ROADSTAR INFRA INVESTMENT TRUST

(Settled in the Republic of India as a contributory irrevocable determinate trust by way of a trust deed dated October 6, 2020, as amended, under the Indian Trusts Act, 1882, and registered as an infrastructure investment trust under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended on December 22, 2020 having registration number IN/InvIT/20-21/0015)

Principal place of business: The IL&FS Financial Centre, Plot No. C22, G-Block, Bandra Kurla Complex, Bandra (E), Mumbai - 400 051, Maharashtra, India
Tel: +91 22 2653 3333; **Compliance Officer**: Jyotsna Matondkar
E-mail: riml@roadstarinfra.com; **Website**: www.roadstarinfra.com

Sponsor	Investment Manager	Trustee
Roadstar Infra Private Limited	**Roadstar Investment Managers Limited**	**Axis Trustee Services Limited**

Roadstar Infra Investment Trust ("**Trust**") is proposing a unit distribution of up to 455,477,143 units representing an undivided beneficial interest in the Trust (the "**Units**") to Eligible Creditors (as defined herein), on a private placement basis, by IL&FS Transportation Networks Limited, Infrastructure Leasing & Financial Services Limited, IL&FS Financial Services Limited and Sabarmati Capital One Limited (collectively, the "**Distributing Unitholders**") as per the Resolution Framework approved by the NCLAT (such distribution, the "**Unit Distribution**"). For details in relation to the background of the Resolution Framework, the formation of the Trust and the Unit Distribution, please see the sections "*The Unit Distribution*", "*Formation Transactions in relation to the Trust*" and "*Overview of the Trust*" on pages 19, 26 and 23, respectively.

Pursuant to SEBI's letter dated March 20, 2024, the Trust has received an exemption from strict enforcement of Regulation 12(3A) of the InvIT Regulations, with reference to the requirement of holding certain Units by the Sponsor and Sponsor Group entities for a certain period of time, subject to the Sponsor holding not less than 15% of the Units on a post-issue basis for a period of three years. Accordingly, 68,806,097 Units, equivalent to not less than 15% of total outstanding Units post the Unit Distribution, are proposed to be distributed to the Sponsor ("**Sponsor Lock-in Units**"), which will be held by the Sponsor for a period of at least three years from the date of listing of the Units. For details in respect of the Sponsor Lock-in Units, please see the section "*Unit Distribution Procedure and Information*" on page 392.

THE UNIT DISTRIBUTION IS BEING MADE ONLY TO ELIGIBLE CREDITORS IN ACCORDANCE WITH THE RESOLUTION FRAMEWORK APPROVED BY THE NATIONAL COMPANY LAW APPELATE TRIBUNAL.

The Units are proposed to be listed on the National Stock Exchange of India Limited ("**NSE**") and BSE Limited ("**BSE**", together with NSE, the "**Stock Exchanges**"). The Trust has received in-principle approvals from BSE and NSE for listing of the Units pursuant to letters, each dated July 22, 2024. The validity of the in-principle approval of NSE has been extended by way of letters dated October 28, 2024 and February 10, 2025. The validity of the in-principle approval of BSE has been extended by way of letters dated November 7, 2024 and February 10, 2025. NSE is the Designated Stock Exchange. Applications shall be made to the Stock Exchanges for obtaining the final listing and trading approvals for the Units to be distributed pursuant to the Unit Distribution. The Stock Exchanges assume no responsibility for the correctness of any statements made, opinions expressed or reports contained herein. Admission of the Units to be distributed pursuant to the Unit Distribution for trading on the Stock Exchanges should not be taken as an indication of the merits of the Trust or of the Units.

This is distribution of Units only to Eligible Creditors, and there is no formal market for the Units. No assurance can be given regarding an active or sustained market for trading in the Units or regarding the price at which the Units will be traded after the proposed listing. This Placement Memorandum has not been, and will not be, registered as a prospectus, will not be circulated or distributed to the public at large in India or any other jurisdiction, and will not constitute a public offer in India or any other jurisdiction.

A copy of the Draft Placement Memorandum and this Placement Memorandum has been filed with the Securities and Exchange Board of India ("**SEBI**") and delivered to the Stock Exchanges and a copy of the Final Placement Memorandum will be delivered to the SEBI and the Stock Exchanges.

The Investment Manager, having made all reasonable inquiries confirms that this Placement Memorandum contains all information with regard to the Trust, the Units and the Unit Distribution, which is material in the context of the Unit Distribution, that the information contained in this Placement Memorandum is true, correct and adequate in all material aspects and is not misleading in any material respect, that the opinions and intentions expressed herein are honestly held and have been reached after considering all relevant circumstances and are based on reasonable assumptions and information presently available with the Investment Manager and that there are no other facts, the omission of which makes this Placement Memorandum as a whole or any of such information or the expression of any such opinions or intentions misleading in any material respect.

The Units have not been and will not be registered under the United States Securities Act of 1933, as amended (the "**U.S. Securities Act**") and may not be offered, sold or distributed within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable U.S. state securities laws. Accordingly, the Units are only being offered, sold or distributed outside the United States in "offshore transactions" as defined in, and in reliance on, Regulation S under the U.S. Securities Act ("**Regulation S**") and the applicable law of the jurisdictions where such offers, sales or distributions occur. The Units are transferable only in accordance with the restrictions described under the section titled "*Selling and Transfer Restrictions*" on page 378.

THIS PLACEMENT MEMORANDUM IS PERSONAL TO EACH ELIGIBLE CREDITOR AND WOULD NOT CONSTITUTE AN OFFER OR INVITATION OR SOLICITATION OF AN OFFER TO THE PUBLIC OR ANY OTHER PERSON OR CLASS OF INVESTORS WITHIN OR OUTSIDE INDIA. THIS PLACEMENT MEMORANDUM HAS BEEN PREPARED BY THE TRUST SOLELY FOR PROVIDING INFORMATION IN CONNECTION WITH THE UNIT DISTRIBUTION.

YOU MAY NOT, AND ARE NOT AUTHORIZED TO, (1) DELIVER THIS PLACEMENT MEMORANDUM TO ANY OTHER PERSON; OR (2) REPRODUCE THIS PLACEMENT MEMORANDUM IN ANY MANNER WHATSOEVER. ANY DISTRIBUTION OR REPRODUCTION OF THIS PLACEMENT MEMORANDUM, IN WHOLE OR IN PART, IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS INSTRUCTION MAY RESULT IN A VIOLATION OF THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014, AS AMENDED OR OTHER APPLICABLE LAWS OF INDIA AND OF OTHER JURISDICTIONS.

THE UNITS HAVE NOT BEEN RECOMMENDED BY SEBI NOR DOES SEBI GUARANTEE ACCURACY OR ADEQUACY OF THE CONTENTS OF THIS PLACEMENT MEMORANDUM. EACH ELIGIBLE CREDITOR IS ADVISED TO CONSULT ITS OWN ADVISORS, ABOUT THE CONSEQUENCES OF HOLDING THE UNITS BEING DISTRIBUTED PURSUANT TO THIS FINAL PLACEMENT MEMORANDUM. ELIGIBLE CREDITORS ARE ALSO ADVISED TO CAREFULLY READ THIS PLACEMENT MEMORANDUM, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS" ON PAGES 63 AND 383, RESPECTIVELY.

For further details, please see the section "*Unit Distribution Procedure and Information*" on page 392. The distribution of the Draft Placement Memorandum, this Placement Memorandum or the Final Placement Memorandum, or the disclosure of their contents, without the Investment Manager's prior consent, to any person, other than the Eligible Creditors is unauthorized and prohibited. Each Eligible Creditor, by accepting delivery of this Placement Memorandum, agrees to observe the foregoing restrictions and to make no copies of this Placement Memorandum or any documents referred to in this Placement Memorandum.

The information on the website of the Trust, any website directly or indirectly linked to such website, or the website of the Trustee does not form part of this Placement Memorandum and any information contained in, or available through, any such websites, shall not be relied upon.

PURSUANT TO SEBI'S LETTER DATED MARCH 20, 2024, THE TRUST HAS RECEIVED AN EXEMPTION FROM STRICT ENFORCEMENT OF REGULATION 14(1)(C) OF THE INVIT REGULATIONS, WITH REFERENCE TO THE REQUIREMENT OF MINIMUM ISSUE SIZE OF AN INITIAL OFFER OF UNITS.

PLACEMENT AGENT	REGISTRAR TO THE UNIT DISTRIBUTION
Axis Capital Limited 1st Floor, Axis House, Pandurang Budhkar Marg, Worli, Mumbai 400 025 Maharashtra, India Tel.: +91 22 4325 2183 E-mail: ilfs.invit@axiscap.in Investor Grievance E-mail: complaints@axiscap.in Website: www.axiscapital.co.in Contact Person: Prashant Kolhe / Harish Patel SEBI Registration No.: INM000012029	**KFin Technologies Limited** Selenium, Tower B Plot No- 31 and 32, Financial District Nanakramguda, Serilingampally Mandal, Hyderabad 500 032 Telangana, India Tel.: +91 40 6716 2222 Fax number: +91 40 67161563 E-mail: roadstar.invit@kfintech.com Investor Grievance E-mail: einward.ris@kfintech.com Website: www.kfintech.com Contact Person: M. Murali Krishna SEBI Registration No.: INR000000221 CIN: L72400TG2017PLC117649

This Placement Memorandum is dated February 11, 2025.

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NOTICE TO ELIGIBLE CREDITORS

The statements contained in this Placement Memorandum relating to the Trust and the Units are, in all material respects, true, correct, adequate and not misleading. The opinions and intentions expressed in Placement Memorandum with regard to the Trust and the Units are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions and information presently available with the Investment Manager, the Sponsor or both, as applicable. There are no other facts in relation to the Trust and the Units, the omission of which would, in the context of the Unit Distribution, make any statement in this Placement Memorandum misleading in any material respect. Further, each of the Investment Manager and the Sponsor has made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements disclosed in this Placement Memorandum in all material respects.

The Placement Agent has not separately verified any information (financial, legal or otherwise) contained in this Placement Memorandum. Accordingly, the Placement Agent or any of its shareholders, employees, counsel, officers, directors, representatives, agents, associates or affiliates do not make any express or implied representation, warranty or undertaking, and accept no responsibility or liability as to the accuracy or completeness of the information contained in this Placement Memorandum or any other information supplied in connection with the Unit Distribution or the distribution of the Units, other than in relation to themselves. Each Eligible Creditor receiving this Placement Memorandum acknowledges that such person has neither relied on the Placement Agent nor any of their shareholders, employees, counsel, officers, directors, representatives, agents, associates or affiliates in connection with their investigation of the accuracy of such information. Each Eligible Creditor must rely on its own examination of the Trust and the merits and risks involved in holding the Units. Eligible Creditors should not construe the contents of this Placement Memorandum as legal, tax, accounting or investment advice. Each Eligible Creditor receiving this Placement Memorandum acknowledges that they have relied solely on the information contained in this Placement Memorandum and the Final Placement Memorandum and not on any other disclosure or representation by the Investment Manager, the Project Manager, the Trustee, the Sponsor, the Placement Agent, the Distributing Unitholders or any other party. Save as expressly stated in this Placement Memorandum, nothing contained herein is, or may be relied upon as, a promise or representation as to the future performance of the Trust.

No person is authorized to give any information or to make any representation not contained in this Placement Memorandum and any information or representation not so contained must not be relied upon as having been authorized by or on behalf of the Trust or by, or on behalf, of the Sponsor, the Investment Manager, the Distributing Unitholders or the Placement Agent. The delivery of this Placement Memorandum, at any time, does not imply that the information contained in it is correct as of any time subsequent to its date. This Placement Memorandum shall not be relied upon by, and the Investment Manager, the Trustee, the Sponsor, the Project Manager, the Distributing Unitholders and/or the Placement Agent shall not be liable to, any subsequent acquirer, transferee or investor of the Units.

This Placement Memorandum is personal to each Eligible Creditor.

The distribution of the Draft Placement Memorandum and this Placement Memorandum and the Final Placement Memorandum or the disclosure of its contents to any person, other than the Eligible Creditors to whom it is addressed and those retained by such Eligible Creditors, is unauthorized and prohibited. Each Eligible Creditor, by accepting delivery of this Placement Memorandum and the Final Placement Memorandum agrees to observe the foregoing restrictions and make no copies of, this Placement Memorandum and the Final Placement Memorandum or any other material in connection with the Unit Distribution or the Units.

Certain U.S. Matters

The Units to be distributed pursuant to the Unit Distribution have not been approved, disapproved or recommended by any regulatory authority in any jurisdiction, including the United States Securities and Exchange Commission ("**SEC**"), any other federal or state authorities in the United States, the securities authorities of any non-United States jurisdiction or any other United States or non-United States regulatory authority. No authority has passed on or endorsed the merits of the Unit Distribution or the accuracy or adequacy of this Placement Memorandum. Any representation to the contrary is a criminal offence in the United States and may be a criminal offence in other jurisdictions.

The Units have not been and will not be registered under the U.S. Securities Act and may not be offered, sold or distributed within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable state securities laws. Accordingly, the Units are

only being offered, sold or distributed outside the United States in "*offshore transactions*" as defined in, and in reliance on, Regulation S and the applicable laws of the jurisdictions where those offers, sales or distributions occur. The Units are transferable only in accordance with the restrictions described under the section "*Selling and Transfer Restrictions*" on page 378.

Each recipient of the Units offered by this Placement Memorandum will be deemed to have made the representations, agreements and acknowledgments as described in this section "*Notice to Eligible Creditors – Representations by Eligible Creditors"* on page 2.

Notice to Eligible Creditors in certain other jurisdictions

The distribution of the Draft Placement Memorandum, this Placement Memorandum and the Final Placement Memorandum and the distribution of the Units in certain jurisdictions may be restricted by law. As such, the Draft Placement Memorandum, this Placement Memorandum and the Final Placement Memorandum do not constitute, and may not be used for, or in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it is unlawful to make such offer or solicitation. In particular, no action has been taken by the Investment Manager or the Placement Agent which would permit a distribution of the Units or distribution of the Draft Placement Memorandum, this Placement Memorandum and the Final Placement Memorandum in any jurisdiction, other than India. Accordingly, the Units will not be offered, sold or distributed, directly or indirectly, and neither the Draft Placement Memorandum, this Placement Memorandum and the Final Placement Memorandum nor any materials in connection with the Units be distributed or published in or from any country or jurisdiction that would require registration of the Units in such country or jurisdiction.

THE VALUE OF THE UNITS AND THE INCOME DERIVED FROM THEM MAY FLUCTUATE. THE UNITS ARE NOT OBLIGATIONS OF, DEPOSITS IN, OR GUARANTEED BY THE TRUST, THE TRUSTEE, THE SPONSOR, THE INVESTMENT MANAGER, THE PLACEMENT AGENT, THE DISTRIBUTING UNITHOLDERS OR ANY OF THEIR RESPECTIVE SHAREHOLDERS, EMPLOYEES, COUNSEL, OFFICERS, DIRECTORS, REPRESENTATIVES, AGENTS, ASSOCIATES OR AFFILIATES. AN INVESTMENT IN THE UNITS IS SUBJECT TO INVESTMENT RISKS, INCLUDING THE POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED, FURTHER, LISTING OF THE UNITS ON THE STOCK EXCHANGES DOES NOT GUARANTEE A LIQUID MARKET FOR THE UNITS. UNITHOLDERS HAVE NO RIGHT TO REQUEST THE TRUST, THE TRUSTEE, THE SPONSOR, THE DISTRIBUTING UNITHOLDERS OR THE INVESTMENT MANAGER OR ANY OF THEIR RESPECTIVE SHAREHOLDERS, EMPLOYEES, COUNSEL, OFFICERS, DIRECTORS, REPRESENTATIVES, AGENTS, ASSOCIATES OR AFFILIATES TO REDEEM THEIR UNITS WHILE THE UNITS ARE LISTED, UNLESS OTHERWISE PERMITTED BY APPLICABLE LAW. THE PERFORMANCE OF ANY OF THE LISTED UNITS OF THE TRUST IS NOT NECESSARILY INDICATIVE OF THE FUTURE PERFORMANCE OF THE UNITS OF THE TRUST.

Representations by Eligible Creditors

References herein to "you" or "your" is to each Eligible Creditor in the Unit Distribution.

By receiving the Units pursuant to the Unit Distribution, you are deemed to have represented to the Trustee, the Investment Manager, the Sponsor and the Placement Agent, and acknowledge and agree as follows:

1. You are a creditor of a Distributing Unitholder, who has a valid admitted claim existing as of the Cut-Off Date (i.e. October 15, 2018) in terms of the Resolution Framework (as defined hereunder), and are eligible under applicable laws and regulations of India, and undertake (i) to receive, hold, manage or dispose of any of the Units that are distributed to you in accordance with InvIT Regulations, other applicable laws and under the laws of all relevant jurisdictions; and (ii) that you are entitled to receive and have all necessary capacity and have obtained all necessary consents, governmental or otherwise and authorisations to enable you to commit to this participation in this Unit Distribution and to perform your obligations in relation thereto (including, without limitation, in the case of any person on whose behalf you are acting, all necessary consents and authorisations to agree to the terms set out or referred to in the Draft Placement Memorandum, this Placement Memorandum and the Final Placement Memorandum) and will honour such obligations;

2. You will make all necessary filings and reporting, in relation to the Unit Distribution, with appropriate governmental, statutory or regulatory authorities, including the RBI, as may be required, in accordance with applicable law in India and in your respective jurisdiction, as applicable;

3. You agree to provide on request in a timely manner, and consent to the use and disclose (including to any taxation or other regulatory authorities) of, any information or documentation in relation to yourself and, if and to the extent required, the direct or indirect beneficial ownership of your Units (if any), as may be necessary for the Trust (or the Trustee and its agents) and the Investment Manager to comply with any regulatory obligations and/or prevent the withholding of tax or other penalties under FATCA, the CRS or other similar and applicable exchange of tax information regimes. You acknowledge and agree that you shall have no claim against the Trust (or the Trustee and its agents) and the Investment Manager for any losses suffered by you (including in relation to the direct or indirect beneficial ownership of your Units (if any)) as a result of such use or disclosure of such information or documentation to any regulatory, governmental or statutory authority;

4. You are aware that the Units have not been and will not be registered through a prospectus under the InvIT Regulations, or under any other law in force in India, and no Units will be distributed in India or overseas to the public or any members of the public in India or any other class of investors other than the Eligible Creditor. This Placement Memorandum has been filed with the Stock Exchanges and SEBI and would be displayed on the websites of SEBI and the Stock Exchanges;

5. None of the Sponsor, the Investment Manager, the Project Manager, the Trustee, the Distributing Unitholders or the Placement Agent or any of their respective shareholders, directors, officers, employees, counsel, representatives, agents or affiliates is making any recommendations to you or advising you regarding the suitability of any transactions it may enter into in connection with the Unit Distribution and that participation in the Unit Distribution is on the basis that you are not and will not, up to the Allotment, be a client of the Placement Agent. None of the Sponsor, the Trustee, the Investment Manager, the Project Manager, the Distributing Unitholders, the Placement Agent or any of their respective shareholders, employees, counsel, officers, directors, representatives, agents or affiliates have any duties or responsibilities to you for providing the protection afforded to their clients, or for providing advice in relation to the Unit Distribution and are in no way acting in a fiduciary capacity towards you;

6. All statements, other than statements of historical fact included in this Placement Memorandum, including, without limitation, those regarding the Trust's financial position, business strategy, plans and objectives for future operations, Investment Objectives and the Projections of Revenue from Operations and Cash Flow from Operating Activities, are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause actual results to be materially different from the results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on certain assumptions regarding the Trust's present and future business strategies and the environment in which the Trust will operate in the future. You should not place undue reliance on forward-looking statements, which speak only as of the date of this Placement Memorandum, and not regard such statements to be a guarantee or assurance of our future performance or return to creditors. The Trust, the Trustee, the Sponsor, the Placement Agent and the Investment Manager, the Distributing Unitholders or any of their respective shareholders, directors, officers, employees, counsel, representatives, advisors, agents, associates or affiliates assume no responsibility to update any of the forward-looking statements contained in this Placement Memorandum;

7. You have read this Placement Memorandum in its entirety, including, in particular, the section "*Risk Factors*" on page 63;

8. You have been provided with a serially numbered copy of this Placement Memorandum and will be deemed to have read this Placement Memorandum, in its entirety, including, in particular, the section "*Risk Factors*" on page 63. Further, if you are an Eligible Creditor who has been Allocated Units, you will be provided with a serially numbered copy of the Final Placement Memorandum and will be deemed to have read the Final Placement memorandum in its entirety, including in particular, the section "*Risk Factors"* on page 63 '

9. You are aware and understand that the Units are being distributed only to Eligible Creditors through this Placement Memorandum and the Final Placement Memorandum and are not being offered to the general public and the Allotment shall be on a discretionary basis in accordance with the Resolution Framework;

10. You are permitted to receive the Units under the laws of any applicable jurisdiction and that you have necessary capacity and authority, and have obtained all necessary consents and authorisations to enable you to commit to this participation in the Unit Distribution and to perform your obligations in relation thereto (including, without limitation, on behalf of any person) and honour such obligations;

11. You undertake to (i) hold, manage or dispose of any Units that are distributed to you in accordance with the InvIT Regulations and all other applicable laws; and (ii) to comply with all requirements under applicable law in relation to reporting obligations, if any, in this relation;

12. You understand that the Units have not been, and will not be, registered under the U.S. Securities Act or with any securities regulatory authority of any state of the United States and accordingly, may not be offered, sold or distributed within the United States, except in reliance on an exemption from the registration requirements of the U.S. Securities Act;

13. You are not receiving or acquiring or subscribing for the Units as a result of any "directed selling efforts" (as defined in Regulation S);

14. You are acquiring or receiving the Units in an "offshore transaction" as defined in Regulation S, and are not an affiliate of the Trust or the Placement Agent or a person acting on behalf of such an affiliate;

15. You understand and agree that the Units are transferable only in accordance with the restrictions described in the section entitled "*Selling and Transfer Restrictions*" on page 378, and you warrant that you will comply with such restrictions;

16. You agree and acknowledge that, in the event you hold 10% or more of the total outstanding Units of the Trust, you shall comply with the stewardship code as specified in Schedule VIII of the InvIT Regulations;

17. You have (i) relied on your own examination of the Trust, the Units and the terms of the Unit Distribution, including the merits and risks involved, (ii) made and will continue to make your own assessment of the Trust, the Units and the terms of the Unit Distribution based solely on the information contained in this Placement Memorandum and the Final Placement Memorandum, (iii) consulted your own independent advisors or otherwise have satisfied yourself concerning, without limitation, the effects of local laws, (iv) relied solely on the information contained in this Placement Memorandum and the Final Placement Memorandum, and no other disclosure or representation by the Sponsor or the Investment Manager or any other party, (v) received all information in this Placement Memorandum and the Final Placement Memorandum that you believe is necessary or appropriate, and (vi) relied upon your own investigation in relation to the Unit Distribution;

18. You have such knowledge and experience in financial, business and investment matters as to be capable of evaluating the merits and risks of holding the Units. You and any accounts for which you are receiving the Units, (i) are each able to bear the economic risk of the investment in the Units; (ii) will not, subject to the terms of this Placement Memorandum and the Final Placement Memorandum, look to any of the Investment Manager, the Trustee, the Sponsor, the Distributing Unitholders or the Placement Agent or any of their respective shareholders, employees, counsel, officers, directors, representatives, financial advisors, agents or affiliates for all, or part, of any such loss or losses that may be suffered due to your holding of the Units; and (iii) are able to sustain a complete loss on the holdings in the Units; (iv) have no need for immediate liquidity with respect to the holdings in the Units, and (v) have no reason to anticipate any change in your or their circumstances, financial or otherwise, which may cause or require any sale or distribution by you or them of all or any part of the Units. You acknowledge that holding the Units involves a high degree of risk and that the Units are, therefore, a speculative investment. You are seeking to receive the Units in the Unit Distribution as part of the Resolution Framework, and not with a view to resell or distribute in any manner that could characterise you as an underwriter or similar entity in any jurisdiction;

19. The Trustee, the Sponsor, the Investment Manager, the Placement Agent, the Distributing Unitholders or any of their respective shareholders, directors, officers, employees, counsel, representatives, advisors, agents or affiliates have not provided you with any legal, financial or tax advice or otherwise made any representations regarding the tax consequences of the Units (including but not limited to the Unit Distribution). You will obtain your own independent legal, financial or tax advice and will not rely on the Investment Manager, the Sponsor, the Trustee, the Placement Agent, the Distributing Unitholders or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisors, agents or affiliates when evaluating the tax consequences in relation to the Units (including but not limited to the Unit Distribution). You waive and agree

not to assert any claim against the Placement Agent, the Sponsor, the Trustee, the Distributing Unitholders or the Investment Manager or any of their respective financial advisors, agents or affiliates with respect to the tax aspects of the Units or the Unit Distribution or as a result of any tax audits by tax authorities, in relation to the Units and the Unit Distribution, wherever situated;

20. You are not the Trustee, the Valuer or an employee of the Valuer involved in the valuation of the Project SPVs;

21. You are aware that (i) the Trust has received in-principle approvals from BSE and NSE for listing of the Units pursuant to letters, each dated July 22, 2024. The validity of the in-principle approval of NSE has been extended by way of letters dated October 28, 2024 and February 10, 2025. The validity of the in-principle approval of BSE has been extended by way of letters dated November 7, 2024 and February 10, 2025;; and (ii) the application for the final listing and trading approval will be made only after Allotment. There can be no assurance that the final approval for listing and trading of the Units will be obtained in a timely manner, or at all. The Trust, the Trustee, the Placement Agent the Investment Manager, the Distributing Unitholders or the Sponsor, shall not be responsible for any delay or non-receipt of such final approval (except to the extent prescribed under the InvIT Regulations) or any loss arising from such delay or non-receipt;

22. You shall not undertake any trade in the Units credited to your demat account until such time that the final listing and trading approval for the Units has been issued by the Stock Exchanges;

23. The only information you are entitled to rely on, and on which you have relied, in committing yourself to receive the Units is contained in this Placement Memorandum, such information being all that you deem necessary in respect of the Units and that you have neither received nor relied on any other information given or representations, warranties or statements made by the Trustee, the Placement Agent, the Investment Manager, the Distributing Unitholders or the Sponsor, and neither the Trustee, the Placement Agent, the Investment Manager, the Distributing Unitholders nor the Sponsor will be liable for your decision to participate in the Unit Distribution based on any other information, representation, warranty or statement that you have obtained or received;

24. You understand that the Units in this Unit Distribution will, when Allotted, be credited as fully paid and will rank pari passu in all respect with all other Units, including in respect of the right to receive all distributions declared, made or paid in respect of the Units after the Allotment. For details, please see the section "*Distribution*" on page 288;

25. You agree to indemnify and hold the Trustee, Investment Manager, the Sponsor, the Distributing Unitholders and the Placement Agent harmless from any and all costs, claims, liabilities and expenses (including legal fee and expenses) arising out of or in connection with any breach of the representations and warranties in this section;

26. The Trustee, the Investment Manager, the Sponsor, the Placement Agent, the Distributing Unitholders, their respective shareholders, employees, counsel, offices, directors, representatives, agents or affiliates, will rely on the truth and accuracy of the foregoing representations, warranties, acknowledgements and undertakings which are given to the Placement Agent on their own behalf and on behalf of the Trust, the Sponsor, the Investment Manager, the Trustee, the Distributing Unitholders and the same are irrevocable;

27. You are eligible to invest in India and are eligible to receive/hold the Units under applicable law, including the FEMA Rules, and have not been prohibited by SEBI or any other statutory, regulatory or judicial authority from buying, selling or dealing in securities;

28. You understand that, subject to the terms of this Placement Memorandum, neither the Placement Agent, the Investment Manager, the Sponsor, the Distributing Unitholders nor the Trustee has any obligation to purchase or subscribe to all, or any part, of the Units Allotted to you in the Unit Distribution, or to support any losses directly or indirectly sustained or incurred by you for any reason whatsoever in connection with the Unit Distribution;

29. Any dispute arising in connection with the Unit Distribution will be governed by, and construed in accordance with, the laws of the Republic of India and the courts at Mumbai, Maharashtra shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with the Unit Distribution;

30. You have made, or are deemed to have made, as applicable, the representations provided in this section and each of the representations, warranties, acknowledgements and agreements set out above shall continue to be true and accurate at all times, up to and including the Allotment, listing and trading of the Units; and
31. You are eligible to hold the Units, so Allotted. You are aware that your holding after the Allotment of the Units cannot exceed the investment level permissible as per any applicable law and regulations.

Available Information

The Investment Manager agrees to comply with any undertakings given by it from time to time in connection with the Units and, without prejudice to the generality of foregoing, shall furnish to the Unitholders all such information as may be required under the InvIT Regulations.

Disclaimer

This Placement Memorandum does not, directly or indirectly, relate to any invitation, offer or sale of any securities, instruments or loans (including listed non-convertible debentures or bonds, if any) that may be issued by the Trust after the listing of the Units. Any person or entity investing in such issue or transaction by the Trust should consult its own advisors. Neither the Placement Agent, nor their associates or affiliates have any responsibility or liability for such issue or transaction by the Trust.

DEFINITIONS AND ABBREVIATIONS

This Placement Memorandum uses the definitions and abbreviations provided below which you should consider when reading the information contained herein.

References to any legislation, act, regulations, rules, guidelines or policies shall be to such legislation, act, regulations, rules, guidelines or policies as amended, supplemented, or re-enacted from time to time and any reference to a statutory provision shall include any subordinate legislation made under that provision.

The words and expressions used in this Placement Memorandum, but not defined herein shall have the meaning ascribed to such terms under the InvIT Regulations, the SEBI Act, the SCRA, the Depositories Act, and the rules and regulations made thereunder.

Notwithstanding the foregoing, the terms not defined but used in the sections "Audited Special Purpose Combined Financial Statements", "Projections of Revenue from Operations and Cash Flow from Operating Activities", "Statement of Tax Benefits" and "Legal and Other Information" on pages 425, 524, 401 and 346, respectively, shall have the meanings ascribed to such terms in those respective sections.

In this Placement Memorandum, unless the context otherwise requires, a reference to "we", "us" and "our" refers to the Trust and the Project SPVs on a consolidated basis. For the sole purpose of the Audited Special Purpose Combined Financial Statements, reference to "we", "us" and "our" refers to the Project SPVs on a combined basis.

Trust Related Terms

Term	Description
A&M	Alvarez and Marsal India Private Limited
Associate	An associate, as defined under Regulation 2(1)(b) of the InvIT Regulations
Audited Special Purpose Combined Financial Statements	The audited special purpose combined financial statements of the Project SPVs, which comprise the combined balance sheets as at September 30, 2024, March 31, 2024, March 31, 2023 and March 31, 2022, the combined statements of profit and loss (including other comprehensive income), the combined cash flow statements, the combined statements of changes in equity for the six months period ended September 30, 2024 and the years ended March 31, 2024, March 31, 2023 and March 31, 2022, and a summary of significant accounting policies and other explanatory information prepared in accordance with the Guidance Note on Reports in Company Prospectuses (Revised 2019), and the Guidance Note on Combined and Carve Out Financial Statements issued by the Institute of Chartered Accountants of India using the recognition and measurement principles of Ind AS and other generally accepted accounting principles and other relevant provisions relating to disclosures required as per the InvIT Regulations on which the Auditor has issued an audit report dated January 4, 2025.
Auditors	KKC & Associates LLP (*formerly known as Khimji Kunverji and Co. LLP*), Chartered Accountants, the statutory auditors of the Trust
Audit Committee	The audit committee of the Trust
BAEL	Barwa Adda Expressway Limited
BAEL Project	A toll road project to augment a 122.88 km section of NH-2 between Barwa Adda and Panagarh in Jharkhand by six-laning on a DBFOT basis
BAEL Settlement Agreement	Settlement Agreement executed between National Highways Authority of India and Barwa Adda Expressway Limited dated September 30, 2024
Concession Agreements	Collectively, the concession agreements entered into between the Project SPVs and the relevant concessioning authorities. For details, please see the section "*Summary of Key Agreements*" on page 227.
Corporate Governance Framework	The corporate governance framework adopted by the Investment Manager in relation to the Trust. For details, please see the section "*Corporate Governance*" on page 138.
Distributing Unitholders	IL&FS Transportation Networks Limited, Infrastructure Leasing & Financial Services Limited, Sabarmati Capital One Limited and IL&FS Financial Services Limited

Term	Description
Distributed Units	Units which are held by the Distributing Unitholders and are proposed to be distributed to the Eligible Creditors pursuant to the Unit Distribution
DOA	Deed of Assignment, by way of which, the creditors of each of the Project SPVs, have assigned their respective receivables from the Project SPVs to the Trust.
ECB Unit Escrow Agreement	ECB Unit Escrow Agreement entered into between the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, IDBI Trusteeship Services Limited and KFin Technologies Limited
EMSL	Elsamex Maintenance Services Limited
Formation Transactions	The formation transactions in relation to the Trust, including the completed transfers of the Project SPVs to the Trust
GT	Grant Thornton Bharat LLP
Holding Company/Holdco	A holding company, as defined under Regulation 2(1)(sa) of the InvIT Regulations
HREL	Hazaribagh Ranchi Expressway Limited
HREL Project	A project for constructing and maintaining the 4-laning of the Hazaribagh – Ranchi section of NH-33 from 40.50 km to 114.00 km in Jharkhand on a BOT – annuity basis
IAL	IL&FS Airports Limited
IFSL	IL&FS Financial Services Limited
IL&FS	Infrastructure Leasing & Financial Services Limited
IL&FS Interim Distribution SOP	Details of the process to be followed for the Interim Distribution computation of Cash and Units as approved by NCLAT *vide* order dated May 31, 2022 and as per the Initial Resolution Framework as approved by the board of directors of IL&FS in its meeting held on May 15, 2024.
IL&FS Group	IL&FS and its group entities
IL&FS Unitholders	IL&FS Group entities that hold Units of the Trust
IM Board	The board of directors of the Investment Manager
Initial Resolution Framework	The resolution framework for the IL&FS Group approved by the NCLAT vide its order dated March 12, 2020, comprising of the 'Third Report on Progress and Way Forward' dated December 17, 2018 and the 'Addendum to the Third Report on Progress and Way Forward' dated January 15, 2019, each as filed by the Ministry of Corporate Affairs with NCLAT on January 25, 2019 and the 'Second Addendum to the Third Report on Progress and Way Forward' dated December 5, 2019 filed by the Ministry of Corporate Affairs with the NCLAT on January 9, 2020 (and the terms of which were resubmitted to the NCLAT by the Ministry of Corporate Affairs vide affidavit dated February 7, 2020).
Interim Distribution Framework	The interim distribution framework for the IL&FS Group filed by the Union of India (acting through the Ministry of Corporate Affairs) before the NCLAT on January 21, 2022 (vide application bearing I.A. 586 of 2022 in Company Appeal (AT) No. 346 of 2018), approved by the NCLAT vide its orders dated May 31, 2022, July 6, 2022, January 19, 2023, February 13, 2023, April 26, 2023 and May 18, 2023.
Investment Management Agreement	The investment management agreement dated October 23, 2020, as amended, entered into between the Trustee and the Investment Manager
Investment Manager	Roadstar Investment Managers Limited (*formerly known as North Karnataka Expressway Limited*)
Investment Objectives	The investment objectives of the Trust, as provided under the section "*Overview of the Trust*" on page 23.
InvIT Assets or Trust Assets	Assets owned by the Trust, whether held directly, or through holding companies or SPVs, and includes all rights, interests and benefits arising from and incidental to ownership of such assets, in accordance with the InvIT Regulations and applicable law
InvIT Documents	The Trust Deed, the Investment Management Agreement, the Project Implementation and Management Agreements, Share Purchase Agreements, Deed of Assignments, policies adopted by the Investment Manager, any other document, letter or agreement entered into by the Investment Manager or Trustee on behalf of the Trust, with respect to the Trust or the Units or executed

Term	Description
	in connection with the Trust, the Unit Distribution documents and such other documents in connection therewith, as originally executed and amended, modified, supplemented or restated from time to time, together with the respective annexures, schedules and exhibits, if any
InvIT Master Circular	SEBI Master Circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024
ITNL	IL&FS Transportation Networks Limited
MBEL	Moradabad Bareilly Expressway Limited
MBEL Project	A toll project for augmentation of a 114 km section of NH-24 between Moradabad and Bareilly in Uttar Pradesh by four-laning on a DBFOT basis
NCLT	National Company Law Tribunal
NCLAT	National Company Law Appellate Tribunal
Operations & Management Committee	The operations & management committee constituted by the IM Board
Parties to the Trust	Collectively, the Sponsor and the Sponsor Group, the Trustee, the Investment Manager and the Project Manager
Portfolio Assets	The Project SPVs and other SPVs, as the context may require, which are owned by the Trust from time to time
Project Implementation and Management Agreement	The project implementation and management agreements, entered into amongst the Trustee, the Project Manager, the Investment Manager and each of the Project SPVs
Project Manager or EMSL	Elsamex Maintenance Services Limited
Project SPVs	SBHL, TRDCL, PSRDCL, MBEL, HREL and BAEL
Projections of Revenue from Operations and Cash Flow from Operating Activities	Statements of projections of revenue from operations and cash flows from operating activities of the Trust and the Project SPVs for the years ending March 31, 2026, March 31, 2027 and March 31, 2028 prepared in accordance with the Standard on Assurance Engagement 3400, 'The Examination of Prospective Financial Information', issued by the ICAI and other relevant standards/directions issued by ICAI.
PSRDCL	Pune Sholapur Road Development Company Limited
PSRDCL Project	A toll road project to undertake design, engineering, construction, development, finance and operation & maintenance of four-laning of Pune-Sholapur section of NH-9 from km 144.400 to km 249.000 in the State of Maharashtra under National Highways Development Project Phase III on DBFOT
Related Parties	Related parties, as defined under Regulation 2(1)(zv) of the InvIT Regulations.
Resolution Framework	Collectively, the Initial Resolution Framework and the Interim Distribution Framework
RIML	Roadstar Investment Managers Limited
SBHL	Sikar Bikaner Highway Limited
SBHL Project	A toll road project to augment the existing road from km 340.188 of NH-11 to km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from km 553.869 of NH-11 to km 267.325 of NH-89 on the Sikar-Bikaner section of the NH-11 (approximately 237.578 km) in the State of Rajasthan by two-laning with paved shoulder on a DBFOT basis
SCOL	Sabarmati Capital One Limited
SEBI Exemption Letters	Letters received from SEBI dated September 2, 2020; December 3, 2021; June 23, 2022; June 7, 2023; March 20, 2024 and July 24,2024 that grant exemptions to the Trust from the strict enforcement of certain provisions of the InvIT Regulations and the InvIT Master Circular.
Share Purchase Agreements or SPAs	The share purchase agreements entered into among ITNL, the Trustee, the Investment Manager and each of the Project SPVs, pursuant to which such Project SPVs have been transferred to the Trust.
Sponsor or Settlor	Roadstar Infra Private Limited
Sponsor Group	Collectively, the Sponsor, ITNL, IL&FS, SCOL, IFSL and EMSL.
SPV(s)	Special purpose vehicles, as defined under Regulation 2(l)(zy) of the InvIT Regulations
TRDCL	Thiruvananthapuram Road Development Company Limited

Term	Description
TRDCL Project	An annuity-based project for construction, operations and maintenance of ten corridors and three NH-bypass links aggregating to about 42.38 km in Thiruvananthapuram, Kerala
Trust or InvIT	Roadstar Infra Investment Trust
Trust Deed	The trust deed dated October 6, 2020, entered into between the Settlor and the Trustee, as amended.
Trust Group	Collectively, the Trust, the Project SPVs and the Parties to the Trust
Trustee or Axis	Axis Trustee Services Limited
Unit	An undivided beneficial interest in the Trust, and all Distributed Units together represent the entire beneficial interest in the Trust
Unitholder	Any person who owns any Unit of the Trust
Unit Escrow Agreement	Unit escrow agreement entered into between the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, SCOL and KFin Technologies Limited.
Valuer	RBSA Valuation Advisors LLP
Valuation Report	The valuation report dated December 17, 2024, issued by the Valuer, which sets out its opinion as to the fair enterprise value of the Project SPVs as on September 30, 2024
We / us / our	Unless the context otherwise requires or implies, the Trust and the Portfolio Assets

Unit Distribution Related Terms

Term	Description
Allocated/ Allocation	The allocation of the Units, to Eligible Creditors on the basis of the Resolution Framework, by the Investment Manager, in consultation with the Placement Agent
Allot/ Allotment/ Allotted	Unless the context otherwise requires, the distribution/allotment of the Units to Eligible Creditors pursuant to the Unit Distribution
Allottees	Eligible Creditors to whom Units are Allotted pursuant to the Unit Distribution
Body Corporate / Bodies Corporate	Body Corporate / Bodies corporate as defined in Regulation 2(1)(d) of the InvIT Regulations
Business Day	Any day from Monday to Friday, excluding any public holiday
Client ID	Client identification number maintained with one of the Depositories in relation to a demat account
Closing Date	The date on which Allotment of the Units pursuant to the Unit Distribution shall be made, i.e. on or about March 5, 2025
Demographic Details	Details of the Eligible Creditors, including the Eligible Creditor's address, investor status, occupation and bank account details
Designated Date	The date of credit of Units to the Eligible Creditors' demat accounts
Designated Stock Exchange	NSE
Draft Placement Memorandum	The draft placement memorandum dated April 2, 2024 in relation to the Unit Distribution, filed with SEBI and the Stock Exchanges, issued in accordance with the InvIT Regulations, which did not contain the complete particulars of the Unit Distribution
Eligible Creditors	Eligible creditors of Distributing Unitholders in terms of the Resolution Framework, as identified by a duly appointed intermediary.
Final Placement Memorandum	The final placement memorandum to be issued, in relation to this Unit Distribution, in accordance with the InvIT Regulations
Listing Agreement	The listing agreement to be entered into with the Stock Exchanges by the Trust, in line with the format as specified under the Securities and Exchange Board of India circular number CIR/CFD/CMD/6/2015 dated October 13, 2015 on "Format of uniform Listing Agreement"
Listing Date	The date on which the Units will be listed on the Stock Exchanges
Mutual Funds	Mutual funds registered with SEBI under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996
Placement Agent	Axis Capital Limited
Placement Agreement	The placement agreement dated April 2, 2024 entered into among the Trustee (acting on behalf of, and in its capacity as a trustee to the Trust), the Investment

Term	Description
	Manager, the Sponsor, the Project Manager, the Distributing Unitholders and the Placement Agent
Placement Memorandum	This placement memorandum dated February 11, 2025, issued, in relation to this Unit Distribution, in accordance with the InvIT Regulations which may not have complete particulars of the Unit Distribution
Registrar and Unit Transfer Agent or Registrar	KFin Technologies Limited
Unit Distribution	The unit distribution of up to 455,477,143 Units to Eligible Creditors, on a private placement basis, by the Distributing Unitholders as per the Resolution Framework approved by the NCLAT
Unit Escrow Agent	KFin Technologies Limited
Unit Value	₹100, being the value at which the IL&FS Unitholders have been issued Units in terms of the InvIT Documents
Working Day	Working Day shall mean all days, excluding Saturdays, Sundays and public holidays, on which commercial banks in Mumbai are open for business;

Technical and Industry Related Terms

Term	Description
2A/ Truck	2 Axle/ Truck
3A	3 Axle
AADT	Annual Average Daily Traffic
AI	Artificial intelligence
BOT	Build, operate and transfer
BTKM	Billion tonne kilometers
CCI	Competition Commission of India
CJV	Cars/ Jeeps/ Vans
CRISIL Report	The report titled "Assessment of the roads sector in India" dated November 2024, prepared by CRISIL
DBFOT	Design, build, finance, operate and transfer
DSRA	Debt Service Reserve Account
ETC	Electronic toll collection
FVTPL	Fair value through profit or loss
HAM	Hybrid Annuity Model
LJV/ LCV	Light Goods Vehicle/ Light Commercial Vehicles
MAV	Multi Axle Vehicle
MCA	Model Concession Agreement
MM	Major maintenance
MMR	Maximum marginal rate
MNC	Multinational company
NCR	National Capital Region
NH Fee Rules	National Highways Fee (Determination of Rates and Collection) Rules, 2008
NHDP	National Highways Development Project
NIP	National Infrastructure Pipeline
O&M	Operation and maintenance
OCI	Other comprehensive income
PPP	Public-private partnership
PPPAC	Public Private Partnership Appraisal Committee
RFID	Radio-frequency identification
ROU	Right-of-use
SCA	Service Concession Arrangement
Technical Consultants	Translink Infrastructure Consultants Private Limited; GMD Engineering Consultants Private Limited; HBS Infra Engineers India Private Limited; LSI Engineering & Consultants Limited; and Transys Consulting Private Limited
Technical Reports or Technical Consultant Reports	Collectively the technical reports, prepared by the Technical Consultants, in relation to the Project SPVs

Term	Description
Third Party Reports	Collectively, the Technical Consultant Reports, Traffic Reports, CRISIL Report and the Valuation Report
TMS	Toll management system
Toll SPVs	The Project SPVs, holding projects based on toll.
TOT	Toll, operate and transfer
Traffic Consultants	Collectively, Segmental Consulting & Infrastructure Advisory Private Limited; GMD Engineering Consultants Private Limited and HBS Infra Engineers India Private Limited
Traffic Reports or Traffic Consultant Reports	Collectively the traffic reports, prepared by the Traffic Consultants, in relation to Toll SPVs
VGF	Viability Gap Funding
WPI	Wholesale price index

Abbreviations

Term	Description
AIF	Alternative Investment Fund as defined in and registered with SEBI under the SEBI AIF Regulations
BSE	BSE Limited
CAN	Confirmation of Allocation Note
CCEA	Cabinet Committee on Economic Affairs
CDSL	Central Depository Services (India) Limited
Companies Act	Companies Act, 1956 and/or the Companies Act, 2013, as applicable
Companies Act, 1956	The erstwhile Companies Act, 1956 read with the rules, regulations, clarifications and modifications thereunder
Companies Act, 2013	Companies Act 2013, as amended read with rules, regulations, clarifications and modifications thereunder
Competition Act	The Competition Act, 2002
CRISIL	CRISIL Market Intelligence & Analytics, a division of CRISIL Limited
Depositories Act	Depositories Act, 1996
Depository	A depository registered with SEBI under the Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018
Depository Participant	A depository participant as defined under the Depositories Act
DIN	Director Identification Number
EPC	Engineering, Procuring and Construction
FEMA	Foreign Exchange Management Act, 1999, read with rules and regulations thereunder
FEMA Rules	Foreign Exchange Management (Non-debt Instruments) Rules, 2019
Finance Act	Finance (No. 2) Act, 2024
Financial Year or Fiscal Year or Fiscal	Period of 12 months ended March 31 of that particular year, unless otherwise stated
FVCI	Foreign venture capital investors, as defined under the SEBI FVCI Regulations
GAAR	General Anti-Avoidance Rules
GDP	Gross Domestic Product
GoI or Government	Government of India
GST	Goods and Services Tax
ICAI	Institute of Chartered Accountants of India
ICRA	ICRA Limited
Ind AS	Companies (Indian Accounting Standards) Rules, 2015, notified on February 19, 2015 by the MCA, including any amendments or modifications thereto
Indian GAAP	Accounting principles generally accepted in India, including the Accounting Standards as prescribed under Section 133 of the Companies Act, 2013 read with Companies (Accounting Standards) Rules, 2006, as amended or Companies (Indian Accounting Standard) Rules, 2015, as amended.
InvIT	Infrastructure investment trust

Term	Description
InvIT Regulations or SEBI InvIT Regulations	Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended and circulars, notifications, guidelines and clarifications issued thereunder
IRDAI	Insurance Regulatory and Development Authority of India
IRR	Internal rate of return
IT Act	Income-tax Act, 1961
KRFB	Kerala Road Fund Board
LODR Regulations	Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015
MAT	Minimum alternate tax
MCA	Ministry of Corporate Affairs
MoEF	Ministry of Environment, Forest and Climate Change
MoRTH	Ministry of Road Transport and Highways
NEFT	National Electronic Funds Transfer
NHAI	National Highways Authority of India
NITI	National Institution for Transforming India
NSDL	National Securities Depository Limited
NSE	National Stock Exchange of India Limited
OCD	Optionally Convertible Debenture
PAN	Permanent Account Number
RBI	Reserve Bank of India
Regulation S	Regulation S under the U.S. Securities Act
Rs./Rupees/INR/₹	Indian Rupees
RTGS	Real Time Gross Settlement
SCR (SECC) Regulations	Securities Contract (Regulation) (Stock Exchanges and Clearing Corporations) Regulations, 2018
SCRA	Securities Contracts (Regulation) Act, 1956
SEBI	Securities and Exchange Board of India
SEBI Act	The Securities and Exchange Board of India Act, 1992
SEBI AIF Regulations	Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
SEBI FPI Regulations	Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019
SEBI FVCI Regulations	Securities and Exchange Board of India (Foreign Venture Capital Investors) Regulations, 2000
SEBI ICDR Regulations	Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018
U.S. Securities Act	U.S. Securities Act of 1933, as amended
Stock Exchanges	BSE and NSE
STT	Securities transaction tax
Tax	All forms of direct and indirect taxes, duties, charges, levies, including without limitation corporate income tax, withholding tax, minimum alternate tax, sales tax, goods & services tax, value added tax, customs and excise duties, service tax, capital gains tax and all charges, interest, penalties and fines incidental or relating to any taxation falling within the aforesaid or which arise as a result of the failure to pay any taxes on the due date or to comply with any obligation relating to tax
U.S./USA/United States	United States of America
USD/US$	United States Dollars
Water Pollution Act	Water (Prevention and Control of Pollution) Act, 1974

PRESENTATION OF FINANCIAL DATA AND OTHER INFORMATION

Certain Conventions

All references in this Placement Memorandum to "India" are to the Republic of India, all references to the "U.S.", or the "United States" are to the United States of America.

Unless stated otherwise, all references to page numbers in this Placement Memorandum are to the page numbers of this Placement Memorandum.

Financial Data

Unless stated otherwise, the financial information in this Placement Memorandum is derived from the Audited Special Purpose Combined Financial Statements. The Trust was settled as a contributory irrevocable determinate trust on October 6, 2020, and has acquired ownership of MBEL (FY 2021-22), TRDCL (FY 2022-23), SBHL (FY 2021-22), HREL (FY 2022-23), PSRDCL (FY 2023-24) and BAEL (FY 2024-25). For further details, please see the section "*Formation Transactions in Relation to the Trust*" on page 26.

The Audited Special Purpose Combined Financial Statements have been prepared in accordance with the recognition and measurement principles of the Indian Accounting Standards, as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 prescribed under Section 133 of the Companies Act, 2013 read with the InvIT Regulations and the circulars issued thereunder and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India. For further details, please see the section "*Audited Special Purpose Combined Financial Statements*" on page 425.

Further, this Placement Memorandum includes projections of revenue from operations and cash flows from operating activities of the Trust on a combined basis and each of Project SPV, individually, for the financial years ended March 31, 2026, March 31, 2027 and March 31, 2028, prepared in accordance with the basis of preparation as set out the projections of revenue from operations and cash flow from operating activities (the "**Projections of Revenue from Operations and Cash Flow from Operating Activities**"). For further details, please see the section "*Projections of Revenue from Operations and Cash Flow from Operating Activities*" on page 524.

Further, this Placement Memorandum includes summaries of the audited financial statements of (i) the Sponsor, as of and for the financial years ended March 31, 2024, March 31, 2023 and March 31, 2022 prepared in accordance with Ind AS and the Companies Act, derived from the financial statements of the Sponsor for the respective years; and (ii) Investment Manager, as of and for the period ended March 31, 2024 March 31, 2023 and March 31, 2022, prepared in accordance with Ind AS and the Companies Act and derived from the financial statements of the Investment Manager. For further details, please see the sections "*Summary of Financial Information of the Sponsor*" and "*Summary of Financial Information of the Investment Manager*" on pages 34 and 38, respectively.

The financial year for the Trust, the Investment Manager, the Project SPVs and the Sponsor, commences on April 1 and ends on March 31 of the next year, and accordingly, all references to a particular financial year or fiscal year, unless stated otherwise, are to the 12-month period ended on March 31 of that year.

The degree to which the financial information included in this Placement Memorandum will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting policies and practices, the Companies Act, the Indian GAAP, Ind AS and the InvIT Regulations. The Investment Manager has not attempted to explain these differences or quantify their impact on the financial data included in this Placement Memorandum, and it is urged that you consult your own advisors regarding such differences and their impact on our financial data. Any reliance by persons not familiar with Indian accounting policies and practices on the financial disclosures presented in this Placement Memorandum should accordingly be limited.

In this Placement Memorandum, any discrepancies in any table between the total and the sums of the amounts listed are due to rounding off. All figures and percentage figures have been rounded off to two decimal places. However, where any figures may have been sourced from third-party industry sources, such figures may be rounded-off to such number of decimal points as provided in such respective sources.

Non-GAAP Measures

EBITDA and EBITDA Margin (together, "**Non-GAAP Measures**"), presented in this Placement Memorandum are a supplemental measure of our performance and liquidity that is not required by, or presented in accordance with, Ind AS, Indian GAAP, IFRS or US GAAP. Further, these Non-GAAP Measures are not a measurement of our financial performance or liquidity under Ind AS, Indian GAAP, IFRS or US GAAP and should not be considered in isolation or construed as an alternative to cash flows, profit/ (loss) for the years/ period or any other measure of financial performance or as an indicator of our operating performance, liquidity, profitability or cash flows generated by operating, investing or financing activities derived in accordance with Ind AS, Indian GAAP, IFRS or US GAAP. In addition, EBITDA and EBITDA Margin are not standardised terms, hence a direct comparison of these Non-GAAP Measures between companies may not be possible. Other companies may calculate these Non-GAAP Measures differently from us, limiting its usefulness as a comparative measure. Although such Non-GAAP Measures are not a measure of performance calculated in accordance with applicable accounting standards, the Investment Manager believes that they are useful to an investor in evaluating us as they are widely used measures to evaluate our operating performance.

Currency and Units of Presentation

All references to:

- "Rupees" or "₹" or "INR" or "Rs." are to Indian Rupees, the official currency of the Republic of India; and
- "USD" or "US$" or "$" or "U.S. dollars" are to United States Dollars, the official currency of the United States

Except otherwise specified, certain numerical information in this Placement Memorandum has been presented in "million" units. (i) One million represents 1,000,000; (ii) one billion represents 1,000,000,000; and (iii) one lakh represents 1,00,000. Unless the context requires otherwise, any percentage amounts, as set forth in this Placement Memorandum, have been calculated on the basis of the Audited Special Purpose Combined Financial Statements and the summary financial statements of (i) the Sponsor; and (ii) the Trust, as the case may be.

Exchange Rates

This Placement Memorandum contains conversion of certain other currency amounts into Indian Rupees. These conversions should not be construed as a representation that these currency amounts could have been, or can be converted into Indian Rupees, at any particular rate. The following table sets forth, for the periods indicated, information with respect to the exchange rate between the Rupee and the US$ and the Rupee:

(in ₹)

Currency		Exchange Rate as on			
	December 31, 2024	September 30, 2024	March 31, 2024	March 31, 2023	March 31, 2022
1 US$	85.62	83.79	83.37	82.22	75.81

Source: https://www.fbil.org.in/#/home; www.xe.com.
Note: The reference rates are rounded off to two decimal places. If the reference rate is not available on a particular date due to a public holiday, exchange rates of the previous working day have been disclosed,

Industry and Market Data

Unless stated otherwise, industry and market data used in this Placement Memorandum has been obtained or derived from CRISIL Report. The Investment Manager has commissioned the CRISIL Report, to provide an independent estimation of the roads sector, which is based on historical data and certain assumptions.

Industry publications as well as government publications generally state that the information contained in such publications has been obtained from various sources believed to be reliable but that their accuracy and completeness are not guaranteed and their reliability cannot be assured. Accordingly, no decisions should be based solely on such information. The data used in these sources may have been re-classified for the purposes of presentation. Data from these sources may also not be comparable. Such data involves risks, uncertainties and numerous assumptions and is subject to change based on various factors, including those disclosed in the section "*Risk Factors- We have relied on data derived from (i) Technical Consultant Reports commissioned from the Technical Consultants, (ii) Traffic Reports commissioned from the Traffic Consultants and (iii) the CRISIL Report, which are based on certain estimates and assumptions and are subject to the limitations set out therein.*" on page 66. Accordingly, decisions should not be based solely on such information.

The extent to which the market and industry data used in this Placement Memorandum is meaningful depending on the reader's familiarity with and understanding of the methodologies used in compiling such data. There are no standard data gathering methodologies in the industry in which the business of the Trust is conducted, and methodologies and assumptions may vary widely among different industry sources. The CRISIL Report is subject to the following disclaimer:

"CRISIL Market Intelligence & Analytics (CRISIL MI&A), a division of CRISIL Limited (CRISIL) has taken due care and caution in preparing this report (Report) based on the Information obtained by CRISIL from sources which it considers reliable (Data). However, CRISIL does not guarantee the accuracy, adequacy or completeness of the Data / Report and is not responsible for any errors or omissions or for the results obtained from the use of Data / Report. This Report is not a recommendation to invest / disinvest in any entity covered in the Report and no part of this Report should be construed as an expert advice or investment advice or any form of investment banking within the meaning of any law or regulation. CRISIL especially states that it has no liability whatsoever to the subscribers / users / transmitters/ distributors of this Report. Without limiting the generality of the foregoing, nothing in the Report is to be construed as CRISIL providing or intending to provide any services in jurisdictions where CRISIL does not have the necessary permission and/or registration to carry out its business activities in this regard. Roadstar Investment Managers Limited will be responsible for ensuring compliances and consequences of non-compliances for use of the Report or part thereof outside India. CRISIL MI&A operates independently of, and does not have access to information obtained by CRISIL Ratings Limited, which may, in their regular operations, obtain information of a confidential nature. The views expressed in this Report are that of CRISIL MI&A and not of CRISIL Ratings Limited. No part of this Report may be published/reproduced in any form without CRISIL's prior written approval."

Valuation

The Valuation Report was commissioned by the Investment Manager for the purposes of the Unit Distribution.

Traffic Data

The Traffic Reports were commissioned by the Investment Manager.

Credit Rating

The Trust has obtained credit rating from ICRA Limited. The credit rating issued to the Trust is subject to the following disclaimer:

"ICRA ratings should not be treated as recommendation to buy, sell or hold the rated debt instruments. ICRA ratings are subject to a process of surveillance, which may lead to revision in ratings. An ICRA rating is a symbolic indicator of ICRA's current opinion on the relative capability of the issuer concerned to timely service debts and obligations, with reference to the instrument rated. Please visit our website www.icra.in or contact any ICRA office for the latest information on ICRA ratings outstanding. All information contained herein has been obtained by ICRA from sources believed by it to be accurate and reliable, including the rated issuer. ICRA however has not conducted any audit of the rated issuer or of the information provided by it. While reasonable care has been taken to ensure that the information herein is true, such information is provided 'as is' without any warranty of any kind, and ICRA in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness or completeness of any such information. Also, ICRA or any of its group companies may have provided services other than rating to the issuer rated. All information contained herein must be construed solely as statements of opinion, and ICRA shall not be liable for any losses incurred by users from any use of this publication or its contents."

Websites

The information contained on the websites of the Trust, the Trustee, the Placement Agent, or the other websites referred in this Placement Memorandum or that can be accessed through our websites or such other websites, neither constitutes part of this Placement Memorandum, nor is it incorporated by reference therein and should not form the basis of any investment decision. For details of the websites of the Trust, Trustee and Placement Agent, please see the section "*General Information*" on page 96.

FORWARD-LOOKING STATEMENTS

Certain statements contained in this Placement Memorandum that are not statements of historical fact constitute "forward-looking statements". Forward-looking statements can generally be identified by terminology such as "aim", "anticipate", "believe", "continue", "can", "could", "estimate", "expect", "intend", "likely", "may", "objective", "plan", "potential", "project", "pursue", "shall", "should", "target", "targeted", "will", "would", or other words or phrases of similar import. Similarly, statements that describe the strategies, objectives, plans or goals of the Trust are also forward-looking statements. However, these are not the exclusive means of identifying forward-looking statements.

All statements regarding the Trust's expected financial conditions, results of operations, business plans and prospects are forward-looking statements. These forward-looking statements include statements as to the Trust's business strategy, planned projects, revenue and profitability (including, without limitation, any financial or operating projections or forecasts), new business and other matters discussed in this Placement Memorandum that are not historical facts. These forward-looking statements and any other projections contained in this Placement Memorandum (whether made by the Trustee, Investment Manager or any third party), are predictions and involve known and unknown risks, uncertainties, assumptions and other factors that may cause the Trust's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or other projections. Further, this Placement Memorandum also includes the section "*Projections of Revenue from Operating and Cash Flow from Operating Activities*" on page 524.

The Valuation Report included in this Placement Memorandum, is based on certain projections and accordingly, should be read together with assumptions and notes thereto. For further details, please see the "*Valuation Report*" attached as Annexure A. The Traffic Reports, attached at Annexure B, include projections and estimates in relation to routine and periodic maintenance, including operation and maintenance contracts review, and operational analysis and generation comparison and accordingly, should be read in conjunction with the relevant notes and assumptions thereto.

All forward-looking statements and financial projections are subject to risks, uncertainties and assumptions. Actual results may differ materially from those suggested by forward-looking statements and financial projections due to certain known or unknown risks or uncertainties associated with the Investment Manager's expectations with respect to, but not limited to, the actual growth in the infrastructure sector, the Investment Manager's ability to successfully implement the strategy, growth and expansion plans, technological changes, cash flow projections, exposure to market risks, general economic and political conditions in India, monetary and fiscal policies of India, inflation, deflation, foreign exchange rates, performance of financial markets in India or globally, changes in domestic laws, regulations and taxes, changes in competition in the infrastructure sector, the outcome of any legal or regulatory proceedings and the future impact of new accounting standards. By their nature, certain of the market risk disclosures are only estimates and could be materially different from what actually occurs in the future. As a result, actual future gains, losses or impact on net income could materially differ from those that have been estimated.

Factors that could cause actual results, performance or achievements of the Trust to differ materially include, but are not limited to, those discussed under the sections "*Risk Factors*", "*Industry Overview*", "*Our Business*" and "*Discussion and analysis by the Directors of the Investment Manager of the financial condition, results of operations and cash flows of the Project SPVs of the Trust*", on pages 63, 153, 207 and 293, respectively. Some of the factors that could cause the Trust's actual results, performance or achievements to differ materially from those in the forward-looking statements, financial projections and financial information include, but are not limited to, the following:

- Toll collections and toll road traffic volumes may be affected by competing roads and bridges and other modes of transportation, and any improvements to, or construction of, such roads, bridges and other modes of transportation;

- Toll rates and collections and toll road traffic volumes are subject to regulatory constraints, number of road users subject to such rates and dependent on factors beyond our control;

- Leakage of the toll fees of any of the toll-based Project SPV's roads may materially and adversely affect our revenues and financial condition;

- We have relied on data derived from (i) Traffic Reports commissioned from the Traffic Study Consultant and (ii) the CRISIL Report, which are based on certain estimates and assumptions and are subject to the limitations set out therein;

- Certain provisions of the standard form of Concession Agreements may be untested, and the Concession Agreements may contain certain restrictive terms and conditions which may be subject to varying interpretations;

- The Valuation Report, and any underlying reports, are not opinions on the commercial merits of the Trust or the Project SPVs, nor are they opinions, expressed or implied, as to the future trading price of the Units or the financial condition of the Trust upon listing, and the valuation contained therein may not be indicative of the true value of the Project SPV's assets;

- Any infrastructure project that we acquire which is still under construction and development may be subject to cost overruns or delays;

- We may be subject to increases in costs, including operation and maintenance costs, which we cannot recover by increasing toll fees or annuity income under the relevant Concession Agreements;

- We will depend on various third parties to undertake certain activities in relation to the operation and maintenance of the roads and any delay, default or unsatisfactory performance by these third parties could materially and adversely affect our ability to effectively operate or maintain the roads. Further, the operation of the Project SPVs will also depend on our relationships with other stakeholders; and

- Our actual results may be materially different from the expectations, express or implied, or Projections of Revenue from Operations and Cash Flows from Operating Activities included, in this Placement Memorandum.

The forward-looking statements, Projections of Revenue from Operations and Cash Flow from Operating Activities, Valuation Report, Technical Reports and Traffic Reports reflect current views as of the dates specified therein and are not a guarantee of future performance or returns. These statements and projections are based on certain beliefs and assumptions, which in turn are based on currently available information. Although the Investment Manager and the Sponsor believe that the expectations and the assumptions upon which such forward-looking statements are based, are reasonable at this time, none of the Investment Manager or the Sponsor can assure that such expectations will prove to be correct or accurate.

In accordance with the InvIT Regulations, the assumptions underlying the Projections of Revenue from Operations and Cash Flow from Operating Activities have been examined by the Auditors in accordance with SAE 3400 "The Examination of Prospective Financial Information", issued by the Institute of Chartered Accountants of India. The Projections of Revenue from Operations and Cash Flow from Operating Activities have been prepared for inclusion in this Placement Memorandum for the purposes of this Unit Distribution, using a set of assumptions that include hypothetical assumptions about future events and management's actions that are not necessarily expected to occur, and have been approved by the IM Board. Consequently, Eligible Creditors are cautioned that the Projections of Revenue from Operations and Cash Flow from Operating Activities may not be appropriate for purposes other than that described above. In any event, these statements speak only as of the date of this Placement Memorandum or the respective dates indicated in this Placement Memorandum.

The Trust, the Investment Manager, the Sponsor and the Placement Agent or any of their affiliates or advisors, undertake no obligation to update or revise any of statements reflecting circumstances arising after the date hereof or to reflect the occurrence of underlying events, whether as a result of new information, future events or otherwise after the date of this Placement Memorandum. If any of these risks and uncertainties materialize, or if any of the Investment Manager's underlying assumptions prove to be incorrect, the actual results of operations or financial condition or cash flow of the Trust could differ materially from that described herein as anticipated, believed, estimated or expected. All subsequent forward-looking statements attributable to the Trust are expressly qualified in their entirety by reference to these cautionary statements. Given these uncertainties, Eligible Creditors are cautioned not to place undue reliance on such forward-looking statements and financial projections, and not to regard such statements to be a guarantee or assurance of the Trust's future performance or returns to unitholders.

THE UNIT DISTRIBUTION

The following is a general summary of the terms of this Unit Distribution. This summary should be read in conjunction with, and is qualified in its entirety by, the detailed information appearing elsewhere in this Placement Memorandum:

Unit Distribution	Unit Distribution of up to 455,477,143 Units to Eligible Creditors, on a private placement basis, by the Distributing Unitholders as per the Resolution Framework approved by the NCLAT. Pursuant to SEBI's letter dated March 20, 2024, the Trust has received an exemption from strict enforcement of Regulation 12(3A) of the InvIT Regulations, with reference to the requirement of holding certain Units by the Sponsor and Sponsor Group entities, collectively, for a certain period of time, subject to the Sponsor holding not less than 15% of the Units on a post-issue basis for a period of three years. Accordingly, 68,806,097 Units, equivalent to not less than 15% of total outstanding Units post the Unit Distribution, are proposed to be distributed to the Sponsor ("**Sponsor Lock-in Units**"), which will be held by the Sponsor for a period of at least three years from the date of listing of the Units.
Unit Value	₹100, being the value at which the IL&FS Unitholders have been issued Units in terms of the InvIT Documents
Minimum Allotment Lot[1]	200,000 Units
Unit Distribution Allocation Date[2]	On or about Wednesday, February 19, 2025
Sponsor	Roadstar Infra Private Limited
Trustee	Axis Trustee Services Limited
Investment Manager	Roadstar Investment Managers Limited
Project Manager	Elsamex Maintenance Services Limited
Eligible Creditors	Eligible creditors of Distributing Unitholders in terms of the Resolution Framework and the Interim Distribution Framework, as identified by a duly appointed intermediary.
Authority for this Unit Distribution	This Unit Distribution has been authorised and approved by the IM Board on April 2, 2024[3]
Tenure of the Trust	The Trust shall remain in force perpetually until it is dissolved or terminated in accordance with the Trust Deed. For details, please see the section "*Parties to the Trust*" on page 101.
Units issued and outstanding as of the date of this Placement Memorandum	As of the date of this Placement Memorandum, there are 455,477,143[5] issued and outstanding Units.
Sponsor and Sponsor Group(s) Units[6 and 7]	68,806,097[5] Units, equivalent to not less than 15% of total outstanding Units post the Unit Distribution, are proposed to be distributed to the Sponsor ("**Sponsor Lock-in Units**"), which will be held by the Sponsor for a period of at least three years from the date of listing of the Units in terms of SEBI's letter dated March 20, 2024 (exempting the Trust from strict enforcement of Regulation 12(3A) of the InvIT Regulations). The Units held by the Sponsor shall rank *pari passu* with, and have the same rights as the Units to be Allotted pursuant to this Unit Distribution.
Units outstanding immediately after the Unit Distribution	Up to 455,477,143 Units
Distribution	Please see the section "*Distribution*" on page 288
Indian Taxation	Please see the section "*Statement of Tax Benefits"* on page 401
Listing	Prior to this Unit Distribution, there has been no market for the Units. The Units are proposed to be listed on the Stock Exchanges. In-principle approvals for listing of the Units has been received from Stock Exchanges on July 22, 2024. The validity of the in-principle approval of NSE has been extended by way of letters dated October 28, 2024 and February 10, 2025. The validity of the in-principle approval

	of BSE has been extended by way of letters dated November 7, 2024 and February 10, 2025.The Investment Manager shall apply to the Stock Exchanges for the final listing and trading approval, after the Allotment and the credit of the Units to the demat accounts of the Allottees
Designated Stock Exchange	NSE
Closing Date	The date on which Allotment of the Units pursuant to this Unit Distribution shall be made, i.e. on or about Tuesday, March 4, 2025
Ranking[(8)]	The Units being distributed shall rank *pari passu* in all respects, including rights in respect of distribution. Please see the section *"Rights of Unitholders"* on page 383
Lock-in and Rights of Unitholders	For details, please see the sections "*Information Concerning the Units*" and "*Rights of Unitholders*" on pages 272 and 383, respectively
Risk Factors	Eligible Creditors should consider carefully the matters discussed in the section *"Risk Factors*" on page 63

[1]As per the exemption granted by SEBI by way of its letter dated March 20, 2024.

[2]The Trust has been granted an exemption by SEBI from disclosing the "issue opening date" and "issue closing date' by way of its letter dated March 20, 2024.

[3]The details of authorisations by the Distributing Unitholders for their participation in the Unit Distribution is set out below:

S. No.	*Distributing Unitholders*	*Date of Board Resolutions*
1.	*Sabarmati Capital One Limited*	*March 29, 2024 and February 7, 2025*
2.	*IL&FS Financial Services Limited*	*March 30, 2024 and February 7, 2025*
3.	*Infrastructure Leasing & Financial Services Limited*	*March 28, 2024 and February 6, 2025*
4.	*IL&FS Transportation Networks Limited*	*March 29, 2024 and February 7, 2025*

[5]The details in relation to the issue of Units by the Trust to the IL&FS Unitholders are set-out below:

S. No.	*Name*	*Number of Units*	*Date of Board Resolution*
	MBEL		
1.	*IL&FS Airports Limited*	*2,663,185*	*December 23, 2021*
2.	*Sabarmati Capital One Limited*	*8,494,972*	
3.	*IL&FS Financial Services Limited*	*26,016,583*	
4.	*Infrastructure Leasing & Financial Services Limited*	*56,856,800*	
5.	*IL&FS Cluster Development Initiative Limited*	*8,818,205*	
6.	*IL&FS Transportation Networks Limited*	*1,426,636*	
7.	*IL&FS Transportation Networks Limited*	*57,677,900*	
8.	*Bhopal E- Governance Limited*	*77,138*	
9.	*IL&FS Transportation Networks Limited*	*10,404,048*	*May 30, 2024*
	SBHL		
10.	*IL&FS Transportation Networks Limited*	*20,781,190*	*March 18, 2022*
11.	*IL&FS Transportation Networks Limited*	*37,787,533*	
12.	*IL&FS Financial Services Limited*	*2,991,438*	*October 23, 2024*
	HREL		
13.	*IL&FS Transportation Networks Limited*	*25,178,412*	*December 13, 2022*
14.	*IL&FS Financial Services Limited*	*67,858*	
15.	*Infrastructure Leasing & Financial Services Limited*	*52,362*	
16.	*IL&FS Transportation Networks Limited*	*112,885*	
	TRDCL		
17.	*IL&FS Transportation Networks Limited*	*3,753,445*	*December 13, 2022*
18.	*IL&FS Financial Services Limited*	*1,070,923*	
19.	*Infrastructure Leasing & Financial Services Limited*	*3,221,383*	
20.	*IL&FS Transportation Networks Limited*	*36,428*	
	PSRDCL		
21.	*IL&FS Transportation Networks Limited*	*47,433,603*	*May 12, 2023*
22.	*IL&FS Financial Services Limited*	*29,254,765*	
23.	*Infrastructure Leasing & Financial Services Limited*	*28,983,719*	
24.	*IL&FS Cluster Development Initiative Limited*	*8,791,241*	
25.	*Sabarmati Capital One Limited*	*5,665,511*	
26.	*IL&FS Transportation Networks Limited*	*173,275*	
	BAEL		
27.	*IL&FS Transportation Networks Limited*	*54,314,944*	*October 14, 2024*
28.	*IL&FS Transportation Networks Limited*	*150,429*	
29.	*IL&FS Financial Services Limited*	*13,220,332*	

[6]As permitted by SEBI by way of its letter dated March 20, 2024, the Sponsor is only required to hold the mandatory unitholding, being not less than 15% of total outstanding Units, post the Unit Distribution, as contemplated under Regulation 12(3) of the InvIT Regulations for a period of three years from the date of listing and accordingly, 68,806,097 Units will be distributed to the Sponsor to comply with such requirements. The Sponsor Lock-in Units will be distributed to the Eligible Creditors upon expiry of the three year period. For details see "Unit Distribution Procedure and Information" on page 392.

[7] Pursuant to the IL&FS Interim Distribution SOP as approved by the board of directors of IL&FS in its meeting held on May 15, 2024, IL&FS and ITNL will continue to hold 31,593,908 Units after the Unit Distribution which will be held by them for a period of one year from the date of Unit Distribution in accordance with Regulation 12(3) of the InvIT Regulations. These Units correspond to the recovery amount for contingent claims that are either 'admitted contingent claims' or 'contingent claims that are neither admitted nor rejected and under

appeal/adjudication at various fora'. These Units will be locked in with IL&FS and ITNL for a period of at least one year from the date of listing of Units or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. The Units which remain unallocated post finalisation of the contingent claims shall form part of pool of Units used for settlement of other creditors of the IL&FS Group and will be kept in separate demat accounts which will be jointly controlled by the Investment Manager. Distribution / sale of such Units, after a one-year lock-in period, shall be in consultation with the Investment Manager and SEBI. Prior to filing the Final Placement Memorandum, the Investment Manager shall enter into letter arrangements with IL&FS and ITNL for being a joint signatory to the demat accounts where such Units will be kept in relation to contingent claims. Under no circumstance such Units would be held in a beneficial interest capacity by any of the IL&FS entities.

8 During the period that the Distributed Units are held in escrow in the Unit Escrow Accounts, any distributions or benefits accruing to the Distributed Units (if any) shall be to the credit of the Eligible Creditors and shall be released into a Unit Escrow Account notified in writing by the Eligible Creditors. The Distributing Unitholders shall not continue to exercise all its rights including voting rights attached to the Distributed Units, during the period they are held in escrow in the Unit Escrow Accounts. For details see the section "Unit Distribution Procedure and Information- Escrow Mechanism" on page 397 .

The Unit Distribution is a distribution of Units under Regulation 14(2) of the InvIT Regulations, subject to exemptions granted by way of SEBI Exemption Letters. Exemption from strict enforcement of paragraph 15.1 of the InvIT Master Circular, with reference to requirement of listing of Units within six working days from the closure of the issue has been granted by SEBI way of its letter dated March 20, 2024. Upon listing of the Units on the Stock Exchanges, the Units shall be traded only on the dematerialized segment of the Stock Exchanges.

In accordance with the InvIT Regulations, no Unitholder shall enjoy superior voting or any other rights over another Unitholder. Further, there shall not be multiple classes of Units. However, the Trust may issue subordinate units of the Trust only to the Sponsor and its Associates, in compliance with the InvIT Regulations, where such subordinate units of the Trust shall carry only inferior voting or other rights compared to the Units. For further details in relation to this Unit Distribution, including the method of application, please see the section "*Unit Distribution Procedure and Information*" on page 392.

No person connected with the Unit Distribution, including any person connected with the distribution of this Placement Memorandum, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for participating in the Unit Distribution. For further details in relation to this Unit Distribution please see the section "*Unit Distribution Procedure and Information*" on page 392.

Preliminary distribution

The Units allotted to (and currently held by) the IL&FS Group as consideration of the transfer of their respective interests in the Project SPVs to the Trust would be distributed to the Eligible Creditors of such IL&FS Group entities as per the Resolution Framework.

While the intention of the Unit Distribution is to ensure that Eligible Creditors (i.e., non-IL&FS Group entities) receive Units from the IL&FS Group entities as part of the Resolution Framework, in certain cases, the creditors of the IL&FS Unitholders are actually other IL&FS Group entities themselves ("**Intragroup Creditors**"). To prevent a situation where in the Units held by the relevant IL&FS Unitholders would be distributed to (and held by) Intragroup Creditors even after the Unit Distribution, a preliminary distribution of such Units to the Intragroup Creditors was undertaken. The details of the Preliminary Distribution are set forth below:

The unitholding of the IL&FS Group entities that currently hold Units ("**IL&FS Unitholders**"), before and after the Preliminary Distribution is set out below:

S. No.	Name of Entity	Pre-Preliminary Distribution		Post Preliminary Distribution	
		No. of units held *	% of holding	No. of units held	% of holding
1.	IL&FS Transportation Networks Limited	259,230,728	56.91	219,993,908	48.30
2.	IL&FS	89,114,264	19.57	124,870,622	27.42
3.	Sabarmati Capital One Limited	14,160,483	3.11	2,000,000	0.44
4.	IL&FS Financial Services Limited	72,621,899	15.94	108,535,475	23.83
5.	IL&FS Airports Limited*	2,663,185	0.58	-	-
6.	IL&FS Cluster Development Initiative Limited*	17,609,446	3.87	-	-

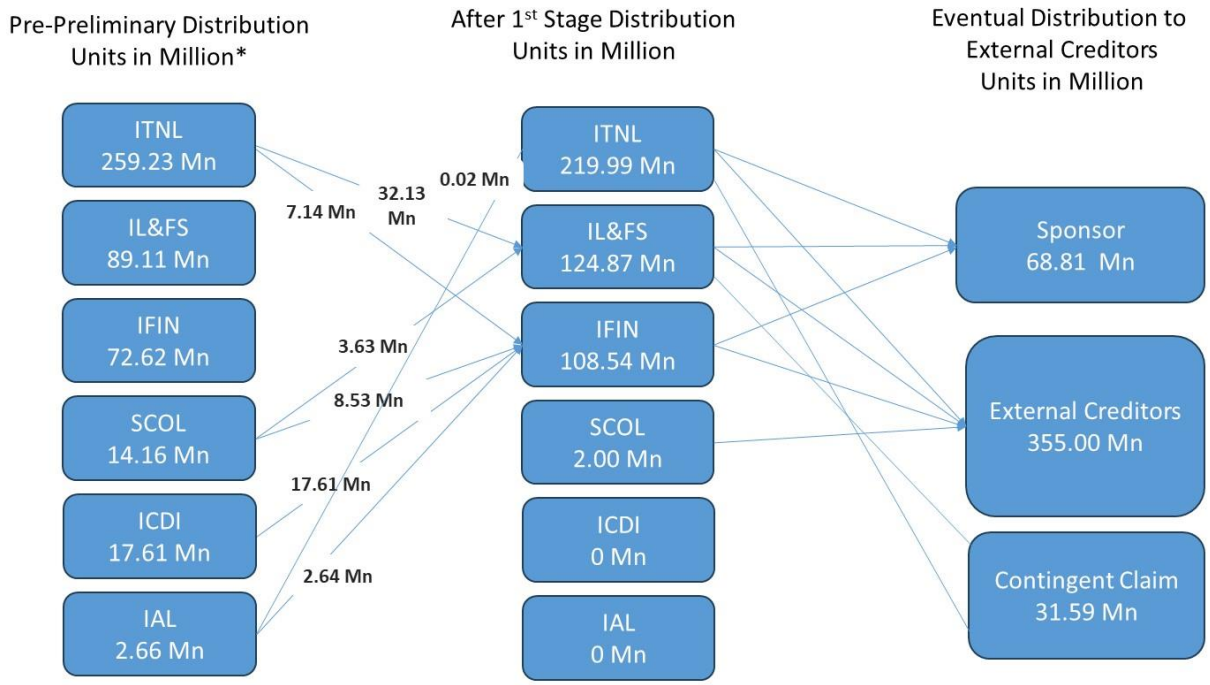
* *Pursuant to the Preliminary Unit Distribution, these entities have divested their unitholding in the Trust and hence are no longer participating in the Unit Distribution.*

The Units distributed to the Intragroup Creditors pursuant to the Preliminary Distribution are, in turn, distributed in terms of the Resolution Framework to their external creditors (i.e., non-IL&FS Group entities) pursuant to the Unit Distribution.

In this regard exemption from strict enforcement (i) of second proviso of Regulation 12(3) of the InvIT Regulations, with reference to requirement of holding of Units in excess of the minimum 15% of the Units for one year to allow the Preliminary Distribution to the Intragroup Creditors and subsequently to the Eligible Creditors; and (ii) of Regulation 16(10) of the InvIT Regulations, with reference to requirement of Units to be held by persons other than the Sponsor Group for one year from the date of listing has been granted by SEBI by way of its letter dated March 20, 2024.

Pursuant to the IL&FS Interim Distribution SOP as approved by the board of directors of IL&FS in its meeting held on May 15, 2024, IL&FS and ITNL will continue to hold 31,593,908 Units after the Unit Distribution which will be held by them for a period of one year from the date of Unit Distribution in accordance with Regulation 12(3) of the InvIT Regulations.These Units correspond to the recovery amount for contingent claims that are either 'admitted contingent claims' or 'contingent claims that are neither admitted nor rejected and under appeal/adjudication at various fora'. These Units will be locked in with IL&FS and ITNL for a period of at least one year from the date of listing of Units or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. The Units which remain unallocated post finalisation of the contingent claims shall form part of pool of Units used for settlement of other creditors of the IL&FS Group which will be kept in separate demat accounts which will be controlled by the Investment Manager and will be released after a one year lock-in period, in consultation with SEBI. Prior to filing the Final Placement Memorandum, the Investment Manager shall enter into letter arrangements with IL&FS and ITNL for being a joint signatory to the demat accounts where such Units will be kept in relation to contingent claims. Under no circumstance such Units would be held in a beneficial interest capacity by any of the IL&FS entities.

Please see below a diagrammatic representation of the Preliminary Distribution and the Unit Distribution and the corresponding distribution of Units:



Note: Overall InvIT unit outstanding are 455,477,143 units

OVERVIEW OF THE TRUST

The following overview is qualified in its entirety by, and is subject to, the more detailed information contained in, or referred to elsewhere, in this Placement Memorandum. The statements contained in this summary that are not historical facts may be forward-looking statements. Such statements are subject to certain risks, uncertainties and assumptions that could cause actual results of the Trust to differ materially from those forecasted or projected in this Placement Memorandum. Under no circumstances should the inclusion of such information herein be regarded as a representation, warranty or prediction of the accuracy of the underlying assumptions by the Trust, the Parties to the Trust or the Placement Agent or any other person or that these results will be achieved or are likely to be achieved. Eligible Creditors are advised not to rely solely on this overview, however, and should read this Placement Memorandum in its entirety and in particular, the section "Risk Factors" on page 63.

Structure and description of the Trust

Roadstar Infra Private Limited ("**Settlor**") set up the Trust by way of the Trust Deed dated October 6, 2020, as amended, as a contributory irrevocable determinate trust under the provisions of the Indian Trusts Act, 1882 at Mumbai, India. The Settlor has settled the Trust for an initial sum of ₹ 1,000. The Sponsor shall not have any beneficial interest in such initial sum of the Trust and such sum shall not be distributed to Sponsor under any circumstances. The Trust was registered as an infrastructure investment trust under the InvIT Regulations on December 22, 2020, having registration number IN/InvIT/20-21/0015.

For details of the registered office and contact person of the Settlor, please see the section "*General Information*" on page 96.

Further, Roadstar Investment Managers Limited has been appointed as the Investment Manager to the Trust, and Elsamex Maintenance Services Limited has been appointed as the Project Manager to the Trust pursuant to a resolution passed by the IM Board. The Project Manager, the Investment Manager and the Project SPVs have entered into Project Implementation and Management Agreement in this regard. For further details, please see the section "*Parties to the Trust*" on page 101.

Investment Objectives

The object and purpose of the Trust shall be to carry on the activity of an infrastructure investment trust under the InvIT Regulations. The principal investment objectives of the Trust is to own, operate and invest in infrastructure projects in India, directly or through Holdco or SPVs and make other investments and undertake such activities in such jurisdictions as may be permissible under the InvIT Regulations, other applicable law and the InvIT Documents (collectively, the "**Investment Objectives**").

The Trustee, in consultation with the Investment Manager, shall ensure that the InvIT Assets shall be utilized solely for the purpose of the Investment Objectives set out above, towards making investments and incurring expenses of the Trust in accordance with the InvIT Documents.

The Trust shall not engage in any business or activities except as permitted under InvIT Documents and subject to the InvIT Regulations.

Unless permitted by applicable law, the Trustee shall, in consultation with the Investment Manager, ensure that the InvIT Assets shall not be utilized for any activities prohibited under the InvIT Regulations. The Trustee shall, in consultation with the Investment Manager, also ensure that the Trust complies with any additional conditions as may be specified by the SEBI.

The Trustee, in respect of the Trust, shall, in consultation with the Investment Manager, do all other things necessary and conducive to the attainment of the Investment Objectives, directly or through the Investment Manager or the Project Manager.

The Trustee, on the advice of the Investment Manager, may, if it deems expedient, from time to time, review, revise, amend, vary or alter the Investment Objectives in accordance with the Trust Deed, subject to the provisions of the InvIT Documents and applicable law.

All InvIT Assets shall be registered in the name of the Trust or the Trustee (on behalf of the Trust), as permissible.

Fee and expenses

Annual Expenses

The expenses in relation to the Trust, other than such expenses incurred in relation to operations of the Project SPVs, would broadly include fee payable to: (i) the Trustee; (ii) the Investment Manager; (iii) the Project Manager; (iv) the Auditors, (v) the Valuer; and (vi) other intermediaries and consultants.

The estimated recurring expenses on an annual basis (excluding GST), including but not limited to, are as follows:

(₹ in million)

Payable by the Trust	Estimated Expenses*
Fee payable to Credit Rating Agency	4.00
Fee payable to the Valuer	Please see Note 1 below
Fee payable to the Technical Consultant	18.23
Fee payable to the Auditors	1.60
Fee payable to Trustee	Please see Note 2 below
Fee payable to Investment Manager	Please see Note 3 below
Fee payable to Project Manager	Please see Note 4 below

**The above-mentioned expenses relate to one full year of operation for the Trust.*

Note 1:
The Valuer shall be entitled to a fee of ₹1.50 million, excluding out of pocket expenses incurred in connection with the performance of the services.

Note 2:
The Trustee shall be entitled to a fee of ₹1.80 million (the "**Trusteeship Fee**"), which shall be paid annually to the Trustee for the services rendered to the Trust. In addition, the Trustee shall be to recover from the Trust any (i) any legitimate out of pocket expenses incurred by it in relation to its trusteeship of the Trust, and (ii) any tax or duty including goods and services tax (other than income tax) which is, or has become as on the date of collection of such tax or duty, leviable under the applicable law on the fee payable to the Trustee by the Trust.

Note 3:
The annual fee payable by the Trust to the Investment Manager shall be equal to 107.00% of the costs incurred by the Investment Manager in providing the investment management services to the Trust under the Investment Management Agreement. For the purposes of this proposal, "costs" shall include all manpower expenses, administrative expenses, audit fees and operating expenses that may be, or are, debited to the Investment Manager's statement of profit and loss, excluding depreciation. Such fee will be paid to the Investment Manager on a quarterly basis as per the terms of the Investment Management Agreement.

The Investment Manager shall be able to recover from the Trust any tax or duty or levies including goods and services tax (other than income tax) which is, or may become, leviable under applicable law on the fees payable to the Investment Manager by the Trust.

Note 4:
The Project Manager is entitled to a fee from the funds of the relevant Project SPV on an arm's length basis in accordance with the relevant Project Implementation and Management Agreement ("**PM Fee**"). The PM Fee is calculated equal to 1.50% of the operation, management, major maintenance expenses (paid or accrued) of the identified SPV in the financial year in which the fee is being paid. The fee as described above, is payable in monthly instalments.

The payments of PM Fee is subject to applicable tax deduction, as may be required as per applicable law. The PM Fee is exclusive of GST which is attributed to the account of the relevant Project SPV. The Project Manager can charge delay interest in case of failure to make payments within the agreed timelines in accordance with the provisions of the relevant Project Implementation and Management Agreement.

Set-up expenses

In connection with establishment and registration of the Trust, the Sponsor has incurred approximately ₹55.12 million as expenses, which has been reimbursed by the Trust.

Unit Distribution Expenses

The total expenses of this Unit Distribution are estimated to be up to ₹ [●] million ("**Unit Distribution Expenses**"). The Unit Distributions Expenses consist of fee and commissions payable to the Placement Agent, fee payable to legal counsels and Registrar, fee payable to Trustee, Valuer, SEBI (filing of the Unit Distribution Documents), Technical Consultant, Auditor and Credit Rating Agency, stamp duties payable on issuance of units, Registrar and Unit Transfer Agent and all other incidental and miscellaneous expenses for undertaking the formation transactions and for listing the Units on the Stock Exchange. The Unit Distribution expenses shall be borne by the Trust. For ease of operations, if required, the expenses in relation to the Unit Distribution as stated above, at the outset, may be borne by the Sponsor or the Investment Manager on behalf of the Trust, and the Investment Manager (on behalf of the Trust) agrees that it will reimburse the Sponsor or the Investment Manager for all such expenses as may be incurred by the Sponsor or the Investment Manager on actual basis, from the future cash flows of the Trust.

We propose to pay a fee to Axis Capital Limited ("Axis Capital**") in respect to its role as the Placement Agent. While Axis Capital is an affiliate of the Trustee, it is not an associate of the Trust in terms of the Securities and Exchange Board of India (Merchant Bankers) Regulations, 1992. There is no conflict of interest under the Securities and Exchange Board of India (Merchant Bankers) Regulations, 1992, as amended, or any other applicable SEBI rules or regulations and current disclosure is being made to ensure disclosure of all transactions with affiliate of the Trustee. The current disclosure is being made to ensure disclosure of all transactions with affiliate of the Trustee.*

Details of credit ratings

Please see the section "*General Information – Credit ratings*" on page 100 in relation to the details of credit ratings.

FORMATION TRANSACTIONS IN RELATION TO THE TRUST

Details of arrangements pertaining to the Trust

The Project SPVs comprise of six road project SPVs, namely, (i) Hazaribagh Ranchi Expressway Limited; (ii) Moradabad Bareilly Expressway Limited; (iii) Pune Sholapur Road Development Company Limited; (iv) Sikar Bikaner Highway Limited; (v) Thiruvananthapuram Road Development Company Limited; and (vi) Barwa Adda Expressway Limited (collectively**, "the Project SPVs")**. The shareholding of the Project SPVs has been transferred to the Trust by way of the relevant Share Purchase Agreements.

The details of the Project SPVs as on the date of this Placement Memorandum are provided below:

1. **Hazaribagh Ranchi Expressway Limited**

HREL is a public limited company incorporated on March 19, 2009, originally incorporated as ITNL Highways Development Company Limited, under the Companies Act, 1956 (CIN U45203MH2009PLC191070). Pursuant to a fresh certificate of incorporation dated May 11, 2009, the name of the company was changed to Hazaribagh Ranchi Expressway Limited. Its registered office is located at the IL&FS Financial Centre, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized share capital of HREL is ₹1,320,000,000.00 (divided into 132,000,000 equity shares of ₹10.00 each) and its issued, subscribed and paid-up capital is ₹1,310,000,000.00 (divided into 131,000,000 equity shares of ₹ 10 each), as at the date of this Placement Memorandum.

The shareholding pattern of HREL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	130,986,840	99.99
2.	Punj Lloyd Limited	13,100	0.01
3.	Roadstar Infra Investment Trust and Ravi Praveen Kumar	10	Negligible
4.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
5.	Roadstar Infra Investment Trust and Parimal Prasad	10	Negligible
6.	Roadstar Infra Investment Trust and Jyotsna Matondkar	10	Negligible
7.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
8.	Roadstar Infra Investment Trust and Danny Samuel	10	Negligible
	Total	**131,000,000**	**100.00**

2. **Moradabad Bareilly Expressway Limited**

MBEL is a public limited company incorporated on January 11, 2010, under the Companies Act, 1956 (CIN U45208MH2010PLC198737). Its registered office is located at the IL&FS Financial Centre, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized share capital of MBEL is ₹2,216,600,000.00 (divided into 221,660,000 equity shares of ₹ 10.00 each) and its issued, subscribed and paid-up capital is ₹ 2,216,600,000.00 (divided into 221,660,000 equity shares of ₹10.00 each), as at the date of this Placement Memorandum.

The shareholding pattern of MBEL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	221,659,940	100
2.	Roadstar Infra Investment Trust and Ravi Praveen Kumar	10	Negligible
3.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
4.	Roadstar Infra Investment Trust and Parimal Prasad	10	Negligible
5.	Roadstar Infra Investment Trust and Jyotsna Matondkar	10	Negligible
6.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
7.	Roadstar Infra Investment Trust and Danny Samuel	10	Negligible
	Total	**221,660,000**	**100.00**

3. **Pune Sholapur Road Development Company Limited**

PSRDCL is a public limited company incorporated on August 21, 2009, under the Companies Act, 1956 (CIN U45203MH2009PLC195154). Its registered office is located at the IL&FS Financial Centre, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized share capital of PSRDCL is ₹1,760,000,000.00 (divided into 176,000,000 equity shares of ₹10.00 each) and its issued, subscribed and paid-up capital is ₹ 1,760,000,000.00 (divided into 176,000,000 equity shares of ₹10.00 each), as at the date of this Placement Memorandum.

The shareholding pattern of PSRDCL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	159,999,940	90.91
2.	Roadstar Infra Investment Trust and Jyotsna Matondkar	10	Negligible
3.	Roadstar Infra Investment Trust and Danny Samuel	20	Negligible
4.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
5.	Roadstar Infra Investment Trust and Ravi Praveen Kumar	10	Negligible
6.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
7.	East Nippon Expressway Company Limited	16,000,000	9.09
	Total	**176,000,000**	**100.00**

4. **Sikar Bikaner Highway Limited**

SBHL is a public limited company incorporated on April 13, 2012, under the Companies Act, 1956 (CIN U45203MH2012PLC229612). Its registered office is located at the IL&FS Financial Centre, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized share capital of SBHL is ₹1,240,500,000.00 (divided into 124,050,000 equity shares of ₹10.00 each) and its issued, subscribed and paid-up capital is ₹1,240,500,000.00 (divided into 124,050,000 equity shares of ₹10.00 each), as at the date of this Placement Memorandum.

The shareholding pattern of SBHL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	124,049,940	100.00
2.	Roadstar Infra Investment Trust and Parimal Prasad	10	Negligible
3.	Roadstar Infra Investment Trust and Ravi Praveen Kumar	10	Negligible
4.	Roadstar Infra Investment Trust and Danny Samuel	10	Negligible
5.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
6.	Roadstar Infra Investment Trust and Jyotsna Matondkar	10	Negligible
7.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
	Total	**124,050,000**	**100.00**

5. **Thiruvananthapuram Road Development Company Limited**

TRDCL is a public limited company incorporated on March 1, 2004, under the Companies Act, 1956 (CIN U45203MH2004PLC144789). Its registered office is located at the IL&FS Financial Centre, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized share capital of TRDCL is ₹ 350,000,000.00 (divided into 35,000,000 equity shares of ₹ 10.00 each), and its issued, subscribed and paid-up capital is ₹ 340,600,700.00 (divided into 34,060,070 equity shares of ₹ 10.00 each), as at the date of this Placement Memorandum.

The shareholding pattern of TRDCL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	17,030,000	50.00
2.	Punj Lloyd Limited	17,030,000	50.00

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
3.	K. Ramchand	10	Negligible
4.	Sanjay Arora	10	Negligible
5.	Roadstar Infra Investment Trust and Danny Samuel	20	Negligible
6.	Roadstar Infra Investment Trust and Ravi Praveen Kumar	10	Negligible
7.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
8.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
	Total	**34,060,070**	**100.00**

Note: In the case of TRDCL, by way of a letter dated June 23, 2022, SEBI had granted an exemption to the Trust from compliance with Regulation 2(1)(zy), 18(3)(a) and 18(3)(b) of the InvIT Regulations.

6. **Barwa Adda Expressway Limited**

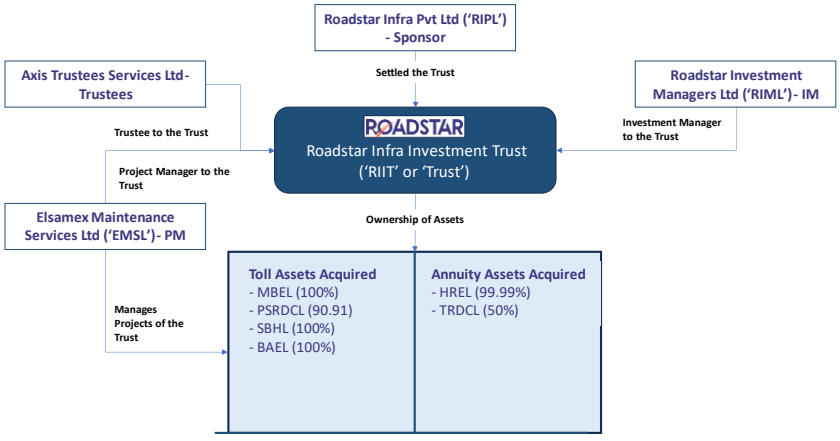
BAEL is a public limited company incorporated on April 23, 2013, under the Companies Act, 1956 (CIN U45400MH2013PLC242336). Its registered office is located at the IL&FS Financial Center, Plot C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. The authorized capital of BAEL is ₹ 3,350,000,000.00 (divided into 335,000,000 shares of ₹10.00 each), and its issued, subscribed and paid-up capital is ₹ 2,43,50,00,000.00 (divided into 243,500,000 equity shares of ₹10.00 each), as at the date of this Placement Memorandum.

The shareholding pattern of BAEL as at the date of this Placement Memorandum is provided below:

Sr. No.	Shareholder's Name	No. of Equity Shares	Percentage (%)
1.	Roadstar Infra Investment Trust	243,499,940	100.00
2.	Roadstar Infra Investment Trust and Vijay Kini	10	Negligible
3.	Roadstar Infra Investment Trust and Ajay S Vaidyanath	10	Negligible
4.	Roadstar Infra Investment Trust and Danny Samuel	10	Negligible
5.	Roadstar Infra Investment Trust and Sachin Suresh Joshi	10	Negligible
6.	Roadstar Infra Investment Trust and Pritesh Lalwani	10	Negligible
7.	Roadstar Infra Investment Trust and Milind Ramesh Gandhi	10	Negligible
	Total	**243,500,000**	**100.00**

Proposed post-Unit Distribution structure

The following structure illustrates the relationship between the Trust, the Trustee, the Sponsor, the Project Manager, the Investment Manager and the Project SPVs as on the Listing Date, that is pursuant to the completion of the proposed Unit Distribution:



SUMMARY OF COMBINED FINANCIAL STATEMENTS

The following tables set forth the summary financial information derived from the Audited Special Purpose Combined Financial Statements which were prepared in accordance with the recognition and measurement principles of Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 prescribed under Section 133 of the Companies Act, 2013 read with the InvIT Regulations and the circulars issued thereunder and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India, as of and for the six month period ended September 30, 2024 and fiscals 2024, 2023, and 2022.

The degree to which the summary financial information included herein below will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations. Accordingly, any reliance by persons not familiar with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations on the summary financial information presented below should be limited.

The summary financial information derived from the Combined Financial Statements, as presented below, should be read together with the section entitled "Discussion and Analysis by the Directors of the Investment Manager of the Financial Condition, Results of Operations and Cash Flows of Project SPVs of the Trust" on page 293 in conjunction with the section entitled "Audited Special Purpose Combined Financial Statements" enclosed at page 425.

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Roadstar Infra Investment Trust
Special Purpose Combined Balance Sheet

(all amounts in ₹ million unless otherwise stated)

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
ASSETS								
Non-current assets								
(a) Property, plant and equipment		20.70		21.01		22.92		25.48
(b) Intangible assets								
(i) Service Concession Arrangements (SCA)	54,565.54		56,053.70	-	58,954.81		61,543.31	
(ii) Intangible assets under development	3,320.13	57,885.67	2,617.51	58,671.21	679.65	59,634.46	11.95	61,555.26
(c) Investment accounted for using equity method		0.00		0.00		0.00		0.00
(d) Financial assets		-						
(i) Other financial assets		2,041.75		3,562.72		4,679.01		5,992.58
(e) Tax assets								
(i) Deferred tax asset (net)		562.53		619.92		531.82		568.53
(f) Other non-current assets		4.76		19.42		-		0.04
(g) Non-current tax assets (net)		112.86		91.65		40.00		25.71
Total non-current assets		**60,628.27**		**62,985.93**		**64,908.21**		**68,167.61**
Current assets								
(a) Financial assets								
(i) Investments	658.57		635.43		592.31		1,579.61	
(ii) Trade receivables	37.00		52.29		142.81		26.32	
(iii) Cash and cash equivalents	2,073.35		2,273.68		1,956.67		943.35	
(iv) Bank balances other than (iii) above	7,460.27		8,330.63		12,226.25		12,641.81	
(v) Other financial assets	8,958.46	19,187.65	7,913.38	19,205.41	5,412.01	20,330.05	5,963.48	21,154.57
(b) Current tax assets (net)		221.43		197.81		192.40		154.99
(c) Other current assets		88.09		83.66		81.86		88.84
Total current assets		**19,497.17**		**19,486.88**		**20,604.31**		**21,398.40**
Total assets		**80,125.44**		**82,472.81**		**85,512.52**		**89,566.00**
EQUITY AND LIABILITIES								
Equity								
(a) Share capital	8,801.97		8,801.97		8,801.97		8,801.97	
(b) Other equity	(27,872.63)	(19,070.66)	(21,053.65)	(12,251.68)	(21,026.90)	(12,224.93)	(18,830.57)	(10,028.60)
Equity attributable to controlling interest of RIIT InvIT group		**(19,070.66)**		**(12,251.68)**		**(12,224.93)**		**(10,028.60)**
Non-controlling interest of RIIT InvIT group		**(10.72)**		**28.69**		**110.68**		**194.11**
Liabilities								
Non-current liabilities								
(a) Financial liabilities								
(i) Borrowings	65,382.71		67,214.40		66,134.05		53,686.95	
(ii) Trade payables								
a) Dues of micro enterprises and small enterprises	-		-		-		-	
b) Dues of other than micro enterprises and small enterprises	-		-		-		-	
(iii) Other financial liabilities	6,890.90	72,273.61	5,246.84	72,461.24	5,095.57	71,229.62	4,881.17	58,568.12
(b) Provisions		1,456.25		962.00		2,117.64		1,017.23
Total non-current liabilities		**73,729.86**		**73,423.24**		**73,347.26**		**59,585.35**
Current liabilities								
(a) Financial liabilities								
(i) Borrowings	6,458.98		6,132.48		8,691.93		24,674.79	
(ii) Trade payables								
a) Dues of micro enterprises and small enterprises	1.89		1.22		0.15		0.22	
b) Dues of other than micro enterprises and small enterprises	6,352.24		6,798.56		7,144.20		6,579.97	
(iii) Other financial liabilities	11,167.06	23,980.17	6,749.80	19,682.06	8,153.67	23,989.94	6,805.45	38,060.43
(b) Provisions		1,423.32		1,510.07		218.29		1,303.60
(c) Current tax liabilities (net)		-		-		-		377.94
(d) Other current liabilities		73.47		80.43		71.27		73.18
Total current liabilities		**25,476.96**		**21,272.56**		**24,279.51**		**39,815.15**
Total liabilities		**99,206.82**		**94,695.80**		**97,626.77**		**99,400.50**
Total equity and liabilities		**80,125.44**		**82,472.81**		**85,512.52**		**89,566.00**

Roadstar Infra Investment Trust
Combined Statement of Profit and Loss

(all amounts in ₹ million unless otherwise stated)

	Particulars	For the six month period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
	Income				
I.	Revenue from operations	5,492.72	11,658.14	9,940.48	7,631.12
II.	Other income	1,932.78	1,262.06	2,266.07	1,052.55
III.	**Total income (I+II)**	**7,425.50**	**12,920.20**	**12,206.55**	**8,683.67**
IV.	**Expenses**				
	Construction costs and cost of material consumed	667.58	1,845.17	641.78	-
	Operating expenses	1,126.89	1,936.99	3,044.23	1,553.59
	Employee benefits expense	-	-	-	-
	Finance costs	7,996.95	6,258.37	6,727.54	4,102.08
	Depreciation and amortisation expense	1,489.17	2,903.00	2,609.70	1,958.71
	Other expenses	2,945.92	173.50	647.78	161.28
	Total expenses	**14,226.51**	**13,117.03**	**13,671.03**	**7,775.66**
V	**Profit / (Loss) before tax (III-IV)**	**(6,801.01)**	**(196.83)**	**(1,464.48)**	**908.01**
VI	Share of profit/ (loss) of joint ventures (net of provision)	-		-	-
VII	**Profit / (Loss) before exceptional items and tax (V+VI)**	**(6,801.01)**	**(196.83)**	**(1,464.48)**	**908.01**
VIII	Exceptional items	-		-	
IX	**Profit / (Loss) before tax (VII + VIII)**	**(6,801.01)**	**(196.83)**	**(1,464.48)**	**908.01**
X	**Less: Tax expense**				
	(1) Current tax	-	-	-	-
	(2) Adjustment of tax relating to earlier year	-		(369.67)	-
	(3) Deferred tax	57.38	(88.10)	36.71	(87.86)
	Total tax expenses	**57.38**	**(88.10)**	**(332.96)**	**(87.86)**
XI	**Profit / (Loss) after tax (IX - X)**	**(6,858.39)**	**(108.73)**	**(1,131.52)**	**995.87**
	Total comprehensive income for the year attributable to non controlling interests *	**(39.41)**	**(81.99)**	**(83.42)**	**65.57**
	Total comprehensive income for the year attributable to owners of Project SPVs**	**(6,818.98)**	**(26.74)**	**(1,048.10)**	**930.30**
XII	**Other comprehensive income**				
	- Items that will not be reclassified to standalone statement of profit and loss	-	-	-	
	- Income tax relating to items that will not be reclassified to standalone statement of profit and loss	-	-	-	
XIII	**Total comprehensive income for the year: (XI + XII)**	**(6,858.39)**	(108.73)	(1,131.52)	995.87

	Total comprehensive income for the year attributable to non-controlling interests	**(39.41)**	**(81.99)**	**(83.42)**	**65.57**
	Total comprehensive income for the year attributable to owners of Project SPVs**	**(6,818.98)**	**(26.74)**	**(1,048.10)**	**930.30**
	Earnings per unit (of ₹ 100 each)				
	(1) Basic (In ₹)	(14.97)	(0.06)	(2.30)	2.04
	(2) Diluted (In ₹)	(14.97)	(0.06)	(2.30)	2.04

Notes:

** This represents the share of profits attributable to the shareholders of the SPVs who have not agreed to exchange their shares in the SPVs for Units of Trust and will not become the unitholders of InvIT Trust.*

*** This represents the share of profits attributable to the shareholders of the SPVs / who have agreed to exchange their shares in the SPVs for Units of InvIT Trust and are proposed to become the unitholders of InvIT Trust.*

Roadstar Infra Investment Trust
Combined Cash Flow Statement

(all amounts in ₹ million unless otherwise stated)

Particulars	For the six month period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit/(Loss) for the year	(6,858.44)	(108.73)	(1,131.52)	995.87
Adjustments for:				
Depreciation and amortisation expense	1,489.17	2,903.00	2,609.70	1,958.71
Net Gain/(Loss) arising on financial assets designated as at FVTPL	(23.14)	(43.12)	(32.01)	(51.36)
Finance costs recognised in profit/(loss)	7,926.71	5,965.67	6,382.72	3,845.77
Interest income recognised in profit/(loss)	(298.71)	(737.40)	(654.05)	(319.33)
Reversal of provision for impairment	(0.00)	(0.01)	-	-292.79
(Loss)/Gain on disposal of property, plant and equipment	-	(0.03)	(0.01)	-
Provision for doubtful debts and receivables	-	11.92	108.03	-
Margin on construction	(35.05)	(92.70)	-	-
Operation and maintenance income	(53.51)	(107.13)	(90.10)	(73.57)
Bad debts written off	1,324.39	-	-	-
Liabilities written back	(1,526.09)	(14.68)	(1,283.30)	(18.32)
Finance income	(165.64)	(388.89)	(498.26)	(581.61)
Overlay income	-	(206.00)	(200.66)	(80.58)
Receipt of annuities	708.61	1,326.51	1,785.36	1,651.76
(Gain)/Loss modification on financial instrument	1,526.50	(326.27)	275.13	(240.72)
Provision for overlay (net)	530.86	981.30	2,060.01	995.18
Provision of deferred taxes asset/liability	57.38	(88.10)	36.71	(87.86)
Expenses towards damage & negative change of scope	-		-	31.08
Operating profit before working capital changes and other adjustments	**4,603.04**	**9,075.34**	**9,367.75**	**7,732.23**
Decrease in trade receivables (current and non-current)	0.52	(1.74)	(0.39)	(1.90)
(Increase)/Decrease in other financial assets and other assets (current and non-current)	(1,041.55)	(1,998.98)	(159.97)	(183.10)
Increase/(Decrease) in financial liabilities and other liabilities (current and non-current)	-49.41	237.34	360.43	(555.70)
(Decrease) in trade and other payables	17.68	(30.32)	10.20	(1.63)
Cash flow from operating activities post working capital changes	**3,530.28**	**7,281.64**	**9,578.02**	**6,989.90**
Income tax paid (net)	-44.83	-57.07	-429.63	-43.94
Net cash generated from operating activities	**3,485.45**	**7,224.57**	**9,148.39**	**6,945.96**
Cash flows from investing activities			-	
Payments for property, plant and equipment, intangible assets	-787.78	-1,808.25	-682.81	-61.07
Major maintenance cost	-176.95	-921.70	-1,476.06	-117.08
Receipt/(deposit) in fixed deposit	1,370.51	4,012.17	-2,527.32	-5,914.84
Redemption of mutual fund (at cost)	-		1,019.30	-
Interest received	293.87	415.88	501.28	206.76
Movement in other bank balances	-545.31	205.00		-322.51
Bank balance not consider as cash and cash equivalents	-		3,079.72	-1,434.27
Net cash used in investing activities (B)	**154.34**	**1,903.10**	**-85.89**	**-7,643.01**
Cash flows from financing activities				
Finance costs paid	-1,946.24	-4,992.45	-4,053.46	-2,282.30
Proceeds from borrowings	-	130.00	-	-
Repayment of borrowings	-1,594.90	-3,145.44	-3,995.72	-161.88
Movement in term loan borrowing	-298.98	-802.77	-	-
Net cash generated in financing activities (C)	**- 3,840.12**	**-8,810.66**	**-8,049.18**	**-2,444.18**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**-200.33**	**317.01**	**1,013.32**	**-3,141.23**
Cash and cash equivalents at the beginning of the year	**2,273.68**	**1,956.67**	**943.35**	**4,084.58**
Cash and cash equivalents at the end of the year	**2,073.35**	**2,273.68**	**1,956.67**	**943.35**
Components of Cash and Cash Equivalents				
Cash on hand	2.01	2.44	1.87	2.17
Balances with banks in current accounts	860.44	1,102.89	1,455.05	300.75
Balances with banks in deposit accounts	1,210.90	1,168.35	499.75	640.43
Cash and cash equivalents	**2,073.35**	**2,273.68**	**1,956.67**	**943.35**

SUMMARY OF FINANCIAL INFORMATION OF THE SPONSOR

The following tables set forth the summary financial information derived from the consolidated financial statements of RIPL as of and for the financial years ended March 31, 2024, March 31, 2023, and March 31, 2022, which were prepared in accordance with Ind AS, as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under the Section 133 of the Companies Act.

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Roadstar Infra Private Limited
Consolidated Balance Sheet

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
ASSETS			
Non-current assets			
Property, plant and equipment	1.63	2.30	1.67
Right to use asset	3.30	13.22	23.13
Other intangible assets	-	-	-
Financial assets			
- Trade receivables	-	-	-
- Loans	-	-	-
- Investments	-	-	-
Other financial assets	24.09	0.78	0.73
Deferred tax assets (net)	0.30	1.74	1.63
Total non-current assets	**29.32**	**18.04**	**27.16**
Current assets			
Financial assets			
- Investments	10.72	10.00	9.50
- Trade receivables	9.14	2.87	10.56
- Loans	-	-	-
- Cash and cash equivalent	1258.76	1139.98	1087.48
Other financial assets	3.69	91.75	0.06
Other current assets	77.49	78.77	166.75
Total current assets	**1359.80**	**1323.37**	**1274.35**
TOTAL ASSETS	**1389.12**	**1341.41**	**1301.51**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	1018.67	1018.67	1018.67
Other equity	181.44	53.92	2.87
Non-controlling interest	25.27	19.01	17.52
Total equity	**1225.38**	**1091.60**	**1039.06**
Liabilities			
Financial liabilities			
Borrowings	-	89.37	89.37
Trade payable			
(a) total outstanding dues of micro enterprises and small enterprises;	-	-	-
(b) total outstanding dues of creditors other than micro enterprises and small enterprises;	-	-	-
Lease liabilities	-	3.78	14.54
Provisions	59.79	58.53	66.47
Deferred tax liabilities (net)	-	-	-
Other non-current liabilities	-	-	-
Total non-current liabilities	**59.79**	**151.68**	**170.38**
Current liabilities			
Financial liabilities			
Borrowings	-	-	-
Trade payable			
(a) total outstanding dues of micro enterprises and small enterprises;	-	-	-
(b) total outstanding dues of creditors other than micro enterprises and small enterprises;	92.49	82.70	79.36
Lease liabilities	3.78	10.76	9.62
Provisions	-	0.63	0.33
Other current liabilities	7.68	4.04	2.76
Current tax liability	-	-	-
Total current liabilities	**103.95**	**98.13**	**92.07**
TOTAL LIABILITIES	**163.74**	**249.81**	**262.45**
TOTAL EQUITY AND LIABILITIES	**1389.12**	**1341.41**	**1301.51**

Roadstar Infra Private Limited
Consolidated statement of profit and loss

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Revenue from operations	95.46	56.58	9.75
Other income	133.03	62.22	39.93
Total Income	**228.49**	**118.80**	**49.68**
Expenses			
- Operating expenses	-	-	-
- Employee benefits expense	39.22	36.93	21.24
- Finance costs	0.78	1.60	8.01
- Depreciation and amortisation expense	10.82	10.65	6.91
- Other expenses	20.53	6.90	8.99
Total expenses	**71.35**	**56.08**	**45.15**
Profit/(loss) before exceptional items and tax	**157.14**	**62.72**	**4.53**
Exceptional items	-	-	-
Profit / (loss) before tax	**157.14**	**62.72**	**4.53**
Tax expenses			
- Current tax charge	21.68	12.93	6.16
- Tax for earlier years	-	-	-
- Deferred tax charge	1.54	(0.84)	0.55
Total tax expenses	**23.22**	**12.09**	**6.71**
Profit / (loss) for the period	**133.92**	**50.63**	**(2.18)**
Other Comprehensive Income			
A. (i) Items that will not be reclassified to profit or loss	(0.20)	2.65	0.02
(ii) Income tax relating to items that will not be reclassified to profit or loss	0.06	(0.74)	-
B (i) Items that will be reclassified to profit or loss	-	-	-
(ii) Income tax relating to items that will be reclassified to profit or loss	-	-	-
Total comprehensive income for the period (comprising profit / (loss) and other comprehensive income for the year) (IX+/-X)	**133.78**	**52.54**	**(2.16)**
Total comprehensive income for the year attributable to			
- Owners of the parent	127.52	51.05	(0.73)
- Non-controlling interest	6.26	1.49	(1.43)
Earning per equity share (for continuing operations)			
- Basic	1.31	0.50	(0.02)
- Diluted	1.31	0.50	(0.02)

Roadstar Infra Private Limited
Consolidated statement of Cash flow

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
CASH FLOW FROM OPERATING ACTIVITIES:			
Net profit before tax as per profit & loss account	157.14	62.72	4.53
Adjusted for:			
Excess provision written back	(50.33)	(6.01)	-
Finance Cost	-	-	6.38
Reversal of Liability no longer required	(0.36)	-	-
Interest income on Investment	(81.57)	(55.65)	(12.29)
Other Gain	(0.72)	(0.50)	(0.32)
Unwinding Interest on Lease Liabilities	0.77	1.59	1.46
Depreciation	10.82	10.65	6.91
Operating profit before working capital changes	**35.75**	**12.80**	**6.67**
Adjusted for:			
(Increase)/decrease in trade receivables	(6.27)	7.68	(10.56)
(Increase)/decrease in other current and non-current assets	69.89	(6.29)	(45.07)
Increase/ (decrease) in trade and other payables	9.89	3.32	(17.19)
Increase/ (decrease) in other current and non-current liabilities	3.53	12.99	-
Movement in receivable under service concession arrangement (net)	-	-	-
Increase/(decrease) in provisions	0.45	(4.71)	0.50
Net cash from operating activities before income tax	**113.24**	**25.80**	**(65.65)**
Income tax paid	(25.22)	(16.36)	(9.48)
Net cash from operating activities	**88.02**	**9.43**	**(75.13)**
	-		
CASH FLOW FROM INVESTING ACTIVITIES:			
Proceeds from interim distribution	50.33	-	-
Proceeds on sale of fixed assets	-	-	-
Interest received	81.57	55.65	12.29
Payments for property, plant and equipment	(0.24)	(1.37)	(1.91)
Net cash from / (used in) investing activities	**131.66**	**54.28**	**10.38**
CASH FLOW FROM FINANCING ACTIVITIES:			
Proceeds from long term borrowings	(89.37)	-	21.50
Principal repayment on lease liability	(10.76)	(9.62)	-
Interest paid on lease liability	(0.77)	(1.59)	-
Net cash from financing activities	**(100.90)**	**(11.21)**	**21.50**
Net increase in cash and cash equivalents	**118.78**	**52.50**	**(43.25)**
Opening balance of cash and cash equivalents	**1139.98**	**1087.48**	**1130.73**
Closing balance of cash and cash equivalents	**1258.76**	**1139.98**	**1087.48**

SUMMARY OF FINANCIAL INFORMATION OF THE INVESTMENT MANAGER

The following tables set forth the summary financial information derived from the financial statements of RIML as of and for the financial years ended March 31, 2024, March 31, 2023 and March 31, 2022, which were prepared in accordance with Ind AS, as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under the Section 133 of the Companies Act.

The summary financial information of the RIML is included in this Placement Memorandum as per the requirements of the InvIT Regulations.

The degree to which the summary financial information included herein below will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting practices, Ind AS, and the Companies Act. Accordingly, any reliance by persons not familiar with Indian accounting practices, Ind AS, and the Companies Act on the summary financial information presented below should be limited.

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Roadstar Investment Managers Limited
Balance Sheet

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024		For the year ended March 31, 2023		For the year ended March 31, 2022*	
I. ASSETS						
Non-current assets						
(a) Property, plant and equipment	1.64		2.31		1.68	
(b) Right to use asset	3.30	4.94	13.22	15.53	23.13	24.81
(c) Financial assets						
(i) Other financial assets	24.09	24.09	0.78	0.78	0.73	0.73
(d) Tax assets						
(i) Deferred tax asset (net)	0.40		0.65		-	
(ii) Tax asset (net)	72.49	72.89	70.53	71.18	67.06	67.06
Total non-current assets		**101.92**		**87.49**		**92.60**
Current assets						
(a) Financial assets						
(i) Investments	10.72		10.00		9.50	
(ii) Trade receivable	9.14		2.87		10.56	
(iii) Cash and cash equivalents	18.70		6.08		2.91	
(iv) Bank balances other than (iii) above	406.05		342.78		321.46	
(v) Loans	-		-		-	
(vi) Other financial assets	-	444.61	0.01	361.75	0.07	344.49
(b) Other current assets	-	3.35		2.72		5.31
Total current assets		**447.96**		**364.47**		**349.80**
Total assets		**549.88**		**451.96**		**442.40**
II. EQUITY AND LIABILITIES						
Equity						
(a) Equity share capital	593.91		593.91		593.91	
(b) Other equity	(204.56)		(300.81)		(324.47)	
Equity attributable to owners of the Investment Manager		389.35		**293.10**		**269.44**
Total equity		**389.35**		**293.10**		**269.44**
Liabilities						
Non-current liabilities						
(a) Financial liabilities						
(i) Lease liabilities	0.00		3.78		14.54	
(ii) Trade payables	-		-		-	
(iii) Other financial liabilities	-	0.00	-	3.78	-	14.54
(b) Provisions		2.04		1.39		2.97
(c) Other non-current liabilities		57.76		57.76		63.50
Total non-current liabilities		**59.80**		**62.93**		**81.01**
Current liabilities						
(a) Financial liabilities						
(i) Trade payables						
(A) Total outstanding dues of micro enterprise and small enterprise	-		-		-	
(B) Total outstanding dues of other than micro enterprise and small enterprise	92.48		82.59		79.27	
(ii) Lease liabilities	3.78	96.26	10.76	93.35	9.62	88.89
(b) Provisions		0.00		0.00		0.33
(c) Current tax liabilities (net)		-		-		-
(c) Other current liabilities		**4.47**		2.57		2.73
Total Current Liabilities		100.73		95.92		91.95
Total liabilities		**160.53**		**158.85**		**172.96**
Total equity and liabilities		549.88		**451.96**		**442.40**

Notes:
** Relied on audited financial statements audited by erstwhile auditors, M/s M.P. Chitale & Co.*

Roadstar Investment Managers Limited
Statement of Profit and Loss

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022*
Income			
(a) Revenue from operations	95.46	56.58	9.75
(b) Other income	77.73	22.92	12.66
Total Income	**173.19**	**79.50**	**22.41**
Expenses			
(a) Operating expenses of SCA	-	-	-
(b) Employee benefits expense	39.22	36.93	21.24
(c) Finance costs	0.78	1.60	8.01
(d) Depreciation and amortisation expense	10.82	10.65	6.91
(e) Other expenses	15.53	6.20	8.33
Total expenses	**66.35**	**55.38**	**44.50**
Profit /(loss) before tax	**106.84**	**24.12**	**(22.09)**
Less: Tax Expense/(Income)			
(1) Current tax	9.45	3.76	-
(2) Tax for earlier years	-	-	-
(3) Deferred tax	1.00	(1.39)	-
	10.45	**2.37**	**-**
Profit for the period	**96.39**	**21.75**	**(22.09)**
Other Comprehensive Income (OCI)			**-**
A (i) Items that will not be reclassified to profit or loss			
(a) Remeasurements gains/(losses) on defined benefit plans	(0.20)	**2.65**	**0.02**
(b) Income tax on above	0.06	**(0.74)**	**-**
Other comprehensive income	**(0.14)**	**1.92**	**0.02**
Total comprehensive income for the period	**96.25**	**23.66**	**(22.07)**
Earnings per equity share (for continuing operation):			
(1) Basic (in ₹)	1.62	0.37	(0.37)
(2) Diluted (in ₹)	1.62	0.37	(0.37)

Notes:
** Relied on audited financial statements audited by erstwhile auditors, M/s M.P. Chitale & Co.*

Roadstar Investment Managers Limited
Cash Flow Statement

(all amounts in ₹ million unless otherwise stated)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022*
Cash flows from operating activities			
Profit / (loss) for the year	106.84	24.12	(22.07)
Adjustments for:			
Reversal of provision on recovery of dues from ITNL	(50.33)		
Excess provision written back	(0.35)	(6.01)	-
Expected credit losses on other financial assets (net)		-	6.38
Interest income	(26.28)	(16.35)	(12.29)
Unwinding interest on lease liabilities	-	-	1.46
Finance cost	0.77	1.59	-
Unrealised fair value gain on investments measured at FVTPL	(0.72)	(0.50)	-
Depreciation and amortisation expense	10.82	10.65	6.91
Other gain	-	-	(0.32)
	40.75	**13.50**	**(19.93)**
Movements in working capital:			
(Increase)/decrease in trade receivables	(6.27)	7.68	-
(Increase)/decrease in other current and non-current assets	(23.59)	2.61	(15.11)
(Increase)/decrease in trade payables and acceptances	9.89	3.32	(7.28)
Increase/ (Decrease) in other current and non-current liabilities	1.91	5.55	-
Increase/(Decrease) in provisions	0.45	(4.71)	0.50
	(17.61)	14.45	(21.89)
Cash generated from operations	**23.14**	**27.96**	**(41.82)**
Income taxes paid	(12.10)	(7.23)	(2.21)
Net cash generated by operating activities (a)	**11.04**	**20.73**	**(44.03)**
Cash flows from investing activities			
Proceeds from interim distribution	50.33	-	-
Interest received	26.28	16.35	12.29
(Investment)/proceeds from fixed deposit	(63.27)	(21.33)	19.97
Payments for property, plant and equipment	(0.24)	(1.37)	(1.91)
Net cash (used in)/generated by investing activities (b)	**13.10**	**(6.34)**	**30.35**
Cash flows from financing activities			
Principal repayment on lease liability	(10.76)	(9.62)	**-**
Interest paid on lease liability	(0.77)	(1.59)	-
Finance costs paid	-	-	-
Net (used in)/ generated in financing activities (c)	**(11.53)**	**(11.21)**	-
		-	-
Net increase/ (decrease) in cash and cash equivalents (a+b+c)	**12.61**	**3.17**	**(13.68)**
Cash and cash equivalents at the beginning of the year	**6.08**	**2.91**	**16.59**
Cash and cash equivalents at the end of the year	**18.70**	**6.08**	**2.91**

Notes:
** Relied on audited financial statements audited by erstwhile auditors, M/s M.P. Chitale & Co.*

SUMMARY OF INDUSTRY

1. Macroeconomic overview of India

1.1 Review of India's GDP growth

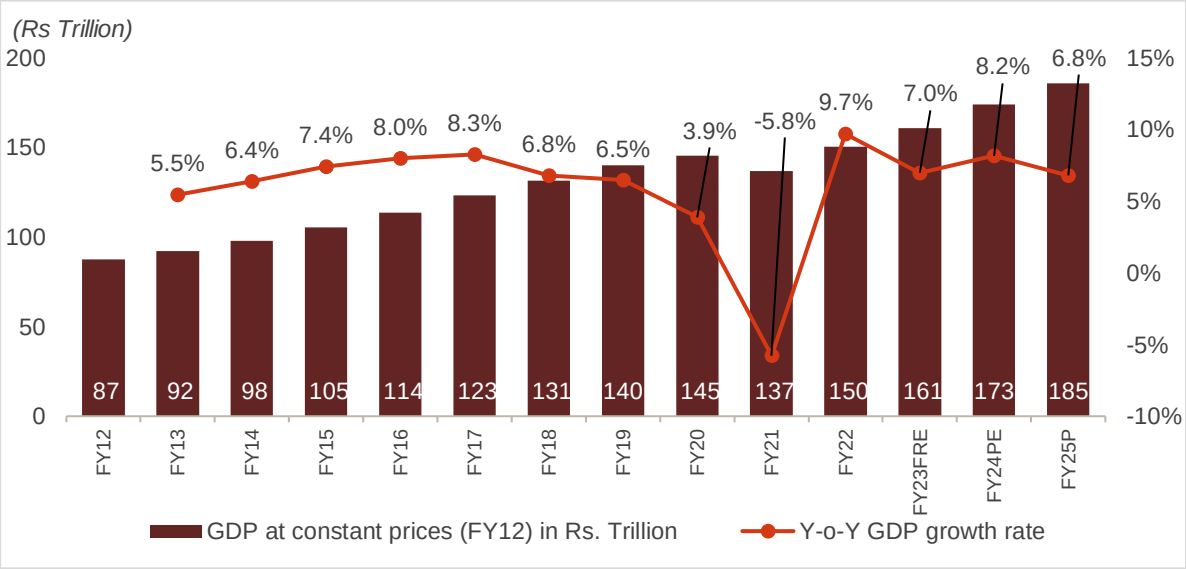
GDP logged 5.7% CAGR between fiscals 2012 and 2023

In 2015, the Ministry of Statistics and Programme Implementation (MoSPI) changed the base year for calculating India's gross domestic product (GDP) to fiscal 2012 from fiscal 2005.

Based on the change, India's GDP clocked a compound annual growth rate (CAGR) of 5.7% between fiscals 2012 and 2023, with the country's overall GDP at Rs 160,714 billion in fiscal 2023 vs Rs 87,363 billion in fiscal 2012. The pace of growth was despite the stress inflicted by the pandemic that led to the GDP — which was already experiencing a slowdown and had grown 3.9% in fiscal 2020 — contracting 5.8% on-year in real terms in fiscal 2021 to Rs ~136,949 billion.

The economy bounced back in fiscal 2022 as the Covid-19 pandemic-related shocks subsided, which resulted in a growth of 9.7% on-year in real GDP to Rs ~150,218 billion.

Real GDP growth in India (new GDP series)



FRE-First Revised Estimate; PE- Provisional Estimate; P – Projected
Source: National Statistics Office (NSO), Advance estimates of national income 2020-24, Central Statistics Office, Ministry of Statistics and Programme Implementation (MoSPI), CRISIL MI&A Consulting

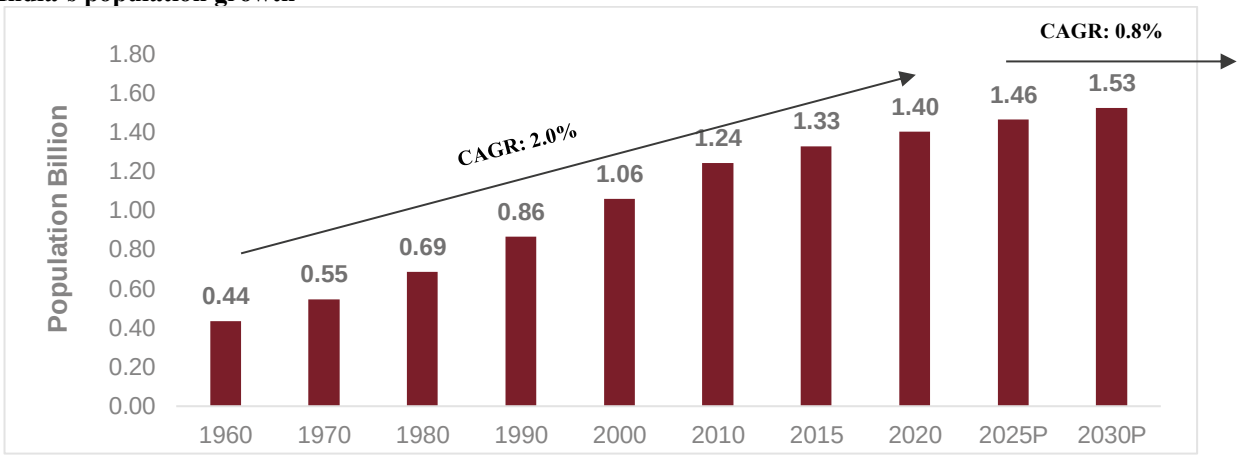
Review of population growth and urbanisation

India's population projected to touch 1,500 million by 2030

India's population clocked ~1.6% CAGR from 2001 to 2011, reaching ~1,200 million, and comprised nearly 246 million households, as per Census 2011.

According to the World Urbanization Prospects: The 2018 Revision by the United Nations, India and China – the top two countries in terms of population – accounted for nearly 37% of the world's population in 2015. India's population is expected to increase at 0.8% CAGR from 2020 to 1,525 million by 2030.

India's population growth



P: Projected
Source: Unitedk Nations, Department of Economic and Social Affairs, Population Division (2024); Probabilistic Population Projections Rev. 1 based on the World Population Prospects 2019 Rev. 1; CRISIL MI&A Consulting

Urbanisation likely to reach 40% by 2030

The share of the urban population in India's total population has been rising over the years and stood at ~31% in 2010. This trend is expected to continue, with a United Nations report projecting that nearly 40% of the country's population will live in urban areas by 2030.

1. Review of road infrastructure in India

2.1 Overview of infrastructure sector in India

The roads sector registered a strong pace of constructions by NHAI, growing 6,003 km (16.4 km per day) in fiscal 2023 from 3,071 km (8.4 km per day) in fiscal 2018. Investments in the roads and highways sector rose from Rs 1.7 trillion in fiscal 2018 to ~Rs 2.9 trillion in fiscal 2022, registering ~1.7x growth.

The government launched the National Infrastructure Pipeline (NIP) for fiscals 2020 to 2025, to boost infrastructure, with a projected investment of Rs 111 trillion during the period. Investments in energy (24%), roads (18%), urban (17%), and railways (12%) will amount to over 70% of the projected capital expenditure during the period.

Contribution of roads sector to India's GVA

The share of the roads sector in India's GDP stood at 3.0% in fiscal 2023. The share hovered at ~3.3% from fiscals 2012 to 2022.

2.2 Road network in India

India has the second-largest road network in the world, spanning 6.345 million km as of fiscal 2024. Roads, the most frequently used mode of transportation in India, accounted for ~87% of passenger traffic and close to ~60% of freight traffic says MoRTH as of September 2024. Although national highways span nearly 146,145 km, constituting just 2% of road length, they accounted for ~40% of the total road traffic. The secondary road system comprises state roads and major district roads, which accounted for the remaining 60% of traffic and 98% of road length.

Road network in India in FY24

Road network	Length (km)	Percentage of total length	Percentage of total traffic	Connectivity to
National highways	146,145	~2	40	Union capital, state capitals, major ports, foreign highways
State highways	179,535	~3	60	Major centres within the states, national highways

Road network	Length (km)	Percentage of total length	Percentage of total traffic	Connectivity to
Other roads	6,019,723	~95		Major and other district roads, rural roads - production centres, markets, highways and railway stations
Total Network	6,345,403	100	100	

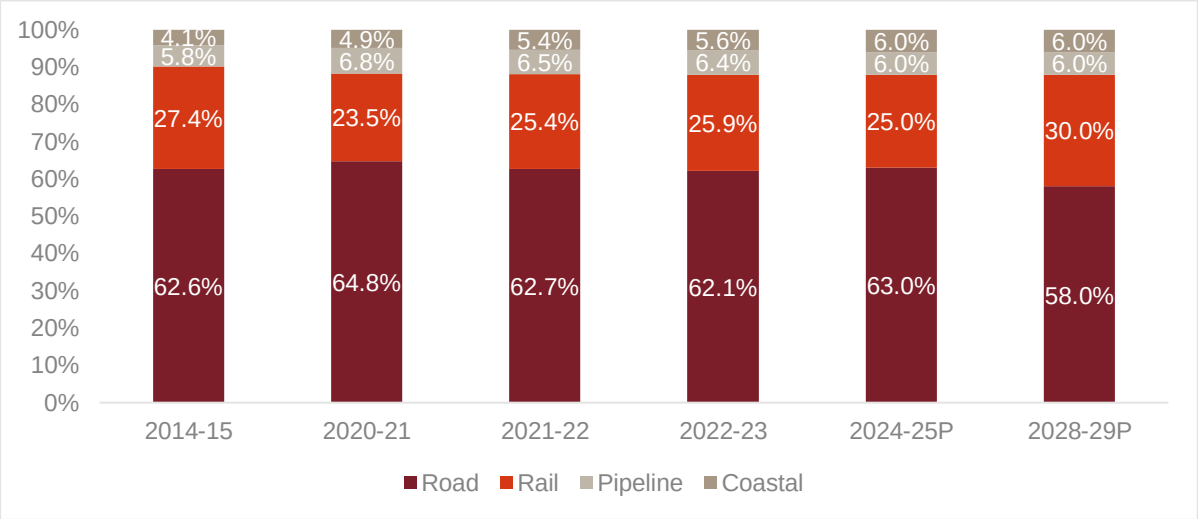
Source: MoRTH PIB-05 Jan 2024, MoRTH Annual Report 2023-24, CRISIL MI&A Consulting

2.3 Indian freight traffic scenario

Road transportation remains dominant, but Railways eye share given Dedicated Freight Corridors and rising road freight rates

Roads are expected to remain dominant in transportation, having grown 5-7% in fiscal 2024. Railways are expected to gain share owing to the Dedicated Freight Corridors (DFCs) and higher road freight rates. DFCs are aimed at decongesting India's railway network. It will help carry freight at higher speed with increased load-carrying capacity, up to 6.2 million TEUs (twenty-foot equivalent unit) in total, reducing operating costs in India for rail freight significantly. Roads are typically preferred for non-bulk, high-value commodities. CRISIL expect growth in road freight traffic to increase at a compounded annual growth rate (CAGR) of 4-6% in BTKM terms between the fiscals 2024 and 2029.

Share of roads in total freight movement (in terms of BTKM)



P: Projected
Source: CRISIL MI&A Consulting

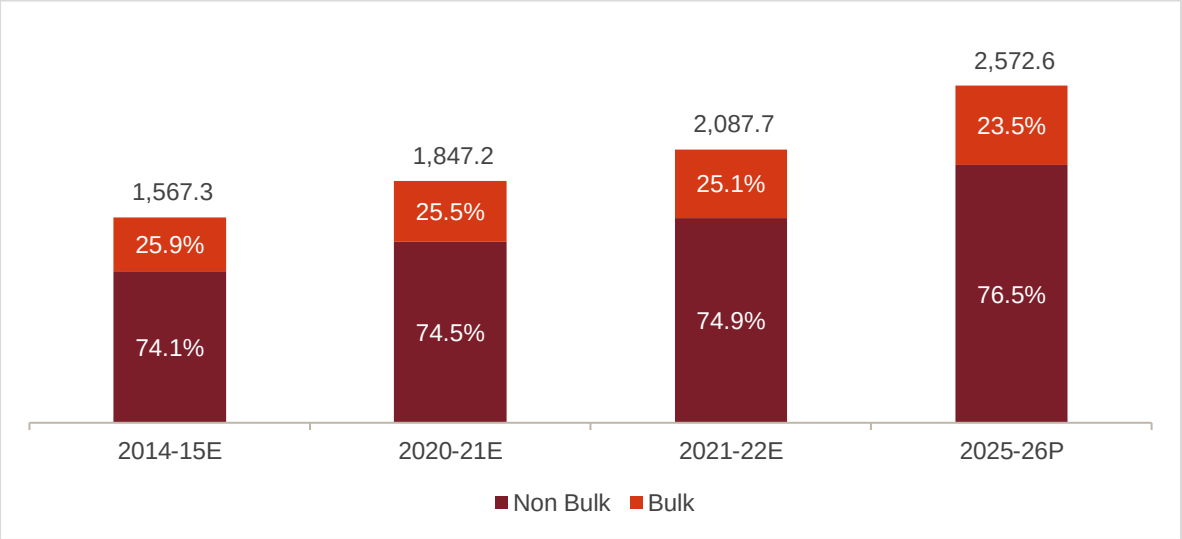
Roads remain the preferred mode for non-bulk transportation

Roads generally account for a significant share in non-bulk commodity transportation, as:

- Railways do not cater to piecemeal freight transportation. Entire rakes are provided for transportation and not just single wagons (although Indian Railways is looking into multi-point loading, it would still not attract small-sized cargo)
- Road transport has better service quality and is more reliable
- Road transporters operate on a much smaller scale. Also, given the large number of road transport operators, customers have better bargaining power. These transporters also add a personal touch to their service, which is important, as these commodities are typically expensive and fragile.

- Roads provide end-to`-end connectivity and safer handling, which is an important factor while transporting low-volume, but high-value commodities

Roads predominantly transfer non-bulk freight (in terms of BTKM)



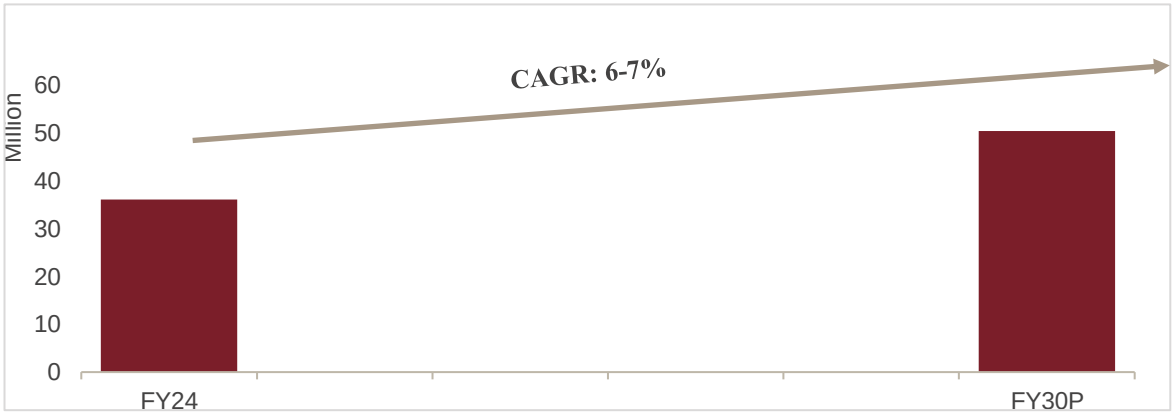
E: Estimated; P: Projected
Source: CRISIL MI&A Consulting

Historical growth of vehicular population

Market for PVs underpenetrated, offers sizeable potential in the long run

India's car market is extremely underpenetrated compared with most developed economies and some developing nations. As of fiscal 2024, India had ~32 passenger vehicles per 1,000 people. This number is expected to increase to 40 by fiscal 2029, which is significantly lower than the developed nations and even Brazil, Russia, and China (which, along with India, form the BRIC block) based on per capita GDP.

Outlook on passenger vehicle population



Note: FY30 is projected year
Source: CRISIL MI&A Consulting

Commercial vehicle market faces volatility: Growth to moderate in current fiscal

Commercial vehicle (CV) sales for fiscal year 2025 are expected to remain flat clocking in at (1)-1%, CVs being a cyclical industry, the downcycle in terms of volumes is playing out while tonnage growth will be healthy on account of a shift to higher tonnage vehicles in MHCVs over the past couple of years. Light Commercial vehicles (LCVs) are expected to grow by 0-1% supported by volume up for replacement, while volumes of Medium and Heavy Commercial Vehicles (MHCV) are estimated to remain at par with that of fiscal 2024 registering a (1)-1% change

on account of the high tonnage sold in MHCVs over the preceding years. Overall commercial vehicles grew by 3.5% on year in first quarter of fiscal 2025 led by growth in MHCV and Buses.

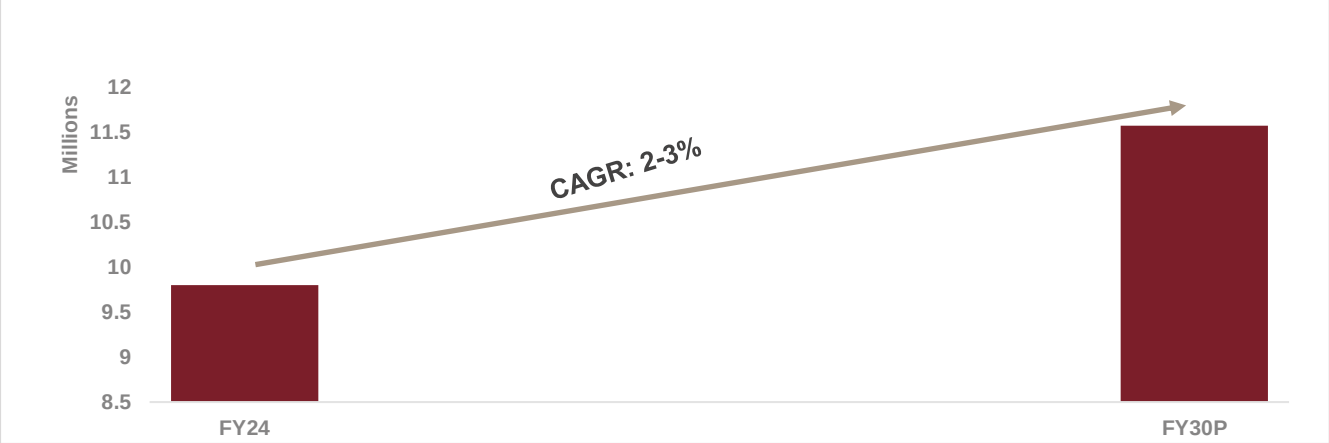
In fiscal 2024, the commercial vehicle (CV) market recorded a modest 1% growth, building on the momentum of the previous year. While light commercial vehicle (LCV) sales dipped by 3% due to reduced fleet utilization, medium and heavy commercial vehicle (MHCV) sales remained flat, driven by higher tonnage demand. The bus segment, however, saw a significant 21% surge, fuelled by robust demand from school and staff transportation services. The industry's growth was further supported by pent-up replacement demand and strong end-user segments, ultimately reaching 98% of pre-pandemic levels.

The CV industry made a remarkable comeback in fiscal 2023, posting a 34% growth rate, albeit from a low base, and reaching 96% of pre-pandemic levels seen in fiscal 2019. This rebound can be attributed to the release of pent-up replacement demand, improved transporter profitability, and a resurgence in capital expenditures, which had been hindered by economic stagnation and pandemic-related disruptions over the preceding 2-3 years.

The MHCV industry is set to witness a projected CAGR of ~1-5% over the five years from fiscals 2024 to 2029. In the last five fiscal years (2019-2024), industry growth declined by 2% annually on account of a number of factors such as the pandemic, axle loading norms (norms stating maximum permissible limit of load carrying capacity of commercial vehicles) and emission norms (norms stating maximum permissible limit of vehicle wise carbon emission). The rise in tonnage addition is expected to be driven by an improved product mix, with a notable surge in demand for multi-axle vehicles (MAV).

Long-term MHCV sales are likely to be propelled by several factors, including the country's improving industrial activity, steady agricultural output, and the government's continued focus on infrastructure development. However, volume growth may be somewhat constrained due to the efficiencies achieved through the implementation of the Goods and Services Tax (GST), the development of better road infrastructure and commissioning of the DFC.

Outlook on growth of freight vehicle population



Note: FY30 is projected year
Source: CRISIL MI&A Consulting

2.4 Key growth drivers and emerging trends for road sector

Policy pushes aimed at improving private participation in National Highways

The following are the recent policy changes that the MoRTH and NHAI have undertaken to improve private participation in the sector and increase competition:

- Technical and financial bidder eligibility criteria reduced for HAM and EPC projects, which would promote the entry of smaller players

- Changes in the hybrid-annuity model (HAM) concession agreement aimed at protecting developers' returns and easing their cash flows during the construction period

- Changes in the Build-Operate-Toll (BOT) concession agreement to reinstate developer interest in the model

Apart from this, the government has taken various steps under the Atmanirbhar package to mitigate the impact of Covid-19 on the sector:

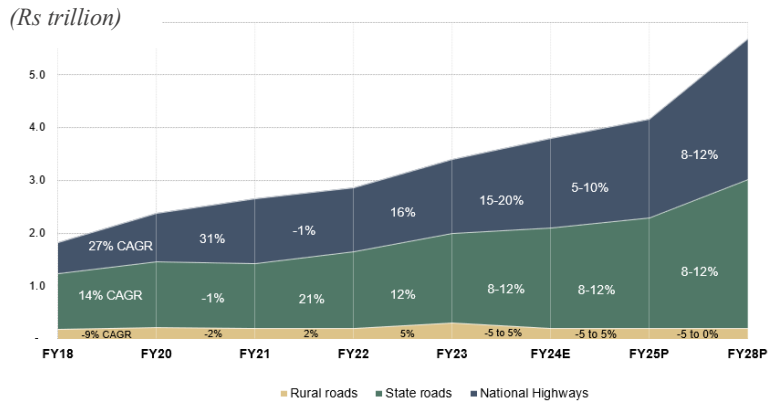
- Extension of time (EOT) of up to 3-6 months for all projects and relaxation of milestone achievement
- Monthly payment mechanism, instead of milestone-based payments
- Reduction in performance security from 5% to 3%, release of retention money to the extent of work done
- Additionally, Covid-19 emergency loan facilities and moratorium on loan repayment up to August 2020
- Extension of concession period for BOT-toll operators, due to toll suspension and restriction in movement during lockdowns

Strong government thrust likely to deliver steady growth in fiscal 2024

Overall road sector capex, comprising of National Highways, State Highways & rural roads is estimated to have grown at a CAGR of 14% between fiscals 2018 & 2023. The NH segment contributes around 40-45% of the overall capex. While the execution remained flattish in fiscal 2023 vis-à-vis fiscal 2022, capex grew by 16% due to a rise in construction of high value projects and high commodity prices. In fiscal 2024, we expect the national highway capex to grow by 15-20% driven primarily by increased execution.

On the low base of fiscal 2021, the state spends grew by 21% in fiscal 2022 and are estimated to have grown further by 10-13% in fiscal 2023 largely in line with the growth in budgetary outlay. In fiscal 2024, state spends are expected to go up further by 8-12% as their percentage achievement of budgetary allocations are expected to be largely in line with historical average.

Momentum to continue, supported by Bharatmala and NIP pipeline



Note: Capex excludes the land-acquisition costs
Source: NHAI, MoRTH, State budget documents, PMGSY, CRISIL MI&A Research

2.5 Key challenges faced by roads sector in India

Issues and challenges for roads sector

Given the share of roads in the overall transport of goods and passenger traffic, it is critical to develop the roads sector. Although the government has been continuously making efforts to give a fillip to the sector, several issues and challenges hamper the pace of development.

2.6 Overview of PPP framework and models in operations

PPP is an arrangement between a government/statutory entity/government-owned entity and a private sector entity for the provision of public assets and/or public services through investments made and/or management undertaken by the private sector entity for a specified period of time. In this arrangement, allocation of risk between the private sector and the public entity is defined well. The private entity receives performance-linked payments that conform with (or are benchmarked to) specified and pre-determined performance standards, measurable by the public entity or its representative.

The types of construction contracts based on price risk are as follows:

Fixed-price contracts: These contracts state the fixed fee or payment (per unit output or whole project) the contractor receives on completion of a contract. The contractor bears the risk of a rise in cost during the construction period. Certain pass-through of higher cost may be allowed in some projects.

Cost-plus contracts: These are contracts in which the contractor is entitled to receive a fixed surplus over the project cost borne. The surplus given to the contractor can be in the form of a fixed percentage over cost or a pre-decided fee over cost. Therefore, any increase in cost of the project, during the construction phase, is passed on to the client.

The types of contracts based on scope of execution are as follows:

Item rate contract

These are fixed-price contracts, where the concerned authority provides the detailed design and the estimated quantity of materials. A project is divided into several sub-activities, for which the item-wise quantity of input material to be used is specified in a document called bill of quantities. Bids are invited for the price of each construction activity based on the items specified. As the aggregate of bid amounts form the total project cost, the lowest bidder wins the project. The bill of quantity document may state the quantity of items such as cement, girders, electric boards, wires, etc, to be used, against which the bids are invited.

Lump-sum turnkey (LSTK) contract

LSTK is a fixed-price contract in which the contractor fixes a lump-sum fee based on the specific project requirements. The client states the project specifications with respect to designs, drawings, technical stipulations, quality of raw material, etc, based on which the contractor provides bids, stating a lump-sum fee for execution.

Design and build contract

In this type of a contract, the authority does a conceptual study of the project to be awarded and specifies the technical output details based on which the specifications of the project are decided. The developer has to undertake the detail designing and execution of these projects. EPC and BOT are design and build models.

A few operational models:

I. BOT-toll/-annuity/-hybrid annuity model (HAM)

II. EPC

III. Toll collection

IV. Operate, maintain and transfer (OMT)

V. Toll, operate and transfer (TOT)

Electronic toll collection (ETC) is a strategic focus area for regulatory and administrative bodies involved in the process of toll collection. It presents several advantages such as limiting toll leakages, reducing the waiting time for vehicles, and improving overall traffic flow at toll plazas. In the future, this may result in significant changes in toll collection operating procedures, followed in all the PPP models.

Types of PPP models

Type of project	Description	Development risk	Financing risk	Traffic risk and accrual of toll fee collection	Net cash outflow for the government	Revenue for private party	Concession period	Award criteria
BOT-toll	Private party builds the road, undertakes O&M and collects toll	Concessionaire	Concessionaire	Concessionaire	Yes (in the form of grant/equity support)	Toll	20-30 years for the NHAI** and other authorities	Highest revenue sharing bid/highest premium/ lowest equity support
BOT-annuity	Private party builds the road, undertakes O&M* and collects annuity from the granting authority	Concessionaire	Concessionaire	Authority	Yes, net payment to be made is the difference between the toll collection and the annuity payable	Annuity payment	15-20 years for the NHAI and other authorities	Lowest annuity
BOT-HAM	Private party builds the road, undertakes O&M. Gets 40% of payment during construction and 60% as annuity along with interest	Concessionaire	Concessionaire	Authority	40% during construction and 60% as semi-annual annuity along with interest, net of toll collected	Construction grant plus annuity payments, interest on annuities, inflation-indexed O&M payments	Around 15 years of operations plus additional construction period	Lowest project cost plus O&M cost
EPC	Private party builds the road, based on the cost incurred by the government	Concessionaire	Authority	Authority	Yes	Contract amount	Not required	Lowest contract price requested
OMT	Private party collects toll, and undertakes O&M and major maintenance	No development risk except minimal risk in case of paved shoulders	Concessionaire	Concessionaire	No	Toll	Up to nine years for NHAI projects	Highest % of toll revenue share or highest premium per year
Tolling	Private party pays the estimated toll upfront to the authority and collects it during the concession period	No development by tolling contractor	Concessionaire	Concessionaire	No	Toll	One year for NHAI projects	Highest revenue-sharing bid
TOT	Private party pays an upfront bid concession fee (summation of NPV of free cash flow based on concessionaire estimates) to the authority, undertakes O&M plus certain capex and collects the toll during concession period	Authority (in case upgradation of lanes is taken up during the concession period)	Concessionaire	Concessionaire	No	Toll	15, 20, 30 years#	Highest upfront payment

Note: Development risk refers to construction risk in developing a road project

**Operations and maintenance*

*** National Highways Authority of India*

#As per TOT bundles of NHAI in 2021-22
Source: CRISIL MI&A Consulting, NHAI

2.7 Key budgetary proposals for infrastructure sector

While the overall gross budgetary capex support increased 17% over FY24RE to Rs 11,110,000 million, ther budgetary support for 100 million infrastructure ministries increased only 4% to Rs 5,600,000 million. A large share of the deviation is on account of higher allocation to the Ministry of Finance, under which the Department of Economic Affairs has been allocated Rs 661,970 million for disbursement towards central schemes, the details of which are yet to be announced.

Key announcements

- Rs 7,160,000 million (gross budgetary support + internal and extra budgetary resources) has been provided to 100 million infrastructure ministries towards capital spending, which is consistent with the figure in the interim budget

- The Pradhan Mantri Gram Sadak Yojana (PMGSY)-IV initiative aims to ensure all-weather connectivity for 25,000 rural habitations. Other significant road connectivity projects include the Patna-Purnea and the Buxar-Bhagalpur expressways, extensions to Bodhgaya, Rajgir, Vaishali and Darbhanga, and an additional two-lane bridge over the Ganga at Buxar. A total cost of Rs 260,000 million has been earmarked for these projects

- Irrigation and flood relief assistance will be provided to Bihar, Assam, Uttarakhand, Himachal Pradesh and Sikkim. This includes an allocation of Rs 115,000 million for the Kosi-Mechi project in Bihar and 20 other ongoing irrigation projects

- Transit-oriented development strategies will be devised for 14 major cities with populations exceeding 3 million, incorporating implementation as well as financing frameworks. Additionally, 35 cities will be developed as growth hubs through comprehensive economic and transit planning, along with the development of peri-urban areas

- Reforms in the domestic shipping sector regarding ownership, leasing and flagging are expected to support the players

Note: Core infrastructure ministries constitute road, railways, rural development, urban development, power, new and renewable energy, civil aviation, shipping, water resources, and atomic energy

Impact

- The total capex (gross budgetary support + internal and extra budgetary resources) for 10 core infrastructure ministries has been increased by 4.9% over fiscal 2024RE. The moderate increase in capital allocation to core infrastructure ministries suggests the need for crowding in of private sector investment

- Investment in urban development are expected to increase, particularly in public transport, water supply and sanitation, and waste management projects

- While the construction of national highways has progressed at a robust pace, rural road development has been lagging. However, with the announcement of PMSY-IV, an uptick in rural road execution is likely. Reform in the shipping sector is expected to support the sector; but further clarification and an action plan will be required to gauge the impact

Roads and highways

- The overall gross budgetary outlay for the Ministry of Road Transport and Highways doubled from Rs 1,280,000 million in fiscal 2019 to Rs 2,640,000 million in fiscal 2024RE. Against this backdrop, the growth rate of roads and highways capex for the next fiscal has moderated sharply, only 3% higher vis-à-vis fiscal 2024RE. Similar to the previous fiscal, the entire allocation of Rs 2,720,000 million would be

via gross budgetary support since the internal and extra budgetary resources limit has been completely eliminated to reduce the NHAI's dependence on market borrowings. On the other hand, the asset monetisation target has increased from Rs 100,000 million in fiscal 2024RE to Rs 150,000 million in fiscal 2025BE. To be sure, in 9M fiscal 2024, the NHAI has been able to monetise ~Rs 160,000 million, which bodes well for the divestment target set out for fiscal 2025. This assumes greater significance as roads account for close to 30% of the National Monetisation Plan (NMP) targets and healthy progress in monetisation of road assets is imperative to achieve the same

- The budgetary allocation of Rs 1,680,000 million towards the NHAI for the next fiscal has remained flattish vis-à-vis fiscal 2024RE. The elimination of internal and extra budgetary resources and minimal contribution of cess implies a significantly large portion of the NHAI funding would be met through gross budgetary support

- Furthermore, the NHAI has been aiming to modify the BOT model with fast-tracked clearances to award more projects, since the share of this model has dipped to negligible levels in recent years. Large developers are also likely to be interested in BOT projects amidst dipping profitability in the hybrid annuity model owing to competitive bidding. Notably, if successful, the shift towards BOT could reduce funding burden on the ministry since 100% of the construction cost is borne by the developer in this model

Note: Based on budget document of February 2024

Capital outlay of the Ministry of Road, Transport and Highways

Capital outlay (Rs Billion)	FY16	FY17	FY18	FY19	FY20	FY21	FY22RE	FY23A	FY24BE	FY24RE	FY25BE	Growth FY24RE vs FY23A
Ministry of Road, Transport and Highways	275	412	508	677	684	892	1213	2171	2704	2764	2780	27%

Source: CRISIL MI&A Consulting

PMGSY allocation for this fiscal (budget estimate) is Rs 120,000 million, down ~37% over fiscal 2023A. However, over the past two years, the achievement ratio under the scheme has been low. Therefore, actual expenditure against the allocation remains a monitorable

Real Estate: Key Announcements

Increase in the Pradhan Mantri Awas Yojana (PMAY)-Urban target by 1 crore houses, or ~81%, from the previous target of ~1.2 crore houses with planned allocation of Rs 2.2 lakh crore over the next five fiscals. Increase in the PMAY-Rural target by 2 crore houses, or ~68%, from the previous target of ~3 crore houses. Revision in long-term capital gains tax to 12.5% from 20.0% and removal of indexation benefit on sale of real estate properties, in addition to other taxation-related announcements. Urban and rural land-related reforms and actions to be initiated in collaboration with states

Capital outlay of the Ministry

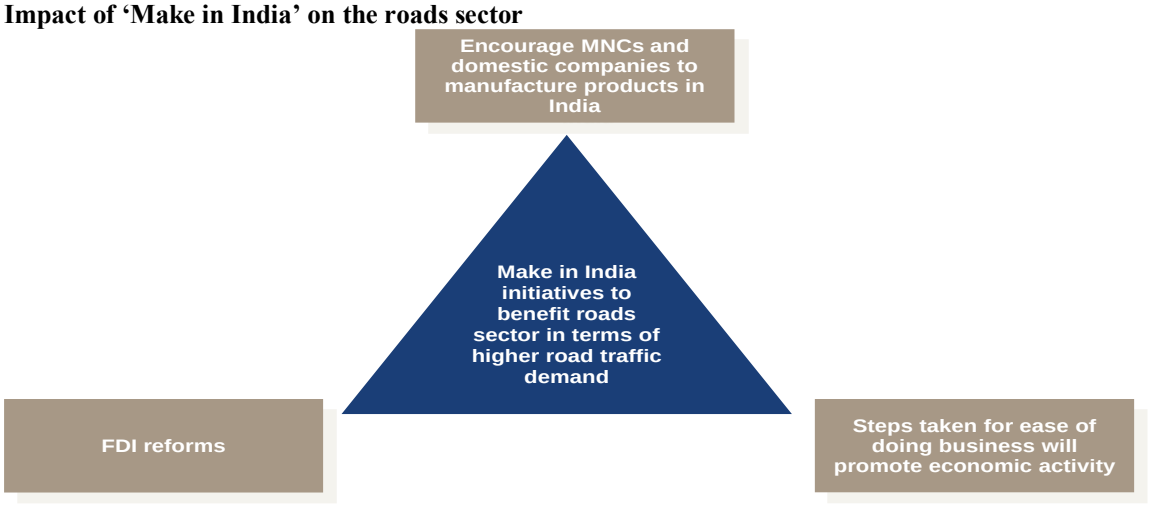
Sr no.	Parameters	FY23A (Rs crore)	FY24RE (Rs crore)	FY25BE (Rs crore)	Growth in FY25BE over FY24RE
1	Pradhan Mantri Awas Yojana–Urban	28,653	22,103	30,171	36%
2	Pradhan Mantri Awas Yojana–Gramin	44,962	32,000	54,500	70%

Source: Budget document – July 2024, CRISIL MI&A Consulting

2.8 Impact of the 'Make in India' initiative on the roads sector

The 'Make in India' campaign, launched in September 2014, covers 25 major sectors, including roads and highways. The initiatives under the campaign, such as encouraging multinational companies (MNCs) to manufacture products in India, taking steps to improve the ease of doing business, as well as FDI reforms, are expected to benefit the roads sector in terms of increase in traffic movement.

Impact of 'Make in India' on the roads sector



Source: CRISIL MI&A Consulting

Overview of government initiatives

New tolling policy (2011)

Toll act

The central government is authorised to levy a fee (toll) under Section 7 of the National Highways Act, 1956, for public-funded projects and under Section 8-A of the said Act for private investment projects. The government can levy fees on all sections of national highways (irrespective of four or two lanes), tunnels, bypasses, and bridges with specific cost criteria.

Fee structure

Toll charges are based on rates notified by the government. The fee for use of a section of national highways with four or more lanes for the base year fiscal 2008 shall be the product of the length of such a section multiplied by the rates specified hereunder.

Toll rates for four-lane national highways

Vehicle category	Rs/ km
Car, jeep, van, light motor vehicle	0.65
Light commercial vehicle	1.05
Bus or truck	2.2
3-axle commercial vehicle	2.4
Heavy construction machinery, multi-axle vehicles (MAV) with 4-6 axles	3.45
Oversized vehicles with 7 axles or more	4.2

Source: PIB, CRISIL MI&A Consulting

The rates, which will be revised every year, will be an aggregate of the following rules effective April 1, 2016:

- Increase of 3% without compounding (on base rates of fiscal 2008)
- Compared with the previous year, 40% of the increase in wholesale price index (WPI)

In previous years, the toll rates were fully linked to the WPI, which led to numerous case where WPI would become negative. The current method of toll rates has been beneficial for private players.

Other features of the new tolling policy include the following:

- Uniform rates for public- and private-funded projects
- Fee for a permanent bridge, bypass, or tunnel costing Rs 0.10 billion or more and that of NH length will be calculated separately

In 2013, 2014, 2015, 2019, 2020, and 2022 some amendments were made to the National Highway Fee (determination of rates and collection) Rules 2008, as follows:

- In the case of a four-lane highway being upgraded to a six-lane one, the increase in rate shall be limited to 75% of the fee specified, revised as per the applicable rules calculated on and from the date of commencement of upgrade-related work to the date of completion of the project, according to the agreement entered into with the concessionaire without any annual revision
- In certain cases, fee collection is started when the project is 75% complete, but the fee is applicable only to 75% of the operational length
- No user fee shall be levied on the delayed period between the date of completion as per the agreement entered into with the concessionaire and the date of actual completion of the project. For the purposes of this rule, any provisional completion shall not be treated as completion of the project.
- The tolls rates are calculated on the basis of the road length, excluding bypass (costing more than 100 million) and structures (more than 60 metre). The road length fee is payable at 100% of the applicable rate for four lanes and at 60% for two lanes with paved shoulders
- Bypass (costing more than 100 million) length fee is payable at 150% of the applicable rate for four lanes and at 90% for two lanes with paved shoulders
- Structure (costing more than 100 million) length fee is payable at 100% of the applicable rate for four lanes and at 60% for two lanes with paved shoulders
- Commercial vehicles registered within the district are tolled at 50% discount, and local non-commercial vehicles are issued a monthly pass for a certain amount
- The rate of fee for use of an expressway shall be 1.25 times the rate specified in the applicable rule
- The rate of fee for private investment projects shall be as specified under the applicable rule or as the concessionaire may determine by issuing a public notice to users
- The following method is used to calculate the rate of fee for highways/expressways with standalone structures and structures forming part of linear highways/expressways:

  Length of the structure* (L) X Factor "10" = Length in metres

  ** Structure of 60 metres of length or more*

- To calculate fee for a linear highway/expressway, structures will be considered a part of the normal length of highways/expressways

- In the December 2013 amendments, the NHAI empowered the concessionaire to collect 10 times the applicable fee from overloaded vehicles. The December 2015 amendments allowed the concessionaire to stop vehicles plying on National Highways unless they cleared their dues. Any vehicle loaded in excess of its maximum permissible gross vehicle weight (GVW) is not permitted to use the National Highway or cross the toll plaza until the excess load is removed or a fee of 10 times the applicable amount is paid. Moreover, the concessionaire can detain the vehicle until all dues are cleared.

- On 25th September 2018, MoRTH has modified the overloading norms, and it states that user of vehicle shall be liable to pay fee, for entering the overloaded vehicle on the national highway, to the user fee collecting agency, equal to fees slabs as mentioned below:

Percentage of excess load over Maximum Permissible Gross Vehicular Weight	0 to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80%
Multiplying factor to base rate of fees	2 times	4 times	6 times	8 times	10 times

- The May 2018 amendment stated that if a vehicle user with a valid, functional FASTag or any such device with sufficient balance in the linked account crossing a fee plaza installed with Electronic Toll Collection infrastructure is not able to pay the user fee through FASTag or any such device because of malfunctioning of Electronic Toll Collection infrastructure, the vehicle user shall be permitted to pass the fee plaza without payment of any user fee

- In the National Highways Fee (Determination of Rates and Collection) Rules, 2008, in rule 11, in clause (e), the word “disability” should be replaced with “DIVYANGJAN”

- The fee payable towards discounts shall be paid through pre-paid instruments, smart card or through FASTag or on-board unit (transponder) or any other such device

- The executing authority or the concessionaire, as the case may be, provide for multiple journeys to cross a toll plaza within the specified period at the rates specified

- The words “may opt for such pass” shall be omitted

- “A person who owns a mechanical vehicle”, the words, “with valid functional FASTag,” shall be inserted

- “A person who owns a commercial vehicle (excluding vehicle plying under National Permit)”, the words “with valid functional FASTag,” shall be inserted.

- User of the vehicle not fitted with “FASTag” or vehicle without valid, functional “FASTag” entering into “FASTag lane” of the Fee plazas shall pay a fee equivalent to two times of the fee applicable to that category of vehicles

- closed user fee collection system means a system under which the fee is levied based on the actual distance travelled by a mechanical vehicle, on a national highway or expressway

- the executing authority or the concessionaire may establish fee plaza on the national highway or expressway on which the closed user fee collection system has been installed

- Provided further that no such concession shall be provided for commuting on a national highway or expressway on which fees is levied based on the closed user fee collection system.

Financial incentives for road developers

- Under section 80 IA of the Income Tax Act, profits and gains derived by an undertaking are subject to 100% deduction for 10 consecutive assessment years out of 20, beginning from the year in which the

undertaking begins to operate the business, provided such profits and gains are derived from the business of: 1) developing, 2) operating and maintaining, or 3) developing, operating, and maintaining a road, including tolls and bridges, a highway project including housing or other activities being an integral part of the highway project. These criteria shall not apply to any enterprise that starts development or operations and maintenance of the infrastructure facility on or after April 1, 2017, as that enterprise shall be eligible for 100% deduction of capital expenditure under section 35AD

- Import duty has been completely exempted for public-funded needs on certain identified high-quality construction plants and equipment
- Import of bitumen is now permitted under the Open General Licence
- External commercial borrowings are permitted up to 35% of the project cost

2.9 Overview of investments in road platforms

Investments by private sector to grow 3x over the next five years

CRISIL MI&A expects private construction investments in national highways to increase 2x to Rs 2.7 trillion over fiscals 2024 to 2028 compared with the previous five years. This is expected to be mainly through the hybrid annuity model (HAM) mode, as the build-operate-transfer (BOT) toll mode may have only a few takers.

A policy push in the form of changes in Model Concession Agreements (MCA) for HAM and BOT projects and reduction in bid eligibility criteria across all national highway projects would bode well for private participation. However, the share of HAM in total awarding is constrained by the cautious approach employed by banks in lending to HAM projects.

Amidst the COVID-19 pandemic, NHAI and the ministry have taken various steps under the Atmanirbhar package to ease issues faced by developers. Releasing monthly payments, instead of milestone-based payments; extension of timelines for completion of projects, etc have sustained private participation in the sector. While these have been extended till Oct 2020, they are likely to fade from next fiscal onwards.

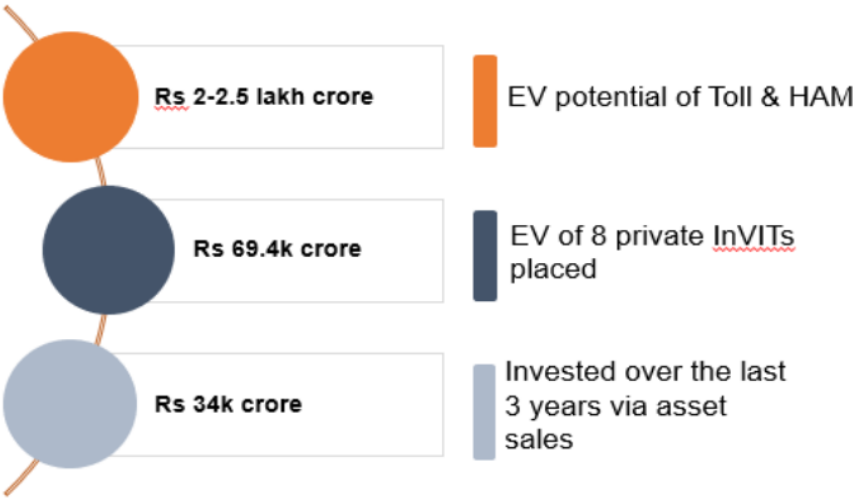
Asset monetisation, equity infusion key to support private investment in the long run

Currently, there are two broad drivers of asset sales in the roads sector - rationalisation of financial position to improve balance sheet strength and asset churning to be able to participate in the upcoming projects. The erstwhile major BOT players are selling off assets to reduce their debt burden and free up equity, which can be infused in under-execution projects.

The players present in HAM are currently selling off HAM assets to participate further in upcoming HAM projects. Some players intend to sell off under-construction projects to financial investors with projects being executed by the same player. Thus, they are able to convert HAM projects to EPC without facing the cut-throat competition they deal with currently in the EPC mode. This will help them retain margins.

About Rs 700-800 billion has already been invested through these models. CRISIL's analysis of BOT and HAM projects indicates a potential of ~Rs 2.0-2.5 trillion in terms of enterprise value.

Asset monetisation has a lot of potential to free up developers' balance sheets



Source: CRISIL MI&A Consulting

3. Overview of Infrastructure Investment Trusts (InvITs) for roads in India

3.1 Overview of InvITs currently listed in India

InvITs to deleverage balance sheets and enable capital recycling

Infrastructure investment trusts (InVITs) will help free up capital of players by divesting stake in operational assets and help recycle this capital to deleverage balance sheets for creating new assets.

Details of InVITs currently registered in India:

Name	Sponsor	Date of registration	Assets
IRB InviT Fund	IRB	Mar-2016	5 toll road assets & 1 HAM asset
Indinfravit Trust	L&T IDPL	Mar-2018	19 BOT-toll, 4 BOT annuity assets
Oriental Infratrust	Oriental Group	Mar-2019	4 toll & 1 annuity asset
IRB Infrastructure Trust (IRB InVIT II)	IRB Infrastructure Trust (IRB InVIT II)	Nov-2019	10 operational toll projects, 1 under construction project & 1 proposed under construction project

Name	Sponsor	Date of registration	Assets
Bharat Highways InvIT	G R Infraprojects Limited	Aug-2022	7 HAM assets
Cube Highways Trust	Cube Highways Group	July-2022	17 toll and 1 annuity asset
Highways Infrastructure Trust	Galaxy Investments II Pte. Ltd	Mar-2022	5 BOT Toll, 2 Annuity Assets and 3 HAM assets (in process of acquiring 3 other assets)
Indian Highway Concessions Trust	Maple Highways Pte Ltd	Feb-2020	2 toll assets
National Highways Infra Trust	National Highway Authority of India	Oct-2020	5 BOT Annuity, 3 TOT Toll
Shrem Invit	Shrem Infra Structure Private Limited	Feb-2021	15 NHAI & 1 MoRTH HAM Assets, 2 NHAI toll assets, 10 State (Toll+Annuity) assets and 6 State Annuity
NXT- Infra Trust	Actis-Highway Infra Limited	Jan-2024	1 toll asset
Roadstar Infra Investment Trust	IL&FS Transportation Networks Ltd	Apr-2024	6 Assets (4 BOT (toll) and 2 Annuity)

Note: Details pertaining to Roadstar Infra Investment Trust is shared by company in November 2024
Source: Credit Rating Rationale, DRHP, CRISIL MI&A

SUMMARY OF BUSINESS

Overview

Unit Distribution and Trust Formation Overview

The Union of India, acting through the Ministry of Corporate Affairs, had filed a company petition under sections 241 and 242 of the Companies Act, 2013 against the IL&FS Group before the NCLT on the grounds of, *inter alia*, that the affairs of the IL&FS Group were being conducted in a manner prejudicial to public interest. Subsequently, the NCLT directed suspension of the then existing board of directors of IL&FS and constitution of a new board of directors of IL&FS comprising the nominees of the Ministry of Corporate Affairs (the "**New Board**"). The New Board, undertaking steps for designing and implementing a fair and orderly resolution of the outstanding debt of the entire IL&FS Group, and for the purposes of resolution of certain portion of the debt of ITNL proposed the setting up of an infrastructure investment trust.

Consequently, Roadstar Infra Investment Trust as sponsored by Roadstar Infra Private Limited, was established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations.

The Trust has acquired each of the Project SPVs. Please refer to the section "*Formation Transactions in relation to the Trust*" on page 26 for more information in relation to the shareholding of the Trust in the Project SPVs. The proposed Unit Distribution will be in accordance with (i) the Resolution Framework as approved by the NCLAT vide its order dated March 12, 2020 and/or any other appropriate judicial authority and in terms of the interim distribution as approved by the NCLAT vide its order dated May 31, 2022 and (ii) a distribution plan setting out the details and manner of distribution of, among other assets, the Units issued by the Trust as may be approved by the board of directors of IL&FS.

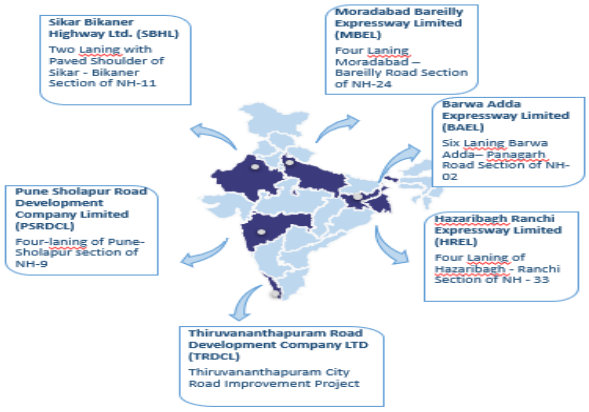
For more details in relation to the Resolution Framework and the holding of the Trust in the Project SPVs, please refer to sections "*Unit Distribution Background*" and "*Formation Transactions in relation to the Trust"* on pages 389 and 26, respectively.

Business Overview

The Trust is established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations. The Trust, through its Project SPVs together operates 6 road assets, aggregating to 685.16 kms, located across 6 states in India.

The Project SPVs had a weighted average residual concession life (weighted on the basis of residual life-time pre-MM EBITDA) of 13.54 years as on March 31, 2024 and a weighted average operating history (weighted on the basis of Fiscal 2024 estimated pre-MM EBITDA, assuming COD and appointed date as the beginning date for BOT/DBFOT assets) of 9.19 years as on March 31, 2024.

The map below sets forth the location of our projects in the Project SPVs:



The tables below set forth an overview of the Project SPVs:

S. No.	Relevant Project SPV	Project length and number of lanes	State(s)	Residual Life (in years, as of September 30, 2024)	Model	Actual Revenue from Toll Fee / Annuities in FY 2024 (in ₹ million)
1.	Hazaribagh Ranchi Expressway Limited	73.50 kms 4 lanes	Jharkhand	3.82 years	Annuity	702.02
2.	Moradabad Bareilly Expressway Limited*	121.00 kms 4 lanes	Uttar Pradesh	11.17 years	Toll	3,390.09
3.	Pune Sholapur Road Development Company Limited*	102.08 kms 4 lanes	Maharashtra	6.79 years	Toll	2,165.67
4.	Sikar Bikaner Highway Limited*	237.58 kms 2/4 lanes	Rajasthan	13.38 years	Toll	826.02
5.	Thiruvananthapuram Road Development Company Limited**	28.12 kms (excluding phase I**) 2/3/4/6 lanes	Kerala	Phase II- 2.39 years Phase III- 5.39 years Phase IV- 6.67 years	Annuity	143.95
6.	Barwa Adda Expressway Limited*	122.88 kms 6 lanes	Jharkhand/West Bengal	9.49 years	Toll	2,636.47
Total		**685.16**				**9,864.22**

Notes:
** Extendable based on target traffic as per provisions contained in the respective Concession Agreement*
*** Phase I concession period ended in July, 2022*

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In addition to the Project SPVs, the Trust through the Investment Manager may also have the ability to acquire new projects. For further details, please see the sections "*Corporate Governance*" and "*Related Party Transactions*" on pages 138 and 325, respectively. The Investment Manager is responsible for managing the Trust and the Project SPVs, as well as undertaking investment decisions relating to us and our assets. The Investment Manager meets the experience criteria as required under the SEBI InvIT Regulations. As required under the InvIT Regulations, the experience of the Investment Manager in fund management or advisory services or development in the infrastructure sector is above 5 years. Further, the Investment Manager is responsible for defining our strategic direction, including in relation to our future acquisitions, divestments or enhancement of assets. For further details, please see "*Parties to the Trust – The Investment Manager – Roadstar Investment Managers Limited*" – on page 114.

The Trustee, Axis Trustee Services Limited, is a trusteeship company registered with SEBI as a debenture trustee under the Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993, as amended. On behalf of our Unitholders, the Trustee is responsible for (a) ensuring that our business objectives and investment policies comply with the provisions of the InvIT Regulations and other applicable law, and (b) monitoring the activities of the Investment Manager (in terms of the Investment Management Agreement) and the Project Manager (in terms of the Project Implementation and Management Agreement). For further details, please see "*Parties to the Trust – The Trustee – Axis Trustee Services Limited*" on page 101.

The Project Manager, Elsamex Maintenance Services Limited, is responsible for the operations and management of the Trust and ensuring compliance with the respective concession agreements and project documents, making arrangements for appropriate maintenance, oversee the progress of development, status of approvals and other aspects of the projects of the SPVs. The Project Manager has been appointed as per the terms of the Project Implementation and Management Agreement. In addition, the Project Manager has entered into operations and maintenance agreements with the respective SPVs for providing operations and management for the SPVs. Neither the Project Manager nor any of the promoters or directors of the Project Manager (i) is debarred from accessing the securities market by SEBI; (ii) are or have been a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other

infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/ or (iii) are or have been declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters published by the RBI. For further details, please see "*Parties to the Trust – The Project Manager – Elsamex Maintenance Services Limited*" – on page 129.

Each financial year, we intend to distribute a minimum of 90.00% of the net distributable cash flows of the Trust available for distribution to our Unitholders. For further details, please see, "*Distribution*" on page 288.

Our revenue from operations for the six month period ended September 30, 2024, Fiscal 2024 Fiscal 2023, and Fiscal 2022 were ₹5,492.72 million, ₹11,658.14 million, ₹9,940.48 million, and ₹7,631.12 million, respectively. Our profit / (loss) after tax for the six month period ended September 30, 2024, Fiscals 2024, 2023, and 2022 were (₹ 6,858.39 million), (₹108.73 million), (₹1,131.52 million), and ₹995.87 million respectively.

For details of credit ratings obtained by the Trust, please see "*General Information – Credit rating"* on page 100.

Our Strengths

The Investment Manager believes the following to be the key strengths of the Trust:

Large and Diversified Portfolio of Highway Assets

The Trust owns a sizeable initial portfolio consisting of the six Project SPVs. These assets represent a scaled and diversified portfolio, as the Project SPVs consist of 6 highway assets having an aggregate length of 685.16 kms, located across 6 states in India.

Each of the Project SPVs has entered into a long-term concession agreement with either NHAI or a state authority with tenures ranging between 17.50 and 25 years. As of September 30, 2024, the Project SPVs had a weighted average residual concession life (weighted on the basis of residual life-time pre-MM EBITDA) of approximately 13.54 years.

Our assets are operated under different types of concessions, and for the six month period ended September 30, 2024 and the fiscal years ending March 31, 2024, March 31, 2023, and March 31, 2022, revenue from toll assets represented 83.22%, 77.36%, 85.23%, and 90.36% of our combined revenue and 96.51%, 95.49%, 93.91%, and 91.50% of the combined EBITDA, while revenue from annuity assets represented 3.99%, 6.02%, 7.94%, and 9.64% of our combined revenue and 3.49%, 4.51%, 6.09%, and 8.50% of the combined EBITDA, respectively.

Sizeable portfolio of mature and revenue generating assets

As of September 30, 2024, the Project SPVs had a weighted average operating history (weighted on the basis of Fiscal 2024 estimated pre-MM EBITDA, assuming COD and appointed date as the beginning date for BOT/DBFOT assets) of 9.19 years.

4 out of 6 Project SPVs are Toll Assets with an average operational life of 18.94 years. The toll assets contribute 96.51% of the combined EBITDA and has grown at CAGR of 13.13% over the last three years and at a CAGR of 9.26% over the last 5 years.

Skilled and experienced management team

The Investment Manager is led by a management team with vast experience in the road sector. The Investment Manager's management team consists of experienced personnel in the top management and key strategic positions having over 10-15 years' experience in operations of road projects, fund raising and fund management, finance and accounting, and regulatory compliance. In addition, the board of directors of the Investment Manager comprises of professionals having experience of serving in senior management roles, large multinational banks, regulatory bodies, and government institutions.

The vast experience of the management team of the Investment Manager shall enable the Investment Manager to employ a business strategy appropriate for the Trust, and assist the Investment Manager in areas of governance, engineering and operations.

In house operation and maintenance teams having rich and hands on experience with a consistent track record of managing some of the marquee projects in the infrastructure space.

The Investment Manager and the Project Manager have adequate experience in road engineering, design, construction, operation & maintenance of road and highway projects. The Project Manager is currently maintaining a road portfolio of 17 assets encompassing 1,167 kms (4,813 lane kms). The Project Manager is collecting toll on behalf of respective authorities by deputing suitable manpower in 22 toll plazas comprising a cumulative of 210 toll lanes. Further, the Project Manager has in-house expertise on Electronic Toll Collection System (ETC), highway traffic management systems and integrated tunnel control systems and is currently operating 25 toll plazas with 200 toll lanes, highway traffic management systems at 3 road projects with a total length of 296 kms and integrated tunnel control system at one tunnel project of 9 kms.

The current portfolio of projects in the Trust are part of the portfolio of assets developed by ITNL. ITNL has a strong presence in the road infrastructure sector and credited with having developed some marquee projects like the longest road tunnel project in India, first city roads projects under PPP in the state of Kerala and having developed the metro projects in Gurgaon under PPP.

Promising sector with strong fundamentals and supportive government policies.

As per the CRISIL Report, the roads sector in India registered a strong pace of constructions by NHAI, growing 6,003 km (16.4 km per day) in fiscal 2023 from 3,071 km (8.4 km per day) in fiscal 2018. The investments in the roads and highways sector rose from ₹1.7 trillion in Fiscal 2018 to ₹2.9 trillion in Fiscal 2022, registering a 1.7 times growth. Additionally, India's passenger traffic logged at a CAGR of about 8.00% from around 165.00 million in Fiscal 2017 to around 209.00 million in Fiscal 2020. In addition to the rapid growth in the road sector, the Government of India has initiated various policies and programmes for the enhancement of the road sector in India.

The Trust operates in the road sector which we believe is a strategically important sector for the Indian Government in its focus for the development of infrastructure in the country. As evidenced in the recent past, the Indian Government has undertaken various initiatives in the road sector including the construction and development of various large expressway projects, which we believe shall provide growth opportunities to the Trust in future.

Transfer of assets into the Trust pursuant to NCLT orders in line with Resolution Framework for the IL&FS Group, by NCLAT in March 2020.

The transfer of Project SPVs to the Trust is a part of the resolution efforts undertaken by the New Board of IL&FS under the Resolution Framework approved by the NCLAT. The Project SPVs were transferred to the Trust pursuant to NCLT Order which provides a title which is free and clear from all encumbrances, liens, security interest and third party claims (including any statutory or tax claims).

Pursuant to a share purchase agreement dated October 11, 2024, the Trust has acquired 243,500,000 Equity Shares representing 100.00% of equity stake of BAEL from IL&FS Transportation Networks Limited. In addition, pursuant to a deed of assignment dated October 11, 2024 and a resolution passed by the IM Board on October 14, 2024, IL&FS Group lenders of BAEL, namely, Infrastructure Leasing & Financial Services Limited, IL&FS Financial Services Limited, Elsamex Maintenance Services Limited and IL&FS Transportation Networks Limited have assigned their receivables (including resolution process cost) in BAEL to the Trust being discharged by way of issue of Units aggregating to ₹ 6,768,570,500 and balance sum in cash.

For further details on the market opportunity for the road infrastructure industry in India, please see the section "*Industry Overview*" on page 153.

Business Strategies

The Investment Manager believes the following to be the key strategies of the Trust:

Active asset management to drive organic growth

The Investment Manager will employ an active asset management strategy in the existing assets to drive growth of the portfolio. In particular, the Investment Manager will seek to maintain or improve the Project SPVs net incomes and free cash flows by, among other initiatives, minimizing revenue leakages, formulating and adopting policies and procedures and structuring investments to address regulatory considerations. The Project Manager will continue to assist the Investment Manager by carrying out the operations, management and maintenance of the projects in accordance with the relevant concession agreement and the Project Implementation and Management Agreements and by procuring, operating and maintaining the relevant project's toll management systems, improving the effectiveness of routine and major maintenance activities and instituting controls on administrative expenditures and overheads.

Calibrated expansion of the portfolio

The Investment Manager also intends to expand the portfolio of the Trust by acquiring further assets that adhere to certain asset selection criteria, which includes access to important locations in the vicinity, connecting roads, industrial and manufacturing hubs, connectivity with raw materials, ports, and also evaluating competing modes of transportation.

The Investment Manager intends to expand the portfolio without compromising on the operation and management of the existing Project SPVs while providing attractive cash flows and yields, and opportunities for future income and capital appreciation for our Unitholders.

Implementing prudent capital management policies

The Investment Manager intends to institute and implement a capital management strategy that is consistent with its objective of maximizing distributions to our Unitholders while also generating consistent total returns. To achieve these objectives, the Investment Manager will aim to ensure an efficient cost of capital and an optimal capital structure of the Trust and the Project SPVs to maximize cash distribution to Unitholders while also retaining adequate flexibility to acquire assets in the future.

Pursuant to the Unit Distribution, the Trust's total consolidated borrowings are expected to be less than 49.00% of the total value of the Trust's consolidated assets, in compliance with the InvIT Regulations.

RISK FACTORS

Eligible Creditors should pay particular attention to the fact that the Trust, the Parties to the Trust, each Project SPV and each of their activities are governed by the legal, regulatory and business environment in India, which differs from that which prevails in other countries. Eligible Creditors should carefully consider the risks and uncertainties described below and the information contained elsewhere in, this Placement Memorandum and the Final Placement Memorandum. Each Eligible Creditor must rely on its own examination of the Trust and the terms of the Unit Distribution. The risks and uncertainties described in this section may not be the only risks and uncertainties the Trust currently faces. Additional risks and uncertainties not presently known to the Trustee or the Investment Manager, or that the Trustee or the Investment Manager currently deem immaterial, may arise or may adversely affect our business, financial condition, cash flows and results of operations. If any of the following risks, or other risks that are not currently known or are now deemed immaterial, actually occur, our business prospects, results of operations, cash flows and financial condition could suffer, the price of the Units could decline to nil.

The financial and other related implications of the risk factors, wherever quantifiable, have been disclosed in the risk factors mentioned below. However, there are certain risk factors where the financial impact is not quantifiable and, therefore, cannot be disclosed in such risk factors. Unless specified or quantified in the relevant risk factors below, we are not in a position to quantify the financial or other implication of any of the risks described in this section.

Eligible Creditors should be aware that the income from the Units, may be subject to volatility. If any of the risks described below occurs, our business and prospects could be materially and adversely affected, the trading price of the Units could decrease to nil. This section should be read in conjunction with the sections entitled "Our Business" and "Discussion and Analysis by the Directors of the Investment Manager of Financial Condition and Results of Operations and Cash Flows of the Project SPVs of the Trust" on pages 207 and 293, respectively, as well as the financial statements and other financial information included elsewhere in this Placement Memorandum.

This Placement Memorandum also contains forward-looking statements (including Projections of Revenue from Operations and Cash Flow from Operating Activities) that involve risks, assumptions, estimates and uncertainties. Our actual results could differ materially from those anticipated in such forward-looking statements as a result of certain factors including the considerations described below and elsewhere in this Placement Memorandum, including the section "Forward-Looking Statements" on page 17.

Eligible Creditors must rely upon their own examination and the terms of the Unit Distribution, including the merits and the risks involved. Eligible Creditors should consult their tax, financial and legal advisors about the particular consequences of holding Units pursuant to Unit Distribution.

In this section, unless specified otherwise, a reference to "we", "us" and "our" refers to the Trust and each Project SPV on a combined basis. Furthermore, unless the context otherwise requires, the financial information used in this section is derived from the Audited Special Purpose Combined Financial Statements.

Risks Related to Our Business and the Concession Agreements

1. ***Toll collections and toll road traffic volumes may be affected by competing roads and bridges and other modes of transportation, and any improvements to, or construction of, such roads, bridges and other modes of transportation.***

   For the toll-based Project SPVs, their principal source of revenue is the collection of toll fees from users of the toll roads. The level of toll collections may be affected by competing routes and alternative modes of transportation, such as adjacent free roads, new or existing toll roads, railways or air transport. Furthermore, neither the NHAI nor the GoI is restricted under the Concession Agreements from constructing alternative modes of travel which service the same areas as are serviced by the toll roads. In the event such alternative modes of travel are constructed, it may adversely impact our revenue from toll roads.

   Additionally, given the renewed focus of the GoI, at the national, state and local levels, on the construction and development of new expressways and development and strengthening of the highway network across India, there can be no assurance that there will not be any construction, widening or improvement of any free or toll roads, or construction of other modes of transportation including local routes by local authorities/ communities, in the proximity of the toll roads or which provide an alternative or more direct routing to

locations served by the toll roads. Any such construction, widening or improvement may divert traffic away from the toll roads, which may adversely affect toll collections and, therefore, our ability to make distributions to the Unitholders.

2. Toll rates and collections and toll road traffic volumes are subject to regulatory constraints, number of road users subject to such rates and dependent on factors beyond our control.

Toll revenue depends on the tolling rates set by the concessioning authority in accordance with the concession agreement and the actual traffic volume using our roads. Usually, the concessioning authority sets the applicable tolling rates and mechanism for periodically resetting the tolling rates, in accordance with applicable MoRTH guidelines. Such tolling rates, based on the National Highways Fee Rules, 2008, were increased without compounding, by 3% each year with effect from April 1, 2008, and such increased rate was deemed to be the base rate for subsequent years. Further, the applicable base rates were revised annually with effect from April 1 each year to reflect the variation in WPI between the week ending January 6, 2007 and the WPI for the month of December of the year in which such revision is undertaken but such revision was restricted to 40% of the change in WPI. We may not be able to increase tolling rates to cover increases in our operations or financing or other costs. Such tolling rates and the scope of our arrangements with the concessioning authority may be revised by the concessioning authority in accordance with the provision of the concession agreement and applicable law. Thus, revenue from toll receipts is affected by traffic volume and toll rates, both of which are beyond our control.

Our toll collections may also be affected by the level of exemptions, i.e., some categories of road users not required to pay the applicable toll rates when using the toll roads, which may be higher in urban settings. We are also subject to fluctuations of traffic flow at new toll plazas that may not stabilize within the timelines anticipated or at all.

Traffic volumes on the toll roads and toll collections are directly and indirectly affected by a number of other factors beyond our control, including but not limited to:

- the decline in manufacturing or exports of commodities plying on the toll roads due to regulatory restrictions or other reasons including financial crises and war, which can potentially distort global prices of traded commodities;
- the number and type of motor vehicles in operation and the cost of purchasing and operating motor vehicles, including financing costs, environmental law compliance costs, exchange rate fluctuations and fuel prices, in the project influence areas of the toll roads;
- weather conditions, such as floods or torrential rain, acts of god, strikes or any other force majeure event, including epidemics, that could impair the safe operation of, restrict traffic access to, or prevent use of the toll roads. Further, any political/ non-political agitations may also significantly impact traffic movement on the roll roads;
- traffic on the roads providing access to and from the toll roads including the waiting time at toll plazas and congestion at the gateways, or the physical condition of such roads, which hampers the ability of road users to gain access to and from the toll roads;
- the capacity of the toll roads including any structure forming part of the toll roads, such as bridges, bypasses or tunnels, and the need for maintenance and repair of parts or all of the toll roads, or any structure forming part of the toll roads, which may result in restricted or no access to the toll roads for material periods of time;
- overall security of the toll roads as managed by the relevant security contractors, including the possible threat of terrorist attacks on the toll roads or any of their free-standing structures;
- a change in the applicable toll policies or other applicable laws (including environmental regulations) which affects any category of vehicle or fuel;
- development of other transportation modes and incentives associated with such modes such as the national rail plan that is expected to increase rail's modal share traffic which may adversely impact the modal share for road-freight;
- changes in consumption pattern of commodities transported on the toll roads;
- changes to axle load norms in order to further increase the permissible axle load limits in India, which may adversely impact traffic growth along Indian national and state highways and cause accelerated deterioration of the condition of the pavement of the toll roads;
- the reactions of the public or other national or state government institutions to toll rate increases;

- diversion of all or a certain class of traffic by the district or state administration for safety of pedestrians during local gatherings due to religious festivals or other form of public gatherings;
- leakage of toll fees or any form of violation by users of the toll roads;
- rise in fuel prices; reduction in commercial or industrial activities in the regions through which the roads being operated by the Project SPVs passes;
- seasonal fluctuations, specifically during the monsoon season, may adversely affect traffic volumes and cash flow. Traffic volumes tend to decrease during the monsoon season and tend to increase during holiday season. The monsoon season may also restrict our ability to carry on activities related to our operations and maintenance of the roads. This may result in delays in periodic maintenance and reduce productivity, thereby materially and adversely affecting our business, financial condition and results of operations; and
- any government policy or scheme which can have an effect on the economy of the states through which the roads being operated by the Project SPVs passes.

In the event there is a significant change in traffic volume or change in toll rates on the toll roads, there may be a corresponding decrease in toll collections which could have a material adverse effect on our ability to make distributions to the Unitholders.

3. Leakage of the toll fees of any of the toll-based Project SPV's roads may materially and adversely affect our revenues and financial condition.

Each of the toll-based Project SPV's toll receipts are primarily dependent on the integrity of toll-collection systems and the willingness of road users to pay toll fees. While each toll-based Project SPV has an integrated toll-collection system in place, the level of revenues derived from collection of tolls may be reduced by leakage through toll evasion, theft, fraud or technical defaults in the relevant Project SPV's toll systems or forced violations by users of the toll roads. Furthermore, any toll-based Project SPV may also, at times, be unable to collect tolls due to political protests or other agitations, including relating to tolling. In addition, in certain circumstances, the governmental authorities or Indian courts could seek to suspend toll collection for or during certain periods, in full or in part, on the toll roads, which suspension would result in a reduction in our revenues. For instance, during 2020-2021 toll collection was suspended on the tolls operated by SBHL due to farmer protests. SBHL has sought relief pursuant to the MoRTH circular for relief measures for farmers protest dated July 2, 2021 by way of letters dated January 13, 2021 December 10, 2021 February 27, 2023, April 26, 2024 and August 14, 2024, and January 14, 2023 written to Independent Engineer, PWD, Rajasthan.

Furthermore, toll-collection errors may amount to a loss of revenue as there is an inherent risk of under-collection of toll fees, especially in instances where the users of toll roads pay in cash. Additionally, since most of the toll collections at the toll roads operated by certain Project SPVs are through FAStag, there are risks associated with certain transactions which are rejected due to blacklisted FASTag registrations, software errors, duplicate readings etc. Any failure by us to monitor and control leakage in toll-collection systems could have a material adverse effect on our business, prospects, financial condition and results of operations and our ability to make distributions. We may be exposed to leakage even in non-cash based toll collection systems, such as software or digitally enabled toll payment options that are susceptible to cyber security breaches and theft.

Further, there have been occasions where political parties and local communities protest against the collection of tolls on roads and some of these occasions have turned violent and resulted in the destruction of toll collection booths. During such an event, the affected toll-based Project SPVs could have a limited ability to collect tolls.

4. We have relied on data derived from (i) Technical Consultant Reports commissioned from the Technical Consultants, (ii) Traffic Reports commissioned from the Traffic Consultants and (iii) the CRISIL Report, which are based on certain estimates and assumptions and are subject to the limitations set out therein.

We have appointed Translink Infrastructure Consultants Private. Limited, GMD Engineering Consultants Private Limited, HBS Infra Engineers India Private Limited, LSI Engineering & Consultants Limited and Transys Consulting Private Limited, independent third-party technical engineering firms, as our technical consultants (the "**Technical Consultants**") to forecast the operations and maintenance expenses for each Project SPV and to prepare technical reports on the Project SPVs, which are set out in Annexure C to this Placement Memorandum (the "**Technical Reports**"). We have also appointed Segmental Consulting & Infrastructure Advisory Private Limited, GMD Engineering Consultants Private Limited and HBS Infra Engineers India Private Limited as our traffic consultants ("**Traffic Consultants**") to provide their analysis

and forecast of traffic volumes for MBEL, SBHL, PSRDCL and BAEL which are set out in Annexure B to this Placement Memorandum (the "**Traffic Reports**"). Please also see "*Our Business - Projected Revenue for Toll SPVs*" on page 216. Furthermore, we have also included data from a report titled "Assessment of the roads sector in India" dated November 2024, prepared by CRISIL. ("**CRISIL Report**").

The Technical Consultant Reports, the Traffic Reports and the CRISIL Report (together referred to as "**Third Party Reports**") are subject to various limitations and are based upon certain bases, estimates and assumptions that are subjective in nature and are based, in part, on information provided by and discussions with or on behalf of us, the Sponsor and the Investment Manager. The Third Party Reports reflect current expectations and views regarding future events, and therefore, necessarily involve known and unknown risks and uncertainties. The Third Party Reports contain forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties, including population growth, gross domestic product growth, vehicle ownership rates, per capita income, agricultural output, technological advancements and fuel consumption. The future events referred to in the Third Party Reports involve risks, uncertainties and other factors which may cause the actual traffic volumes to be materially different from any future traffic volumes expressed or implied by the Third Party Reports. There can be no assurance that the bases, estimates and assumptions adopted by the Technical Consultant, Traffic Consultant or CRISIL Report Provider for the purposes of preparing their respective reports will prove to be accurate. If any of these bases, traffic assumptions is incorrect, future traffic volumes for the Project SPVs could be materially different from those that are set forth in these reports and this Placement Memorandum. The Third Party Reports are not a recommendation to invest or disinvest in the Project SPVs. Eligible Creditors are advised not to unduly rely on the Third Party Reports.

5. ***Certain provisions of the standard form of Concession Agreements may be untested, and the Concession Agreements may contain certain restrictive terms and conditions which may be subject to varying interpretations.***

Our concession agreements were entered into with the concessioning authorities and we have limited ability to negotiate the terms of these contracts. The Concession Agreements that our Project SPVs (excluding TRDCL) have entered into are substantially based on a model concession agreement prescribed by NHAI or the relevant state authority. For example, the toll fees under the Concession Agreements is fixed, subject to annual adjustments to account for inflation as specified in the Concession Agreements. In addition, the operation and maintenance standards and specifications require each Project SPV to incur operation and maintenance costs on a regular and periodic basis. The Concession Agreements also provide for a fixed term concession and, although the Concession Agreements provide for an extension or reduction of the concession period based on certain factors, including actual traffic volumes on specified target dates, the Concession Agreements do not provide for renewal of the Concession Agreements after the expiry of the term.

There is limited guidance available on the interpretation of a number of terms and conditions of the Concession Agreements. In addition, certain terms of the Concession Agreements, such as those related to an augmentation in the capacity of the toll roads, termination payments, construction of additional competing roads by the concessioning authority, variation in concession period based on target traffic, the Government or State Governments and payment of compensation for changes in law are untested. Accordingly, the interpretation of certain terms and conditions in the Concession Agreements of the Project SPVs by the concessioning authority, the courts or regulators may be different from our interpretation of such terms and conditions.

The terms and conditions of the Concession Agreements contain restrictive terms and conditions. For example, the Concession Agreements contain provisions that mandate substitution clauses in the project agreements. Such substitution clauses allow the lenders of such project to step into project agreements in place of a Project SPV in the event of suspension of the Concession Agreement for the concerned Project SPV due to a breach or default by the said Project SPV. The Concession Agreements also provides that the lenders to a Project SPV may substitute the Project SPV with new entities in the event of a default by the concerned Project SPV under the relevant Concession Agreements or financing agreements. The terms of each of the Project SPV's Concession Agreements requires the Project SPVs to indemnify the concessioning authority for losses arising out of breach of the obligations of the Project SPVs under the Concession Agreements. Further, the Concession Agreements may mandate the requirement of a consent from the concessioning authorities prior to the undertaking of certain activities by the relevant Project SPV.

In the event the concessioning authority or a lender invokes any restrictive term or condition in the Concession Agreements, or the concessioning authority or a court interprets any term or condition in an adverse manner,

such invocation or interpretation may materially and adversely affect our business, financial condition and results of operations. For further details, please see, "*Summary of Key Agreements— Summary of Concession Agreements*" on page 227 of this Placement Memorandum.

6. ***The Valuation Report, and any underlying reports, are not opinions on the commercial merits of the Trust or the Project SPVs, nor are they opinions, expressed or implied, as to the future trading price of the Units or the financial condition of the Trust upon listing, and the valuation contained therein may not be indicative of the true value of the Project SPV's assets.***

RBSA Valuation Advisors LLP has been appointed as the independent valuer (the "**Valuer**") to undertake independent valuation of the Project SPVs. The Valuer has issued a report (the "**Valuation Report**"), included in this Placement Memorandum, which sets out their opinion as to the fair enterprise value of the Project SPVs as on September 30, 2024. In order to issue their Valuation Report, the Valuer has based his assumptions regarding the traffic volume, toll rates, operation and maintenance costs, amortization, debt repayments and non-cash net working capital projections amongst other things, on information provided by and discussions with or on behalf of us, the Sponsor and the Investment Manager, and which reflects current expectations and views regarding future events and, therefore, necessarily involves known and unknown risks and uncertainties. Please see the Valuation Report included as Annexure A in this Placement Memorandum for a detailed description of all assumptions relied upon in the preparation thereof. The Valuation Report contains forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties. The future events referred to in these forward-looking statements involve risks, uncertainties and other factors which may cause the actual results or performance to be materially different from any future results or performance expressed or implied by the forward-looking statements.

7. ***Any infrastructure project that we acquire which is still under construction and development may be subject to cost overruns or delays.***

We may acquire infrastructure projects which are still under construction and development subject to certain thresholds and other considerations, in accordance with the InvIT Regulations and subject to the Unitholders' approval in certain cases. The development of such projects is subject to substantial risks, including various planning, engineering and construction risks, along with regulatory hurdles on land acquisition and necessary environmental clearances. The concessionaire generally begins generating a return on investment only after the commencement of commercial operations, which may be delayed due to various reasons.

Under the InvIT Regulations, we can acquire eligible infrastructure projects (as defined in the InvIT Regulations) as well as under-construction projects. Several key steps must be taken before these assets commence operations, generate revenue and recover costs, including but not limited to: conducting surveys and investigations for the proposed route; entering into construction contracts and long-term service agreements with contractors with sufficient expertise; purchasing necessary equipment; acquiring land/ obtaining rights of way from land owners and local authorities; complying with ongoing requirements of the required permits, approvals and licenses; procuring sufficient equity, debt, mezzanine and other necessary financing.

During the construction and development phases, we may also suffer from the unavailability of equipment/ materials, shortage of technically skilled personnel and labour, work stoppages, labour or social unrest, adverse weather conditions, accidents, natural calamities, delays in construction, delays in clearances, unforeseen construction-related and/ or operational delays and defects, delivery failures by, and disputes with contractors, limited availability of competent construction companies, increased cost of raw materials, unavailability of adequate funding, failure to complete projects within budget and in accordance with the required specifications, additional interest costs incurred due to project delays, legal actions brought by third-parties, changes in government, regulatory policies and tax policies, foreign exchange movements, adverse trends in the infrastructure industry or general economic conditions in India. These factors, as well as other unforeseeable problems and circumstances may lead to substantial increases in the time and costs required to complete the projects that we may acquire. We may also not be able to recover the additional costs and may also be subjected to levy of liquidated damages or penalties in case of delay in achieving commercial operations date for the project.

The foregoing factors may also give rise to risks in the building and construction phase of projects and create delays in the completion of such projects. Construction disruptions or delays could impede our ability to

undertake future acquisition of assets, and in turn materially and adversely affect our financial and operational estimates, our business, prospects, financial condition, results of operations and cash flows.

8. We may be subject to increases in costs, including operation and maintenance costs, which we cannot recover by increasing toll fees or annuity income under the relevant Concession Agreements.

The terms and conditions of the Concession Agreements are fixed and are not negotiable during the concession period. The costs of operating and maintaining the roads may be subject to cost overruns as a result of increased or unforeseen costs due to a number of factors beyond each Project SPV's control, including, among other things:

- increase in the cost of labour, materials (for example, bitumen) and insurance;
- the Project SPVs being required to install intelligent toll-collection systems or other new technologies for monitoring projects at their own costs, including remedial costs incurred to rectify any defects caused on account of a failure of any technology;
- Project SPVs being required to install/ deploy sustainable solutions to adhere with evolving and stringent environmental and social norms;
- higher axle loading, traffic volume or environmental stress leading to more extensive or more frequent heavy repairs or maintenance costs, which may be substantial;
- the Project SPVs being required to restore their project roads in the event of any landslides, floods, road subsidence, other natural disasters, accidents or other events causing structural damage or compromising safety;
- cost incurred for repair of damage to road pavement, bridges, culverts or any other type of structures on account of bad workmanship, faulty engineering, design defects or any other defects during the construction stage;
- cost incurred for repair of damage to road pavement, bridges, culverts or any other type of structures on account of poor maintenance or on account of not having undertaken timely repairs/ replacement of parts;
- changes to the laws and regulations relating to insurance in India which results in an increase in the insurance premiums payable by the Project SPVs;
- increase in electricity tariff rates or other fuel costs resulting in an increase in the cost of energy;
- increase in royalty or levy on raw materials and services used for routine and heavy maintenance;
- adverse weather conditions;
- an increase in minimum wages or other operating costs;
- the introduction of a levy on the usage of water for maintenance of the toll roads, among other things, in states in which the toll roads are located;
- unforeseen legal, tax and accounting liabilities relating to acquired assets; or
- other unforeseen operational and maintenance costs such as unexpected escalations in third-party fees or insurance premium.

In the event that our costs increase, we may be unable to offset such increases with higher revenues by increasing toll fees or seeking increase in annuity income due to the restrictions under the Concession Agreements. Any significant increase in operation and maintenance costs beyond the amounts budgeted by us, or any failure to meet quality standards, may reduce our profits, could expose us to penalties imposed by the concessioning authorities and could have a material, adverse effect on our business, financial condition and results of operations. Such events may also impact the ability of the Project SPVs to service the debt obtained from the Trust and our ability to make distributions to the Unitholders. As such, the inability to change the terms and conditions, including the toll fees of the concession during the concession period, may materially and adversely affect our operational and financial flexibility.

9. The Trust may be unable to maintain its eligible status under the InvIT Regulations due to non-compliance by certain members of the Sponsor Group with the fit and proper requirements under Schedule II of the Securities and Exchange Board of India (Intermediaries) Regulations, 2008.

Regulation 4(2)(k) of the InvIT Regulations require the Trust, Sponsor Group, Investment Manager, Project Manager and Trustee, to be 'Fit and Proper' under Schedule II Securities and Exchange Board of India (Intermediaries) Regulations, 2008 ("**Intermediaries Regulations**" and such requirements the "**Fit and Proper Requirements**"). The Fit and Proper Requirements are, *inter alia*, applicable to the relevant entity and its promoters or persons holding controlling interest or persons exercising control over such entity (collectively

the "**Persons**"). Under the Fit and Proper Requirements, Persons are disqualified if, (i) a charge sheet has been filed against the Person by any enforcement agency in matters concerning economic offences and is pending or (ii) the Person has been categorized as a wilful defaulter.

Certain IL&FS Group entities (including ITNL and IL&FS) that are identified as members of the Sponsor Group do not meet the Fit and Proper Requirements due to the ongoing insolvency and criminal proceedings concerning these entities or their promoters, being IL&FS or ITNL ("**Non-Compliant Entities**"). A list of such entities and the status of their compliance with the Fit and Proper Requirements is stated below:

Sr. No.	Sponsor Group member	Status of Compliance with the Fit and Proper Requirements
1.	RIPL	ITNL, being the promoter of RIPL, has been: (i) declared as a wilful defaulter by 19 banks, the lead bank being Canara Bank, and (ii) named as an offender in the charge sheet filed by the Economics Offence Wing, Delhi. Accordingly, RIPL, by virtue of ITNL being its promoter, falls within the criteria specified under 3(b)(ii) and 3(b)(ix) read with 2(c) of Schedule II of the Intermediaries Regulations. RIPL is also the holding company of the Investment Manager and hence, RIPL not meeting the Fit and Proper Requirements will affect the eligibility of the Investment Manager as well.
2.	ITNL	ITNL has been: (i) declared as a wilful defaulter by 19 banks, the lead bank being Canara Bank, and (ii) named as an offender in the charge sheet filed by the Economics Offence Wing, Delhi. Accordingly, ITNL falls within the criteria specified under (A) 3(b)(ii), and (B) 3(b)(ix), of Schedule II of the Intermediaries Regulations. Further, considering that IL&FS is the promoter of ITNL, by virtue of 2(c) of Schedule II of the Intermediaries Regulations, disqualification of IL&FS from being categorized as 'Fit and Proper' as specified under the Intermediaries Regulations, will also impact the eligibility of ITNL to be 'Fit and Proper'. Further, as stated above, ITNL is the promoter of the Sponsor, RIPL, as well.
3.	IL&FS	As on date of this Placement Memorandum, there are ongoing criminal proceedings, including proceedings initiated by enforcement agencies such as the Serious Fraud Investigation Office ("**SFIO**"), and other civil proceedings which may lead to IL&FS being disqualified from being categorized as 'Fit and Proper' as specified under the Intermediaries Regulations.
4.	Sabarmati Capital One Limited ("**SCOL**")	IL&FS indirectly holds controlling interest in SCOL. As on date of this Placement Memorandum, there are ongoing criminal proceedings, including proceedings initiated by SFIO, which may lead to IL&FS being disqualified from being categorized as 'Fit and Proper' as specified under the Intermediaries Regulations. By virtue of 2(c) of Schedule II of the Intermediaries Regulations, such disqualification of IL&FS will also impact the eligibility of SCOL to be 'Fit and Proper'.
5.	IL&FS Financial Services Limited ("**IFSL**")	As on date of this Placement Memorandum, IFSL has been named as an offender in the charge sheet filed by the Senior Fraud Investigation Office in the Court of Learned Additional Sessions Judge Cum Special Judge (Companies Act), Greater Mumbai. Accordingly, IFSL falls within the criteria specified under 3(b)(ii) of Schedule II of the Intermediaries Regulations. Further, considering that IL&FS is the promoter of IFSL, by virtue of 2(c) of Schedule II of the Intermediaries Regulations, disqualification of IL&FS from being categorized as 'Fit and Proper' as specified under the Intermediaries Regulations, also impacts the eligibility of IFSL to be 'Fit and Proper'.

While SEBI, by way of its letter dated March 20, 2024 has granted the Trust and the Non-Compliant Entities an exemption from the strict enforcement of Regulation 4(2)(k) of the InvIT Regulations, in case such exemption is withdrawn by SEBI or restricted in any way, it could affect the eligibility of the Trust as specified under the InvIT Regulations.

10. We will depend on various third parties to undertake certain activities in relation to the operation and maintenance of the roads and any delay, default or unsatisfactory performance by these third parties could materially and adversely affect our ability to effectively operate or maintain the roads. Further, the operation of the Project SPVs will also depend on our relationships with other stakeholders.

We will depend on the availability and skills of third-party employees and contractors for the operation and maintenance of the roads. We can also make no assurance that the services of such third parties will continue to be available at reasonable rates in the areas in which we conduct our operations or at all. We may also be exposed to risks relating to the inability of such third parties to obtain requisite approvals for the operation and maintenance activities, as well as the quality of their services, equipment and supplies. We may also fail to ensure the reliability and sustainability of toll collectors who are required to man the toll booths continuously may materially and adversely affect our overall level of net revenue. We may also be exposed to civil and criminal liability in relation to the actions of other third parties, including our directors, employees and contractors. For details of such civil and criminal proceedings, please see the section "*Legal and Other Information*" on page 346 of this Placement Memorandum.

Further, if we undertake limited development, while we may sub-contract our construction work, we may still be liable for accidents on our projects due to defects in design and quality of construction/ repair works of our projects during their construction and operation. In addition, we can make no assurance that such contractors or their sub-contractors will continue to hold or renew valid registrations under the relevant labour laws in India or be able to obtain the requisite approvals for undertaking such construction and operation. Furthermore, in case of failure by the sub-contractor to pay the labour costs of the workers engaged by them, we may be liable to pay such costs to the contracted labourers. Any delay, default or unsatisfactory performance by these third parties could materially and adversely affect our ability to manage the operation and maintenance of the toll roads under the Concession Agreements in a timely manner or at all and may require us to implement traffic diversion measures and expose us to penalties and premature termination of our Concession Agreements. Any of the foregoing factors could have a material adverse effect on our business, financial condition, reputation and results of operations.

The operation of the Project SPVs will also depend on our relationships with other shareholders and stakeholders. Under the InvIT Regulations, the Trust is permitted to invest in SPVs containing other shareholders or partners subject to such other shareholders or partners executing an agreement confirming that they will not exercise any rights that prevent the Trust from complying with the InvIT Regulations. The shares held by the third-party shareholder in TRDCL or any other shareholder in any SPVs acquired by the Trust in the future, will continue to remain an asset of such shareholder and may be subject to encumbrances, regulatory proceedings and other restrictions imposed on such shareholder, which are beyond our control.

11. Our actual results may be materially different from the expectations, express or implied, or Projections of Revenue from Operations and Cash Flows from Operating Activities included, in this Placement Memorandum.

In view of the InvIT Regulations, this Placement Memorandum includes certain forward-looking statements, such as Projections of Revenue from Operations and Cash Flows from Operating Activities, expectations, plans and analysis of the projections, as set out in the section "*Projections of Revenue from Operations and Cash Flows from Operating Activities*" on page 524. The Projections of Revenue from Operations and Cash Flows from Operating Activities have been prepared and presented on the basis that the Trust holds all the Project SPVs on or prior to the date of the Allotment of the Units pursuant to the Offer for the last three fiscals as per the statement of Projections of Revenue from Operations and Cash Flows from Operating Activities. Certain assumptions have been made regarding our future financial and operating performance, including but not limited to the revenue from operations, construction income, operating and maintenance costs, Trust expenses, the portfolio remaining unchanged through the projections period and no outflow on account of any litigation related matters during the projections period. It has been assumed all projects will continue to operate at the current or estimated levels. In case such assumptions are not satisfied, the associated revenue from operations, profit and cash flows would need to be revised accordingly. Hence, the projections of revenue from operations and cash flows are only estimates and there can be no assurance from the Investment Manager on any of these

parameters. The Trust's revenue will be dependent on the cash flows from the Project SPVs, including principal and interest payments (net of applicable taxes and expenses) from the Project SPVs, whose revenue in turn is dependent on a number of factors, including the receipt of toll revenues, which may decrease for a number of reasons including traffic volumes.

Given that the Projections of Revenue from Operations and Cash Flows from Operating Activities are based on assumptions, there could be uncertainties and contingencies, which could adversely affect the Investment Manager's ability to achieve the Projections of Revenue from Operations and Cash Flows from Operating Activities. Further, the assumptions underlying the Projections of Revenue are subject to significant business, regulatory and tax risks. The Investment Manager cannot assure you that the assumptions will be realized and the actual revenue from operations and cash flows from operating activities, will be as projected. The Projections of Revenue from Operations and Cash Flows from Operating Activities for Fiscals 2026, 2027 and 2028 are derived assuming post Unit Distribution capital structure and corporate structure as if it will be in existence from March 31, 2024.

12. We may face limitations and risks associated with debt financing and refinancing.

We are subject to regulatory restrictions in relation to our debt financing and refinancing. We may from time to time require debt financing and refinancing to carry out the Investment Manager's investment strategy. In the event that we undertake debt financing or refinancing, we may be limited by Indian law as to the nature of financing or refinancing that we may undertake. Under the InvIT Regulations, the aggregate consolidated borrowings and deferred payments of the Trust, net of cash and cash equivalents shall not exceed 70% of the value of the Trust Assets and any borrowings above 25% of the value of the Trust Assets, up to 49%, shall be subject to certain conditions, including Unitholder approval and credit rating from a credit rating agency. For further borrowings exceeding 49% of the value of the Trust Assets, the funds are permitted to be utilized only for acquisition or development of infrastructure projects, the prescribed credit rating and threshold of unitholder approval are required to be obtained and the Trust is required to have a track record of at least six distributions on a continuous basis post listing in the years preceding the financial year in which the enhanced borrowings are proposed to be made. There is no assurance that the relevant approval can be obtained in a timely manner, or at all. Further, there is no assurance that the current levels of debt allowed under the InvIT Regulations shall remain unchanged and these can be made further stringent wherein the ability of the Trust to raise incremental debt financing may be curtailed.

Debt financing to fund the acquisition of a project may not be available on short notice or may not be available on acceptable terms or at all. Since the timing and size of acquisitions cannot be readily predicted, the Trust may need to be able to obtain funding on short notice to benefit fully from opportunities. Also, as a trust, we may be unable to access certain debt capital available to companies. Debt raised by us may be subject to regulatory restrictions. Additionally, debt to be raised by any of the Project SPVs will be subject to their credit rating.

In the event that we undertake new debt financing or refinance existing debt, we may also be subject to risks associated with debt financing and refinancing, including prior consent or intimation to lenders required to carry out certain actions and the risk that our cash flows may be insufficient to meet required periodic payments of principal and interest under such arrangements and to make distributions to the Unitholders. Our ability to generate sufficient cash to satisfy our debt obligations will depend on our future operating performance, which may be affected by prevailing economic conditions and financial, business and other factors beyond our control. There is no assurance that we will be able to generate sufficient cash flow to meet all of our debt obligations. If we are unable to make payments due under our debt facilities, the lenders may be able to declare an event of default and initiate enforcement proceedings relating to any security provided in respect of the loan facilities, and/or call upon any guarantees, and this may materially and adversely affect our ability to make distributions to the Unitholders. Furthermore, a lender may, in accordance with the terms and conditions of applicable documentation and applicable law, seek recourse to, and enforce security interest, if any, against the Project SPVs, by initiating proceedings against the Trustee and/or the Investment Manager (acting on behalf of the Trust); provided that on initiation of the proceedings against the Trust or the Project SPVs, the Trustee shall not be personally liable and the Trustee's assets shall not be utilized towards recovery of such debt. The Project SPVs, which remain after any such recovery by the lenders, shall remain the property of the Trust, to be utilized in accordance with the Trust documents and applicable law. Further, borrowings availed by the Project SPVs and/or the Trust are subject to the applicable law, regulations, rules issued by governmental and regulatory bodies. These applicable law, regulations and rules are subject to amendments in future and onerous provisions may be imposed which may result in non-compliance by the Project SPV and/or the Trust.

Furthermore, restrictions in relation to external commercial borrowings may limit the Trust's ability to borrow overseas for projects under development and hence could constrain its ability to obtain financing on competitive terms and refinance existing indebtedness. In addition, there can be no assurance that any required regulatory approvals or borrowing in foreign currencies will be granted to the Trust without onerous conditions, or at all.

13. The Project SPVs' financing agreements entail interest at variable rates, and any increase in interest rates may adversely affect our results of operations, financial condition and cash flows.

Certain third-party financing arrangements of the Project SPVs would remain in place after the Unit Distribution. These financing agreements typically entail interest at variable rates with a provision for the periodic reset of interest rates. Accordingly, the Project SPVs are susceptible to changes in interest rates and the risks arising therefrom. Any increase in interest rates will have an adverse effect on our results of operations, financial condition and cash flows. For further details in relation to the financing arrangements entered into by the Project SPVs, please see the section "*Financial Indebtedness and Deferred Payments*" on page 274.

14. The Project SPVs have a limited period to operate the roads as the concession periods granted to the Project SPVs are fixed.

The concession agreements entered into by TRDCL and HREL provide for a fixed term concession, at the end of which the operations, the rights and obligations granted to the SPVs will be transferred to the relevant concessioning authority with no renewal option. For toll-road projects of the Project SPVs, the respective concession agreements provide for limited increase in concession period basis the target traffic.

Furthermore, there is no assurance that the concessioning authority will grant extensions for the toll roads. In addition, there can be no assurance that we will be able to successfully acquire new assets once the existing Concession Agreements expire. Further, if the operating periods of the toll roads are shortened or disrupted or the Project SPVs' rights to operate the toll roads are terminated before the expiration of the concessions, our business, financial condition and results of operations may be adversely affected.

15. The termination payment due to us upon termination of the Concession Agreements may not adequately compensate us for the actual costs and investments associated with the toll roads in a timely manner or at all.

The concession agreements may be terminated by the concessioning authorities for a variety of reasons, including but not limited to one or more of the following:

- failure to replenish or provide fresh performance security within a cure period of 30 days;
- failure to achieve the latest outstanding project milestone and continuing to be in default for a specified period (ranging from 90 to 120 days);
- abandonment or manifestation of intention to abandon the construction or operation of the project without prior written consent;
- breach of maintenance requirements or safety requirements;
- failure to make payments within the specified period in the relevant Concession Agreement;
- escrow default and failure to cure within a cure period of 15 days;
- creation of encumbrance in breach of the relevant Concession Agreement; and
- materially false representations or warranties.

If a concession agreement is terminated by the concessioning authority due to a default by a Project SPV, the Project SPV may be exposed to additional liability. For further details, please see, "*Summary of Key Agreements— Summary of Concession Agreements.*" on page 227 of this Placement Memorandum.

In the event that the early termination of the Concession Agreements is due to a breach by the concessioning authority, we are entitled to receive a contractually agreed termination amount, as set out in "*Summary of Key Agreements— Summary of Concession Agreements.*" on page 227 of this Placement Memorandum. The termination payment payable to us or in the event of a breach of the concessioning authority would generally be lower than what we would have otherwise been entitled to receive in the event that the Concession Agreement had not been terminated, we may not be adequately compensated for the actual costs and

investments associated with the toll roads and, therefore, may adversely affect our ability to make distributions to the Unitholders.

16. Our revenue from HREL and TRDCL is dependent on receiving consistent annuity income from the respective concessioning authority.

HREL and TRDCL, are annuity assets, forming a part of the Project SPVs. Pursuant to the relevant concession agreements, a fixed amount is paid semi-annually as annuity by the NHAI or KRFB. The concession agreement provides that HREL and TRDCL can encash the letter of credit established by the concessioning authority for the security of the payment, subject to certain conditions. Any reduction or non-receipt of annuity income or delay in receipt of annuity income from the relevant concession authority may adversely affect our business, prospects, financial condition, cash flows and results of operations.

17. The Project SPVs have entered into concession agreements with government entities which contain certain onerous provisions and any failure to comply with such concession agreements could result in adverse consequences including penalties, deductions from annuities and substitution of the concessionaire.

The Project SPVs have entered into concession agreements with which the Project SPVs have a limited ability to negotiate the terms of the concession agreements. As a result, the concession agreements contain terms that may be onerous to the Project SPVs.

The concession agreements impose certain onerous obligations on the Project SPVs in relation to, among other things, compliance with operation and maintenance requirements. In the event of any default under the project agreements, which may limit the Project SPVs' flexibility in carrying out their businesses. Failure to comply with these requirements or to obtain a waiver thereto could result in adverse consequences, including the Project SPVs being liable for compensating the relevant concessioning authorities for such breach or termination, as may be specified in the concession agreements.

Further, the Projects should typically achieve the commercial operation stage no later than the commercial operation dates specified under the relevant concession agreements, or by the end of the extension period, if any, granted by the concessioning authorities. The failure to adhere to contractually agreed or extended timelines, for reasons other than *force majeure* events not within the control of the concessionaire, may require the Project SPVs to pay liquidated damages as stipulated in the concession agreements, among other things. The concessioning authority may also be entitled to terminate the concession agreement if a delay in the completion of a relevant Project is not as a result of any of the agreed exceptions. In such cases, a Project SPV may receive partial payments under its concession agreement and the payments received by it may be less than the estimated cash flows expected from such Projects.

18. There can be no assurance that we will be able to successfully undertake future acquisitions of road assets or efficiently manage the infrastructure road assets we have acquired or may acquire in the future.

Our growth strategy in the future may involve strategic acquisitions of roads and other road assets. We may not be able to identify or conclude appropriate or viable acquisitions in a timely manner. The success of our past acquisitions and any future acquisitions will depend upon several factors, including:

- our ability to identify, finance and acquire operational toll roads and other road assets on a cost-effective basis;
- our ability to integrate acquired personnel, operations, products and technologies into our organisation effectively;
- unanticipated problems or legal liabilities of the acquired businesses; and
- tax or accounting issues relating to the acquired businesses.

There can be no assurance that we will be able to achieve the strategic purpose of such acquisitions or operational integration or an acceptable return on such investments, which may materially and adversely affect our profits, financial condition and distributions.

Furthermore, concession agreements for future road projects may also contain terms and conditions that are more restrictive than those under the current Project SPV's Concession Agreements for the roads. These restrictions may restrict our flexibility in managing our business or projects.

Any future acquisitions or investments may require significant capital and may expose us to potential risks, including risks associated with failure to identify material problems during due diligence, undisclosed disputes, non-compliance with applicable laws, incurring additional debt, risks that acquired properties will not achieve anticipated profitability and an inability of the project to generate sufficient potential revenue in the future to offset the costs and expenses of the acquisition. These restrictions may restrict our flexibility in managing our business or projects and could in turn adversely affect our business prospects, financial condition and results of operations. Further, we are required to maintain certain investment ratios in accordance with the InvIT Regulations, including, requirement under Regulation 18(4) of the InvIT Regulations under which, not less than 80% of the value of our assets should be invested in eligible infrastructure projects. Compliance with these requirements may restrict us from acquiring additional assets in the future. There can be no assurance that any future acquisitions will perform as expected or that the returns from such acquisitions will support the financing utilised to acquire them or maintain them. As a result, the consummation of acquisitions may have an adverse effect on our ability to execute our growth strategy, business, financial condition, results of operations and cash flows and ability to make distributions to our Eligible Creditors.

19. ***Disruptions to traffic flows on the long network corridors connecting to the toll roads or a failure by local or state agencies to maintain such long network corridors may have an adverse effect on traffic volumes and revenues.***

Disruptions to the roadways connecting to the toll roads, including as a result of construction or maintenance activities, is and will continue to be outside of our control. Any such construction or maintenance activities along the long network corridors of the toll roads may have a significant impact on the level of service offered to the users of such routes, particularly if there is a disruption to the flow of traffic, which may cause road users to take alternative routes to avoid such disruptions. Further, if the local or state agencies responsible for the maintenance of the long network corridors do not properly maintain the connecting roadways, or if such maintenance requires any material closure of such roadways, the toll roads may experience a decrease in traffic volume on the toll roads, which could adversely affect our toll collections and our ability to make distributions to the Unitholders.

20. ***Decreases in demand for, or the production of, certain commodities and regulatory changes relating to certain commodities or the transportation thereof may adversely affect traffic volumes and our toll collections.***

Traffic volume on our toll roads may be affected by the demand for certain commodities, including food grains and vegetables, which are produced in local regions and transported to other states within India via national and state highway connections, including the toll roads. As a result, traffic volumes and our toll collections are susceptible to fluctuations in the demand for, or production of, such commodities. Any decrease in the demand for, or production of, such commodities in the future may result in a reduction in traffic volumes on the toll roads and a corresponding decrease in our toll collections. Further, any potential bans on sand, stone or iron ore mining in the future or other regulatory restrictions on the production or manufacturing of certain commodities, such as the restrictions on sand-mining in Rajasthan and Uttar Pradesh or other concerns may cause a reduction in traffic volumes on the roads and a consequential decrease in toll collections.

Any future change in the regulations regarding the dynamics of interstate transit or transportation of commodities may cause a reduction in the flow of traffic by discouraging the transportation of commodities across state borders and prompting industries to source commodities from their home state. Any such reduction in the demand for, or production of, certain commodities or any increase in the interstate transportation costs of such commodities may have a material adverse effect on our toll collections and our ability to make distributions to the Unitholders.

21. ***Our operations could be adversely affected by strikes, work stoppages or wage increase demands by, or any other kind of disputes involving, our workforce or our contractors' work force or any labour unions.***

Certain day-to-day operations of the toll roads are expected to be outsourced to external contractors. There can be no assurance that we will not experience business disruptions in the form of local or nationwide strikes or work stoppages due to disputes relating to wage increases or other problems with our workforce or our contractors' work force or any labour unions. Such labour disruptions may interfere with, or lead to the complete or partial shutdown of the operation of, the toll roads resulting in a loss of toll collections which may, as a result, adversely affect our business and results of operations.

22. ***There may be interruptions in our information technology systems, including the operation of the automated toll accounting and administrative systems at the toll roads.***

We have and will continue to rely on information technology systems and infrastructure to support our businesses. For instance, the Trust has subscribed to SAP for implementing cloud storage services. Further, as the Project SPVs are reliant on an electronic toll collection system, our transaction-processing systems and reliable network infrastructure are critical for successful toll collections. In particular, the toll roads are managed, in part, by third-party hardware and software which account for and administer the collection of tolls. For instance, Vaaan Infra Private Limited and Arya Omnitalk Wireless Solutions Private Limited have been engaged for the implementation of hybrid electronic toll system at the SBHL Project and PSRDCL Project, respectively. These information technology systems may be susceptible to outages due to fire, explosions, floods, power loss, telecommunications failures, cyberattacks, security breaches, and similar events. Such instances of server failures and short circuit in electrical wiring have happened at the BAEL Project and MBEL Project.

Information technology system failures, network disruptions, software errors, duplicate readings and breaches of data security could disrupt our operations. Although we expect to take steps to protect our systems from security breaches and unauthorized access by third parties, such efforts may be unsuccessful due to software glitches, employee error or malfeasance, government surveillance, or other factors. Further, if our systems or software were to malfunction, the accuracy of our traffic data and our ability to correctly identify and classify vehicles would be adversely affected, which may lead to loss of toll revenue, among other things.

If any unforeseen event were to render all or part of our information technology systems or toll collection computer systems non-operational, or in the event that these systems malfunction and are not able to be restored quickly, our business may be harmed and our ability to make distributions to the Unitholders may be impaired. There can be no assurance that our business continuity plans will be completely effective during an information technology failure or interruption. Such failures could have an adverse effect on our business, financial condition and results of operations.

23. ***The business and financial performance of the Trust, the operations of the Project SPVs and any future assets that we may acquire, are significantly dependent on the policies of, and relationships with, various government entities in India and could be affected if there are adverse changes in such policies or relationships.***

The operations of the Project SPVs and any future assets that we may acquire, are and will be significantly dependent on various central and state government entities, in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the surface transportation industry, as well as the terms of the contractual arrangements, concessions and other incentives available from these government entities for the projects. Sustained increases in budgetary allocations by the GoI and various state governments for investments in the infrastructure sector, the development of structured and comprehensive infrastructure policies that encourage greater private sector participation and increased funding by international and multilateral development financial institutions in infrastructure projects in India have resulted in, and are expected to continue to result in, an increase in the amount of transportation infrastructure projects undertaken in India. Any adverse change in the focus or policy framework regarding infrastructure development or the surface transportation industry, or change in the Trust's relationships with the GoI or various government entities in India, could adversely affect the Project SPVs, the opportunities for the Trust to secure new assets and our business, results of operations and financial condition.

In addition, the projects in which government entities participate may be subject to delays, extensive internal processes, policy changes, changes due to local, national and internal political pressures and changes in governmental or external budgetary allocation and insufficiency of funds. Since government entities are responsible for awarding concessions and are parties to the development and operations of projects, projects are directly and significantly dependent on their support. Any withdrawal of support or adverse changes in their policies may lead to the agreements being renegotiated and could also adversely affect the financing, capital expenditure, revenues, development or operations relating to the current and future assets of the Project SPVs.

24. ***The Trust may be dissolved, and the proceeds from the dissolution thereof may be less than the value of the Units held by the Unitholders.***

The Trust is a contributory irrevocable trust registered under the Registration Act, 1908 and it may only be extinguished (i) if it is impossible to continue with the Trust or if the Trustee, on the advice of the Investment Manager, deems it impracticable to continue with the Trust; (ii) on the written recommendation of the Investment Manager and upon obtaining the prior written consent of such number of the unitholders as is required under the InvIT Regulations; (iii) if the Units of the Trust are delisted from the Stock Exchange; (iv) if the SEBI passes a direction for the winding up of the Trust or the delisting of the Units; or (v) in the event the Trust becomes illegal. Should the Trust be dissolved, depending on the circumstances and the terms upon which assets of the Trust are disposed of, there is no assurance that Eligible Creditors will recover all or any amount as part of its unitholding.

If a default is triggered under the financing documents that the Trust is a party to, the Trustee/ Investment Manager will take steps to cure such default and/or to repay the affected lender by appropriate means, including divesting or liquidating the assets of the Trust or raising additional financing, in accordance with such financing documents and applicable laws. If such default is not cured, and the affected lender initiates proceedings against the Trust, the Trust may be terminated subject to applicable laws. In the event of a termination of the Trust, the net assets which will be paid to the Eligible Creditors will take into account the debt, liabilities and obligations of the Trust. There is no assurance that Eligible Creditors will recover all or any amount as part of its unitholding.

25. The insurance coverage for the roads may not protect the Project SPVs from all forms of losses and liabilities associated with their businesses.

Our operations are subject to a number of risks associated with the maintenance and operations of the Project SPVs. Our Project SPVs are associated with various risks and are accordingly covered under various insurance policies covering risks including, risks in relation to fire and special perils, terrorism, burglary, various business guard commercial policies for projects, machinery breakdown and any accidental physical loss and destruction or damage to the insured property due to a cause, other than as excluded in the insurance policies. These risks can cause personal injury and loss of life and damage to, or the destruction of, property and equipment (including infrastructure developed by us) and may result in the limitation or interruption of our business operations and the imposition of civil or criminal liabilities.

For instance, BAEL has filed for an insurance claim for loss of various electronic and electrical assets caused due to thunderstorm and lightening on August 22, 2023 at the BAEL Project.

While our insurance policies cover such risks, they are subject to deductions and exclusions based on certain circumstances including, among others, war, invasion, damage caused by nuclear weapons material or ionizing radiation or contamination by radioactivity from any nuclear fuel or nuclear waste, loss or damage caused directly or indirectly from discharge of pollutants or contaminants, loss of earnings, loss by delay, loss of market or other consequential or indirect loss or damage of any kind arising from any functioning or malfunctioning of the internet, intranet, private network or any other similar facility. For further details, please see the section "*Our Business*" on page 207.

However, there can be no assurance that all risks are adequately insured against or that the Project SPVs will be able to procure adequate insurance coverage at commercially reasonable rates in the future. In addition, not all of the above risks may be insurable on commercially reasonable terms, or at all. In addition, these insurance policies are subject to annual review by insurers, and there can be no assurance that they will be renewed on similar or otherwise acceptable terms, if at all. To the extent that the Project SPVs suffer any damage or loss which is not covered by insurance, or exceeds the insurance coverage, the loss would have to be borne by the Project SPVs. Further, the Project SPVs have, from time to time, insurance claims pending, with respect to its insurance policies. The proceeds of any insurance claim may also be insufficient to cover rebuilding costs as a result of inflation, deductibles, changes in regulations regarding infrastructure projects, environmental and other factors. There is no assurance that the insurance claims raised by the Project SPVs will be appropriately honoured by the relevant insurers. The resulting costs could have an adverse effect on the Trust's business, prospects, financial condition or results of operations and no assurance can be given that losses in excess of insurance proceeds will not occur in the future.

26. We are subject to risks associated with outbreaks of diseases or similar pandemics or public health threats, such as the novel coronavirus ("COVID-19"), which could have a material adverse impact on our business and our results of operations and financial condition.

In the past, various contagious diseases have spread throughout the world, including India, where the entire operations of the toll roads are located. Most recently, beginning in late 2019 and continuing in 2020, 2021 and 2022, the global spread of COVID-19 has created significant economic and political volatility and uncertainty and business disruption. The spread of COVID-19 has led to governments around the world taking various restrictive measures designed to limit the spread of the virus, such as the implementation of travel restrictions, mandatory cessations of business operations, mandatory quarantines and work-from-home and other alternative working arrangements, curfews, limitations on social and public gatherings and partial lockdowns of cities or regions.

The spread of COVID-19 and governmental responses have resulted in workforce absence, reduced business productivity, other business disruptions, reduced demand and stagnated economic activity in India and around the world. This has resulted in significantly fewer customers using our toll roads and therefore has had a material adverse impact on the revenues of the toll roads, as well as other aspects of our operations. The long term effects of COVID-19, including the mutation of more transmittable strains is highly uncertain and cannot be predicted. More generally, any epidemic, pandemic or other health crisis, whether similar to COVID-19, SARS, MERS or other similar global diseases or pandemics, could materially and adversely affect our business, financial condition and results of our operations.

27. We may be adversely affected by presently unidentified environmental matters or changes in environmental regulation that could give rise to potential liability in the future.

The operation of the toll roads is subject to various environmental laws and regulations, including those relating to the discharge of pollutants, the treatment, transport, storage and disposal of solid and hazardous wastes, and the remediation of soil and groundwater contamination. While we believe the toll roads are in material compliance with applicable environmental requirements, we cannot be certain that we have identified all environmental matters giving rise to potential liability, or that current environmental regulations will not materially change. Environmental approvals are typically subject to ongoing compliance in the form of monitoring, audit and reporting norms, under, *inter alia*, central and state-specific environmental regulations. Also, please see the section "*Regulatory Approvals*" on page 342. We cannot assure you that such action may not be taken by the concerned authorities, which may adversely impact our ability to continue operating the relevant project in a profitable manner, or at all.

28. An inability to obtain, renew or maintain the required statutory and regulatory permits and approvals or to comply with the applicable laws may have an adverse effect on the business of the Project SPVs.

The Project SPVs require certain approvals, licenses, registrations and permissions under regulations, guidelines, circulars and statutes regulated by the Indian regulatory and government authorities to be obtained at various stages and by a number of parties.

There can be no assurance that the relevant authorities will issue these approvals or licenses, or renewals thereof, in a timely matter, or at all. In addition, the Project SPVs are required to comply with a wide variety of Indian laws and regulations. There can be no assurance that the Project SPVs are in compliance with such laws and regulations or as requested by the regulatory authorities, have obtained all necessary approvals or that they will continue to obtain the necessary approvals or have been and will continue to be in compliance with all applicable laws and regulations. For further details, please see the section "*Regulatory Approvals*" on page 342.

In the event of any failure to obtain or renew the approvals or if there is a delay in the obtaining of such approvals, the business and financial condition of the Project SPVs could be adversely affected. Permits, licenses and approvals could be subject to several conditions, and we cannot assure that the Project SPVs have complied with all such conditions and will be able to continuously meet such conditions or be able to prove compliance with such conditions to the authorities. Any non-compliance may lead to cancellation, revocation or suspension of relevant permits, licenses or approvals, which may result in the interruption of the operations of the Project SPVs and may adversely affect the business, financial condition, cash flows, and results of operations of the Project SPVs.

29. Our Project SPVs are subject to ongoing compliance requirements under various laws, and there have been certain past instances of non-compliance.

There have been instances in the past where the Project SPVs may not have been in compliance with a particular compliance or filing requirement under applicable regulatory requirements, or there may have been

a delay in such compliance or filing requirement. For instance, PSRDCL has paid certain late submission fees to the MCA for delayed form filings of DIR-12 and MGT-14 with the MCA. Further, there are certain ongoing non-compliances by TRDCL in relation to delay in the filing of DIR-12 and MGT-7 forms with the RoC. Any such non-compliance or delay in filing under applicable laws in the future will subject the relevant Project SPV to a penalty, which may have an impact on the results of operations of such Project SPV.

30. The outcome of any future actual or threatened legal, regulatory or other proceedings arising from our business operations could adversely affect our business, financial condition, result of operations and prospects.

From time to time, we or our directors, officers or employees or the Parties to the Trust may be involved in legal, regulatory and other proceedings concerning matters that arise in the ordinary course of our business operations, including as a result of disputes with the concessioning authority in relation to the provisions of the Concession Agreements, labour disputes with our employees or contract workers, and disputes with our contractual counterparties, local unions, or users of the toll roads. These disputes may lead to legal, criminal, civil, regulatory and other proceedings, and may cause us to incur significant costs, delays and other disruptions to our business and operations. In addition, regulatory actions and disputes with governmental authorities may result in fines, penalties and other administrative sanctions. There can be no assurance that the outcome of any future legal, regulatory or other proceedings that may be brought against us in the future will not adversely affect our reputation, business, financial condition, results of operations and prospects. For further details, please see the section "*Legal and Other Information*" on page 346.

31. The Project SPVs are subject to force majeure risks, which may adversely affect our ability to make distributions to the Unitholders.

If any Project SPV is unable to perform its obligations under the Concession Agreements as a result of a *force majeure* event, such as a war, strike, riot, act of terrorism, natural catastrophe or epidemic, although it would not be in breach of the Concession Agreements, its toll collections may be adversely affected. Upon the occurrence of any *force majeure* event prior to the commencement of the concession period, and subject to the concessioning authority's approval, the concession period commencement date may be extended by a period equal to the *force majeure* event, provided that the concerned Project SPV notifies the concessioning authority of such *force majeure* event. Any delay in the commencement of the concession period would cause a delay in our toll collections, which would have an adverse impact on our business and results of operations and, therefore our ability to make distributions to the Unitholders. In the event that any *force majeure* event, such as flooding, damage to the toll roads or the destruction of our toll-collection computer system, interrupts our ability to operate the toll roads, there may be a significant reduction in toll collections, which may adversely affect our ability to make distributions to the Unitholders.

Upon the occurrence of certain indirect political events, such as war, strikes or industrial action and public agitation, we will be liable for the costs attributable to such events. If the costs exceed our insurance for such events, the concessioning authority will typically be obligated to reimburse us for one half of the excess amount of the costs over and above the insurance limit. Upon the occurrence of certain other political events, such as a change in law or compulsory acquisition or expropriation of any toll road, the concessioning authority will be obligated to reimburse us for all costs attributable to such events subject to the terms of the concession agreements. In certain circumstances, the term of the Concession Agreement may be extended by the length of the duration of the *force majeure* event or the length of the duration of the period during which we were prevented from collecting toll fees. For instance, during the COVID-19 pandemic, as per NHAI policy guidelines dated May 26, 2020 provided minimum extension of three months to all the developers whose contracts had ended on or after February 20, 2020.

Notwithstanding the terms of the Concession Agreements, there can be no assurance that, if certain political events occur causing damage or other loss to us, the concessioning authority will reimburse us in a timely manner or at all. In the event the concessioning authority fails to meet its reimbursement obligations under the terms of the Concession Agreements, our business, financial position and results of operations may be significantly adversely affected and we may be unable to make distributions to the Unitholders.

32. The Trust does not own the trademark "Roadstar Infra Investment Trust" and the associated logo to be used by it for its business and its ability to use the trademark may be impaired.

The Trust has not made an application for the use of the trademark "Roadstar Infra Investment Trust" and the associated logo. The Trust's ability to use the trademark and the associated logo may be impaired if it does not make a trademark application, or if such an application is made and the application is rejected. Consequently, the Trust could be required to cease using "Roadstar Infra Investment Trust" and the associated logo, which may have an adverse effect on its operations.

Although we believe that our intellectual property rights do not infringe the intellectual property rights of any other party, we cannot assure you that infringement claims will not be asserted against us in the future. If we become liable to third parties for infringing their intellectual property rights, we could be required to pay a substantial damage award and be forced to immediately restrict our usage of such intellectual property.

33. We may be subject to penalties and claims from the concessioning authorities and third parties during the course of operations of the Project SPVs and may not be able to recover all operational losses from the Project Manager and/ or other contractors providing operations and maintenance services to the Projects.

The Project SPVs may, from time to time, receive letters and notices from the concessioning authorities or other third parties imposing penalties and seeking claims for any deficiencies or non-compliance with the terms of the concession agreement or other project agreements or a claim or compensation under the terms of the concession agreements. For instance, (i) MBEL has received notices from NHAI in relation to recovery of damages for default in operating and maintaining the MBEL Project; and (ii) PSRDCL has received notices from NHAI in relation to recovery of damages due to failure in rectifying deficiencies. The Project SPVs may contest such claims or invoke any indemnification provided by the O&M contractors it has appointed. However, there may be limitations on the ability to claim such amounts from the O&M contractor in terms of the agreements entered into with them. There would be an adverse effect on the Project SPV's operations and financial condition if a claim is decided against such Project SPV. Ongoing claims by the Project SPVs against the concessioning authorities, if any, have been disclosed in the section "*Legal and Other Information*" on page 346.

Risks Related to the Structure of the Trust

34. We must maintain certain investment ratios, which may present additional risks to us.

Pursuant to the InvIT Regulations, we are required to invest not less than 80% of the value of our assets in eligible infrastructure projects as defined under the InvIT Regulations, such as the Project SPVs. In addition, we must not invest more than 20% of the value of our assets in certain financial instruments prescribed under the InvIT Regulations. If these conditions are not fulfilled or breached on account of market movements of the price of the underlying assets or securities, the Investment Manager must inform the Trustee and ensure that these conditions are satisfied within six months of such breach (or within one year with the Unitholder approval). Failure to comply with these conditions may present additional risks to us, including divestment of some or all of our assets, delisting of our Units from the stock exchanges and other penalties, which could have a material adverse effect on our business, financial condition and results of operations.

35. We do not provide any assurance or guarantee of any distributions to the Unitholders. Further, the level of distributions may fall.

The Trust's distributions will be based on the cash flows generated from the operations to be undertaken by the underlying Project SPVs held by the Trust and not on whether the Trust makes an accounting profit or loss. The InvIT Regulations provide that not less than 90% of net distributable cash flows of each Project SPV are required to be distributed to the Trust in proportion of the Trust's holding in the Project SPVs subject to applicable provisions of the Companies Act. Not less than 90% of distributable cash flows of the Trust shall be distributed to the Unitholders. Under the InvIT Regulations, such distributions are required to be declared and made not less than once in every year and shall be made not later than fifteen days from the date of such declaration. For more details, see the section "*Distribution*" on page 288 of this Placement Memorandum.

The Trust will also rely on the receipt of interest, dividends, and principal repayments (net of applicable taxes and expenses) from each Project SPV in order to make distributions to the Unitholders. There is no assurance that the Trust will be able to make distributions to the Unitholders or that distributions will be consistent across various periods. Further, the income earned by each of the Project SPVs may be affected by a number of factors including, among other things:

- the business and financial position of the Project SPVs;
- amount of income generated from toll receipts, default or delay in payment of annuity income to the Project SPVs, and the level of operating and other expenses incurred as a result of escalation in commodity prices and labour costs;
- ability of the Trust and Project SPVs to borrow funds and access debt capital markets and terms of such borrowings including cost of borrowings and requirements of maintaining cash reserves;
- applicable laws and regulations, which may restrict the payment of distributions by the Project SPVs;
- fluctuations in the working capital needs of the Project SPVs;
- changes in accounting standards, taxation laws and regulations, laws and regulations in respect of foreign exchange repatriation of funds, corporation laws and regulations relating thereto; and
- the terms of agreements, including the Concession Agreements, project agreements or financing agreements, to which the Project SPVs are, or may become, a party.

The distributions from the SPVs to the Trust may also be subject to the requirement of creation of certain necessary reserves, such as a major maintenance reserve or a debt service reserve, as set out in the distribution policy of the Trust. For more details, see the section "*Distribution*" on page 288 of this Placement Memorandum.

Further, the methodology of computation of the net distributable cash flows may change subsequently due to regulatory changes which can impact the amount of cash flows available for distribution. Any change in applicable laws in India or elsewhere (including, for example, tax laws and foreign exchange controls) may limit our ability to pay or maintain distributions to our Unitholders. Furthermore, no assurance can be given that we will be able to pay or maintain the levels of distributions at all, or that the level of distributions will increase over time, or that future acquisitions or rights in new assets will increase our distributable cash flow to our Unitholders. Any reduction in, or delay/default in payments of distributions could materially and adversely affect the market price of our Units.

In addition, the financing agreements, including debt restructuring agreements entered into by any of the Project SPVs with banks, financial institutions from time to time or accessed through the debt capital markets may typically contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to making any payments to the Trust. Any failure to obtain such consents in a timely manner or at all would impede our ability to make distributions to the Unitholders on a regular basis or at all, which could materially and adversely affect the market price of the Units. Additionally, following a default under our financing agreements if and when entered into, lenders may take coercive actions as per the rights available to them under applicable law, which may restrict our ability to conduct business and operations.

36. Distributions may be adversely impacted due to cash trapped in the Project SPVs.

Under the Companies Act, 2013, a company can declare dividends only after the mandatory transfer of profits to reserves. Further, amortisation and depreciation are non-cash expenditures and are charged to the profit and loss account. Consequently, a company may have surplus cash but no profit in the profit and loss account and thus will not be able to declare dividends, resulting in cash trapped in the company. Further, cash may be trapped in a particular Project SPV due to debt service account provisions of an applicable financing agreement. For example, in case of SBHL, it is required to maintain a DSRA equivalent to interest and principal payable to its lenders for the next six months. In case of PSRDCL it is required to maintain a DSRA equivalent to interest and principal payable to its lenders for the next three months. In case of MBEL, it is required to maintain the DSRA equivalent to interest and principal payable to its lenders for the next three months. In addition, applicable financing agreements may also specify provisions for maintaining major maintenance reserves, which will also result in trapping of cash. In the event that cash is trapped in the Project SPVs, the Investment Manager and the Trustee may evaluate various options to extract the cash and make distributions to the Unitholders. There is no assurance that any such options to extract the cash trapped in the Project SPVs would not have adverse tax implications or impact our distributions, business and results of operation adversely.

37. Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. Non-compliance by the Sponsor Group, the Investment Manager, the Project Manager and the Trustee, could result in the cancellation of the registration of the Trust.

Each of the Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. These eligibility conditions include, among other things,

that (a) the Sponsor, Investment Manager and Trustee are separate entities, (b) each Sponsor has a net worth of not less than ₹ 1,000 million and the Sponsor or its associate has a sound track record in the development of infrastructure or fund management in the infrastructure sector, (c) the Investment Manager has a net worth of not less than ₹ 100 million and has not less than five years' of experience in fund management or advisory services or development in the infrastructure sector or the combined experience of the directors, partners and employees of the Investment Manager, each with at least five years of experience, in fund management or advisory services or development in the infrastructure sector is not less than 30 years, (d) the Investment Manager has not less than two employees who have atleast five years of experience each, in fund management or advisory service or development in infrastructure sector; (e) the Trustee is registered with the SEBI under Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is not an associate of the Sponsor or Investment Manager, and (f) each of the Trust, the Sponsor, the Sponsor Group, Investment Manager, Project Manager and Trustee are "fit and proper persons" as defined under Schedule II of the Intermediaries Regulations on an ongoing basis. Any non-compliance by the Sponsor, Sponsor Group, the Investment Manager, the Project Manager and the Trustee, may result in the cancellation of the registration of the Trust.

Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager

38. We will depend on certain directors, executive officers and key employees of the Investment Manager, the Project Manager, and such entities may be unable to appoint, retain such personnel or to replace them with similarly qualified personnel, which could have a material adverse effect on the business, financial condition, results of operations and prospects of the Trust.

Our performance will depend, in part, upon the continued service and performance of certain directors, executive officers and key personnel of the Investment Manager and Project Manager. The continued operations and growth of our business will be dependent upon the Investment Manager and the Project Manager being able to attract and retain personnel who have the necessary and required experience and expertise. Competition for qualified and experienced personnel with relevant industry expertise in India is intense due to the scarcity of qualified individuals in the toll-road business, and the aforesaid entities may not be able to retain their executive officers and key employees or attract and retain fresh talent in the future.

Furthermore, the Investment Manager and the Project Manager may not be able to adequately re-deploy and re-train their employees to keep pace with evolving industry standards and changing customer preferences. Any inability by the Investment Manager and/or the Project Manager to retain their directors, executive officers and key employees, or the inability to replace such individuals with similarly qualified personnel, could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust.

39. The Trust and the Project SPVs have entered into certain related party transactions and expect to continue to enter into related party transactions and there can be no assurance that such transactions will not have an adverse effect on our results of operations and financial condition.

The Trust has entered and will in the future enter into certain transactions with related parties, including the Sponsor, the Project Manager and the Investment Manager. The Project SPVs have also entered into transactions with related parties. Such transactions or any future transactions with related parties may potentially involve conflicts of interest and impose certain liabilities on the Trust or the Project SPVs. There can be no assurance that previous related party transactions could not have been made on more favourable terms with unrelated parties, and there can be no assurance that such transactions or future transactions, individually or in the aggregate, will not have an adverse effect on our results of operations and financial condition. For detailed information on related party transactions, please see the section "*Related Party Transactions*" on page 325.

40. The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust.

The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust in accordance with the InvIT Regulations. These requirements include, among other things, (a) making investment decisions with respect to the underlying assets or projects of the Trust, (b) overseeing the activities of the Project Manager, (c) investing and declaring distributions in accordance with the InvIT Regulations, (d) submitting reports to the Trustee, and (e) ensuring the audit of the Trust's accounts. Non-compliance with such requirements in a timely manner or at all, could subject the Investment Manager, the

other Parties to the Trust, the Trust or any person involved in the activity of the Trust to applicable penalties under the InvIT Regulations, and/or the SEBI Act or other applicable law. Under the InvIT Regulations, the SEBI also has the right to inspect documents, accounts and records relating to the activity of the Trust, Project SPVs or parties to the InvIT and may issue directions in the nature of, *inter alia*, (i) requiring the Trust to delist its Units and surrender its certificate of registration; (ii) requiring the Trust to wind-up; (iii) requiring the Trust to sell its assets; (iv) requiring the Trust or Parties to the Trust to take such action as may be in the interest of unitholders; or (v) prohibiting the Trust or Parties to the Trust from operating in the capital market or from accessing the capital market for a specified period. Any such failure to comply or the imposition of any penalty could have a material adverse effect on our business, financial condition and results of operations.

41. The Trust may be unable to dispose off its non-performing assets in a timely manner.

Due to the nature of its structure, the Trust may be unable to dispose off its non-performing or under-performing assets in a timely manner, or at all. For example, under the InvIT Regulations, any asset acquired by the Trust is required to be held for a period of at least three years from the date of acquisition. As a result, no assurance can be given that the Trust may be able to adapt to market developments, changes in asset quality, or adverse macroeconomic factors in a way comparable to, or competitive with, its competitors (whether InvITs or public/ private companies). Any inability to dispose off non-performing assets may in turn adversely affect the financial condition, business and prospects of the Trust, as well as distributions to the Unitholders.

42. Unitholders would not be able to participate in the election or removal of directors in the Investment Manager and will be able to remove the Investment Manager and Trustee only pursuant to a majority resolution.

Under the InvIT Regulations, the Trustee or the Investment Manager cannot be removed without the prior approval of Unitholders where the votes cast in favour of the resolution shall not be less than one and a half times the votes cast against such resolution. Accordingly, the Unitholders may face difficulties in removing and replacing the Trustee or the Investment Manager. Further, under the InvIT Regulations, in case of change in control of the Investment Manager of the Trust, prior approval of SEBI is also required.

Further, Unitholders would not be able to participate in the nomination, election or removal of directors in the Investment Manager. The recourse available to the Unitholders' is the removal of the Investment Manager by way of a resolution where Unitholders holding at least 60% of the Units must vote in favour of the resolution. In comparison, the Companies Act, 2013 allows the removal of a director of a private limited company by way of an ordinary resolution.

Similarly, Unitholders may remove the Trustee only if they believe that the acts of the Trustee are detrimental to the interests of the Unitholders and by way of a resolution where the votes cast in favour of the resolution must meet the required percentage as set out in the InvIT Regulations. Further, the Investment Manager and the Trustee cannot be discharged until a suitable replacement is appointed in their place, and there can be no guarantees that a suitable replacement will be appointed, or that appointment will take place in a timely manner, or at all.

Accordingly, as opposed to shareholders removing a director of a private limited company, it may not be possible for Unitholders to remove directors of the Investment Manager or the Trustee.

43. We depend on the Investment Manager, the Project Manager and the Trustee to manage our business and assets, and our rights and the rights of the Unitholders to recover claims against them are limited.

The success of our business and growth strategy and the operational success of our assets will depend significantly upon the managers' satisfactory performance of these services. Our recourse against the Project Manager, the Trustee and Investment Manager is limited.

The aggregate maximum liability of the Project Manager under the Project Implementation Management Agreement in each financial year is limited to the aggregate fees paid to the Project Manager for the immediately preceding financial year, in accordance with the terms of the Project Implementation Management Agreement and such fees shall not include any fees paid to the Project Manager in any other capacity, except for losses arising of fraud, gross negligence or wilful misconduct. As the Project Manager is not a captive company of the Trust and is not bound by an exclusivity arrangement with the Trust, the Project Manager may

fail to dedicate appropriate and adequate resources to us/ the Project SPVs at all times, which may affect their operations and performance.

Pursuant to the Trust Deed, the Trustee is not liable for anything done or omitted to be done or suffered by the Trustee in good faith and in accordance with, or in pursuance of any request or advice of the Investment Manager. Further, the Trustee and Investment Manager are not liable for any action or omission that results in any depletion in the value of the trust fund and consequent losses of the Unitholder, except in situations where such depletion is a result of the gross negligence or wilful default on the part of the Trustee and/ or Investment Manager, as applicable, or results from a breach by the Trustee of the Trust Deed, as determined by a court of competent jurisdiction. The liability of the Trustee shall be limited to the losses incurred by the Trustee, its directors and employees (the, "**Indemnified Parties**") on behalf of the Trust which have resulted from (i) fraud; gross negligence, willful misconduct of the Indemnified Parties; (ii) material breach of the provisions of the Investment Management Agreement; or (iii) breach of the provisions of the other trust documents of the Trust by the Trustee, as finally determined by a court of competent jurisdiction.

Under the Investment Management Agreement, the Investment Manager is not liable for, among other things, any action taken or damage suffered by it, provided that the Investment Manager shall not be so exculpated in the event of a breach of the obligations under any agreements entered into by the Investment Manager in relation to the Trust or a violation of the InvIT Regulations and/or applicable law on the part of the Investment Manager. Further, it shall not incur any liability for any act or omission which may result in a loss to a Unitholder except in the event that such loss is a result of fraud or gross negligence or dishonest acts of commission or omission or wilful default on the part of the Investment Manager, or disregard of duty or breach of duties under the Investment Management Agreement or applicable law. The Investment Management Agreement and the Trust Deed further provide that the Investment Manager is entitled to be indemnified by the Trustee against any direct and actual claims, actions, losses, damages, liabilities, suits, proceedings and reasonable costs and expenses including legal fees ("**Losses**") incurred in connection with the Trust, unless arising out of fraud, gross negligence, dishonest acts of commissions or omissions or wilful default on the part of the Investment Manager or disregard of duty or breach of duties under the Investment Management Agreement or the applicable law. The Investment Manager's liability to Trustee, its directors, employees and officers for breach of its obligations under the Investment Management Agreement in each financial year is limited to the aggregate fees paid to the Investment Manager for the immediately preceding financial year under the agreement, except in the event that such liability arises out of any gross negligence, willful default or misconduct or fraud of the Investment Manager. As a result, the Trust's rights and the rights of the Unitholders to recover claims against the Investment Manager are limited. Furthermore, recourse to the Trustee may be limited under the Trust Deed.

Accordingly, the liability of the Investment Manager and the Trustee are limited under the terms of these agreements and the Unitholders may not be able to recover claims against the Trustee or the Investment Manager, including claims with respect to any offer documents relating to the Offer. If the management agreements were to be terminated or if their terms were to be altered, our business could be adversely affected, as the Trustee may not be able to immediately replace such services, and even if replacement services were immediately available, the terms offered or obtained with the new managers could be less favorable than the ones currently offered by the Investment Manager and the Project Manager.

Risk related to the Resolution Framework of the IL&FS Group

44. Appeals pending against the Resolution Framework approved by the NCLAT vide its order dated March 12, 2020.

The NCLAT has vide its order dated March 12, 2020 ("**March 12 Order**") in Company Appeal (AT) No. 346 of 2018 approved the Resolution Framework relating to the IL&FS Group and other procedures suggested by the Union of India for resolution of the IL&FS group. The InvIT proposal for the IL&FS group, was one such procedure/ resolution mode which was approved in the March 12 Order.

Various creditors have since then filed appeals against the March 12 Order before the Supreme Court of India. The aforesaid appeals are currently pending before the Supreme Court of India and as on date, no adverse orders or orders modifying the Resolution Framework have been passed in such appeals relating to the operation of the March 12 Order or the Resolution Framework relating to the IL&FS group.

Further, the new board of IL&FS as appointed by the NCLT has concluded the sale of various entities/ assets forming part of the IL&FS Group through a process overseen by Hon'ble Justice Retd D.K. Jain and the NCLT in accordance with the Resolution Framework. These sales have been approved by the NCLT in line with the Resolution Framework. While the probability of the Supreme Court setting aside the March 12 Order and reversing the already concluded sale processes is low, any order of the Supreme Court of India which overrules the March 12 Order or stays or modifies the operation of the March 12 Order in any manner, may:

(a) have adverse consequences on the steps which may have been taken in the past with regard to the resolution of the IL&FS Group;

(b) impede the ongoing resolution process of the IL&FS Group, including any sale of any assets of the IL&FS group or discharge of debt owing to the creditors of the IL&FS group;

(c) result in vacation of the stay that has been granted by the NCLAT on, amongst others, institution or continuation of suits or other proceedings against IL&FS group entities, in the manner set out in the March 12 Order.

45. Some lenders have demanded 'right to recompense' which has been made as a condition subsequent in case of certain Project SPVs.

The transfer of certain entities like BAEL to InvIT has been inordinately delayed on account of certain lenders withholding their consent for the restructuring of debt and transfer to InvIT for certain reasons including *inter alia* Project SPV acceding to their request of providing the lenders a 'right to recompense' in relation to interest which has purportedly accrued from October 15, 2018 till the date of transfer of the relevant Project SPV to the InvIT.

In this regard, an application was filed by IL&FS before the NCLAT (being I.A. No. 2650 of 2023 in Company Appeal (AT) No. 346 of 2018) *inter alia* seeking reliefs for the said lenders to grant their consent to the restructuring terms of the relevant Project SPV (being BAEL and PSRDCL in this case) without imposing any additional conditions, including *inter alia* the right to recompense for the interest forgone post October 15, 2018. The NCLAT has passed an order in favor of IL&FS thereby rejecting bank's claim of 'right to recompense'. The Lenders may challenge the order of the NCLAT before the Supreme Court of India.

In case the above matters are ruled against the Project SPVs, then the relevant Project SPV shall be required to compensate the lenders for the sacrifice of interest payment during the moratorium period. Such financial impact is currently unknown and if an adverse ruling is passed it will only have an impact on the net distributable cash flows of the relevant Project SPV and not affect the already concluded transfer of Project SPVs.

Further, other creditors approaching the NCLAT/ Supreme Court of India seeking a similar 'right to recompense' (even in the cases of resolved entities) cannot be ruled out.

46. Claims of creditors (whether admitted or not, filed or not) have been cleared against consideration paid for CAT-II entities but there still is a risk that some creditor can demand old dues and file suit for the same.

The NCLT has *vide* order dated September 15, 2021 (as modified by an order dated October 22, 2021) ("**InvIT Phase 1 Order**") allowed transfer of six entities to the InvIT ("**Phase 1 Entities**"). Out of the Phase 1 Entities, BAEL is a 'Category II' entity i.e. the 'SPV Enterprise Value' of BAEL as determined pursuant to a valuation exercise is not sufficient to cover all liabilities of BAEL and hence the creditors of BAEL have to forego certain outstanding amounts. *Vide* the InvIT Phase 1 Order, the NCLT has allowed for extinguishment of all claims and liabilities with respect to BAEL relating to a period prior to October 15, 2018 (except for debt that was restructured or acquired by the InvIT) upon payment to the (non-IL&FS group) operational creditors of BAEL.

Similarly, the NCLT *vide* order dated October 14, 2022 ("**InvIT Phase 2 Order**") approved transfer of four entities to the InvIT ("**Phase 2 Entities**"). Out of the Phase 2 Entities, HREL and TRDCL are 'Category II' entities and hence the creditors of HREL and TRDCL will have to forego certain outstanding amounts. Vide the InvIT Phase 2 Order, the NCLT has allowed for extinguishment of all claims and liabilities with respect to HREL and TRDCL relating to a period prior to October 15, 2018 (except for debt that was restructured or acquired by the InvIT) upon payment to the (non-IL&FS group) operational creditors of HREL and TRDCL.

Accordingly, the NCLT *vide* the InvIT Phase 1 Order and InvIT Phase 2 Order has allowed extinguishment of liabilities (for period prior to October 15, 2018) of all entities being transferred to the InvIT including BAEL, HREL and TRDCL. However, there is a possibility that creditors of the aforesaid entities or any other Phase 1 Entities or Phase 2 Entities may contest the admission/non-admission of their claims, seek condonation of delay in filing their claims or initiate any other proceedings in regard to the claims management process, distribution of amounts and recovery of their dues as per applicable law.

47. No indemnity from IL&FS group companies under the transaction documents

The new board of IL&FS was appointed on October 1, 2018 by the NCLT pursuant to the extraordinary circumstances and on the grounds of mismanagement of public funds by the erstwhile board of IL&FS and the affairs of IL&FS being conducted in a manner prejudicial to the public interest. The power under Sections 241 and 242 of the Companies Act, 2013 can be exercised where the circumstances would otherwise justify the making of a winding up order on just and equitable grounds. Further, it should be noted that in cases where a company is ordered to be wound up, the claims relating to that company to be considered are those which exist as at the date of commencement of the winding up.

Accordingly, and applying the same principle, all liabilities of the relevant IL&FS group entity, whether financial (including interest, default interest, indemnity claims and additional charges), operational debt (including interest, indemnity or other claims) as well as statutory claims (including tax, employment and labour related claims) whether existing at or relating to a period prior to October 1, 2018 should not continue accruing.

In light of the above, the IL&FS group has taken a group level decision to not undertake any indemnity obligations with respect to any sale company and accordingly the share purchase agreement or any other agreement entered into between *inter alia* the IL&FS group and the InvIT does not contain any provision whereby an indemnity has been granted by the IL&FS group with respect to any past or future obligations.

However, liabilities, if any, on the Sponsor flowing on account of the provisions of the InvIT Regulations or any other applicable law, supersedes any contractual arrangements of the Sponsor for waiver of indemnity. Hence, the Sponsor undertakes that, as per the provisions of Regulation 12(3)(a) of the InvIT Regulations, it would be responsible for all acts, omissions, representations and covenants of the Trust related to the formation of Trust or sale or transfer of assets/holdco/SPV to the Trust and for providing recourse if any in relation to these transactions.

48. Distribution of units under the Interim Distribution Framework may not be in equal proportion to all creditors and accordingly, post listing of the Units, the market price is subject to fluctuation.

Pursuant to the interim distribution proposed to be undertaken by the IL&FS Transportation Networks Limited ("**ITNL**") / IL&FS Group, the Eligible Creditors would be allotted certain Units issued by the InvIT under the Unit Distribution. The units are not proposed to be allotted to all creditors in equal proportion in accordance with the limitations under Regulation 14 of the InvIT Regulations with respect to minimum trading lot and maximum number of subscribers.

The market price of the Units is subject to markets risks and fluctuations due to which the market price of the Units volatile and could be subject to wide fluctuations. There can be no assurance that the market price of the Units will not fluctuate or decline significantly in the future. The market price of the Units will depend on many factors, including, among others:

- the perceived prospects of our business and investments and the market for toll roads and other infrastructure projects;
- differences between our actual financial and operating results and those expected by investors and analysts;
- the perceived prospects of future toll roads and other infrastructure projects that may be added to our portfolio in accordance with our investment mandate;
- changes in research analysts' recommendations or projections;
- changes in general economic or market conditions;
- the market value of our assets;
- the perceived attractiveness of the Units against those of other business trusts, equity or debt securities;

- the balance of buyers and sellers of the Units;
- the size and liquidity of the Indian business trusts market;
- any changes to the regulatory system, including the tax system, both generally and specifically in relation to India business trusts;
- the ability of the Investment Manager to implement successfully its investment and growth strategies;
- foreign exchange rates;
- broad market fluctuations, including increases in interest rates and weakness of the equity and debt markets;
- variations in our quarterly operating results;
- difficulty in assessing our performance against either domestic or international benchmarks, as there are few listed comparables;
- publication of research reports about us, our affiliates, other road businesses, the road industry in general or other relevant sectors, or the failure of securities analysts to cover the Units after the Offer;
- additions or departures of key management personnel of the Investment Manager and/or the Trust Group;
- changes in the amounts of our distributions, if any, and changes in the distribution payment policy or failure to execute the existing distribution policy;
- actions by Unitholders;
- changes in market valuations of similar business entities or companies;
- announcements by us or our competitors of significant contracts, acquisitions, disposals, strategic partnerships, joint ventures or capital commitments;
- speculation in the press or investment community; and
- changes or proposed changes in laws or regulations affecting the road industry and infrastructure development in India or enforcement of these laws and regulations, or announcements relating to these matters.

Accordingly, since the Units are not capital-safe products and there is no guarantee that the value of the Units shall remain stable and the creditors of ITNL may receive the value based on the market price of the Unit post listing. If the Trust is extinguished, it is possible that unitholders may lose a part or all of the value of the units it holds.

Risks related to India

49. We are exposed to risks associated with the roads sector in India.

We derive and expect to continue to derive in the foreseeable future, almost all of our revenues and operating profits from the roads sector in India. Changes in macroeconomic conditions generally impact the road industry and could negatively impact our business. Accordingly, our business is highly dependent on the state of development of the Indian economy and the macroeconomic environment prevailing in India. The use of our toll roads, our expansion plans and future projects depend or will depend on macroeconomic factors that may negatively impact demand the development of road infrastructure projects in India, or the timely commencement of their operations which could in turn have a material adverse effect on our growth prospects, business and cash flows. In addition, access to financing may be more expensive or not available on commercially acceptable terms during economic downturns. We may also face risks in relation to the regulated environment we operate in (the road sector). For instance, we face risks in relation to non-collection of overload penalty under National Highway Fee (Determination of Rates and Collection) Rules, 2008. Any of these factors and other factors beyond our control could have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows.

50. Changing laws, rules and regulations and legal uncertainties may materially and adversely affect our business, financial condition and results of operations.

Our business, financial condition and results of operations could be materially and adversely affected by any change in laws or interpretations of existing, or the promulgation of new, laws, rules and regulations applicable to us and our business. There can be no assurance that the Government or State Governments will not implement new regulations and policies which will require the Trust and Project SPVs to obtain additional approvals and licenses from governmental and other regulatory bodies or impose onerous requirements and conditions on our operations. The Investment Manager cannot predict the terms of any new policy, and there can be no assurance that such policy will not be onerous.

51. Significant increases in the price or shortages in the supply of crude oil and products derived therefrom, including petrol and diesel fuel, could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Indian economy in general, including the infrastructure sector.

India imports a significant majority of its crude oil requirements. Crude oil prices are volatile and are subject to a number of factors, including the level of global production and political factors, such as war and other conflicts, particularly in the Middle East with ongoing Israel-Gaza conflict, where a substantial proportion of the world's oil reserves are located. The ongoing Russia-Ukraine conflict has caused a significant increase and volatility in the price of crude oil and impacted fuel prices in India. Further increases in the price of or shortages in the supply of crude oil could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and materially and adversely affect the Indian economy in general, including the infrastructure sector, which could have a material, adverse effect on our business, financial condition and results of operations.

52. We may be affected by competition law in India and any adverse application or interpretation of the Competition Act could materially and adversely affect our business.

The Competition Act, 2002, as amended (the "**Competition Act**"), regulates practices having an appreciable adverse effect on competition in the relevant market in India. Under the Competition Act, any formal or informal arrangement, understanding or action in concert, which causes or is likely to cause an appreciable adverse effect on competition is considered void and results in the imposition of substantial monetary penalties. Further, any agreement among competitors which directly or indirectly involves the determination of purchase or sale prices, limits or controls production, supply, markets, technical development, investment or provision of services, shares the market or source of production or provision of services by way of allocation of geographical area, type of goods or services or number of customers in the relevant market or directly or indirectly results in bid-rigging or collusive bidding is presumed to have an appreciable adverse effect on competition. The Competition Act also prohibits abuse of a dominant position by any enterprise in a relevant market.

The Competition Act aims to, among other things, prohibit all agreements and transactions which may have an appreciable adverse effect on competition in India. Further, the CCI has extra-territorial powers and can investigate any agreements, abusive conduct or combination occurring outside India if such agreement, conduct or combination has an appreciable adverse effect on competition in India.

In the event, the Project SPVs or the Trust enters into any agreements or transactions that have an appreciable adverse effect on competition in the relevant market in India, the provisions of the Competition Act will be applicable. Consents may also be required from the CCI in relation to the Offer and failure to obtain such consents may adversely affect the Offer. Any prohibition or substantial penalties levied under the Competition Act could materially and adversely affect our financial condition and results of operations. Any adverse impact on our financial condition or operations due to the Competition Act may have a material adverse impact on our business, financial condition, results of operations and prospects and our ability to make distributions to the Unitholders.

53. Our business is dependent on economic growth in India and financial stability in Indian markets, and any slowdown in the Indian economy or in Indian financial markets could have an adverse effect on our business, results of operations, financial condition and the price of our Units.

Our Investment Manager and we are registered in India, and the Project SPVs and our Investment Manager are located in India. As a result, we are highly dependent on the prevailing economic conditions in India and our results of operations are significantly affected by factors influencing the Indian economy. Factors that may adversely affect the Indian economy, and hence our results of operations, may include:

- any increase in interest rates or inflation in India;
- any exchange rate fluctuations;
- any scarcity of credit or other financing in India;
- prevailing income, consumption and savings conditions among consumers and corporations in India;
- the intensification of the adverse effects of the ongoing COVID-19 pandemic including new waves or the occurrence or other epidemics or pandemics;
- volatility in, and actual or perceived trends in trading activity on, India's principal stock exchanges;

- changes in India's tax, trade, fiscal or monetary policies and which may impact India's foreign exchange reserves;
- civil unrest, riots, protests, acts of violence, terrorist attacks, political instability, terrorism or military conflict in India, including increased tensions on the Indian borders, or in countries in the region or globally, including in India's various neighbouring countries;
- the occurrence of force majeure events under the contractual arrangements of the Project SPVs;
- the occurrence of natural or man-made disasters;
- prevailing regional or global economic conditions;
- balance of trade movements, including export demand and movements in key imports, including oil and oil products;
- annual rainfall which affects agricultural production; and
- other significant regulatory, policy or economic developments in or affecting India or its infrastructure sector.

Inflation rates in India have been volatile in recent years, and such volatility may continue. High fluctuations in inflation rates may make it more difficult for us to accurately estimate or control our costs. Any increase in inflation in India can increase our expenses, whether entirely or in part, and may adversely affect our business and financial condition. If we are unable to increase our revenues sufficiently to offset our increased costs due to inflation, it could have an adverse effect on our business, prospects, financial condition, results of operations and cash flows.

Any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could have an adverse effect on our business, results of operations, financial condition and the price of our Units.

54. Financial instability in other countries may cause increased volatility in Indian financial markets.

The Indian market and the Indian economy are influenced by economic and market conditions in other countries, including conditions in the United States, Europe and certain emerging economies in Asia. Financial turmoil in Asia, Russia and elsewhere in the world in recent years has adversely affected the Indian economy. Any worldwide financial instability may cause increased volatility in the Indian financial markets and, directly or indirectly, adversely affect the Indian economy and financial sector and us.

Although economic conditions vary across markets, loss of investor confidence in one emerging economy may cause increased volatility across other economies, including India. Financial instability in other parts of the world could have a global influence and thereby negatively affect the Indian economy. Financial disruptions could materially and adversely affect our business, prospects, financial condition, results of operations and cash flows.

Further, economic developments globally can have a significant impact on our principal markets. Concerns related to a trade war between large economies may lead to increased risk aversion and volatility in global capital markets and consequently have an impact on the Indian economy. The imposition of sanctions on Russia have also impacted economic conditions in various parts of the world, including Europe.

Legislators and financial regulators in the United States and other jurisdictions, including India, implement a number of policy measures designed to add stability to the financial markets from time to time. However, the overall long-term effect of such legislative and regulatory efforts on the global financial markets is uncertain, and they may not have the intended stabilizing effects. Any significant financial disruption could have a material adverse effect on our business, financial condition and results of operation.

These developments, or the perception that any of them could occur, have had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets and may significantly reduce global market liquidity, restrict the ability of key market participants to operate in certain financial markets or restrict our access to capital. This could have a material adverse effect on our business, financial condition and results of operations and reduce the trading price of the Units.

55. Any downgrading of India's debt rating by rating agencies could have a negative impact on our business.

India's sovereign ratings from S&P is BBB-with a "stable" outlook. India's sovereign rating could be downgraded due to various factors, including changes in tax or fiscal policy or a decline in India's foreign

exchange reserves, which are outside our control. Any adverse revisions to India's credit ratings by rating agencies may adversely affect our ability to raise additional financing, and the interest rates and other terms at which such additional financing is available. This could materially and adversely affect our ability to obtain financing for capital expenditure, which could in turn materially and adversely affect our business, prospects, financial condition, results of operations and cash flows. India's sovereign debt rating could be downgraded due to various factors, including changes in tax or fiscal policy or a decline in India's foreign exchange resources, which are outside our control.

56. Significant differences exist between Ind AS and other accounting principles, such as IFRS and U.S. GAAP, which may be material to your assessment of our results of operations, financial condition and cash flows.

The Audited Special Purpose Combined Financial Statements included in this Placement Memorandum are prepared and presented in conformity with IndAS, consistently applied during the periods stated in those reports. Ind AS differs from accounting principles with which persons from other countries may be familiar, such as IFRS and U.S. GAAP. Accordingly, the degree to which the Audited Special Purpose Combined Financial Statements included in this Placement Memorandum provide meaningful information is entirely dependent on your level of familiarity with Indian accounting practices. Ind AS has certain differences with IFRS and U.S. GAAP. In addition, as the transition to Ind AS is recent, there is no significant body of established practice that we can draw on, in forming judgments regarding the implementation and application of Ind AS, as compared to other established principles generally, or in respect of specific industries, such as the industry in which we operate.

57. Fluctuations in the exchange rate of the Indian Rupee with respect to the U.S. Dollar or other currencies will affect the foreign currency equivalent of the value of the Units and any distributions.

Fluctuations in the exchange rates between the Indian Rupee and other currencies will affect the foreign currency equivalent of the Indian Rupee price of the Units. In particular, the Indian Rupee has declined significantly against the U.S. dollar recently. Such fluctuations will also affect the amount that holders of the Units will receive in foreign currency upon conversion of any cash distributions or other distributions paid in Indian Rupees by us on the Units, and any proceeds paid in Indian Rupees from any sale of the Units in the secondary trading market. Further, a decline in India's foreign exchange reserves may reduce liquidity and increase interest rates in India, which could have an adverse impact on us. Depreciation of the Indian Rupee may also escalate the prices of some of the commodities which are corelated to global crisis.

58. Unitholders may not be able to enforce a judgment of a foreign court against us.

The enforcement of civil liabilities by overseas unitholders in the Units, including the ability to effect service of process and to enforce judgments obtained in courts outside of India, may be adversely affected by the fact that (i) the Trust is constituted under the laws of the Republic of India, (ii) the Investment Manager and the Trustee are limited liability companies incorporated under the laws of the Republic of India, (iii) certain directors and key personnel of the Investment Manager reside in India, and (iv) all of the assets of the Trust, the Project SPVs and the Investment Manager are located in India. As a result, it may be difficult to serve process upon the Trust, the Investment Manager, the Trustee or any of these persons outside of India or to enforce in India judgments obtained against such persons in courts outside of India.

India is not a party to any international treaty in relation to the recognition or enforcement of foreign judgments. Recognition and enforcement of foreign judgments are provided for under Section 13, Section 14 and Section 44A of the Civil Procedure Code, 1908. The GoI has, under Section 44A of the Civil Procedure Code, notified certain countries as reciprocating countries. Section 13 of the Civil Procedure Code provides that a foreign judgment will be conclusive regarding any matter directly adjudicated upon, between the same parties or between the parties whom they or any of them claim are litigating under the same title, except: (i) where the judgment has not been pronounced by a court of competent jurisdiction; (ii) where the judgment has not been given on the merits of the case; (iii) where it appears on the face of the proceedings that the judgment is founded on an incorrect view of international law or a refusal to recognise the law of India in cases in which such law is applicable; (iv) where the proceedings in which the judgment was obtained were opposed to natural justice; (v) where the judgment has been obtained by fraud; or (vi) where the judgment sustains a claim founded on a breach of any law in force in India. Section 44A of the Civil Procedure Code provides that where a foreign judgment has been rendered by a superior court in any country or territory outside India, which the GoI has, by notification, declared to be a reciprocating territory, it may be enforced in India by proceedings in execution as if the judgment had been rendered by the relevant court in India. However, Section 44A of the Civil

Procedure Code is applicable only to monetary decrees not being in the nature of any amounts payable in respect of taxes or other charges of a similar nature or in respect of a fine or other penalties and does not include arbitration awards.

There may be considerable delays in the disposal of suits by Indian courts. It may be unlikely that a court in India would award damages on the same basis as a foreign court if an action is brought in India. Furthermore, it may be unlikely that an Indian court would enforce foreign judgments if it viewed the amount of damages awarded as excessive or inconsistent with the public policy in India. A party seeking to enforce a foreign judgment in India is required to obtain prior approval from the RBI to repatriate any amount recovered pursuant to execution and any such amount may be subject to income tax in accordance with applicable laws. Any judgment or award in a foreign currency would be converted into Indian Rupees on the date of the judgment or award and not on the date of the payment which could be subject to foreign exchange risk. Generally, there are considerable delays in the processing of legal actions to enforce a civil liability in India, and therefore it is uncertain whether a suit brought in an Indian court will be disposed of in a timely manner or subject to considerable delays.

Risks Related to Ownership of the Units

59. Any additional debt financing or issuance of additional Units may have a material, adverse effect on the Trust's distributions, and your ability to participate in future rights offerings may be limited.

The Investment Manager, on behalf of the Trust may require additional debt financing or the issuance of additional Units in order to support the operating business or to make acquisitions and investments. If obtained, any such additional debt financing may decrease distributable income, and any issuance of additional Units may dilute existing Unitholders' entitlement to distributions and their unitholding.

We are not required to offer pre-emptive rights to existing Unitholders when issuing new Units. Compliance with securities laws or other regulatory provisions in some jurisdictions may prevent certain unitholders from participating in any future rights issuances and thereby result in dilution of their existing holdings in Units.

60. Any future issuance of Units by us or sales of Units by the Sponsor or any of other significant Unitholders may materially and adversely affect the trading price of the Units.

Any future issuance of Units by us could dilute unitholders' holdings of Units. Any such future issuance of Units may also materially and adversely affect the trading price of the Units and could impact our ability to raise capital through an offering of our securities. There can be no assurance that we will not issue further Units. In addition, any perception by unitholders that such issuances might occur could also affect the trading price of the Units.

Units will be tradable on the Stock Exchanges. If the Sponsor (following the lapse of their lock-up arrangements, to the extent applicable), directly or indirectly, transfer, sell or pledge or encumber 1or otherwise dispose or are perceived as intending to sell or pledge or encumber or otherwise dispose a substantial number of Units, or if a secondary offering of the Units is undertaken, the market price for the Units could be materially and adversely affected. These transfers or sales may also make it more difficult for us to raise capital through the issue of new units at a time and at a price we deem appropriate.

61. The Trust has been provided exemptions by SEBI from compliance with certain provisions of the InvIT Regulations related to disclosures to be made in this Placement Memorandum.

SEBI, by way of its letter dated March 20, 2024, has granted the Trust an exemption from the strict enforcement of Regulation 23(1) and Regulation 15(4) read with Para 4(a) and 7(b) of Schedule III of the InvIT Regulations. Such provisions require an InvIT to disclose in its placement/offer documents, (i) the terms of the offer including number of units, price, issue opening date, issue closing date, terms and conditions and any other information as may be required for the investor to make an informed decision; and (ii) the use of proceeds, including the purpose of the issue and the issue expenses. Further, by way of its letter dated July 24, 2024 SEBI had granted the Trust an extension of up to seven days for filing of the Draft Placement Memorandum.

As no Units are being offered and no investment is being made in terms of the proposed Unit Distribution, the aforestated provisions are not directly applicable to the Trust. This Placement Memorandum is being prepared

as a disclosure document that will be utilized for the Units to be listed on the Stock Exchanges and therefore, the information that may be relevant in fund-raising transactions would not be applicable in the present case.

Accordingly, based on the exemptions granted by SEBI, while this Placement Memorandum contains disclosures in relation to the price and the number of units being distributed and expenses involved in the current Unit Distribution, the disclosures relating to (i) the other terms of the offer, including issue opening date, issue closing date and other associated terms and conditions, are not relevant to the current Unit Distribution and are not being made; and (ii), the disclosures relating to the purpose of the issue, use of proceeds and other similar matters are not relevant to the current Unit Distribution and are not being made.

62. The price of the Units may decline after Listing.

The Unit Value has been determined by the Investment Manager. The Unit Value may not be indicative of the market price of the Units upon completion of the Listing. The market price of the Units may also be highly volatile and could be subject to wide fluctuations. If the market price of the Units declines significantly, unitholder may be unable to resell their Units at or above their purchase price, if at all. There can be no assurance that the market price of the Units will not fluctuate or decline significantly in the future.

To the extent that we retain operating cash flow for investment purposes, working capital reserves or other purposes, these retained funds, while increasing the value of our underlying assets, may not correspondingly increase the market price of the Units. Our failure to meet market expectations with regard to future earnings and cash distributions may materially and adversely affect the market price of the Units.

Where new Units are issued at less than the market price of the Units, the value the Units may be affected. In addition, Unitholders who do not, or are not able to, participate in the new issuance of Units may experience a dilution of their interest in the Trust. In addition, the Units are not capital-safe products and there is no guarantee that the value of the Units shall remain stable. If the Trust is extinguished, it is possible that unitholders may lose a part or all of the value of the units it holds.

63. Your ability to receive and transfer Units is restricted by the selling and transfer restrictions set forth in this Placement Memorandum

No actions have been taken to permit this Unit Distribution in any jurisdiction, other than India. As such, the Units have not and will not be registered under the U.S. Securities Act, any state securities laws, or the law of any jurisdiction other than India. Furthermore, the Units are subject to restrictions on transferability and sale. Eligible Creditors based in jurisdictions other than India are required to inform themselves about and observe these restrictions. The Trust, Investment Manager, Sponsor, Placement Agent or the Distributing Unitholders, will not be obligated to recognize any receipt of Units, made other than in compliance with the restrictions set forth herein. The Units are transferable only in accordance with the restrictions described under the section "*Selling and Transfer Restrictions*" on page 378.

Risks Related to Tax

64. Changes in legislation or the rules relating to tax regimes could materially and adversely affect our business, prospects and results of operations.

Tax and other levies imposed by the Government and state governments may include: (i) income tax (including withholding tax and tax collection at source); (ii) wealth tax (which was withdrawn with effect from January 1, 2016); (iii) excise duty; (iv) value added tax/central sales tax/ goods and service tax; (v) service tax; (vi) stamp duty; and (vii) other special taxes and surcharges that are introduced on a temporary or permanent basis from time to time. In some cases, these taxes and other levies may be changed from year to year and the Indian courts which interpret tax legislation may apply such interpretations with retroactive effect. Also, the Government in certain situations has the authority to change tax laws retrospectively.

The Ministry of Finance, GoI, has set up a panel to review the ITA and to draft a new direct tax legislation ("**Panel**"). The Panel has been tasked with drafting appropriate direct tax legislation aimed at (i) aligning India's domestic direct tax regime in line with international best practices; and (ii) ensuring and encouraging compliance. The implications of the report by the Panel, including findings and recommendations in their report and the provisions of the proposed direct tax legislation may have an unfavourable impact on us. Since

the Panel and its report, including their recommendations and the draft of the new direct tax legislation has not been released yet, the possible impact on us cannot be determined at this point in time.

The GoI announced the union budget for the Fiscal Year 2024 and the Finance (No. 2) Act, 2024 was notified with effect from August 16, 2024.

The Finance Act 2024, provides for tax on the unitholders for such portion of distribution received by them that is not covered under section 10(23FC) or 10(23FCA) of the ITA and that which is not chargeable to tax under section 115UA(2) of the ITA. Any distribution not covered under the aforementioned clauses will be taxed under the head "income from other sources" in the hands of the unitholders as 'income' under section 56(2)(xii) of the ITA, provided the amount received (including similar distributions in earlier years to the same unitholder or any other unitholder) is in excess of the amount at which units were issued by the InvIT, as reduced by the amount which would have been charged to tax under this provision in the earlier year. The aforementioned amounts received by a unitholder being a specified person covered under section 10(23FE) of the ITA shall not be subject to taxes upon the fulfilment of certain conditions set out in the ITA. Further, any such distribution received by a unitholder to the extent not chargeable to tax under section 56(2)(xii) and 115UA(2) and not covered under sections 10(23FC) or 10(23FCA) shall be reduced from the cost of units. We cannot assure you that there will be no adverse impact on the tax incidence to the unitholders pursuant to the Finance Act 2023. For details, please see the section "*Statement of Tax Benefits*" on page 401.

The Finance Act, 2021 amended the Securities Contracts (Regulation) Act, 1956 ("**SCRA**") to recognise pooled investment vehicles and recognise the units, debentures, other marketable securities and other instruments issued by InvITs as "*securities*". The Finance Act, 2021 exempted the payment of tax deducted at source on dividends paid to InvITs.

There have been two key major reforms in Indian tax laws, namely the introduction of the Goods and Services Tax ("**GST**") and provisions relating to general anti-avoidance rules ("**GAAR**"). The GST regime came into effect on July 1, 2017, combining taxes and levies by the Government and State Governments into a unified rate structure. Given the limited availability of information in the public domain concerning GST, we cannot assure you as to the tax regime following implementation of the GST. Additionally, there is limited clarity on the availability of input tax credit, and any unfavourable orders in this regard may have an adverse effect on our financial position and cash flows.

Further, any application of existing law or future amendments may affect our overall tax efficiency, and may result in significant additional taxes becoming payable.

The GAAR regime came into effect on April 1, 2017. The tax consequences of the GAAR provisions being applied to an arrangement could result in denial of tax benefit, amongst other consequences, including on the interest paid by the SPVs on the debt from the Trust. In the absence of any precedents on the subject, the application of these provisions is uncertain. If the GAAR provisions are made applicable to the Trust or any Party to the Trust, it may have an adverse effect on the Trust.

The rules notified with respect to GAAR prescribe that these shall not be applicable to FIIs in accordance with the SEBI (Foreign Portfolio Investors) Regulations, 2014 subject to the fulfilment of certain conditions. GAAR may have a material adverse tax impact on the Trust, the Sponsor and the Unitholders.

Further, vide Finance Act, 2022, the applicability of section 94(7) of the ITA has been extended to the units of a business trust (with effect from Financial Year 2022-23), which provides that where:

1. any person buys or acquires any securities or unit within a period of three months prior to the record date (a date fixed for the purposes of entitlement of the holder of the securities or units, as the case may be, to receive dividend, income, or additional securities or units without any consideration, as the case may be);
2. such person sells or transfers such securities within three months after such record date or such units within a period of nine months after such record date; and
3. the dividend or income on such securities or unit received or receivable by such person is exempt,

then, the loss, if any, arising from the sale and purchase of securities and units, to the extent of dividend or income received or receivable on such securities or unit, shall be ignored for computing income chargeable to tax.

Vide Finance Act, 2022, the applicability of section 94(8) of the ITA (commonly known as bonus stripping) has been extended to the units of business trusts (with effect from Financial Year 2022-23), which provides that where:

1. Any person buys or acquires any units within a period of three months prior to the record date;

2. Such person is allotted additional units without any payment on the basis of holding of such units on such record date;

3. Such person sells or transfers all or any of the units within a period of nine months after the record date, while continuing to hold all or any of the additional units referred in clause (ii) above,
then, the loss, if any, arising from the sale and purchase of all or any of the units shall be ignored for computing income chargeable to tax and notwithstanding anything contained in any other provision of the ITA, the amount of loss so ignored shall be deemed to be the cost of purchase or acquisition of such additional units referred to in clause (ii) above as are held on the date of such sale or transfer.

The Investment Manager has not determined the impact of such existing or proposed legislations on our business. Uncertainty in the applicability, interpretation or implementation of any amendment to, or change in, governing law, regulation or policy, including by reason of an absence, or a limited body, of administrative or judicial precedent may be time consuming as well as costly for us to resolve, and may impact the viability of our current business or restrict our ability to grow our business in the future.

We may incur increased costs relating to compliance with any new requirements, which may also require management time and other resources, and any failure to comply may adversely affect our business, results of operations and prospects.

65. Tax laws are subject to changes and differing interpretations, which may materially and adversely affect our operations.

The current tax laws and regulations in India provide certain exemptions to interest/dividend income earned by business trusts from a special purpose vehicle. These exemptions could be modified or removed at any time or clarified in a manner adverse to Unitholders, which could adversely affect our profitability and the amount available for distribution to Unitholders. Tax laws and regulations are subject to differing interpretations by tax authorities. Differing interpretations of tax and other fiscal laws and regulations may exist within governmental ministries, including tax administrations and appellate authorities, thus creating uncertainty and potential unexpected results. The degree of uncertainty in tax laws and regulations, combined with significant penalties for default and a risk of aggressive action by the governmental or tax authorities, may result in tax risks in the jurisdictions in which we operate being significantly higher than expected. Any of the above events may result in a material, adverse effect on our business, financial condition, results of operations and/or prospects and our ability to make distributions to the Unitholders. Tax authorities in India may also introduce additional or new regulations applicable to our business which could adversely affect our business and profitability.

For instance, while the Investment Manager intends to take measures to ensure that it is in compliance with all relevant tax laws, there is no assurance that the tax authorities will not take a position that differs from the position taken by us with regard to our tax treatment of various items. Any of the above events may result in a material, adverse effect on our business, financial condition, results of operations and/or prospects and our ability to make distributions to the Unitholders.

However, the tax authorities might take a position that differs from the position taken by us with regard to our tax treatment of various items.

66. The Project SPVs enjoy certain benefits under Section 80-IA of the ITA in relation to the Assets and any change in these tax benefits applicable to the Trust may adversely affect its results of operations.

Under the provisions of section 80-IA of the ITA, the Project SPVs are eligible for tax holiday for any 10 consecutive assessment years out of 20 years beginning from the year in which the undertaking or enterprise develops and begins to operate any infrastructure facility. As a result of the tax holiday available to the Project SPVs, the taxable profits derived by the Project SPVs from developing, operating and maintaining any infrastructure facility will not be taxable under the normal provisions of the ITA during the tax holiday period.

Any other taxable income (for example, interest income, profit on sale of mutual funds) from deployment of temporary funds or otherwise would also be taxable under the terms of the ITA. The Project SPVs will only be subject to MAT if the Project SPVs have a book profit as required to be computed under section 115JB of the ITA. Any change in the tax benefits under section 80-IA and/or the provisions of MAT may have an impact on the income tax liability of the Project SPVs and may consequently affect the amount available for distribution by the Project SPVs to the Trust. Furthermore, if the relevant conditions under section 80-IA of the ITA are not met and the manner of computation of profits and gains are not as permitted, the Project SPVs will not be able to enjoy the benefits of such tax holiday.

Benefits under section 80-IA of the ITA shall not be available to Project SPVs in case they have opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the ITA. Further, in such case, provisions of MAT shall not be applicable.

67. Eligible Creditors may be subject to Indian taxes arising out of capital gains on the sale of Units, on any dividend or interest component of any returns from the Units or on certain distributions from the Trust.

Under current Indian income tax laws, listed units of a business trust held for more than 12 months are considered as long term capital assets. In case of sale of such units through a recognised stock exchange in India and subject to payment of securities transaction tax ("**STT**"), any gain arising in excess of ₹ 0.125 million is subject to long term capital gains tax at a concessional rate of 12.50% without indexation benefit (plus applicable surcharge and cess). However, if the said units are sold in any other manner, the same shall be subject to long term capital gains tax at the rate of 12.50% without indexation benefit (plus applicable surcharge and cess).

In case, listed units are held for less than or up to 12 months, the same shall be regarded as short term capital asset. Any gain arising in case of sale of such units through a recognised stock exchange in India and subject to payment of STT, is subject to short term capital gains tax at concessional rate of 20% (plus applicable surcharge and cess). However, the condition of chargeable to STT shall not apply to a transaction undertaken on a recognized stock exchange located in any International Financial Services Centre and where the consideration under applicable law for such transaction is paid or payable in foreign currency. However, if the said units are sold in any other manner, the same shall be subject to short term capital gains tax at applicable tax rates of the holder (plus applicable surcharge and cess). Under the Finance Act, 2024, gains shall be computed by a unitholder after reducing from its cost of acquisition any amount distributed by us which is not in the nature of dividends or interest or any other income.

The aforesaid taxability in India is subject to tax treaty benefits in the case of a non-resident holder. Further, the applicable taxes on the sale of Units and on any dividend or interest component of any returns from the Unit will also be subject to the category of creditor holding or selling the Units.

The Finance Act, 2020 amended the ITA to abolish the dividend distribution tax regime and shift the incidence of taxation of dividend (declared or distributed on or after April 1, 2020) to shareholder. Under the Finance Act, 2020, a distribution made by a business trust, being in nature dividend income received from a special purpose vehicle, will not be subject to tax in the hands of a unitholder, so long as the special purpose vehicle has not opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the ITA. Similarly, a business trust (which includes an infrastructure investment trust) will not be required to withhold tax on any distributions which are in the nature of dividend income received from a special purpose vehicle, so long as such special purpose vehicle has not opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the ITA. However, where the special purpose vehicle opts to pay tax under Section 115BAA of the ITA, dividend income distributed by the business trust would be taxed in the hands of a non-resident unitholder at 20% (plus applicable surcharge and cess) or the applicable treaty rate and at the ordinary rate for a resident unitholder. Further, the business trust would be required to withhold tax on such distributions made from dividend received from the special purpose vehicle. Thus, the taxability of dividends distributed by the Trust will depend on the taxation regime opted by the Project SPVs. It may also be noted that in terms of Section 194LBA (1) of the ITA, any distributable income in the nature of interest income and dividend income (where the Project SPVs has opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the ITA) in the hands of a resident creditor is subject to deduction of tax at the rate of 10%. Similarly, in terms of Section 194LBA (2) of the ITA, any distributable income in the nature of interest income and dividend income (where the SPV has opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the ITA) in the hands of a non-resident is subject to deduction of tax at the rate of 5% (plus applicable surcharge and cess) and 10% (plus applicable surcharge and

cess) respectively. The ultimate tax liability in the hands of the Unitholder may depend on various factors/ considerations.

Further, the Finance Act, 2021, has included a definition of "pooled investment vehicle" which comprises business trusts as defined under the ITA. The ITA defines business trusts as trusts registered with SEBI as an InvIT. This amendment has come into effect from April 1, 2021. The Finance Act, 2021 recognises units, debentures and other instruments issued by infrastructure investment trusts as "securities" under the Securities Contracts (Regulation) Act, 1956. This may have further implications under various regulations issued by SEBI, governing securities, including under the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015. As announced in previous budgets, the dividend distribution tax applicable on InvITs was abolished and replaced with dividend withholding tax. The Finance Act, 2021 has also exempted payment of tax deducted at source on dividend paid to InvITs, with effect from April 1, 2020.

The Finance Act, 2024, provides for tax on the unitholders for such portion of distribution received by them that is not covered under section 10(23FC) or 10(23FCA) of the ITA and that which is not chargeable to tax under section 115UA(2) of the ITA. Any distribution not covered under the aforementioned clauses shall be taxed under the head "income from other sources" in the hands of the unitholders as 'income' under section 56(2)(xii) of the ITA, provided the amount received (including similar distributions in earlier years to the same unitholder or any other unitholder) is in excess of the amount at which units were issued by the InvIT, as reduced by the amount which would have been charged to tax under this provision in the earlier year. The aforementioned amounts received by a unitholder being a specified person covered under section 10(23FE) of the ITA shall not be subject to taxes upon the fulfilment of certain conditions set out in the ITA. Further, any such distribution received by a unitholder to the extent not chargeable to tax under section 56(2)(xii) and 115UA(2) and not covered under sections 10(23FC or, 10(23FCA) shall be reduced from the cost of units.

Furthermore, the Trust might not be able to pay or maintain the levels of distributions or ensure that the level of distributions will increase over time, or that future acquisitions will increase the Trust's distributable free cash flow to the Unitholders. Any reduction in, or elimination or taxation of, payments of distributions could materially and adversely affect the market price of the Units. The above statements are based on the current tax laws and subject to change as a result of the introduction of new laws or amendments to existing laws.

Further, the Finance bill, 2025 have been presented by the finance minister on 1st Feb 2025. Once the said bill is passed, and President assent is received, it becomes the Finance Act 2025 and shall be effective from the financial year 2025-26, and may have an impact on respective stake holders

GENERAL INFORMATION

The Trust

The Trust has been settled on October 6, 2020, by Roadstar Infra Private Limited (acting as the settlor) on the instructions of the Sponsor as a contributory irrevocable determinate trust under the provisions of the Indian Trusts Act, 1882. The Trust was registered as an infrastructure investment trust under the InvIT Regulations on December 22, 2020 having registration number IN/InvIT/20-21/0015. For information on the background of the Trust and the description of the Project SPVs, please see the sections "*Overview of the Trust*" and "*Our Business*" on pages 23 and 207, respectively.

Compliance Officer of the Trust

The Compliance Officer of the Trust is Jyotsna Matondkar. Her contact details are as follows:

Jyotsna Matondkar
Address: The IL&FS Financial Centre,
Plot No. C-22, G Block,
Bandra Kurla Complex,
Bandra (E), Mumbai – 400051
Tel: +91 22 26533333
E-mail: riml@roadstarinfra.com

Eligible Creditors can contact the Compliance Officer, Registrar or the Placement Agent in case of any Unit Distribution related problems, non-credit of Allotted Units in the respective beneficiary account of Eligible Creditors after Allocation. For further details please see the section "*Unit Distribution Procedure and Information*" on page 392.

The Sponsor - Roadstar Infra Private Limited

Registered office and address for correspondence

The IL&FS Financial Centre,
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Bandra (E), Mumbai – 400051.
Tel: +91 22 26533333
E-mail: itnl.investor@ilfsindia.com

Contact Person of the Sponsor:

Upasana Dikshit, Company Secretary is the contact person of the Sponsor. Her contact details are as follows:

The IL&FS Financial Centre,
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Tel: +91 22 26533333
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The Investment Manager – Roadstar Investment Managers Limited

Registered office and address for correspondence

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Fax: +91 22 26523979
E-mail: riml@roadstarinfra.com

Website: www.roadstarinfra.com

The Project Manager – Elsamex Maintenance Services Limited

Registered office and address for correspondence

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Plot No. C-22, G Block,
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Bandra (E), Mumbai – 400051.
Tel: +91 22 2653333
E-mail: rajnish.saxena@emslindia.com

The Trustee - Axis Trustee Services Limited

Registered Office:

Axis House
Bombay Dyeing Mills Compound
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Worli, Mumbai 400 025

Corporate Office/Correspondence Address:

The Ruby, 2nd Floor, SW,
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Tel: +91 22 6230 0605
E-mail: debenturetrustee@axistrustee.in
Contact Person: Chief Operating Officer
Website: www.axistrustee.com

Other Parties involved in the Trust

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Peer review certificate no.: 016960

Valuer

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Website: hbs.hbsinfra.com
Contact person: Premal Mehta

Placement Agent to the Unit Distribution

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Tel.: +91 22 4325 2183
E-mail: ilfs.invit@axiscap.in
Investor Grievance E-mail: complaints@axiscap.in
Website: www.axiscapital.co.in
Contact Person: Prashant Kolhe / Harish Patel
SEBI Registration No.: INM000012029

Legal Counsels to the Trust, the Investment Manager and the Sponsor as to Indian Law

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Legal Counsels to the Placement Agent as to Indian Law

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Registrar and Unit Transfer Agent

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Website: www.kfintech.com
Contact Person: M. Murali Krishna
SEBI Registration No.: INR000000221
CIN: L72400TG2017PLC117649

Resolution Consultants

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Address : 16th Floor, Tower III, One International Center, SB Marg,
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E-mail : ashish.c@IN.GT.COM
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Name : Alvarez and Marsal India Private Limited
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Website : AlvarezandMarsal.com

Credit ratings

The Trust has been given a rating of [ICRA]BBB+(Stable) by ICRA on March 27, 2024, the rationale for which is available at its website, https://www.icra.in/Rationale/ShowRationaleReport?Id=126590.

Disclaimer by ICRA

ICRA ratings should not be treated as recommendation to buy, sell or hold the rated debt instruments. ICRA ratings are subject to a process of surveillance, which may lead to revision in ratings. An ICRA rating is a symbolic indicator of ICRA's current opinion on the relative capability of the issuer concerned to timely service debts and obligations, with reference to the instrument rated. Please visit our website www.icra.in or contact any ICRA office for the latest information on ICRA ratings outstanding. All information contained herein has been obtained by ICRA from sources believed by it to be accurate and reliable, including the rated issuer. ICRA however has not conducted any audit of the rated issuer or of the information provided by it. While reasonable care has been taken to ensure that the information herein is true, such information is provided 'as is' without any warranty of any kind, and ICRA in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness or completeness of any such information. Also, ICRA or any of its group companies may have provided services other than rating to the issuer rated. All information contained herein must be construed solely as statements of opinion, and ICRA shall not be liable for any losses incurred by users from any use of this publication or its contents.

PARTIES TO THE TRUST

A. The Sponsor

Roadstar Infra Private Limited ("RIPL")

History and certain Corporate Matters

RIPL was incorporated on January 7, 2020 as a private company limited by shares under laws of India. The CIN of the RIPL is U45400MH2020PTC335610. The registered office of RIPL is situated at the IL&FS Financial Centre, Plot No. C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai – 400051. For further details, please see the section *"General Information*" on page 96.

Background of RIPL

RIPL was incorporated to serve as the Sponsor of the Trust and to facilitate the resolution of the Project SPVs which form a part of the IL&FS Group by setting up the Trust and undertaking the Unit Distribution as required under the terms of the Resolution Framework.

RIPL is a recently incorporated entity and derives experience from its holding company, ITNL, which has over two decades of experience in having developed, maintained and operated numerous BOT projects.

Board of Directors of RIPL

The board of directors of RIPL is entrusted with overall management of RIPL. Please see below the details in relation to the directors on the board of RIPL:

Sr. No.	Name	DIN	Designation
1.	Sabina Bhavnani	06553087	Non-Executive Director
2.	Jayashree Ramaswamy	02235205	Non - Executive Director
3.	Rakesh Chatterjee	00029365	Non-Executive Director

Sponsor Group

The Sponsor, ITNL, IL&FS, Sabarmati Capital One Limited, IL&FS Financial Services Limited and EMSL form part of the Sponsor Group. Pursuant to the Preliminary Distribution, ILF&FS Airports Limited and IL&FS Cluster Developments Initiative Limited have divested their unitholding in the Trust and hence are no longer part of the Sponsor Group.

B. The Trustee

Axis Trustee Services Limited

History and certain Corporate Matters

Axis Trustee Services Limited is the Trustee of the Trust. The Trustee is a registered intermediary with SEBI under the SEBI Debenture Trustee Regulations as a debenture trustee having registration number IND000000494 and the certificate of registration is valid until suspended. The Trustee's registered office is situated at Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai 400 025 and corporate office at The Ruby 2nd floor, SW, 29 Senapati Bapat Marg, Dadar West, Mumbai 400 028. The Trustee is a wholly-owned subsidiary of Axis Bank Limited.

Background of the Trustee

The Trustee is a wholly-owned subsidiary of Axis Bank Limited. The Trustee's services are aimed at catering to the individual needs of the client and enhancing client satisfaction. As Trustee, it ensures compliance with all statutory requirements and believes in the highest ethical standards and best practices in corporate governance. It aims to provide the best services in the industry with its well trained and professionally qualified staff with a sound legal acumen. The Trustee is involved in varied facets of debenture and bond trusteeships, including, advisory functions and management functions. The Trustee

also acts as a security trustee and is involved in providing services in relation to security creation, compliance and holding security on behalf of lenders.

The Trustee is also involved in providing services as (i) a facility agent for complex structured transactions with advice on suitability of the transaction on operational aspects; (ii) an escrow agent; (iii) a trustee to alternative investment funds; (iv) custodian of documents as a safekeeper; and (v) a trustee to real estate investment funds, etc.

The Trustee has been engaged in the activity of providing trusteeship services since 2008 and has a customer base of over 500 corporate clients. The Trustee is currently the trustee to one of the first publicly offered infrastructure investments trust in India, India Grid Trust.

The Trustee is not an Associate of the Sponsor or the Investment Manager or the Project Manager to the Trust. Further, neither the Trustee nor the settlors of the Trustee (i) are or have been debarred from accessing the securities market by SEBI; (ii) are or have been promoters, directors or persons in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/or (iii) are or have been declared a wilful defaulter by any bank or a financial institution or consortium thereof, in accordance with the guidelines on 'wilful defaulters' issued by the RBI.

Board of Directors of the Trustee

The board of directors of the Trustee is entrusted with the responsibility for the overall management of the Trustee. Please see below the details in relation of the board of directors of the Trustee:

Sr. No.	Name	DIN	Designation
1.	Prashant Joshi	08503064	Additional, Non-Executive Director
2.	Rahul Choudhary	10935908	Managing Director & Chief Executive Officer
3.	Arun Mehta	08674360	Additional Director (Non- Executive Independent)
4.	Parmod Kumar Nagpal	10041946	Additional Director (Non- Executive Independent)

Brief profiles of the Directors of the Trustee

Please see below brief biographies of the directors of the Trustee:

1. **Prashant Joshi** is an additional director (non-executive) on the board of directors of the Trustee. He is the group executive and chief credit officer of the Axis Bank since May 1, 2022. As the chief credit officer, he is responsible for all underwriting functions across the retail and corporate segments. Prashant has nearly three decades of experience in financial services, primarily in project finance, appraisals and credit functions. He has been with Axis Bank since September 2006 in roles related to credit/ underwriting and risk across various segments. In his previous stint, he was with the Industrial Development Bank of India in the project finance department for nearly 13 years, with in-depth experience of working on proposals across sectors. He started his career in a private firm as a project engineer. He holds a degree in civil engineering from Sardar Patel College of Engineering, Mumbai University.

2. **Rahul Choudhary** is the managing director and chief executive officer on the board of directors of the Trustee. He is a banker with around 21 years of experience (joined Axis Bank as a Management Trainee in 2003) across Product/Portfolio/Process Management with P&L ownership, Operations, Customer Experience, Strategy and Planning, New Product Development, Innovation/Transformation, Business Development/Coverage, Project Management and Compliance/Risk Management. These roles have been in multiple functions in Axis Bank and across domains like Transaction Banking, Business & Institutional Banking, Retail & Branch Banking, Govt. Banking, Corporate Credit, Trade & Forex and Wholesale Banking Operations; with subject matter expertise in Liability, Payments, Transaction Banking, Corporate Credit/Asset Products, CMS, Govt. Business and Digital Banking. He was heading the Wholesale Banking Operations (WBO) Department at Axis Bank with a team size of 3,500+ staff – a mix of Central Back-Office Units & decentralized Wholesale Banking Service Teams across Credit, Domestic & Cross-Border Trade

Finance, Retail Forex & Remittance, CMS & Current Account, Treasury Operations, Custody & Capital Market and ground delivery of these services to Wholesale (Corporate & SME/Commercial Banking) Clients through 350+ ground service teams (Wholesale Banking Centers). His key responsibilities in the role included delivering good customer service through better TATs leading to increased wallet share; enhanced operating efficiency through Tech, Digital & Analytics driven Ops Transformation; delivering on the digitization mandate through industry first initiatives and innovation including process re-engineering; accelerating digital adoption; increasing Cx / NPS scores; and ensuring compliance to regulations with effective and robust risk controls - the focus in the last few years has been on transformation of Wholesale Ops as an Agile & Future Ready Customer Centric Ops/Service Team with best-in-class compliance standards.

3. **Arun Mehta** is a director (non-executive independent) on the board of the Trustee. He is a postgraduate in economics and is a certified member of the Indian Institute of Bankers. He has over 38 years of experience, which includes corporate banking (mid-corporates and large corporates), international banking, ECBs and loan syndication (heading the merchant banking division), investment banking and retail banking. He has also had considerable international exposure, having worked overseas in Hong Kong handling loan syndications and investments. He has earlier held the position of managing director and chief executive officer of SBI Capital Markets, the merchant banking arm of SBI. He was also the non-executive chairman of SBICap Securities (retail broking arm), SBICap Ventures Ltd and SBICap Trustee Company Ltd. He was a non-executive director in Investec Capital Services India Pvt Ltd. Some of the other senior level assignments include chief general manager, financial control (ALM, budgeting and performance monitoring, raising equity and AT1 and tier II debt). He has also chaired the mid corporates credit committee for Gujarat Diu and Daman.

4. **Parmod Kumar Nagpal** is a director (non-executive independent) on the board of the Trustee. He has 40 years of work experience. In 1989, he joined SEBI as the manager and worked with SEBI for about 30.5 years. Before retirement in December 2019, he was the executive director of SEBI for almost 13 years. He has experience of working in all operational departments of SEBI – corporate finance, market regulation, mutual funds, venture capital funds, market intermediaries supervision, investigation and foreign portfolio investors. He was also involved in policy formulation and implementation of regulations, registration and supervision of market intermediaries, inspection of stock exchanges and market intermediaries, investigation of market manipulation and insider trading, takeovers, IPOs, compliance of listing requirements by the companies, corporate governance, etc. He was the chief vigilance officer of SEBI and in-charge of internal inspections department, HRD, finance and audit, establishment, premises and internal security and acted as the disciplinary authority for internal matters.

Key Terms of the Trust Deed

The Trustee and the Settlor have entered into the Trust Deed in terms of the InvIT Regulations. The key terms of the Trust Deed are provided below:

1. *Powers of the Trustee*

The Trustee has been provided with various powers under the Trust Deed in accordance with the Indian Trusts Act, 1882 and the InvIT Regulations, including but not limited to:

A. *General Power:* without prejudice to the scope and generality of the powers and authority conferred upon the Trustee under the Indian Trusts Act, 1882, the Trustee shall, in relation to the Trust, have every and all powers that a person competent to contract and acting as a legal and beneficial owner of such property has, and such powers shall not be restricted by any principle of construction or rule or requirement, but shall operate according to the widest generality of which the foregoing words are capable, notwithstanding that certain powers are more specifically set forth in the Trust Deed.

B. *Power of investments:*

(i) The Trustee is empowered to take all decisions in relation to the management and administration of the Trust Assets and the Trust as may be necessary for and incidental to

the advancement of fulfilment of the investment objectives in accordance with the trust documents, the InvIT Regulations and other applicable law provided that such power may be delegated to and exercised by the Investment Manager pursuant to the Investment Management Agreement.

(ii) The Trustee, in the name of the Trust or in its own name, on behalf of the Trust, is empowered to, among other things:

a) Acquire, hold, manage, trade and dispose of shares, stocks, convertibles, debentures, bonds or other equity or equity-related securities, derivatives, instruments or obligations and any debt or mezzanine securities instruments or obligations of all kinds or any other security, instrument or obligation under applicable law, including without limitation, those issued by any SPV, Holdco, infrastructure projects in accordance with the InvIT Regulations, other applicable law and the investment strategy. For the avoidance of doubt, this shall also include the power to hypothecate, pledge or create encumbrances of any kind on or provide guarantees, undertakings or other contractual comforts in-relation' to such securities, instruments or obligations held by the Trust in such SPVs, Holdco or infrastructure projects to be used as collateral security for any borrowings by the Trust, Holdco or SPVs;
b) issue, hold, invest, collateralize or sell any loan, debt, derivative, instrument or obligations as permitted under applicable law, including without limitation, those issued by the SPVs or Holdco, as applicable;
c) keep the capital and monies of the Trust in deposit with banks or other institutions;
d) accept contributions;
e) collect and receive the profit, interest repayment of principal of debt or debt-like equity or equity-like mezzanine securities, dividend, return of capital of any type by the SPVs, Holdco or infrastructure projects and income of the Trust as and when such amounts become due or receivable;
f) invest in securities or in units of mutual funds in accordance with applicable law;
g) invest in money market instruments including government securities, treasury bills, certificates of deposit and commercial papers in accordance with applicable law;
h) to give, provide and agree to provide to any SPV or holding company, financial assistance in the form of investment in share capital of any class including ordinary, preference, participating, non-participating, voting, non-voting or other class, and in the form of investment in securities convertible into capital;
i) to invest, acquire, purchase, hold, divest, sale, hypothecate, pledge or otherwise transfer immovable properties of any kind including rights and interest therein;
j) to structure an investment through one or more investment vehicles in order to address tax or regulatory considerations;
k) to create, establish and maintain partnerships, trusts, corporations, companies or other entities of any kind, to acquire, hold or dispose of the Trust Assets;
l) to enter into, execute and/or terminate any investment pooling agreements, agreements related to strategic investments, co-investment agreements. and any and all documents and instruments of a similar nature in the name of the Trust; and
m) to make further investments from the disposition proceeds in accordance with the Trust documents and the InvIT Regulations.

C. *Power to allot units etc. and accept subscriptions:* The Trust acting through the Trustee shall have the power to accept subscriptions to Units, debt securities (including any non-convertible debentures, bonds or convertible securities) or other securities, obligations or instruments permitted to be issued by the Trust under the InvIT Regulations and issue and allot Units, debt securities (including any non-convertible debentures, bonds or convertible securities) or other securities, obligations or instruments to Unitholders or other security holders, as applicable, and undertake all related activities. The Trustee shall, either by itself or through the Investment Manager or any such delegate as may be permitted under the InvIT Regulations and the Trust documents, subject to and only in accordance with the terms of the Trust documents and applicable law, have the power to approve or take on record any transfer of Units or debt securities or other securities or instruments or obligations issued by the Trust.

D. *Register of holders:* The Trustee shall have the power, or cause the investment manager, to maintain (or cause depositories to maintain) a depository register of the Unitholders or other instrument-holders of the Trust.

E. *Power to create reserves:*

(i) The trustee, in consultation with the Investment Manager, shall have the power to make such reserves out of the income or capital as it may deem proper.
(ii) Any distribution made from such reserves shall be in accordance with the Trust documents, the investment strategy and the InvIT Regulations.

F. *Power to employ agents:* The Trustee shall have the power to advise the Investment Manager to employ and pay at the expense of the Trust, any agent in any jurisdiction whether attorneys, solicitors, brokers, banks, trust companies or other agents, without being responsible for the default of any agent if employed in good faith to transact any business, including without limitation, the power to appoint agents to raise funds, or do any act required to be transacted or done in the execution of the responsibilities hereof including the receipt and payment of moneys and the execution of documents.

G. *Power to appoint nominees and custodians*: the Trustee will have the power to advise the Investment Manager to appoint any custodian in order to provide custodial services, and permit any property comprised in the Trust to be and remain deposited with a custodian or with any person or persons in India or in any other jurisdiction subject to such deposit being permissible under the applicable law.

H. *Power to oversee activities of the Investment Manager and Project Manager:* The Trustee shall oversee the activities of the Investment Manager and Project Manager in the interest of the Unitholders and ensure that the Investment Manager and the Project Manager comply with the InvIT Regulations and other applicable law.

I. *Power to pay duties and taxes:* In the event of any capital gains tax, income tax, stamp duty or other duties, fees or taxes (and any interest or penalty chargeable thereon) whatsoever becoming payable in any jurisdiction in respect of the Trust or any part thereof or in respect of documents issued or executed in pursuance of the Trust Deed or the Investment Management Agreement in any circumstances whatsoever, the Trustee shall have the power and duty to pay all such duties, fees or taxes (and any interest or penalty chargeable thereon) as well as to create any reserves for future potential tax liability (and any such interest or penalty) out of the Trust Assets and the Trustee may pay such duties, fees or taxes (and any such interest or penalty) on behalf of the Trust out of the Trust Assets.

J. *Power to allocate and expend on behalf of the Trust:* The Trustee shall, subject to the advice of the Investment Manager, have the power to incur and pay Trust expenses, which shall include, without limitation, any expenses made under any contract or applicable law, out of the Trust Assets, including any funds held by the Trust, the SPVs, the Holdco or other assets of the Trust, as applicable.

K. *Power to take counsel's opinion*: The Trustee shall have the power to take the opinion of legal, tax or other counsel in any jurisdiction concerning any difference arising under the Trust Deed or any matter in any way relating to the Trust Deed or to its duties in connection with the Trust Deed and the fees of such advisors shall be paid from the Trust Assets, including any funds held by the Trust, the SPVs, the Holdco or other assets of the Trust, as applicable.

L. *Power to conduct activities with trustees of other trusts:* Subject to applicable law, the Trustee may, in consultation with the Investment Manager, in execution of the Trust hereof or in exercise of any of the powers hereby or by law given to the Trustee sell, rent or buy any property, or borrow property from or carry out any other transaction with the trustees of any other trust or the executors or administrators of any estate notwithstanding that the Trustee is the same person as those trustees, executors or administrators or any of them and where the Trustee is the same Person as those trustees, executors or administrators, the transaction shall be binding on all persons then or thereafter interested hereunder though effected and evidenced only by an entry in the books of

accounts of the Trustee, provided such power is delegated to the Investment Manager pursuant to the Investment Management Agreement. The Trustee shall ensure that no conflicts of interest shall arise whilst conducting such activities.

M. *Power to effect compromises:* the Trustee, in consultation with the Investment Manager and subject to applicable law, shall have the power to:

(i) accept any property before the time at which it is transferable or payable;
(ii) pay or allow any claim on any evidence that it thinks sufficient;
(iii) accept any security movable or immovable in lieu of any amounts payable to it;
(iv) alter the dates for payment of any amounts payable to it; and
(v) compromise, compound, abandon or otherwise pay and settle any claim or thing whatsoever relating to the Trust or the Trust Deed.

N. *Power to borrow and create security:*

(i) The Trust acting through the Trustee shall, in consultation with the Investment Manager, have the power to cause the Trust to borrow or incur indebtedness including by way of issuance of debt securities or other securities or instruments permitted under the InvIT Regulations or other applicable law for the purpose of the Trust in accordance with the Trust documents and the InvIT Regulations.
(ii) The Trust acting through the Trustee shall, in consultation with the Investment Manager, have the power to secure the payment of any sum of money for and on behalf of the Trust in such manner and upon such terms and conditions in all respects as it deems fit including by mortgage or pledge or charge upon all or any Trust Assets (present or future);
(iii) The Trust acting through the Trustee shall subject to applicable law, in consultation with the Investment Manager, have the power to provide security, guarantee, undertakings, and other contractual comforts in relation to the indebtedness availed by any of the SPVs or Holdco, as applicable.

O. *Power to repay debts:* Subject to applicable law, the Trustee may cause the Trust to pay, prepay or repay any and all debt raised from any person in accordance with the terms therein and to redeem any debt securities or other securities, obligations or instruments in accordance with the terms thereof issued to persons in compliance with the InvIT Regulations and other applicable law, if so advised by the Investment Manager.

P. *Power to give loans:* Subject to applicable law, the Trustee shall, upon the recommendation of, the Investment Manager, extend loans out of the Trust Assets to SPVs or Holdco and also subscribe to debt or convertible or exchangeable securities or other securities or obligations or instruments of a similar nature or incur any indebtedness in accordance with the provisions of the, relevant Trust documents, the InvIT Regulations and other applicable law.

Q. *Power to re-invest:* Subject to the conditions laid down in the placement memorandum, other Trust documents and the InvIT Regulations, the Trustee may, subject to the advice of the Investment Manager, retain or re-invest any proceeds received by the Trust from any SPV or Holdco.

R. *Power to make rules*: The Trustee, in consultation with the Investment Manager, may make rules to give effect to and carry out the investment objectives, subject to the terms of the trust documents. In particular, and without prejudice to the generality of such power, the Trustee may provide, not inconsistent with the provisions of the Trust Deed and the InvIT Regulations, for all or any of the following matters, which may be delegated to the Investment Manager pursuant to the Investment Management Agreement subject to the InvIT Regulations:

(i) manner of maintaining of the records and particulars of the Unitholders and other instrument-holders of the Trust;
(ii) norms of investment by the Trust in accordance with the investment objectives and the investment strategy and in accordance with the powers and authorities of the Trustee as set out herein;
(iii) matters relating to deposit of any securities or SPVs or Holdco of the Trust to custodians and the procedure relating to the holding thereof by the custodian;

(iv) such other administrative, procedural or other matters relating to the administration or management of the affairs of the Trust and which matters are not required to be included or provided for in the Trust Deed and which matters are not inconsistent with the provisions thereof;
(v) procedure for voting by Unitholders in a meeting through postal ballot, proxy or otherwise;
(vi) procedure for summoning and conducting meetings of Unitholders.

S. *Power to appoint intermediaries*:

(i) The Trustee shall advise the Investment Manager in relation to the appointment of Valuer, Auditors, Registrar and transfer agent, merchant bankers, custodian, credit rating agency and any other intermediary or service provider or agent as may be applicable with respect to the activities pertaining to the InvIT, in a timely manner, in accordance with the InvIT Regulations and applicable law.
(ii) The Trustee shall ensure that the Investment Manager ensures that all activities of the intermediaries, agents or service providers appointment by the Investment Manager are in accordance with the InvIT Regulations and the guidelines and circulars issued thereunder, as applicable.

T. *Power to buy back Units:* Subject to applicable law, the Trustee, on behalf of the Trust, shall have the power to buy back Units from the Unitholders.

U. *Power to declare distributions:* The Trustee shall have the power to determine distributions to Unitholders and other rights attached to the Units in compliance with the Trust documents, the investment objectives, investment strategy and the InvIT Regulations.

V. *Power to insure property:* The Trustee shall have the power to obtain insurance policies for the Trust or SPVs or Holdco against any loss or damage from any peril, any assets and property forming part of the Trust Assets for any amount, and to pay the premiums out of the Trust Assets.

W. *Power to review reports:* The Trustee shall review the reports required in terms of InvIT Regulations and applicable law, as submitted by the Investment Manager and the Project Manager. In the event such reports are not submitted in a timely manner, the Trustee shall promptly follow-up with the Investment Manager and ensure that such reports are submitted as required under the applicable law.

X. *Power to open and operate bank accounts and demat accounts*: The Trustee shall have the power to open and operate one or more bank accounts and demat accounts for purposes of the Trust, including change of signatories of the bank accounts or demat accounts.

Y. *Power to execute documents*:

(i) Subject to the InvIT Regulations, the Trustee shall have the power to enter into all such negotiations and contracts, to appoint (or terminate the appointment of) any person, entity or intermediary, and, to execute and do all such acts, deeds and things for or on behalf of or in the name of the Trust as the Trustee may consider expedient for or in relation to any of the matters or otherwise for the purposes of the Trust.
(ii) The Trustee shall have the power to sign, seal, execute, deliver, register and/or terminate all deeds, documents, and assurances in respect of the Trust in accordance with applicable law.
(iii) The Trustee shall have the power to negotiate, sign, seal, execute, deliver and/or terminate the Trust Documents.

Z. *Other matters authorized by the Unitholders:* The Trustee shall have the power to take up with SEBI or with stock exchanges, as applicable, any matter which has been approved in any meeting of Unitholders, if the matter requires such action.

AA. *Power to provide indemnity:* The Trustee shall have the power to enter into any indemnification obligation under contract or applicable law on behalf of the Trust. The Trustee shall have the power to pay such obligation out of the Trust Assets as a trust expense. Such obligation shall be enforceable against the Trust and the Trustee solely in its capacity as the trustee of the Trust.

BB. *Other Powers:* Without prejudice to any other provisions of the Trust Deed, the Trustee shall also have the following powers and authorities exercisable pursuant to the advice of the Investment Manager:

(i) initiate, prosecute and/or defend any action or other proceedings in any court of law or through arbitration or in any other manner for recovery of debts or sums of money, right, title or interest, property, claim, matter or thing whatsoever now or hereafter to become due or payable or in any way belonging to the Trust by any means or on any account whatsoever in respect of and relating to the investments made by the Trust or Trustee and to discontinue or settle such actions or proceedings or suits as the Trustee may in its discretion deem fit;

(ii) commence, institute, conduct, defend or abandon any action or legal proceedings for the purposes of the Trust and have for such purposes, powers to sign and verify all written statements, petitions, appeals, declarations, revisions and applications and have power to refer any claim to arbitration and to perform, observe and challenge the awards;

(iii) appear in and defend or compromise any action or other proceedings now or hereafter to be instituted, commenced or prosecuted against or relating to the Trust in any court of law and if necessary through arbitration and to refuse and resist payments of any sum or sums or money or compliance with or fulfilment of any claim or demand or otherwise as the Trustee shall deem fit;

(iv) to make and give receipts, releases and other discharges for moneys payable to or by the Trust and for the claims and demands of or against the Trust;

(v) pay out of the income of the Trust after deducting all expenses, the income and other distributions in accordance with the InvIT Regulations;

(vi) to take into its custody or control the Trust Assets and hold such Trust Assets for the benefit of the Unitholders in accordance with the Trust Deed and the InvIT Regulations; and

(vii) generally to exercise all such powers as it may be required to exercise under the InvIT Regulations or any other applicable law for the time being in force and do all such matters and things as may promote the investment objectives or as may be incidental to or consequential upon the discharge of its functions and the exercise and enforcement of all or any of the powers and rights under the Trust Deed and the InvIT Regulations or any other applicable law.

CC. *Power to delegate:* Subject to the provisions of the Trust Deed, the Trustee may from time to time, in the interests of administrative and operational convenience, delegate to any committee or person (including the Investment Manager), any powers and duties including management of the Trust Assets vested in it under the Trust Deed, provided, however, that the Trustee shall remain responsible and liable for all the acts of commission or omission of such persons. Any action taken by such committee or person in respect of the Trust Assets shall be construed as an act done by the Trustee except in cases of gross negligence, fraud or wilful misconduct by such persons as determined by a court of competent jurisdiction whose decision is final and non-appealable.

2. *Duties of the Trustee*

A. *Interests of the Unitholders:* The Trustee shall carry on and conduct its business in a proper and efficient manner in the best interest of the Unitholders in accordance with the Trust Deed. The Trustee shall duly perform all its duties, responsibilities and powers as set out in the InvIT Regulations and other applicable law in the interest of the Unitholders and in accordance with the provisions of the Trust Documents.

B. *Supervision of the Investment Manager*

(i) The Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee shall require the Investment Manager to rectify such delay or discrepancy on an urgent basis.

(ii) The Trustee shall oversee the activities of the Investment Manager in the interest of the Unitholders, ensure that the investment Manager complies with the applicable provisions of the InvIT Regulations, including in relation to reporting and disclosure requirements and shall obtain a compliance certificate from the Investment Manager on a quarterly basis.

(iii) The Trustee shall review transactions between the Investment Manager and its associates and where the Investment Manager has advised that there may be a conflict of interest, obtain a confirmation that such transaction is on an arm's length basis from a practicing chartered account, a valuer or as may be otherwise prescribed in the InvIT Regulations, as applicable.

(iv) The Trustee shall ensure that the Investment Manager reviews the valuation reports issued by the Valuer and submitted to the Trustee by the Investment Manager in accordance with the InvIT Regulations.

(v) The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for effective monitoring of the functioning of the InvIT.

(vi) The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and oversee the voting by Unitholders and declaration of results (except where the Trustee is required to carry out such functions under the InvIT Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

(vii) The Trustee shall ensure that the Investment Manager takes all actions and compliances, in relation to the right of eligible unitholder(s) to nominate unitholder nominee director(s) on the board of directors of the Investment Manager, in the manner prescribed under the InvIT Regulations.

C. *Supervision of the Project Manager:* The Trustee shall oversee the activities of the Project Manager with respect to compliance with the InvIT Regulations and the Project Implementation and Management Agreements and Investment Management Agreement and shall obtain a compliance certificate from the Project Manager on a quarterly basis.

D. *Providing information to the SEBI and the Stock Exchanges:* The Trustee shall ensure that the Investment Manager shall provide to the SEBI, the stock exchanges and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI, the stock exchanges or other governmental authorities, as applicable, in relation to the activities of the Trust. The Trustee shall comply with the information and intimation requirements under the InvIT Regulations. The Trustee shall ensure that the activity of the Trust is operated in accordance with the provisions of the Trust Deed, the InvIT Regulations, other applicable law and the Trust documents. The Trustee shall immediately inform the SEBI in case any act which is detrimental to the interests of the unitholders is noted.

E. *Documents and information to be provided to Unitholders:* The Trustee shall, and shall ensure that the Investment Manager shall, provide documents and information to the Unitholders with respect to the confirmation on the activities carried on by the Trust, as may be required by the SEBI, the stock exchanges or other governmental agency, as applicable, under applicable law.

F. *Change in Control:* The Trustee shall obtain approvals, if required under the Trust Deed, the InvIT Regulations, other applicable law, for any proposed change in control of the Trustee, the Investment Manager or the Project Manager, as applicable.

G. *Change in Investment Manager or Project Manager:* In the event of any proposed change or termination of the Investment Manager or Project Manager, the Trustee shall ensure that all conditions in connection with the removal of such Investment Manager or Project Manager and appointment of a new investment manager or project manager prescribed under the InvIT Regulations, the Trust documents and other applicable law are complied with. The previous investment manager or project manager shall continue to act as such at the discretion of the Trustee until such time as the new Investment Manager or Project Manager is appointed. The Trustee shall ensure that the new investment manager or project manager shall stand substituted as a party in all the documents (to the extent applicable) to which the earlier Investment Manager or Project Manager was a party. The Trustee shall also ensure that the earlier Investment Manager or Project Manager continues to be liable for all its acts of omissions and commissions for the period during which it served as investment manager or project manager, notwithstanding its change or termination.

H. *Subscription amounts*: The Trustee shall and shall ensure that the Investment Manager ensures that subscription amounts, if any, in case of any offering by the Trust are collected and utilized in accordance with the InvIT Regulations, the relevant Trust documents and conditions specified by the SEBI, as applicable.

I. *Maintenance of books of accounts and other records:* The Trustee shall cause the books of accounts and other records of the Trust to be maintained in accordance with the Trust Deed, the Trust documents and applicable law.

J. *Payment of statutory charges, operation of bank accounts etc.*

(i) The Trustee shall ensure that the Investment Manager shall make payments of all taxes, duties and any other statutory charges or levies that may be payable by the Trust or on behalf of the Unitholders from the Trust Assets, subject to the provisions of the Trust documents and applicable law.
(ii) The Trustee shall be responsible for opening and operating bank accounts and demat accounts on behalf of the Trust.

K. *Attainment of objects of the Trust:* The Trustee shall ensure that all acts, deeds and things are done for the fulfilment of the investment objectives of the Trust in accordance with the InvIT Regulations, the Trust documents and to secure the best interests of the Unitholders.

L. *Reports to be filed by the Trust:* The Trustee shall file such reports as may be required by the SEBI or any other governmental authority or as required under applicable law in relation to the activities carried on by the Trust.

M. *Unitholder Complaints:* The Trustee shall periodically review the status of Unitholders' complaints and their redressal by the Investment Manager. The Investment Manager shall provide quarterly reports on Unitholders' grievances to the Trustee, as applicable.

N. *Segregation of assets and liabilities:* The assets and liabilities of the Trust shall at all times be segregated from the assets and liabilities of the Trustee and the assets and liabilities of other trusts managed by the Trustee. The Trust Assets shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any person claiming under any other fund or trust administered or managed by the Trustee or the Investment Manager.

O. *Valuer*

(i) The Trustee shall ensure that the Valuer is not an associate of the Sponsor, the Investment Manager or the Trustee.
(ii) The Trustee shall ensure that the Investment Manager ensures that a detailed valuation is undertaken of the Trust Assets by the Valuer at such intervals and in the manner specified under the InvIT Regulations and the Trust documents.
(iii) The Trustee shall ensure that the remuneration of the Valuer is not linked to or based on the value of the asset being valued.

P. *Investment by Trustee:* The Trustee shall invest in Units only if permitted under applicable law and such investments shall be in accordance with applicable law.

Q. *Compliance with the InvIT Regulations*: The Trustee shall fulfil its obligations under applicable provisions of the InvIT Regulations.

R. *Delegation to the Investment Manager and Project Manager:* The Trustee shall delegate all such powers to the Investment Manager as may be required by the Investment Manager to carry out its obligations under the Investment Management Agreement and applicable law and as may be required for the benefit of the Unitholders. The Trustee shall delegate all such powers to the Project Manager as may be required by the Project Manager to carry out its obligations under the Project Implementation and Management Agreement and under applicable law.

3. *Rights of the Trustee*

A. *Right to receive Trusteeship fees:* The Trustee shall have the right to receive trusteeship fees from the Trust Assets for services to be rendered in relation to Trust as set out in the engagement letter dated January 15, 2020.

B. *Right to receive advice:* The Trustee may, in the discharge of its duties, act upon (i) any advice obtained in writing from any bankers, accountants, brokers, lawyers, professionals, consultants, or other experts acting as advisers to the Trustee and (ii) any instructions received from the Unitholders in a validly conducted Unitholders meeting.

C. *Right to reimbursement of expenses:* the Trustee shall be entitled to the reimbursement of all expenses incurred by the Trustee on behalf of the Trust out of the Trust Assets in the manner set out in the Trust Deed.

D. *Restriction on right to inspect:* subject to applicable law, no Unitholder shall be entitled to inspect or examine the Trust's premises or properties without the permission of the Trustee, who shall give such permission, if necessary, in consultation with the Investment Manager. Further, no Unitholder shall be entitled to require discovery of any information in respect of any detail of the Trust's activities or any matter which may relate to the conduct of the business of the Trust and which information may, in the opinion of the Trustee and the Investment Manager adversely affect the interest of the unitholder.

4. *Liabilities of the Trustee*

A. *Assets received by the Trustee*:

(i) The Trustee shall only be chargeable for such monies, stocks, funds, shares, securities, investment or property as the Trustee shall have actually received and shall not be liable or responsible for any banker, broker, custodian, the Investment Manager or other person in whose hands the same may be deposited or placed, nor for the deficiency or insufficiency in the value of the Trust Assets nor otherwise for any involuntary loss.

(ii) Any receipt signed by the Trustee for any monies, stocks, funds, shares, securities, investment or property, paid, delivered or transferred to the Trustee by virtue of the Trust Deed or in exercise of the duties, functions and powers of the Trustee shall effectively discharge the Trustee or the person paying, delivering or transferring the same provided that the Trustee and such person shall have acted in good faith, without negligence and shall have used their best efforts in connection with such dealings and matters.

B. *Acts or things required to be done by the Trustee under applicable law:* The Trustee shall not be liable to the Unitholders for an act or omission which by reason of any provision under applicable law, whether in the present or in the future, or of any decree, order or judgment of any court or governmental authority, the Trustee is required to do or omit doing. Subject to the InvIT Regulations and other applicable law, in such an event if it becomes impossible or impracticable to carry out any of the provisions of the Trust Deed, the Trustee shall not be liable. However, it shall duly inform the Sponsor, the Investment Manager and the Unitholders of such event.

C. *Authenticity of Signature and Seal:* the Trustee shall not be responsible to any Unitholder for the authenticity of any signature or of any seal affixed to any endorsement on any certificate or to any transfer or form of application endorsement or other document effecting the title to or transmission of interests in the Trust or of any of the Trust Assets or be in any way liable for any forged or unauthorized signature on or any seal affixed to such endorsement transfer or other document or for acting upon or giving effect to any such forged or unauthorized signature or seal. The Trustee shall be entitled but not bound to require that the signature of any Unitholder to any document required to be signed by such Unitholder under or in connection with these presents shall be verified to the reasonable satisfaction of the Trustee.

D. *Acts done in good faith:* the Trustee shall not be under any liability on account of anything done or omitted to be done or suffered by the Trustee in good faith if the Trustee is able to establish that it performed its rights and duties and exercised its powers, as a reasonable person in such a position would have, in compliance with the provisions of the Trust documents.

E. *Value or price of an investment:* the trustee may accept a certificate from the Valuer as sufficient evidence for the value of any investment or for the cost price or sale price thereof or for any other related aspect.

F. *Suits, proceedings or claims against the Trust:* the Trustee shall not be under any obligation to institute, acknowledge the service of, appear in, prosecute or defend any action, suit, proceedings or claim in respect of the provisions hereof or in respect of the investments or any part thereof which in its opinion would or might involve it in expense or liability unless the Investment Manager shall so request in writing and the Trustee is satisfied that the value of the investment is sufficient to provide adequate indemnity against costs, claims, damages, expenses or demands to which it may be put as Trustee as a result thereof.

G. *Bona fide action by the Trustee:* The Trustee shall not be liable in respect of any action taken or damage suffered by it as a result of reliance upon any notice, resolution, direction, consent, certificate, affidavit, statement, certificate of stock, plan of reorganization or (without being limited in any way by the foregoing) other paper or document believed to be genuine and to have been passed, sealed or signed by appropriate authorities or entities provided that the foregoing shall not absolve the Trustee of its obligation to perform basic prescribed checks on authenticity of such notice, resolution, direction, consent, certificate, affidavit, statement, certificate of stock, other paper or document prior to such reliance.

H. *Information:* in the event that the applicable law requires the Trustee to provide information regarding the Trust fund, any of the Unitholders, the Trust Assets or income derived therefrom, the Trustee shall comply with such a request in good faith, and shall not be liable to the Unitholders or any of them or to any other party as a result of such compliance or in connection with such compliance.

I. *Validity of decisions made by the Trustee*: the exercise of all power and discretion by the Trustee shall be in accordance with the trust documents and applicable law and any powers have been delegated by the directors of the board of the Trustee to any officer of the Trustee, if the exercise of such powers is within the parameters of such delegated authority.

J. *Non-exclusivity:* The Trustee shall not be prevented from and nothing contained herein shall be construed in a manner so as to prevent the Trustee from acting as a trustee of another infrastructure investment trust, real estate investment trust, security trust, alternative investment fund, mutual fund, private equity fund or other fund or investment vehicle that is separate and distinct from the Trust, and retaining for its own use and benefit all remuneration, profits and advantages which it may derive from such trust, security trust, alternative investment fund, mutual fund, private equity fund or other fund or investment vehicle.

5. *Issue, transfer, listing and redemption of Units*

A. The Investment Manager, supervised by the Trustee, shall be responsible for all activities pertaining to the issue of Units including filing of any placement memorandum, final placement memorandum with the SEBI and dealing with all matters relating to the allotment of Units to Unitholders and the listing and trading of Units, if applicable.
B. No Units may be issued without complying with the requirements of applicable law. No Unitholder shall enjoy superior voting or any other rights over another Unitholder, unless permitted under applicable law.
C. There shall not be multiple classes of Units, unless permitted under applicable law.
D. The Unitholders may, in accordance with the provisions of the Trust Documents and subject to applicable law, transfer all or any of their Units to another person where such person accepts all the rights and obligations of the transferor and the Trustee and the Investment Manager shall give effect such transfer in accordance with applicable law.
E. The minimum offer and allotment to the public through a placement memorandum shall be in accordance with the InvIT Regulations and other applicable law.
F. Units may be redeemed by way of a buy-back or as otherwise permitted under applicable law in accordance with the Trust documents.

G. The Trust intends to list its Units on one or more stock exchanges subject to compliance with the conditions specified under the InvIT Regulations and directions issued by the SEBI or stock exchanges, as applicable.
H. The Trust shall ensure that no advertisement shall be issued pertaining to any private placement of Units by the Trust.

6. *Rights of the Unitholders*

A. Unitholders meetings shall be conducted in accordance with the InvIT Regulations. Each Unit allotted to the Unitholders shall have one vote for any decisions requiring a vote of Unitholders.
B. The minimum number of Unitholders of the Trust shall be in accordance with the applicable provisions of the InvIT Regulations.
C. Unitholders shall have the right to receive income or distribution as specified in the Trust Deed.
D. The aggregate liability of each Unitholder in the Trust shall be limited to the capital contribution payable by such Unitholder in relation to its subscription of Units. No Unitholder shall have any personal liability or obligation with respect to the Trust.
E. In no event shall the Trustee or the Investment Manager be bound to make payment to any Unitholder, except out of the funds held by it for that purpose under the provisions of this Trust Deed or the Investment Management Agreement.
F. The Unitholders shall not give any directions to the Trustee or the Investment Manager (whether in a meeting of Unitholders or otherwise) if it would require the Trustee or the Investment Manager to do or omit doing anything which may result in:

(i) non-compliance of applicable law by the Trust or the Trustee, in its capacity as the trustee of the Trust or the Investment Manager, in its capacity as the investment manager; or
(ii) interference with the exercise of any discretion expressly conferred on the Trustee by the Trust Deed or the Investment Manager by the Investment Management Agreement, or the determination of any matter which requires the agreement of the Trustee or the Investment Manager.

G. A Unitholder whose name and account details are entered in the depository register shall be the only person entitled to be recognised as having a right, title, interest in or to the Units registered in its name and the Trustee shall recognise such holder as an absolute owner.
H. The depository register shall (save in case of manifest error) be conclusive evidence of the number of Units held by each depositor and in the event of any discrepancy between the entries of the depository register and any statement issued by the depository, the entries in the depository register shall prevail unless the depositor proves to the satisfaction of the Trustee and the depository that the depository register is incorrect.
I. The Unitholders shall have the right to call for certain matters to be subject to their consent, in accordance with the InvIT Regulations and applicable law.
J. The Trustee shall and shall ensure that the Investment Manager obtains the consent of the Unitholders for the matters prescribed under the Trust Deed and the InvIT Regulations in accordance with the provisions of the InvIT Regulations.
K. The eligible unitholder(s) shall have the right to nominate unitholder nominee director(s) on the board of directors of the Investment Manager from time to time, in the manner prescribed under the InvIT Regulations.

7. *Indemnity*

A. In addition to the fees, payments, distributions and expense reimbursements herein described, the Trust Assets shall be utilized to indemnify and hold harmless the Trustee, its directors and employees (the **"Indemnified Parties"**) from and against any claims, losses, costs, damages, liabilities, suits, proceedings and expenses, including legal fees **("Losses")** suffered or incurred by any of the Indemnified Parties by reason of their activities on behalf of the Trust, unless such Losses have resulted from (i) fraud, gross negligence, wilful misconduct of the indemnified parties, (ii) material breach of the provisions of the Investment Management Agreement, or (iii) breach of the provisions of the other Trust documents by the Trustee, as finally determined by a court of competent jurisdiction.

B. The indemnification rights of the Indemnified Parties under the Trust Deed are without prejudice, independent of and in addition to, such other rights and remedies as the Indemnified Parties may have under applicable law or in equity or otherwise.

8. *Term & Termination*

A. The Trustee shall hold the office of trustee of the Trust under the Trust Deed, until the earlier of the: (a) dissolution or winding-up of the Trust; or (b) discharge of the Trustee from its office upon the occurrence of the events set out below:

(i) resignation by the Trustee from its office provided that, in the event that the Trustee desires to resign, it may submit its resignation to the Sponsor and the Investment Manager by giving 60 business days' prior notice with the reasons for its resignation;
(ii) the Trustee going into liquidation (except a voluntary liquidation for the purpose of reconstruction or amalgamation) or if a receiver is appointed to all or a substantial portion of the assets of the Trustee or for any other reason it ceases to be entitled to provide and perform the services herein provided for in accordance with applicable law;
(iii) passing of a direction by the SEBI or any other governmental authority to remove the Trustee; or
(iv) the Unitholders pass a resolution under the InvIT Regulations or the Trust documents for removal of the Trustee.

B. Upon the resignation or removal of the Trustee, a new trustee shall be appointed in its place by execution of a deed of appointment between the Sponsor and the new trustee, to hold office in its place from the date of acceptance of the resignation, subject to approval of the Unitholders. The date of acceptance of the Trustee's resignation shall be deemed to be the date of discharge of the Trustee. On such appointment, the Trust shall vest with the new trustee.
C. The Trustee shall not be discharged unless a new trustee is appointed in its place. The appointment of a successor trustee shall be done by an instrument in writing.
D. Notwithstanding the discharge of the Trustee in accordance with the provision in the Trust Deed, the Trustee shall continue to be responsible and liable for all its past acts and omissions, subject to the indemnity of the Trustee as provided in the Trust documents.
E. Every new trustee shall have the powers, authorities and discretion, and shall in all respects act and be liable as if originally appointed as a Trustee under the Trust Deed.
F. *Extinguishment or dissolution of the Trust:* Subject to applicable law, the Trust shall stand dissolved and terminated:
(i) if the trust becomes illegal;
(ii) upon liquidation of the Trust Assets;
(iii) if there are no projects or assets remaining in the Trust and the Trust does not invest in any project for six months thereafter;
(iv) if the trust fails to maintain the minimum number of unitholders specified in the Trust Deed and as may be applicable under the InvIT Regulations; or
(v) delisting of the units and/or winding up of the Trust in accordance with the InvIT Regulations.

C. The Investment Manager

Roadstar Investment Managers Limited ("RIML")

History and Certain Corporate Matters

RIML is the Investment Manager of the Trust having CIN U67100MH2001PLC163992. It was originally incorporated as a private limited company on October 15, 2001, as North Karnataka Expressway Private Limited. It was converted into a public limited company on September 25, 2002, through a fresh certificate of incorporation. Subsequently, the name of the Investment Manager was changed from North Karnataka Expressway Limited to Roadstar Investment Managers Limited and a fresh certificate of incorporation was issued on April 20, 2021. The Investment Manager's registered office is situated at the IL&FS Financial Centre, Plot No. C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai – 400051.

Background of RIML

RIML, being the Investment Manager of the Trust, has extensive experience in operating a road project. The Investment Manager has executed the project of rehabilitation, strengthening and expanding the existing two-lane road to a four-lane road in the Dharwad – Maharashtra border section of National Highway-4 in the State of Karnataka under a concession agreement dated November 20, 2001. The commercial operations date of the project was March 26, 2002 and the concession period was of 17 years and six months which expired on December 19, 2019. Thereafter, the project was handed back to NHAI in terms of the concession agreement. The Investment Manager has the requisite infrastructure for managing the assets and investments of the Trust. The management of the Investment Manager has been suitably broad-based and appropriate systems/procedures have been formulated to enable the Investment Manager to carry out its activities as required under the InvIT Regulations.

Board of Directors of RIML

The board of directors of RIML is entrusted with overall management of RIML. Please see below the details in relation to the directors on the board of RIML:

Sr. No.	Name*	DIN	Designation
1.	Jagadip Narayan Singh	00955107	Independent Director and Chairman
2.	Dhanraj Tawade	02911849	Non-Executive Director
3.	Lubna Ahmad Usman	08299976	Non-Executive Director
4.	Subrata Kumar Atindra Mitra	00029961	Independent Director
5.	Rajeev Uberoi	01731829	Independent Director
6.	Preeti Grover	00128513	Independent Director

Brief Biographies of the Directors of RIML

Please see below brief biographies of the directors of the Investment Manager:

1. **Jagadip Narayan Singh** is an independent director on the board of the Investment Manager. He is a retired Indian Administrative Service ("**IAS**") Officer of the 1983 batch, who retired as chief secretary of Gujarat in November, 2019. He has held many important portfolios, largely in the infrastructure and finance sector, like member (administration), Gujarat Electricity Board; joint secretary, Government of India; member (finance) National Highways Authority of India; and managing director, Sardar Sarovar Nigam Limited. He also served as chairman and/or managing director of several state-owned companies like Gujarat Gas Limited, Gujarat State Petronet Limited, Gujarat State Fertilizers & Chemicals Limited, Gujarat Narmada Valley Fertilizers & Chemicals Limited, Gujarat Alkalies and Chemicals Limited, and Gujarat Maritime Board. Currently, he is serving as an independent director on the board of many companies and as an independent external monitor for public sector undertakings. He holds a master's degree in arts from Jawaharlal Nehru University and a Ph.D. in political science from the Maharaja Sayajirao University, Vadodara. He also graduated with a master's degree in development management from the Asian Institute of Management, Manila, Philippines.

2. **Dhanraj Tawde** is a non-executive director on the board of the Investment Manager since November 27, 2024. He has experience of more than 34 years with Ministry of Road Transport & Highways (MORTH) and National Highway Authority of India (NHAI). He has also worked as Additional Director General with the MORTH. Further, he served as member (technical) in NHAI from August 29, 2016, to May 15, 2019. He holds a bachelor's degree in civil engineering from Nagpur University.

3. **Lubna Ahmad Usman** is a non-executive director on the board of the Investment Manager since January 11, 2024. She also holds non-executive board positions at IL&FS Investment Managers Limited, IL&FS Securities & Trustee Services Limited, IL&FS Portfolio Management Services. She is a senior management professional with more than 21 years of experience in providing strategic leadership, project finance, debt restructuring and treasury management across banking and non-banking finance companies. She has worked for 11 years with IDBI Bank in various leadership roles and has led the bank's client coverage – sourcing, structuring and syndication of project debt for North and East region. At Infrastructure Leasing & Financial Services Limited ("**IL&FS**"), her key

responsibilities included debt structuring, project finance and corporate fund raising through capital market and other debt instruments across infrastructure verticals. Since October 2018, she is a key member of the core team engaged in the resolution of debt of IL&FS group, under the supervision of the new board appointed by the Government of India. Currently, she is the COO at IL&FS Financial Services Limited, leading the creditor engagement across all banks, financial institutions and other category of lenders and in-charge of debt restructuring and resolution. She is a postgraduate in business administration from the SIES College of Management Studies, Mumbai.

4. **Subrata Kumar Atindra Mitra** is an independent director on the board of the Investment Manager. He holds a degree of master of science from the University of Calcutta and a degree of master of management science from Texas Christian University. He has served as a vice-president at American Express Bank Limited and during his tenure there was invited to be a member of the Indo-American Chamber of Commerce Standing Committee on Administration/Finance for the year 1987-88. He has served as a director on the board of GIC Asset Management Company Limited and as a director of Rotary Club of Bombay. He delivered an address to the Confederation of Indian Industries on "Private Equity – An Asset Class for improving markets; preparing your business for it" in Financial Market's Conclave 2010 and was invited to be on the managing committee of the India Merchant's Chamber for the year 2015-16 as a special invitee.

5. **Rajiv Uberoi** is a non-executive, independent director on the board of the Investment Manager. He is a career banker with more than 35 years of experience in public sector, private sector and foreign banks. He was also with the Reserve Bank of India in the area of supervision and regulations. He was also associated with Yes Bank as a senior group president — governance and controls after serving at senior positions of IDFC Bank Limited and its subsidiaries. As a lawyer and a banker, he has been instrumental in number of mergers and acquisitions namely, ANZ Grindlays and Standard Chartered Bank; Standard Chartered Bank and American Express Bank; IDFC demerger into bank and other subsidiaries, to name a few. He has been responsible for rolling over half a dozen private equity funds with gross assets under management (AUM) of more than USD 6 billion and incorporating entities overseas and merging some. He is also a profound writer and has a lot of publications to his credit. He also represents the boards of various companies including committees. He is a recipient of many accolades and awards and his contribution to the legal fraternity has been recognised in the industry. He holds the following degrees: LL.B, M.A. (Economics), Ph.D.(Philosophy), Ph.D. in Economics.

6. **Preeti Grover** is an independent director on the board of the Investment Manager. She is a qualified company secretary ("**CS**") and has over 27 years of experience with core specialization in corporate law compliances, listing compliances and secretarial audit. She is an active member in the CS profession and a faculty member at Northern India Regional Council of Institute of Company Secretaries of India, New Delhi. She is an active speaker on topics including corporate governance, independent directors, secretarial audit, prevention of sexual harassment at workplaces, social audit. She is a well-known and respected professional in the CS fraternity. She is also a council member of Anti Sexual harassment Council of Women's Indian Chamber of Commerce and Industry. She is also the winner of Platinum Award for "Best Mentor of the year 2022" by Professional Network Group of India, in association with the GD Goenka University.

Brief profiles of the Key Personnel of RIML

Please see below brief biographies of the Key Personnel of the Investment Manager:

1. **Danny Samuel** is the chief executive officer of ITNL and the Investment Manager. He has more than 25 years of experience across diverse infrastructure sectors such as energy, roads, telecom and aviation. Preceding his current role, he undertook an international assignment as the chief executive officer in the Asia-Pacific region for ITNL and has also played a pivotal role in numerous capital markets, encompassing both equity and debt domains. He has been a key contributor to several marquee transactions, including ITNL's initial public offering, the issuance of rated and listed project bonds in 2010, the inaugural issuance of a renminbi- denominated corporate bond by an Indian corporate group, as well as various domestic and cross-border merger and acquisition activities. His experience is particularly deep-rooted in the roads and highways sector, where he has been engaged in complex financial, operational, and business restructuring challenges associated with these assets. He is an associate company secretary and has a master's degree in economics and financial management from the University of Rajasthan. He has further enriched his expertise through short

courses at International Institute for Management Development (IMD) Singapore and an executive management program at University of California Los Angeles (UCLA) - Anderson School of Management.

2. **Milind Gandhi** is the chief financial officer of the Investment Manager. He is a chartered accountant and a company secretary with more than 26 years of experience. He is currently working with Roadstar Investment Managers Limited and ITNL as chief financial officer. He joined ITNL in February 2020. He is a senior level finance professional with extensive experience in areas including financial accounting and reporting, treasury management, corporate finance, secretarial and compliance, taxation, audit and investor relations. His leadership capabilities are evident in his track record of building and leading high-performing teams with a keen focus on execution. He has demonstrated consisted results in areas of fund raising, cost management, IT initiatives and stake holder relationships in his past assignments.

3. **Jyotsna Matondkar** is the company secretary and compliance officer of the Investment Manager, with an overall experience of 18 years of overviewing the entire corporate secretarial and compliance related activities. She has an experience of more than 10 years in working for ITNL, a listed company in India. She has played a pivotal role in various fund raising activities, including listing of securities in Indian and overseas stock exchanges for ITNL and its group entities. She has also handled corporate secretarial activities of the companies domiciled in Singapore, Dubai and Africa. She holds a bachelor's degree in commerce and am an associate member of Institute of Company Secretaries of India ("**ICSI**") since 2005. She has completed certification courses in securities laws, Insolvency and Bankruptcy Code, 2016 and National Company Law Tribunal conducted by ICSI, New Delhi.

Key Terms of the Investment Management Agreement

The Investment Manager has entered into the Investment Management Agreement, in terms of the InvIT Regulations, the key terms of which, are provided below.

1. *Powers of the Investment Manager*

The Investment Manager has been provided with various powers under the Investment Management Agreement in accordance with the InvIT Regulations, including but not limited to:

A. *Management of the Trust*:

(i) The Investment Manager shall take all decisions in relation to the management and administration of the Trust and the Trust Assets and the investments of the Trust as may be necessary for or incidental to the advancement or fulfilment of the Investment Objectives in accordance with the Trust Documents, the InvIT Regulations and other applicable law.

(ii) The Investment Manager shall be responsible for generally evolving, formulating and adopting such policies and procedures as may be conducive for the effective administration and management of the Trust and necessary for or incidental to the advancement or fulfilment of the Investment Objectives.

B. *Power to make investment and divestment decisions*: The Investment Manager shall have the power to make all investment decisions with respect to the Trust Assets including, without limitation, investigation, selection, development, negotiation, structuring, restructuring, commitment to or monitoring and any further investment or divestment of the underlying assets or projects of the Trust and in this regard shall also be empowered to do the following acts on behalf of the Trust:

(i) acquire, hold, manage, trade and dispose of shares, stocks, convertibles, debentures, bonds and other equity or equity-related securities, derivatives, instruments or obligations and any debt or mezzanine securities instruments or obligations of all kinds or any other security, instrument or obligation under applicable law, including without limitation, those issued by any SPV, Holdco, Infrastructure Projects in accordance with the InvIT Regulations, other applicable law and the Investment Strategy. For the avoidance of doubt, this shall also include the power to hypothecate, pledge or create encumbrances of any kind on or provide guarantees, undertakings or other contractual comforts in relation to such securities,

instruments or obligations held by the Trust in such SPVs, Holdco or Infrastructure Projects to be used as collateral security for any borrowings by the Trust, Holdco or SPVs;

(ii) issue, hold, invest, collateralize or sell any loan, debt, derivative, instrument or obligation as permitted under applicable law, including without limitation, those issued by the SPVs or Holdco, as applicable;

(iii) keep the capital and monies of the Trust in deposit with banks or other institutions;

(iv) accept contributions in accordance with applicable law;

(v) collect and receive the profit, interest, repayment of principal of debt or debt-like, equity or equity-like mezzanine securities, dividend, return of capital of any type by the SPVs, Holdco or Infrastructure Projects and income of the Trust as and when such amounts become due or receivable;

(vi) invest in securities or in units of mutual funds in accordance with applicable law;

(vii) invest in money market instruments including government securities, treasury bills, certificates of deposit and commercial papers in accordance with applicable law;

(viii) to give, provide and agree to provide to any SPV or Holdco, financial assistance in the form of investment in share capital of any class including, preference, participating, non-participating, voting, non-voting or other class, and in the form of investment in securities convertible into capital;

(ix) to invest, acquire, purchase, hold, divest, sell, create charge, mortgage or otherwise transfer land and building and other immovable properties of any kind including rights and interests therein;

(x) to structure an investment through one or more investment vehicles in order to address tax or regulatory considerations;

(xi) to create, establish and maintain partnerships, trusts, corporations, companies or other entities of any kind, to acquire, hold or dispose of the Trust Assets;

(xii) to enter into, execute and/or terminate any investment pooling agreements, agreements related to strategic investments, co-investment agreements, and any and all documents and instruments of a similar nature in the name of the Trust; and

(xiii) to make further investments from the disposition proceeds in accordance with the Trust Documents and the InvIT Regulations.

C. *Power to allot Units etc. and accept subscriptions*: The Investment Manager shall have the power to deal with all matters relating to the allotment of Units on behalf of the Trust. The Investment Manager (on behalf of the Trust) shall have the power to accept subscriptions to Units, debt securities (including any non-convertible debentures, bonds or convertible securities) or other securities, obligations or instruments permitted to be issued by the Trust under the InvIT Regulations and issue and allot Units, debt securities (including any non-convertible debentures, bonds or convertible securities) or other securities, obligations or instruments to Unitholders or other security holders, as applicable, and undertake all related activities. The Investment Manager shall, subject to and only in accordance with the terms of the Trust Documents and applicable law, have the power to approve or take on record any transfer of the Units or debt securities or other securities or instruments or obligations issued by the Trust.

D. *Register of holders*: The Investment Manager shall have the power to maintain (or cause depositories to maintain) a register of the Unitholders or other instrument-holders of the Trust.

E. *Creation of reserves*:

(i) The Investment Manager shall make such reserves out of the income or the capital as it may deem proper and any directions of the Trustee in this behalf whether made in writing or implied from their acts shall, so far as the law permit, be conclusive and binding.

(ii) Any Distribution made from such reserves shall be in accordance with the InvIT Regulations.

F. *Power to appoint external advisors*: The Investment Manager shall have the power to use the services of external advisors and rely on the information provided in the due diligence process of assessing investment proposals as it deems necessary.

G. *Power to employ agents:* The Investment Manager, in consultation with the Trustee, shall have the power to employ and pay at the expense of the Trust, any agent in any jurisdiction whether attorneys, solicitors, consultants, brokers, banks, trust companies or other agents, without being responsible for the default of any agent if employed in good faith to transact any business, including without limitation, the power to appoint agents to raise funds, or do any act required to be transacted or done in the execution of the responsibilities hereof including the receipt and payment of moneys and the execution of documents.

H. *Power to appoint nominees and custodians*: The Investment Manager, in consultation with the Trustee, may appoint any custodian in order to provide custodial services, and permit any property comprised in the Trust to be and remain deposited with a custodian or with any person or persons in India or in any other jurisdiction subject to such deposit as authorized by the Trustee and permissible under applicable law.

I. *Power to oversee activities of the Project Manager*: The Investment Manager shall oversee the activities of the Project Manager with respect to the Trust and ensure that the Project Manager complies with the InvIT Regulations and the Project Implementation and Management Agreements. The Investment Manager shall obtain a compliance certificate from the Project Manager on a quarterly basis, or such other time and in the form as may be prescribed under the InvIT Regulations.

J. *Power to pay duties and taxes*: In the event of any capital gains tax, income tax, stamp duty or other duties, fees or taxes (and any interest or penalty chargeable thereon) whatsoever becoming payable in any jurisdiction in respect of the Trust or any part thereof or in respect of documents issued or executed in pursuance of the Trust Deed or the Investment Management Agreement in any circumstances whatsoever, the Investment Manager shall have the power and duty to pay all such duties, fees or taxes (and any interest or penalty chargeable thereon) as well as to create any reserves for future potential tax liability (and any such interest or penalty) out of the Trust's income. The Investment Manager may pay such duties, fees or taxes (and any such interest or penalty) on behalf of the Trust and be reimbursed for such payments out of the Trust Assets.

K. *Power to allocate and expend on behalf of the Trust:* The Investment Manager shall have the power to incur and pay Trust Expenses, which shall include, without limitation, any expenses made under any contract or applicable law, out of the Trust Assets, including any funds held by the Trust, the SPVs, the Holdco or other assets of the Trust, as applicable, in such proportion as may be determined from time to time.

L. *Power to exercise rights in respect of the* Trust Assets*:* The Investment Manager shall have the power to exercise all rights of the Trust in the Trust Assets, including voting rights, rights to appoint directors, whether pursuant to securities held by it, or otherwise, in such manner as it deems to be in the best interest of the Trust, and in accordance with the InvIT Regulations and other applicable law. The Investment Manager shall, in consultation with the Trustee, appoint the majority of the Board of Directors or the governing board of the Holdco and SPVs, as applicable.

M. *Power to take counsel's opinion*: The Investment Manager shall have the power to take the opinion of legal, tax or other counsel in any jurisdiction concerning any difference arising under the Investment Management Agreement or any matter in any way relating to the Investment Management Agreement or to its duties in connection with the Investment Management Agreement. The fees of such counsel shall be paid from the Trust Assets, including any funds held

by the Trust, the SPVs, the Holdco or other assets of the Trust, as applicable.

N. *Power to effect compromises*: The Investment Manager, in consultation with the Trustee, shall have the power to:

(i) accept any property before the time at which it is transferable or payable;

(ii) pay or allow any claim on any evidence that it thinks sufficient;

(iii) pay or allow any amounts on any evidence that it deems sufficient;

(iv) accept any security (movable or immovable) *in lieu* of any amounts payable to it;

(v) alter the dates for payment of any amounts payable to it; and

(vi) compromise, compound, abandon, submit to arbitration or otherwise pay and settle any claim or thing whatsoever relating to the Trust or the Investment Management Agreement.

O. *Power to borrow and create security*:

(i) The Investment Manager shall have the power to cause the Trust to borrow or incur indebtedness including by way of issuance of debt securities or other securities or instruments permitted under the InvIT Regulations or other applicable law for the purpose of the Trust in accordance with the Trust Documents and the InvIT Regulations.

(ii) The Investment Manager shall have the power to secure the payment of any sum of money for and on behalf of the Trust in such manner and upon such terms and conditions in all respects as its deems fit including by mortgage or pledge or charge upon all or any Trust Assets (present or future).

(iii) The Investment Manager, shall subject to applicable law, have the power to provide security, guarantee, undertakings, and other contractual comforts in relation to the indebtedness availed by any of the Trust, SPVs or Holdco, as applicable.

(iv) The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust, any Holdco and the SPVs, net of cash and cash equivalents, shall be as approved by the Unitholders from time to time in the manner set out in the Trust Documents.

P. *Power to repay debt:* The Investment Manager may cause the Trust to pay, prepay or repay any and all debt raised from any Person in accordance with the terms therein and to redeem any debt securities or other securities, obligations or instruments in accordance with the terms thereof issued to Persons in compliance with the InvIT Regulations and other applicable law.

Q. *Power to give loans*: Subject to applicable law, the Investment Manager, in consultation with the Trustee, may extend loans out of the Trust Assets to SPVs or Holdco and also subscribe to debt or convertible or exchangeable securities or other securities, obligations or instruments of a similar nature or incur any indebtedness in accordance with the provisions of the relevant Trust Documents, the InvIT Regulations and other applicable law.

R. *Power to re-invest*: Subject to the conditions laid down in any offer document and the InvIT Regulations, the Investment Manager may retain or recall for reinvestment any proceeds received by the Trust from any SPV or Holdco.

S. *Power to make rules*: The Investment Manager may make rules to give effect to and carry out the Investment Objectives, subject to the terms of the Trust Documents and applicable law. In particular, and without prejudice to the generality of such power, the Investment Manager may provide, not inconsistent with the provisions of the Trust Deed and the InvIT Regulations, for all or any of the following matters:

(i) manner of maintaining of the records and particulars of the Unitholders and other instrument-holders of the Trust;

(ii) norms of investment by the Trust in accordance with the Investment Objectives and the Investment Strategy and in accordance with the powers and authorities of the Investment Manager as set out herein;

(iii) matters relating to entrustment/ depositor handing over of any securities or SPVs or Holdco of the Trust to custodians and the procedure relating to the holding thereof by the custodian;

(iv) such other administrative, procedural or other matters relating to the administration or management of the affairs of the Trust, which are not required to be included or provided for in the Trust Deed and not inconsistent with the provisions contained in the Investment Management Agreement;

(v) procedure for voting by Unitholders in a meeting, through postal ballot, proxy or otherwise; and

(vi) procedure for summoning and conducting meetings of Unitholders.

T. *Power to appoint intermediaries*:

(i) The Investment Manager shall, in consultation with the Trustee, appoint the Valuer, Auditor, registrar and transfer agent, merchant bankers, credit rating agencies and any other intermediaries or service providers or agents, as may be applicable, with respect to the activities in relation to the Trust in accordance with the provisions of the InvIT Regulations.

(ii) The Investment Manager shall, in consultation with the Trustee, appoint an Auditor for a period of not more than five consecutive years, or such other period as may be specified in the InvIT Regulations, provided that an Auditor who is not an individual may be reappointed subject to and in accordance with the provisions of the InvIT Regulations.

(iii) The Investment Manager shall determine the remuneration of the Auditor in consultation with the Trustee. In the event the Investment Manager is required to take any approval of the Unitholders for approval of remuneration of the Auditor or appointment of the Auditor, such approval of the Unitholders shall be obtained in accordance with the requirements specified in the InvIT Regulations and the Trust Documents.

(iv) The Investment Manager shall have the power to determine the remuneration of the Valuer in consultation with the Trustee and the Trustee shall ensure that the remuneration of the Valuer is not linked to or based on the value of the assets being valued.

(v) The Investment Manager shall ensure that all activities of the intermediaries, agents or service providers appointment by the Investment Manager are in accordance with the InvIT Regulations and the guidelines and circulars issued thereunder, as applicable.

U. *Power to restrict right to inspect:* Subject to applicable law, no Unitholder shall be entitled to inspect or examine the Trust's premises or properties without the permission of the Investment Manager. Further, no Unitholder shall be entitled to require discovery of any information with respect to any detail of the Trust's activities or any matter which may relate to the conduct of the business of the Trust and which information may, in the opinion of the Trustee and the Investment Manager adversely affect the interest of other Unitholders.

V. *Power to redeem Units and return capital*: Subject to applicable law, the Investment Manager shall have the power to redeem the Units of the Trust and return capital, from time to time, in accordance with the InvIT Regulations.

W. *Power to buy back Units*: Subject to applicable law, the Investment Manager, on behalf of the Trust, shall have the power to buy back Units from the Unitholders.

X. *Power to insure property:* The Investment Manager shall have the power to obtain insurance policies for the Trust or the SPVs or Holdco against any loss or damage from any peril, any assets and property forming part of the Trust Assets for any amount, and to pay the premiums out of the Trust Assets.

Y. *Power to open and operate bank accounts and demat accounts:* The Investment Manager shall have the power to open and operate one or more bank accounts and demat accounts for purposes of the Trust, including authorizing the change of signatories of the bank accounts or demat accounts.

Z. *Power to execute documents:*

(i) The Investment Manager shall have the power to enter into all such negotiations and contracts, to appoint (or terminate the appointment of) any Person, entity or intermediary, and, to execute and do all such acts, deeds and things for or on behalf of or in the name of the Trust as the Investment Manager may consider expedient for or in relation to any of the matters or otherwise for the purposes of the Trust.

(ii) The Investment Manager shall have the power to sign, seal, execute, deliver, register and/or terminate, according to applicable law, all deeds, documents, and assurances in respect of the Trust.

(iii) The Investment Manager shall have the power to negotiate, sign, seal, execute, deliver and/or terminate the Trust Documents, including but not limited to any share purchase agreement, share subscription agreement, services agreement, deed of right of first offer, leave and license agreement, rent agreement, loan documentation, placement memorandum, final placement memorandum, information memorandum, issue agreement, underwriting agreement or any other deed, agreement or document in connection with the Trust, including any amendments, supplements or modifications thereto.

AA. *Reports to be filed by the Trust:* The Investment Manager shall have the power to file such reports as may be required by the SEBI or any other Governmental Authority or as required under applicable law in relation to the activities carried on by the Trust.

BB. *Other matters authorized by the Unitholders*: The Investment Manager shall have the power to take up with SEBI or with the Stock Exchanges as applicable, any matter which has been approved in any meeting of Unitholders post the Initial Offer by the Trust, if the matter requires such action.

CC. *Other powers*: Without prejudice to any other provisions of the Investment Management Agreement, the Investment Manager shall also have the following powers and authorities:

(i) initiate, prosecute and/or defend any action or other proceedings in any court of law or through arbitration or in any other manner for recovery of debts or sums of money, right, title or interest, property, claim, matter or thing whatsoever now or hereafter to become due or payable or in any way belonging to the Trust by any means or on any account whatsoever in respect of and relating to the investments made by the Trust or Investment Manager (on behalf of the Trust) or to discontinue or settle such actions or proceedings or suits as the Investment Manager may in its discretion deem fit;

(ii) commence, institute, conduct, defend or abandon any action or legal proceedings for the purposes of the Trust and have for such purposes, powers to sign and verify all written statements, petitions, appeals, declarations, revisions and applications and have power to refer any claim to arbitration and to perform, observe and challenge the awards;

(iii) appear in and defend or compromise any action or other proceedings now or hereafter to be instituted, commenced or prosecuted against or relating to the Trust in any court of law and if necessary through arbitration and to refuse and resist payment of any sum or sums or money or compliance with or fulfilment of any claim or demand or otherwise as the Investment Manager shall deem fit;

(iv) to make and give receipts, releases and other discharges for moneys payable to or by the Trust and for the claims and demands of or against the Trust;

(v) pay out of the income of the Trust after deducting all expenses, the income and other Distributions in accordance with the InvIT Regulations;

(vi) to issue statement of accounts or Unit certificates (if requested) to the Unitholders on behalf of the Trustee in accordance with applicable law;

(vii) to take into its custody or control the Trust Assets and hold such Trust Assets for the benefit of the Unitholders in accordance with the Trust Deed, the Investment Management Agreement and the InvIT Regulations;

(viii) ensure adequate and timely redressal of all unit holders' grievances pertaining to activities of the Trust; and

(ix) generally to exercise all such powers as it may be required to exercise under the InvIT Regulations or any other applicable law for the time being in force and do all such matters and things as may promote the Investment Objectives or as may be incidental to or consequential upon the discharge of its functions and the exercise and enforcement of all or any of the powers and rights under the Investment Management Agreement and the InvIT Regulations or any other applicable law.

DD. *Power to provide indemnity*: The Investment Manager shall have the power to enter into any indemnification obligation under contract or applicable law on behalf of the Trust. The Investment Manager shall have the power to pay such obligation out of the Trust Assets as a Trust Expense.

EE. *Power to delegate:* The Investment Manager may from time to time, in the interests of administrative and operational convenience, delegate to any duly qualified committee or Person, any powers and duties including management of the Trust Assets vested in it under the Investment Management Agreement, provided, however, that the Investment Manager shall remain responsible and liable for all the acts of commission or omission of such Persons. Any action taken by such committee or Person in respect of the Trust Assets shall be construed as an act done by the Investment Manager.

2. *Duties of the Investment Manager*

The Investment Manager shall perform its duties as required under the Investment Management Agreement in accordance with the InvIT Regulations, including but not limited to:

A. *Experienced Team:*

(i) The Investment Manager shall establish and maintain a dedicated, specific team of its employees ("**Team**"). The Team shall comprise of adequate number of members, with relevant experience as required under applicable law.

(ii) The Investment Manager shall ensure that it has adequate infrastructure and sufficient key personnel with adequate qualification to undertake management of the Trust at all times. In the event of any attrition of key personnel who are required to be part of the Team in accordance with the InvIT Regulations, the Investment Manager shall ensure that a new employee, who fulfils the requirement under the InvIT Regulations, joins the Team before the previous employee departs in order to ensure the composition required under the InvIT Regulations. The Investment Manager shall have the primary obligation to find and replace any of the key members of the Team. It being clarified that the Investment Manager will exercise the rights and perform the duties through the Team as per the terms of the Investment Management Agreement and for the purpose of the Investment Management Agreement, (unless repugnant to the context) it shall be deemed that the Investment Manager is acting through the Team.

B. *Interest of the Unitholders:* The Investment Manager shall use best endeavours to carry on and

conduct its business in a proper and efficient manner in the best interest of the Unitholders. Further, it shall at all times exercise due diligence in carrying out its duties and protecting the interest of the Unitholders.

C. *Duty to promote and manage the Trust:* The Investment Manager shall coordinate with the Trustee, as may be necessary, with respect to the operations of the Trust.

D. *Duty to ensure valuation:* The Investment Manager shall ensure that the valuation of the Trust Assets is done by the Valuer in accordance with the InvIT Regulations.

E. *Insurance:* The Investment Manager shall arrange for adequate insurance coverage for the Trust Assets in accordance with the InvIT Regulations. If any of the Trust Assets are held by an SPV or Holdco, the Investment Manager shall ensure that such assets are adequately insured.

F. *Accounts, audit and reporting:* The Investment Manager shall maintain proper books of accounts, documents and records with respect to the Trust, in the manner set out in the Trust Deed and in accordance with applicable law. The financial year of the Trust shall begin from the date of the Trust Deed and shall end on the immediately succeeding March 31 and on the anniversary thereof in each succeeding year unless otherwise determined. The Investment Manager shall ensure that audit of the accounts of the Trust by the Auditor is undertaken in accordance with the InvIT Regulations and such report is submitted to the Stock Exchanges within the time stipulated by Stock Exchange, if any. Notwithstanding the above, the Investment Manager shall ensure that the audit of accounts of the Trust by the Auditor is done not less than once in a year and such report is submitted to the Stock Exchanges within sixty (60) days of the end of the Financial Year.

G. *Distributions:* The Investment Manager shall make Distributions to Unitholders in accordance with the InvIT Regulations, the Trust Documents, the Investment Strategy and other applicable law. Subject to the Trust Documents, applicable law and the Investment Strategy, at least such percentage of the net distributable cash flows of the SPVs and Holdco (as applicable) shall be distributed to the InvIT, as prescribed in the InvIT Regulations. The Distributions shall be made at such periods as prescribed under the InvIT Regulations.

H. *Meeting of Unitholders:* The Investment Manager shall convene meetings of the Unitholders in accordance with the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with the InvIT Regulations.

I. *Change in Control:* The Investment Manager shall notify the Trustee prior to any Change in Control of the Investment Manager to enable the Trustee to seek prior approval from the Unitholders (and the SEBI or any other Governmental Authority, if applicable) and shall ensure that no such Change in Control is given effect to, until the approval of the Unitholders (and the SEBI or any other Governmental Authority, as applicable) has been obtained, or the Investment Management Agreement is terminated and a new investment manager has been appointed in accordance with the terms hereof, or in compliance with any other requirement under the InvIT Regulations, other applicable law and the Trust Documents.

J. *Monitoring:* The Investment Manager shall, set up effective systems and procedures, as may be necessary, to effectively monitor the functioning of the Trust, including the current and projected financial position of the Trust Assets. The Investment Manager will place before its board of directors, a report on the activity and performance of the Trust in accordance with the InvIT Regulations. The Investment Manager, in consultation with the Trustee, shall designate an appropriately qualified employee to act as the compliance officer for monitoring of compliance with the InvIT Regulations and any circulars or guidelines issued thereunder and notifying the SEBI in case of non-compliance. Further, the Investment Manager shall ensure that the activities of the Trust are in compliance with the laws of the state or local body, including local building laws.

K. *Maintenance of records:* The Investment Manager shall maintain records pertaining to the activity of the Trust in terms of Regulation 26 of the InvIT Regulations.

L. *Duty in relation to Investment Objectives:* The Investment Manager shall manage the Trust in

accordance with applicable law (including the InvIT Regulations) and the Trust Documents and the Investment Strategy, and shall ensure that the investments made by the Trust are in accordance with the investment conditions specified in the applicable provisions of the InvIT Regulations and in accordance with the Investment Strategy.

M. *Transactions between the Project Manager and its Associates:* The Investment Manager shall review the transactions carried out between the Project Manager and its Associates and where the Project Manager has advised that there may be a conflict of interest, shall obtain confirmation from a practicing chartered accountant or valuer, as applicable, that such transaction is on an arm's length basis.

N. *Unitholder grievances:* The Investment Manager shall ensure adequate and timely redressal of Unitholders' grievances pertaining to the activities of the Trust in accordance with the InvIT Regulations. The Investment Manager shall submit reports on Unitholders' grievances to the Trustee, as applicable, either quarterly or at such other intervals/times as prescribed under the InvIT Regulations.

O. *Information to Trustee, Unitholders, SEBI and other Governmental Authorities:*

(i) The Investment Manager shall provide to the SEBI, the Stock Exchanges and other Governmental Authorities, as applicable, information as may be requested or required under applicable law by the SEBI, the Stock Exchanges or other Governmental Authorities, as applicable, in relation to the activities of the Trust, including any information having bearing on the operation or performance of the Trust as well as price sensitive information. The Investment Manager shall comply with the information and notification requirements under the applicable provisions of the InvIT Regulations (including disclosure to the Trustee and the Unitholders of any information having a bearing on the operation or performance of the Trust) in accordance with the timelines specified in the InvIT Regulations.

(ii) The Investment Manager shall notify the Trustee and the Unitholders on the occurrence of any event that may have a material impact on the Investment Manager and its ability to perform its obligations under the Trust Documents, including any Change in Control of the Investment Manager.

P. *Issue and listing of Units:* The Investment Manager shall be responsible for all activities pertaining to the issue of Units including filing of the placement memorandum or final placement memorandum with the SEBI and dealing with all matters relating to the allotment of Units to Unitholders. The Investment Manager shall also be responsible for obtaining in-principle approval and final listing and trading approvals from the Stock Exchanges. The Investment Manager shall ensure that disclosures in the placement memorandum are material, true, correct and adequate, and in accordance with the InvIT Regulations, guidelines or circulars issued thereunder and applicable law. The Trust may list its Units on one or more Stock Exchanges subject to compliance with the conditions specified under the InvIT Regulations and directions issued by the SEBI or the Stock Exchanges, as applicable.

Q. *Delisting of Units and winding up of the Trust:* In case of occurrence of any event specified under the InvIT Regulations, the Investment Manager shall apply for delisting of the Units to SEBI and the designated stock exchanges, and carry out all necessary actions as required under applicable law.

R. *Compliance with the InvIT Regulations:* The Investment Manager shall fulfil its obligations under the applicable provisions of the InvIT Regulations and the Trust Documents.

S. *Submission to the Trustee: The Investment Manager shall submit to the Trustee:*

(i) quarterly reports on the activities of the Trust including receipts for all funds received by it and for all payments made, status of compliance with the InvIT Regulations, specifically Regulations 18, 19 and 20 of the InvIT Regulations, performance report, status of development of under-construction projects, within time period specified under the InvIT Regulations;

(ii) valuation reports as required under the InvIT Regulations within the time period specified under the InvIT Regulations;

(iii) decision to acquire or sell or develop or bid for any Trust asset or Project or expand existing completed Trust Assets or Projects along with rationale for the same;

(iv) details of any action which requires approval from the Unitholders as may be required under the InvIT Regulations;

(v) details of any other material fact including change in its directors, change in its shareholding, any legal proceedings that may have a significant bearing on the activity of the Trust, within the time period specified under the InvIT Regulations; and

(vi) such other information, documents and records in relation to the activities of the Trust as may be reasonably necessary for the Trustee to carry out its responsibilities under the Trust Deed or the InvIT Regulations.

T. *Submission of annual and half-yearly reports:* The Investment Manager shall, within the time period prescribed under the InvIT Regulations, submit annual reports and half yearly reports to all the Unitholders electronically or provide physical copies and, if applicable, to the Stock Exchanges.

U. *Segregation of assets and liabilities:* The assets and liabilities of the Trust shall at all times be segregated from the assets and liabilities of the Investment Manager and the assets and liabilities of any other trusts managed by the Investment Manager. The assets held under the Trust shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any person claiming under any other fund or trust administered or managed by the Investment Manager.

V. *Administration of claims:* The Investment Manager shall be responsible for monitoring, administering and giving effect to all claims and adjustments arising out of the share purchase agreements executed in respect of the acquisition of Trust Assets and any payments required to be made by or to the Trust.

W. *Other Duties:* Without prejudice to any other provision of the Investment Management Agreement, the Investment Manager shall also have the following duties and obligations:

(i) ensure that computation of the net asset value of the Trust based on the valuation done by the Valuer in accordance with the InvIT Regulations shall be disclosed to the Stock Exchanges not later than fifteen days from the date of valuation;

(ii) maintain regular interaction with the Trustee on performance of the Trust and providing the Trustee with any information in relation to the operations of the Trust as may be required;

(iii) conducting its affairs and the affairs of the Trust in such a manner that Unitholders will not have personal liability with respect to liabilities or obligations of the Trust;

(iv) collecting all dividends, fees, property and other payments due and receivable by the Trust in the manner set out in the Trust Deed and in terms of the InvIT Regulations;

(v) ensuring that no commission or rebate or any other remuneration, arising out of transaction pertaining to the Trust is collected by the Investment Manager or its Associates, other than as specified in the placement memorandum or any other document as may be specified by SEBI for the purpose of the issue of the units of the Trust;

(vi) ensuring that the Trust Assets have proper and legal marketable titles and that all the material contracts entered into or on behalf of the Trust or the Trust Assets or the SPVs, or the Holdco are legal, valid, binding and enforceable by and on behalf of the Trust or the Trust Assets or the SPVs or the Holdco, as applicable;

(vii) keeping the Unitholders informed and updated on investment activities of the Trust in accordance with the Trust Documents;

(viii) to ensure that any possible conflict of interest involving its role as an Investment Manager is reported to the Trustee and the Unitholders;

(ix) to ensure that disclosures and reporting to the Unitholders, SEBI, the Trustee and the Stock Exchanges are in accordance with applicable law and InvIT Regulations;

(x) to immediately notify the Trustee and the Unitholders of any act which is detrimental to the interest of the Unitholders;

(xi) to inform the Trustee and Unitholders in writing about any change in the representations and warranties provided by the Investment Manager under the Investment Management Agreement or any of the Trust Documents;

(xii) to provide to the Trustee such assistance as may be required by the Trustee in fulfilling its obligations towards the Truste and the Unitholders, under applicable law, by any Governmental Authority or under the Trust Documents;

(xiii) providing to the SEBI, the Trustee and if applicable, the Stock Exchanges, such information as may be sought by the SEBI, the Trustee or the Stock Exchanges in relation to the activities of the Trust;

(xiv) providing, in parallel, to the Unitholders a copy of all reports and submissions made under (xiii) above as required under applicable law; and

(xv) taking any other actions incidental to any of the foregoing or necessary or convenient in order to fully effect or evidence any action or transaction contemplated under the Investment Management Agreement.

(xvi) to take all actions and compliances, in relation to the right of eligible unitholder(s) to nominate unitholder nominee director(s) on the board of directors of the Investment Manager, as prescribed under the InvIT Regulations.

X. The Investment Manager shall also perform any other duties specified in the InvIT Regulations and the Trust Documents.

Notwithstanding anything contained in the Investment Management Agreement, nothing contained in the Investment Management Agreement shall be construed to limit or restrict the performance of any of the duties or obligations of the Investment Manager or the Trustee contained in the InvIT Regulations.

3. *Board Nomination Rights of eligible unitholder(s):* Eligible unitholder(s) shall have the right to nominate unitholder nominee director(s) on the board of directors of the Investment Manager from time to time, in accordance with and in the manner prescribed under the InvIT Regulations.

4. *Liabilities of the Investment Manager*

The liabilities of the Investment Manager in terms of the Investment Management Agreement are as follows:

A. The Investment Manager shall not be liable in respect of any action taken or damage suffered by it as a result of reliance upon any notice, resolution, direction, consent, certificate, affidavit, statement, certificate of stock, plan of reorganization or, without being limited in any way by the foregoing, other paper or document reasonably believed by it to be genuine and to have been passed, sealed or signed by appropriate authorities or entities; provided that the Investment Manager shall not be so exculpated in the event of a breach of the obligations under the Trust Documents or a violation of the InvIT Regulations and/or applicable law on the part of the Investment Manager.

B. The Investment Manager shall not be liable to the Unitholders for doing or failing to do any act or thing which, by reason of any provision of any present or future applicable law, or of any decree, order or judgment of any court, or by reason of any request announcement or similar action (whether of binding legal effect or not) which may be taken or made by any Governmental Authority, it shall be directed or requested to do or perform or to forbear from doing or performing. If for any reason it becomes impossible or impracticable to carry out any of the provisions of the Investment Management Agreement, the Investment Manager shall not be under any liability therefore or thereby. However, it shall duly inform the Trustee and the Unitholders of such event.

C. If the Investment Manager is required by the InvIT Regulations or any other applicable law to provide information with respect to the Trust, the Unitholders, the Trust Assets (including any potential investments) and income therefrom, the Investment Manager shall not be liable to the Unitholders or any of them or to any other party as a result of such compliance or in connection with such compliance.

D. The Investment Manager shall not incur any liability for doing or (as the case may be) failing to do any act or thing which may result in a loss to a Unitholder (by reason of any depletion in the value of the Trust Assets or otherwise), except in the event that such loss is a result of fraud or gross negligence or wilful misconduct, breach of the obligations under the Trust Documents or a violation of the InvIT Regulations and/or applicable law on the part of the Investment Manager as determined by appropriate dispute resolution mechanism.

E. The Investment Manager shall not be liable to the Trust or the Trustee or any Unitholder or any third party in respect of any investments made or investment decisions taken in respect of the Trust in the manner set out in the Investment Management Agreement including for the non-recoverability or non-realisability of any of the Trust Assets, other than for fraud, gross negligence or wilful misconduct on part of the Investment Manager as finally determined by a court of competent jurisdiction/arbitral award.

F. If the Distributions are not made within the period prescribed in the InvIT Regulations, the Investment Manager shall be liable to pay interest to the Unitholders at the rate as may be prescribed in the InvIT Regulations until such Distributions are made and such interest shall not be recovered in the form of fees or any other form payable to the Investment Manager by the Trust.

G. If the Investment Manager fails to allot, or list the Units, or refund the money within the time prescribed in the InvIT Regulations, as applicable, the Investment Manager shall be liable to pay interest to Unitholders at the rate as may be prescribed under the InvIT Regulations until such time as the allotment/listing/refund and such interest shall not be recovered in the form of fees or any other form payable to the Investment Manager by the Trust.

H. The Investment Manager shall not be liable to any Unitholder for the authenticity of any signature or of any seal affixed to any endorsement on any certificate or to any transfer or form of application, endorsement or other document affecting the title to or transmission of Units/interests in the Trust or of any investments of the Trust or be in any way liable for any forged or unauthorised signature or seal affixed to such endorsement, transfer or other document or for acting upon or giving effect to any such forged or unauthorised signature or seal. The Investment Manager shall be bound to require that the signature of any Unitholder to any document required to be signed by such Unitholder, under or in connection with these presents shall be verified to its reasonable satisfaction.

I. The Investment Manager shall not be liable to account to any Unitholder or otherwise for any payment made or suffered by the Investment Manager in good faith to any duly empowered revenue authority for taxes or other charges in any way arising out of or relating to any transactions of whatsoever nature under these presents, notwithstanding that any such payment ought not to be or need not have been made or suffered.

5. *Indemnity*

A. In addition to the fees, payments and expense reimbursements herein described, the Trust acting through the Trustee shall, from the Trust Assets, indemnify and hold harmless the Investment

Manager and its respective officers, directors, shareholders, partners, members, employees, advisors and agents (the "**Indemnified Parties**"), from and against any claims, losses, costs, damages, liabilities, suits, proceedings and expenses, including legal fees (the "**Losses**") suffered or incurred by any of the Indemnified Parties by reason of their activities on behalf of the Trust, unless such Losses have resulted from fraud, gross negligence, wilful misconduct of the Indemnified Parties as finally determined by a court of competent jurisdiction/arbitral award. The aggregate maximum liability in each financial year, shall be limited to the aggregate fees paid to the Investment Manager for the immediately preceding one financial year, in accordance with the terms under the Investment Management Agreement, except for losses arising from fraud, gross negligence, wilful misconduct of the Indemnified Parties as finally determined by a court of competent jurisdiction.

B. The indemnification rights of the Parties under the Investment Management Agreement are without prejudice, independent of and in addition to, such other rights and remedies that they may have under Applicable Law or in equity or otherwise.

6. *Termination*

A. The Investment Management Agreement shall become effective upon its execution by the Parties and shall terminate upon dissolution of the Trust, unless otherwise terminated in accordance with the Investment Management Agreement.

B. The Trustee may terminate the Investment Management Agreement by giving 30 (thirty) days written notice to the Investment Manager, in the event that:

(i) the Investment Manager goes into liquidation (except a voluntary liquidation for the purpose of reconstruction or amalgamation) or if a receiver is appointed to all or a substantial portion of the assets of the Investment Manager or for any other reason it ceases to be entitled to provide and perform the services herein provided for in accordance with applicable law; or

(ii) the Unitholders pass a resolution for the removal of the Investment Manager in accordance with the InvIT Regulations.

C. Actions pursuant to Termination

(i) Upon removal of the Investment Manager, the Trustee shall appoint the new investment manager within three months from the date of termination of the earlier Agreement. Until such appointment is made, the Investment Manager shall continue to act as such at the discretion of the Trustee.

(ii) Upon removal or replacement of the Investment Manager, the Investment Manager shall transfer custody of the Trust to the Trustee and give the Trustee all books of account, correspondence, documents and records relating to the Trust which the Investment Manager has in its possession.

(iii) Every new investment manager appointed pursuant to the provisions of the Investment Management Agreement shall have the powers, authorities and discretion, and shall in all respects act and be liable as if originally appointed as an investment manager under the Investment Management Agreement.

(iv) Notwithstanding anything contained herein, the Investment Manager shall continue to be liable for all its acts of omissions and commissions prior to such termination in accordance with the terms and conditions set forth in the Investment Management Agreement.

(v) The Trustee shall ensure that the new investment manager shall stand substituted as a party in all the documents (to the extent applicable) to which the Investment Manager was a party.

D. The Project Manager

Elsamex Maintenance Services Limited ("EMSL")

History and Certain Corporate Matters

EMSL is the Project Manager of the Trust. The Project Manager is a company limited by shares incorporated on September 12, 2013 having CIN U45201MH2013FLC285659. The Project Manager's registered office is situated at the IL&FS Financial Centre, Plot No. C-22, G Block, Bandra Kurla Complex, Bandra (E), Mumbai – 400051.

Background of EMSL

EMSL specializes in road operations and maintenance and has expertise in maintenance of roads, highways, bridges, tunnels and other structures, toll management and collection and route operations.

EMSL is a pioneer in the operation and maintenance of highways, drawing its roots back to 2008 under the current ownership. Over the past decade, EMSL has been involved in various services related to the infrastructure space with close focus on surface transportation, specifically roads. EMSL was incorporated to solely focus on operations and maintenance activities of national highways, state highways and city roads and over the years it has developed expertise in other associated areas like pavement rehabilitation and improvement (micro-surfacing, cold in place recycling, regular bituminous overlays), engineering and construction, user fee collection etc. Beside these areas, EMSL has also been actively providing project management and supervision services to its client for monitoring and execution of major maintenance works across its assets.

Key Terms of the Project Implementation and Management Agreements ("PIMA")

The Project Manager has entered into PIMAs for MBEL, SBHL, TRDCL, HREL, PSRDCL and BAEL, in terms of the InvIT Regulations. The key terms of each of the PIMA are, provided below:

1. *Scope of Services*

A. The Project Manager agrees to undertake the following works, either directly or through sub contractors in relation to the project (the "**Works**"):

   (i) any and all activities required to be carried out by the Project Manager under the InvIT Regulations and other applicable law;
   (ii) any and all activities required to be performed by it in terms of the PIMA and the O&M agreement, and the Concession Agreement (collectively referred to as, "**Project Agreements**"), as applicable; and
   (iii) supervise and monitor activities required to be performed in terms of the Project Agreements.

B. The Project Manager acknowledges that the identified SPV shall be fully reliant on the Project Manager to undertake all Works and ensure all compliances that the identified SPV is required to perform or comply with under the Project Agreements.

C. The Project Manager acknowledges and confirms that it has (i) reviewed and covenants to ensure compliance with the Project Agreements (as amended from time to time), including the terms and conditions, representations and warranties of the identified SPV, as applicable, and (ii) shall ensure that no breach or violation of the Project Agreements, the InvIT Regulations, or other applicable law occurs which relates, directly or indirectly, to the performance of its role as the Project Manager.

D. The Project Manager may engage duly qualified third-party service providers including but not limited to architects, surveyors and technical consultants for undertaking the Works (such service providers, the "**Sub-Contractors**"). The Project Manager shall be solely responsible for the actions and/or omissions of its employees and the Sub-Contractors.

2. *Obligations of the Project Manager*

The obligations of the Project Manager in terms of the PIMA are as follows:

A. The Project Manager shall develop, train, and maintain a service team for the purpose of undertaking the Works ("**Team**"). The parties agree that the size and the composition of the Team may be changed from time to time according to the requirement at such time as may be mutually agreed in writing between the parties. It is clarified that the Project Manager shall be responsible to the Trustee and Investment Manager for the performance of the Team and that all the employees, contractors, Sub-Contractors, consultants, agents, professionals and workmen (including contract labour) constituting the Team at any time shall not be considered to be the employees, contractors, Sub-Contractors, consultants, agents, professionals and workmen (including contract labour) of the Trustee or Investment Manager. Accordingly, the Project Manager shall at all times be solely responsible for the payment of compensation to the Team, including without limitation, all employment related compensation and benefits and any other payments which are required to be paid in accordance with the Project Agreements (as applicable) and under applicable law.

B. The Project Manager shall at all times undertake the Works, strictly in accordance with the PIMA and in carrying out its duties under the PIMA and in undertaking the Works, the Project Manager shall:

(i) at all times act in good faith;
(ii) provide continuous access to all data and information pertaining to the project, to the Trustee and the Investment Manager at all times;
(iii) exercise the level of skill, care, attention and diligence as may reasonably be expected of an experienced, professional, prudent and competent third party skilled in providing project management services such as undertaking the Works in relation to the project;
(iv) at all times act within the parameters laid down in the Project Agreements; and
(v) ensure that all Works are undertaken and other obligations under the PIMA are performed in a manner that does not infringe any applicable law.

C. The Project Manager shall undertake, maintenance, operation and management of the project including arrangement for the appropriate maintenance and appointment and supervision of agents, if any, as may be necessary for discharge of its duties under the terms of the PIMA, the Project Agreements and under the InvIT Regulations.

D. The Project Manager shall provide compliance certificate(s), as may be specified, on a quarterly basis to the Investment Manager and the Trustee in accordance with the InvIT Regulations, in the form prescribed by SEBI, if any.

E. The Project Manager shall inform and provide the Investment Manager details of transactions between the Project Manager and its associate(s), and disclose any conflict of interest in such cases to the Investment Manager, in accordance with the InvIT Regulations. Where the Project Manager has advised that there may be a conflict of interest, it shall obtain confirmation from the practicing chartered accountant or the valuer, as applicable, that such transaction is on arm's length basis.

F. The Project Manager shall intimate the Trustee prior to any change in the management or control of the Project Manager to enable the Trustee to seek approval from the relevant authority in accordance with the concession agreement, as applicable.

G. The Project Manager shall provide to the Trustee and the Investment Manager, all information that may be necessary for each of them to perform their functions under applicable law and as may be required for making submissions to the SEBI or any other governmental authority.

H. The duties of Project Manager shall also include the following, but not limited to :

(i) supervision of the revenue streams from the project;
(ii) supervision of all maintenance, including major maintenance activities of the project;
(iii) exercise diligence and vigilance in carrying out its duties and protecting the identified SPV and the project;
(iv) keep the Investment Manager informed on all matters which have a material bearing on the operations of the identified SPV and the project;

(v) liaise with governmental authorities in respect of its obligations under the PIMA and the Project Agreements, as applicable;
(vi) take appropriate measures to mitigate the risks which may be encountered by the Trust in respect of the identified SPV and the project;
(vii) keep proper records for actions taken in respect of the identified SPV and the project; and
(viii) comply with the instructions of the Investment Manager and the requirements under the InvIT Regulations.

I. In case of any inconsistency or discrepancy between the PIMA and the Project Agreements, the Project Manager shall bring the same to the notice of the Trustee. The Trustee, in consultation with the Investment Manager, shall issue instructions resolving the inconsistency. The Project Manager shall be bound to comply with the instructions of the Trustee.

J. During the term of the PIMA, in the event the representations provided by the Project Manager under the PIMA, become untrue or incorrect or incomplete in any respect, the Project Manager shall, within a reasonable time, inform the Trustee and Investment Manager of such event.

3. *Indemnity*

A. In addition to the fees, payments and expense reimbursements described in the PIMA, the Project Manager hereby agrees to indemnify and hold harmless the identified SPV, Trustee, on behalf of the Trust, the Investment Manager and their respective directors, employees, members, advisors, officers, agents and the Trust (the "**Indemnified Parties**"), from and against any direct claims, losses, costs, damages, liabilities, suits, proceedings and expenses, including legal fees, incurred or suffered by any of the Indemnified Parties by reason of any breach of the PIMA or the Project Agreements or violation of the InvIT Regulations by the Project Manager or its representatives or agents or any fraud, negligence or wilful misconduct by the Project Manager or its representatives or agents. The aggregate maximum liability in each financial year, shall be limited to the aggregate fees paid to the Project Manager for the immediately preceding one financial year, in accordance with the terms under the PIMA and such fees shall not include any fees paid to the Project Manager in any other capacity, except for losses arising from fraud, gross negligence or wilful misconduct.

B. Notwithstanding anything contained hereinabove, the Project Manager shall not be liable to the identified SPV, the Investment Manager or the Trustee acting on behalf of the Trust, in respect of any loss, damage, extra expense or cost suffered by the identified SPV which is not attributable to the action or inaction of the Project Manager, or to the failure of the Project Manager or any of its agents to meet the obligations as provided in the PIMA, the Project Agreements or the InvIT Regulations.

C. The indemnification rights of the parties under the PIMA are without prejudice, independent of and in addition to, such other rights and remedies that they may have under applicable law or in equity or otherwise. In no event shall any party be liable to an Indemnified Party for any punitive, incidental, consequential, special or indirect damages, including loss of future revenue or income, or loss of business reputation or opportunity relating to the breach or alleged breach of the PIMA.

4. *Termination*

A. PIMA shall remain effective, unless terminated by the parties in accordance with the provisions under the PIMA or extended by mutual consent expressed in writing by the parties, for the period that the Project Agreements are in force ("**Validity Period**").

B. The Project Manager shall be bound by the terms of the PIMA, for a minimum lock-in period of three years from the effective date ("**Lock-in Period**"). Upon the expiration of the Lock-in Period, the Project Manager may terminate the PIMA by delivery of a written notice of 90 days to the other parties to the PIMA.

C. Notwithstanding the above, prior to the expiry of its Validity Period, PIMA, may be terminated:

(i) by the Investment Manager after consultation with the Trustee by delivery of a written notice to the Project Manager at any time; or

(ii) by any party by delivery of a written notice to the other party upon the bankruptcy of such other party or if winding up or liquidation proceedings are commenced against such other party (and such proceedings persist for a period of more than three months).

D. In case of removal or termination of the Project Manager, the Trustee upon the written recommendation of the Investment Manager, shall appoint a new project manager within three months from the termination of the PIMA in terms of the InvIT Regulations, or such other period as specified under the InvIT Regulations. The Trustee may, either *suo moto* or based on the advice of the National Highway Authority of India appoint an administrator in connection with an infrastructure project on such terms and conditions as it deems fit. The Project Manager will continue to act as such at the discretion of Trustee until such time as a new project manager is appointed. The new project manager shall stand substituted as a party in all agreements and any other documents executed in relation to the identified SPV and the project to which the Project Manager was a party. The Project Manager shall continue to be liable for all its acts and omissions and commissions for the period during which it served as the project manager, notwithstanding its termination.

E. The termination of the PIMA shall not affect the rights and obligations of the parties accrued prior to such termination. The provisions in relation to the definitions and interpretation; termination; notices; governing law and disputes; indemnity; and confidentiality, in the PIMA shall survive any such termination of the PIMA.

F. Notwithstanding anything contained hereinabove, the termination of any of the Project Agreements will not result in the termination of the PIMA, and it shall continue to be in force in respect of the other Project Agreements that are not terminated.

OTHER PARTIES INVOLVED IN THE TRUST

The Auditors

Background and terms of appointment

The Investment Manager, in consultation with the Trustee, has appointed KKC & Associates LLP (*formerly known as Khimji Kunverji and Co. LLP*), Chartered Accountants (firm registration no. 105146W/W-100621) who will hold office from the date of conclusion of the 1st annual meeting till the conclusion of the 6th annual meeting of the Trust. The Auditors have audited the standalone and consolidated financial statements of the Trust for the six months period ended September 30, 2024 and the year ended March 31, 2024, year ended March 31, 2023 and year ended March 31, 2022 and have examined the Projections of Revenue from Operations and Cash Flow from Operating Activities, and their reports in relation to such Audited Special Purpose Combined Financial Statements dated January 4, 2025 and Projections of Revenue from Operations and Cash Flow from Operating Activities dated January 4, 2025 have been included in this Placement Memorandum.

Functions, Duties and Responsibilities of the Auditors

The functions, duties and responsibilities of the Auditors will be in accordance with the InvIT Regulations. Presently, in terms of the InvIT Regulations, the Auditors are required to comply with the following conditions at all times:

(i) the Auditors shall conduct audit of the accounts of the Trust including both, the standalone and the consolidated financial statements, and draft the audit report based on the accounts examined after taking into account the relevant accounting and auditing standards, as may be specified by the SEBI, and shall comply with the requirements of the InvIT Regulations;
(ii) the Auditors shall, to the best of its information and knowledge, ensure that the accounts and financial statements give a true and fair view of the state of the affairs of the Trust, including profit or loss and cash flow for the period and such other matters as may be specified by SEBI;
(iii) the Auditors shall have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust;
(iv) the Auditors shall have a right to require such information and explanation pertaining to activities of the Trust as it may consider necessary for the performance of its duties as auditors from the employees of the Trust or Holdco or parties to the Trust or holding company or the special purpose vehicle(s)or any other person in possession of such information; and
(v) the Auditors shall undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust as per the applicable Indian Accounting Standards (Ind AS) and any addendum thereto as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, in such manner as may be specified by the SEBI.

The Valuer

Background and terms of appointment

The Investment Manager, in consultation with the Trustee, has appointed RBSA Valuation Advisors LLP, in terms of the engagement letter dated May 23, 2022 for conducting the valuation of the Trust starting from FY 2021-22, as the valuer of the Trust. In accordance with the InvIT Regulations, the Valuer has undertaken a full valuation of the Project SPVs, and their report dated December 17, 2024 in relation to such valuation as on June 30, 2024, has been included in this Placement Memorandum.

Functions, Duties and Responsibilities of the Valuer

The functions, duties and responsibilities of the Valuer will be in accordance with the InvIT Regulations. Presently, in terms of the InvIT Regulations, the Valuer is required to comply with the following conditions at all times:

(i) the Valuer shall ensure that the valuation of the InvIT Assets is impartial, true and fair and is in accordance with Regulation 21 of the InvIT Regulations;
(ii) the Valuer shall ensure that adequate and robust internal controls to ensure the integrity of its valuation reports;
(iii) the Valuer shall ensure that it has sufficient key personnel with adequate experience and qualification to perform valuations;
(iv) the Valuer shall ensure that it has sufficient financial resources to enable it to conduct its business effectively and meet its liabilities;
(v) the Valuer and any of its employees involved in valuing of the assets of the Trust, shall not, (i) invest in Units or in the assets being valued; and (ii) sell the assets or Units held prior to being appointed as the valuer, until the time the Valuer is designated as the valuer of the Trust and not less than six months after ceasing to be valuer of the Trust;
(vi) the Valuer shall conduct valuation of the Trust's assets with transparency and fairness and shall render, at all times, high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment;
(vii) the Valuer shall act with independence, objectivity and impartiality in performing the valuation;

(viii) the Valuer shall discharge its duties towards the Trust in an efficient and competent manner, utilizing its knowledge, skills and experience in best possible way to complete given assignment;
(ix) the Valuer shall not accept remuneration, in any form, for performing a valuation of the Trust's assets from any person other than the Trust or its authorized representative;
(x) the Valuer shall before accepting any assignment from any related party of the Trust, disclose to the Trust any direct or indirect consideration which the valuer may have in respect of such assignment;
(xi) the Valuer shall disclose to the Trust any pending business transactions, contracts under negotiation and other arrangements with the investment manager or any other party whom the Trust is contracting with and any other factors that may interfere with the Valuer's ability to give an independent and professional valuation of the assets;
(xii) the Valuer shall not make false, misleading or exaggerated claims in order to secure assignments;
(xiii) the Valuer shall not provide misleading valuation, either by providing incorrect information or by withholding relevant information;
(xiv) the Valuer shall not accept an assignment which interferes with its ability to do fair valuation; and
(xv) the Valuer shall, prior to performing a valuation, acquaint itself with all laws or regulations relevant to such valuation.

Policy on Appointment of Auditor and Valuer ("Appointment Policy")

The Investment Manager has adopted a policy on the appointment of auditor of the Trust, pursuant to the resolution of the IM Board dated January 25, 2024. The key terms of the Appointment Policy are set out below:

Appointment of Auditor

(i) The Investment Manager, in consultation with the Trustee (as defined under the investment management agreement dated October 23, 2020, as amended ("**Investment Management Agreement**"), shall appoint the Auditor of the Trust, with respect to the activities in relation to the Trust, in a timely manner and in accordance with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended, including any guidelines, circulars, notifications and clarifications notified thereunder ("**InvIT Regulations**").

(ii) The Auditor, so appointed, shall be one who has subjected itself to the peer review process of the Institute of Chartered Accountants of India ("**ICAI**") and who holds a valid certificate issued by the Peer Review Board of ICAI.

(iii) The Investment Manager shall determine the remuneration of the Auditor in consultation with the Trustee.

(iv) The Investment Manager shall ensure that if the removal of the Auditor and appointment of another auditor to the Trust is taken up at a meeting of the Unitholders at the request of the Unitholders, such removal of the Auditor shall be approved by the Unitholders in accordance with the InvIT Regulations.

(v) The Investment Manager shall, in consultation with the Trustee, appoint an Auditor for a maximum period as may be specified in the InvIT Regulations, provided that an Auditor, not being an individual, may be reappointed subject to and in accordance with the provisions of the InvIT Regulations.

(vi) In the event of any casual vacancy in the position of the Auditor, whether on account of resignation or otherwise, such casual vacancy shall be filled within 30 days by the board of directors of the Investment Manager. Approval for the appointment made by the board of directors of the Investment Manager shall be obtained from the unitholders of the Trust, in the manner prescribed under Regulation 22(4)(f), within 3 months from the date of such appointment; further, the Auditor so appointed shall hold office till the conclusion of the next annual meeting of the unitholders of the Trust.

(vii) The Investment Manager shall ensure that the audit of accounts of the Trust by the Auditor is done not less than once in a year and such report is submitted to the stock exchanges within the timelines prescribed under the InvIT Regulations.

(viii) The Auditor shall comply with the following conditions at all times:

(a) the Auditor shall conduct audit of the accounts of the Trust including both, the standalone and the consolidated financial statements, and draft the audit report based on the accounts examined by him and after taking into account the relevant accounting and auditing standards, as may be specified by the Securities and Exchange Board of India ("**SEBI**"), and shall comply with the requirements of the InvIT Regulations;

(b) the Auditor shall, to the best of his information and knowledge, ensure that the accounts and financial statements give a true and fair view of the state of the affairs of the Trust, including profit or loss and cash flow for the period and such other matters as may be specified by SEBI;

(c) the Auditor shall have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust; and

(d) the Auditor shall have a right to require such information and explanation pertaining to activities of the Trust as he may consider necessary for the performance of his duties as Auditor, from the employees of Trust or holding company or parties to the Trust or holding company or the special purpose vehicle(s) or any other person in possession of such information.

(e) The auditor shall undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust as per the applicable Indian Accounting Standards (Ind AS) and any addendum thereto as defined in Rule 2(1) (a) of the Companies (Indian Accounting Standards) Rules, 2015, in such manner as may be specified by the Board.

(ix) The Investment Manager, in consultation with the Trustee, shall have the right to take all necessary steps to remove the Auditor who ceases to comply with the eligibility criteria required under the InvIT Regulations and applicable law. In case of removal of the auditor and appointment of another auditor to the Trust, approval from the Unitholders shall be required in accordance with the InvIT Regulations.

Appointment of Valuer

The Investment Manager has adopted a policy on the appointment of valuer of the Trust, pursuant to the resolution of the IM Board dated January 24, 2024. The key terms of the Appointment Policy are set out below:

(i) The Investment Manager, in consultation with Trustee (as defined under the investment management agreement dated October 23, 2020, as amended ("**Investment Management Agreement**"), shall appoint the Valuer of the Trust, with respect to the activities in relation to the Trust, in a timely manner and in accordance with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended, including any guidelines, circulars, notifications and clarifications notified thereunder ("**InvIT Regulations**").

(ii) The Investment Manager shall have the power to determine the remuneration of the Valuer in consultation with the Trustee and the Trustee shall ensure that the remuneration of the Valuer is not linked to or based on the value of the assets being valued.

(iii) The Valuer shall not be an associate of the Sponsor (as defined under the Investment Management Agreement) or the Investment Manager or Trustee.

(iv) The Valuer shall have not less than five years of experience in valuation of infrastructure assets.

(v) A Valuer shall not undertake valuation of the same project for more than four years consecutively, provided that the Valuer may be reappointed after a period of not less than two years from the date it ceases to be the Valuer of the Trust.

(vi) The Valuer shall not undertake valuation of any assets in which it has either been involved with the acquisition or disposal within the last twelve months other than such cases where the Valuer was engaged by the Trust for such acquisition or disposal.

(vii) In the event of any casual vacancy in the position of the Valuer, whether on account of resignation or otherwise, such casual vacancy shall be filled within 60 days by the board of directors of the Investment Manager. Approval for the appointment made by the board of directors of the Investment Manager shall be obtained from the unitholders of the Trust, in the manner prescribed under Regulation 22(4)(f), within 3 months from the date of such appointment; further, the Valuer so appointed shall hold office till the conclusion of the next annual meeting of the unitholders of the Trust.

(viii) The Valuer shall comply with the following conditions at all times:

(a) the Valuer shall ensure that the valuation of the Trust Assets is impartial, true and fair and is in accordance with Regulation 21 of the InvIT Regulations;

(b) the Valuer shall ensure adequate and robust internal controls to ensure the integrity of its valuation reports;

(c) the Valuer shall ensure that it has sufficient key personnel with adequate experience and qualification to perform valuations;

(d) the Valuer shall ensure that it has sufficient financial resources to enable it to conduct its business effectively and meet its liabilities;

(e) the Valuer and any of its employees involved in valuing of the assets of the Trust , shall not:

- invest in units of the Trust or in the assets being valued; and
- sell the assets or units of the Trust held prior to being appointed as the Valuer

till the time such person is designated as Valuer of the Trust and not less than six months after ceasing to be Valuer of the Trust;

(f) the Valuer shall conduct valuation of the Trust Assets with transparency and fairness and shall render, at all times, high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment;

(g) the Valuer shall act with independence, objectivity and impartiality in performing the valuation;

(h) the Valuer shall discharge its duties towards the Trust in an efficient and competent manner, utilizing its knowledge, skills and experience in best possible way to complete given assignment;

(i) the Valuer shall not accept remuneration, in any form, for performing a valuation of the Trust Assets from any person other than the Trust or its authorized representative;

(j) the Valuer shall before accepting any assignment, from any related party of the Trust, disclose to the Trust, any direct or indirect consideration which the Valuer may have in respect of such assignment;

(k) the Valuer shall disclose to the Trust, any pending business transactions, contracts under negotiation and other arrangements with the Investment Manager or any other party whom the Trust is contracting with and any other factors that may interfere with the Valuer's ability to give an independent and professional valuation of the assets, and other necessary disclosures required under the InvIT Regulations;

(l) the Valuer shall not make false, misleading or exaggerated claims in order to secure assignments;

(m) the Valuer shall not provide misleading valuation, either by providing incorrect information or by withholding relevant information;

(n) the Valuer shall not accept an assignment which interferes with its ability to do fair valuation; and

(o) the Valuer shall, prior to performing a valuation, acquaint itself with all laws or regulations relevant to such valuation.

(ix) The Investment Manager in consultation with the Trustee shall have the right to take all necessary steps to remove the Valuer who ceases to comply with the eligibility criteria required under the InvIT Regulations and applicable law. If the removal of the Valuer and appointment of another valuer to the Trust is taken up at a meeting of the Unitholders at the request of the Unitholders, such removal of the Valuer shall be approved by the Unitholders in accordance with the InvIT Regulations.

CORPORATE GOVERNANCE

The section below is a summary of the corporate governance framework in relation to the Trust, implemented by or to be implemented by the Investment Manager

1. **Investment Manager**

Board of Directors

*Composition of the Board of Directors of the Investment Manager ("**IM Board**")*

In addition to the applicable provisions of the Companies Act and LODR Regulations (if applicable), the IM Board shall adhere to the following:

Quorum

The quorum for every meeting of the Board of Directors of the investment manager shall be one-third of its total strength or three directors, whichever is higher, including at least one independent director.

Frequency of meetings

The board of directors shall meet at least four times a year, with a maximum time gap of one hundred and twenty days between any two meetings

Sitting fee

The directors on the IM Board are entitled to a sitting fee for attending the meetings of the IM Board and its committees.

Committees of the board of directors

Name of the committee	Composition	Present Members	Quorum	Frequency of meetings
Nomination and Remuneration Committee	The Nomination and Remuneration committee shall consist of at least three directors. All directors should be non-executive independent directors as members. The chairperson of the committee should be an independent director and shall not be the chairperson on the IM Board.	Jagadip Narayan Singh, Subrata Kumar Mitra and Preeti Grover	The quorum shall be one third of the total strength of the committee or two members whichever is higher including at least one independent director.	The nomination and remuneration committee shall meet periodically, as it deems fit, and in any case at least once in a year.
Audit Committee	The audit committee should comprise of minimum 3 directors as members, of which at least 2/3rd shall be independent directors. All the members shall be financially literate, having the ability to read and understand basic financial statements i.e. balance sheet, profit and loss account, and statement of cash flows and with at least one member having accounting or related financial management expertise, wherein he shall be considered to have accounting or related financial management expertise if he or she possesses experience in finance or accounting, or requisite professional certification in	Subrata Kumar Atindra Mitra, Jagadip Narayan Singh, Rajeev Uberoi and Lubna Ahmad Usman	The quorum shall be one third of the total strength of the committee or two members whichever is higher including at least two independent directors.	The audit committee shall meet at least four meetings in a financial year and not more than 120 days shall elapse between two such meetings.

Name of the committee	Composition	Present Members	Quorum	Frequency of meetings
	accounting, or any other comparable experience or background which results in the individual's financial sophistication, including being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities. The audit committee at its discretion shall invite the finance director or head of the finance function, head of internal audit and a representative of the statutory auditor and any other such executives to be present at the meetings of the committee. The Chairman should be an independent director.			
Stakeholders' Relationship Committee	The stakeholders' relationship committee should comprise of minimum 3 directors as members, of which at least 1 shall be an independent director. The chairman shall be an independent director.	Preeti Grover, Rajeev Uberoi and Lubna Ahmad Usman	The quorum shall be one third of the total strength of the committee or two members whichever is higher including at least one independent director.	The stakeholders' relationship committee shall meet periodically, as it deems fit, and in any case at least once in a year.
Risk Management Committee	The risk management committee should comprise of minimum 3 members with majority of them being members of the board of directors, of which atleast 1 member shall be independent director. Senior executives may be appointed as members of the risk management committee. The chairman of the Risk Management Committee shall be a member of the board of directors.	Rajeev Uberoi, Jagadip Narayan Singh and Lubna Ahmad Usman	The quorum shall be one third of the total strength of the committee or two members whichever is higher including at least one member of the board of directors in attendance.	The risk management committee shall meet periodically, as it deems fit, and in any case at least twice in a year with a maximum gap of 180 days between any two successive meetings.
Operations & Maintenance Committee	The operations & maintenance committee comprises of the chief executive officer and chief financial officer.	Danny Samuel and Milind Gandhi	The quorum shall be all members.	The operations committee shall convene its meeting as it deems fit.

For details of the scope of each committee, please see below.

Nomination and Remuneration Committee

Terms of reference of the Nomination and Remuneration Committee

The key terms of reference of the Nomination and Remuneration Committee include the following:

a. Formulation of the criteria for determining qualifications, positive attributes and independence of a director and recommend to the board of directors a policy relating to, the remuneration of the directors, key managerial personnel and other employees.

b. For every appointment of an independent director, the Nomination and Remuneration Committee shall evaluate the balance of skills, knowledge and experience on the board of directors and on the basis of such evaluation, prepare a description of the role and capabilities required of an independent director. The person recommended to the board of directors for appointment as an independent director shall have the capabilities identified in such description. For the purpose of identifying suitable candidates, the Nomination and Remuneration Committee may:

(i) use the services of an external agencies, if required;
(ii) consider candidates from a wide range of backgrounds, having due regard to diversity; and
(iii) consider the time commitments of the candidates.

c. Formulation of criteria for evaluation of performance of independent directors and the board of directors.

d. Devising a policy on diversity of board of directors.

e. Identifying persons who are qualified to become directors and who may be appointed in senior management in accordance with the criteria laid down and recommend to the board of directors their appointment and removal.

f. Whether to extend or continue the term of appointment of the independent director, on the basis of the report of performance evaluation of independent directors.

g. Recommend to the board of directors, all remuneration, in whatever form, payable to senior management.

Audit Committee

Terms of reference of the Audit Committee

The terms of reference of the Audit Committee include the following:

The role of the Audit Committee shall include the following:

a. Oversight of the listed entity's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.

b. Recommendation for appointment, remuneration and terms of appointment of auditors of the listed entity.

c. Approval of payment to statutory auditors for any other services rendered by the statutory auditors.

d. Reviewing, with the management, the annual financial statements and auditor's report thereon before submission to the board for approval, with particular reference to:
(i) matters required to be included in the director's responsibility statement to be included in the board of directors' report in terms of clause (c) of sub-section (3) of Section 134 of the Companies Act, 2013;
(ii) changes, if any, in accounting policies and practices and reasons for the same;
(iii) major accounting entries involving estimates based on the exercise of judgment by management;
(iv) significant adjustments made in the financial statements arising out of audit findings;
(v) compliance with listing and other legal requirements relating to financial statements;
(vi) disclosure of any related party transactions;
(vii) modified opinion(s) in the draft audit report;

e. Reviewing, with the management, the quarterly financial statements before submission to the board for approval.

f. Reviewing, with the management, the statement of uses / application of funds raised through an issue (public issue, rights issue, preferential issue, etc.), the statement of funds utilized for purposes other than those stated in the offer document / prospectus / notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public issue or rights issue or preferential issue or qualified institutions placement, and making appropriate recommendations to the board to take up steps in this matter.

g. Reviewing and monitoring the auditor's independence and performance, and effectiveness of audit process.

h. Approval or any subsequent modification of transactions of the listed entity with related parties.

i. Scrutiny of inter-corporate loans and investments.

j. Valuation of undertakings or assets of the listed entity, wherever it is necessary.

k. Evaluation of internal financial controls and risk management systems.

l. Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems.

m. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit;

n. Discussion with internal auditors of any significant findings and follow up there on.

o. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the board.

p. Discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern.

q. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors.

r. To review the functioning of the whistle blower mechanism.

s. Approval of appointment of chief financial officer after assessing the qualifications, experience and background, etc. of the candidate.

t. Reviewing the utilization of loans and/ or advances from/investment by the holding company in the subsidiary exceeding ₹1000.00 million or 10.00% of the asset size of the subsidiary, whichever is lower including existing loans / advances / investments existing as on the date of coming into force of this provision.

u. Consider and comment on rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc., on the listed entity and its shareholders.

The audit committee shall mandatorily review the following information:

a. Management discussion and analysis of financial condition and results of operations.

b. Management letters / letters of internal control weaknesses issued by the statutory auditors.

c. Internal audit reports relating to internal control weaknesses.

d. The appointment, removal and terms of remuneration of the chief internal auditor shall be subject to review by the Audit Committee.

e. Statement of deviations:
   (i) quarterly statement of deviation(s) including report of monitoring agency, if applicable, submitted to stock exchange(s) in terms of Regulation 32(1) of the LODR Regulations.
   (ii) annual statement of funds utilized for purposes other than those stated in the offer document/prospectus/notice in terms of Regulation 32(7) of the LODR Regulations.

Stakeholders' Relationship Committee

Terms of reference of the Stakeholders' Relationship Committee

The terms of reference of the Stakeholders' Relationship Committee include the following:

a. Resolving the grievances of the security holders of the listed entity including complaints related to transfer/transmission of shares, non-receipt of annual report, non-receipt of declared dividends, issue of new/duplicate certificates, general meetings etc.

b. Review of measures taken for effective exercise of voting rights by shareholders.

c. Review of adherence to the service standards adopted by the listed entity in respect of various services being rendered by the registrar and share transfer agent.

d. Review of the various measures and initiatives taken by the listed entity for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/annual reports/statutory notices by the shareholders of the Company.

Risk Management Committee

Terms of reference of the Risk Management Committee

The terms of reference of the Risk Management Committee include, amongst others, the following:

a. To formulate a detailed risk management policy which shall include:

   (i) a framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Risk Management Committee;
   (ii) measures for risk mitigation including systems and processes for internal control of identified risks; and
   (iii) business continuity plan.

b. To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company;

c. To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems;

d. To periodically review the risk management policy, at least once in two years, including by considering the changing industry dynamics and evolving complexity;

e. To keep the board of directors informed about the nature and content of its discussions, recommendations and actions to be taken;

f. The appointment, removal and terms of remuneration of the chief risk officer (if any) shall be subject to review by the Risk Management Committee.

Operations & Maintenance Committee

Terms of reference of the Operations & Maintenance Committee

The terms of reference of the Operations & Maintenance Committee include the following with respect to each of the InvIT assets:

a. Review and approval of budget for operations and maintenance ("**O&M**") and major maintenance ("**MM**") work.

b. Award of O&M contracts to contractors/ sub-contractors/ agencies.

c. Award of MM contracts to the contractors/ sub-contractors/ agencies.

d. Amendment/ enhancement/ extension of work orders awarded to the contractors/ sub-contractor/ agencies for O&M and MM.

e. Approving the main terms and conditions of the contracts/ work order to be issued to the contractors/ sub-contractors/ agencies for O&M and MM.

f. Revision in rates and work orders value for contracts given to the contractors/ sub-contractors/ agencies including reimbursement statutory payments.

g. Approve the process for inviting bids/tenders including any deviations/ exceptions as may be required on a case to case basis.

h. Reviewing of the performance of the contractors/ agencies appointed for O&M and MM contracts and initiating actions for termination of the contracts for failure to perform the works in accordance with the contract award or any other reason and such other actions as may be desired.

i. Approving of inviting bids through a public auction process for auction of tolling rights and approving the final bids so received.

j. Approving modifications/ changes/ termination of any O&M, MM and toll auction contracts already awarded.

Policies of the Trust

The Investment Manager (on behalf of itself and the Trust) has adopted certain policies for corporate governance, key terms of which are set out below.

1. **Policy on Unpublished Price Sensitive Information and Dealing in Units by Parties to the Trust ("UPSI Policy")**

The Investment Manager has adopted the UPSI Policy pursuant to a resolution of the IM Board on January 25, 2024. The purpose of the policy is to ensure that Trust comply with applicable laws, including the InvIT Regulations, as amended or supplemented or such other laws, regulations, rules or guidelines prohibiting insider trading and governing disclosure of material, unpublished price sensitive information ("**UPSI**"). The key principles of the UPSI Policy are set out below:

a. The Investment Manager shall promptly disclose to the public, all UPSI that would impact price discovery, no sooner than credible and concrete information comes into being in order to make such information generally available;

b. The compliance officer, in consultation with the senior management of the Investment Manager, shall be responsible for deciding whether a public announcement is necessary for verifying or denying rumours and then making the disclosure, in accordance with the procedure specified in the policy for disclosure of material events and information;

c. The compliance officer, in consultation with the IM Board, shall also make an appropriate and fair response to the queries on news reports and requests for verification of market rumours by regulatory authorities, in accordance with the procedure specified in the policy for disclosure of material events and information.

d. While dealing with analysts or research persons or large investors like institutions, the Investment Manager shall provide only public information. Alternatively, the information given to analysts or research persons shall be simultaneously made public at the earliest; and

e. The Investment Manager shall handle all UPSI on a "need to know" basis.

2. **Policy for Disclosure of Material Events and Information ("Materiality of Information Policy")**

The Investment Manager has adopted the Materiality of Information Policy pursuant to a resolution of the IM Board on January 25, 2024, in relation to the Trust. The Materiality of Information Policy has the key objective to ensure that the Trust complies with the disclosure obligations that are applicable to it as a privately-placed, listed InvIT and that any material information and/or event in relation to the Trust is disclosed in a timely and transparent manner and the same are accurate and do not contain any misstatements or misrepresentations. The policy also aims to protect the confidentiality of material / price sensitive information within the context of the Trust's disclosure obligations and to provide a framework that supports and fosters confidence in the quality and integrity of the information released by the Trust. The key terms of the policy are set out below:

a. The compliance officer, in consultation with the chief executive officer and the chief financial officer, is authorised to determine the materiality of an event or information and to make appropriate disclosure on a timely basis. S/he shall have the power to ask for any information or clarifications from the management in this regard.

b. The information covered by this policy shall include "information related to the Trust's business, operations, or performance, which has a significant effect on securities investment decisions" **("Material Information")** that the Trust is required to disclose in a timely and appropriate manner by applying the guidelines for assessing materiality.

c. The policy lays down qualitative and quantitative criteria for determination of materiality of events/information other than for the deemed material information which is to be disclosed without any application of the materiality criteria.

d. Pursuant to Regulation 23 of the InvIT Regulations, the Investment Manager is obligated to prepare and submit half-

yearly and annual reports, containing certain prescribed disclosures, to the Stock Exchanges and the unitholders. The provisions of the policy shall also be applicable whilst determining the materiality of any events and/or information required to be disclosed in such periodic reports.

3. **Borrowing Policy of the Trust ("Borrowing Policy")**

The Investment Manager has adopted a borrowing policy pursuant to a resolution of the Board of Directors of the Investment Manager (**"IM Board"**) dated January 25, 2024. The Investment Manager shall ensure that all funds borrowed in relation to the Trust are in compliance with the InvIT Regulations. Accordingly, the IM Board has formulated the Borrowing Policy to outline the process for borrowing monies in relation to the Trust. The key terms of the Borrowing Policy include, among other things, the following:

a. The Investment Manager shall ensure that all funds borrowed in relation to the Trust are in compliance with the InvIT Regulations.

b. In the event the aggregate consolidated borrowings and deferred payments of the Trust, holding companies and the SPVs, net of cash and cash equivalents, exceed any thresholds prescribed under the InvIT Regulations in this regard, any further borrowings by the Trust shall be availed in accordance with the requirements prescribed under the InvIT Regulations, including any approval from unitholders under Regulation 22 of the InvIT Regulations.

c. The Trust may raise debt and avail borrowings and deferred payments from time to time, including through (i) issuance of debt securities, in the manner specified by the SEBI, and (ii) availing loans from banks and financial institutions in accordance with applicable law (including the InvIT Regulations). The Trust shall be permitted to borrow monies through any permitted means, by any instrument, in Indian or foreign currency, as permitted by applicable law, including as prescribed by the Reserve Bank of India.

d. The Trust shall be permitted to borrow monies, subject to the approval of the IM Board and/or such other committee of the IM Board as may be constituted in this regard. The Investment Manager may engage such intermediaries as may be necessary to facilitate the borrowings in relation to the Trust, holding companies or SPVs at such remuneration as may be reasonable and at arm's length.

e. The Trust acting through the Trustee shall, in consultation with the Investment Manager, have the power to secure the payment of any sum of money for and on behalf of the Trust in such manner and upon such terms and conditions in all respects as it deems fit including by mortgage or pledge or charge upon all or any Trust Assets (as defined in the Trust Deed), present or future. Any such obligation will not allow the Investment Manager to make the liabilities of the Trust or its Unitholders unlimited.

4. **Policy on appointment of the auditor of the Trust**

The Investment Manager has adopted a policy on appointment of the auditor of the Trust pursuant to a resolution of its board of directors on January 25, 2024. For details of the appointment policy of the auditor in relation to the Trust, please see the section "*Other Parties involved in the Trust – Policy on appointment of Auditor and Valuer*" on page 135.

5. **Policy on appointment of the valuer of the Trust**

The Investment Manager has adopted a policy on appointment of the valuer of the Trust pursuant to a resolution of its board of directors on January 25, 2024. For details of the appointment policy of the valuer in relation to the Trust, please see the section "*Other Parties involved in the Trust – Policy on appointment of Auditor and Valuer*" on page 135.

6. **Distribution Policy**

The Investment Manager has adopted a distribution policy in relation to Trust pursuant to a resolution of its board of directors on January 25, 2024. For details of the Distribution Policy, please see the section "*Distribution*" on page 288.

7. **Policy on Related Party Transactions ("RPT Policy")**

The Investment Manager has adopted a RPT Policy pursuant to a resolution of its board of directors on January 25, 2024. For details of the RPT Policy, please see the section "*Related Party Transactions*" on page 325.

8. **Policy for familiarization programmes for independent directors ("Familiarization Policy")**

The Investment Manager has adopted the Familiarization Policy pursuant to a resolution of its board of directors on January 25, 2024. The key terms of the Familiarization Policy are set out below:

a. The Investment Manager shall conduct orientation programmes / presentations / training sessions, periodically at regular intervals, to familiarize the independent directors with the strategy, operations and functions of the Trust.

b. Such orientation programmes / presentations / training sessions will provide an opportunity to the independent directors to interact with the senior leadership team of the Investment Manager and help them to understand the Investment Manager's and Trust's strategy, business model, structure, operations, markets, organization structure, finance, human resources, technology, risk management strategy, strategy, governance policies and such other areas as deemed necessary.

c. The programmes / presentations shall also familiarize the independent directors with their roles, rights and responsibilities.

d. The Investment Manager may include such other details and information, as required, during the introductory familiarization programme / presentation, when a new independent director comes on the IM Board.

e. The Investment Manager may periodically review this programme and make suitable revisions, as may be deemed necessary, from time to time.

f. The Investment Manager shall present the quarterly reports on the projects operated by the SPVs of the Trust before the independent directors for review, before submission of the reports to the trustee as required under the InvIT Regulations.

g. The programme will be conducted at least once a year on an "as needed" basis.

9. **Risk Management Policy ("RM Policy")**

The Investment Manager has adopted the RM Policy pursuant to a resolution of its board of directors on January 25, 2024. The RM Policy aims to provide a framework for identification and management of risks associated with the business of the Trust. The key terms of the RM Policy are set out below:

a. *Principles of risk management:*

(i) The Risk Management Committee shall provide reasonable assurance in protection of business value of the Trust from uncertainties and consequent losses.
(ii) All concerned process owners of the Investment Manager shall be responsible for identifying & mitigating key Risks in their respective domain.
(iii) The occurrence of risk, progress of mitigation plan and its status will be monitored on periodic basis.
(iv) The risk managers at the level of the Trust would include the Chief Executive Officer, Chief Financial Officer and Compliance Officer of the Investment Manager, as applicable.
(v) The risk management committee shall have minimum three members with majority of them being members of the IM Board, including at least one independent director. The chairperson of the risk management committee shall be a member of the board of directors. The risk management committee shall meet at least twice in a year.

b. *Risk Management Procedures:*

Risk management process includes four activities:

(i) Risk identification;
(ii) Risk assessment;
(iii) Risk mitigation and monitoring; and
(iv) Reporting.

c. *Risk identification:*

The purpose of risk identification is to identify internal and external risks specifically faced by the Trust, in particular including financial, operational, sectoral, sustainability (particularly, environment, social and governance related risks), information, personnel, reputational, regulatory, technology, political, litigation, cyber security risks or any other risk as may be determined by the risk management committee and identify all other events that can have an adverse impact on the achievement of the business objectives. All Risks identified are documented in the form of a risk register. The risk register incorporates risk description, category, classification, mitigation plan, responsible function / department.

d. *Risk assessment:*

Assessment involves quantification of the impact of risks to determine potential severity and probability of occurrence. Each identified risk is assessed on two factors which determine the risk exposure:

(i) Impact if the event occurs

(ii) Likelihood of event occurrence

Risk Categories: It is necessary that risks are assessed after taking into account the existing controls, so as to ascertain the current level of risk. Based on the above assessments, each of the risks can be categorized as – low, medium and high.

e. *Risk mitigation:*

All identified risks should be mitigated using any of the following risk mitigation plans:

(i) Risk avoidance: by not performing an activity that could carry risk. Avoidance may seem the answer to all risks but avoiding risks also means losing out on the potential gain that accepting (retaining) the risk may have allowed;
(ii) Risk transfer: mitigation by having another party to accept the risk, either partial or total, typically by contract or by hedging / insurance;
(iii) Risk reduction: Employing methods/solutions that reduce the severity of the loss; and
(iv) Risk retention: Accepting the loss when it occurs. Risk retention is a viable strategy for small risks where the cost of insuring against the risk would be greater than the total losses sustained. All risks that are not avoided or transferred are retained by default.

f. *Monitoring and reviewing risks:*

The risk management committee shall formulate the policies for effective identification, monitoring, mitigation of the risks. The secretary of the risk management committee shall maintain the risk register. Internal audit committee reviews the risk register once a year and adds any new material risk identified to the existing list. These will be taken up with respective functional head for its mitigation. Existing process of risk assessment of identified risks and its mitigation plan will be appraised by the risk management committee to the IM Board on an annual basis.

10. **Policy on Succession Planning for the Board of Directors and Senior Management ("Succession Policy")**

The Investment Manager has adopted the Succession Policy pursuant to a resolution of its board of directors on January 25, 2024**.** The key terms of the Succession Policy are set out below:

a. The objectives of the Succession Policy are, *inter alia*, as under:

(i) To identify and nominate suitable candidates for the board of director's approval to fill vacancies which may arise in the board of directors from time to time;

(ii) To identify the competency requirements of critical and key positions, assess potential candidates and develop required competency through planned development and learning initiatives;

(iii) To identify the key job incumbents in senior management positions and recommend whether the concerned individual be granted an extension in term/service or be replaced with an identified internal or external candidate or recruit other suitable candidate(s); and

(iv) To ensure the systematic and long-term development of individuals in the senior management level to replace as and when the need arises due to deaths, disabilities, retirements, and other unexpected occurrence.

b. The nomination and remuneration committee shall review the leadership and management needs of the Investment Manager from time to time. The nomination and remuneration committee shall assess the suitability of a person who is being considered for appointment as a director of the Investment Manager, based on his / her educational qualification, experience, expertise and track record and shall recommend to the IM Board, the terms and conditions of his/her appointment, including remuneration.

c. The nomination and remuneration committee may, at its discretion, recommend to the IM Board, appointment of suitable candidate(s) in senior management level with a view to ensure a continuous availability of managerial talent at senior levels to meet the organizational needs.

d. The recommendations of the nomination and remuneration committee shall be placed before the IM Board for approval. The senior management team shall always strive to develop in-house capabilities by enriching work exposure.

11. Investor Grievance Redressal Policy

The Investment Manager has adopted an Investor Grievance Redressal Policy pursuant to a resolution of its board of directors on January 25, 2024. The policy aims to provide efficient services to the investors and to effectively address and redress the grievances of the investors of the Trust in a timely manner.

As per the policy, all investors communication or grievances in relation to following matters shall be addressed by the registrar and transfer agents of the Trust within 5 working days from the date of receipt of such grievance or communication.

a. Issue or non-receipt of TDS certificates/ Form 64B,
b. Request for copy of annual report,
c. Non-receipt of distribution or interest,
d. Request for providing details of distribution and interest paid,

Furthermore, all investors grievance or communication regarding re-processing of distribution or interest and all other grievance or communication not specifically covered in this policy should be addressed by the registrar and transfer agents of the Trust within 10 working days from the date of receipt of such grievance or communication.

In case the registrar and transfer agents of the Trust requires any additional information or supporting document to address such grievance or communication, the return communication stating details of desired information or document should be released within respective stipulated turnaround time. After receipt of requested information or document, the registrar and transfer agents of the Trust should address such grievance or communication within respective stipulated turnaround time.

With a view to ensure greater transparency and as a part of the Trust's investor-friendly initiatives, the board of directors has considered it appropriate and desirable to formally document the present guidelines with respect to classification of securityholders' communication through the policy.

General principle guiding classification of securityholders' communication

a. Multiple correspondence / communications or reminders received for the same matter within the stipulated turnaround time in this Policy for handling of the query / communication will be treated as one complaint.
b. If a query is resolved after the stipulated turnaround time and there is no reminder from the securityholder during such time period, such query will not be treated as complaint.
c. In case of any ambiguity, the company secretary shall be the sole authority to decide on the nature and classification of the communication and the decision of the company secretary shall be final and binding.

The policy also lays down the investor grievance redressal mechanism.

12. Nomination and Remuneration Policy

The Investment Manager has adopted a Nomination and Remuneration Policy pursuant to a resolution of its board of directors on January 25, 2024. The key terms of the Nomination and Remuneration Policy are set out below:

Nomination and remuneration committee charter-

The following matters shall be dealt with by the nomination and remuneration committee:

a. It shall periodically review the size and composition of the board of directors to have an appropriate mix of executive and independent directors to maintain its independence and separate its functions of governance and management and to ensure that it is structured to make appropriate decisions, with a variety of perspectives and skills, in the best interests of the Investment Manager;

b. Basis the criteria determined by the committee on the qualifications, positive attributes and independence of a director, review and recommend the candidates to be appointed as director, having regard to qualifications, integrity, expertise and experience for the position.

c. To formulate the performance criteria and framework for evaluation of performance of every director on the board of directors or engage with a third party facilitator to do so.

d. To decide whether to extend or continue the term of appointment of independent directors.

e. To devise a policy on the diversity of the board of directors.

f. The committee shall act in compliance with the InvIT Regulations.

g. The committee shall act in compliance with the provisions of the Companies Act, 2013 on managerial remuneration and shall review and recommend to the board of directors on the remuneration payable to directors/key management personnel/senior management/ other employees subject to the approval of shareholders if necessary:-

(i) The remuneration payable to directors including sitting fees/commission payable to the directors for their participation at the board of directors and committees thereof including any revisions thereof;

(ii) the remuneration policies for key management personnel and senior management including base pay, incentive payments, equity awards, retirement rights, severance pay if any and service contracts having regard the need to:

a. attract and motivate talent to pursue the Investment Manager's long term growth;
b. demonstrate a clear relationship between compensation and performance;
c. balance between fixed and incentive pay reflecting short and long-term performance objectives as appropriate for the Investment Manager and its goals

(iii) need for any insurance to be obtained by the Investment Manager on behalf of its directors, key management personnel and senior management for indemnifying them against any liability; the premium paid on such insurance shall not be treated as part of the remuneration payable to any such personnel. Provided that if such person is proved to be guilty, the premium paid on such insurance shall be treated as part of the remuneration.

(iv) the compensation for other employees would be as per the compensation policy of the Investment Manager, as revised through the annual compensation review process from time to time, which is reviewed and recommended by the chief executive officer, in consultation with the Head- HR.

Board diversity-

The committee shall ensure that the board of directors shall have an optimum combination of non-independent, independent and woman directors in accordance with requirements of the InvIT Regulations, SEBI Listing Regulations and other statutory, regulatory and contractual obligations of the Investment Manager and the Trust. The Board shall consist of not less than one woman independent director.

13. **Whistleblower Policy**

The Investment Manager has adopted a Whistleblower Policy pursuant to a resolution of its board of directors on January 25, 2024. The key terms of the Whistleblower Policy are set out below:

a. Protected Disclosures, as defined below, should be addressed to the chairman of the audit committee (**"Authority"**) of the Investment Manager for investigation under a sealed envelope.
"Protected Disclosures" means any written or anonymous communication made in good faith that discloses or demonstrates information, about the Investment Manager or its subsidiary(ies), that may evidence unethical or improper activity.

b. If a Protected Disclosure is received by any executive of the Investment Manager other than the Authority, the same should be forwarded unopened by such executive to the Authority for further appropriate action. Reasonable care shall be taken by such executive to keep the identity of the whistle blower confidential.

c. Protected Disclosures should be reported in writing in an easy and understandable manner, so as to ensure a clear communication of the issues raised and should preferably be typed, or alternatively, written in legible handwriting.

d. The Protected Disclosure should be forwarded under a covering letter which shall bear the identity of the whistle blower. This is to ensure that the Authority may interview the whistle blower, if required. Upon receipt of the covering letter, the Authority shall detach the same and forward only the Protected Disclosure to the investigators for investigation.

e. Protected Disclosures should be factual and not speculative or in the nature of a conclusion and should contain as much specific information as possible to allow for proper assessment of the nature and extent of the concern and the urgency of a preliminary investigative procedure.

f. On receipt of a communication that discloses or demonstrates information, about the Investment Manager or its subsidiary(ies), that may evidence unethical or improper activity (**"Communication"**), the Authority shall first ascertain that (a) the Communication is made in good faith, (b) that the Communication is not prima facie frivolous in nature, basis facts and circumstances shared, and (c) that the Communication is complete. If the Communication is not complete in terms of the information so provided, the Authority shall request the whistle blower to share additional information to the extent required to determine the true nature of the Communication.

g. Thereafter, the Authority shall immediately share the Communication along with all relevant information gathered and call for a meeting of the audit committee to investigate the matter. The Audit Committee shall investigate the matter either by itself or shall take assistance of a third party (independent and neutral consultant) to investigate the matter.

h. If the Authority considers the Communication frivolous, it shall make a notation of it and nevertheless forward it to the audit committee for it to take a decision as to whether the Communication needs to be further investigated or rejected for its frivolous nature or being made in bad faith. The audit committee shall provide proper reasons as to why a Communication is rejected, if it so decides not to further investigate it.

The policy lays down following guidelines regarding the protection received by the whistle blower:

a. No unfair treatment will be meted out to a whistle blower by virtue of his/her having reported a Protected Disclosure under this policy.

b. The Investment Manager condemns any kind of discrimination, harassment, victimization or any other unfair employment practice being adopted against whistle blowers. Complete protection will, therefore, be given to the whistle blowers against any unfair practice like retaliation, threat or intimidation of termination/suspension of service, disciplinary action, transfer, demotion, refusal of promotion, or the like including any direct or indirect use of authority to obstruct the whistle blower's right to continue to perform his duties/functions including making further Protected Disclosure.

c. The Investment Manager shall take steps to minimize difficulties, which the whistle blower may experience as a result of making the Protected Disclosure. Thus, if the whistle blower is required to give evidence in criminal or disciplinary proceedings, the Investment Manager will arrange for the whistle blower to receive advice about the procedure, etc.

d. Any other employee assisting in the investigation process under this policy shall also be protected to the same extent as the whistle blower.

The policy also lays down a reporting requirement as per which the investigators shall submit a report to the audit committee on a regular basis about all Protected Disclosures referred to him/her since the last report together with the results of investigations, if any.

14. **Anti-Money Laundering Policy ("AML Policy")**

The Investment Manager has adopted an AML Policy pursuant to a resolution of its board of directors on January 25, 2024. The AML Policy aims to establish the controls around prevention of money laundering in the Trust. It is applicable to the Trust, the SPVs**,** and the Investment Manager, project manager, sponsor, sponsor groups (as defined under the InvIT Regulations) and trustee(s) of the Trust (collectively referred to as the **"Trust Entities"**). The key terms of the policy are set out below:

a. The AML Policy has the following objectives:

(i) To create awareness among all directors, officers, employees, vendors, agents, representatives, staff, consultants and other associated persons/business partners of the Trust Entities (collectively referred to as the **"Trust Personnel"**) about the legal and regulatory framework for anti-money laundering requirements;

(ii) To interpret the obligations under the Prevention of Money Laundering Act, 2002 **("PMLA")** and the rules notified thereunder, and how they may be implemented in practice; and

(iii) To align the Trust Entities' operations with best industry practices in anti-money laundering procedures.

b. The AML policy puts following obligations on the compliance officer:

(i) Monitoring the Trust Entities with regards to the compliance with PMLA and, overseeing communication and training for the Trust personnel.

(ii) Ensure that Trust Entities keep and maintain all records as required under the PMLA and other applicable laws for such periods as prescribed.

(iii) Based on facts and circumstances of an incident covered in the report received by the compliance officer, he/she shall take one or more steps, such as:

a. conducting a probe into the incident himself/herself;

b. setting up an internal inquiry into the incident;

c. in case of Aggravated Cases, as defined below, determine and recommend whether the incident should be reported to the appropriate authority as specified under PMLA.

("**Aggravated Cases**" shall mean incidents of money laundering that need to be reported to the relevant regulatory or enforcement authorities, for example the Financial Intelligence Unit, India. All Aggravated Cases must be escalated, without delay, to the designated director).

(iv) In case of violations of the AML Policy, the compliance officer shall, after considering inputs, if any, from the designated director, have the discretion to do the following:

a. **Corrective Action:** If necessary, corrective actions shall be prescribed by the compliance officer to Trust Personnel for implementation.

b. **Penalties:** The compliance officer shall, based on the investigation reports (if any) have the discretion to recommend appropriate disciplinary action, including suspension, wage freeze, recovery, clawback and termination of service, against such a defaulting Trust Personnel. Depending on the nature and scale of default of the AML Policy, the compliance officer may also recommend to the board of directors to commence civil and/or criminal proceedings against such Trust Personnel in order to enforce remedies available to the Trust Entities under applicable laws.

c. Ensure that order of attachment or complaint has been filed by a person authorized to investigate the offence before the relevant magistrate or court in terms of the PMLA.

c. The AML Policy also obligated the compliance officer to raise awareness of the employee(s)/director(s)/personnel of the Trust and parties to the trust on the risks, ability to identify such transactions and report to the correct authority. Training sessions should be periodically conducted among employees to keep them updated on the latest amendments to anti-money laundering laws, internal controls, legal requirements and reporting authority.

15. Policy on Acquisition and Funding ("Acquisition Policy")

The Investment Manager has adopted an Acquisition Policy pursuant to a resolution of its board of directors on January 25, 2024. The Acquisition Policy aims to provide a policy in respect of acquisition of any future SPVs by the Trust, and any funding that may be availed by the Trust in respect thereof. Following are the key terms of the Acquisition Policy.

a. As per this policy, the Trust shall be entitled to acquire a future SPV, subject to compliance with this policy and applicable law, provided that such future SPV meets each of the following criteria:

(i) has residual revenue generating period of not less than 3 years;

(ii) is a completed and revenue generating asset or, in the reasonable assessment of the Investment Manager, could be converted into a completed and revenue generating asset over the next 18 months; and

(iii) there are no substantial risks which, in the reasonable assessment of the Investment Manager, may lead to suspension or termination of the revenues.

A future SPV that meets each of the aforesaid criteria shall be deemed an "**Eligible SPV**".

b. This policy also requires preparation of an annual acquisition plan at the beginning of each financial year that shall include details in relation to the likely target assets, estimated valuation, potential sources of funding, estimated expenses for due diligence, means of finance and plan of funding for the proposed acquisitions, along with other transaction related costs.

c. The independent evaluation for all potential acquisition opportunities shall be undertaken by the Investment Manager, including carrying out a detailed diligence exercise. If required, the Investment Manager may empanel key advisors with relevant experience and credentials for carrying out various work streams of due diligence, such as technical evaluation, legal and regulatory, finance, accounting and tax, human resources, environment, health and safety (EHS), secretarial, insurance advisors. This is only an indicative list and may be modified depending upon the nature and size of the target assets.

d. The Trust shall be obligated to repay any and all shareholder loans or advances held by any person in such Eligible SPV.

e. Any offer or an invitation to offer, made by any person (**"Seller"**) in relation to an Eligible SPV controlled by such Seller, shall be presented by any member of the key management team of the Investment Manager to the board of directors of the Investment Manager. Such an offer shall, among other things, set-out the non-binding offer and the information including, the price, the details of the Seller and its nominees, and the terms of the sale proposed by the Seller.

f. The Trust shall meet its funding requirements, including funding for acquisition of any Eligible SPVs and for capital expenditure requirements for any capacity augmentation, in accordance with the terms set out in the Acquisition Policy.

g. As per the policy, subject to applicable law and the Borrowing Policy, the Trust may avail additional debt (along with provision of security for such debt) for funding the acquisition of any Eligible SPVs if the following conditions are complied with:

(i) the aggregate consolidated borrowings and deferred payments of the Trust, at a consolidated level, shall not exceed such limit as prescribed under applicable law;

(ii) the debt is availed at commercially reasonable terms as may be determined by the board of directors. The Investment Manager shall ensure that the Trust does not undertake any obligation which would result in its liabilities exceeding the value of the total assets of the Trust;

(iii) the terms of any debt proposed to be availed require complete repayment at least one year prior to the expiry of the relevant concession agreement of the Eligible SPV; and

(iv) the average debt service coverage ratio on a consolidated letter is not less than 1.75 times.

h. If the funding requirement of the Trust are not fulfilled for acquisition of any Eligible SPVs post utilisation of debt availed as per point (e) above, subject to compliance with applicable law, the Trust may utilise such portion of its distributable income as are set aside as reserves for the purposes of funding the acquisition of any Eligible SPVs. In case there is any trapped cash or any other trapped liquid investments in the Trust, the same can also be utilised for acquisition of Eligible SPVs in any feasible manner (such as security for any borrowing).

i. If the Trust does not have sufficient funds under point (h.) above, the Trust may raise funding for the acquisition of any Eligible SPVs in compliance with applicable law.

j. The payment of any consideration by the Trust to the Seller(s) for the acquisition of future SPVs controlled by the Seller(s) shall only be made in cash, as may be available with the Trust in accordance with terms of the Acquisition Policy; provided that so long as such a Seller is not a competitor of the Trust, the Trust may undertake a preferential issue of such number of units as consideration to such a Seller for the acquisition of the Eligible SPV controlled by the Seller(s), at a price determined in compliance with applicable law.

k. The policy also sets forth reporting requirement as per which, at least once every year, the chief financial officer (or in case the position of chief financial officer is vacant for any reason, then the chief executive officer) of the Investment Manager shall explore the possibility of, and present a report to the board of directors of the Investment Manager, on refinancing whole or part of the existing debt of the Trust and/or the SPVs of the Trust.

l. If the board of directors of the Investment Manager (either by itself or through a committee designated for such purpose) determines that the expected gains from refinancing exceed the costs of such refinancing and thereby approves the debt refinancing proposal (including with modifications) of the chief financial officer or chief executive officer, as the case may be, then such refinancing proposal shall be implemented, subject to compliance with applicable law. If the board of directors of the Investment Manager (either by itself or through a committee designated for such purpose) determines that the expected gains from refinancing is less than the costs of such refinancing and thereby disapproves the debt refinancing proposal (including with modifications) of the chief financial officer or chief executive officer, as the case may be, then such refinancing proposal shall be terminated.

16. **Document Archival Policy**

The Investment Manager has adopted a Document Archival Policy pursuant to a resolution of its board of directors on January 25, 2024. It aims to provide a comprehensive policy on the preservation and conservation of the records and documents of the Trust. It provides guidance on the preservation and management of documents to help ensure the authenticity, reliability and accessibility of such documents. The policy aims at identifying, classifying, storing, securing, retrieving, tracking and destroying or permanently preserving records. It stipulates the duration and manner in and place at which records and documents of the Trust shall be preserved. Accordingly, the Investment Manager has formulated this policy.

2. Project SPVs

Representatives on the Board of Directors of the Project SPVs

The Investment Manager, in consultation with the Trustee, currently appoints the majority of the members of the board of directors of each of the Project SPVs , in accordance with the requirements prescribed under the InvIT Regulations.

INDUSTRY OVERVIEW

The information contained in this section is derived from the CRISIL Report. The information contained in the CRISIL Report has been obtained by CRISIL from sources believed by it to be reliable. The information contained herein was prepared expressly for use herein and was based on certain assumptions and information available at the time the CRISIL Report was prepared. As with any attempt to estimate future events, the forecasts, conclusions, and other information included herein are subject to certain risks and uncertainties, and are not to be considered guarantees of any particular outcome. The CRISIL Report, in part or in whole, is not intended to constitute investment advice, and is not a recommendation to purchase or not purchase, an endorsement of, or an opinion as to the value of, any security or any investment instrument of any entity. The CRISIL Report is not a comprehensive evaluation of the industry, the Trust or the Units and all material within the CRISIL Report should be deemed as expressions of opinion which are subject to change without notice. All references to years refer to calendar years except as otherwise stated. References to Indian financial years are to the one year period ending March 31 of the named year.

1. Macroeconomic overview of India

1.1. Review of India's GDP growth

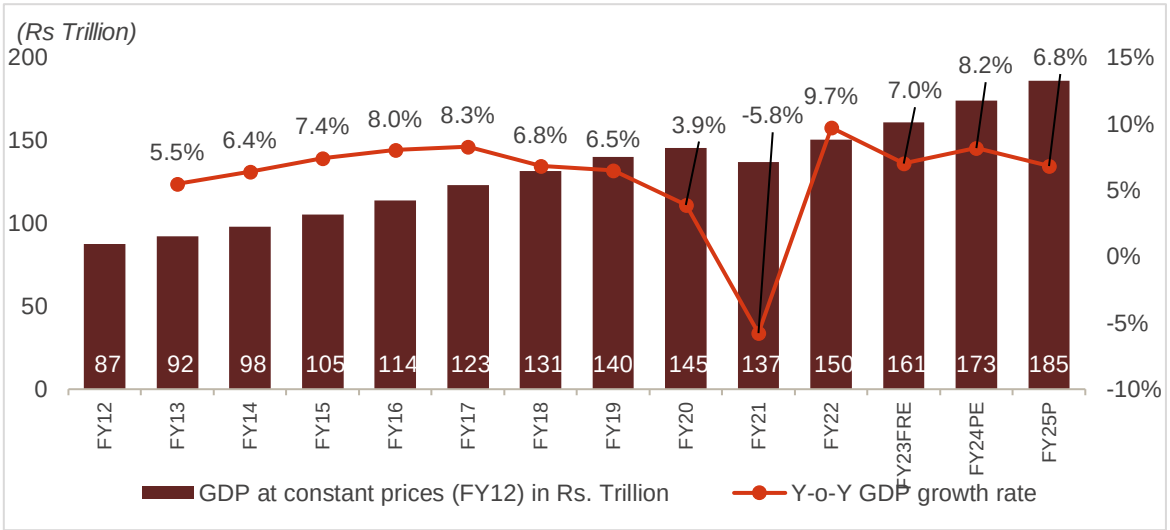
GDP logged 5.7% CAGR between fiscals 2012 and 2023

In 2015, the Ministry of Statistics and Programme Implementation (MoSPI) changed the base year for calculating India's gross domestic product (GDP) to fiscal 2012 from fiscal 2005.

Based on the change, India's GDP clocked a compound annual growth rate (CAGR) of 5.7% between fiscals 2012 and 2023, with the country's overall GDP at Rs 160,714 billion in fiscal 2023 vs Rs 87,363 billion in fiscal 2012. The pace of growth was despite the stress inflicted by the pandemic that led to the GDP — which was already experiencing a slowdown and had grown 3.9% in fiscal 2020 — contracting 5.8% on-year in real terms in fiscal 2021 to Rs ~136,949 billion.

The economy bounced back in fiscal 2022 as the Covid-19 pandemic-related shocks subsided, which resulted in a growth of 9.7% on-year in real GDP to Rs ~150,218 billion.

Real GDP growth in India (new GDP series)



FRE-First Revised Estimate; PE- Provisional Estimate; P – Projected
Source: National Statistics Office (NSO), Advance estimates of national income 2020-24, Central Statistics Office, Ministry of Statistics and Programme Implementation (MoSPI), CRISIL MI&A Consulting

Review of real GDP growth over fiscals 2019-2024 and outlook for fiscals 2025-2029

The Indian economy, which rose a robust 6.6% CAGR between fiscals 2017 and 2019, decelerated sharply to 4.4% CAGR between fiscals 2019 and 2024.

Economic growth during fiscals 2017 to 2019 was driven by rising consumer spending, rapid urbanisation, and the government's focus on infrastructure investment and the domestic manufacturing sector. Supporting the expansion were benign crude oil prices, soft interest rates and low current account deficit. The Indian government undertook key reforms and initiatives as well, such as implementation of the Goods and Services Tax (GST), Insolvency and Bankruptcy Code, Make in India and financial inclusion

push, and gradual opening of sectors such as retail, e-commerce, defence, railways, and insurance to foreign direct investments (FDIs).

However, over fiscal 2018 to 2023, a large part of the lower growth was because of the economy contracting 5.7% in fiscal 2021, owing to the fallout of Covid-19. The pandemic's impact was more pronounced on those industries that needed to adhere to social distancing norms, such as entertainment, travel and tourism, with many industries in the manufacturing sector also facing issues with shortage of raw materials/ components as lockdowns in various parts of the world upended supply chains. Also, the non-banking financial company (NBFC) crisis and slower global economic growth affected the trajectory.

But as lockdowns were gradually lifted, economic activity revived in the second half of fiscal 2021. After a steep contraction in the first half, owing to rising number of Covid-19 cases, the GDP expanded towards the end of fiscal 2021. Subsequently, in fiscal 2022, India's real GDP grew 9.7% from the low base of fiscal 2021 that is Rs. 136,949 billion.

In the first three quarters of fiscal 2024, India's GDP exceeded expectations. Growth in the fiscal was primarily driven by fixed investments on the demand side and industry on the supply side.

In fact, growth surpassed forecasts in the second quarter, owing to strong government spending and sharp rise in manufacturing and construction growth. Globally, growth rates of major economies such as the US and China beat estimates as well, contributing to better export earnings for India. According to the National Statistics Office's (NSO) second advance estimates (SAE), real GDP rose 8.6% on-year in the third quarter of the fiscal, which was a revision from 8.4%. Growth of the previous two quarters were revised up as well – second quarter was revised to 8.1% from 7.6% and first quarter to 8.2% from 7.8%.

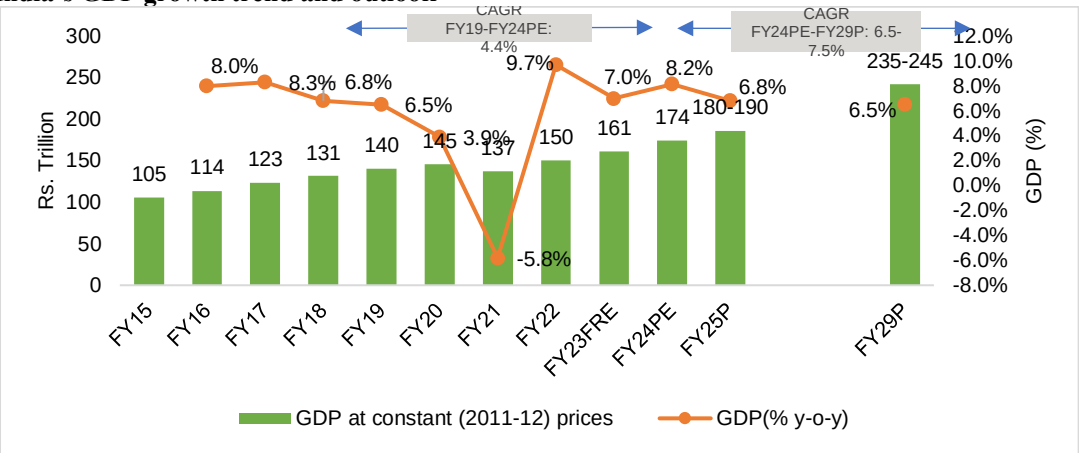
And while GDP growth slowed to 7.8% on-year in the fourth quarter of last fiscal, it was higher than 6.2% in the year-ago quarter. Also, quarter four growth was much stronger than 5.9% factored in the SAE in February 2024. Overall moderation of growth in the fourth quarter of fiscal was because of fixed investment segment on the demand side. And while private consumption trailed overall GDP growth, its performance improved overall in the second half of the fiscal. Net exports also buoyed GDP growth in the fourth quarter, driven by pick up in export growth and moderation in import growth.

On the supply side, gross value added (GVA) growth at 6.3% in the fourth quarter was much lower than GDP growth. Sharp rise in net taxes pushed the GDP growth higher than GVA. The industrial and services sectors saw a moderation, while the agriculture and allied sector inched up slightly. This prompted the NSO to revise up the fiscal 2024 GDP growth estimate to 8.2% (which is a provisional estimate). GVA growth was also revised up to 7.2% from 6.9%. NSO pegged GDP growth at 7.6% in fiscal 2024 vs 7.3% as per the first advance estimates. But based on the SAE, growth in the fourth quarter of the fiscal is estimated to have slowed to 5.9%.
Meanwhile, nominal GDP slowed to 9.9% in the fourth quarter of fiscal 2024 from 10.3% in the previous quarter. For fiscal 2024, it grew 9.6%, slower than 14.2% in the previous year.

After a strong GDP estimate in the past three fiscals, CRISIL MI&A Research expects GDP growth to moderate to 6.8% in fiscal 2025. Fiscal consolidation will reduce the fiscal impulse to growth. Rising borrowing costs and increased regulatory measures could weigh on demand, and net tax impact on GDP is expected to normalise. Exports could be impacted due to uneven growth in key trade partners such as the US and EU and escalation in geopolitical issues in the Middle East.

However, another spell of normal monsoon and easing inflation could revive rural demand. Also, reducing the fiscal 2025 deficit will reduce the government's direct support for economic growth, but investing in high-quality spending could still boost investment and rural incomes. CRISIL MI&A Research anticipates a return to normal levels of indirect tax support GDP as well.

India's GDP growth trend and outlook



FRE-First Revised Estimate; PE- Provisional Estimate; P – Projected
Source: NSO, International Monetary Fund (IMF), CRISIL MI&A estimates

Key fiscal measures announced by the Centre to deal with pandemic fallout

Under the Atmanirbhar Bharat initiative, the government announced a series of fiscal measures to contain the human and economic challenges from the pandemic. Following are the details of key measures announced through three packages in May, October and November of fiscal 2021.

Fiscal stimulus 1.0

Through this fiscal stimulus package, the government announced measures worth Rs 11,000,000 million in five tranches. This was in addition to the earlier announced measures worth Rs 9,900,000 million, including liquidity support from the Reserve Bank of India (RBI), taking the total financial support amount to Rs 20,900,000 million. The government announced the package with the aim of reviving the economy by infusing liquidity and providing income support. The actual committed fiscal outgo was of Rs 1,000,000 million, translating into 9% of the Rs 11,000,000 million of measures outlined over the five tranches. The bulk of this direct support was through the Pradhan Mantri Garib Kisan Yojana. The government also ploughed in some earlier discussed structural reforms, especially in tranches 4 and 5, to help drive India's medium-term growth story. The announcements pertained especially to sectors such as mining, aviation, urban infrastructure, power and agriculture.

Further, the government increased the borrowing limit for state governments from 3% of their GDP to 5%. However, of this additional 2.0 percentage points, 1.5 percentage point was conditional upon states achieving certain targets.

For addressing near-term issues, apart from direct benefit transfers and additional spending through the Mahatma Gandhi National Rural Employment Guarantee Act, 2005, the government mobilised credit to micro, small and medium enterprises, agriculture, and the affordable housing sector. This included the 100% guarantee on loans worth Rs 30,000,000 million and one-year moratorium to help these units, which were typically strapped for working capital. It was also aimed at spurring credit growth for both banks and non-banks in fiscal 2021 and contain delinquencies in the segment, which would have increased otherwise.

Fiscal stimulus 2.0

The government measures targeted increasing demand in the economy. The government proposed a scheme where central government employees could spend their tax-exempt travel concessions on certain goods and services. It also made provisions for them to receive a part of their wages in advance to spend on their choice of festival before March-end 2021. The stimulus also included infrastructure spending of Rs 250,000 million and interest-free loan to states, which stood at Rs 120,000 million. The measures announced under this package amounted to Rs 700,000 million.

Fiscal stimulus 3.0

This Rs 2,650,000 million stimulus package was aimed at job creation, access to credit and farm support with. The key highlight of this stimulus was to provide production-linked incentives to 10 sectors, estimated at ~14,500,000 million. This was proposed to be spent over next 4-6 years, i.e. till fiscal 2028, to encourage domestic manufacturing across 10 sectors – namely, textiles, food, pharma, consumer durables, auto, telecom, specialty steel, solar, electronic, and battery. The stimulus package also provides Rs 650,000 million additional outlays for subsidy towards the fertilisers sector. The stimulus includes a Rs 180,000 million outlay for the housing for all plan, besides having a package of Rs 100,000 million to support the rural economy.

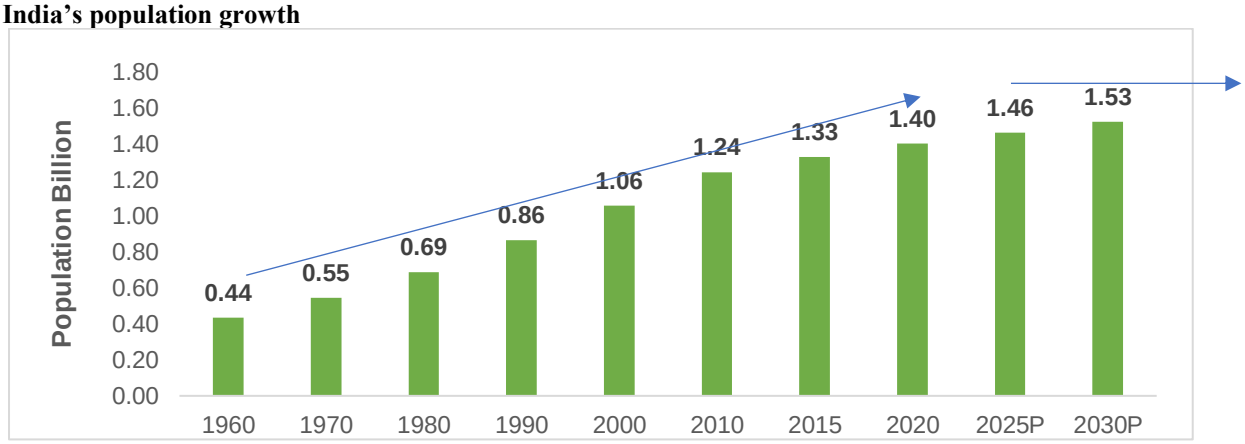
1.2. Review of population growth and urbanisation

India's population projected to touch 1,500 million by 2030

India's population clocked ~1.6% CAGR from 2001 to 2011, reaching ~1,200 million, and comprised nearly 246 million households, as per Census 2011.

According to the World Urbanization Prospects: The 2018 Revision by the United Nations, India and China – the top two countries in terms of population – accounted for nearly 37% of the world's population in 2015. India's population is expected to increase at 0.8% CAGR from 2020 to 1,525 million by 2030.

India's population growth



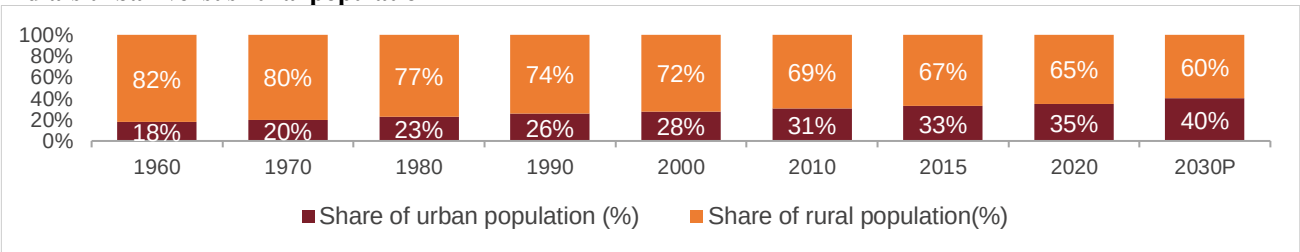
P: Projected

Source: Unitedk Nations, Department of Economic and Social Affairs, Population Division (2024); Probabilistic Population Projections Rev. 1 based on the World Population Prospects 2019 Rev. 1; CRISIL MI&A Consulting

Urbanisation likely to reach 40% by 2030

The share of the urban population in India's total population has been rising over the years and stood at ~31% in 2010. People from rural areas move to cities for better job opportunities, education and quality of life. The entire family or only a few individuals (generally an earning member or students) may migrate, while the rest of the family continues to live in the native, rural house. This trend is expected to continue, with a United Nations report projecting that nearly 40% of the country's population will live in urban areas by 2030.

India's urban versus rural population



P: Projected

Source: World Urbanization Prospects: The 2018 Revision, United Nations; CRISIL MI&A Consulting

1.3. Review of private final consumption growth

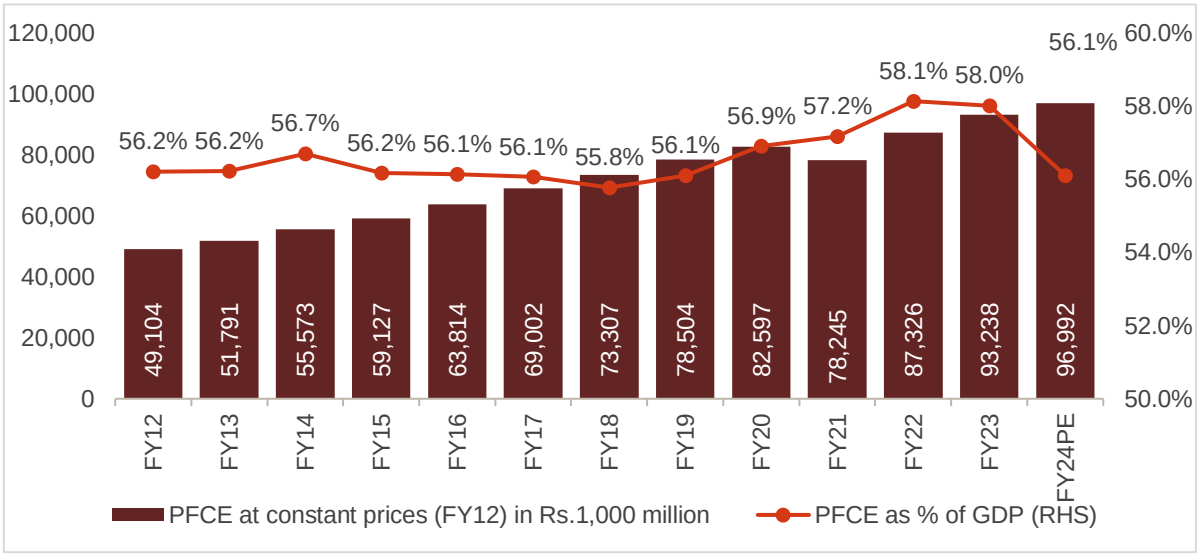
Private final consumption expenditure to maintain dominant share in GDP

Private final consumption expenditure (PFCE) reflects the overall consumption patterns and spending capacity of households within an economy. When PFCE increases it often translates to increased demand for various goods and services.

PFCE at constant prices clocked 6.0% CAGR between fiscals 2012 and 2023, maintaining its dominant share in the GDP pie, at 58.5% or Rs 93,587,000 million as of fiscal 2023. Factors contributing to the growth included good monsoons, wage revisions due to the implementation of the Pay Commission's recommendations, benign interest rates and low inflation.

That said, PFCE had declined to Rs 78,245,000 million in fiscal 2021 from Rs 82,597,000 million in fiscal 2020 on account of the pandemic, when consumption demand was impacted on account of strict lockdowns, employment loss, limited discretionary spending and disruption in demand-supply dynamics. PFCE increased 6.8% to Rs 93,238,000 million in fiscal 2023 but remained at 58.0% as a % of GDP. This was because the pandemic had an adverse impact on personal expenditure and government spending increased in an effort to boost the economy from the Covid-19-induced slump.

PFCE at constant prices

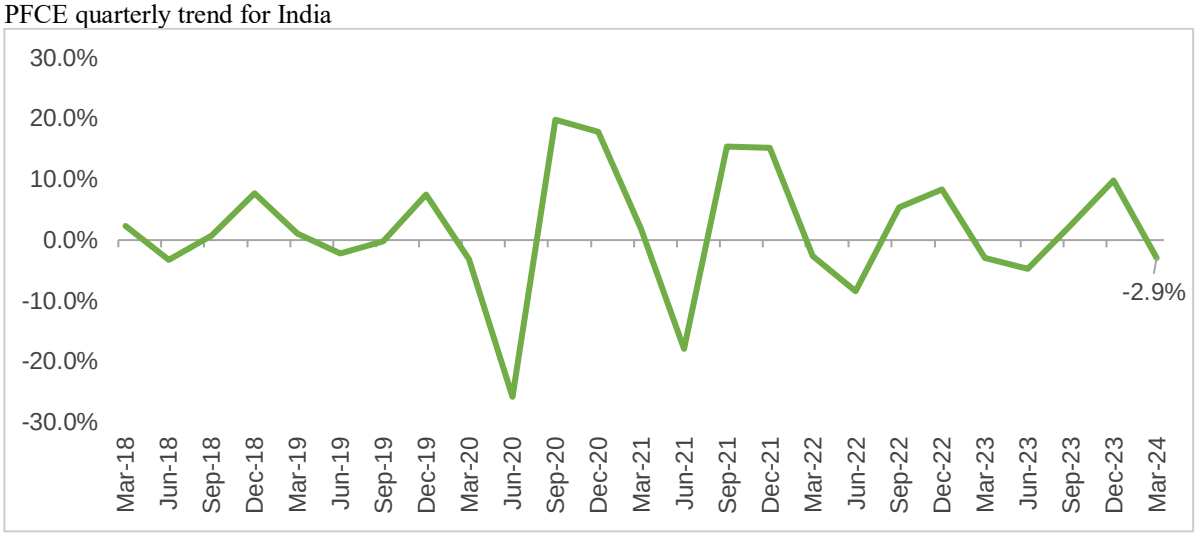


PE – Provisional Estimate
Source: Second Advance Estimates 2023-24, MoSPI, CRISIL MI&A Consulting

PFCE stayed steady in the fourth quarter of fiscal 2024 at 4.0% on-year (previous quarter print was revised up to 4.0% from 3.5%). However, the growth remained much lower than the 7.8% GDP growth during the quarter. There appeared some signs of a rural recovery during the quarter. Demand for work under the Mahatma Gandhi National Rural Employment Guarantee Act declined significantly on-year, indicating easing job distress. Rural wages also showed signs of a pick-up. Demand for rural-dependent sectors, though, showed a mixed trend. For instance, two-wheeler sales rose in the fourth quarter, but tractor sales continued to decline.

Urban demand seemed to have sustained some momentum. Employment prospects were broadly healthy with higher labour force participation and lower unemployment on-year. Consumer durables production further grew in the fourth quarter and retail credit growth showed steady momentum. But growth in consumer non-durables production slowed further, indicating persisting uneven trend in consumption.

PFCE quarterly trend for India



Source: Industry, CRISIL MI&A Research

1.4. Outlook on GDP growth

Near-term review and outlook on GDP

Services sector is the key growth driver

In fiscal 2020, the services sector accounted for 55.3% of India's GDP compared with 52.4% in fiscal 2015. However, its share dipped to 53.6% in fiscal 2021 following the onset of the pandemic. Fiscal 2022 saw marginal improvement in the share of the services sector with gradual normalisation of market operations.

The industrial sector, which is the second-largest contributor, maintained its share in GDP of ~31%, logging 7.1% CAGR between fiscals 2015 and 2019. Industrial contribution declined in fiscal 2020, with slowdown in economic development. Before overall economic activity slowed down in fiscal 2020, India's industrial sector output growth was supported by the Make in India initiative, rising domestic consumption and GST implementation. The initiatives improved India's position on the World Bank's Ease of Doing Business index to 63 in fiscal 2019 from 142 in fiscal 2014.

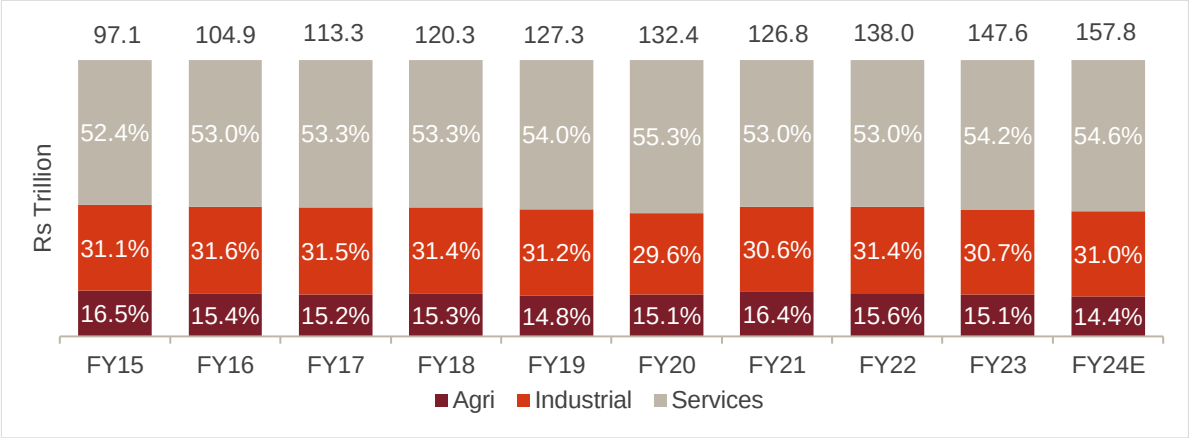
The pandemic and subsequent lockdown exacerbated the economic slowdown in fiscal 2021. The services segment was the worst affected and declined 8.2% year-on-year, mainly due to the decline in trade, hotels, transport, and communication services (THTC) by 19.7% as well as decline in public administration, defence and other services by 7.6%, followed by industrial, which slipped 0.9% on-year. Agriculture was the only sector that grew 4.1% on-year, restricting a further contraction in the GDP.

In fiscal 2021, the agriculture sector's share in GVA at constant prices expanded, while the share of the services and industrial sectors contracted.

In fiscal 2022, agriculture GVA grew at a rate of 3.5%, but the industrial sector rose a sharper 12.0% on a low base of fiscal 2021. The service sector grew 8.8% on-year.

Agriculture GVA continued to grow at a steady 4.0% in fiscal 2023. Faster GDP growth in fiscal 2023 saw the share of agriculture increase in the fiscal. The share of industrial sector in GDP grew 4.0% in fiscal 2023, strongly because od utility services, with 8% growth, which was higher than all other industrial sectors. Mining grew 5%, while manufacturing and construction added marginal growth momentum from a high base of fiscal 2022. The high base of fiscal 2022 led to moderate growth of the industrial sector in fiscal 2023. The services sector grew 9% in fiscal 2023. THTC saw strong on-year growth of 14% in fiscal 2023.

Share of sector in GVA at constant prices



Source: RBI; CRISIL MI&A Consulting; E: Estimated

GDP growth moderated in the fourth quarter of fiscal 2024

Moderating industry and services, weak agriculture

On the supply side, GVA growth moderated to 6.3% in the fourth quarter from 6.8% in the previous quarter. It remained much lower than the GDP growth as net taxes grew 22.2% on-year during the quarter after a 31.2% growth in the third quarter.

While GVA growth for agriculture picked up (0.6% in the fourth quarter vs 0.4% in the third quarter), it slowed for industry (8.4% vs 10.5%) and services (6.7% vs 7.1%).

- The subdued growth in agriculture and allied activities reflects lower crop output this year. According to the SAE, total food production will be 1.3% lower on-year — kharif 1.0% lower and rabi 1.7%
- Within industry, manufacturing growth moderated to 8.9% in the fourth quarter from 11.5% in the previous quarter. Infrastructure and investment-related sectors, which had contributed to strong growth in the first half of the fiscal, slowed in the second half, according to the granular data from the Index of Industrial Production (IIP). The benefit of falling input costs is also fading, as the decline in commodity prices halted
- Construction GVA growth, though moderate, was a healthy 8.7% (vs 9.6%). Moderating government capital expenditure (capex) towards the end of the fiscal may have weighed on construction growth. However, a slowdown was seen in electricity (7.7% vs. 9.0%) and mining (4.3% vs 7.5%)
- Services growth moderated (6.7% in the fourth quarter vs 7.1% in the previous quarter), driven by contact-based services such as trade, hotels, transport and communication (THTC) services. THTC growth moderated to 5.1% from 6.9%, reflecting post-pandemic fading pent-up demand
  - Financial, real estate and professional services rose to 7.6% from 7.0%, driven by a healthy banking sector and robust real estate
  - Public administration, defence and other services grew 7.8% vs 7.5%

Softening investments

Investments—the key driver of domestic demand in **fiscal 2024**—moderated in the fourth quarter for the second consecutive quarter. Private consumption remained steady, after rising in the third quarter.

Fixed investments slowed as measured by gross fixed capital formation (GFCF; 6.5% vs 9.7%). Slower government infrastructure spending may have dragged investment growth, with both central and state capex data showing an on-year slowdown in the fourth quarter.

Private final consumption expenditure (PFCE) stayed steady in the fourth quarter, at 4.0% on-year (previous quarter print revised up to 4% from 3.5%) but was much lower than 7.8% GDP growth in the fourth quarter.

Outlook on GDP

After strong GDP print in the past three years, we expect it to moderate to 6.8% this fiscal. Growth will still be higher than the pre-pandemic decadal average of 6.7%, continuing to position India as the fastest growing major economy.

Investments, a key growth booster, are expected to moderate as the government focuses on fiscal consolidation. The extent of revival in private investment cycle will determine the investment momentum this fiscal.

The other strong segment, urban demand, could moderate as credit conditions tighten this year. Transmission of previous rate hikes to broader lending rates remains incomplete. As the wait for rate cuts from the RBI prolongs, the transmission is expected to continue, raising the borrowing costs. In addition, the RBI's regulatory measures to clamp down on risky lending will weigh on credit support to consumption.
That said, the forecast of an above-normal monsoon brings hope for the rural economy, which was a laggard in the country's growth story last year. The consequent possible easing in food inflation could also boost purchasing power and support consumption. However, monsoon distribution will be the determining factor. Freak weather events, such as heatwave and unseasonal rains, remain a risk.

We expect a normalisation of the net indirect tax impact on GDP after strong growth last fiscal (FY2024).

Slower global growth can restrict upside to goods exports owing to normalisation of supply chains and an expected pick-up in volume of trade in calendar 2024. S&P Global expects global GDP growth to slow to 3.2% in 2024 from 3.4% in the previous year, weighed by interest rates staying elevated for longer. Any spike in the prices of commodities—particularly crude oil—remains a risk for the country's growth.

Risks to growth

Weak monsoon

Rainfall in the country during the monsoon season (June-September) 2023 was 94% of its long period average (LPA). Deficient rainfall has a significant impact on rural demand.

Inflation pressure

Inflation data released in April 2024 showed Consumer Price Index (CPI)-based inflation eased to a 5-month low of 4.9% in March from 5.1% in February. While core inflation declined to a record low of 3.3%, fuel inflation declined to 3.2% on the back of lower domestic fuel prices. The worry, though, remains about persistently high food inflation, at 8.5%**.**

External drag on growth

Global growth is likely to slow down this year because of higher interest rates. Central banks in key advanced economies have maintained policy interest rates in their latest meetings. However, improving inflation outlook will allow the RBI to initiate rate cuts in fiscal 2025. Geopolitical uncertainty, though, will continue to disrupt global trade.

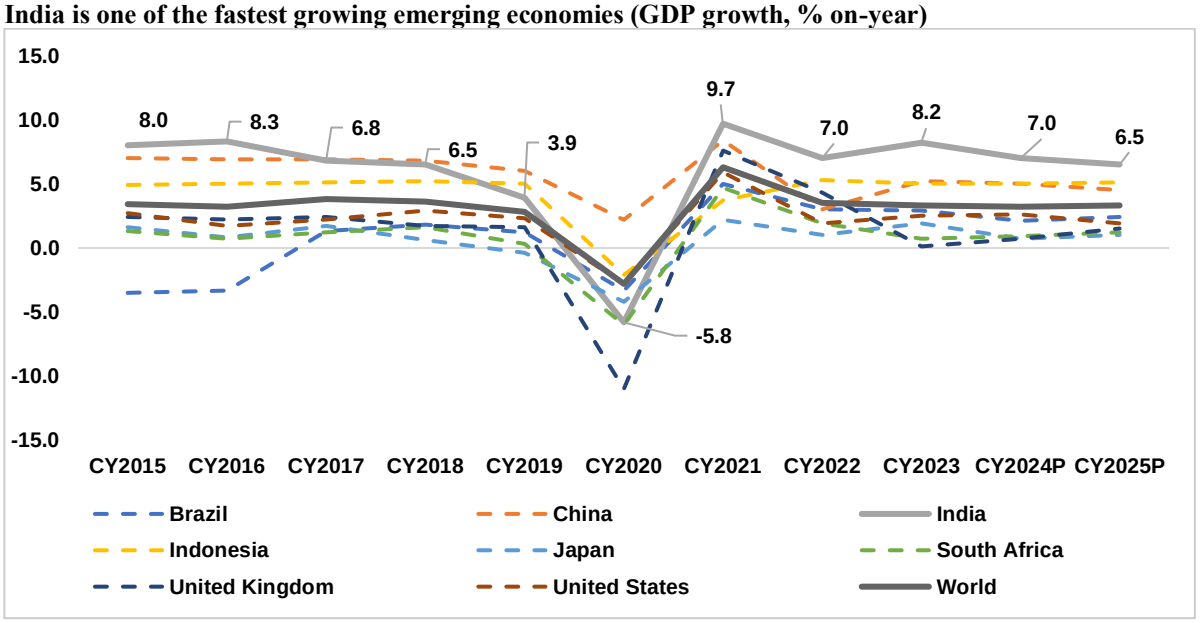
Impact of higher interest rates

The transmission of previous rate hikes by the Monetary Policy Committee (MPC) is still playing out amid tight liquidity conditions, which suggests a further rise in market lending rates in the near term. This will moderate domestic demand. The RBI's move to increase risk weights on the consumer credit exposure of banks and non-banking financial companies (NBFCs) is also expected to mildly affect overall credit growth next fiscal.

India to remain a growth outperformer globally

Despite slowdown in the near term, India's growth is expected to outperform over the medium run. CRISIL MI&A expects GDP growth to average 6.8% between fiscals 2025 and 2029, compared with 3.2% globally as estimated by the IMF.

India is one of the fastest growing emerging economies (GDP growth, % on-year)



P: Projected
Note: GDP growth based on constant prices, For India, data and projections are presented on a fiscal year (FY) basis.
Source: IMF (World Economic Outlook – July 2024 update), CRISIL MI&A Research

Growth drivers

- Capital will continue to be the biggest growth contributor. As the government pursues fiscal consolidation, its role in boosting overall capex will partly diminish compared with the past few years
- Strong domestic demand is expected to drive India's growth over peers in the medium term
- Investment prospects are optimistic, given the government's capex push, progress of Production-Linked Incentive (PLI) scheme, healthier corporate balance sheets, and a well-capitalised banking sector with low non-performing assets (NPAs)
- India is also likely to benefit from its diversification of the supply chain for incoming FDI flows, as global supply chains get reconfigured with the focus shifting from efficiency to resilience and friend shoring
- Rising employment rates and a notable increase in private consumption, buoyed by growing consumer confidence, will boost GDP growth in the upcoming months
- The government's future capex is expected to be supported by factors such as tax buoyancy, simplified tax structures with lower rates, tariff structure reassessment and tax filing digitisation
- Medium-term growth is anticipated to be bolstered by increased capex on infrastructure and asset development projects, leading to enhanced growth multipliers

Near-term review and outlook on inflation

CPI eased to a 5-month low of 4.9% in March 2024 from 5.1% in February 2024. While core inflation declined to a record low of 3.3%, fuel inflation declined to 3.2% on the back of lower domestic fuel prices. Food inflation remained high, at 8.5%. Higher cereals inflation, erratic vegetable inflation and elevated pulses inflation have been a cause of concern given the India Meteorological Department's (IMD) prediction of higher-than-normal temperatures between April and June.

Although headline inflation eased to 5.4% on-year in fiscal 2024 from 6.7% in fiscal 2023, food inflation surged to 7.5% from an already high 6.6% in fiscal 2023. The March 2024 reading of 8.5% food inflation creates some disquiet given the prediction of higher-than-average temperatures over the next few months that can stress vegetable production and some of the rabi crop that is yet to be harvested. Beyond that, we expect food inflation to ease a tad on the back of the prediction of a favourable monsoon (above normal rains as per the IMD), some benefit from a high food inflation base and an expected seasonal downturn in pulses inflation.

We expect non-food inflation to remain comfortable, supported by softness in consumer demand, a pass-through of the previous year's oil price decline to domestic fuel (petrol and liquefied petroleum gas [LPG]) prices and an expectation of benign crude prices. Under these assumptions, we expect CPI inflation to average 4.5% in fiscal 2025. Intensification/persistence of geopolitical concerns and weather shocks, if any, pose an upside risk. Meanwhile, the government's budget is slimmer, which means the fiscal impulse to growth is also leaner and, therefore, less inflationary. All these factors contribute to the favourable conditions for interest rate reductions during this fiscal year, provided that potential hindrances such as food inflation or geopolitical escalations do not intervene and defer this decision.

Food inflation remains high

Food inflation rose to a six-month high of 9.4% on-year in June 2024 from 8.7% in May 2024. Vegetables inflation rose for the first time in four months to 29.3% on-year in June from 27.4% in February despite a supportive base. On a seasonally adjusted basis, vegetable prices rose 3.4% on-month. Unlike the last three months (April 24 – June 2024), the rise in vegetables inflation was broad-based with both TOP (tomatoes, onions, potatoes) and non-TOP vegetables inflation rising. TOP inflation surged to 48.4% in June 2024, driven by onions (58.5% in June vs 38.1% in May) and potatoes (57.6% in June vs 55.3% in May). Despite an on-month uptick in prices (seasonally adjusted) tomato inflation eased to 26.4% in June from 41.3% in May owing to the high base of last year. Non-TOP vegetables inflation hardened to 19.7% in June from 18.8% in May, driven by leafy vegetables, brinjal, lady's finger, pumpkin, etc.

Foodgrain inflation was rigid at 10.2% on-year in June, though 20 bps lower than the previous month. Cereals inflation inched up to 8.8% in June from 8.7% in May, mostly owing to non-PDS wheat (6.7% in June vs 6.5% in May). Pulses inflation eased a tad to 16.1% in June from 17.1% in May. While inflation in arhar dal declined sharply (26.9% in June vs 32.1% in May), other pulses such as split gram (18.5% in June vs 14.8% in May) saw a rise.

Inflation in milk rose for the first time in 13 months on account of a price hike by major milk producers (3% in June vs 2.6% in May).

Edible oils inflation continued to log lower disinflation for the fifth consecutive month, at -2.7% in June vs -6.7% in May.

Fuel inflation falls further

Fuel prices fell 3.7% on-year in June, remaining in deflation for the 10th straight month. Although global oil prices remain under pressure, the government subsidy for LPG has kept fuel inflation negative. Prices of liquefied petroleum continued to deflate on-year in June (-24.8%). Electricity inflation moderated to 8.8% in June from 10.9% in May owing to a supportive base.

Core inflation eases to a record low

Core inflation inched down to a record low of 3.1% in June. Inflation slid in the essential categories of education to 3.6% in June from 4.1% in May. On the other hand, inflation picked up in personal care and effects to 8.2% in June from 7.7% in May, led by 19.7% rise in gold prices in June compared with 10.2% in the previous month. Services inflation eased 10 bps to a record low of 2.9% in June, while core goods inflation was steady at 3.2%.

WPI inflation accelerates

Wholesale Price Index (WPI)-based inflation accelerated for the fourth straight month to a 16-month high of 3.4% in June from 2.6% in May. WPI food inflation rose for the sixth consecutive month to 8.7% from 7.4%, led by soaring vegetable inflation (38.8% vs 32.4%). Onions were the main reason for higher WPI vegetable inflation, with the inflation rate rising to 93.4% from 58.0%. Inflation in potatoes also rose (64.1% vs 66.4%). A high base did lower tomato inflation, though it remained high (57.8% vs 64.6%). Foodgrain inflation was relatively steady, rising just 20 bps to 11.6%. Non-food inflation crept up as well, though it remained benign (1.2% vs 0.7%). Crude petroleum inflation rose to 14.0% from 11.1%. Fuel and power inflation was broadly unchanged at 1.0% vs 1.3% in the previous month. Inflation in manufactured products, which accounts for nearly a third of the WPI, rose to 1.4% from 0.8%, driven by manufactured foods (4.3% vs 2.7%), basic metals (1.1% vs 0.3%) and chemicals (-1.1% vs -2.7%).

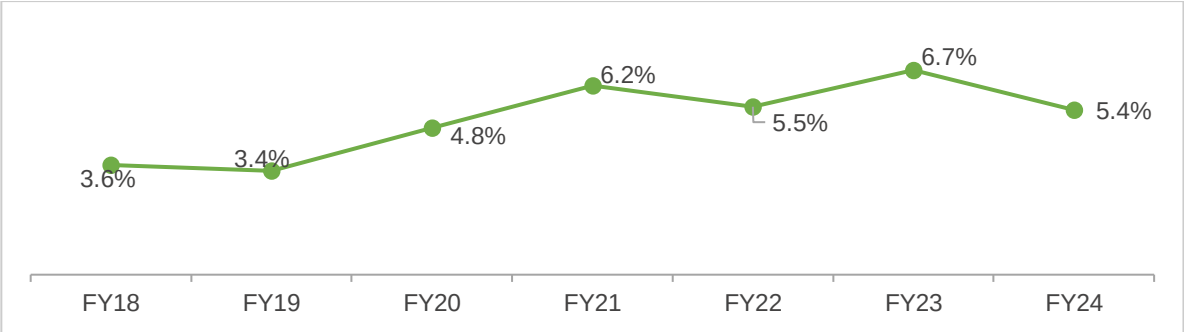
Outlook on inflation

While headline CPI eased to 5.4% on-year in fiscal 2024 from 6.7%, food inflation surged to 7.5% from a high of 6.6% in fiscal 2023. The June reading of 9.4% food inflation raises concerns, particularly with the prediction of higher-than-average temperatures in the coming months, which could strain vegetable production and the rabi crops yet to be harvested. Looking

ahead, we anticipate a slight easing in food inflation, driven by prediction of favourable monsoon (above-normal rains according to the IMD), some relief from a high base of food inflation and an expected seasonal decline in pulses inflation.

We anticipate non-food inflation to remain manageable, supported by subdued consumer demand, the impact of previous year's oil price decline on domestic fuel prices (petrol and LPG) and expectations of stable crude prices. Based on these assumptions, we project CPI inflation to average 4.5% this fiscal. However, intensification or persistence of geopolitical tensions and weather-related shocks pose an upside risk to this forecast. Moreover, with a leaner government budget, the fiscal impulse to growth is diminished, which could alleviate inflationary pressures. These factors create a conducive environment for potential rate cuts this fiscal, unless challenges such as food inflation or geopolitical tensions intervene and delay such decisions. Hence, CRISIL expects CPI inflation to average 4.5% in fiscal 2025 against an estimated 5.4% in fiscal 2024.

CPI trendline



Source: Ministry of Statistics and Programme Implementation (MOSPI), CRISIL MI&A Research

Cooling domestic demand, assumption of a normal monsoon along with a high base for food inflation should help moderate inflation this fiscal. A non-inflationary Interim Budget 2024-25 that has focused on asset creation rather than direct cash support also bodes well for core inflation. However, an unusual weather event could reverse the easing. Similarly, recent geopolitical uncertainties in the Middle East and a fading low base effect for commodity prices could put some upside pressure on core inflation, and would, therefore, need monitoring.

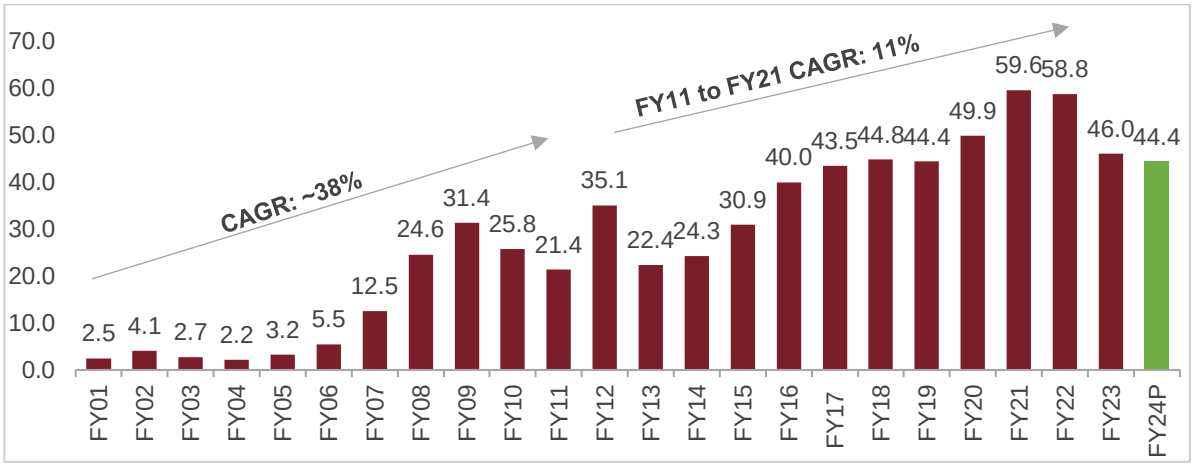
Nevertheless, we believe slowing inflation, a smaller fiscal deficit and an imminent turn in the US Federal Reserve's (Fed) policy rates will lay the ground for the RBI's MPC to start cutting rates. However, we believe more clarity on the path of disinflation could push this decision at least to June 2024, if not later. While CPI inflation has remained in the RBI's tolerance band of 2-6% since August, it is still shy of the 4% target, thereby keeping the MPC on guard.

1.5. Historical trends in FDI inflows

The Government of India constituted the Foreign Investment Promotion Board (FIPB) in 1991, whose main function was to invite and facilitate foreign investments. The FIPB ceased to exist as per the decision taken by the Ministry of Finance in 2017. The government has now empowered individual departments to clear FDI proposals in consultation with the Department of Industrial Policy and Promotion (DIPP) within the set timelines. From a baseline of less than $1,000 million in 1990, India has become one of the most important FDI destinations in the world.

FDI inflows in India grew rapidly to $49,900 million in fiscal 2020 from $2,500 million in fiscal 2001, at a CAGR of ~17%. The pace of growth was faster over fiscals 2001-2009 (~38% CAGR), but the global slowdown affected investments in fiscals 2010 and 2011. In fiscal 2021, India recorded the highest ever FDI inflows of $59,600 million, up ~20% on-year. Fiscal 2023 recorded $46,000 million FDI inflow, ~22% down on-year. Continuing its downward trend, FDI inflows declined 24% to $20,500 million during the first six months of fiscal 2024.

FDI equity inflows to India ($ billion)



P: Provisional
Source: DIPP, CRISIL MI&A Consulting

According to the quarterly factsheet on FDI prepared by the DIPP up to end-fiscal 2024, Mauritius was the leader in cumulative FDI inflows over April 2000 to March 2024 with a share of 25%, followed by Singapore (24%), the US (10%), the Netherlands (7%), Japan (6%) and the UK (5%). During the period, the services sector accounted for 16% of the cumulative FDI inflows, followed by computer software and hardware (15%), telecommunications (6%), trading (6%), automobile (5%) and construction development (5%). FDI inflows amounted to $44,400 million in fiscal 2024, registering a significant decline over fiscal 2022 levels.

2. Review of road infrastructure in India

2.1. Overview of infrastructure sector in India

Developing and modernising the infrastructure sector has been a priority area for the Government of India and has witnessed increasing public investments and budgetary support. Further, the government has undertaken several reforms and initiatives in the infrastructure sector, which has resulted in robust secular growth in most of the segments within the sector.

The roads sector registered a strong pace of constructions by NHAI, growing 6,003 km (16.4 km per day) in fiscal 2023 from 3,071 km (8.4 km per day) in fiscal 2018. Investments in the roads and highways sector rose from Rs 1.7 trillion in fiscal 2018 to ~Rs 2.9 trillion in fiscal 2022, registering ~1.7x growth. Civil aviation has witnessed strong growth as well. India's passenger traffic logged at a CAGR of ~8% from around 165 million in fiscal 2017 to around 209 million in fiscal 2020. In fiscal 2023, passenger traffic stood at 194 million passengers, however international passenger traffic is still below pre-pandemic levels. In the ports and shipping sector, installed capacity of major ports in India increased to 2,456 million tonne in fiscal 2022 from 2,283 million tonne in fiscal 2018.

The government launched the National Infrastructure Pipeline (NIP) for fiscals 2020 to 2025, to boost infrastructure, with a projected investment of Rs 111 trillion during the period. Investments in energy (24%), roads (18%), urban (17%), and railways (12%) will amount to over 70% of the projected capital expenditure during the period. As per an economic survey, NIP will be funded by the central government (39%), state governments (40%), and private sector (21%). The NIP outlines a revised spend of 147 lakh crore which was originally planned over fiscals 2020-2025, a lofty target with focus on public funds to do the heavy lifting. With public funds being constrained due to the impact of the pandemic across fiscals 2021 and 2022, with vaccination, social and healthcare spends to be met. The investments outlined in the NIP are almost double over the previous 5 year plan and the achievement ratio of the 5 year plans have been dropping with rising outlay of capex. CRISIL Research projects a 70-75% achievement of the NIP. The balance investments are unlikely to be met till fiscal 2025 and will likely spill over into further years. As per the India Investment Grid website accessed on April 24, 2024, 10,286 projects are under development covering over 56 sub-sectors.

The Public Private Partnership Appraisal Committee (PPPAC) set up by the government has been responsible for the appraisal of PPP projects in the central sector. Yearwise project summary of PPAC is tabulated below.

PPAC Project Summary

FY	Number of Projects	Total Project Cost (In Rs. Billion)
FY24	9	490.7
FY23	6	88.9
FY22	6	784.8
FY21	10	1357.5
FY20	8	275.1
FY19	8	97.3
FY18	4	78.5
FY17	9	124.0
FY16	17	286.7
FY15	18	290.7
FY14	25	553.3
FY13	25	256.4
FY12	53	549.6
FY11	31	243.0
FY10	53	578.5
FY9	48	533.8
FY8	13	112.3
FY7	15	65.2

Source: PPP in India (PPPAC projects summary), CRISIL MI&A Consulting

In fiscal 2021, the government approved the continuation of the revamped Infrastructure Viability Gap Funding (VGF) Scheme till fiscal 2025. The objective of the revamped scheme is to attract PPP projects and aid private investment in social infrastructure (health, education, wastewater, solid waste management, water supply, etc).

2.2. Contribution of roads sector to India's GVA

The share of the roads sector in India's GDP stood at 3.0% in fiscal 2023. The share hovered at ~3.3% from fiscals 2012 to 2022.

GVA share	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Road transport (at constant prices)	3.2%	3.3%	3.3%	3.3%	3.3%	3.2%	3.3%	3.3%	3.3%	2.5%	3.1%	3.0%

Source: MoSPI, National Accounts Statistics 2024, CRISIL MI&A Consulting

2.3. Road network in India

India has the second-largest road network in the world, spanning 6.345 million km as of fiscal 2024. Roads, the most frequently used mode of transportation in India, accounted for ~87% of passenger traffic and close to ~60% of freight traffic says MoRTH as of September 2024. Although national highways span nearly 146,145 km, constituting just 2% of road length, they accounted for ~40% of the total road traffic. The secondary road system comprises state roads and major district roads, which accounted for the remaining 60% of traffic and 98% of road length.

As per the report published by MoSPI in October 2024, in FY23 gross value add of road sector was ~68% among all contributors of output & value added from transport services.

Road network in India in FY24

Road network	Length (km)	Percentage of total length	Percentage of total traffic	Connectivity to
National highways	146,145	~2	40	Union capital, state capitals, major ports, foreign highways
State highways	179,535	~3	60	Major centres within the states, national highways
Other roads	6,019,723	~95		Major and other district roads, rural roads - production centres, markets, highways and railway stations
Total Network	6,345,403	100	100	

Source: MoRTH PIB-05 Jan 2024, MoRTH Annual Report 2023-24, CRISIL MI&A Consulting

Total length and break-up of national, state and rural roads (in km)

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
National highways	97,991	101,011	114,158	126,350	132,500	132,995	136,440	140,995	144,955	146,145
State highways	167,109	176,166	175,036	186,908	186,528	194,900	176,818	171,039	167,079	179,535
Other roads	5,207,044	5,326,116	5,608,477	5,902,539	6,067,269	6,165,660	5,902,539	6,059,813	6,019,757	6,345,403
Total	5,472,144	5,603,293	5,897,671	6,215,797	6,386,297	6,493,555	6,215,797	6,371,847	6,331,791	6,671,083

Source: MoRTH Annual Report 2021-22 and 2022-23, MoRTH PIB-05 Jan 2024, CRISIL MI&A Consulting

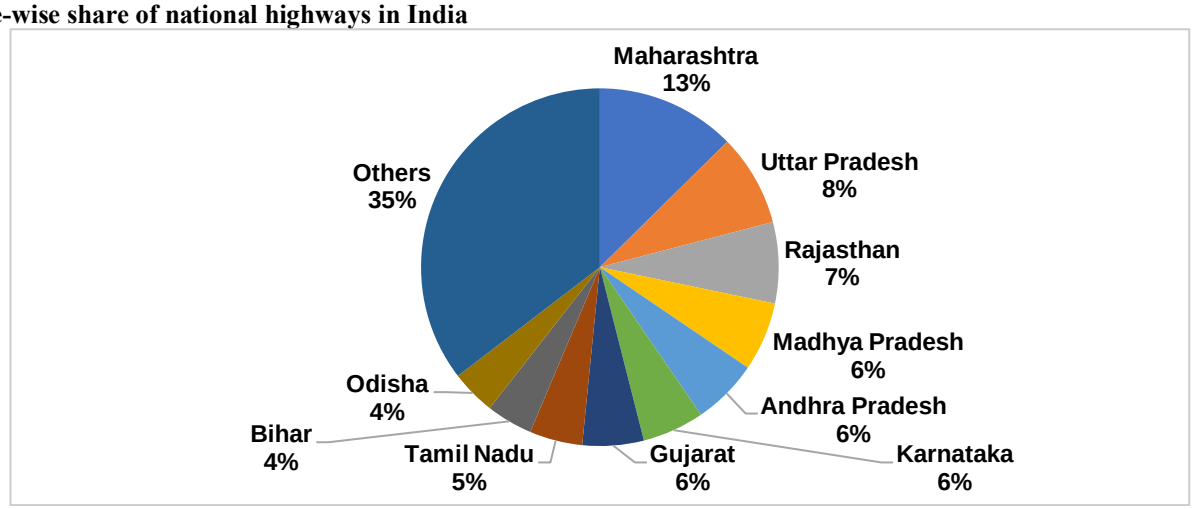
State-wise length of national highways in India as on June 30, 2024

S. No.	State	Total NH length as on March 31, 2014	Total NH length as on June 30, 2024	S. No.	State	Total NH length as on March 31, 2014	Total NH length as on June 30, 2024
1	Andhra Pradesh	4,190	8,683	19	Manipur	1,452	1,840
2	Arunachal Pradesh	2,027	4,367	20	Meghalaya	1,171	1,156
3	Assam	3,634	4,077	21	Mizoram	1,222	1,499
4	Bihar	4,467	6,132	22	Nagaland	741	1,670
5	Chandigarh	24	15	23	Odisha	4,550	5,897
6	Chhattisgarh	3,031	3,620	24	Puducherry	53	64
7	Delhi	80	157	25	Punjab	1,699	4,239
8	Goa	269	299	26	Rajasthan	7,646	10,706
9	Gujarat	4,694	8,099	27	Sikkim	149	709
10	Haryana	2,050	3,394	28	Tamil Nadu	4,975	7,000
11	Himachal Pradesh	2,196	2,607	29	Telangana	2,400	4,926
12	Jammu and Kashmir	1,513	1,935	30	Tripura	509	889
13	Jharkhand	2,968	3,633	31	Uttar Pradesh	7,986	12,141
14	Karnataka	6,177	8,191	32	Uttarakhand	2,282	3,664
15	Kerala	1,700	1,858	33	West Bengal	2,908	3,910
16	Ladakh	8,06	806	34	Andaman & Nicobar Islands	300	331
17	Madhya Pradesh	5,116	9,105	35	Dadra & Nagar Haveli	31	37
18	Maharashtra	6,249	18,447	36	Daman & Diu	22	22

S. No.	State	Total NH length as on March 31, 2014	Total NH length as on June 30, 2024	S. No.	State	Total NH length as on March 31, 2014	Total NH length as on June 30, 2024
					TOTAL	**91,287**	**146,126**

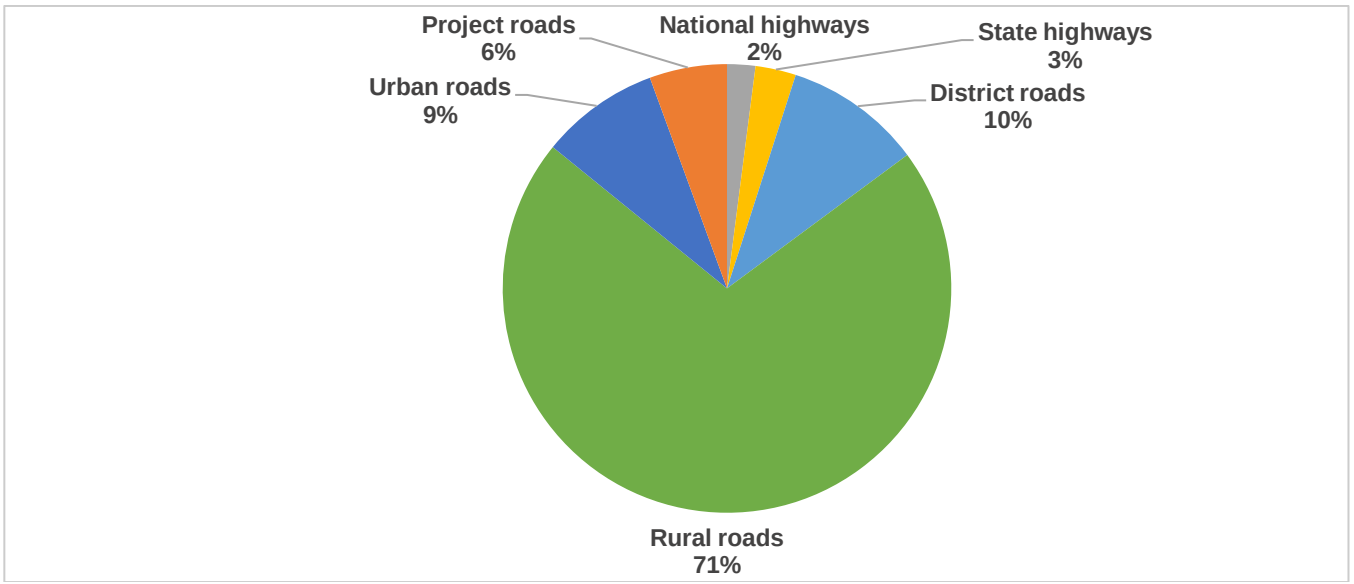
Source: PIB (July 25, 2024), CRISIL MI&A Consulting

State-wise share of national highways in India



Source: PIB (July 25, 2024), CRISIL MI&A Consulting

Road length break-up by segment as a percentage of total road length in India for FY19



Source: MoRTH Annual Report FY24, CRISIL MI&A Consulting

Qualitative overview of maintenance of roads in India

The Pradhan Mantri Gram Sadak Yojana (PMGSY) is a one-time special scheme undertaken by the Central government to boost infrastructure in rural parts of the country, but maintenance of these roads remains a state subject. All PMGSY roads are covered by five-year maintenance contracts. Maintenance funds to service the contract are to be budgeted by the state government. With effect from fiscal 2017, financial incentives are given to best-performing states, which show higher achievement on the basis of set parameters. Financial incentives amounting to Rs 10.8 billion and Rs 8.4 billion were awarded in fiscals 2017 and 2018, respectively, for periodic maintenance to best-performing states.

In fiscal 2017 alone, Rs 5.4 billion was credited to the accounts of 20 state rural-road development agencies for carrying out maintenance on these roads, of which only Rs 3.33 billion was spent. In fiscal 2018, Rs. 9.4 billion was spent on maintenance. Thus, even though execution of new roads under PMGSY is on track, their maintenance remains a key monitorable.

Central Road & Infrastructure Fund (CRIF)

The CRIF is funded from the cess collected on the sale of petrol and high-speed diesel (HSD). On every litre of petrol and HSD that is sold, a cess of Rs 6 is collected (since fiscal 2016; previously cess was Rs 2). The fund provides assistance to states for the development and maintenance of state roads, rural roads, national highways, under- and over-bridges, and safety works at unmanned railway crossings. About 11% of the cess collected on HSD and 30% on petrol is allocated towards maintenance of state roads.

Funds allocated for fiscals 2015, 2016, 2017, and 2018 were Rs 26.5 billion, Rs 28.8 billion, Rs 72.4 billion, and Rs 83.1 billion respectively. About 476 projects, amounting to Rs 98.6 billion, were sanctioned under the scheme in fiscal 2018, compared with 1,093 projects, costing Rs 123 billion in fiscal 2017. As per notes published in public domain on Demand no. 84 and 86 (Ministry of Road Transport and Highways), Transfer to Central Road and Infrastructure Fund (CRIF) in fiscal 2019, 2020, 2021, 2022, and 2023 (RE) are Rs 200.4 billion, Rs 160.9 billion, Rs 207.5 billion, Rs 394.1 billion, and Rs 1136.0 billion respectively.

In the union budget for fiscal 2019, road cess was replaced by the road and infrastructure cess. Previously, road cess was split for NH construction, maintenance, railways, Pradhan Mantri Gram Sadak Yojana, etc., based on a fixed formula.

Development of roads under CRIF scheme

S. No.	State/UT	Projects received			Projects sanctioned/finalised		
		No.	Length	Cost (10 million)	No.	Length	Cost (10 million)
2019-20							
1	Assam	88	1,472	3,507	-	-	-
2	Himanchal Pradesh	20	229	381	-	-	-
3	Kerala	57	485	493	-	-	-
4	Manipur	38	342	264	13	145	132
5	Nagaland	5	152	611	-	-	-
6	Odisha	31	558	928	-	-	-
7	Uttarakhand	2		159	2		174
Total		241	3,237	6,341	15	145	306
2020-21							
1	Andhra Pradesh	77	1,097	1,501	46	676	946
2	Assam	1	89	241	13	201	606
3	Bihar	1	2	205	1	2	205
4	Goa	7	79	98	-	-	-
5	Himachal Pradesh	5	64	107	-	-	-
6	Kerala	8	110	115	-	-	-
7	Madhya Pradesh	1	107	154	1	107	154
8	Maharashtra	284	2,188	2,098	276	2,263	2,231
9	Manipur	23	284	259	-	-	-
10	Mizoram	1	15	99	-	-	-
11	Odisha	25	521	1,001	-	-	-
12	Punjab	12	144	211	12	144	211
13	Rajasthan	32	531	724	32	531	724

S. No.	State/UT	Projects received			Projects sanctioned/finalised		
		No.	Length	Cost (10 million)	No.	Length	Cost (10 million)
14	Telangana	42	523	744	-	-	-
15	Tripura	1	16	16	1	16	16
16	Uttarakhand	2		2,402	3	-	2,777
17	West Bengal	7	136	483	7	136	483
Total		529	5,906	10,457	392	4,075	8,351
2021-22							
1	Andhra Pradesh	13	204	353	-	-	-
2	Arunachal Pradesh	27	294	553	27	294	553
3	Bihar	12	121	873	-	-	-
4	Chhattisgarh	15	316	846	15	316	846
5	Goa	6	75	81	6	75	81
6	Haryana	1	24	99	1	24	99
7	Himachal Pradesh	9	187	368	13	94	238
8	Jharkhand	7	121	496	-	-	-
9	Kerala	69	956	1,307	-	-	-
10	Madhya Pradesh	24	600	1,893	24	600	1,893
11	Maharashtra	276	1,597	2,231	276	1,597	2,231
12	Meghalaya	15	127	257	15	127	257
13	Mizoram	3	34	223	1	10	47
14	Odisha	35	619	1,727	35	619	1,727
15	Punjab	5	24	272	5	24	272
16	Rajasthan	81	1,607	2,046	81	1,607	2,046
17	Tamil Nadu	47	103	582	-	-	-
18	Telangana	48	612	879	48	612	879
19	Uttarakhand	42	370	615	42	370	615
20	West Bengal	6	155	397	-	-	-
21	Ladakh	17	422	297	17	422	297
22	Puducherry	4	41	33	4	41	33
Total		762	8,610	16,428	610	6,833	12,113
2022-23							
1	Andhra Pradesh	60	320	2,682	37	391	1,270
2	Arunachal Pradesh	6	-	64	3	0	33
3	Bihar	29	150	1,846	27	122	2
4	Chhattisgarh	23	133	1373	6	0	315
5	Haryana	14	279	794	11	279	724
6	Himachal Pradesh	5	137	452	1	0	103

S. No.	State/UT	Projects received			Projects sanctioned/finalised		
		No.	Length	Cost (10 million)	No.	Length	Cost (10 million)
7	Jharkhand	16	148	1,289	17	216	1,128
8	Karnataka	22	0	785	22	0	785
9	Kerala	71	981	1,342	37	404	673
10	Madhya Pradesh	43	626	3270	39	651	3047
11	Manipur	26	207	716	-	-	-
12	Maharashtra	146	943	1892	171	943	2978
13	Meghalaya	2	0	0	2	0	0
14	Mizoram	9	0	55	-	-	-
15	Nagaland	52	802	4,455	1	24	93
16	Odisha	10	7	579	6	0	361
17	Punjab	32	370	870	23	372	627
18	Rajasthan	98	1812	3053	14	0	674
19	Sikkim	66	-	476	-	-	-
20	Tamil Nadu	56	103	1376	51	103	1.002
21	Telangana	25	-	1,829	5	0	433
22	Tripura	12	226	321	-	-	-
23	Uttar Pradesh	25	78	1,525	17	80	1
24	Uttarakhand	164	2897	2896	6	1	194
25	West Bengal	18	356	1,025	14	346	997
Total		1,030	10,575	34,965	510	3,932	14,439
2023-24							
1	Andhra Pradesh	-	-	-	3	40	108
2	Arunachal Pradesh	-	-	-	25	88	316
3	Assam	-	-	-	7	76	425
4	Chhattisgarh	-	-	-	1	0	42
5	Goa	-	-	-	1	1	92
6	Gujarat	-	-	-	49	577	1,905
7	Himachal Pradesh	-	-	-	5	73	295
8	Karnataka	-	-	-	317	2.056	2
9	Madhya Pradesh	-	-	-	11	54	698
10	Maharashtra	-	-	-	89	663	2
11	Manipur	-	-	-	8	58	153
12	Nagaland	-	-	-	8	39	103
13	Punjab	-	-	-	1	0	83
14	Rajasthan	-	-	-	112	2.397	4
15	Sikkim	-	-	-	13	33	50

S. No.	State/UT	Projects received			Projects sanctioned/finalised		
		No.	Length	Cost (10 million)	No.	Length	Cost (10 million)
16	Telangana	-	-	-	37	498	977
17	Tripura	-	-	-	6	22	77
18	Uttarakhand	-	-	-	13	439	259
19	Delhi	-	-	-	1	3	9
20	Ladakh	-	-	-	37	469	1,352
Total		**NA**	**NA**	**NA**	**744**	**3,137**	**6,952**

Note: "-" represent data not available; NA: Not available
Source: PIB (March 23, 2023, July 25, 2024), CRISIL MI&A Consulting

Of the amount collected under CRIF for state roads, 10% is reserved for the development of roads under the following schemes:

Interstate connectivity (ISC)

Under this scheme, 100% funding (not a loan) is provided by the central government. ISC typically encompasses the development of

- Interstate roads
- Roads connecting national highways

Economic importance (EI)

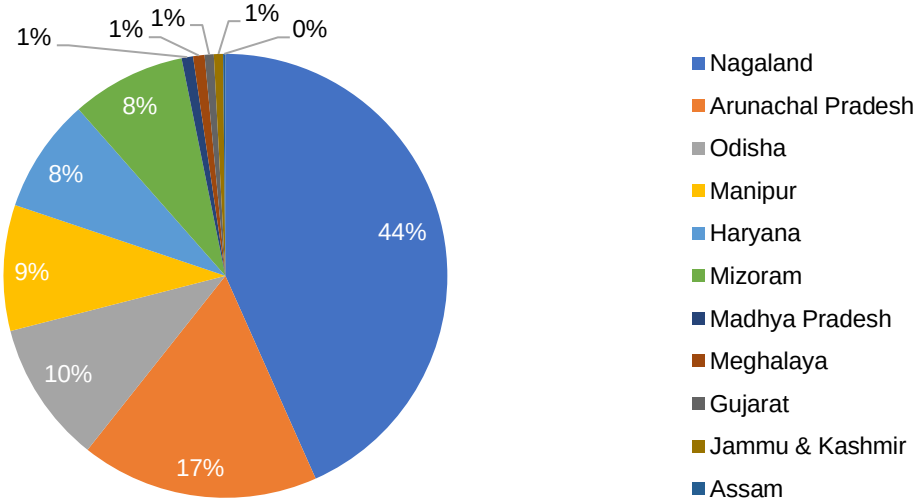
Under this scheme, projects are funded to the extent of 50% by the central government. The state government contributes the rest of the project cost. This scheme is focussed on the development of:

- Roads facilitating connectivity to remote industrial and economic areas
- Roads facilitating the development of remote residential areas, such as those connecting the hilly regions to plains

Funds allocated together under ISC and EI in fiscals 2015, 2016 and 2017 stood at Rs 2,390 million, Rs 3,550 million and Rs 4,150 million, respectively. In fiscal 2018, ~19 projects amounting to Rs 6,600 million were approved under ISC and EI. In fiscal 2019, ~18 projects amounting to Rs 4,740 million were approved.

During fiscal 2023, a sum of Rs 1,900 million had been allocated to various states. Also, as per MoRTH's letter dated February 9, 2024, Rs 3,000 million had been allocated for fiscal 2024.

State-wise allocation under ISC and EI schemes in FY23



Source: Letter published by MoRTH, CRISIL MI&A Consulting

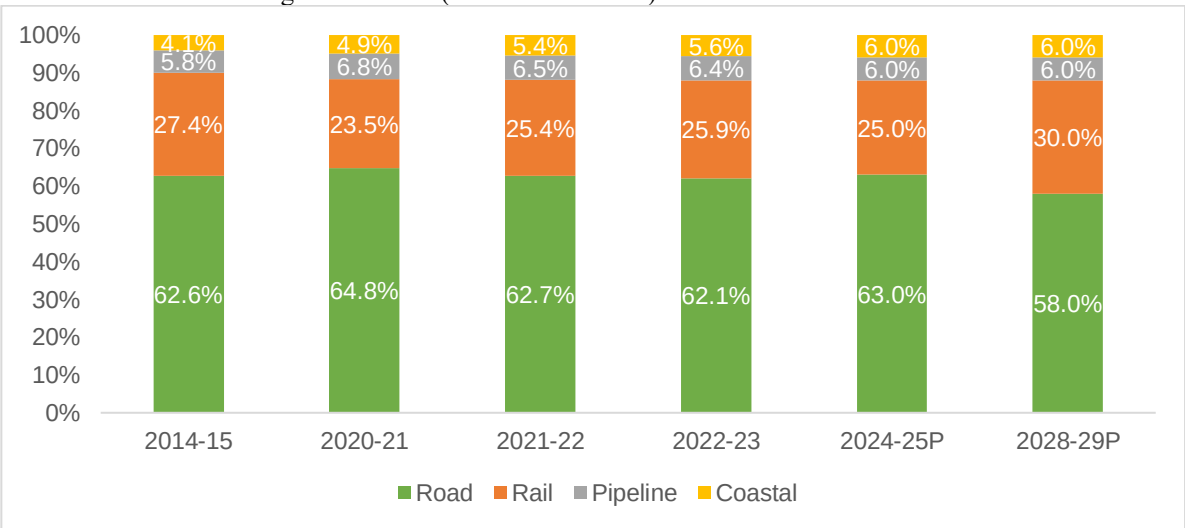
2.4. Indian freight traffic scenario

Road transportation remains dominant, but Railways eye share given Dedicated Freight Corridors and rising road freight rates

Roads are expected to remain dominant in transportation, having grown 5-7% in fiscal 2024. Railways are expected to gain share owing to the Dedicated Freight Corridors (DFCs) and higher road freight rates. DFCs are aimed at decongesting India's railway network. It will help carry freight at higher speed with increased load-carrying capacity, up to 6.2 million TEUs (twenty-foot equivalent unit) in total, reducing operating costs in India for rail freight significantly. Roads are typically preferred for non-bulk, high-value commodities. CRISIL expect growth in road freight traffic to increase at a compounded annual growth rate (CAGR) of 4-6% in BTKM terms between the fiscals 2024 and 2029. In the same period, railways are expected to grow at a CAGR of 10-12%, growing faster than roads. Railways gained share in fiscal 2021 as rail freight traffic was more resilient during the pandemic. The share of railways increased further in fiscal 2022 owing to increased rail capacity, partial commissioning of the DFCs, soaring diesel prices and higher road freight rates. Commissioning of the DFCs will aid in increasing the share of railways in India's freight traffic.

Road freight movement is estimated to have grown 5-7% in fiscal 2024, at a slightly slower pace than that of rail freight movement. In fiscal 2023, road Billion Tonne Kilometres (BTKM) is estimated to have grown ~7%, mainly attributed to higher production across all sectors and government spending focused on investments. However, it is expected that road transport will lose market share to railways in the upcoming years on account of the establishment of DFCs and comparatively higher road freight rates relative to other modes of transportation.

Share of roads in total freight movement (in terms of BTKM)



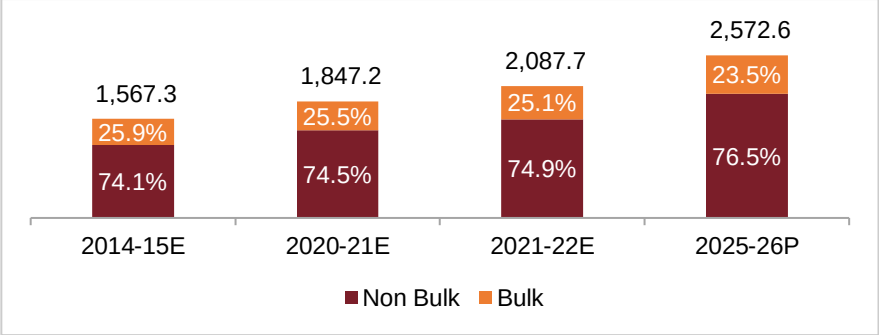
P: Projected
Source: CRISIL MI&A Consulting

Roads remain the preferred mode for non-bulk transportation

Roads generally account for a significant share in non-bulk commodity transportation, as:

- Railways do not cater to piecemeal freight transportation. Entire rakes are provided for transportation and not just single wagons (although Indian Railways is looking into multi-point loading, it would still not attract small-sized cargo)
- Road transport has better service quality and is more reliable
- Road transporters operate on a much smaller scale. Also, given the large number of road transport operators, customers have better bargaining power. These transporters also add a personal touch to their service, which is important, as these commodities are typically expensive and fragile.
- Roads provide end-to-end connectivity and safer handling, which is an important factor while transporting low-volume, but high-value commodities

Roads predominantly transfer non-bulk freight (in terms of BTKM)



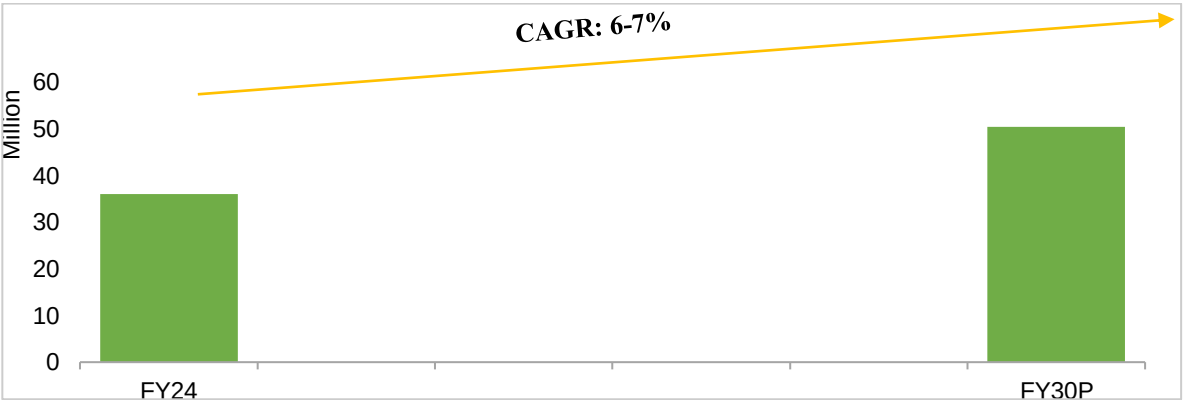
E: Estimated; P: Projected
Source: CRISIL MI&A Consulting

Historical growth of vehicular population

Market for PVs underpenetrated, offers sizeable potential in the long run

India's car market is extremely underpenetrated compared with most developed economies and some developing nations. As of fiscal 2024, India had ~32 passenger vehicles per 1,000 people. This number is expected to increase to 40 by fiscal 2029, which is significantly lower than the developed nations and even Brazil, Russia, and China (which, along with India, form the BRIC block) based on per capita GDP. Thus, India offers tremendous growth potential for automobile manufacturers. Even while comparing the penetration of cars and UVs across countries based on per capita GDP, India lags most others. We expect this gap to reduce gradually in the long run.

Outlook on passenger vehicle population



Note: FY30 is projected year
Source: CRISIL MI&A Consulting

Commercial vehicle market faces volatility: Growth to moderate in current fiscal

Commercial vehicle (CV) sales for fiscal year 2025 are expected to remain flat clocking in at (1)-1%, CVs being a cyclical industry, the downcycle in terms of volumes is playing out while tonnage growth will be healthy on account of a shift to higher tonnage vehicles in MHCVs over the past couple of years. Light Commercial vehicles (LCVs) are expected to grow by 0-1% supported by volume up for replacement, while volumes of Medium and Heavy Commercial Vehicles (MHCV) are estimated to remain at par with that of fiscal 2024 registering a (1)-1% change on account of the high tonnage sold in MHCVs over the preceding years. Overall commercial vehicles grew by 3.5% on year in first quarter of fiscal 2025 led by growth in MHCV and Buses.

In fiscal 2024, the commercial vehicle (CV) market recorded a modest 1% growth, building on the momentum of the previous year. While light commercial vehicle (LCV) sales dipped by 3% due to reduced fleet utilization, medium and heavy commercial vehicle (MHCV) sales remained flat, driven by higher tonnage demand. The bus segment, however, saw a significant 21% surge, fuelled by robust demand from school and staff transportation services. The industry's growth was further supported by pent-up replacement demand and strong end-user segments, ultimately reaching 98% of pre-pandemic levels.

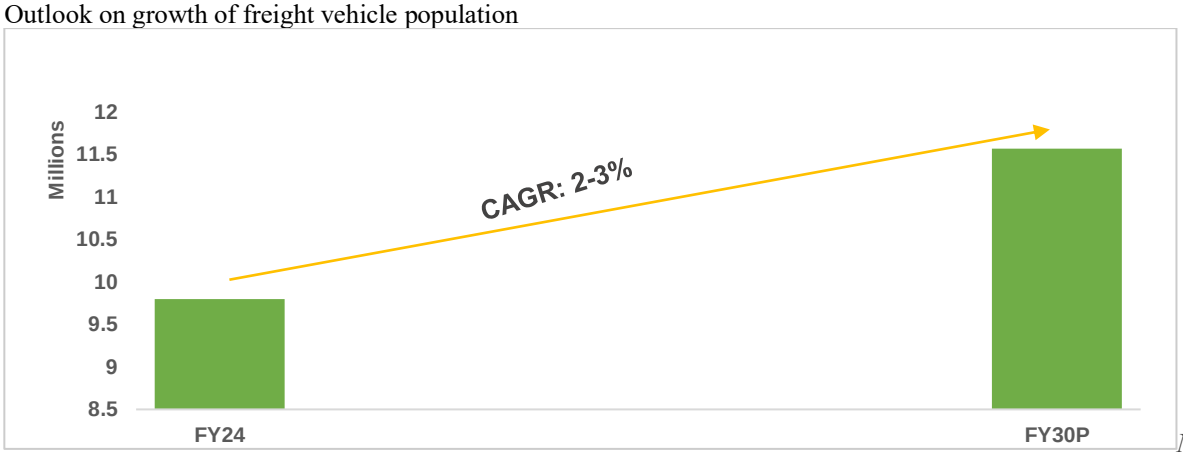
The CV industry made a remarkable comeback in fiscal 2023, posting a 34% growth rate, albeit from a low base, and reaching 96% of pre-pandemic levels seen in fiscal 2019. This rebound can be attributed to the release of pent-up replacement demand,

improved transporter profitability, and a resurgence in capital expenditures, which had been hindered by economic stagnation and pandemic-related disruptions over the preceding 2-3 years.

The MHCV industry is set to witness a projected CAGR of ~1-5% over the five years from fiscals 2024 to 2029. In the last five fiscal years (2019-2024), industry growth declined by 2% annually on account of a number of factors such as the pandemic, axle loading norms (norms stating maximum permissible limit of load carrying capacity of commercial vehicles) and emission norms (norms stating maximum permissible limit of vehicle wise carbon emission). The rise in tonnage addition is expected to be driven by an improved product mix, with a notable surge in demand for multi-axle vehicles (MAV).

Long-term MHCV sales are likely to be propelled by several factors, including the country's improving industrial activity, steady agricultural output, and the government's continued focus on infrastructure development. However, volume growth may be somewhat constrained due to the efficiencies achieved through the implementation of the Goods and Services Tax (GST), the development of better road infrastructure and commissioning of the DFC.

Outlook on growth of freight vehicle population



Note: FY30 is projected year
Source: CRISIL MI&A Consulting

2.5. Key growth drivers and emerging trends for road sector

Policy pushes aimed at improving private participation in National Highways

The following are the recent policy changes that the MoRTH and NHAI have undertaken to improve private participation in the sector and increase competition:

- Technical and financial bidder eligibility criteria reduced for HAM and EPC projects, which would promote the entry of smaller players
- Changes in the hybrid-annuity model (HAM) concession agreement aimed at protecting developers' returns and easing their cash flows during the construction period
- Changes in the Build-Operate-Toll (BOT) concession agreement to reinstate developer interest in the model

Apart from this, the government has taken various steps under the Atmanirbhar package to mitigate the impact of Covid-19 on the sector:

- Extension of time (EOT) of up to 3-6 months for all projects and relaxation of milestone achievement
- Monthly payment mechanism, instead of milestone-based payments
- Reduction in performance security from 5% to 3%, release of retention money to the extent of work done
- Additionally, Covid-19 emergency loan facilities and moratorium on loan repayment up to August 2020
- Extension of concession period for BOT-toll operators, due to toll suspension and restriction in movement during lockdowns

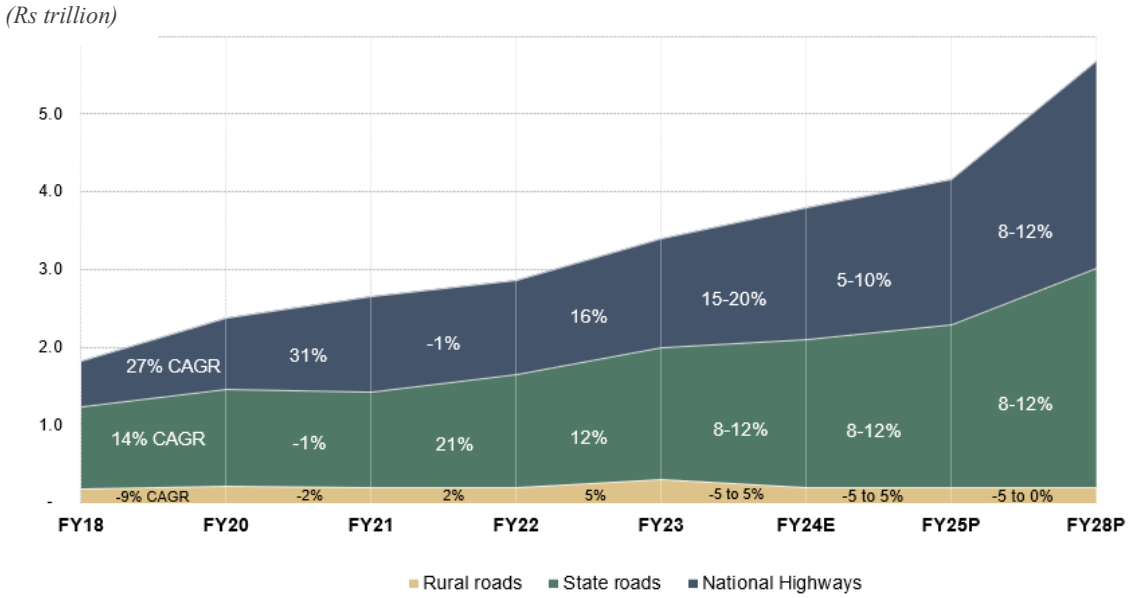
Strong government thrust likely to deliver steady growth in fiscal 2024

Overall road sector capex, comprising of National Highways, State Highways & rural roads is estimated to have grown at a CAGR of 14% between fiscals 2018 & 2023. This growth, driven by Bharatmala and increased state spends on roads has been achieved despite brief hiccups such as the pandemic and hampered construction due to elongated monsoons. The outlook of the sector also remains firm supported by higher awarding of previous fiscals, Bharatmala, NIP pipeline of DPR ready projects and steady state capex.

The NH segment contributes around 40-45% of the overall capex. While the execution remained flattish in fiscal 2023 vis-à-vis fiscal 2022, capex grew by 16% due to a rise in construction of high value projects and high commodity prices. In fiscal 2024, we expect the national highway capex to grow by 15-20% driven primarily by increased execution.

On the low base of fiscal 2021, the state spends grew by 21% in fiscal 2022 and are estimated to have grown further by 10-13% in fiscal 2023 largely in line with the growth in budgetary outlay. In fiscal 2024, state spends are expected to go up further by 8-12% as their percentage achievement of budgetary allocations are expected to be largely in line with historical average.

Momentum to continue, supported by Bharatmala and NIP pipeline



Note: Capex excludes the land-acquisition costs
Source: NHAI, MoRTH, State budget documents, PMGSY, CRISIL MI&A Research

2.6. Key challenges faced by roads sector in India

Issues and challenges for roads sector

Given the share of roads in the overall transport of goods and passenger traffic, it is critical to develop the roads sector. Although the government has been continuously making efforts to give a fillip to the sector, several issues and challenges hamper the pace of development.

NHAI trying to reduce risks associated with BOT projects through changes in MCA

In order to improve private participation via the BOT-toll mode, NHAI and the ministry introduced changes to the BOT MCA, aimed at addressing key issues such as land acquisition, revenue assessment in case of traffic shortfall and stuck projects. Key amendments to the MCA are as below:

Land acquisition

- Minimum 90% right of way before issue of appointed date as against 80% earlier, providing more comfort to lenders and developers

- Balance 10% to be granted within 180 days of appointed date, else it would be removed from the scope of work. Automatic de-scoping clause would enable the developer to receive PCOD/COD on the completed stretch and start tolling

- Termination clause if appointed date is not received within one year of concession signing date

Traffic risk

Revenue assessment of project to be done every five years instead of 10 years (or once in a life time of a project) earlier. In case of traffic either exceeding or seeing a shortfall from the target traffic, the concession period would be adjusted accordingly, providing more comfort to lenders and developers

Stuck projects

- In case the project has not achieved COD one year post its scheduled completion date, the project will be mutually foreclosed, and the authority will pay the concessionaire an amount equal or lower of:

  90% of the debt due less insurance cover and

  Value of work done

This will prevent dragging of projects that would lead to time and cost overruns, which was witnessed in the earlier BOT era.

Subdued private participation due to limited financial flexibility witnessing strong revival

Funding constraints and financial stress have thwarted the pace of development in the roads sector. The PPP model for road construction and development acted as a catalyst and provided an impetus to the sector's growth. During fiscals 2008-2012, of the total 10,600 km of national highways completed under the National Highways Development Programme, 50% was funded through the BOT-toll model and 10% through the BOT-annuity model. Rise of PPP in the roads sector has also had some adverse effects. Period of 2007 to 2011 was considered to be the golden age for PPP in the roads sector, wherein the road developers bid aggressively to bag more BOT-toll projects.

In the subsequent years, developers faced viability issues with projects. Issues pertaining to subdued financing, lower traffic, high gearing ratio and delayed execution have stressed their balance sheets. Bidders for PPP toll projects have become limited on account of the said issues. This led to a rise in EPC contracts, but the quality of roads constructed has been usually poor as the EPC contractor has no stake in the roads once these are constructed and handed over to the government. Further, maintenance of roads has been poor after handover to the government, since there is no proper accountability on quality in case of state-owned roads. In case of PPP projects, the developer ensures that the roads are in a good condition for a longer period of time, i.e., the concession period. In the recent years, private participation has revived with the introduction of the HAM model in 2016 and the subsequent favourable changes to the concession agreements in 2020 for the HAM and BOT model.

Delays in project execution and resultant cost overruns

Delays in project execution have posed a major hurdle in the development of the roads sector. Delays lead to significant cost overruns, which lower returns for developers as well as adversely affect their debt-servicing ability. Reasons for delays are numerous and include:

- Issues in land acquisition
- Environmental clearances
- Forest clearances
- Railway clearances
- Shifting of utilities, religious structures and encroachments

It is observed that the duration of delay and cost escalation are on the higher side for projects involving interstate road construction owing to the involvement of different state agencies. NHAI is working towards fast-tracking the resolution of these issues and has established conciliation committees, which target at settling arbitration disputes within 18-20 months (Arbitration Act - amendment in 2019). As per the April 2022 press release, 251 cases have been referred to CCIE and claims worth Rs 387.4 billion have been settled for an amount of Rs 130.6 billion.

Hurdles in bank funding for road projects

Banks are reluctant to fund road sector projects as they are close to the sector exposure limits. Moreover, to ensure delays because of land acquisition do not hinder the progress of a project, they demand 80-100% of the land to be available with the developer at the time the project is awarded. Given the dependence of infrastructure projects on banks for funding, the projects are unable to take off owing to such funding constraints.

Moreover, the stretched working capital cycle in the core construction business of many entities has also strained their liquidity position and increased their dependence on borrowed funds. The operating margins of several road contractors came under pressure because of rising commodity prices (in case of fixed-price contracts) and idling of capacities since execution could not begin on many new projects.

Reluctance to pay toll

Indians have not yet completely accepted the importance of toll for road construction and improvement of service delivery. Also, appeasement of people through provision of subsidies has been a major tool for reaping political gains in the country. There have been several instances of people, backed by political groups, opposing toll plazas. Such instances have not only affected the sentiment of road developers, but also service delivery within the sector.

2.7. Institutional framework for roads

In January 2015, the government replaced the Planning Commission with the National Institution for Transforming India (NITI) Aayog – a multi-tiered structure, providing strategic and technical advice to the central and state governments. At the central government level, several line ministries handle transport planning, coordination and policy-setting, and NITI Aayog coordinates the entire effort.

Outlay for core infrastructure ministries (Budget documents – July 2024, in multiple of Rs. 100 million)

Ministry	FY23A				FY24RE				FY25BE			
	GBS	IEBR	GIA	Total	GBS	IEBR	GIA	Total	GBS	IEBR	GIA	Total
Ministry of Railways	159,256	44,727	-	203,983	240,000	20,000	-	260,000	252,000	13,000	-	265,000
Ministry of Road Transport and Highways	205,986	-	7,495	213,481	264,526	-	8,806	273,332	272,241	-	8,735	280,976
Ministry of Rural Development	-	-	150,296	150,296	4	-	129,142	129,146	4	-	154,829	154,833
Ministry of Urban Development	26,878	16,512	31,829	75,219	26,533	16,789	33,780	77,102	28,626	16,020	39,255	83,901
Ministry of Power	23	57,384	4,894	62,301	124	59,120	13,108	72,352	1,086	67,286	15,291	83,663
Ministry of New and Renewable Energy	13	18,249	4,113	22,375	15	21,355	6,924	28,294	17	30,715	9,273	40,005
Ministry of Water Resources	168	8	4,923	5,099	325	2	7,450	7,776	400	2	13,183	13,585
Ministry of Shipping	678	3,418	410	4,507	1,166	4,319	437	5,922	1,078	5,218	681	6,977
Ministry of Civil Aviation	86	4,442	1,389	5,917	772	3,428	711	4,910	99	3,448	359	3,906
Department of Atomic Energy	13,832	10,063	770	24,665	15,004	9,161	1,010	25,175	13,861	10,779	806	25,446
Infra capex	406,921	154,802	206,119	767,843	548,469	134,173	201,368	884,010	569,413	146,467	242,411	958,292

GIA: General Grant-in-aid, GBS: Gross Budgetary Support, IEBR: Internal and Extra Budgetary Resources, BE: Budget Estimate, RE: Revised Estimate, A: Actual.
Source: Budget documents-July 2024, CRISIL MI&A Consulting

Roads and highways

- The overall gross budgetary outlay for the Ministry of Road Transport and Highways doubled from Rs 1,280,000 million in fiscal 2019 to Rs 2,640,000 million in fiscal 2024RE. Against this backdrop, the growth rate of roads and highways capex for the next fiscal has moderated sharply, only 3% higher vis-à-vis fiscal 2024RE. Similar to the previous fiscal, the entire allocation of Rs 2,720,000 million would be via gross budgetary support since the internal and extra budgetary resources limit has been completely eliminated to reduce the NHAI's dependence on market borrowings. On the other hand, the asset monetisation target has increased from Rs 100,000 million in fiscal 2024RE to Rs 150,000 million in fiscal 2025BE. To be sure, in 9M fiscal 2024, the NHAI has been able to monetise ~Rs 160,000 million, which bodes well for the divestment target set out for fiscal 2025. This assumes greater significance as roads account for close to

30% of the National Monetisation Plan (NMP) targets and healthy progress in monetisation of road assets is imperative to achieve the same

- The budgetary allocation of Rs 1,680,000 million towards the NHAI for the next fiscal has remained flattish vis-à-vis fiscal 2024RE. The elimination of internal and extra budgetary resources and minimal contribution of cess implies a significantly large portion of the NHAI funding would be met through gross budgetary support

- Furthermore, the NHAI has been aiming to modify the BOT model with fast-tracked clearances to award more projects, since the share of this model has dipped to negligible levels in recent years. Large developers are also likely to be interested in BOT projects amidst dipping profitability in the hybrid annuity model owing to competitive bidding. Notably, if successful, the shift towards BOT could reduce funding burden on the ministry since 100% of the construction cost is borne by the developer in this model

Note: Based on budget document of February 2024

Capital outlay of the Ministry of Road, Transport and Highways

Capital outlay (Rs Billion)	FY16	FY17	FY18	FY19	FY20	FY21	FY22 RE	FY23 A	FY24 BE	FY24 RE	FY25 BE	Growth FY24 RE vs FY23 A
Ministry of Road, Transport and Highways	275	412	508	677	684	892	1213	2171	2704	2764	2780	27%

Source: CRISIL MI&A Consulting

PMGSY allocation for this fiscal (budget estimate) is Rs 120,000 million, down ~37% over fiscal 2023A. However, over the past two years, the achievement ratio under the scheme has been low. Therefore, actual expenditure against the allocation remains a monitorable.

Real Estate: Key Announcements

Increase in the Pradhan Mantri Awas Yojana (PMAY)-Urban target by 1 crore houses, or ~81%, from the previous target of ~1.2 crore houses with planned allocation of Rs 2.2 lakh crore over the next five fiscals. Increase in the PMAY-Rural target by 2 crore houses, or ~68%, from the previous target of ~3 crore houses. Revision in long-term capital gains tax to 12.5% from 20.0% and removal of indexation benefit on sale of real estate properties, in addition to other taxation-related announcements. Urban and rural land-related reforms and actions to be initiated in collaboration with states

Capital outlay of the Ministry

Source: Budget document – July 2024, CRISIL MI&A Consulting

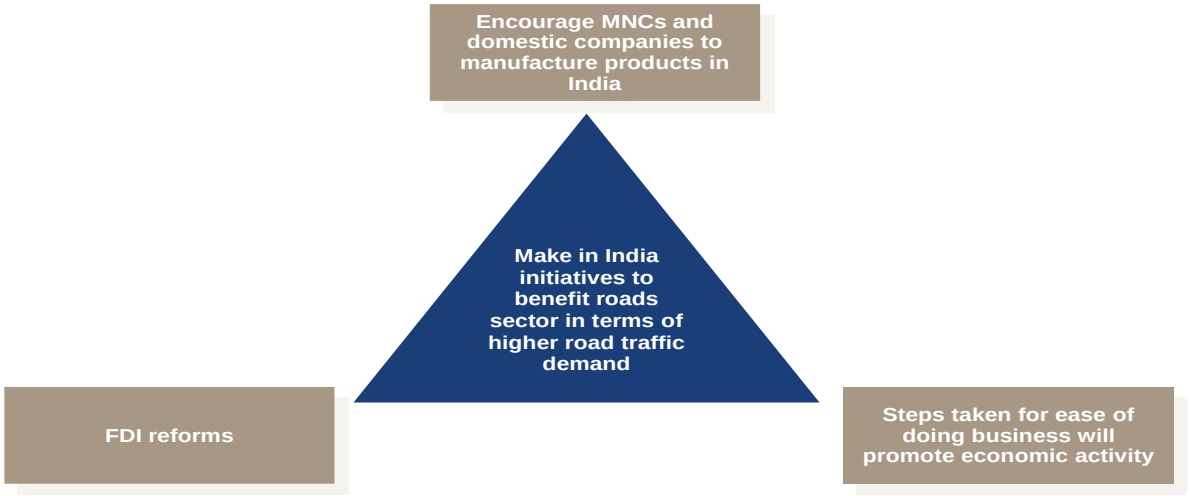
Sr no.	Parameters	FY23A (Rs crore)	FY24RE (Rs crore)	FY25BE (Rs crore)	Growth in FY25BE over FY24RE
1	Pradhan Mantri Awas Yojana–Urban	28,653	22,103	30,171	36%
2	Pradhan Mantri Awas Yojana–Gramin	44,962	32,000	54,500	70%

2.8. Impact of the 'Make in India' initiative on the roads sector

The 'Make in India' campaign, launched in September 2014, covers 25 major sectors, including roads and highways. The initiatives under the campaign, such as encouraging multinational companies (MNCs) to manufacture products in India, taking

steps to improve the ease of doing business, as well as FDI reforms, are expected to benefit the roads sector in terms of increase in traffic movement.

Impact of 'Make in India' on the roads sector



Source: CRISIL MI&A Consulting

Encourage MNCs and domestic companies to manufacture products in India

MNCs and domestic companies setting up manufacturing plants in India will facilitate increase in passenger as well as freight traffic on roads. Following the announcement of the 'Make in India' campaign, the government received several proposals from MNCs interested in manufacturing electronics in India. For instance, Xiaomi, a Chinese mobile phone maker, partnered with Foxconn in August 2015 to manufacture smartphones in a factory in Andhra Pradesh. A few weeks later, Lenovo, a Chinese computer and mobile phone maker, announced its plans to manufacture smartphones in India at its Chennai plant.

Steps to improve ease of doing business will promote economic activity

The measures undertaken for ease of doing business will promote economic activity and, thereby, boost road traffic demand. Some of these key measures are:

- Applications for environment and forest clearances are to be submitted online through the Ministry of Environment and Forests and Climate Change portals
- Application forms for industrial licence (IL) and industrial entrepreneur memorandum (IEM) have been simplified
- Applications for IL and IEM are to be submitted online
- The eBiz portal has integrated 20 services and will function as a single-window portal to obtain clearances from various governments and government agencies
- The Ministry of Labour and Employment has launched a unified portal to register units for Labour Identification Number (LIN), report inspections, submit returns, and for grievance redressal

Overview of government initiatives

New tolling policy (2011)

Toll act

The central government is authorised to levy a fee (toll) under Section 7 of the National Highways Act, 1956, for public-funded projects and under Section 8-A of the said Act for private investment projects. The government can levy fees on all sections of national highways (irrespective of four or two lanes), tunnels, bypasses, and bridges with specific cost criteria.

Fee structure

Toll charges are based on rates notified by the government. The fee for use of a section of national highways with four or more lanes for the base year fiscal 2008 shall be the product of the length of such a section multiplied by the rates specified hereunder.

Toll rates for four-lane national highways

Vehicle category	Rs/ km
Car, jeep, van, light motor vehicle	0.65
Light commercial vehicle	1.05
Bus or truck	2.2
3-axle commercial vehicle	2.4
Heavy construction machinery, multi-axle vehicles (MAV) with 4-6 axles	3.45
Oversized vehicles with 7 axles or more	4.2

Source: PIB, CRISIL MI&A Consulting

The rates, which will be revised every year, will be an aggregate of the following rules effective April 1, 2016:

- Increase of 3% without compounding (on base rates of fiscal 2008)
- Compared with the previous year, 40% of the increase in wholesale price index (WPI)

In previous years, the toll rates were fully linked to the WPI, which led to numerous case where WPI would become negative. The current method of toll rates has been beneficial for private players.

Other features of the new tolling policy include the following:

- Uniform rates for public- and private-funded projects
- Fee for a permanent bridge, bypass, or tunnel costing Rs 0.10 billion or more and that of NH length will be calculated separately

In 2013, 2014, 2015, 2019, 2020, and 2022 some amendments were made to the National Highway Fee (determination of rates and collection) Rules 2008, as follows:

- In the case of a four-lane highway being upgraded to a six-lane one, the increase in rate shall be limited to 75% of the fee specified, revised as per the applicable rules calculated on and from the date of commencement of upgrade-related work to the date of completion of the project, according to the agreement entered into with the concessionaire without any annual revision
- In certain cases, fee collection is started when the project is 75% complete, but the fee is applicable only to 75% of the operational length
- No user fee shall be levied on the delayed period between the date of completion as per the agreement entered into with the concessionaire and the date of actual completion of the project. For the purposes of this rule, any provisional completion shall not be treated as completion of the project.
- The tolls rates are calculated on the basis of the road length, excluding bypass (costing more than 100 million) and structures (more than 60 metre). The road length fee is payable at 100% of the applicable rate for four lanes and at 60% for two lanes with paved shoulders
- Bypass (costing more than 100 million) length fee is payable at 150% of the applicable rate for four lanes and at 90% for two lanes with paved shoulders
- Structure (costing more than 100 million) length fee is payable at 100% of the applicable rate for four lanes and at 60% for two lanes with paved shoulders

- Commercial vehicles registered within the district are tolled at 50% discount, and local non-commercial vehicles are issued a monthly pass for a certain amount

- The rate of fee for use of an expressway shall be 1.25 times the rate specified in the applicable rule

- The rate of fee for private investment projects shall be as specified under the applicable rule or as the concessionaire may determine by issuing a public notice to users

- The following method is used to calculate the rate of fee for highways/expressways with standalone structures and structures forming part of linear highways/expressways:

  Length of the structure* (L) X Factor "10" = Length in metres

  ** Structure of 60 metres of length or more*

- To calculate fee for a linear highway/expressway, structures will be considered a part of the normal length of highways/expressways

- In the December 2013 amendments, the NHAI empowered the concessionaire to collect 10 times the applicable fee from overloaded vehicles. The December 2015 amendments allowed the concessionaire to stop vehicles plying on National Highways unless they cleared their dues. Any vehicle loaded in excess of its maximum permissible gross vehicle weight (GVW) is not permitted to use the National Highway or cross the toll plaza until the excess load is removed or a fee of 10 times the applicable amount is paid. Moreover, the concessionaire can detain the vehicle until all dues are cleared.

- On 25th September 2018, MoRTH has modified the overloading norms, and it states that user of vehicle shall be liable to pay fee, for entering the overloaded vehicle on the national highway, to the user fee collecting agency, equal to fees slabs as mentioned below:

Percentage of excess load over Maximum Permissible Gross Vehicular Weight	0 to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80%
Multiplying factor to base rate of fees	2 times	4 times	6 times	8 times	10 times

- The May 2018 amendment stated that if a vehicle user with a valid, functional FASTag or any such device with sufficient balance in the linked account crossing a fee plaza installed with Electronic Toll Collection infrastructure is not able to pay the user fee through FASTag or any such device because of malfunctioning of Electronic Toll Collection infrastructure, the vehicle user shall be permitted to pass the fee plaza without payment of any user fee

- In the National Highways Fee (Determination of Rates and Collection) Rules, 2008, in rule 11, in clause (e), the word "disability" should be replaced with "DIVYANGJAN"

- The fee payable towards discounts shall be paid through pre-paid instruments, smart card or through FASTag or on-board unit (transponder) or any other such device

- The executing authority or the concessionaire, as the case may be, provide for multiple journeys to cross a toll plaza within the specified period at the rates specified

- The words "may opt for such pass" shall be omitted

- "A person who owns a mechanical vehicle", the words, "with valid functional FASTag," shall be inserted

- "A person who owns a commercial vehicle (excluding vehicle plying under National Permit)", the words "with valid functional FASTag," shall be inserted.

- User of the vehicle not fitted with "FASTag" or vehicle without valid, functional "FASTag" entering into "FASTag lane" of the Fee plazas shall pay a fee equivalent to two times of the fee applicable to that category of vehicles

- closed user fee collection system means a system under which the fee is levied based on the actual distance travelled by a mechanical vehicle, on a national highway or expressway

- the executing authority or the concessionaire may establish fee plaza on the national highway or expressway on which the closed user fee collection system has been installed

- Provided further that no such concession shall be provided for commuting on a national highway or expressway on which fees is levied based on the closed user fee collection system.

Financial incentives for road developers

- Under section 80 IA of the Income Tax Act, profits and gains derived by an undertaking are subject to 100% deduction for 10 consecutive assessment years out of 20, beginning from the year in which the undertaking begins to operate the business, provided such profits and gains are derived from the business of: 1) developing, 2) operating and maintaining, or 3) developing, operating, and maintaining a road, including tolls and bridges, a highway project including housing or other activities being an integral part of the highway project. These criteria shall not apply to any enterprise that starts development or operations and maintenance of the infrastructure facility on or after April 1, 2017, as that enterprise shall be eligible for 100% deduction of capital expenditure under section 35AD

- Import duty has been completely exempted for public-funded needs on certain identified high-quality construction plants and equipment

- Import of bitumen is now permitted under the Open General Licence

- External commercial borrowings are permitted up to 35% of the project cost

2.9. Review and outlook of NHAI funding

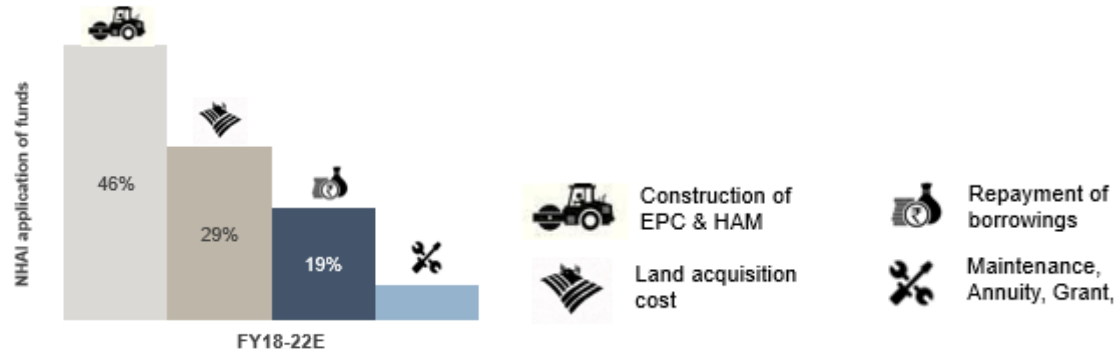
Asset monetisation critical

As per CRISIL MI&A estimates Rs 17-19 trillion will be invested in national highways between fiscals 2023 and 2027, with public funds dominating overall spending. In light of awarding more projects under the HAM and on a cash-contract basis, NHAI is now relying more on external borrowings and asset monetisation. While asset monetisation via TOT and the InvIT route is challenging in itself, raising external funds is increasing the debt to equity ratio of the authority, with repayments forming a large part of NHAI's outflow. Timely asset monetisation is critical for NHAI to meet its ambitious Bharatmala targets.

Due to higher awarding under EPC and HAM, NHAI's outflow toward milestone payments formed ~46% of the total met through market borrowings.

Of the Rs 5,000-6,000 billion spent over the last five years (fiscals 2018-2022), 46% was toward milestone payments for EPC and HAM (40% for HAM) projects, while ~29% was toward land acquisition expenditures and 19% toward interest and repayment of borrowing.

NHAI application of funds: 46% of NHAI outflow towards construction

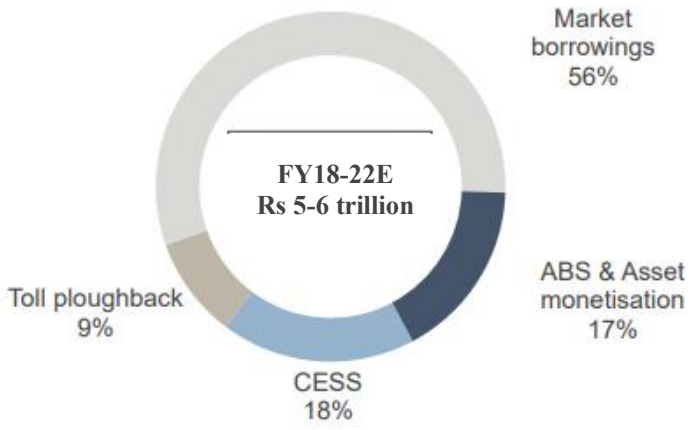


~Rs 5-6 Trillion
~FY18-22E

E: Estimated
Source: NHAI, CRI

While toll plough-back and CESS (budgetary allocation) contributed 18% and 9%, respectively, to the sources, the maximum amount (56%) of NHAI's funding came from market borrowings. Additional budgetary support and asset monetisation were 17% of total amount. With NHAI's requirement expected to increase amid ambitious construction targets, additional support via monetisation are critical for future requirements.

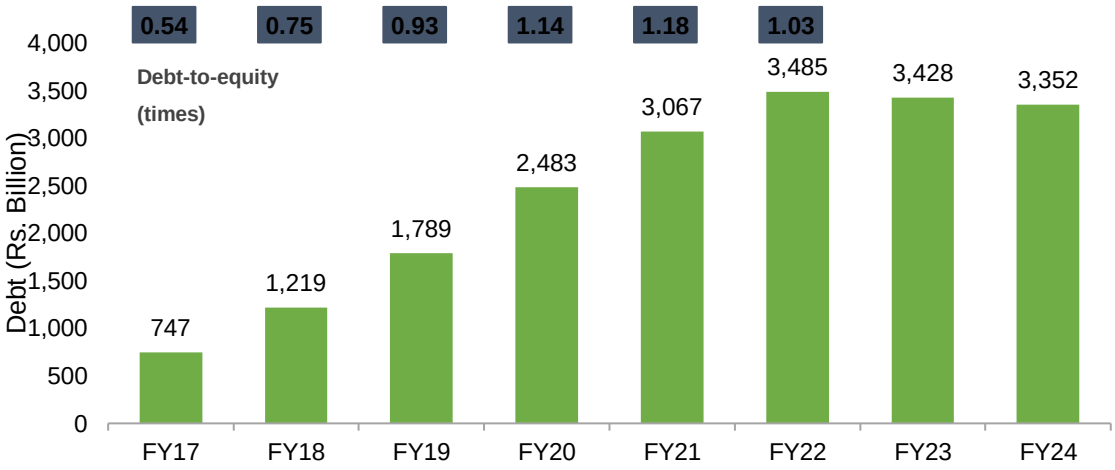
NHAI sources of funds: market borrowings accounted for 56%



Source: NHAI, CRISIL MI&A Consulting

Owing to the high dependence on market borrowings to fund asset creation through EPC and HAM projects, NHAI's debt-to-equity ratio rose to 1.2x in fiscal 2021. Due to the reduction in dependence on external borrowings, NHAI's leverage position saw a sharp improvement. The entity's debt-to-equity ratio dropped from 1.2x in FY21 to 0.75x as of December 2022, attributable to NHAI's strategic importance to the government and the road sector being a key area of reform to eliminate infrastructure bottlenecks and ensure a source of momentum for economic growth. Hence, the sector is witnessing the implementation of significant initiatives, such as the BMP project.

NHAI's borrowings reduce



Source: NHAI PIB - 25 July 2024, CRISIL MI&A.
Note: Debt-to-equity ratio data for fiscals 2023 and 2024 is unavailable.

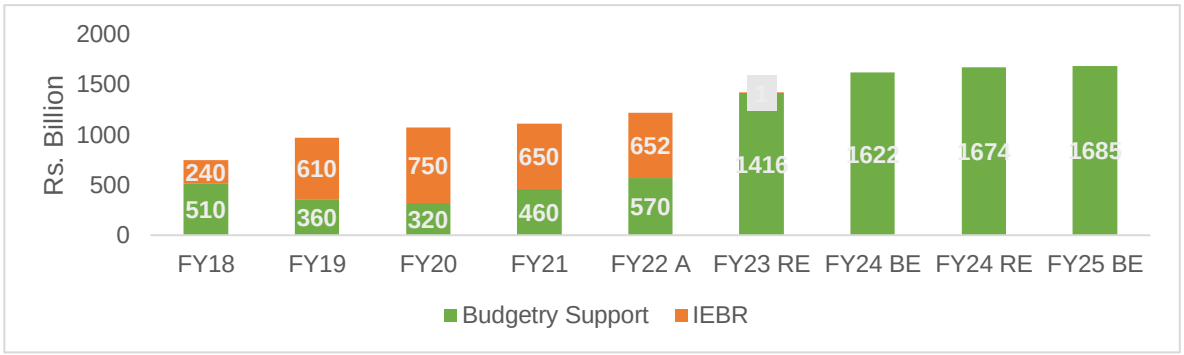
To limit the rise in borrowings, NHAI's budgetary support in the form of cess and toll plough-back increased 106% for fiscal 2023 (budgeted), with nil IEBR. The trend continued in fiscal 2024 wherein the IEBR continued to be nil in the budgeted estimates for fiscal 2024. The overall support to NHAI marked a 13% increase over the revised estimate for fiscal 2023. A NHAI press release of August 6, 2024, stated that in a major step to reduce its overall debt liability, the entity achieved a significant financial milestone with the successful pre-payment of bank loan amounting to Rs 157,000 million. Retiring this debt ahead of schedule will result in an estimated interest savings of ~Rs 10,000 million. With this pre-payment, the outstanding debt liability of NHAI dropped to ~Rs 3,200,000 million.

The government directs InvIT monetisation proceeds to be exclusively used for NHAI debt repayment. In fiscal 2024, Rs 157,000 million was generated through InvIT. In fiscal 2025, NHAI intends to monetise projects worth Rs 150,000 – 200,000 million through InvIT. With this, the overall debt liability of NHAI is expected to further reduce to ~Rs 3,000,000 million by the end of fiscal 2025.

As part of the robust debt payment plan and use of InvIT monetisation proceeds, NHAI actively engaged with lender banks to reduce interest rates. As a result, banks reduced their interest rate from 8.00-8.10% to 7.58-7.59%. In this process, bank loans where interest rates could not be reduced have been repaid Rs 157,000 million and this will result in significant interest savings of around Rs.10,000 million.

Budgetary support to NHAI up 14% vis-a-vis revised estimates of fiscal 2023, IEBR nil in fiscal 2024 budget.

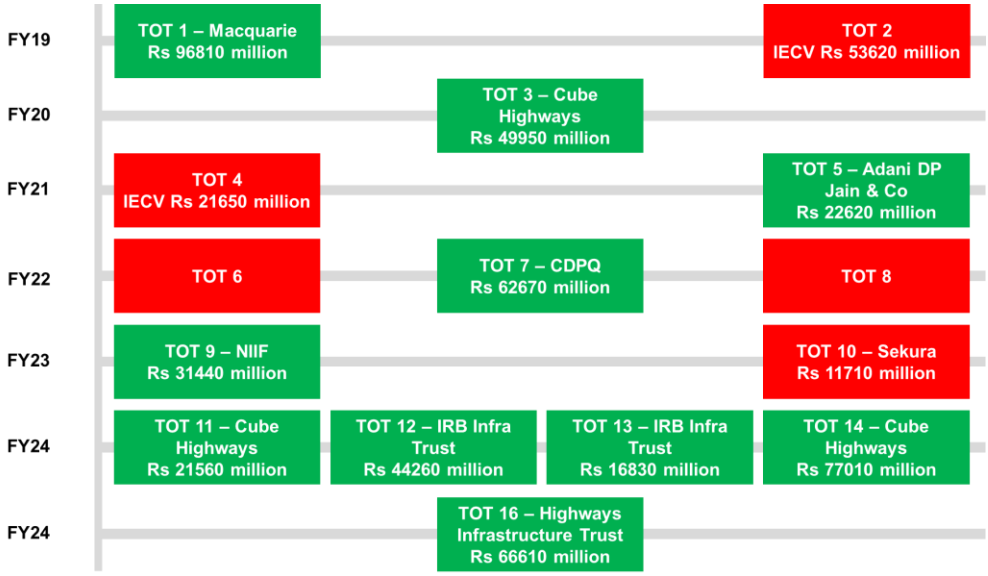
IEBR done away with in FY23 budget



Source: Budget documents, CRISIL MI&A Consulting

Other modes of funding such as TOT have seen only limited success. With the implementation of Fastags, TOT becomes more attractive as its able to eliminate cash handling and plug leakages in the system. However, of late, the awarding of TOT bundles have encountered impediments with certain TOT bundles like TOT-6, TOT-8 and TOT-10 getting cancelled due to low bids. While NHAI annulled the original bidding process for TOT bundles 11 and 12 due to low valuations, they were subsequently able to successfully award these bundles in the second round of bidding during FY24. During FY24, NHAI has also successfully awarded TOT bundles 13 and TOT 14. Also, NHAI has invited bids for TOT bundles 15, 17, 18 and 19. Bidding process of TOT 16 is completed, and Highway Infrastructure Trust has emerged as highest bidder for TOT Bundle 16. The convergence of the expectations of the government authorities and the private bidders remains a key monitorable as well as a major requirement for this mode of funding to become truly successful.

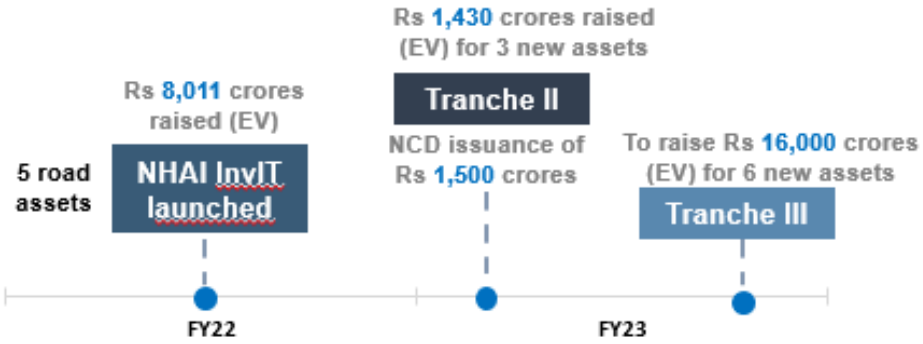
Success of TOT critical to meet ambitious Bharatmala targets



Source: NHAI, CRISIL MI&A Consulting

The authority has also tied up debt via SPVs level funding for the Delhi-Mumbai expressway where it has already raised Rs 97.31 billion.

InvITs and SPV level financing



Source: NHAI, CRISIL MI&A Consulting

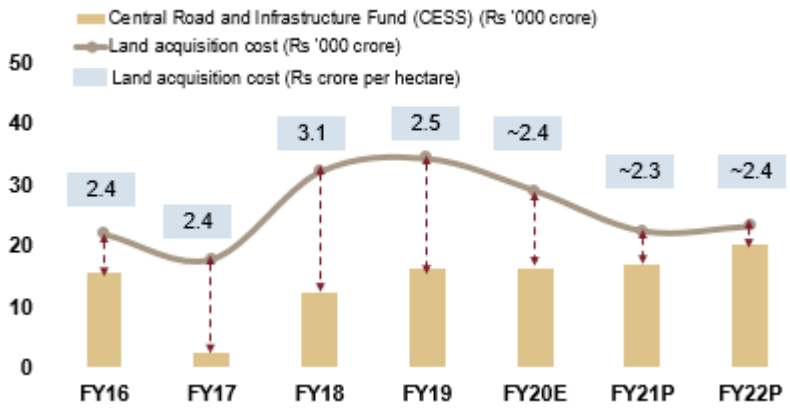
NHAI focuses on clearing land acquisition issues

Historically, cess was allocated towards land acquisition expenditure incurred by the NHAI. After the enactment of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, the shortfall in funds to meet the expenditure widened. However, with the authority's focus on clearing these issues and on new greenfield alignments, the issues plaguing land acquisition have reduced.

In the Union Budget for fiscal 2019, road cess was replaced by the Central Road and Infrastructure Fund (CRIF). Previously, road cess was split based on a fixed formula used and utilised for national highway construction, maintenance, railways, Pradhan Mantri Gram Sadak Yojana, etc. So far, there has been no change in the split. However, going forward, the share of cess for the roads sector could reduce given the increase in the overall scope from roads to roads and infrastructure, increasing dependence on borrowings.

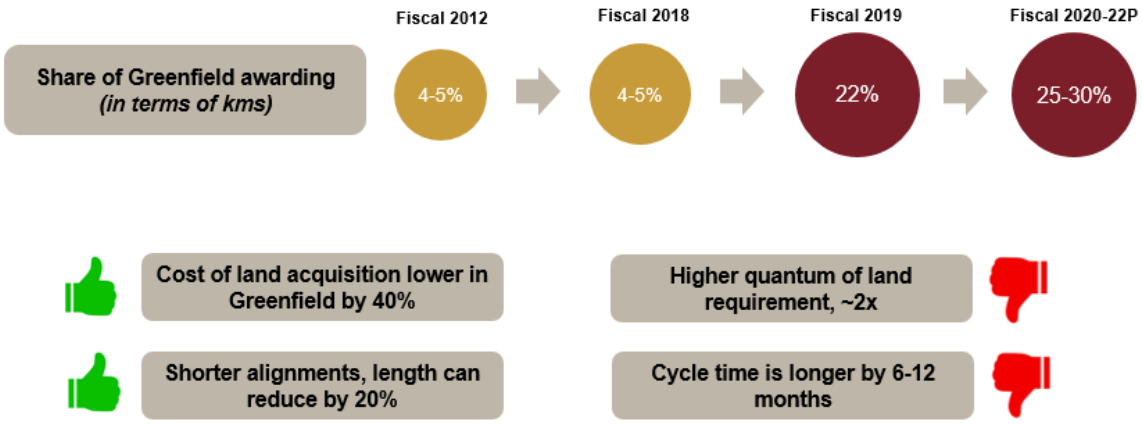
The compensation policy under the current land acquisition law requires the NHAI to pay four times the market value for rural land and two times for urban land. This and the new rehabilitation and resettlement Act have almost tripled land acquisition costs. In fiscal 2014, the average cost for acquiring land was Rs 9 million/ha. It increased to about Rs 30-32 million/ha in fiscal 2019 and declined to Rs 24-25 million/ha in fiscal 2020.

Cost for Land acquisition for the authority has come down since FY20



Source: NHAI, CRISIL MI&A Consulting

Greenfield projects offer support:



Source: NHAI, CRISIL MI&A Consulting

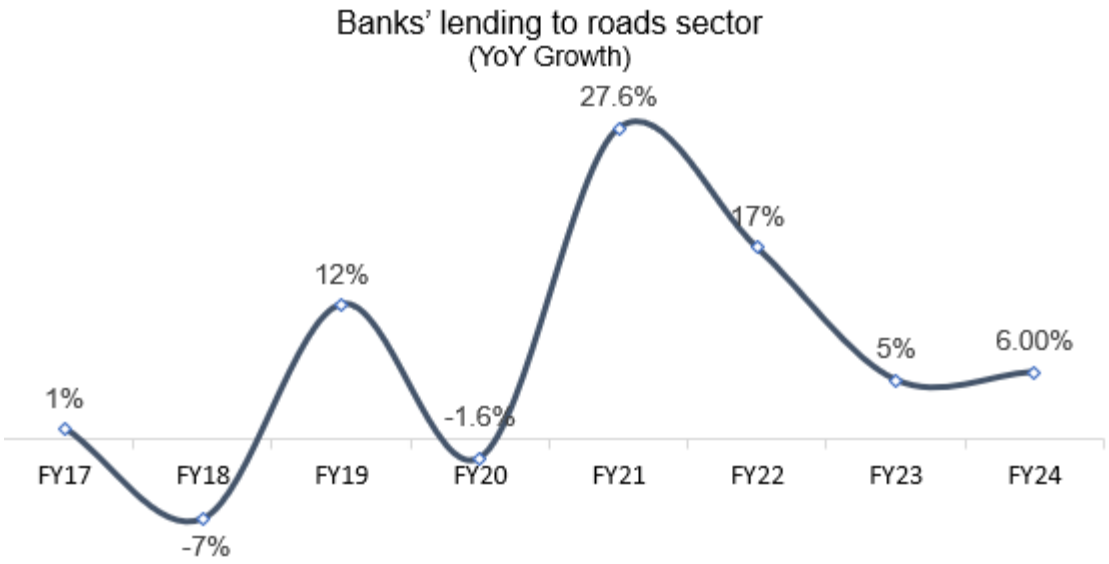
The share of greenfield road projects in awarding has been increasing consistently in the past few years driven by Bharatmala. As per CRISIL MI&A estimates, the share of greenfield projects in awarding was above 25% in the last few fiscals. The increase in the share of greenfield projects lowers the cost of land acquisition by 40%, compared with brownfield projects. Also, these greenfield projects come with shorter alignments and 20% shorter length. That said, a key drawback of greenfield projects is the cycle time, which is longer by 6-12 months, compared with brownfield projects, because of higher design time.

Improvement in bank credit growth led by higher HAM execution

After a dip in fiscal 2020, bank lending to the roads sector staged a healthy recovery and grew by 27% yoy owing to higher awarding and higher construction. The traction continued in fiscal 2022 as well with lending to the sector witnessing a robust growth of 17% yoy. In fiscal 2023, the growth momentum has moderated due to the high base with the on-year growth rate for the year standing at 5%. At the end of fiscal 2023, the outstanding bank credit to the roads & highways sector stood at Rs 2.9 trillion.

For projects that were awarded in fiscal 2012, banks approved costs that were much higher than those approved by the National Highways Authority of India (NHAI). As a result of the problems faced in these projects, bankers are now very cautious while evaluating projects and are estimating project costs much closer to the NHAI estimates. They demand that at least 80% land acquisition should be completed, and all clearances must be obtained at the beginning. While this has increased the time taken by players to achieve financial closure, it will ensure participation only by serious players. However, viable projects and those that have not gone through aggressive bidding should achieve financial closure quite smoothly.

Bank credit growth to the roads sector moderated in fiscal 2024 due to the high base



Source: RBI, CRISIL MI&A Consulting

2.10. Investments in National Highways: Review and outlook

NHAI awarding to revive in fiscal 2025, share of BOT to increase substantially

National Highways Authority of India (NHAI) awarding has witnessed a rise from merely 2,222 km in fiscal 2019 to 6,003 km in fiscal 2023. Fiscal 2021 was a pivotal year since despite the COVID-induced disruptions, the NHAI awarded 4,818 kms in which was a three fiscal high back then. Additionally, favourable changes in the BOT and HAM agreements, and relaxation of bidder eligibility criteria not only indicated a clear policy shift to improve private-sector participation but also aided the spurt in the HAM awards. In fiscal 2023, NHAI's awarding volume remained above the 6,000 km mark for the second consecutive year as 6,003 km was awarded during the fiscal year. The share of HAM in awarding increased slightly from 54% in fiscal 2022 to 56% in fiscal 2023. On the other hand, the share of EPC remained unchanged at 43%.

In fiscal 2024, awarding momentum has been marred by various roadblocks. NHAI's flagship Bharatmala Pariyojana Programme (BMP) Phase-1 has witnessed significant cost overrun on account of costlier land acquisition and high inflation. Notably, as per CAG audit report, while only 75% of the estimated project length has been awarded, 158% of the original estimated financial cost has already been expended. Currently, the estimated cost of the BMP phase-1 is almost twice and the initial estimate and the ministry is awaiting cabinet approval for a revamped programme and additional funds in order to undertake rapid awarding of projects in the pipeline. As a result, NHAI awarding was ~3,339 kms in fiscal 2024. Notably, the share of HAM dipped significantly due to the aforementioned issues regarding the BMP. Going forward, the share of HAM is expected to revive to around 25-30% in fiscal 2025. Further, on account of amendments in the BOT MCA, the awarding under the BOT model is also likely to increase substantially. This is likely to be supported by the interest of developers in the revamped BOT model due to the following factors:

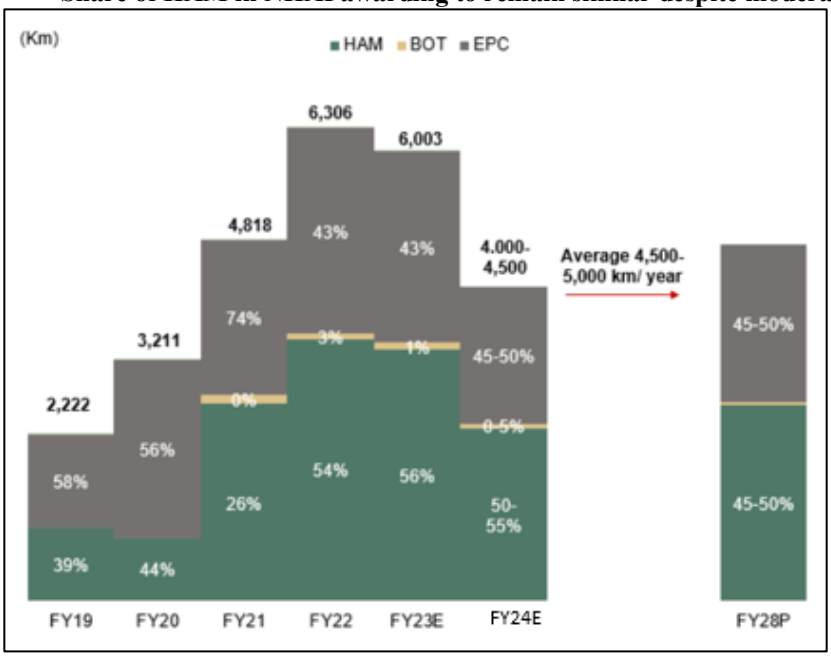
- HAM was favored by the road developers due to lower risk and higher profitability. However, the competition in HAM awarding has increased substantially leading to average bid premiums tumbling from a peak of 15-20% to around 4-6% in the last few fiscals. As a result, the share of the larger developers have dropped substantially since many large developers have refrained from bidding aggressively for HAM projects in order to protect their margins. Given the amendment in BOT MCA and the scope of higher profitability due to lower bidding competitiveness in the BOT space many large developers are keen on taking up BOT projects.

- Furthermore, owing to the healthy balance sheets the developers are also in a comfortable position to undertake BOT projects with high funding requirements.

- The increased traffic visibility vis-à-vis earlier years also augurs well for the BOT projects.

The shift towards the BOT model comes against the backdrop of NHAI facing funding challenges and moderation in growth in the central government's budgetary outlay towards the roads & highways sector. Thus, the shift will have a two-pronged benefit by not only alleviating funding challenges to a great extent but also increasing the private investments in the sector.

Share of HAM in NHAI awarding to remain similar despite moderation in awarding momentum



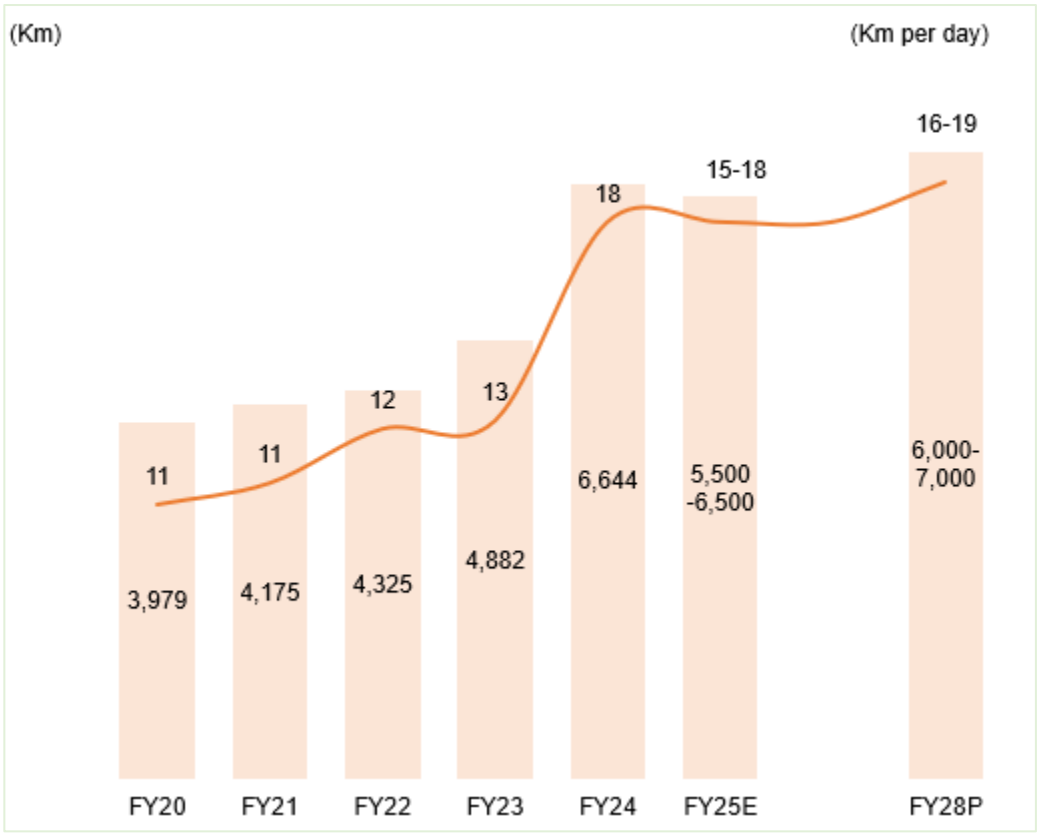
P: Projected
Sources: NHAI, CRISIL MI&A Consulting

NHAI execution is also rising steadily with focus on swifter execution

Even though overall national highways construction at the MoRTH level remained flattish in fiscals 2022 and 2023, NHAI execution witnessed strong momentum. NHAI execution sequentially rose from 4,175 km in fiscal 2021 to 4,882 km in fiscal 2023. Acceleration in project awards, sharper focus on resolving land acquisition issues, and the 'Atmanirbhar Bharat' initiatives to ease liquidity (monthly milestone payments, release of retention money, reduction in performance security & extension of 3-6 months in milestones & SCODs) for EPC road players augured well for the pace of execution of NHAI projects.

Higher awarding of the previous and many of those projects receiving appointed dates in a timely manner have further boosted NHAI execution in fiscal 2024. As a result, 6,644 km of NHAI projects were executed during the year. In other words, the construction per day stood at around 18 km. Given the healthy orderbooks of the developers, the momentum in the pace of execution is likely to continue in fiscal 2025 as well. CRISIL MI&A Research expects NHAI execution to be between 5,500-6,500 km in fiscal 2025. Over the medium term, the pace of construction is expected to rise steadily to reach ~19 km per day by fiscal 2028.

NHAI's pace of construction rising steadily with continued focus on swifter execution



Source: NHAI, CRISIL MI&A Consulting

Policy push boosted HAM share in awarding

NHAI awards roads and highway projects under:

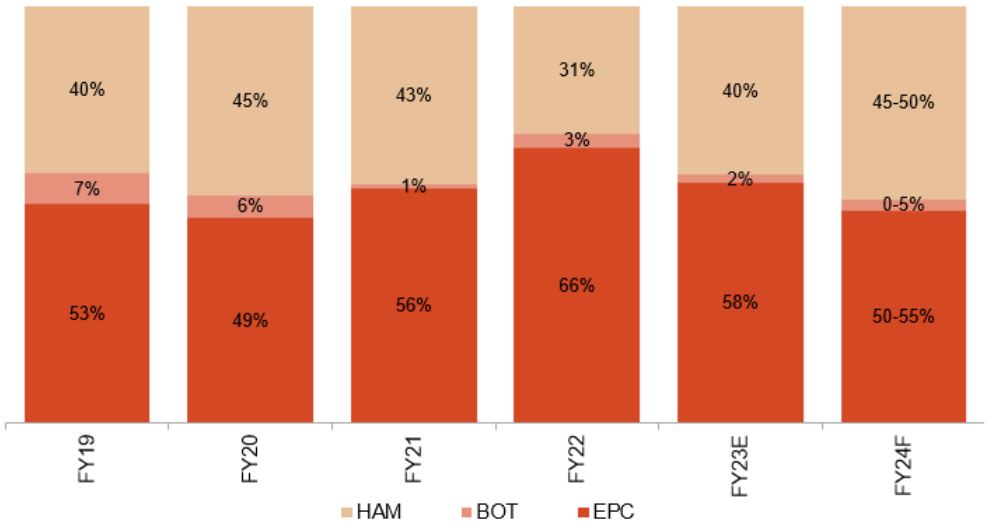
- EPC
- BOT
- HAM

Incorporating multiple suggestions from various stakeholders, the ministry and NHAI amended certain parameters in the HAM MCA in October 2020. These were largely aimed at protecting developers' returns and ease their liquidity.

On the back of the higher HAM awarding, CRISIL MI&A's estimates of split for the NHAI capex mix indicates that the share of HAM in NHAI capex is expected to rise. However, given that EPC has also cornered a large share in awarding in the previous fiscals, its share in NHAI capex is expected to remain at ~50-55% in fiscal 2024. Overall, the share of public funds in NHAI investments is likely to hover around the 70% range. Therefore, NHAI funding would remain critical to sustain the sector forward.

As capex under EPC and HAM remains high, public funds are burdened

(NHAI Capex Mix)



P: Projected
Source: NHAI, CRISIL MI&A Consulting.

Number of highway lanes increased over past five fiscals

The NHAI has also focused on increasing the number of lanes on national highways. Single lane roads decreased to 21% in fiscal 2016 from 32% in fiscal 2015, while two-lane roads increased to 56% from 47%, and four-lane roads to 25% from 12%.

Lane-wise break-up of national highways

Width of carriage way	FY12		FY13		FY14		FY15		FY16		FY19		FY23	
	Km	%	Km	%	Km	%	Km	%	Km	%	Km	%	Km	%
4 Lane & above	17,700	25%	19,128	24%	18,372	20%	21,201	22%	24,705	25%	31,067	23%	46,179	32%
Two-lane	38,536	54%	40,658	51%	45,399	50%	45,701	47%	55,603	56%	65,123	49%	85,096	58%
One-lane	15,536	22%	19,330	24%	27,516	30%	31,089	32%	20,703	21%	36,310	27%	14,870	10%
Total	71,772	100%	79,116	100%	91,287	100%	97,991	100%	1,01,011	100%	1,32,500	100%	146,145	100%

Note: Data between FY19-FY23 (excluding both years) is not available
Source: PIB, MoRTH

Few HAM projects terminated due to land acquisition issues

Even though execution of HAM contracts has picked up, delays with regard to appointed date persists. In fact, a few of these projects have also been terminated.

Terminated HAM projects

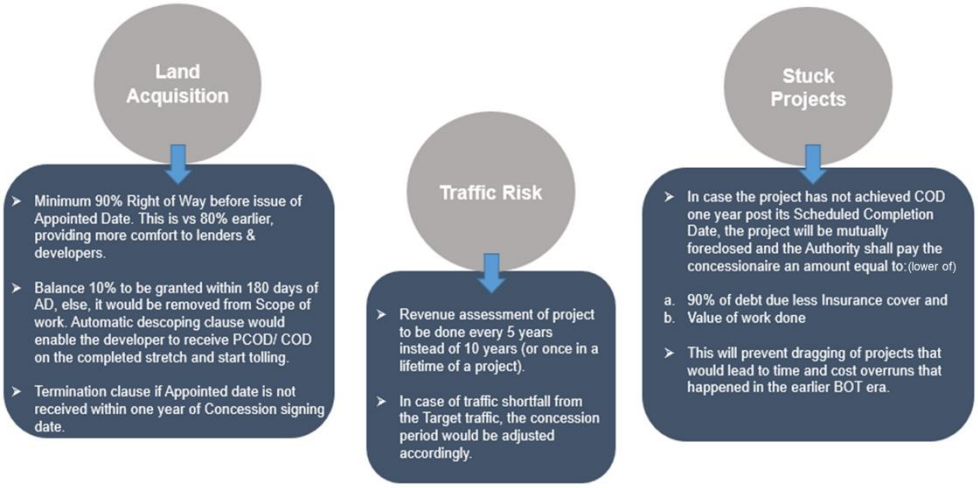
Name of asset	Concessionaire	Termination effective
Vizag Port road	Sadbhav Infrastructure	Jul-2019
Meensurutti to Chidambaram	KNR Construction	Apr-2019
Puducherry-Poondiyankuppam Highway	IRB Infrastructure	Nov-2019
Poondiyankuppam-Sattanathapuram	IRB Infrastructure	Nov-2019

Source: Company report, CRISIL MI&A Consulting

Changes in BOT MCA introduced

In an effort to improve private participation via the BOT-toll mode, the NHAI and the ministry introduced changes to the BOT MCA, aimed at addressing key issues, such as land acquisition, revenue assessment in case of traffic shortfall and stuck projects.

BOT MCA revamped to revive interest in the model



Source: MoRTH, NHAI, CRISIL MI&A Consulting

Contractual reforms provide clarity and address some key issues

The ongoing reforms in contract structures represent a significant stride towards addressing critical issues within the construction sector. These reforms aim to mitigate execution delays by granting access to 90% of the construction zone on the appointed date. Additionally, proactive measures, including early intervention to rectify emerging issues, closer monitoring of escrow accounts, and the implementation of new monthly reporting formats, are expected to enhance progress tracking and provide lender protection in the event of concessionaire default during the construction phase. The recent modifications in the Model Concession Agreement are designed to safeguard against potential traffic diversion due to competing roadways. Notably, provisions allowing for a 10%

incremental increase in the concession period, in contrast to the original 20%, offer additional protection against lower-than-anticipated traffic volumes. These adjustments are particularly pertinent given the current network expansion and the emergence of competing multimodal developments. However, there remains a crucial market requirement for better delineation of competing roadways. The inclusion of a clause mandating authority buyback in the event of capacity breaches over consecutive years serves to mitigate risks associated with traffic spikes and ensures timely capacity augmentation, albeit with limitations on potential upside. Furthermore, the reforms address various issues responsible for project disputes and investor apprehension. Clarity on compensation amounts in the event of authority default or force majeure events, as well as transparent methodologies for cost calculations and debt reconciliation, serve to remove ambiguities and foster investor confidence.

Healthier stakeholder ecosystem may reignite private sector interest

A revitalized stakeholder ecosystem is poised to rekindle private sector interest in infrastructure projects. Developers have experienced improved operating cash flows and achieved crucial project milestones, resulting in unlocked capital and bolstered balance sheets through project monetization. This, coupled with enhanced developer credit profiles and lender-friendly measures, is expected to stimulate a robust financing environment among lenders. While previous Build-Operate-Transfer (BOT-Toll) bids attracted interest from a pool of 7-9 bidders, the introduction of toll-operate-transfer (TOT) mechanisms has broadened the potential bidder pool significantly. In the past five years alone, the TOT framework has attracted nearly 19-20 bidders. With experience in toll asset operation, some of these entities may explore opportunities to undertake construction risk, albeit selectively, focusing on projects with promising returns and under a sound contractual framework.

The bankability imperative

Ensuring the bankability of projects is crucial for attracting private risk capital into BOT-Toll ventures. These projects must exhibit strong traffic potential, sustainable traffic growth prospects, and minimal competition from alternative routes. Leveraging data and analytics, particularly from sources like FASTag and e-way bill data, is imperative to identify optimal project alignments with favourable traffic profiles within the BOT-Toll model. Moreover, securing funding through a prudent capital structure is essential for maximizing the benefits of the revamped BOT-Toll contract framework. As the NHAI adopts a revised financing approach, combining a revamped BOT-Toll strategy with its existing EPC-HAM model, there is cautious optimism that this approach will reignite private sector interest in infrastructure projects.

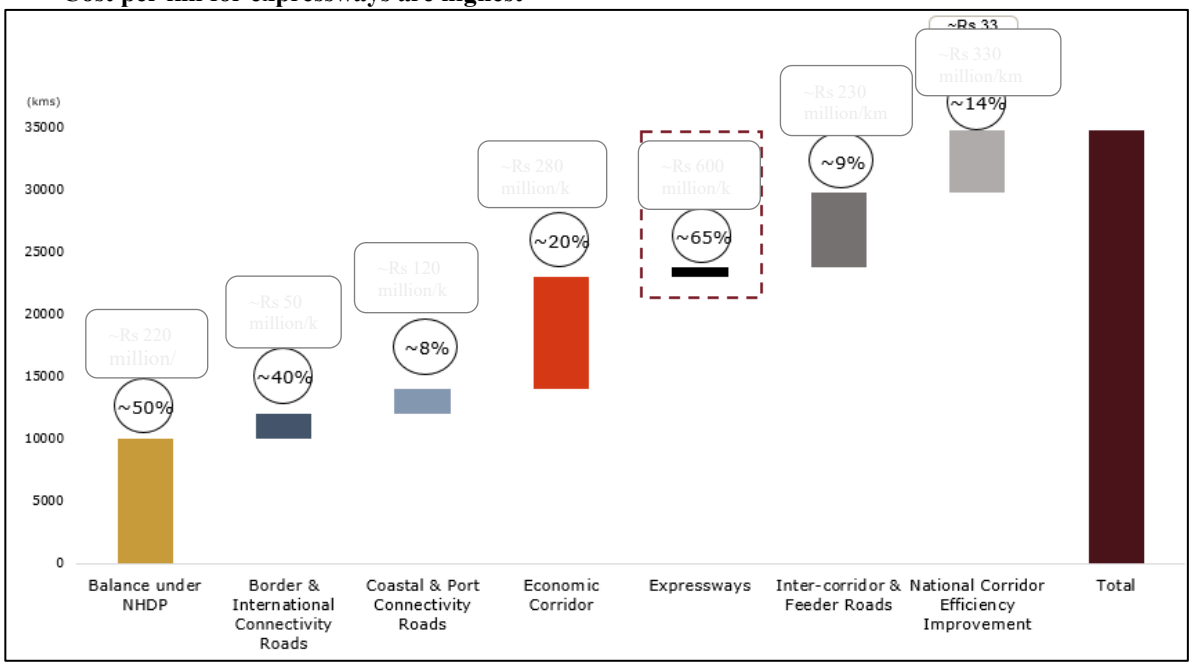
Amendments to EPC contracts effective November 2018

Key implications	Progress
To enable quicker execution by increasing the obligation of the authority	Deadline for approval/ clearance for forest area or a sanctuary lowered to 180 days from 240 days
	If appointed date is not received within 90 days of signing the agreement, the contract can be terminated. Here, the authority will pay contractor damages to the tune of 1% of the contract price to the contractor
Ensure effective competition and focus on timely project completion	If the project is not completed within 90 days of Scheduled Completion Date (SCD), the contractor will be ineligible to bid for projects till it is completed
Increase in working capital requirement for contractors	The interest on mobilisation advance paid to the authority was increased. Earlier recovery of mobilisation advance. Also, release of retention money against bank guarantees has been discontinued
Increased maintenance obligation of the contractor	Compensation has been lowered and tenure for maintenance by the contractor increased – defect liability period raised to 10 years from 4 years

Bharatmala Phase 1 awarding has focused on expressways; likely to stretch till fiscal 2025

Bharatmala Pariyojana is an umbrella project introduced by the central government in 2015 to improve the efficiency in the roads sector. It is expected to supersede the National Highways Development Project (NHDP), and envisages the construction of 65,000 km of highways under the following categories: national corridor roads (north-south, east-west and Golden Quadrilateral), economic corridor roads, inter-corridor roads and feeder roads. As per the ministry, Bharatmala, along with incumbent schemes, would require a total outlay of Rs 6.9 trillion.

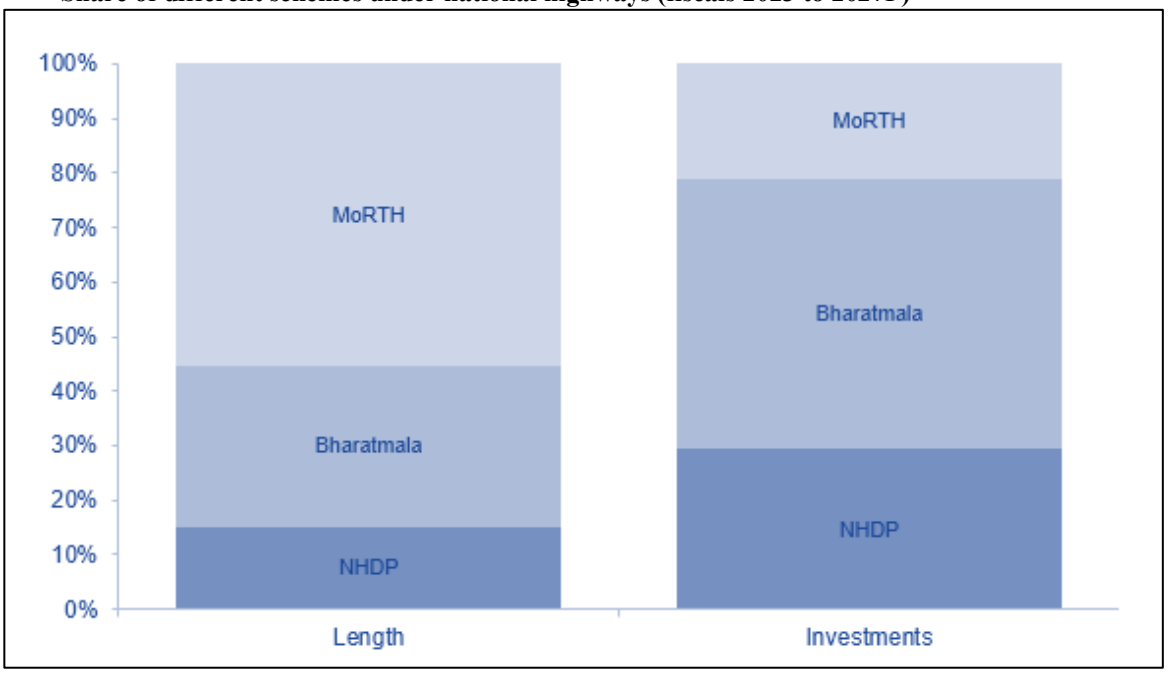
Cost per km for expressways are highest



Note: As of fiscal 2020
Source: NHAI, CRISIL MI&A Consulting

Phase I of the scheme envisages development of ~24,800 km of national highways/roads as well as 10,000 km of residual roads between fiscals 2018 and 2022 under NHDP. Awarding under Bharatmala has begun from fiscal 2018 and we believe it will stretch till fiscal 2025 for Phase 1. Awarding under Bharatmala began in fiscal 2018, with Phase 1 expected to stretch till fiscal 2025.

Share of different schemes under national highways (fiscals 2023 to 2027P)



P: Projected
Note: National highway investments do not include land acquisition costs
Source: CRISIL MI&A Consulting

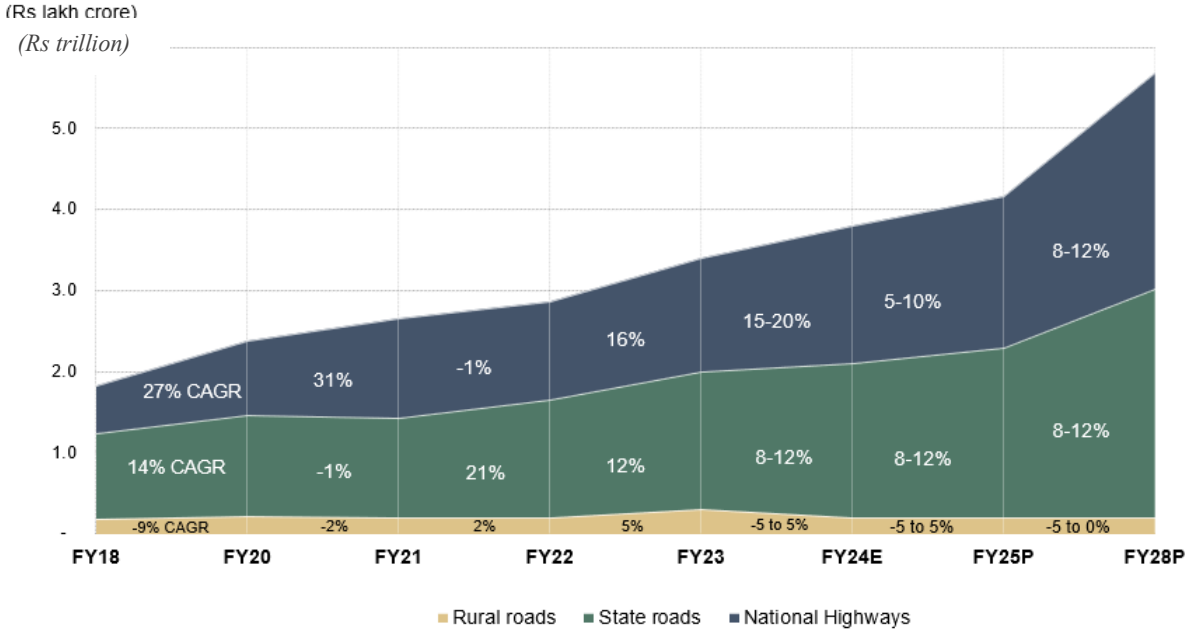
National highway capex to grow by 15-20% driven primarily by increased execution

Overall road sector capex, comprising of National Highways, State Highways & rural roads is estimated to have grown at a CAGR of 14% between fiscals 2018 & 2023. This growth, driven by Bharatmala and increased state spends on roads has been achieved despite brief hiccups such as the pandemic and hampered construction due to elongated monsoons. The outlook of the sector also remains firm supported by higher awarding of previous fiscals, Bharatmala, NIP pipeline of DPR ready projects and steady state capex.

The national highway segment contributes around 40-45% of the overall capex. While the execution remained flattish in fiscal 2023 vis-à-vis fiscal 2022, capex grew by 12-18% due to a rise in construction of high value projects and high commodity prices. In fiscal 2024, we expect the national highway capex to grow by 15-20% driven primarily by increased execution.

On the low base of fiscal 2021, the state spends grew by 21% in fiscal 2022 and are estimated to have grown further by 10-13% in fiscal 2023 largely in line with the growth in budgetary outlay. In fiscal 2024, state spends are expected to go up further by 8-12% as their percentage achievement of budgetary allocations are expected to be largely in line with historical average.

Momentum to continue, supported by Bharatmala and NIP pipeline



E: Estimated, P: Projected
Note: Investment excludes land acquisition cost
Source: NHAI, MoRTH, state budget documents, Pradhan Mantri Gramsadak Yojana, CRISIL MI&A Consulting

On the low base of fiscal 2021, the state spends grew by 21% in fiscal 2022 and are estimated to have grown further by 10-13% in fiscal 2023 largely in line with the growth in budgetary outlay. In fiscal 2024, state spends are expected to go up further by 8-12% as their percentage achievement of budgetary allocations are expected to be largely in line with historical average.

Outlook of toll collection and remittance on national highways

As per IHMCL data, the electronic toll collection on national highways is estimated to have reached ~₹ 496.89 billion in the fiscal year 2024. Further, toll collections are expected to grow at a CAGR of 9.5-10.0% between fiscal years 2023 and 2028 on a like-to-like basis and to grow at 18-19% considering new road additions and subsequent tolling on them over the same period. The growth will be driven by factors such as improvement in overall economic activity, efficiency gains due to removal of check posts post implementation of GST, increase in both passenger and commercial vehicles, strong execution pipeline of road and highway projects, better compliance and blocking of leakages due to electronic toll collection.

2.11. Key transactions in road sector

Recent key asset sales and private equity transactions

Date	Target	Buyer	Seller	Deal value (Rs mn)	% sought
Jan-2024	Portfolio of 11 HAM & 1 BOT (UPSHA)	KKR & Co	PNC Infrastructure	90,057	100%
Apr-2023	Kundapur-Surathkal section (90.1 km road project in Karnataka, comprising 74.8 km Kundapur-Surathkal section and 15.3 km Mangaluru-Kerala border section	KKR & Co	Navayuga Udupi Tollways	9240	NA
Apr-2023	Baharampore-Farakka Highways Ltd	Cube Highways and Infrastructure Pte Ltd	HCC Group	13,230	NA

Date	Target	Buyer	Seller	Deal value (Rs mn)	% sought
Mar-2023	Aurang Tollway (section of NH 6 between Aurang in Chhattisgarh and Odisha border)	Macquarie Group	BSCPL	16,000	NA
Feb-2023	5 completed HAM assets (Welspun Delhi Meerut Expressway Pvt Ltd, Welspun Road Infra Pvt Ltd, MBL (CGRG) Road Ltd, MBL (GSY) Road Ltd, Chikhali Tarsod Highways Pvt Ltd) and one operating BOT toll asset (Welspun Infrafacility Pvt Ltd)	Actis	5 completed HAM assets (Welspun Delhi Meerut Expressway Pvt Ltd, Welspun Road Infra Pvt Ltd, MBL (CGRG) Road Ltd, MBL (GSY) Road Ltd, Chikhali Tarsod Highways Pvt Ltd), and Welspun Infrafacility Pvt Ltd	NA	NA
Nov-2022	Eastern Peripheral Expressway	CDPQ-backed Maple Highways	NHAI	62,670	NA
Oct-2022	InvIT (across 7 states: Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, Telangana)	CPPIB and Ontario Teachers' Pension Plan Board	National Highways Infra Trust	NA	NA
Sep-2022	Andhra Pradesh and Gujarat assets (Tada Nellore)	Adani Group	Macquarie Group	31,100	NA
Aug-2022	SP Jammu-Udhampur Highway Ltd	NIIF	Shapoorji Pallonji Group	22,800	100%
Jul-2022	Navayuga Quazigund Expressway Pvt. Ltd	NIIF	Navayuga Quazigund Expressway Pvt Ltd	30,350	NA
Jun-2022	Six operating highway toll projects	Actis' Long Life Infrastructure Fund	Welspun Enterprises Ltd	60,000	100%
Jun-2022	Five operational road projects (Only 4 acquired on 10th Jun 2023)	IndInfravit Trust, an InvIT led by Canada Pension Plan Investment Board	Brookfield	93,750	100%
April – 2022	KKR & Co's road platform in India	Ontario Teachers	Ontario Teachers' Pension Plan Board committed an investment to boost alternative investment company KKR & Co's road platform in India.	Committed Rs 13.33 billion ($175 million)	-
Jul-2021	One highway concession	KKR Asian Fund III LP	Global Infrastructure Partners	-	39%
Jan-2021	Shree Jagannath Expressways Pvt. Ltd	Indian Highway Concessions Trust	Bharat Road Network	7,300	74%
Dec-2020	Jorabat Shillong Expressway Ltd	Sekura Roads Ltd	IL&FS Transportation Networks Ltd	9,300	100%

Date	Target	Buyer	Seller	Deal value (Rs mn)	% sought
Dec-2020	Chenani Nashri Tunnelway Ltd.	Cube Highways and Transport Assets Advisors Private Limited	IL&FS Transportation Networks Ltd	39,000	100%
Jun-2021	Navayuga Road Projects Pvt. Ltd. – two road projects	Sekura Roads Ltd	Navayuga Road Projects Pvt Ltd	-	100%
Feb-2021	Sadbhav Infrastructure Projects Ltd	Allianz Global Investors joined by AMP Capital	-	To raise Rs 7 billion ($96 million) through NCDs	-
Jan-2021	Chennai Elevated Tollway Ltd	JC Flowers Asset Reconstruction Company	-	Acquire over half of the debt of a stressed road developer at a discount of over 80%	-
Dec--2020	Chenani Nashri Tunnelway Ltd Asset, a road tunnel, from Infrastructure Leasing & Financial Services Ltd	Cube Highways and Infrastructure Pvt Ltd	-	Rs 39.0 billion ($528 million)	-
Sep-2020	Farakka Raiganj Highways Ltd	Cube Highways and Infrastructure Pvt Ltd	Hindustan Construction Company	Rs 15.08 billion (USD 205 million)	-
Jan-2020	KNR Walayar Tollways Pvt Ltd	Cube Highways and Transport Assets Advisors Private Limited	KNR Construction Ltd	6,200	100%
Aug-2019	Five under construction HAM projects – Dilip Buildcon Ltd	Cube Highways and Transport Assets Advisors Private Limited	Dilip Buildcon Ltd	7,300	100%
Aug-2019	KNR Shankarampet Projects Pvt Ltd	Cube Highways and Transport Assets Advisors Private Limited	KNR Construction Ltd	1,000	100%
Feb-2019	Two road projects – KNR Construction Ltd	Cube Highways and Transport Assets Advisors Private Limited	KNR Construction Ltd	2,000	100%

Source: Industry, CRISIL MI&A Consulting

2.12. Overview of investments in road platforms

Investments by private sector to grow 3x over the next five years

CRISIL MI&A expects private construction investments in national highways to increase 2x to Rs 2.7 trillion over fiscals 2024 to 2028 compared with the previous five years. This is expected to be mainly through the hybrid annuity model (HAM) mode, as the build-operate-transfer (BOT) toll mode may have only a few takers.

A policy push in the form of changes in Model Concession Agreements (MCA) for HAM and BOT projects and reduction in bid eligibility criteria across all national highway projects would bode well for private participation. However, the share of HAM in total awarding is constrained by the cautious approach employed by banks in lending to HAM projects.

Amidst the COVID-19 pandemic, NHAI and the ministry have taken various steps under the Atmanirbhar package to ease issues faced by developers. Releasing monthly payments, instead of milestone-based payments; extension of timelines for

completion of projects, etc have sustained private participation in the sector. While these have been extended till Oct 2020, they are likely to fade from next fiscal onwards.

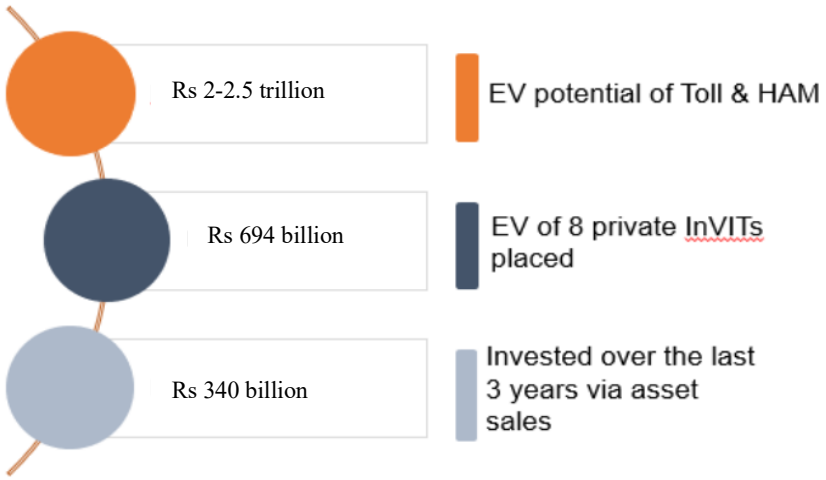
Asset monetisation, equity infusion key to support private investment in the long run

Currently, there are two broad drivers of asset sales in the roads sector - rationalisation of financial position to improve balance sheet strength and asset churning to be able to participate in the upcoming projects. The erstwhile major BOT players are selling off assets to reduce their debt burden and free up equity, which can be infused in under-execution projects.

The players present in HAM are currently selling off HAM assets to participate further in upcoming HAM projects. Some players intend to sell off under-construction projects to financial investors with projects being executed by the same player. Thus, they are able to convert HAM projects to EPC without facing the cut-throat competition they deal with currently in the EPC mode. This will help them retain margins.

About Rs 700-800 billion has already been invested through these models. CRISIL's analysis of BOT and HAM projects indicates a potential of ~Rs 2.0-2.5 trillion in terms of enterprise value.

Asset monetisation has a lot of potential to free up developers' balance sheets



Source: CRISIL MI&A Consulting

2.13. Overview of National Highways Development Project (NHDP)

The NHDP encompasses building, upgradation, rehabilitation and broadening of national highways. The project is being executed by the NHAI, in coordination with the public works departments of various states. The NHAI also collaborates with the Border Roads Organisation to develop certain stretches. The NHDP is being implemented in seven phases.

The projects are awarded to private players either on EPC (cash) or on BOT basis and now on HAM. NHDP cash contracts are mainly financed through budgetary allocations from the Central Road and Infrastructure Fund (CRIF), negative grants/premium received, and toll revenue. Loans and grants are also received from the World Bank and ADB.

Bharatmala Pariyojana

Bharatmala Pariyojana (BMP), an umbrella project of the central government since 2015, aims to improve efficiency in the roads sector. It is expected to supersede the NHDP and envisages the construction of 65,000 km of highways under the national corridor (north-south, east-west, and golden quadrilateral), economic corridor, inter-corridor roads, and feeder roads categories. As per the ministry's announcements in 2017, Bharatmala, along with the other schemes being undertaken, was estimated to have required a total outlay of Rs 6,900,000 million.

Phase I of the scheme envisages development of 24,800 km of national highways/roads and residual 10,000 km of the NHDP between fiscals 2018 and 2022 as per MoRTH Annual Report for fiscal 2023. Awarding under Bharatmala has begun from fiscal 2018 and will likely stretch until fiscal 2025 for Phase 1, involving development of ~9,000 km of economic corridors, ~6,000 km of inter-corridor and feeder roads, ~5,000 km of national corridors efficiency improvements, ~2,000 km of border and

international connectivity roads, ~2,000 km of coastal and port connectivity roads, and ~800 km of expressways. Of the total 34,800 km, ~20,800 km had been awarded as of August 2021.

Components of BMP Phase -I

Category	Description	Total length (km)	Upgrade proposed in Phase I (km)
National corridor efficiency improvement	Lane expansion and de-congestion of the national corridor	13,100	5,000
Economic corridor development	Connecting economically important production and consumption centres	26,200	9,000
Inter-corridor and feeder route development	Inter-connection between economic corridors; first- and last-mile connectivity	15,500	6,000
Border and international roads	Connectivity to border areas, boosting trade with neighbouring countries	5,300	2,000
Coastal and port connectivity roads	Connectivity to coastal areas to enable port-led economic development	4,100	2,000
Expressways	Greenfield expressways	1,900	800
Total		66,100	24,800

Source: NHAI, CRISIL MI&A Consulting

Status of BMP-1

National highways measuring 34,800 km in length were planned under BMP phase 1, according to a MoRTH press release, out of which, 26,418 km (76%) were awarded for construction as of December 2023 and ~15,549km have been completed so far. The projects under BMP are mainly funded by the centre, while MoRTH manages resource mobilisation. Andhra Pradesh has seven projects of ~384 km length of roads at the bidding stage at a cost of Rs 65,860 million under BMP. MoRTH has identified corridors measuring 1,719 km in Telangana for development under BMP phase 1, out of which 1,026 km has been awarded. As of December 2023, Rs 4,230,000 million was spent under phase 1 of the project.

State-wise summary of BMP

State	Total project length (km)	Awarded project length (km)	Length completed (km)	State	Total project length (km)	Awarded project length (km)	Length completed (km)
Andhra Pradesh	2,525	1,936	641	Maharashtra	3,029	2,174	1,628
Assam	433	431	312	Manipur	635	635	332
Bihar	1,572	1,152	571	Meghalaya	170	170	81
Chhattisgarh	571	471	134	Mizoram	593	593	363
Delhi	203	203	158	Nagaland	208	208	131
Goa	26	26	26	Odisha	1,586	967	785
Gujarat	1,577	1,194	742	Punjab	1,764	1,553	424
Haryana	1,058	1,058	776	Rajasthan	2,503	2,360	2,152
Himachal Pradesh	167	167	105	Tamil Nadu	2,414	1,476	1,011
Jammu & Kashmir	433	251	88	Telangana	1,719	1,026	492
Jharkhand	1,000	801	367	Tripura	94	94	66
Karnataka	2,059	1,603	855	Uttar Pradesh	3,127	2,496	1,612

State	Total project length (km)	Awarded project length (km)	Length completed (km)	State	Total project length (km)	Awarded project length (km)	Length completed (km)
Kerala	1,126	708	172	Uttarakhand	273	264	112
Madhya Pradesh	3,063	2,017	1,137	West Bengal	874	385	277

Source: MoRTH PIB, CRISIL MI&A

2.14. Overview of National Highways and Infrastructure Development Corporation Limited (NHIDCL)

The National Highways and Infrastructure Development Corporation Limited (NHIDCL) was established under the MoRTH, on July 18, 2014. It aims to boost construction of national highways and infrastructure in the North Eastern Region and strategic border areas. NHIDCL facilitates economic development in these regions by integrating them more robustly with the mainstream, providing economic benefits to the local population.

As of March 31, 2022, NHIDCL employs 345 individuals across 13 states/UTs and Kathmandu, Nepal. It has also ventured into other infrastructure projects such as multi-level car parking, logistic parks, and bus ports. NHIDCL's projects are enhancing accessibility to remote areas, constructing safer roads, tunnels, and bridges, particularly in challenging terrains like Jammu and Kashmir, Uttarakhand, North-East, West Bengal, and Andaman & Nicobar Islands. Additionally, NHIDCL is contributing to socio-economic growth through skill development programs, improving livelihoods, fostering trade, tourism, and supporting states in by providing financial aid and basic life care ambulances during pandemic.

NHIDCL portfolio for road development in Northeast Regions of India and Jammu & Kashmir

As per PIB's publication dated 31st July 2023 on budget for transport connectivity to North-Eastern States, Ministry has informed that government plans to complete the following road projects in the North-Eastern States to strengthen the connectivity in the region:

A total of 261 road projects under different Schemes of MoRTH with a total sanctioned cost of Rs.1,02,594 crore are under implementation through National Highways Authority of India (NHAI), National Highways & Infrastructure Development Corporation Ltd. (NHIDCL) and State Public Works Departments (PWDs) in the North Eastern States.

In addition, the Ministry of Development of North-Eastern Region, under the erstwhile North-East Road Sector Development Scheme (NERSDS) and the present North-East Special Infrastructure Development Scheme (NESIDS) has sanctioned a total of 77 road projects amounting to Rs.3372.58 crore.

According to order book provided in "Annual report 2022-23" published by NHIDCL, In Jammu and Kashmir, a total of 17 road projects spanning 263 kms of total length is currently under progress and it sums up to total project cost of INR 15,140 Cr. In addition to the ongoing road projects, 352 kms of National Highway length is entrusted. 50 kms of tunnel DPR work, 370 kms of DPR other than Bharatmala Pariyojana, and 116 kms in principle national highway are also in progress.

2.15. PM Gati Shakti - National Master Plan for Multi-modal Connectivity

Gati Shakti Scheme or National Master Plan for multi-modal connectivity plan, was unveiled in October 2021, with an objective of curtailing the logistics cost for the country, by coordinating the infrastructure creation activity different government entities. Major characteristics of the scheme are

- Digital platform for coordination across 16 ministries, including roadways and railways
- 'Gati Shakti' platform will subsume the infrastructure projects announced under National Infrastructure Pipeline (valued at Rs 111 trillion)
- Existing infrastructure schemes across ministries, such as Bharatmala (Roads), Sagarmala (Ports), UDAN (Air), Inland Waterways, Dry ports etc. will be incorporated in the platform
- The platform will also provide spatial data and implementation status for different projects
- Eleven industrial corridors and two defence corridors are also planned in the scheme, covering clusters for textile, pharmaceutical, fishing, electronics, agriculture etc.

Key targets set for different heads under the scheme are:

- Ports: Capacity of the major ports to be increased from 1,282 million tonnes in fiscal 2020 to 1,759 million tonnes in fiscal 2025

- National Waterways: Cargo movement to be ramped from 74 million tonnes to 95 million tonnes during fiscal 2020-25 period
- Railways: Target of 1,600 million tonnes by fiscal 2025, vis-à-vis 1,210 million tonnes in fiscal 2020
- MMLPs: Indian railways will setup 500 multimodal cargo terminals by fiscal 2025
- Others: Gas pipeline length to be doubled from 17,000 Km to 34,500 Km, incremental renewable capacity of ~150 GW, power line capacity target of ~452,000 circuit Km by fiscal 2025

An integrated platform to monitor the progress of projects and logistics initiatives spanning across different ministries will certainly aid in increasing coordination and planning infrastructure creation and connectivity.

3. Overview of Infrastructure Investment Trusts (InvITs) for roads in India

3.1. Overview of InvITs currently listed in India

InvITs to deleverage balance sheets and enable capital recycling

Infrastructure investment trusts (InVITs) will help free up capital of players by divesting stake in operational assets and help recycle this capital to deleverage balance sheets for creating new assets.

Details of InVITs currently registered in India:

Name	Sponsor	Date of registration	Assets
IRB InviT Fund	IRB	Mar-2016	5 toll road assets & 1 HAM asset
Indinfravit Trust	L&T IDPL	Mar-2018	19 BOT-toll, 4 BOT annuity assets
Oriental Infratrust	Oriental Group	Mar-2019	4 toll & 1 annuity asset
IRB Infrastructure Trust (IRB InVIT II)	IRB Infrastructure Trust (IRB InVIT II)	Nov-2019	10 operational toll projects, 1 under construction project & 1 proposed under construction project
Bharat Highways InvIT	G R Infraprojects Limited	Aug-2022	7 HAM assets
Cube Highways Trust	Cube Highways Group	July-2022	17 toll and 1 annuity asset
Highways Infrastructure Trust	Galaxy Investments II Pte. Ltd	Mar-2022	5 BOT Toll, 2 Annuity Assets and 3 HAM assets (in process of acquiring 3 other assets)

Name	Sponsor	Date of registration	Assets
Indian Highway Concessions Trust	Maple Highways Pte Ltd	Feb-2020	2 toll assets
National Highways Infra Trust	National Highway Authority of India	Oct-2020	5 BOT Annuity, 3 TOT Toll
Shrem Invit	Shrem Infra Structure Private Limited	Feb-2021	15 NHAI & 1 MoRTH HAM Assets, 2 NHAI toll assets, 10 State (Toll+Annuity) assets and 6 State Annuitv Assets
NXT- Infra Trust	Actis-Highway Infra Limited	Jan-2024	1 toll asset
Roadstar Infra Investment Trust	IL&FS Transportation Networks Ltd	Apr-2024	6 Assets (4 BOT (toll) and 2 Annuity)

Note: Details pertaining to Roadstar Infra Investment Trust is shared by company in November 2024
Source: Credit Rating Rationale, DRHP, CRISIL MI&A

Year wise developments in InvITs

InvIT	Year	Progress
Cube Highways Trust	July 2022	As per the SEBI's website, the InvIT filed the final placement memorandum in April 2023. Its portfolio assets include 18 toll assets and one annuity asset, totaling 1,636.5 km
Highway Infrastructure Trust (HIT)	Mar 2022	HIT is sponsored by Galaxy, in which KKR is an investor. It has acquired an initial portfolio of six operational projects with four toll and two annuity roads. It has acquired a portfolio of 11 assets from PNC Infrastructure comprising of 10 HAM & 1 BOT (UPSHA) assets in FY24
National Highways Infra Trust	Nov 2021	Eight road project assets (five in round-1 and three in round-2) have been transferred to the InvIT. It was listed in November 2021. Round-1 assets have received appointed date as December 2021. Round-2 assets were transferred in September 2022.
Shrem InvIT	Feb 2021	As of January 2023, the InvIT's portfolio had 28 projects (24 acquired from Dilip Buildcon Ltd in 2017 and 2018 and four newly acquired SPVs). Six additional SPVs were proposed to be acquired. The projects consist of annuity, state toll & annuity, NHAI HAM, MoRTH HAM and NHAI toll assets across five states. Floated by the sponsor, Shrem Infra Structure Pvt Ltd, Shrem InvIT got SEBI approval in February 2021.

InvIT	Year	Progress
IRB InvIT Fund	Feb 2020	In August 2019, the company had announced signing of definitive agreements with GIC affiliates, for up to Rs 44 billion investment for 49% stake in a portfolio of nine of its assets through private InvIT structure (IRB Infrastructure Trust) with IRB retaining the controlling 51% stake in the trust. The portfolio has 5,900 km in Haryana, Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, and Karnataka. In October 2020, IRB Infrastructure Trust successfully closed the second tranche of fund raising by way of rights Issue of units amounting to Rs 5.1 billion. Being the sponsor and 51% stakeholder, the company contributed Rs 2.6 billion and the GIC affiliates, the balance Rs 2.5 billion. This is part of the total commitment of Rs 44 billion by GIC affiliates for the 49% stake in private lnvIT housing nine BOT assets. Of Rs 44 billion, the trust received Rs 37.53 billion in February 2020.
	May 2017	A fresh issue of units of about Rs 43 billion and an offer for sale of about Rs 30 billion. The proceeds from the offer from sale went to the sponsor, IRB, while the proceeds of the fresh issue (about Rs 42 billion) were invested in the six road assets under the InvIT in the form of debt. The repayment of existing debt on the SPV to the lenders was completed.
IndInfravit Trust (L&T IDPL)	Jun 2019	Sadbhav Engineering transferred nine operational BOT assets (seven toll and two annuity) to this InvIT. The enterprise value of these assets is Rs 66 billion, which will help deconsolidate Rs 40 billion of Sadbhav's debt. This, in turn, will help unlock funds to bid for newer HAM projects.
	Apr 2018	L&T privately placed the InvIT units. It has transferred five operational assets to this InvIT.
Oriental InfraTrust	Jun 2019	It has five operational road assets of approximately 621 km.
NXT- Infra Trust	Jan 2024	Bhagan Toll Plaza is a 8-lane, 71.389 km long section near the Haryana/Delhi border.

Source: CRISIL MI&A Consulting

InvITs, as envisaged in Union Budget 2014-15, will own and manage income-generating infrastructure projects. As per regulations, these trusts will be allowed to make only 20% of their investments in under-construction projects. The rest will have to be invested in completed, revenue-generating infrastructure projects. Such trusts are expected to help unlock tied-up capital of developers and attract foreign capital.
In Union Budget 2015-16, the finance minister exempted the capital gains tax on sponsors at the time of listing of units of InvITs. In Union Budget 2016-17, distributions made from special purpose vehicles to InvITs were exempt from the dividend distribution tax.

Additionally, the Union budget (FY21) announcement of scraping dividend distribution tax (DDT) and shifting the taxation of such payouts to investors would prove to be a negative for InvITs. Our interactions with market participants, however, indicate that given this could hurt asset monetisation plans esp. in the roads sector, the government may create a carveout for InvITs to allow them to continue with the earlier regime.

4. State Roads

4.1. Review and Outlook of State Road

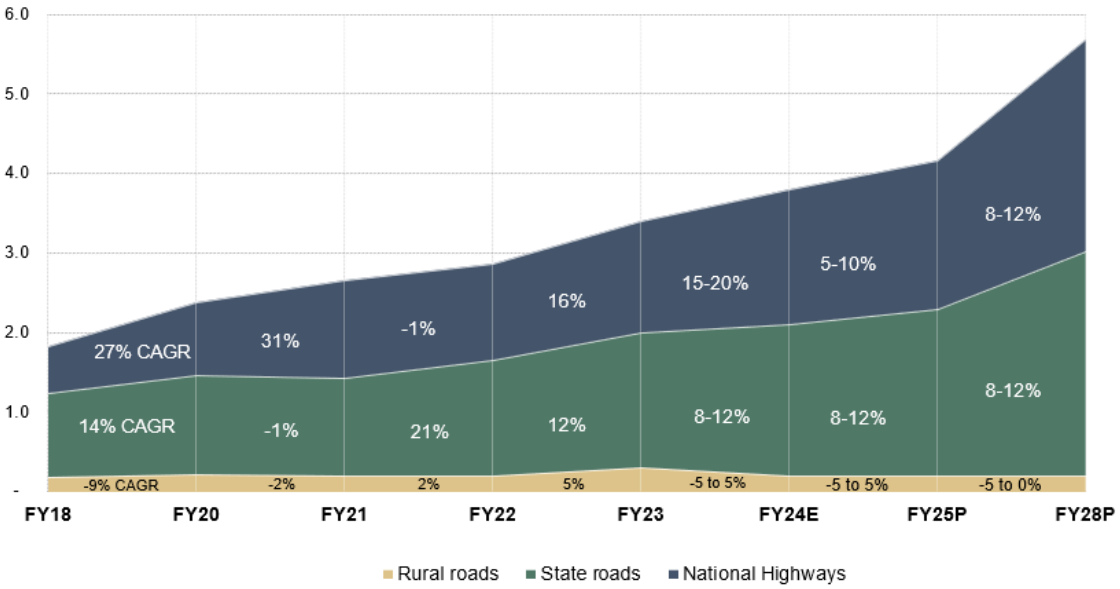
State road capex to continue its growth this fiscal, albeit at a slightly lower pace

CRISIL MI&A's analysis of state road budgets indicates that state road capex forms 45-50% of the sector. State capex on roads & highways sector remained flattish in fiscal 2021 due to constrained state funds. On this low base, it grew by 21% in fiscal 2022 and is estimated to have further grown by 10-13% in fiscal 2023 largely in line with the growth in budgetary outlay. Subsequently, growth is expected to moderate slightly to 8-12% over the next 2 years.

Our interactions with market participants indicate that state road projects funded by external agencies such as World Bank or ADB or have private/bank funding such as Expressways under UPEIDA have not had much impact due to COVID-19, as compared to state-funded projects.

State road capex to witness slight moderation in growth on the high base of last fiscal

(Rs trillion)



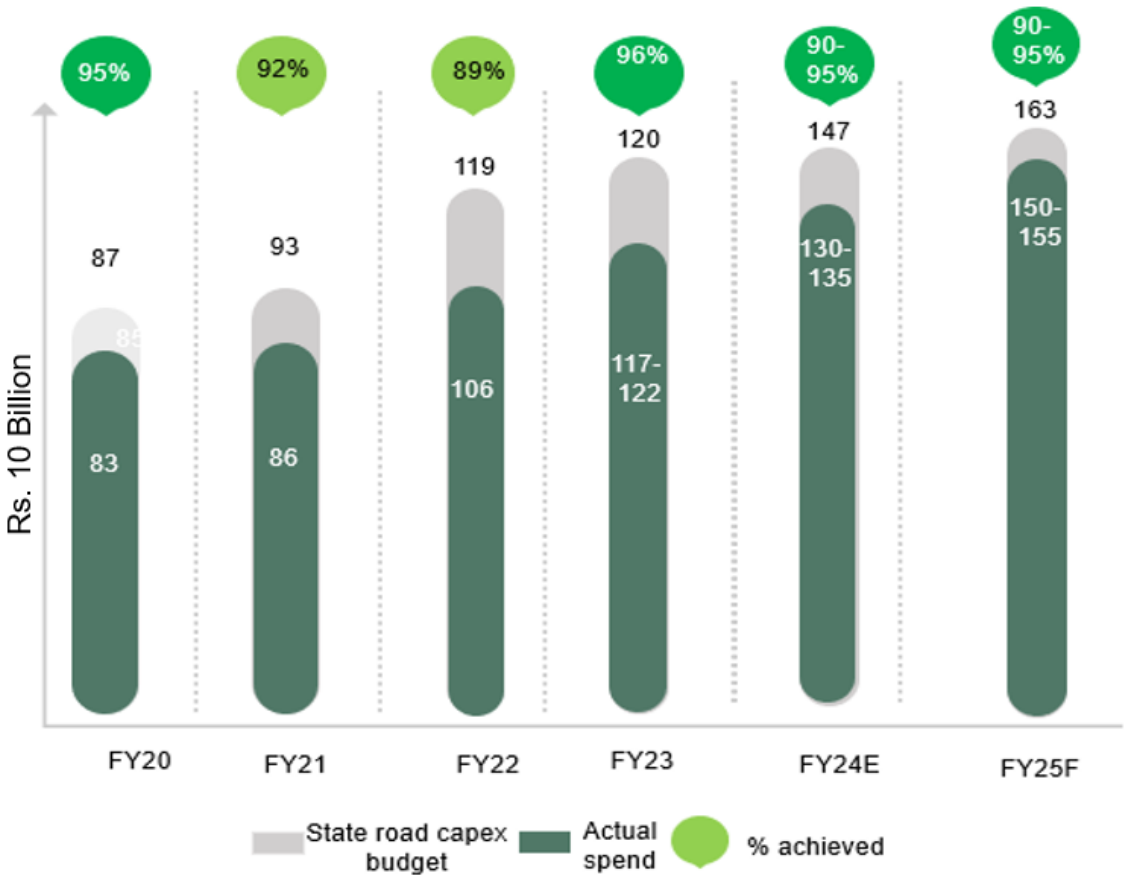
P: Projected
Source: State budget documents, CRISIL MI&A Consulting

State roads, which include highways, major district roads and rural roads that do not come under the purview of the Pradhan Mantri Gram Sadak Yojana, constitute over 20% of the country's road network and handle ~40% of road traffic. These play an important role in the economic development of mid-sized towns and rural areas, and aid industrial development by enabling the movement of raw materials and products to and from the hinterland.

As per CRISIL MI&A's analysis of the budgets of top 15 states that account for 85% of state road capex, in fiscal 2024, the budgeted capital outlay on roads is higher by 9% vis-à-vis the revised estimated (RE) of fiscal 2023 while it is 17% higher than the fiscal 2023 budgeted estimates (BE).

The average achievement ratios, i.e. actual spends over the Budgeted Estimates, is in the range of 90-95%. Fiscal 2023 achievement ratio is likely to be largely in line with historical trend and hence, the actual spend is likely to be in the range of Rs 117-120 thousand crores. Due to the higher budgeted expenditures on roads in fiscal 2024, the actual expenditure is expected to go up to Rs 130-135 thousand crores. However, given the high fiscal deficits of some of the constituent states, there is a downside risk to this estimate.

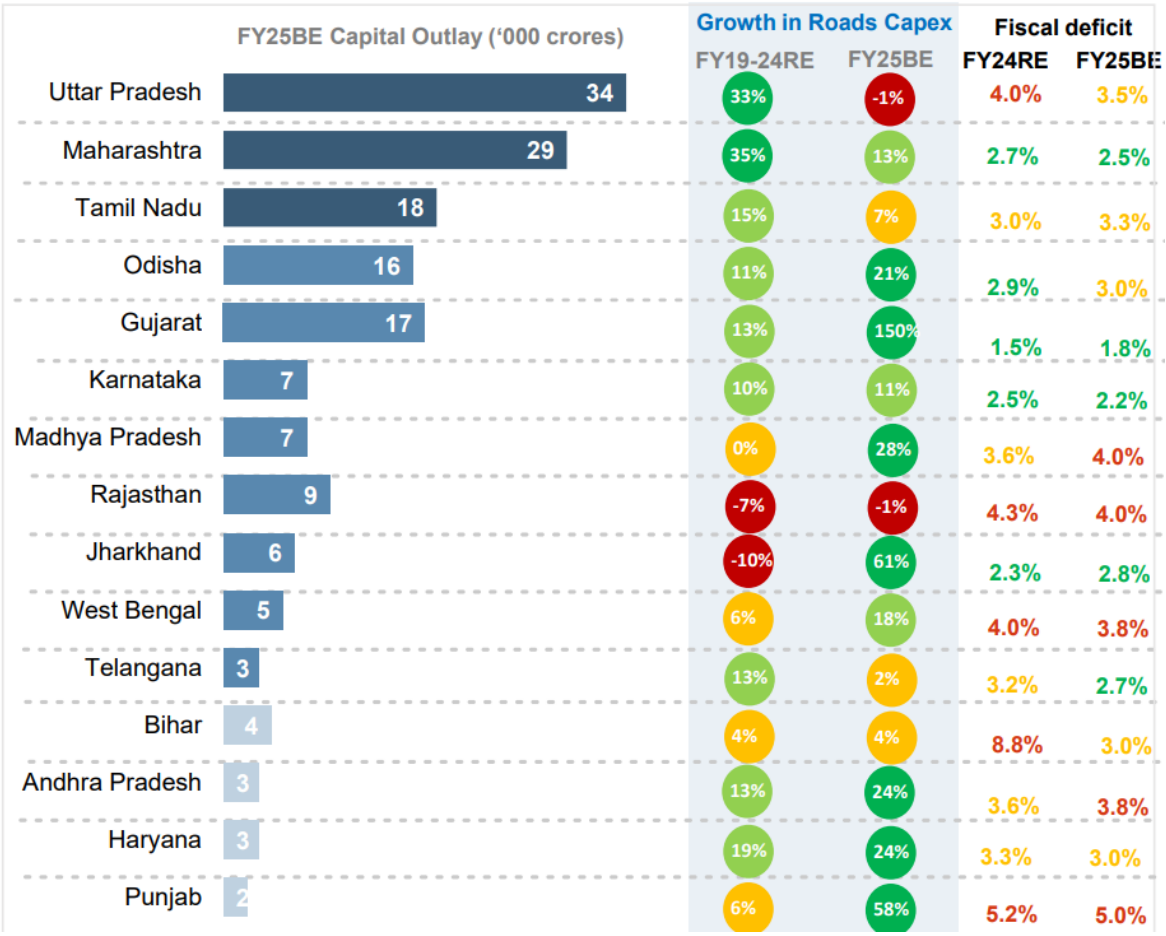
FY25 budgets for top 15 states at 11% on-year, actual expenditure likely to be 15% higher



Note: E: Estimated; State budget data for 15 states that account for 85% of total state road capex outlay
Source: State budget documents, CRISIL MI&A Consulting

Looking at the state-wise expenditures on the roads & highways sectors, it is evident that the top spenders on roads & highways sector have budgeted for higher capital outlay this fiscal as well. The top 3 states - Uttar Pradesh, Maharashtra & Tamil Nadu together account for close to 50% of the total state outlay on the roads & highways sector. On the other hand, the top 5 states together account for 70% of the total state capital outlay on the roads & highways sector. Given these states have relatively strong fiscal deficit profiles as well, the actual expenditure by these states is also likely to be high leading to new investment opportunities.

Traditional top road spenders have budgeted for high capital outlay this fiscal as well

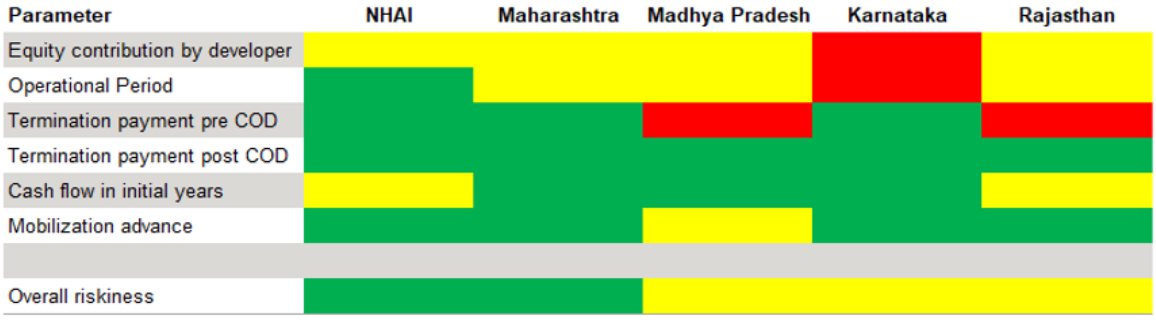


Note: Fiscal deficit: <3% green, 3-3.6% yellow and >3.6% red
Source: NHAI, MoRTH, State budget documents, PMGSY, CRISIL MI&A Consulting

NHAI vs state HAM

Few states such a Maharashtra, Madhya, Karnataka and Rajasthan have implemented the HAM model in awarding of state highway projects. Maharashtra's model is similar to that of NHAI, while those of Madhya Pradesh, Karnataka & Rajasthan.

Maharashtra's HAM similar to NHAI's model



Source: State budget documents, CRISIL MI&A Consulting

State roads financed by state governments, private participation in state-level HAM projects, a monitorable

State roads are largely financed through budgetary allocations by respective state governments. These are supplemented by funds from the National Bank for Agriculture and Rural Development (Nabard), Housing and Urban Development Corporation Ltd, Rural Infrastructure Development Fund, and the state's portion of Central Road Fund (CRF).

State governments will finance most state road projects (via budgetary allocation, external assistance, and CRF). Some states have a favourable policy framework to attract private participation. Going forward, the share of private participation in state roads is expected to be at 12-15% as the success of the HAM projects introduced across various states are monitorable.

Budgetary support and lender comfort — key success factors for states

	NHAI	Maharashtra	Madhya Pradesh	Karnataka	Rajasthan
Number of bidders	5-6 bidders	6-7 bidders	4-5 bidders	2-3 bidders	2-3 bidders
Bid Project Cost vs Authority Cost	10-15% above	Almost at par	Almost at par	15-20% above	8-10% above
Awarded projects (kms) till date	>7000	~10000	280	420	750
Average size of Project	~Rs 1,100 crore	~Rs 200 crore	~Rs 150 crore	~Rs 1,000 crore	~Rs 500 crore
Cost per km	Rs 20 crore per km	Rs 2.5-3 crore per km	Rs 3-3.5 crore per km	Rs 7 crore per km	Rs 2-2.5 crore per km
Key players	Dilip Buildcon, Ashoka Buildcon, PNC Infratech, Sadbhav, IRB	Rajpath Infra, SB Deshmukh, Harsh Construction, Welspun,	Ravi Infra, Shreeji, Path, RCL	Sadbhav, KNR	Dineshchandra R Agarwal, GR Infra, Gawar Construction
	Awarding began in FY16	Awarding began in FY18, future pipeline in line with Govt. budget allocation	Awarding began in FY20, future pipeline of ~1300 kms	Awarded in FY19, no future pipeline	Awarded in FY18, future awarding potential of 750 kms in FY21
Funding	Budgetary allocation + IEBR	Budgetary allocation of Rs 30-35 billion per year	$ 490 mn from ADB	$ 346 mn from ADB approved for KSHIP	$ 190 mn from ADB
Key findings		GoM deposits 50% of its grant in escrow account maintained by bank to ensure no delayed payments	Awarded in Jan 2020 after approval for ADB loan	Land acquisition & funding issues due to change in Govt. Projects awarded in June 2018 have only now achieved FC. Appointed date given with 65% land to KNR	750 kms awarded in FY18 under RSHIP-1 with ADB funding. RSHIP Tranche-2 now approved

Source: State budget documents, CRISIL MI&A Consulting

Central assistance to state roads

State roads come under the jurisdiction of the respective state governments. However, the central government may provide financial assistance to state governments through various schemes for the development of the road network. The responsibility of awarding contracts for road development is entrusted with two state government divisions, namely, the PWD and Road Development Corporation (RDC). Generally, cash contracts are awarded by the state PWDs, while BOT-annuity and BOT-toll contracts are awarded by state RDCs.

- The central government has set up the CRF to provide financial assistance to state governments for road development and railway safety works within the states.

OUR BUSINESS

Some of the information in this section, including information with respect to our plans, strengths, and strategies, contain forward-looking statements that involve risks and uncertainties. You should read "Forward Looking Statements" on page 17 for a discussion on the risks and uncertainties related to those statements and also "Risk Factors", "Audited Special Purpose Combined Financial Statements", "Projections of Revenue From Operations and Cash Flow from Operating Activities" and "Discussion and Analysis by the Directors of the Investment Manager of Financial Condition and Results of Operations and Cash Flows of the Project SPVs of the Trust" on pages 63, 425, 524 and 293, respectively, for a discussion of certain factors that may affect our business, financial condition or results of operations. Our actual results may differ materially from those expressed in or implied by these forward-looking statements. Our fiscal year ends on March 31 of each year, and references to a particular Fiscal are to the twelve months ended March 31 of that year. Unless otherwise stated or the context requires otherwise, the financial information included herein is based on our Audited Special Purpose Combined Financial Statements included in this Placement Memorandum. For further details, please see the section "Audited Special Purpose Combined Financial Statements" on page 425.

Unless otherwise stated or the context requires otherwise, references in this section to "we", "our" or "us" are to Roadstar Infra Investment Trust along with the Project SPVs. However, for the purpose of the Audited Special Purpose Combined Financial Statements, references to "we", "us", and "our" refers to the Project SPVs. We have included various operational and financial performance indicators in this section, some of which may not have been derived from our Audited Special Purpose Combined Financial Statements and which may not have been subject to an audit or review of the auditors. The manner in which such operational and financial indicators are calculated and presented, and the assumptions and estimates used in such calculations, may vary from that used by other entities in the business similar to ours. Eligible Creditors are accordingly cautioned against placing undue reliance on such information in making a decision to participate in the Unit Distribution and must evaluate such information in the context of the Audited Special Purpose Combined Financial Statements.

Unless stated otherwise or the context otherwise requires, industry and market data used in this section has been obtained or derived from the CRISIL Report, publicly available information as well as industry publications and sources, including from various government publications and websites. The data may have been re-classified by us for the purposes of presentation. Industry sources and publications generally state that the information contained therein has been obtained from sources generally believed to be reliable, but that their accuracy, completeness and underlying assumptions are not guaranteed, and their reliability cannot be assured. Industry sources and publications are also prepared based on information as of specific dates and may no longer be current or reflect current trends. Industry sources and publications may also base their information on estimates, projections, forecasts and assumptions that may prove to be incorrect. Eligible Creditors must rely on their independent examination of, and should not place undue reliance on, or base their decision to participate in the Unit Distribution solely on this information.

Overview

Unit Distribution and Trust Formation Overview

The Union of India, acting through the Ministry of Corporate Affairs, had filed a company petition under sections 241 and 242 of the Companies Act, 2013 against the IL&FS Group before the NCLT on the grounds of, *inter alia*, that the affairs of the IL&FS Group were being conducted in a manner prejudicial to public interest. Subsequently, the NCLT directed suspension of the then existing board of directors of IL&FS and constitution of a new board of directors of IL&FS comprising the nominees of the Ministry of Corporate Affairs (the "**New Board**"). The New Board, undertaking steps for designing and implementing a fair and orderly resolution of the outstanding debt of the entire IL&FS Group, and for the purposes of resolution of certain portion of the debt of ITNL proposed the setting up of an infrastructure investment trust.

Consequently, Roadstar Infra Investment Trust as sponsored by Roadstar Infra Private Limited, was established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations.

The Trust has acquired each of the Project SPVs. Please refer to the section "*Formation Transactions in relation to the Trust*" on page 26 for more information in relation to the shareholding of the Trust in the Project SPVs. The proposed Unit Distribution will be in accordance with (i) the Resolution Framework as approved by the NCLAT vide its order dated March 12, 2020 and/or any other appropriate judicial authority and in terms of the interim distribution as approved by the NCLAT vide its order dated May 31, 2022 and (ii) a distribution plan setting out the details and manner of distribution of, among other assets, the Units issued by the Trust as may be approved by the board of directors of IL&FS.

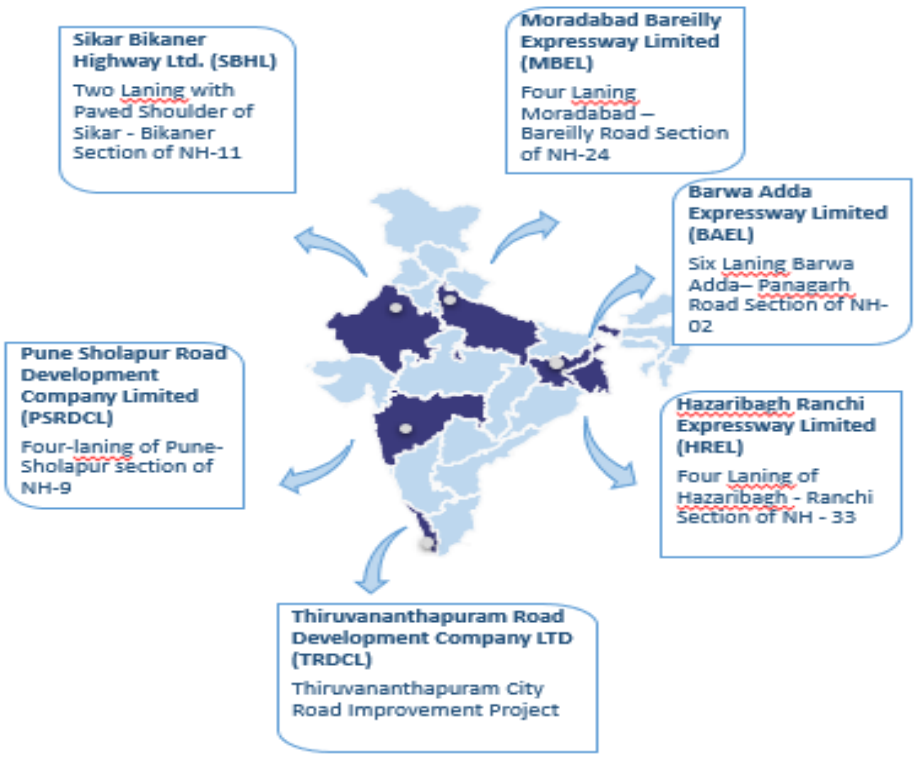
For more details in relation to the Resolution Framework and the holding of the Trust in the Project SPVs, please refer to sections "*Unit Distribution Background*" and "*Formation Transactions in relation to the Trust"* on pages 389 and 26, respectively.

Business Overview

The Trust is established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations. The Trust, through its Project SPVs, together operates 6 road assets, aggregating to 685.16 kms, located across 6 states in India.

The Project SPVs had a weighted average residual concession life (weighted on the basis of residual life-time pre-MM EBITDA) of 13.54 years as on March 31, 2024 and a weighted average operating history (weighted on the basis of Fiscal 2024 estimated pre-MM EBITDA, assuming COD and appointed date as the beginning date for BOT/DBFOT assets) of 9.19 years as on March 31, 2024.

The map below sets forth the location of our projects in the Project SPVs:



The tables below set forth an overview of the Project SPVs:

S. No.	Relevant Project SPV	Project length and number of lanes	State(s)	Residual Life (in years, as of September 30, 2024)	Model	Actual Revenue from Toll Fee / Annuities in FY 2024 (in ₹ million)
1.	Hazaribagh Ranchi Expressway Limited	73.50 kms 4 lanes	Jharkhand	3.82 years	Annuity	702.02
2.	Moradabad Bareilly Expressway Limited*	121.00 kms 4 lanes	Uttar Pradesh	11.17 years	Toll	3,390.09
3.	Pune Sholapur Road Development Company Limited*	102.08 kms 4 lanes	Maharashtra	6.79 years	Toll	2,165.67
4.	Sikar Bikaner Highway Limited*	237.58 kms 2/4 lanes	Rajasthan	13.38 years	Toll	826.02
5.	Thiruvananthapuram Road Development Company Limited**	28.12 kms (excluding phase I**) 2/3/4/6 lanes	Kerala	Phase II- 2.39 years Phase III- 5.39 years Phase IV-6.67 years	Annuity	143.95
6.	Barwa Adda Expressway Limited*	122.88 kms 6 lanes	Jharkhand/West Bengal	9.49 years	Toll	2,636.47
Total		**685.16**				**9,864.22**

Notes:
** Extendable based on target traffic as per provisions contained in the respective Concession Agreement*
*** Phase I concession period ended in July, 2022*

In addition to the Project SPVs, the Trust through the Investment Manager may also have the ability to acquire new projects. For further details, please see the sections "*Corporate Governance*" and "*Related Party Transactions*" on pages 138 and 325, respectively. The Investment Manager is responsible for managing the Trust and the Project SPVs, as well as undertaking investment decisions relating to us and our assets. The Investment Manager meets the experience criteria as required under the SEBI InvIT Regulations. As required under the InvIT Regulations, the experience of the Investment Manager in fund management or advisory services or development in the infrastructure sector is above 5 years. Further, the Investment Manager is responsible for defining our strategic direction, including in relation to our future acquisitions, divestments or enhancement of assets. For further details, please see "*Parties to the Trust – The Investment Manager – Roadstar Investment Managers Limited*" – on page 114.

The Trustee, Axis Trustee Services Limited, is a trusteeship company registered with SEBI as a debenture trustee under the Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993, as amended. On behalf of our Unitholders, the Trustee is responsible for (a) ensuring that our business objectives and investment policies comply with the provisions of the InvIT Regulations and other applicable law, and (b) monitoring the activities of the Investment Manager (in terms of the Investment Management Agreement) and the Project Manager (in terms of the Project Implementation and Management Agreement). For further details, please see "*Parties to the Trust – The Trustee – Axis Trustee Services Limited*" on page 101.

The Project Manager, Elsamex Maintenance Services Limited, is responsible for the operations and management of the Trust and ensuring compliance with the respective concession agreements and project documents, making arrangements for appropriate maintenance, oversee the progress of development, status of approvals and other aspects of the projects of the SPVs. The Project Manager has been appointed as per the terms of the Project Implementation and Management Agreement. In addition, the Project Manager has entered into operations and maintenance agreements with the respective SPVs for providing operations and management for the SPVs. Neither the Project

Manager nor any of the promoters or directors of the Project Manager (i) is debarred from accessing the securities market by SEBI; (ii) are or have been a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/ or (iii) are or have been declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters published by the RBI. For further details, please see "*Parties to the Trust – The Project Manager – Elsamex Maintenance Services Limited*" – on page 129.

Each financial year, we intend to distribute a minimum of 90.00% of the net distributable cash flows of the Trust available for distribution to our Unitholders. For further details, please see, "*Distribution*" on page 288.

Our revenue from operations for the six month period ended September 30, 2024, Fiscal 2024 Fiscal 2023, and Fiscal 2022 were ₹5,492.72 million, ₹11,658.14 million, ₹9,940.48 million, and ₹7,631.12 million, respectively. Our profit / (loss) after tax for the six month period ended September 30, 2024, Fiscals 2024, 2023, and 2022 were (₹ 6,858.39 million), (₹108.73 million), (₹1,131.52 million), and ₹995.87 million respectively.

For details of credit ratings obtained by the Trust, please see "*General Information – Credit rating"* on page 100.

Our Strengths

The Investment Manager believes the following to be the key strengths of the Trust:

Large and Diversified Portfolio of Highway Assets

The Trust owns a sizeable initial portfolio consisting of the six Project SPVs. These assets represent a scaled and diversified portfolio, as the Project SPVs consist of 6 highway assets having an aggregate length of 685.16 kms, located across 6 states in India.

Each of the Project SPVs has entered into a long-term concession agreement with either NHAI or a state authority with tenures ranging between 17.50 and 25 years. As of September 30, 2024, the Project SPVs had a weighted average residual concession life (weighted on the basis of residual life-time pre-MM EBITDA) of approximately 13.54 years.

Our assets are operated under different types of concessions, and for the six month period ended September 30, 2024 and the fiscal years ending March 31, 2024, March 31, 2023, and March 31, 2022, revenue from toll assets represented 83.22%, 77.36%, 85.23%, and 90.36% of our combined revenue and 96.52%, 95.49% 93.91%, and 91.50% of the combined EBITDA, while revenue from annuity assets represented 3.99%, 6.02% , 7.94%, and 9.64% of our combined revenue and 3.49%, 4.51% , 6.09%, and 8.50% of the combined EBITDA, respectively.

Sizeable portfolio of mature and revenue generating assets

As of September 30, 2024, the Project SPVs had a weighted average operating history (weighted on the basis of Fiscal 2024 estimated pre-MM EBITDA, assuming COD and appointed date as the beginning date for BOT/DBFOT assets) of 9.19 years.

4 out of 6 Project SPVs are Toll Assets with an average operational life of 18.94 years. The toll assets contribute 96.51% of the combined EBITDA and has grown at CAGR of 13.13% over the last three years and at a CAGR of 9.26% over the last 5 years.

Skilled and experienced management team

The Investment Manager is led by a management team with vast experience in the road sector. The Investment Manager's management team consists of experienced personnel in the top management and key strategic positions having over 10-15 years' experience in operations of road projects, fund raising and fund management, finance and accounting, and regulatory compliance. In addition, the board of directors of the Investment Manager comprises of professionals having experience of serving in senior management roles, large multinational banks, regulatory bodies, and government institutions.

The vast experience of the management team of the Investment Manager shall enable the Investment Manager to employ a business strategy appropriate for the Trust, and assist the Investment Manager in areas of governance, engineering and operations.

In house operation and maintenance teams having rich and hands on experience with a consistent track record of managing some of the marquee projects in the infrastructure space.

The Investment Manager and the Project Manager have adequate experience in road engineering, design, construction, operation & maintenance of road and highway projects. The Project Manager is currently maintaining a road portfolio of 17 assets encompassing 1,167 kms (4,813 lane kms). The Project Manager is collecting toll on behalf of respective authorities by deputing suitable manpower in 22 toll plazas comprising a cumulative of 210 toll lanes. Further, the Project Manager has in-house expertise on Electronic Toll Collection System (ETC), highway traffic management systems and integrated tunnel control systems and is currently operating 25 toll plazas with 200 toll lanes, highway traffic management systems at 3 road projects with a total length of 296 kms and integrated tunnel control system at one tunnel project of 9 kms.

The current portfolio of projects in the Trust are part of the portfolio of assets developed by ITNL. ITNL has a strong presence in the road infrastructure sector and credited with having developed some marquee projects like the longest road tunnel project in India, first city roads projects under PPP in the state of Kerala and having developed the metro projects in Gurgaon under PPP.

Promising sector with strong fundamentals and supportive government policies.

As per the CRISIL Report, the roads sector in India registered a strong pace of constructions by NHAI, growing 6,003 km (16.4 km per day) in fiscal 2023 from 3,071 km (8.4 km per day) in fiscal 2018. The investments in the roads and highways sector rose from ₹1.7 trillion in Fiscal 2018 to ₹2.9 trillion in Fiscal 2022, registering a 1.7 times growth. Additionally, India's passenger traffic logged at a CAGR of about 8.00% from around 165.00 million in Fiscal 2017 to around 209.00 million in Fiscal 2020. In addition to the rapid growth in the road sector, the Government of India has initiated various policies and programmes for the enhancement of the road sector in India.

The Trust operates in the road sector which we believe is a strategically important sector for the Indian Government in its focus for the development of infrastructure in the country. As evidenced in the recent past, the Indian Government has undertaken various initiatives in the road sector including the construction and development of various large expressway projects, which we believe shall provide growth opportunities to the Trust in future.

Transfer of assets into the Trust pursuant to NCLT orders in line with Resolution Framework for the IL&FS Group, by NCLAT in March 2020.

The transfer of Project SPVs to the Trust is a part of the resolution efforts undertaken by the New Board of IL&FS under the Resolution Framework approved by the NCLAT. The Project SPVs were transferred to the Trust pursuant to NCLT Order which provides a title which is free and clear from all encumbrances, liens, security interest and third party claims (including any statutory or tax claims).

Pursuant to a share purchase agreement dated October 11, 2024, the Trust has acquired 243,500,000 Equity Shares representing 100.00% of equity stake of BAEL from IL&FS Transportation Networks Limited. In addition, pursuant to a deed of assignment dated October 11, 2024 and a resolution passed by the IM Board on October 14, 2024, IL&FS Group lenders of BAEL, namely, Infrastructure Leasing & Financial Services Limited, IL&FS Financial Services Limited, Elsamex Maintenance Services Limited and IL&FS Transportation Networks Limited have assigned their receivables (including resolution process cost) in BAEL to the Trust being discharged by way of issue of Units aggregating to ₹6,768,570,500 and balance sum in cash. .

For further details on the market opportunity for the road infrastructure industry in India, please see the section "*Industry Overview*" on page 153.

Business Strategies

The Investment Manager believes the following to be the key strategies of the Trust:

Active asset management to drive organic growth

The Investment Manager will employ an active asset management strategy in the existing assets to drive growth of the portfolio. In particular, the Investment Manager will seek to maintain or improve the Project SPVs net incomes and free cash flows by, among other initiatives, minimizing revenue leakages, formulating and adopting policies and procedures and structuring investments to address regulatory considerations. The Project Manager will continue to assist the Investment Manager by carrying out the operations, management and maintenance of the projects in accordance with the relevant concession agreement and the Project Implementation and Management Agreements and by procuring, operating and maintaining the relevant project's toll management systems, improving the effectiveness of routine and major maintenance activities and instituting controls on administrative expenditures and overheads.

Calibrated expansion of the portfolio

The Investment Manager also intends to expand the portfolio of the Trust by acquiring further assets that adhere to certain asset selection criteria, which includes access to important locations in the vicinity, connecting roads, industrial and manufacturing hubs, connectivity with raw materials, ports, and also evaluating competing modes of transportation.

The Investment Manager intends to expand the portfolio without compromising on the operation and management of the existing Project SPVs while providing attractive cash flows and yields, and opportunities for future income and capital appreciation for our Unitholders.

Implementing prudent capital management policies

The Investment Manager intends to institute and implement a capital management strategy that is consistent with its objective of maximizing distributions to our Unitholders while also generating consistent total returns. To achieve these objectives, the Investment Manager will aim to ensure an efficient cost of capital and an optimal capital structure of the Trust and the Project SPVs to maximize cash distribution to Unitholders while also retaining adequate flexibility to acquire assets in the future.

Pursuant to the Unit Distribution, the Trust's total consolidated borrowings are expected to be less than 49.00% of the total value of the Trust's consolidated assets, in compliance with the InvIT Regulations.

Structure of Roadstar Infra Investment Trust

The Roadstar Infra Investment Trust was settled on October 6, 2020 in accordance with the provisions of the Indian Trusts Act, 1882, and the Trust is registered with SEBI as an InvIT pursuant to the InvIT Regulations. The Trust's principal investment objectives are to carry on the activities of, and to make investments as an infrastructure investment trust, as permissible in terms of the InvIT Regulations and in accordance with the InvIT documents, to the extent applicable. For details on the Unit Distribution and Trust Formation, see "*Our Business - Unit Distribution and Trust Formation Overview*" on page 207 and for more details on the investment objectives, see "*Overview of the Trust – Investment Objectives"* on page 23.

Operations and maintenance

Under the concession agreements, the Project SPVs are required to operate and maintain the project highway in accordance with the concession agreement either by itself, or through an O&M contractor. Typically, the operation and maintenance obligations include:

(i) permitting safe, smooth and uninterrupted flow of traffic during normal operating conditions;
(ii) collecting and appropriating toll, where applicable;

(iii) minimizing disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing rapid and effective response and maintaining liaison procedures with emergency services;
(iv) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, line markings, lighting and signage;
(v) undertaking major maintenance such as resurfacing of pavements, repairs to structures, repairs and refurbishment of tolling system and hardware and other equipment;
(vi) the protection of the environment and the provision of equipment and materials; and
(vii) maintaining a public relations unit to interface with and attend to suggestions from concerned authorities and law enforcement agencies to preserve the legal right of way on the highway.

Toll collection system and operations

Electronic toll collection

The electronic toll collection ("**ETC**") system based on radio frequency identification ("**RFID**") technology gained more widespread adoption following an Indian transport ministry directive in January 2019, which mandated that all user fee plazas be made ETC compliant. The GoI has also made FASTag at toll plazas on national highways mandatory with effect from February 16, 2021.

Average toll collection across all toll plazas on the Project SPVs in the month of January 2025 had close to or more than 98.00%ETC collection rate.

Cash

With effect from, February 16, 2021, all vehicles plying on national highways were mandated to pay toll only through FASTAG mechanism and any user paying toll in cash are subject to a penalty of 100.00% of the toll amount as per NHAI guidelines.

Monitoring

Toll collection

The electronic toll collection system collects and stores traffic and payment data through system generated reports, thereby, reducing the need for manual operation. The electronic toll collection system consists of revenue collection software, an automatic barrier gate, lane monitoring cameras, along with fully automatic vehicle counting-cum-classifier, RFID readers/antennas, a barcode reader validating the ticket and authenticating the vehicle class, communication channels and traffic control equipment. All our toll plazas are equipped to process such transactions through suitable security mechanisms, which ensures the communication link between the acquirer banks and the toll plaza.

For identifying categories of vehicles and to charge an appropriate toll rate, automatic vehicle identification based on automatic vehicle classification and counting enables collection of variable amounts of tolls depending on the class of motor vehicles and serves as a traffic information system. Certain Project SPVs also use weigh-in-motion technology (Medium Speed Weigh In Motions (WIMs)) for projects where weight-based toll collection is allowed. The weight based tolling systems are integrated with the fully automatic system for detection of the gross vehicle weight of the vehicles approaching the toll booth.

There is also a back-up power supply system in each lane, toll plaza and server room to ensure that there is no interruption to power supply at the toll plazas in order to maintain a stable power supply for critical operations of toll management system ("**TMS**"). Servers used in the toll collection systems at the toll plazas are capable of real-time uploading of transaction data from TMS, which would allow the Project SPVs to collect variable amounts of tolls depending on the class of motor vehicles.

Only authorized persons have access to the toll collection systems and its servers. The Project SPVs are responsible for operating the toll collection system at their toll plazas and taking regular preventive and corrective measures to maintain such systems.

Regular review of maintenance and construction works

The Project SPVs are maintaining/submitting the Daily Progress Reports /Weekly Progress Reports (WPR) and Monthly Progress Reports (MPR). Further, the Independent Engineer appointed under the provisions of the respective concession agreement also monitors the maintenance activities and conducts inspections at periodic intervals. The PM team also conducts regular site visits to monitor the maintenance of the roads and prepares reports in that regard. Further, the IM operations team conducts site visits at periodical intervals to monitor the upkeep and maintenance of the Project Assets.

Traffic and motorway assistance services

Traffic assistance

Each Project SPV is required to carry out regular patrolling and regulate and maintain traffic order within their projects. Route patrol vehicles continuously move along the project stretch to help regulate traffic and carry out surveillance activities. Helpline numbers are also displayed along the projects for communication between road users and the control room in case of emergencies, and the Project SPVs are required to maintain the emergency telephone system.

In the case of a vehicle breakdown, such vehicles shall be removed to the truck lay bay, if possible, by using tow crane after legal formalities are complied with. The patrolling team shall report to the personnel in-charge of any accidents or road blockages and the safety in-charge shall take necessary actions to shift the injured persons to nearby hospitals and to clear the road blockage. The patrolling vehicle supervisor with its limited number of signages is required to divert the vehicles for any diversions, if required. In case of any traffic accident and receipt of such information, an ambulance shall be sent to such location and the injured shall be shifted to nearby hospital.

Safety Measures

Under each of the concession agreements, the concessionaire is obligated to abide by certain safety requirements, which include measures such as installing road signs, pavement marking, traffic control devices, enforcement and emergency response. The concessionaire must also abide by, among others, applicable laws and applicable permits, relevant standards and guidelines of the Indian Roads Congress and good industry practice. These safety requirements apply to all phases of construction, operation and maintenance with emphasis on identification of factors associated with accidents and implementation of appropriate remedial measures.

Competition

Competition for the Trust

As all toll revenues depend on toll receipts and are affected by changes in traffic volumes, the amount of revenue generated by the Project SPVs and future toll projects will depend on a number of factors which can influence the level of traffic volume on those particular toll roads, including competition from other roads that operate in the same area, as well as from other modes of transportation (e.g. railways and airplanes).

We believe we face competition from other road operators, financial investors, private equity funds and from other InvITs, in acquiring lucrative concessions for existing and future projects. In respect of opportunities, the Trust will depend on the Sponsor and Investment Manager, which face competition from both domestic and international entities in the roads and highways infrastructure sector, as most of the contracts awarded by the Government and state governments are awarded on a competitive bidding basis and subject to satisfaction of other prescribed pre-qualification criteria. While service quality, technological capacity and performance, health and safety records and personnel, as well as reputation and experience, are important considerations in award decisions, price is a major factor in most tender awards.

Management

The Trust will be managed, upon the listing of the Units on the Stock Exchanges, by qualified personnel of the Investment Manager. These personnel will have management and operational experience in the roads and highways sector. For further details about the Investment Manager, please see, "*Parties to the Trust – The Investment Manager – Roadstar Investment Managers Limited*" on page 114.

The Investment Manager, in consultation with the Trustee, currently appoints the majority of the members of the board of directors of each of the Portfolio Assets, in accordance with the requirements prescribed under the InvIT Regulations.The Project SPVs' boards of directors have also formed committees, as required under the Companies Act, 2013 and rules made thereunder. For details, please see the section "*Corporate Governance*" on page 138.

Seasonality

Traffic volume tends to decrease during the monsoon season and conversely tends to increase during holiday seasons. While the northern parts of India experience monsoon rains during the period from June or July until September or October every year, the southern parts of India, especially coastal parts of Andhra Pradesh, experience monsoon rains even during the months of October to December. In some projects, the traffic seasonality also depends on agricultural produce and local cultural/religious events. The monsoon season may also restrict the Trust's ability to carry on activities related to its operation and maintenance of toll roads. For further details on risk associated with seasonality, please see, "*Risk Factors – Risks Related to Our Business and the Concession Agreements*" on page 63.

Insurance

The Trust's operations will be subject to hazards inherent in providing operation and maintenance services, such as risk of equipment failure, work accidents, fire, earthquake, flood and other force majeure events. This includes hazards that may cause injury and loss of life, damage and destruction of property, equipment and environmental damage. The Project SPVs' principal types of insurance coverage include, amongst others comprehensive or commercial general liability industrial all risk insurance, fire, terrorism, burglary and electronic equipment policy to the extent applicable to their operations. The Investment Manager and the Trustee confirm that the amount of insurance that each Project SPV presently maintains represents an adequate and appropriate level of coverage required to insure its business and operations and assets, and is in accordance with the relevant concession agreement and industry standards in India and as available on commercial and reasonable terms and will perform regular assessment on the adequacy of insurance coverage on a yearly basis.

Employees

As of September 30, 2024, the Project SPVs had no on roll employees.

Properties

The Investment Manager's registered office is located at The IL & FS Financial Centre Plot No. C 22 G Block Bandra Kurla Complex, Bandra, Mumbai, Maharashtra, India, 400051. The Investment Manager shall be conducting all its administrative and reporting activities from the registered office. The premises are taken on lease by the Investment Manager and the Investment Manager does not own any property.

Under the terms of the concession agreements, title to the roads and related infrastructure such as toll plazas and monitoring posts remains with NHAI or the state authority, as relevant, for the duration of the concession period. During the concession period, the Project SPVs are licensed to use the roads and the related infrastructure which constitute the concession assets and the Project SPVs are entitled to an income from the collection of tolls. Upon the expiration of a concession period, each Project SPV is required to transfer possession of its concession assets to the NHAI or concerned state authority, as relevant.

Summary of Our Toll Roads

The details of the toll road Project SPVs are as follows:

Particulars	PSRDCL	MBEL	BAEL	SBHL
Project stretch	Pune-Solapur section of NH-9 from km 144.400 to km 249	Moradabad-Bareilly section of NH-24 from km 148 to km 262	Barwa adda-Panagarh section of NH-2 from km 398.240 to km 521.120 including Panagarh bypass	Sikar-Bikaner section of NH-11 from km 340.188 of NH 11 to km 557.775 of NH-11 via Sikar bypass and Bikaner bypass from km 553.869 of NH-11 to km 267.325 of NH-89
Geographic location (state)	Maharashtra	Uttar Pradesh	Jharkhand/West Bengal	Rajasthan
Number of lanes	4	4	6	2/4
National Highway # (New | Old)	NH-65| NH-09	NH-24	NH-02	NH-52 | NH-11| NH62
Project length (km)	102.08 km	121 km	122.88	237.578
Number of toll plazas	2	2	2	4
Toll plazas	Warwade and Sawaleshwar	Niyamatpur Ekrotia and Thriyakhetal	Beliyad and Banskopa	Rasheedpura; Tidiyasar; Lakhasar and Udayramsar
Appointed date	September 28, 2011	December 4, 2010	April 1, 2014	February, 18, 2013
Calendar year of acquisition	2023	2021	2024	2022
Type of acquisition	Sale	Sale	Harmonious Substitution	Sale
Commercial operations date (COD) [(1)]	Provisional COD: August 23, 2013 Final Completion: February 3, 2016	Provisional COD: January 6, 2015; November 4, 2015 Final Completion: July 30, 2019	April 1, 2014 (Appointed date)	Provisional COD: October 10, 2015; August 16, 2016; and April 5, 2018
Tolling history (as of September 30, 2024) (in years)	11.11	9.74	10.51	8.98
End of concession[(2)]	July 20, 2031	December 4, 2035	March 31, 2034	February 18, 2038
Residual life (as of September 30, 2024) (in years)	6.79	11.17	9.49	13.38

Notes:

(1) As per the provisions of the concession agreement, the commercial operations date (COD) of the project highway shall be the date on which the independent consultant has issued the final completion certificate or the provisional certificate certifying completion of the project highway as per the relevant terms of the concession agreement. The project highway shall enter into commercial service on COD whereupon the concessionaire shall be entitled to demand and collect fee as per the relevant provisions of the concession agreement.

(2) Concession agreements provide for an extension or reduction of the concession period based on certain factors, including actual traffic volumes on specified target dates.

Projected Revenue for Toll SPVs:

The details of the projected revenue for the toll road Project SPVs based on the Traffic Reports for the last three fiscal years are as follows:

(in ₹ million)

Fiscal Year	PSRDCL	MBEL	BAEL	SBHL
Based on Traffic Reports prepared in April 2024				
FY 2026	2,623.95	4,103.52	3,112.59	1,017.45
FY 2027	2,882.21	4,579.72	3,432.41	1,136.01
FY 2028	3,158.15	5,044.85	3,790.12	1,257.70
Based on Traffic Reports prepared in October- November 2024				
FY 2026	2,626.80	3,769.30	3,052.65	974.60
FY 2027	2,899.60	4,127.80	3,373.61	1,093.20
FY 2028	3,190.20	4,612.30	3,739.85	1,221.30

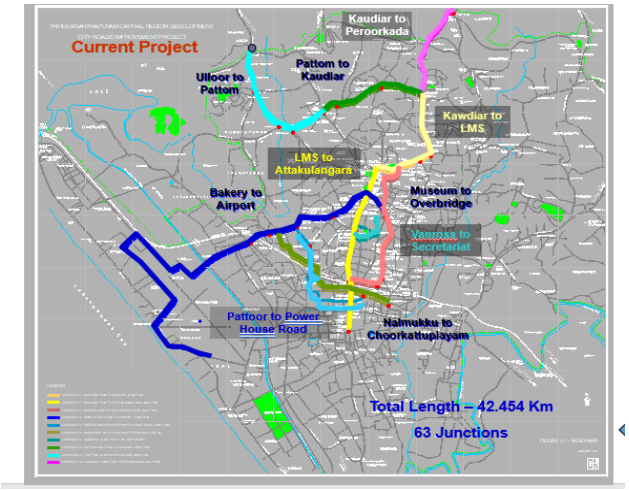
Note: There is an overall reduction in the projection of toll revenue based on the traffic reports prepared in October-November 2024 as compared to the traffic reports prepared in April 2024 for the Valuation Report and preparation of Audited Special Purpose Combined Financial Statements. The variation is 4.03% which is not material and is on account of various factors due to variation in traffic growth, changes in economy growth, reduction in wholesale price index projections and variation in traffic/travel pattern on short term basis. However, the Investment Manager and the Trust expect these variations to normalize over a longer-term period.

In addition to the assets mentioned above, Thiruvananthapuram Road Development Company Limited and Hazaribagh Ranchi Expressway Limited, the two annuity assets also form a part of the Project SPVs.

Description of Annuity Assets

1. Thiruvananthapuram Road Development Company Limited

The TRDCL Project included construction, operations and maintenance of ten corridors and three NH-bypass links aggregating to about 42.38 km in Thiruvananthapuram, Kerala. The final completion certificate was issued on May 8, 2017. Salient features of TRDCL are as follows:



Item	Particulars
Project Length (in kms)	28.12 (excluding phase I*)
Number of Lanes	2/3/4/6 lanes
Appointed Date	Not applicable
Concession Period	15 years from COD
Commercial Operations Date (COD)	Phase II- February 22, 2012 Phase III- February 20, 2015 Phase IV - May 31, 2016
End of Concession	May 31, 2031

Residual Concession Period (as of September 30, 2024)	Phase II- 2.39 years Phase III- 5.39 years Phase IV- 6.67 years
Annual payment receivable (in ₹ million)	236.98
Projected revenue in FY 2026 (in ₹ million)	76.98
Projected revenue in FY 2027 (in ₹ million)	260.17
Projected revenue in FY 2028 (in ₹ million)	66.01

**Phase I of this project was completed on July 4, 2007 and concession period for the same has ended on July 2022. Thereafter, Phase I stretches have been handed back to the concessioning authority.*

In an annuity project model, a fixed amount is paid semi-annually as annuity by the respective concessioning authority pursuant to the applicable concession agreement. Income from the project is thus assured to the extent of the annuity to be collected in accordance with the concession agreement, thus reducing our risk of income fluctuations resulted from changes in traffic volumes. Accordingly, monthly toll revenue collections are not applicable for TRDCL as an annuity project.

Capital Structure

As of September 30, 2024, total equity was negative ₹49.09 million and total liabilities including debt from lenders was ₹798.21 million, out of which ₹764.35 million was debt owed to the Trust.

Land

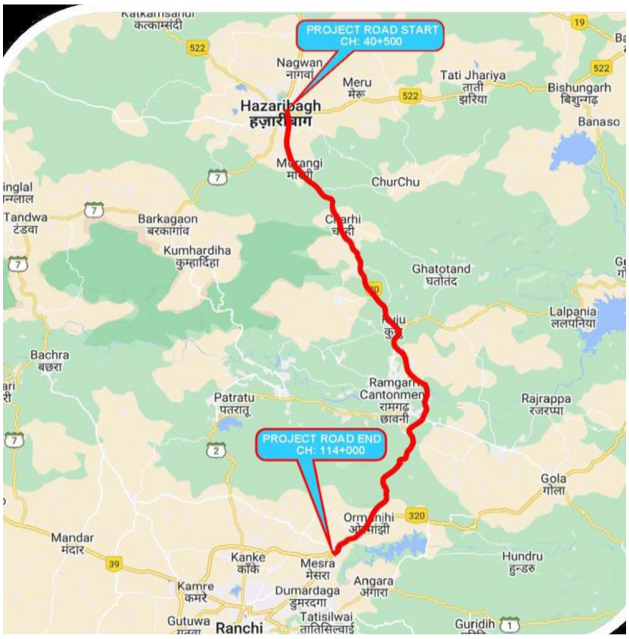
The land that underlies the TRDCL Project highway is owned by Roads and Bridges Division (Thiruvananthapuram), Public Works Department, Government of Kerala.

Ownership Structure

For information about the structure of ownership of the project by the Trust, please see the section "*Formation Transactions in Relation to the Trust"* on page 26.

2. Hazaribagh Ranchi Expressway Limited ("HREL")

The project included constructing and maintaining the 4-laning of the Hazaribagh - Ranchi section of NH-33 from 40.50 km to 114.00 km in Jharkhand on a Build Operate Transfer (BOT) - annuity basis. The final completion certificate was issued on April 1, 2015. Salient features of HREL are as follows:



Item	Particulars
Project Length (in kms)	73.50
Number of Lanes	4 lanes
Appointed Date	August 1, 2010
Concession Period	18 years
Commercial Operations Date (COD)	Provisional COD: September 15, 2012 Final COD: April 1, 2015
End of Concession	July 31, 2028
Residual Concession Period (as of September 30, 2024)	3.82
Annual payment receivable (in ₹ million)	1281.60
Projected revenue in FY 2026 (in ₹ million)	329.38
Projected revenue in FY 2027 (in ₹ million)	234.05
Projected revenue in FY 2028 (in ₹ million)	635.55

In an annuity project model, a fixed amount is paid semi-annually as annuity by the respective concessioning authority pursuant to the applicable concession agreement. Income from the project is thus assured to the extent of the annuity to be collected in accordance with the concession agreement, thus reducing our risk of income fluctuations resulted from changes in traffic volumes. Accordingly, monthly toll revenue collections are not applicable for HREL as an annuity project.

Capital Structure

As of September 30, 2024, total equity was (₹12.92 million) and total liabilities including debt from lenders was ₹ 4,256.97 million, of which ₹ 2,033.36 million was debt owed to the Trust.

Land

The land that underlies the HREL project highway is owned by NHAI.

Ownership Structure

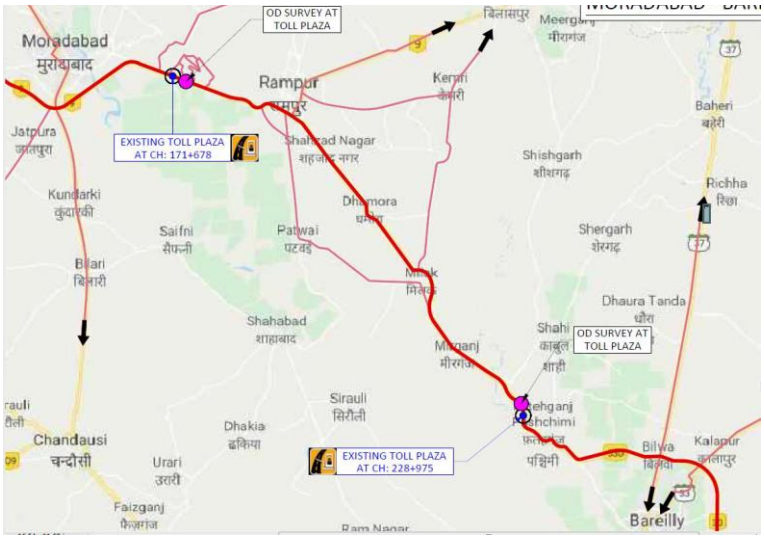
For information about the structure of ownership of the project by the Trust, please see the section "*Formation Transactions in Relation to the Trust"* on page 26.

See "*Summary of the Key Agreements – Summary of Concession Agreements*" on page 227 for a summary of the key terms of the concession agreements entered into by the Project SPVs with the NHAI and state road authorities.

Description of Toll Assets

1. *Moradabad Bareilly Project Project*

On February 19, 2010, the NHAI and MBEL entered into a concession agreement in relation to the Moradabad Bareilly Project. MBEL was engaged to augment a 114 km section of NH-24 between Moradabad and Bareilly in Uttar Pradesh by four-laning on a DBFOT basis. The concession period commenced on December 4, 2010 and the collection of toll began on January 6, 2015. As per the relevant concession agreement, the Moradabad Bareilly Project comprises the section of NH-24 from km 148.00 to km 262.00.



Corridor description

The Moradabad Bareilly Project corridor starts from Moradabad Bypass (km 148.000) and ends at Bareilly Bypass (km 262.00). The length of project road is 121 km. MBEL is a section of NH-24, which runs entirely in the state of Uttar Pradesh.

According to the relevant Traffic Consultant, a majority of the passenger traffic on the MBEL is originating or destined within Uttar Pradesh.

Concession period and revenue sharing arrangement

The NHAI granted MBEL a concession for a period of 25 years for this project. The concession period commenced on December 4, 2010 and is expected to expire on December 3, 2035. MBEL began collecting toll with respect to this project on January 6, 2015. The final completion certificate for this project was issued on July 30, 2019.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume, the concession period shall be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume, the concession period shall, subject to the payment of concession fee, be extended by 1.5% for every 1.00% shortfall, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its option, cause MBEL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, extensions of the concession period, if any, would be capped for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires MBEL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2020 and 30,700 PCUs, respectively.

MBEL submitted the actual traffic calculations on target date to the NHAI for average of three years i.e. one year prior to target date, on the target date and on the first anniversary of the target date. The actual traffic on target date was recorded as 29622 PCU's which is 3.50% lower than the target traffic of 30,700 PCU's. However, the final recommendation for extension in concession period is not yet received from NHAI.

In consideration of the grant of concession, MBEL pays the NHAI a concession fee of ₹1 per annum. Additionally, the NHAI provided MBEL with an outright grant of ₹4433.23 million.

Monthly toll revenue

The toll revenues received from the project for the periods indicated is set out below:

(in ₹ million)

S. No.	Relevant Project SPV	Month ended		
		January31, 2024	December 31, 2024	November 30, 2024
1.	Moradabad Bareilly Expressway Limited	279.26	304.12	317.10

Land

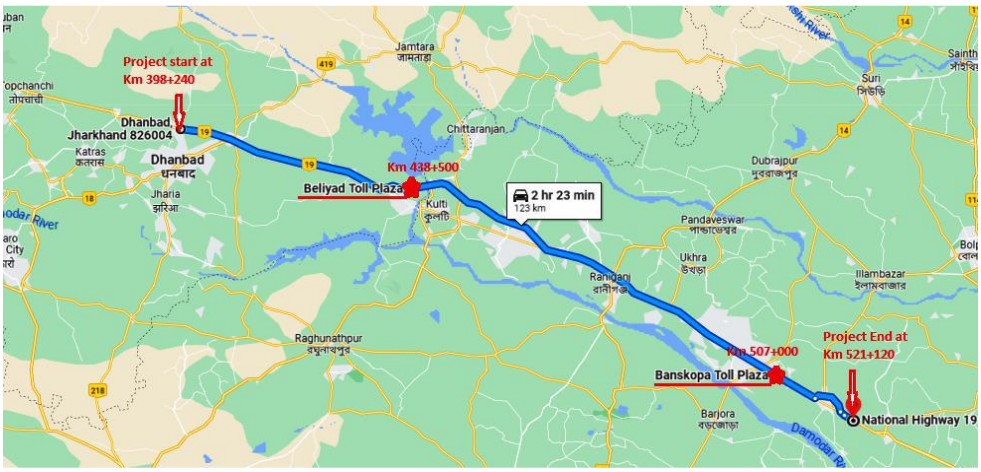
The NHAI owns the land that underlies the Moradabad Bareilly Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, please see the section "*Formation Transactions in relation to the Trust*" on page 26.

2. *Barwa Adda Expressway Limited*

On May 8, 2013, the NHAI and BAEL entered into a concession agreement in respect of the Barwa Adda Project. BAEL was engaged to augment a 122.88 km section of NH-2 between Barwa, Adda and Panagarh in Jharkhand by six laning on a DBFOT basis. The concession period and the collection of tolls commenced on April 1, 2014. As per the relevant concession agreement, the Barwa Adda Project comprises the section of NH-2 from km 398.240 to km 521.120. Further, on January 9, 2025, the NHAI and BAEL entered into a supplementary concession agreement for transfer of accrued claims against NHAI concerning the concession agreement and the BAEL project to the Trust.



Corridor description

The Barwa Adda Project corridor starts from Barwa Adda (Km 398.240) and ends at Bareilly (Km 521.120). The length of project road is 122.88 km. The project road is a section of NH-2, which connects the states of Jharkhand and West Bengal.

According to the relevant Traffic Consultant, a majority of the passenger traffic on the project road is originating from or destined to West Bengal and Jharkhand. In case of freight traffic, more than 65% of the goods traffic is originating

from or destined to West Bengal and Jharkhand States and rest of the traffic is generated from other Northern States like Bihar, UP and rest of India.

Concession period and revenue sharing arrangement

The NHAI granted BAEL a concession for a period of 20 years for this project. The concession period commenced on April 1, 2014 (appointed date) and is expected to expire on March 31, 2034. BAEL began collecting toll with respect to this project on April 5, 2014.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its option, cause BAEL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, extensions of the concession period, if any, would be capped for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires BAEL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 71,077 PCUs, respectively.

BAEL submitted the actual traffic calculations to the NHAI for average of three years i.e. one year prior to target date, on the target date and on the first anniversary of the target date. The actual traffic on target date was recorded as 42,113 PCU's which is 40.75% lower than the target traffic of 71,077 PCU's. However, the final recommendation for extension in concession period is not yet received from NHAI.

In consideration of the grant of concession, BAEL pays the NHAI a concession fee of ₹1 per annum. Additionally, from the Appointed Date, BAEL is required to pay a yearly premium in the form of an additional concession fee equal to ₹420.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year.

Monthly toll revenue

The toll revenues received from the project for the periods indicated is set out below:

(in ₹ million)

S. No.	Relevant Project SPV	Month ended		
		January31, 2024	**December 31, 2024**	**November 30, 2024**
1.	Barwa Adda Expressway Limited	277.45	274.56	248.09

Land

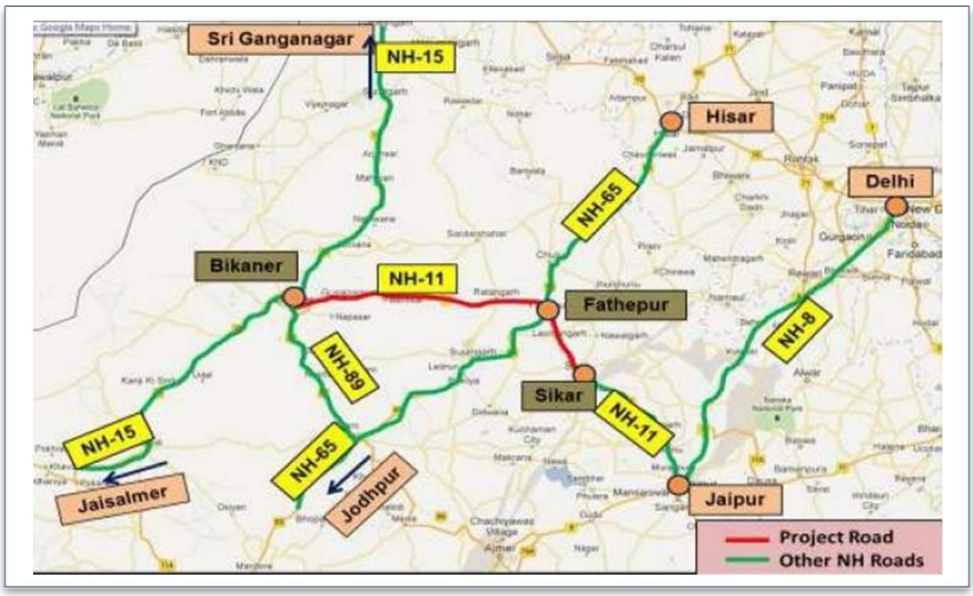
The NHAI owns the land that underlies the Barwa Adda Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, please see the section "*Formation Transactions in relation to the Trust*" on page 26.

3. Sikar Bikaner Highway Limited

On June 29, 2012, the Government of Rajasthan and SBHL entered into a concession agreement in relation to the Sikar Bikaner Project. SBHL was engaged to augment the existing road from km 340.188 of NH-11 to km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from km 553.869 of NH-11 to km 267.325 of NH-89 on the Sikar-Bikaner section of the NH-11 (approximately 237.578 km) in the State of Rajasthan by two-laning with paved shoulder on a DBFOT basis. The concession period commenced on February 18, 2013 and the collection of toll began on October 10, 2015.



Corridor description

The Sikar Bikaner Project corridor starts from Sikar (km 340.188 of NH-11) and ends at Bikaner (km 267.325 of NH-89). The length of project road is 237.58 kms.

The project road is a section of NH-11 and NH-89, which runs entirely in the State of Rajasthan. The project road section forms an important part of NH-11 which provides important connectivity from Bikaner to Jaipur.

According to the relevant Traffic Consultant, Rajasthan has the highest influence on traffic on the project road. In case of freight traffic, more than 80% of the goods traffic is mainly bound within Rajasthan and rest of the traffic is generates from other Northern States like Haryana, Punjab and rest of India.

Concession period and revenue sharing arrangement

The Government of Rajasthan granted SBHL a concession for a period of 25 years for this project. The concession period commenced on February 18, 2013 and is expected to expire on February 17, 2038. SBHL began collecting toll with respect to this project on October 10, 2015. The provisional completion certificates for this project were issued on October 10, 2015; August 16, 2016; and April 5, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume, the concession period shall be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume,

provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume, the concession period shall, subject to the payment of concession fee, be extended by 1.5% for every 1.00% shortfall, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the Government of Rajasthan may, at its option, cause SBHL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the Government of Rajasthan requires SBHL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2023 and 12,357 PCUs, respectively.

SBHL submitted the actual traffic calculations on target date to the NHAI for average of three years i.e. one year prior to target date, on the target date and on the first anniversary of the target date. The actual traffic on target date was recorded as 10,323 PCU's which is 16.46% lower than the target traffic of 12,357 PCU's. Independent engineer recommended five year extension in Concession period. However, the final recommendation for extension in concession period is not yet received from Authority.

SBHL pays the Government of Rajasthan a concession fee of ₹1 per annum. Additionally, the Government of Rajasthan provided SBHL with an outright grant of ₹2,473.20 million.

Monthly toll revenue

The toll revenues received from the project for the periods indicated is set out below:

(in ₹ million)

S. No.	Relevant Project SPV	Month ended		
		January 31, 2025	**December 31, 2024**	**November 30, 2024**
1.	Sikar Bikaner Highway Limited	79.00	81.84	79.52

Land

The Government of Rajasthan owns the land that underlies SBHL.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, please see the section "*Formation Transactions in relation to the Trust*" on page 26.

4. Pune Sholapur Road Development Company Limited

On September 30, 2009, the NHAI and PSRDCL entered into a concession agreement to undertake design, engineering, construction, development, finance and operation & maintenance of four-laning of Pune-Sholapur section of NH-9 from km 144.400 to km 249.000 in the State of Maharashtra under National Highways Development Project Phase III on DBFOT basis.

Corridor description

Project road starts from km. 144.40 (near Indapur in Pune district) and ends at km. 249.00 near Solapur with a length of 102.08 kms. The project road falls under two districts of Maharashtra, namely Pune and Solapur. The important towns and settlements along the project road are Indapur, Temburni, Mohol and Solapur. In addition to the through traffic (interstate traffic), the project stretch provides seamless connectivity between Pune and Solapur.

According to the relevant Traffic Consultant, in Maharashtra, the districts of Solapur (the project road falls), Pune and Mumbai are the districts influencing the traffic more. Impact of other districts are not significant in the case of goods vehicles. The interstate traffic is generated mainly to/from Gujarat in the north and Karnataka, Tamil Nadu and Andhra Pradesh in the south.

Concession period *and revenue sharing arrangement*

The NHAI granted PSRDCL a concession for a period of 20 years for this project. The concession period commenced on September 28, 2011 and is expected to expire on July 20, 2031. PSRDCL began collecting toll with respect to this project on August 31, 2013. The completion certificate for this project was issued on February 3, 2016.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume, the concession period shall be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume, the concession period shall, subject to the payment of concession fee, be extended by 1.5% for every 1.00% shortfall, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in three accounting year, the NHAI may terminate the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2020 and 36,900 PCUs, respectively.

PSRDCL submitted the actual traffic calculations on target date to the NHAI for average of three years i.e. one year prior to target date, on the target date and on the first anniversary of the target date. The actual traffic on target date was recorded as 31896 PCU's which is 13.56% lower than the target traffic of 36,900 PCU's. However, the final recommendation for extension in concession period is not yet received from NHAI.

In consideration of the grant of concession, PSRDCL pays the NHAI a concession fee of ₹1 per annum. Additionally, the NHAI provided PSRDCL with an outright grant of ₹2,850 million.

Monthly toll revenue

The toll revenues received from the project for the periods indicated is set out below:

(in ₹ million)

S. No.	Relevant Project SPV	Month ended		
		January 31, 2025	**December 31, 2024**	**November 30, 2024**
1.	Pune Sholapur Road Development Company Limited	211.94	220.27	198.42

Land

The NHAI owns the land that underlies the PSRDCL Project.

Structure of ownership of the project

For information about the ownership of the project by the Trust, please see the section "*Formation Transactions in relation to the Trust*" on page 26.

Monthly Toll Revenue of Toll SPVs

The monthly toll revenue of the Toll SPVs for the months of December 31, 2024, November 30, 2024 and October 31, 2024 have been presented below:

(in ₹ million)

Relevant Project SPV	Month ended		
	January 31, 2025	**December 31, 2024**	**November 30, 2024**
Moradabad Bareilly Expressway Limited	279.26	304.12	317.10
Barwa Adda Expressway Limited	277.45	274.56	248.09
Sikar Bikaner Highway Limited	79.00	81.84	79.52
Pune Sholapur Road Development Company Limited	211.94	220.27	198.42

SUMMARY OF KEY AGREEMENTS

Summary of Concession Agreements

1. Concession agreement executed between HREL and National Highway Authority of India ("NHAI") dated October 8, 2009 for construction, operation and maintenance of road from Km 40.500 to Km 114 (approximately 71.16 Km) on the Hazaribagh Ranchi section of NH No. 33 on build, operate and transfer ("BOT") basis, for a period of 18 years under NHDP Phase III ("HREL Concession Agreement").

A. ***Grant of Concession***

Subject to the provisions of the HREL Concession Agreement, the applicable laws and applicable permits, NHAI has granted HREL exclusive right, license and authority during the subsistence of the HREL Concession Agreement to construct, operate and maintain the project for 18 years commencing from the appointed date as mentioned in the HREL Concession Agreement.

Subject to and in accordance with the HREL Concession Agreement, the concession grantor shall oblige or entitle (as the case maybe) HREL to:

(i) right of way, access and license to the site for the purpose of and to the extent conferred by the provisions of the HREL Concession Agreement;
(ii) construct the project highway;
(iii) manage, operate and maintain the project and regulate the use thereof by third parties;
(iv) allow and assist NHAI or NHAI's contractors in demanding, collecting and appropriate fee from vehicles and persons liable for payment of fee for using the project highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;
(v) perform and fulfil all the obligations under and in accordance with the HREL Concession Agreement;
(vi) bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of HREL under the HREL Concession Agreement; and
(vii) not assign, transfer or sublet or create any lien or encumbrances on the HREL Concession Agreement or the concession thereby granted or on the whole or any part of the project highway nor transfer, lease or part possession thereof, save and except as expressly permitted by the HREL Concession Agreement or the substitution agreement.

B. ***Annuity***

Subject to the provisions of the HREL Concession Agreement, HREL upon achieving commercial operation date for the project highway and in consideration of HREL accepting the concession and undertaking to perform and discharge its obligation in accordance with the terms, conditions and covenants as mentioned in the HREL Concession Agreement, NHAI has agreed and undertaken to pay to HREL ₹640.80 million **("Annuity")** for each annuity payment period.

C. ***Concession Fees***

In consideration of the grants of concession under the HREL Concession Agreement, concession fee payable by HREL to NHAI shall be ₹1 per year during the term of the HREL Concession Agreement. (**"Concession Fees")**

D. ***Escrow Account***

HREL shall, prior to the appointed date, open and establish an escrow account **("Escrow Account")** and shall deposit the following inflows and receipts into it: i) all funds constituting the financial package; ii) all annuities and any other revenues from or in respect of the project highway, including the proceeds of insurance claims; and iii) all payments by NHAI, after deduction of any outstanding Concession Fees. The nature and scope of the Escrow Account shall be as per the agreement entered into amongst HREL, NHAI, the escrow bank and the senior lenders (**"Escrow Agreement"**).

E. ***Withdrawals during concession period***

HREL shall, at the time of opening of the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the escrow bank instructing that deposits in the Escrow Account shall be appropriated in the following order each month, or at a shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

(i) all taxes due and payable by HREL;
(ii) all payments relating to construction of the project highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;
(iii) operation and maintenance **("O&M")** expenses, subject to the ceiling, if any, set forth in the financing agreements;
(iv) O&M expenses and other costs and expenses incurred by NHAI in accordance with the provisions of the HREL Concession Agreement and certified by NHAI as due and payable to it;
(v) Concession Fees due and payable to NHAI;
(vi) monthly proportionate provision of debt service due in an accounting year;
(vii) all payments and damages certified by NHAI as due and payable to it by HREL;
(viii) debt service in respect of subordinated debt;
(ix) any reserve requirements set forth in the financing agreements; and
(x) balance, if any, in accordance with the instructions of HREL.

HREL shall not in any manner modify the order of payment specified above, except with prior written approval of NHAI.

F. ***Withdrawals upon Termination***

Notwithstanding anything to the contrary contained in the HREL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination be appropriated in the following order:

(i) all taxes due and payable by HREL;
(ii) 90% of the debt due excluding subordinated debt;
(iii) outstanding Concession Fees;
(iv) all payments and damages certified by NHAI as due and payable to it by HREL;
(v) retention and payments relating to the liability for defects and deficiencies set forth in the HREL Concession Agreement;
(vi) outstanding debt service including the balance of debt due;
(vii) outstanding subordinated debt;
(viii) incurred or accrued O&M expenses;
(ix) any other payments required to be made under the HREL Concession Agreement; and
(x) Balance, if any, in accordance with the instructions of HREL provided that no appropriations shall be made until a vesting certificate has been issued by NHAI.

G. ***Change of Scope***

NHAI may, notwithstanding anything to the contrary contained in the HREL Concession Agreement, require the provision of additional works and services which are not included in the scope of the projects as contemplated in the HREL Concession Agreement (**"Change of Scope"**). Any such Change of Scope shall be made in accordance with the provisions of the HREL Concession Agreement and the costs thereof shall be expended by HREL and reimbursed to it by NHAI in accordance with the HREL Concession Agreement.

If HREL determines at any time that a Change of Scope is necessary for providing safer and improved services to the users, it shall by notice in writing require NHAI to consider such Change of Scope. NHAI shall within 15 days of receipt of such notice, either accept it with modifications, if any, and initiate proceedings thereof or inform HREL in writing of its reasons for not accepting it.

H. *Compensation for Breach of Agreement*

In the event of HREL being in material default or breach of the HREL Concession Agreement, it shall pay to NHAI by way of compensation, all direct costs suffered or incurred by NHAI as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any breach or default in respect of which damages are expressly specified and payable under the HREL Concession Agreement.

In the event of NHAI being in material default or breach of the HREL Concession Agreement at any time after the appointed date**,** it shall pay HREL, by way of compensation, all direct costs suffered or incurred by HREL as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No such compensation shall be payable for any breach or default in respect of which damages have been expressly specified in the HREL Concession Agreement.

I. *Termination of the HREL Concession Agreement*

Termination for HREL Default

Save as otherwise provided in the HREL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and HREL fail to cure the default within the cure period set forth in the HREL Concession Agreement, or where no cure period is specified, then within a cure period of 60 days, HREL shall be deemed to be in default of the HREL Concession Agreement **("SPV Default")** unless the default has occurred solely as a result of any breach of the HREL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

(i) the performance security has been encashed and appropriated and HREL fails to replenish or provide fresh performance security within a cure period of 30 days;
(ii) subsequent to the replenishment or furnishing of fresh performance security, HREL fails to cure within a cure period of 90 days, the SPV Default for which whole or part of the performance security was appropriated;
(iii) HREL does not achieve the latest outstanding project milestone and continues to be in default for 90 days;
(iv) HREL abandons or manifests intention to abandon the construction or operation of the project highway without prior written consent of NHAI;
(v) project completion date does not occur within the specified period;
(vi) punch list items have not been completed within the specified period;
(vii) HREL is in breach of the maintenance requirements;
(viii) HREL has failed to make any payment to NHAI within the period specified in the HREL Concession Agreement;
(ix) an escrow default has occurred and HREL fails to cure the default within a cure period of 15 days;
(x) upon occurrence of a financial default, the lenders' representative has by notice required NHAI to undertake suspension in accordance with the substitution agreement and HREL fails to cure the default within the cure period specified in the substitution agreement;
(xi) a breach of any of the project agreements by HREL has caused a material adverse effect;
(xii) HREL create any encumbrance in breach of the HREL Concession Agreement;
(xiii) HREL repudiate the HREL Concession Agreement or otherwise take any action or evidence or conveys an intention not to be bound by the HREL Concession Agreement;
(xiv) change in ownership has occurred in breach of the HREL Concession Agreement;
(xv) there is a transfer, pursuant to law either of (i) the rights and/or obligations of HREL under any of the project agreements, or of (ii) all or part of the assets or undertaking of HREL and such transfer causes a material adverse effect;
(xvi) an execution levied on any of the assets of HREL has cause material adverse effect;
(xvii) HREL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the HREL or for the whole or material part of its assets that has a material bearing on the project;

(xviii) HREL has been, or is in the process of being liquidated, dissolved, wound up, amalgamated or reconstituted in manner that would cause, in the reasonable opinion of NHAI, a material adverse effect;

(xix) a resolution for winding up of HREL is passed, or any petition for winding up of HREL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof or HREL is ordered to wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of HREL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of HREL under the HREL Concession Agreement and project agreement; and provided that:

(i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the HREL Concession Agreement and the project agreements;
(ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the HREL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of the HREL as at the appointed date; and
(iii) each of the project agreements remains in full force and effect;

(xx) any representation or warranty of HREL herein contained which is, as of the date hereof, found to be materially false or HREL is at any time hereafter found to be in breach thereof;

(xxi) HREL submit to NHAI any statement, which has a material effect of NHAI's rights, obligations or interests and which is false in material particulars;

(xxii) HREL has failed to fulfil any obligation, for which failure termination has been specified in the HREL Concession Agreement; or

(xxiii) HREL commits default in complying with any other provision of the HREL Concession Agreement if such a default causes material adverse effect on NHAI.

Without prejudice to any other rights or remedies which NHAI may have under the HREL Concession Agreement, upon the occurrence of an SPV Default, the NHAI shall be entitled to terminate the HREL Concession Agreement by issuing a termination notice to HREL. Before issuing the termination notice, NHAI shall, by notice, inform of its intention to issue such termination notice and grant 15 days to HREL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the HREL Concession Agreement.

Termination for NHAI Default

In the event that any of the defaults specified below shall have occurred, and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the HREL Concession Agreement, NHAI shall be deemed to be in default of the HREL Concession Agreement **("NHAI Default")** unless the default has occurred as a result of any breach of the HREL Concession Agreement by HREL or due to force majeure. The defaults referred to herein shall include:

(i) NHAI commits a material default in complying with any of the provisions of the HREL Concession Agreement and such default has a material adverse effect on HREL;

(ii) NHAI has failed to make any payment to HREL within the period specified in the HREL Concession Agreement;

(iii) NHAI repudiates the HREL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the HREL Concession Agreement; or

(iv) the state commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on HREL and the breach continues for a period of 90 days from the date of notice given in this behalf by HREL to NHAI.

Without prejudice to any other right or remedy which HREL may have under the HREL Concession Agreement, upon occurrence of NHAI default, HREL shall, subject to the provisions of the substitution agreement, be entitled to terminate the HREL Concession Agreement by issuing a termination notice to NHAI; provided that

before issuing the termination notice, the HREL shall by notice inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation, and may after the expiry of such 15 days, whether or not it is in receipt of such representation, issue the termination notice.

J. ***Termination Payment***

Termination Payment shall become due and payable to HREL within 15 days of a demand being made to NHAI with the necessary particulars, and in the event of any delay, NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. Provided that such delay shall not exceed 90 days. For the avoidance of any doubt, it is expressly agreed that termination payment shall constitute a full discharge by NHAI of its payment obligations in respect thereof hereunder.

K. ***Defects Liability after Termination***

HREL shall be responsible for all defects and deficiencies in the project highway for a period of 120 days after termination, and shall have the obligations to repair or rectify, at their own cost, all defects and deficiencies observed by the independent engineer in the project highway during the aforesaid period. In the event that HREL fail to repair or rectify such defect or deficiency within 15 days from the date of notice issued by NHAI in this behalf, NHAI shall be entitled to get the same repaired or rectified at HREL's risk and cost so as to make the project highway conform to the maintenance requirements. All costs incurred by NHAI hereunder shall be reimbursed by HREL to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the Escrow Account.

L. ***Performance Security***

HREL shall, for the performance of its obligations under the HREL Concession Agreement during the construction period, provide to NHAI no later than 180 days from the date of HREL Concession Agreement, an irrevocable and unconditional guarantee from a bank for a sum equivalent to ₹312.50 million in the form set forth in the HREL Concession Agreement ("**Performance Security**"). Until such time the Performance Security is provided by HREL and the same comes into effect, the bid security shall remain in force and effect, and upon such provision of the Performance Security, NHAI shall release the bid security to HREL.

M. ***O&M obligations of HREL***

During the operation period, HREL shall operate and maintain the project highway in accordance with the HREL Concession Agreement either by itself, or through the O&M contractor and if required, modify, repair or otherwise make improvements to the project highway to comply with the provisions of the HREL Concession Agreement, applicable laws and applicable permits, and conform to good industry practice. The obligations of HREL shall include:

(i) permitting safe, smooth and uninterrupted flow of traffic on the project highway during normal operating conditions;
(ii) allowing and assisting NHAI or NHAI contractors in collecting and appropriating the fee;
(iii) minimising disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and maintaining liaison with emergency services of the state;
(iv) carrying out periodic preventive maintenance of the project highway;
(v) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavements markings, lighting, road signs and other traffic control devices;
(vi) undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;
(vii) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the project highway;
(viii) preventing with the assistance of the concerned law enforcement agencies, any encroachments on the project highway;
(ix) protection of the environment and provision of equipment and materials thereof;

(x) operations and maintenance of all communication, control and administrative systems necessary for the efficient operation of project highway;
(xi) maintaining a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and
(xii) complying with safety requirements in accordance with the HREL Concession Agreement.

HREL shall remove promptly from the project highway all surplus construction machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the project highway in a clean, tidy and orderly condition, and in conformity with the applicable laws, applicable permits and good industry practice.

HREL shall maintain, in conformity with good industry practice, all stretches of approach roads, over passes, under passes or other structures situated on the site but not forming part of the carriageway.

N. ***Insurance during concession period***

HREL shall effect and maintain at its own cost, during the construction period and the operation period, such insurances for such maximum sums as may be required under the financing agreements, and the applicable laws, and such insurances as may be necessary or prudent in accordance with good industry practice. HREL shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on NHAI as a consequence of any act or omission of HREL during the construction period. For the avoidance of doubt, the level of insurance to be maintained by HREL after repayment of senior lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of senior lenders' dues.

O. ***Liability and Indemnity***

General Indemnity

HREL will indemnify, defend, save and hold harmless NHAI and its officers, servants, agents, government instrumentalities and government owned and/or controlled entities/enterprises, (the "**Authority Indemnified Persons**") against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by HREL of any of its obligations under the HREL Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by HREL to any user except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach of the HREL Concession Agreement on the part of Authority Indemnified Persons.

NHAI will indemnify, defend, save and hold harmless HREL against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of (i) defect in title and/or the rights of NHAI in the land comprised in the site, and/or (ii) breach by NHAI of any of its obligations under the HREL Concession Agreement or any related agreement, which materially and adversely affect the performance by HREL of its obligations under the HREL Concession Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of the HREL Concession Agreement or any related agreement and/or breach of its statutory duty on the part of HREL, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of HREL.

Indemnity by HREL

Without limiting the generality of the above clause, HREL shall fully indemnify, hold harmless and defend NHAI and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(i) failure of HREL to comply with applicable laws and applicable permits;

(ii) payment of taxes required to be made by HREL in respect of the income or other taxes of HREL's contractors, suppliers and representatives; or
(iii) non-payment of amounts due as a result of materials or services furnished to HREL or any of its contractors which are payable by HREL or any of its contractors.

Without limiting the generality of the provisions of the HREL Concession Agreement, HREL shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may suffer, or pay by reason of any demands, claims, suits, or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by HREL or by HREL's contractors in performing HREL's obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, HREL shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the project highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, HREL shall promptly make every reasonable effort to secure for NHAI a licence, at no cost to NHAI, authorising continued use of the infringing work. If HREL is unable to secure such licence within a reasonable time, HREL shall, at its own expense, and without impairing the specifications and standards, either replace the affected work or part, or process thereof with non-infringing work or part or process, or modify the same so that It becomes non-infringing.

P. ***Effect of Force Majeure Event on the concession***

Upon occurrent of any force majeure event prior to the appointed date, the period set forth in the HREL Concession Agreement for achieving financial close shall be extended by a period equal in length to the duration of the force majeure event.

At any time after the appointed date, if any force majeure event occurs:

(i) before COD, the concession period and the dates set forth in the project completion schedule shall be extended by a period equal in length to the duration for which such force majeure event subsists;

Q. ***Suspension of HREL rights***

Suspension upon HREL default

Upon occurrence of HREL default, NHAI shall be entitled, without prejudice to its other rights and remedies under the HREL Concession Agreement including its rights of termination, to (i) suspend all rights of HREL under the HREL Concession Agreement including HREL's right to receive Annuity, and other revenues, and (ii) exercise such rights itself or authorise any other person to exercise the same on its behalf during such suspension. Suspension shall be effective forthwith upon issue of notice by NHAI to HREL and may extend up to a period not exceeding 180 days from the date of issue of such notice; provided that upon written request from HREL and lender's representative, NHAI shall extend the aforesaid period of 180 days by a further period not exceeding 90 days.

Authority to act on behalf of HREL

During the period of suspension, NHAI shall, on behalf of HREL, operate and maintain the project highway under and in accordance with the HREL Concession Agreement. NHAI shall be entitled to make withdrawals form the escrow account for meeting the costs incurred by it for remedying and rectifying the cause of suspension, and thereafter for defraying the expenses specified in the HREL Concession Agreement.

During the period of suspension hereunder, all rights and liabilities in relation to the project highway shall continue to vest in HREL and all things done or actions taken, including expenditure incurred by NHAI for discharging the obligations of HREL under and in accordance with the HREL Concession Agreement and the

project agreements, shall be deemed to have been done or taken for and on behalf of HREL and HREL undertakes to indemnify NHAI for all costs incurred during such period.

Revocation of Suspension

In the event that NHAI shall have rectified or removed the cause of suspension within a period not exceeding 90 (ninety) days from the date of suspension, it shall revoke the suspension forthwith and restore all rights of HREL under the HREL concession agreement.

Upon HREL having cured SBHL default within a period not exceeding 90 days from the date of suspension, the authority shall revoke the suspension forthwith and restore all rights of HREL under the HREL Concession Agreement.

Substitution of SBHL

At any time during the period of suspension, the lenders' representative, on behalf of senior lenders, shall be entitled to substitute HREL under and in accordance with the substitution agreement, and upon receipt of notice, thereunder from the lenders' representative, NHAI shall withhold termination for a period not exceeding 180 days from the date of suspension, and any extension thereof under the HREL Concession Agreement, for enabling the lenders' representative to exercise its rights of substitution on behalf of senior lenders.

Termination

At any time during the period of suspension under the HREL Concession Agreement, HREL may by notice require NHAI to revoke the suspension and issue a termination notice. Subject to the rights of the lenders' representative to undertake substitution in accordance with the provisions of the HREL Concession Agreement and within the period specified in the HREL Concession Agreement, the authority shall, within 15 days of receipt of such notice, terminate the HREL Concession Agreement under and in accordance with the HREL Concession Agreement.

Notwithstanding anything to the contrary contained in the HREL Concession Agreement, in the event that suspension is not revoked within 180 days from the date of suspension or within the extended period, if any, set forth in the HREL Concession Agreement, the HREL Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have terminated by mutual agreement of the parties and all the provisions of the HREL Concession Agreement shall apply, *mutatis mutandis*, to such termination as if a termination notice had been issued by NHAI upon occurrence of a HREL default.

2. Concession agreement executed between MBEL and NHAI dated February 19, 2010 for four-laning of Moradabad-Bareilly Road Section of NH-24 from Km 148 to Km 262, in the State of Uttar Pradesh under NHDP Phase III on DBFOT basis, for a period of 25 years ("MBEL Concession Agreement")

A. *Grant of Concession*

Subject to the provisions of the MBEL Concession Agreement, the applicable laws and applicable permits, NHAI has granted MBEL exclusive right, license and authority during the subsistence of the MBEL Concession Agreement to construct, operate and maintain the project for 25 years commencing from the appointed date as mentioned in the MBEL Concession Agreement.

Subject to and in accordance with the MBEL Concession Agreement, the concession granted shall oblige or entitle (as the case maybe) MBEL to:

(i) right of way, access and license to the site for the purpose of and to the extent conferred by the provisions of the MBEL Concession Agreement;
(ii) finance and construct the project highway;
(iii) manage, operate and maintain the project highway and regulate the use thereof by third parties;

(iv) demand, collect and appropriate fee from vehicles and users liable for payment of fee for using the project highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;
(v) perform and fulfil all the obligations under and in accordance with the MBEL Concession Agreement;
(vi) bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of MBEL under the MBEL Concession Agreement; and
(vii) neither assign, transfer or sublet or create any lien or encumbrances on the MBEL Concession Agreement or the concessionaire thereby granted or on the whole or any part of the project highway nor transfer, lease or part possession thereof, save and except as expressly permitted by the MBEL Concession Agreement or the substitution agreement.

B. ***Concession Fees***

In consideration of the grants of concession under this MBEL Concession Agreement, concession fee payable by MBEL to NHAI shall be ₹1 per year during the term of the MBEL Concession Agreement **("Concession Fees").**

C. ***Escrow Account***

MBEL shall, prior to the appointed date, open and establish an escrow account **("Escrow Account")** and shall deposit the following inflows and receipts into it: i) all funds constituting the financial package; ii) all fee and any other revenues from or in respect of the project highway, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and iii) all payments by NHAI, after deduction of any outstanding Concession Fees. The nature and scope of the Escrow Account shall be as per the agreement entered into amongst MBEL, NHAI, the escrow bank and the senior lenders **("Escrow Agreement".)**

D. ***Withdrawals during concession period***

MBEL shall, at the time of opening of the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the escrow bank instructing that deposits in the Escrow Account shall be appropriated in the following order each month, or at a shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

(i) all taxes due and payable by MBEL for and in respect of the project highway;
(ii) all payments relating to construction of the project highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;
(iii) operation and maintenance **("O&M")** expenses, subject to the ceiling, if any, set forth in the financing agreements;
(iv) O&M expenses and other costs and expenses incurred by NHAI in accordance with the provisions of the MBEL Concession Agreement and certified by NHAI as due and payable to it;
(v) Concession Fee due and payable to NHAI;
(vi) monthly proportionate provision of debt service due in an accounting year;
(vii) all payments and Damages certified by NHAI as due and payable to it by MBEL, including payment of revenue shortfall loan;
(viii) monthly proportionate provision of debt service due in an accounting year in respect of subordinated debt;
(ix) any reserve requirements set forth in the financing agreements; and
(x) balance, if any, in accordance with the instructions of MBEL.

MBEL shall not in any manner modify the order of payment specified above, except with prior written approval of NHAI.

E. ***Withdrawals upon Termination***

Notwithstanding anything to the contrary contained in the MBEL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination be appropriated in the following order:

(i) all taxes due and payable by MBEL in respect of the project highway;
(ii) 90% of the debt due excluding subordinated debt;
(iii) outstanding Concession Fees;
(iv) all payments and damages certified by NHAI as due and payable to it by MBEL including repayment of the revenue shortfall loan;
(v) retention and payments relating to the liability for defects and deficiencies set forth in the MBEL Concession Agreement;
(vi) outstanding debt service including the balance of debt due;
(vii) outstanding subordinated debt;
(viii) incurred or accrued O&M expenses;
(ix) any other payments required to be made under the MBEL Concession Agreement; and
(x) balance, if any, in accordance with the instructions of MBEL, provided that no appropriations shall be made until a vesting certificate has been issued by NHAI.

F. ***Change of Scope***

NHAI may, notwithstanding anything to the contrary contained in the MBEL Concession Agreement, require the provision of additional works and services which are not included in the scope of the projects as contemplated in the MBEL Concession Agreement (**"Change of Scope"**). Any such Change of Scope shall be made in accordance with the provisions of the MBEL Concession Agreement and the costs thereof shall be expended by MBEL and reimbursed to it by NHAI in accordance with the MBEL Concession Agreement.

If MBEL determines at any time that a Change of Scope is necessary for providing safer and improved services to the users, it shall by notice in writing require NHAI to consider such Change of Scope. NHAI within 15 days of receipt of such notice, either accept it with modifications, if any, and initiate proceedings thereof or inform MBEL in writing of its reasons for not accepting it.

G. ***Compensation for Breach of Agreement***

In the event of MBEL being in material default or breach of the MBEL Concession Agreement, it shall pay to NHAI by way of compensation, all direct costs suffered or incurred by NHAI as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any breach or default in respect of which damages are expressly specified and payable under the MBEL Concession Agreement or for any consequential losses incurred by NHAI.

In the event of NHAI being in material default or breach of the MBEL Concession Agreement at any time after the appointed date**,** it shall pay MBEL, by way of compensation, all direct costs suffered or incurred by MBEL as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No such compensation shall be payable for any breach or default in respect of which damages have been expressly specified in the MBEL Concession Agreement.

H. ***Termination of the MBEL Concession Agreement***

Termination for MBEL Default

Save as otherwise provided in the MBEL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and MBEL fails to cure the default within the cure period set forth in the MBEL Concession Agreement, or where no cure period is specified, then within a cure period of 60 days, MBEL shall be deemed to be in default of the MBEL Concession Agreement **("SPV Default")** unless the default has occurred solely as a result of any breach of the MBEL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

(i) the performance security has been encashed and appropriated and MBEL fails to replenish or provide fresh performance security within a cure period of 30 days;

(ii) subsequent to the replenishment or furnishing of fresh performance security, MBEL fails to cure within a cure period of 90 days, the SPV Default for which whole or part of the performance security was appropriated;
(iii) MBEL does not achieve the latest outstanding project milestone and continues to be in default for 120 days;
(iv) MBEL abandons or manifests intention to abandon the construction or operation of the project highway without prior written consent of NHAI;
(v) project completion date does not occur within the specified period;
(vi) punch list items have not been completed within the specified period;
(vii) MBEL is in breach of the maintenance requirements or the safety requirements, as the case maybe;
(viii) MBEL has failed to make any payment to NHAI within the period specified in the MBEL Concession Agreement;
(ix) an escrow default has occurred and MBEL fails to cure the default within a cure period of 15 days;
(x) upon occurrence of a financial default, the lenders' representative has by notice required NHAI to undertake suspension or termination, as the case maybe, in accordance with the substitution agreement and MBEL fails to cure the default within the cure period specified in the MBEL Concession Agreement;
(xi) a breach of any of the project agreements by MBEL has caused a material adverse effect;
(xii) MBEL creates any encumbrance in breach of the MBEL Concession Agreement;
(xiii) MBEL repudiates the MBEL Concession Agreement or otherwise takes any action or evidence or conveys an intention not to be bound by the MBEL Concession Agreement;
(xiv) change in ownership has occurred in breach of the MBEL Concession Agreement;
(xv) there is a transfer, pursuant to law either of (i) the rights and/or obligations of MBEL under any of the project agreements, or of (ii) all or part of the assets or undertaking of MBEL and such transfer causes a material adverse effect;
(xvi) an execution levied on any of the assets of MBEL has caused material adverse effect;
(xvii) MBEL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the MBEL or for the whole or material part of its assets that has a material bearing on the project;
(xviii) MBEL has been, or is in the process of being liquidated, dissolved, wound up, amalgamated or reconstituted in manner that would cause, in the reasonable opinion of NHAI, a material adverse effect;
(xix) a resolution for winding up of MBEL is passed, or any petition for winding up of MBEL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof or MBEL is ordered to wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of MBEL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of MBEL under the MBEL Concession Agreement and project agreement; and provided that:

    (a) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the MBEL Concession Agreement and the project agreements;
    (b) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the MBEL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of the MBEL as at the appointed date; and
    (c) each of the project agreements remains in full force and effect;

(xx) any representation or warranty of MBEL herein contained which is, as of the date hereof, found to be materially false or MBEL is at any time hereafter found to be in breach thereof;
(xxi) MBEL submit to NHAI any statement, notice or other document, in written or electronic form, which has a material effect of NHAI's rights, obligations or interests and which is false in material particulars;
(xxii) MBEL has failed to fulfil any obligation, for which failure termination has been specified in the MBEL Concession Agreement; or
(xxiii) MBEL commits default in complying with any other provision of the MBEL Concession Agreement if such a default causes material adverse effect on NHAI.

Without prejudice to any other rights or remedies which NHAI may have under the MBEL Concession Agreement, upon the occurrence of an SPV Default, the NHAI shall be entitled to terminate the MBEL Concession Agreement by issuing a termination notice to MBEL. Before issuing the termination notice, NHAI shall, by a notice, inform MBEL of its intention to issue a termination notice and grant 15 days to MBEL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the MBEL Concession Agreement.

Termination for NHAI Default

In the event that any of the defaults specified below shall have occurred, and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the MBEL Concession Agreement, NHAI shall be deemed to be in default of the MBEL Concession Agreement **("NHAI Default")** unless the default has occurred as a result of any breach of the MBEL Concession Agreement by MBEL or due to force majeure. The defaults referred to herein shall include:

(i) NHAI commits a material default in complying with any of the provisions of the MBEL Concession Agreement and such default has a material adverse effect on MBEL;
(ii) NHAI has failed to make any payment to MBEL within the period specified in the MBEL Concession Agreement;
(iii) NHAI repudiates the MBEL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the MBEL Concession Agreement; or
(iv) the state commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on MBEL and the breach continues for a period of 90 days from the date of notice given in this behalf by MBEL to NHAI.

Without prejudice to any other right or remedy which MBEL may have under the MBEL Concession Agreement, upon occurrence of NHAI default, MBEL shall, subject to the provisions of the substitution agreement, be entitled to terminate the MBEL Concession Agreement by issuing a termination notice to NHAI; provided that before issuing the termination notice, the MBEL shall by notice inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation, and may after the expiry of such 15 days, whether or not it is in receipt of such representation, issue the termination notice.

I. *Termination Payment*

Termination Payment shall become due and payable to MBEL within 15 days of a demand being made to NHAI with the necessary particulars, and in the event of any delay, NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. Provided that such delay shall not exceed 90 days. For the avoidance of any doubt, it is expressly agreed that termination payment shall constitute full discharge by NHAI of its payment obligations in respect thereof hereunder.

J. *Defects Liability after Termination*

MBEL shall be responsible for all defects and deficiencies in the project highway for a period of 120 days after termination, and shall have the obligations to repair or rectify, at their own cost, all defects and deficiencies observed by the independent engineers in the project highway during the aforesaid period. In the event that MBEL fail to repair or rectify such defect or deficiency within 15 days from the date of notice issued by NHAI in this behalf, NHAI shall be entitled to get the same repaired or rectified at MBEL's risk and cost so as to make the project highway conform to the maintenance requirements. All costs incurred by NHAI hereunder shall be reimbursed by MBEL to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the Escrow Account.

K. *Performance Security*

MBEL shall, for the performance of its obligations under the MBEL Concession Agreement during the construction period, provide to NHAI no later than 180 days from the date of MBEL Concession Agreement, an irrevocable and unconditional guarantee from a bank for a sum equivalent to ₹633.50 million in the form set

forth in the MBEL Concession Agreement ("**Performance Security**"). Until such time the Performance Security is provided by MBEL and the same comes into effect, the bid security shall remain in force and effect, and upon such provision of the Performance Security, NHAI shall release the bid security to MBEL.

Notwithstanding anything to the contrary in the MBEL Concession Agreement, in the event Performance Security is not provided by MBEL within a period of 180 days from the date of MBEL Concession Agreement, NHAI may encash the bid security and appropriate the proceeds thereof as damages, and thereupon all rights, privileges, claims and entitlements of MBEL under and arising out of the MBEL Concession Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of MBEL, and MBEL Concession Agreement shall be deemed to have been terminated by mutual agreement of the parties.

L. ***O&M obligations of MBEL***

During the operation period, MBEL shall operate and maintain the project highway in accordance with the MBEL Concession Agreement either by itself, or through the O&M contractor and if required, modify, repair or otherwise make improvements to the project highway to comply with the provisions of the MBEL Concession Agreement, applicable laws and applicable permits, and conform to specifications and standards and good industry practice. The obligations of MBEL shall include:

(i) permitting safe, smooth and uninterrupted flow of traffic on the project highway during normal operating conditions;
(ii) collecting and appropriating the fee;
(iii) minimising disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and maintaining liaison with emergency services of the state;
(iv) carrying out periodic preventive maintenance of the project highway;
(v) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavements markings, lighting, road signs and other traffic control devices;
(vi) undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;
(vii) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the project highway;
(viii) preventing with the assistance of the concerned law enforcement agencies, any encroachments on the project highway;
(ix) protection of the environment and provision of equipment and materials thereof;
(x) operations and maintenance of all communication, control and administrative systems necessary for the efficient operation of project highway;
(xi) maintaining a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and
(xii) complying with safety requirements in accordance with the MBEL Concession Agreement.

MBEL shall remove promptly from the project highway all surplus construction machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the project highway in a clean, tidy and orderly condition, and in conformity with the applicable laws, applicable permits and good industry practice. For avoidance of doubt, it is agreed that the debris and material excavated shall be carried to and deposited at a place to be decided in consultation with NHAI, independent engineer and MBEL.

MBEL shall maintain, in conformity with good industry practice, all stretches of approach roads, over passes, under passes or other structures situated on the site but not forming part of the carriageway.

M. ***Insurance during concession period***

MBEL shall effect and maintain at its own cost, during the construction period and the operation period, such insurances for such maximum sums as may be required under the financing agreements, and the applicable laws, and such insurances as may be necessary or prudent in accordance with good industry practice. MBEL

shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on NHAI as a consequence of any act or omission of MBEL during the construction period. MBEL shall procure that in each insurance policy, NHAI shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by MBEL after repayment of senior lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of senior lenders' dues.

N. ***Liability and Indemnity***

General Indemnity

MBEL will indemnify, defend, save and hold harmless NHAI and its officers, servants, agents, government instrumentalities and government owned and/or controlled entities/enterprises, (the "**Authority Indemnified Persons**") against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by MBEL of any of its obligations under the MBEL Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by MBEL to any user or from any negligence of MBEL under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of the MBEL Concession Agreement on the part of Authority Indemnified Persons.

NHAI will indemnify, defend, save and hold harmless MBEL against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (i) defect in title and/or the rights of NHAI in the land comprised in the site, and/or (ii) breach by NHAI of any of its obligations under the MBEL Concession Agreement or any related agreement, which materially and adversely affect the performance by MBEL of its obligations under the MBEL Concession Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of the MBEL Concession Agreement or any related agreement and/or breach of its statutory duty on the part of MBEL, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of MBEL.

Indemnity by MBEL

Without limiting the generality of the above clause, MBEL shall fully indemnify, hold harmless and defend NHAI and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(i) failure of MBEL to comply with applicable laws and applicable permits;
(ii) payment of taxes required to be made by MBEL in respect of the income or other taxes of MBEL's contractors, suppliers and representatives; or
(iii) non-payment of amounts due as a result of materials or services furnished to MBEL or any of its contractors which are payable by MBEL or any of its contractors.

Without limiting the generality of the provisions of the MBEL Concession Agreement, MBEL shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may suffer, or pay by reason of any demands, claims, suits, or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by MBEL or by MBEL's contractors in performing MBEL's obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, MBEL shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the project highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, MBEL shall promptly make every reasonable effort to secure for NHAI a licence, at no cost to NHAI, authorising continued use of the infringing work. If MBEL is unable to secure such licence within a reasonable

time, MBEL shall, at its own expense, and without impairing the specifications and standards, either replace the affected work or part, or process thereof with non-infringing work or part or process, or modify the same so that It becomes non-infringing.

O. ***Effect of Force Majeure Event on the concession***

Upon occurrent of any force majeure event prior to the appointed date, the period set forth in the MBEL Concession Agreement for achieving financial close shall be extended by a period equal in length to the duration of the force majeure event.

At any time after the appointed date, if any force majeure event occurs:

(i) before COD, the concession period and the dates set forth in the project completion schedule shall be extended by a period equal in length to the duration for which such force majeure event subsists; or

(ii) after COD, whereupon MBEL is unable to collect fee despite making best efforts or it is directed by NHAI to suspend the collection thereof during the subsistence of such force majeure event, the concession period shall be extended by a period, equal in length to the period during which MBEL was prevented from collection of fee on account thereof, provided that in the event of partial collection of fee where the daily collection if less than 90% of the average daily fee, NHAI shall extend the concession period in proportion to the loss of fee on a daily basis. For the avoidance of doubt, loss of 25% in collection of fee as compared to the average daily fee for four days shall entitle MBEL to extension of one day in the concession period.

P. ***Suspension of MBEL rights***

Suspension upon MBEL default

Upon occurrence of MBEL default, NHAI shall be entitled, without prejudice to its other rights and remedies under the MBEL Concession Agreement including rights of termination, to (i) suspend all rights of MBEL under the MBEL Concession Agreement including MBEL's right to collect fee, and other revenues, and (ii) exercise such rights itself and perform the obligations or authorise any other person to exercise or perform the same on its behalf during such suspension. Suspension shall be effective forthwith upon issue of notice by NHAI to MBEL and may extend up to a period not exceeding 180 days from the date of issue of such notice; provided that upon written request from MBEL and lender's representative, NHAI shall extend the aforesaid period of 180 days by a further period not exceeding 90 days.

Authority to act on behalf of MBEL

During the period of suspension, NHAI shall, on behalf of MBEL, collect all fee and revenues under and in accordance with the MBEL Concession Agreement and deposit the same in the escrow account. NHAI shall be entitled to make withdrawals form the escrow account for meeting the costs incurred by it for remedying and rectifying the cause of suspension, and thereafter for defraying the expenses specified in the MBEL Concession Agreement.

During the period of suspension hereunder, all rights and liabilities vested in MBEL in accordance with the provisions of the MBEL Concession Agreement shall continue to vest therein and all things done or actions taken, including expenditure incurred by NHAI for discharging the obligations of MBEL under and in accordance with the MBEL Concession Agreement and the project agreements, shall be deemed to have been done or taken for and on behalf of MBEL and MBEL undertakes to indemnify NHAI for all costs incurred during such period. MBEL hereby licenses and sub-licenses respectively, NHAI or any other person authorised by it under the MBEL Concession Agreement to use during suspension, all intellectual property belonging to or licenced to MBEL with respect to the project highway and its design, engineering, construction, operation and maintenance, and which is used or created by MBEL in performing its obligations under the MBEL Concession Agreement.

Revocation of Suspension

In the event that NHAI shall have rectified or removed the cause of suspension within a period not exceeding 90 days from the date of suspension, it shall revoke the suspension forthwith and restore all rights of MBEL under the MBEL Concession Agreement. For the avoidance of doubt, the parties expressly agree that the NHAI may, in its discretion, revoke the suspension at any time, whether or not the cause of suspension has been rectified or removed hereunder.

Upon MBEL having cured MBEL default within a period not exceeding 90 days from the date of suspension, NHAI shall revoke the suspension forthwith and restore all rights of MBEL under the MBEL Concession Agreement.

Substitution of MBEL

At any time during the period of suspension, the lenders' representative, on behalf of senior lenders, shall be entitled to substitute MBEL under and in accordance with the substitution agreement, and upon receipt of notice, thereunder from the lenders' representative, NHAI shall withhold termination for a period not exceeding 180 days from the day of suspension, and any extension thereof under the MBEL Concession Agreement, for enabling the lenders' representative to exercise its rights of substitution on behalf of senior lenders.

Termination

At any time during the period of suspension under the MBEL Concession Agreement, MBEL may by notice require the authority to revoke the suspension and issue a termination notice. Subject to the rights of the lenders' representative to undertake substitution in accordance with the provisions of the MBEL Concession Agreement and within the period specified in the MBEL Concession Agreement, NHAI shall, within 15 days of receipt of such notice, terminate the MBEL Concession Agreement under and in accordance with the MBEL Concession Agreement.

Notwithstanding anything to the contrary contained in the MBEL Concession Agreement, in the event that suspension is not revoked within 180 days from the date of suspension or within the extended period, if any, set forth in the MBEL Concession Agreement, the MBEL Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have terminated by mutual agreement of the parties and all the provisions of the MBEL Concession Agreement shall apply, *mutatis mutandis*, to such termination as if a termination notice had been issued by NHAI upon occurrence of a MBEL default.

3. Concession agreement executed between PSRDCL and NHAI dated September 30, 2009 for design, engineering, construction, development, finance, operation and maintenance of four-laning of Pune-Solapur Section of NH-9 from Km 144.400 to Km 249 in the State of Maharashtra under NHDP Phase III on DBFOT basis, for a period of 19 years and 295 days, as amended ("PSRDCL Concession Agreement").

A. *Grant of Concession*

Subject to the provisions of the PSRDCL Concession Agreement, the applicable laws and applicable permits, NHAI has granted PSRDCL exclusive right, license and authority during the subsistence of the PSRDCL Concession Agreement to construct, operate and maintain the project for 19 years and 295 days commencing from the appointed date as mentioned in the PSRDCL Concession Agreement.

Subject to and in accordance with the PSRDCL Concession Agreement, the concession granted shall oblige or entitle (as the case maybe) PSRDCL to:

(i) right of way, access and license to the site for the purpose of and to the extent conferred by the provisions of the PSRDCL Concession Agreement;
(ii) finance and construct the project highway;
(iii) manage, operate and maintain the project and regulate the use thereof by third parties;

(iv) demand, collect and appropriate fee from vehicles and users liable for payment of fee for using the project highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;
(v) perform and fulfil all the obligations under and in accordance with the PSRDCL Concession Agreement;
(vi) bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of PSRDCL under the PSRDCL Concession Agreement; and
(vii) neither assign, transfer or sublet or create any lien or encumbrances on the PSRDCL Concession Agreement or the concession thereby granted or on the whole or any part of the project highway nor transfer, lease or part possession thereof, save and except as expressly permitted by the PSRDCL Concession Agreement or the substitution agreement.

B. ***Concession Fees***

In consideration of the grant of concession under the PSRDCL Concession Agreement, concession fee payable by PSRDCL to NHAI shall be ₹1 per year during the term of the PSRDCL Concession Agreement **("Concession Fees")**.

C. ***Escrow Account***

PSRDCL shall, prior to the appointed date, open and establish an escrow account **("Escrow Account")** and shall deposit the following inflows and receipts into it: i) all funds constituting the financial package; ii) all fee and any other revenues from or in respect of the project highway, including the proceeds of any deposits, capital receipts or insurance claims; and iii) all payments by NHAI, after deduction of any outstanding Concession Fees. The nature and scope of the Escrow Account shall be as per the agreement entered into amongst PSRDCL, NHAI, the escrow bank and the senior lenders **("Escrow Agreement").**

D. ***Withdrawals during concession period***

PSRDCL shall, at the time of opening of the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the escrow bank instructing that deposits in the Escrow Account shall be appropriated in the following order each month, or at a shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

(i) all taxes due and payable by PSRDCL for and in respect of the project highway;
(ii) all payments relating to construction of the project highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;
(iii) operation and maintenance **("O&M")** expenses, subject to the ceiling, if any, set forth in the financing agreements;
(iv) O&M expenses and other costs and expenses incurred by NHAI in accordance with the provisions of the PSRDCL Concession Agreement and certified by NHAI as due and payable to it;
(v) Concession Fee due and payable to NHAI;
(vi) monthly proportionate provision of debt service due in an accounting year;
(vii) all payment and damages certified by NHAI as due and payable to it by PSRDCL, including repayment of revenue shortfall loan;
(viii) monthly proportionate provision of debt service payments due in an accounting year in respect of subordinated debt;
(ix) any reserve requirements set forth in the financing agreements; and
(x) balance, if any, in accordance with the instructions of PSRDCL.

PSRDCL shall not in any manner modify the order of payment specified above, except with prior written approval of NHAI.

E. ***Withdrawals upon Termination***

Notwithstanding anything to the contrary contained in the PSRDCL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination be appropriated in the following order:

(i) all taxes due and payable by PSRDCL in respect of the project highway;
(ii) 90% of the debt due excluding subordinated debt;
(iii) outstanding Concession Fees;
(iv) all payments and damages certified by NHAI as due and payable to it by PSRDCL including repayment of the revenue shortfall loan;
(v) retention and payments relating to the liability for defects and deficiencies set forth in the PSRDCL Concession Agreement;
(vi) outstanding debt service including the balance of debt due;
(vii) outstanding subordinated debt;
(viii) incurred or accrued O&M expenses;
(ix) any other payments required to be made under the PSRDCL Concession Agreement; and
(x) balance, if any, in accordance with the instructions of PSRDCL, provided that no appropriations shall be made until a vesting certificate has been issued by NHAI.

F. ***Change of Scope***

NHAI may, notwithstanding anything to the contrary contained in the PSRDCL Concession Agreement, require the provision of additional works and services which are not included in the scope of the projects as contemplated in the PSRDCL Concession Agreement (**"Change of Scope"**). Any such Change of Scope shall be made in accordance with the provisions of the PSRDCL Concession Agreement and the costs thereof shall be expended by PSRDCL and reimbursed to it by NHAI in accordance with the PSRDCL Concession Agreement.

If PSRDCL determines at any time that a Change of Scope is necessary for providing safer and improved services to the users, it shall by notice in writing require NHAI to consider such Change of Scope. NHAI within 15 days of receipt of such notice, either accept it with modifications, if any, and initiate proceedings thereof or inform PSRDCL in writing of its reasons for not accepting it.

G. ***Compensation for Breach of Agreement***

In the event of PSRDCL being in material default or breach of the PSRDCL Concession Agreement, it shall pay to NHAI by way of compensation, all direct costs suffered or incurred by NHAI as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any breach or default in respect of which damages are expressly specified and payable under the PSRDCL Concession Agreement.

In the event of NHAI being in material default or breach of the PSRDCL Concession Agreement at any time after the appointed date, it shall pay PSRDCL, by way of compensation, all direct costs suffered or incurred by PSRDCL as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No such compensation shall be payable for any breach or default in respect of which damages have been expressly specified in the PSRDCL Concession Agreement.

H. ***Termination of the PSRDCL Concession Agreement***

Termination for PSRDCL Default

Save as otherwise provided in the PSRDCL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and PSRDCL fail to cure the default within the cure period set forth in the PSRDCL Concession Agreement, or where no cure period is specified, then within a cure period of 60 days, PSRDCL shall be deemed to be in default of the PSRDCL Concession Agreement **("SPV Default")** unless the default has occurred solely as a result of any breach of the PSRDCL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

(i) the performance security has been encashed and appropriated and PSRDCL fails to replenish or provide fresh performance security within a cure period of 30 days;

(ii) subsequent to the replenishment or furnishing of fresh performance security, PSRDCL fails to cure within a cure period of 90 days, the SPV Default for which whole or part of the performance security was appropriated;
(iii) PSRDCL do not achieve the latest outstanding project milestone and continues to be in default for 90 days;
(iv) PSRDCL abandons or manifests intention to abandon the construction or operation of the project highway without prior written consent of NHAI;
(v) project completion date does not occur within the specified period;
(vi) punch list items have not been completed within the specified period;
(vii) PSRDCL is in breach of the maintenance requirements or the safety requirements, as the case maybe;
(viii) PSRDCL has failed to make any payment to NHAI within the period specified in the PSRDCL Concession Agreement;
(ix) an escrow default has occurred and PSRDCL fails to cure the default within a cure period of 15 days;
(x) upon occurrence of a financial default, the lenders' representative has by notice required NHAI to undertake suspension or termination, as the case maybe, in accordance with the substitution agreement and PSRDCL fails to cure the default within the cure period specified in the PSRDCL Concession Agreement;
(xi) a breach of any of the project agreements by PSRDCL has caused a material adverse effect;
(xii) PSRDCL creates any encumbrance in breach of the PSRDCL Concession Agreement;
(xiii) PSRDCL repudiates the PSRDCL Concession Agreement or otherwise takes any action or evidence or conveys an intention not to be bound by the PSRDCL Concession Agreement;
(xiv) change in ownership has occurred in breach of the PSRDCL Concession Agreement;
(xv) there is a transfer, pursuant to law either of (i) the rights and/or obligations of PSRDCL under any of the project agreements, or of (ii) all or part of the assets or undertaking of PSRDCL and such transfer causes a material adverse effect;
(xvi) an execution levied on any of the assets of PSRDCL has caused material adverse effect;
(xvii) PSRDCL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the PSRDCL or for the whole or material part of its assets that has a material bearing on the project;
(xviii) PSRDCL has been, or is in the process of being liquidated, dissolved, wound up, amalgamated or reconstituted in manner that would cause, in the reasonable opinion of NHAI, a material adverse effect;
(xix) a resolution for winding up of PSRDCL is passed, or any petition for winding up of PSRDCL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof or PSRDCL is ordered to wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of PSRDCL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of PSRDCL under the PSRDCL Concession Agreement and project agreement; and provided that:

    (a) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the PSRDCL Concession Agreement and the project agreements;
    (b) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the PSRDCL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of the PSRDCL as at the appointed date; and
    (c) each of the project agreements remains in full force and effect;

(xx) any representation or warranty of PSRDCL herein contained which is, as of the date hereof, found to be materially false or PSRDCL is at any time hereafter found to be in breach thereof;
(xxi) PSRDCL submits to NHAI any statement, notice or other document, in written or electronic form, which has a material effect of NHAI's rights, obligations or interests and which is false in material particulars;
(xxii) PSRDCL has failed to fulfil any obligation, for which failure termination has been specified in the PSRDCL Concession Agreement; or
(xxiii) PSRDCL commits default in complying with any other provision of the PSRDCL Concession Agreement if such a default causes material adverse effect on NHAI.

Without prejudice to any other rights or remedies which NHAI may have under the PSRDCL Concession Agreement, upon the occurrence of an SPV Default, the NHAI shall be entitled to terminate the PSRDCL Concession Agreement by issuing a termination notice to PSRDCL. Before issuing the termination notice, NHAI shall, by a notice, inform PSRDCL of its intention to issue such termination notice and grant 15 days to PSRDCL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the PSRDCL Concession Agreement.

Termination for NHAI Default

In the event that any of the defaults specified below shall have occurred, and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the PSRDCL Concession Agreement, NHAI shall be deemed to be in default of the PSRDCL Concession Agreement **("NHAI Default")** unless the default has occurred as a result of any breach of the PSRDCL Concession Agreement by PSRDCL or due to force majeure. The defaults referred to herein shall include:

(i) NHAI commits a material default in complying with any of the provisions of the PSRDCL Concession Agreement and such default has a material adverse effect on PSRDCL;
(ii) NHAI has failed to make any payment to PSRDCL within the period specified in the PSRDCL Concession Agreement;
(iii) NHAI repudiates the PSRDCL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the PSRDCL Concession Agreement; or
(iv) the state commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on PSRDCL and the breach continues for a period of 90 days from the date of notice given in this behalf by PSRDCL to NHAI.

Without prejudice to any other right or remedy which PSRDCL may have under the PSRDCL Concession Agreement, upon occurrence of NHAI default, PSRDCL shall, subject to the provisions of the substitution agreement, be entitled to terminate the PSRDCL Concession Agreement by issuing a termination notice to NHAI; provided that before issuing the termination notice, the PSRDCL shall by a notice inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation, and may after the expiry of such 15 days, whether or not it is in receipt of such representation, issue the termination notice.

I. ***Termination Payment***

Termination Payment shall become due and payable to PSRDCL within 15 days of a demand being made to NHAI with the necessary particulars, and in the event of any delay, NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. Provided that such delay shall not exceed 90 days. For the avoidance of any doubt, it is expressly agreed that termination payment shall constitute full discharge by NHAI of its payment obligations in respect thereof hereunder.

J. ***Defects Liability after Termination***

PSRDCL shall be responsible for all defects and deficiencies in the project highway for a period of 120 days after termination, and shall have the obligations to repair or rectify, at their own cost, all defects and deficiencies observed by the independent engineers in the project highway during the aforesaid period. In the event that PSRDCL fail to repair or rectify such defect or deficiency within 15 days from the date of notice issued by NHAI in this behalf, NHAI shall be entitled to get the same repaired or rectified at PSRDCL's risk and cost so as to make the project highway conform to the maintenance requirements. All costs incurred by NHAI hereunder shall be reimbursed by PSRDCL to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the Escrow Account.

K. ***Performance Security***

PSRDCL shall, for the performance of its obligations under the PSRDCL Concession Agreement during the construction period, provide to NHAI no later than 180 days from the date of PSRDCL Concession Agreement,

an irrevocable and unconditional guarantee from a bank for a sum equivalent to ₹417.50 million in the form set forth in the PSRDCL Concession Agreement ("**Performance Security**"). Until such time the Performance Security is provided by PSRDCL and the same comes into effect, the bid security shall remain in force and effect, and upon such provision of the Performance Security, NHAI shall release the bid security to PSRDCL.

L. ***O&M obligations of PSRDCL***

During the operation period, PSRDCL shall operate and maintain the project highway in accordance with the PSRDCL Concession Agreement either by itself, or through the O&M contractor and if required, modify, repair or otherwise make improvements to the project highway to comply with the provisions of the PSRDCL Concession Agreement, applicable laws and applicable permits, and conform to specifications and standards and good industry practice. The obligations of PSRDCL shall include:

(i) permitting safe, smooth and uninterrupted flow of traffic on the project highway during normal operating conditions;
(ii) collecting and appropriating the fee;
(iii) minimising disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and maintaining liaison with emergency services of the state;
(iv) carrying out periodic preventive maintenance of the project highway;
(v) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavements markings, lighting, road signs and other traffic control devices;
(vi) undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;
(vii) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the project highway;
(viii) preventing with the assistance of the concerned law enforcement agencies, any encroachments on the project highway;
(ix) protection of the environment and provision of equipment and materials thereof;
(x) operations and maintenance of all communication, control and administrative systems necessary for the efficient operation of project highway;
(xi) maintaining a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and
(xii) complying with safety requirements in accordance with the PSRDCL Concession Agreement.

PSRDCL shall remove promptly from the project highway all surplus construction machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the project highway in a clean, tidy and orderly condition, and in conformity with the applicable laws, applicable permits and good industry practice.

PSRDCL shall maintain, in conformity with good industry practice, all stretches of approach roads, over passes, under passes or other structures situated on the site but not forming part of the carriageway.

M. ***Insurance during concession period***

PSRDCL shall effect and maintain at its own cost, during the construction period and the operation period, such insurances for such maximum sums as may be required under the financing agreements, and the applicable laws, and such insurances as may be necessary or prudent in accordance with good industry practice. PSRDCL shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on NHAI as a consequence of any act or omission of PSRDCL during the construction period. PSRDCL shall procure that in each insurance policy, NHAI shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by PSRDCL after repayment of senior lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of senior lenders' dues.

N. ***Liability and Indemnity***

General Indemnity

PSRDCL will indemnify, defend, save and hold harmless NHAI and its officers, servants, agents, government instrumentalities and government owned and/or controlled entities/enterprises, (the "**Authority Indemnified Persons**") against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by PSRDCL of any of its obligations under the PSRDCL Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by PSRDCL to any user or from any negligence of PSRDCL under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of the PSRDCL Concession Agreement on the part of Authority Indemnified Persons.

NHAI will indemnify, defend, save and hold harmless PSRDCL against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of (i) defect in title and/or the rights of NHAI in the land comprised in the site, and/or (ii) breach by NHAI of any of its obligations under the PSRDCL Concession Agreement or any related agreement, which materially and adversely affect the performance by PSRDCL of its obligations under the PSRDCL Concession Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of the PSRDCL Concession Agreement or any related agreement and/or breach of its statutory duty on the part of PSRDCL, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of PSRDCL.

Indemnity by PSRDCL

Without limiting the generality of the above clause, PSRDCL shall fully indemnify, hold harmless and defend NHAI and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(i) failure of PSRDCL to comply with applicable laws and applicable permits;
(ii) payment of taxes required to be made by PSRDCL in respect of the income or other taxes of PSRDCL's contractors, suppliers and representatives; or
(iii) non-payment of amounts due as a result of materials or services furnished to PSRDCL or any of its contractors which are payable by PSRDCL or any of its contractors.

Without limiting the generality of the provisions of the PSRDCL Concession Agreement, PSRDCL shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may suffer, or pay by reason of any demands, claims, suits, or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by PSRDCL or by PSRDCL's contractors in performing PSRDCL's obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, PSRDCL shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the project highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, PSRDCL shall promptly make every reasonable effort to secure for NHAI a licence, at no cost to NHAI, authorising continued use of the infringing work. If PSRDCL is unable to secure such licence within a reasonable time, PSRDCL shall, at its own expense, and without impairing the specifications and standards, either replace the affected work or part, or process thereof with non-infringing work or part or process, or modify the same so that It becomes non-infringing.

O. *Effect of Force Majeure Event on the concession*

Upon occurrent of any force majeure event prior to the appointed date, the period set forth in the PSRDCL Concession Agreement for achieving financial close shall be extended by a period equal in length to the duration of the force majeure event.

At any time after the appointed date, if any force majeure event occurs:

(i) before COD, the concession period and the dates set forth in the project completion schedule shall be extended by a period equal in length to the duration for which such force majeure event subsists; or
(ii) after COD, whereupon PSRDCL is unable to collect fee despite making best efforts or it is directed by NHAI to suspend the collection thereof during the subsistence of such force majeure event, the concession period shall be extended by a period, equal in length to the period during which PSRDCL was prevented from collection of fee on account thereof, provided that in the event of partial collection of fee where the daily collection if less than 90% of the average daily fee, NHAI shall extend the concession period in proportion to the loss of fee on a daily basis. For the avoidance of doubt, loss of 25% in collection of fee as compared to the average daily fee for four days shall entitle PSRDCL to extension of one day in the concession period.

P. *Suspension of PSRDCL rights*

Suspension upon PSRDCL default

Upon occurrence of PSRDCL default, NHAI shall be entitled, without prejudice to its other rights and remedies under the PSRDCL Concession Agreement including rights of termination, to (i) suspend all rights of PSRDCL under the PSRDCL Concession Agreement including PSRDCL's right to collect fee, and other revenues, and (ii) exercise such rights itself and perform the obligations or authorise any other person to exercise or perform the same on its behalf during such suspension. Suspension shall be effective forthwith upon issue of notice by NHAI to PSRDCL and may extend up to a period not exceeding 180 days from the date of issue of such notice; provided that upon written request from PSRDCL and lender's representative, NHAI shall extend the aforesaid period of 180 days by a further period not exceeding 90 days.

Authority to act on behalf of PSRDCL

During the period of suspension, NHAI shall, on behalf of PSRDCL, collect all fee and revenues under and in accordance with the PSRDCL Concession Agreement and deposit the same in the escrow account. NHAI shall be entitled to make withdrawals form the escrow account for meeting the costs incurred by it for remedying and rectifying the cause of suspension, and thereafter for defraying the expenses specified in the PSRDCL Concession Agreement.

During the period of suspension hereunder, all assets and liabilities in relation to project highway shall continue to vest in PSRDCL and all things done or actions taken, including expenditure incurred by NHAI for discharging the obligations of PSRDCL under and in accordance with the PSRDCL Concession Agreement and the project agreements, shall be deemed to have been done or taken for and on behalf of PSRDCL and PSRDCL undertakes to indemnify NHAI for all costs incurred during such period. PSRDCL hereby licenses and sub-licenses respectively, NHAI or any other person authorised by it under the PSRDCL Concession Agreement to use during suspension, all intellectual property belonging to or licenced to PSRDCL.

Revocation of Suspension

In the event that NHAI shall have rectified or removed the cause of suspension within a period not exceeding 90 days from the date of suspension, it shall revoke the suspension forthwith and restore all rights of PSRDCL under the PSRDCL Concession Agreement.

Upon PSRDCL having cured PSRDCL default within a period not exceeding 90 days from the date of suspension, NHAI shall revoke the suspension forthwith and restore all rights of PSRDCL under the PSRDCL Concession Agreement.

Substitution of PSRDCL

At any time during the period of suspension, the lenders' representative, on behalf of senior lenders, shall be entitled to substitute PSRDCL under and in accordance with the substitution agreement, and upon receipt of notice, thereunder from the lenders' representative, NHAI shall withhold termination for a period not exceeding 180 days from the day of suspension, and any extension thereof under the PSRDCL Concession Agreement, for enabling the lenders' representative to exercise its rights of substitution on behalf of senior lenders.

Termination

At any time during the period of suspension under the PSRDCL Concession Agreement, PSRDCL may by notice require the authority to revoke the suspension and issue a termination notice. Subject to the rights of the lenders' representative to undertake substitution in accordance with the provisions of the PSRDCL Concession Agreement and within the period specified in the PSRDCL Concession Agreement, NHAI shall, within 15 days of receipt of such notice, terminate the PSRDCL Concession Agreement under and in accordance with the PSRDCL Concession Agreement.

Notwithstanding anything to the contrary contained in the PSRDCL Concession Agreement, in the event that suspension is not revoked within 180 days from the date of suspension or within the extended period, if any, set forth in the PSRDCL Concession Agreement, the PSRDCL Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have terminated by mutual agreement of the parties and all the provisions of the PSRDCL Concession Agreement shall apply, *mutatis mutandis*, to such termination as if a termination notice had been issued by NHAI upon occurrence of a PSRDCL default.

4. Concession agreement executed between BAEL and NHAI dated May 08, 2013 for six-laning of Barwa Adda-Panagarh Section of NH-2 from Km 398.240 to Km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT pattern, for a period of 20 years ("BAEL Concession Agreement") read with the Supplementary Concession Agreement dated January 9, 2025 entered into between BAEL and the National Highways Authority of India.

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A. *Grant of Concession*

Subject to the provisions of the BAEL Concession Agreement, the applicable laws and applicable permits, NHAI has granted BAEL exclusive right, license and authority during the subsistence of the BAEL Concession Agreement to construct, operate and maintain the project for 20 years commencing from the appointed date as mentioned in the BAEL Concession Agreement.

Subject to and in accordance with the BAEL Concession Agreement, the concession granted shall oblige or entitle (as the case maybe) BAEL to:

(i) right of way, access and license to the site for the purpose of and to the extent conferred by the provisions of the BAEL Concession Agreement;
(ii) finance and construct the project highway;
(iii) manage, operate and maintain the project highway and regulate the use thereof by third parties;
(iv) demand, collect and appropriate fee from vehicles and users liable for payment of fee for using the project highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;
(v) perform and fulfil all the obligations under and in accordance with the BAEL Concession Agreement;
(vi) bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of BAEL under the BAEL Concession Agreement; and
(vii) neither assign, transfer or sublet or create any lien or encumbrances on the BAEL Concession Agreement or the concession thereby granted or on the whole or any part of the project highway nor transfer, lease or part possession thereof, save and except as expressly permitted by the BAEL Concession Agreement and the substitution agreement.

B. ***Concession Fees***

In consideration of the grants of concession under this BAEL Concession Agreement, concession fee payable by BAEL to NHAI shall be ₹1 per year during the term of the BAEL Concession Agreement (**"Concession Fees"**).

C. ***Additional Concession Fee***

BAEL agrees to pay to NHAI, on the appointed date a premium in the form of an additional concession fee equal to ₹ 420.00 million as due to NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the concession period, the premium shall be determined by increasing the amount of premium in the respective year by an additional 5% compared to the immediately preceding year.

D. ***Escrow Account***

BAEL shall, prior to the appointed date, open and establish an escrow account **("Escrow Account")** and shall deposit the following inflows and receipts into it: i) all funds constituting the financial package; ii) all fee and any other revenues from or in respect of the project highway, including the proceeds of any deposits, capital receipts or insurance claims; and iii) all payments by NHAI, after deduction of any outstanding Concession Fees. The nature and scope of the Escrow Account shall be as per the agreement entered into amongst BAEL, NHAI, the escrow bank and the senior lenders **("Escrow Agreement".)**

E. ***Withdrawals during concession period***

BAEL shall, at the time of opening of the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the escrow bank instructing that deposits in the Escrow Account shall be appropriated in the following order each month, or at a shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

(i) all taxes due and payable by BAEL for and in respect of the project highway;
(ii) all payments relating to construction of the project highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;
(iii) operation and maintenance **("O&M")** expenses, subject to the ceiling, if any, set forth in the financing agreements;
(iv) O&M expenses and other costs and expenses incurred by NHAI in accordance with the provisions of the BAEL Concession Agreement and certified by NHAI as due and payable to it;
(v) Concession Fee due and payable to NHAI;
(vi) monthly proportionate provision of debt service due in an accounting year;
(vii) premium due and payable to NHAI;
(viii) all payment and damages certified by NHAI as due and payable to it by BAEL, including repayment of revenue shortfall loan;
(ix) monthly proportionate provision of debt service payments due in an accounting year in respect of subordinated debt;
(x) any reserve requirements set forth in the financing agreements; and
(xi) balance, if any, in accordance with the instructions of BAEL.

BAEL shall not in any manner modify the order of payment specified above, except with prior written approval of NHAI.

F. ***Withdrawals upon Termination***

Notwithstanding anything to the contrary contained in the BAEL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination be appropriated in the following order:

(i) all taxes due and payable by BAEL in respect of the project highway;

(ii) 90% of the debt due excluding subordinated debt;
(iii) outstanding Concession Fees;
(iv) all payments and damages certified by NHAI as due and payable to it by BAEL including premium and repayment of the revenue shortfall loan;
(v) retention and payments relating to the liability for defects and deficiencies set forth in the BAEL Concession Agreement;
(vi) outstanding debt service including the balance of debt due;
(vii) outstanding subordinated debt;
(viii) incurred or accrued O&M expenses;
(ix) any other payments required to be made under the BAEL Concession Agreement; and
(x) balance, if any, in accordance with the instructions of BAEL. Provided that no appropriations shall be made until a vesting certificate has been issued by NHAI.

G. ***Change of Scope***

NHAI may, notwithstanding anything to the contrary contained in the BAEL Concession Agreement, require the provision of additional works and services which are not included in the scope of the projects as contemplated in the BAEL Concession Agreement (**"Change of Scope"**). Any such Change of Scope shall be made in accordance with the provisions of the BAEL Concession Agreement and the costs thereof shall be expended by BAEL and reimbursed to it by NHAI in accordance with the BAEL Concession Agreement.

If BAEL determines at any time that a Change of Scope is necessary for providing safer and improved services to the users, it shall by notice in writing require NHAI to consider such Change of Scope. NHAI within 15 days of receipt of such notice, either accept it with modifications, if any, and initiate proceedings thereof or inform BAEL in writing of its reasons for not accepting it.

H. ***Compensation for Breach of Agreement***

In the event of BAEL being in material default or breach of the BAEL Concession Agreement, it shall pay to NHAI by way of compensation, all direct costs suffered or incurred by NHAI as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any breach or default in respect of which damages are expressly specified and payable under the BAEL Concession Agreement.

In the event of NHAI being in material default or breach of the BAEL Concession Agreement at any time after the appointed date, it shall pay BAEL, by way of compensation, all direct costs suffered or incurred by BAEL as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No such compensation shall be payable for any breach or default in respect of which damages have been expressly specified in the BAEL Concession Agreement.

I. ***Termination of the BAEL Concession Agreement***

Termination for BAEL Default

Save as otherwise provided in the BAEL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and BAEL fail to cure the default within the cure period set forth in the BAEL Concession Agreement, or where no cure period is specified, then within a cure period of 60 days, BAEL shall be deemed to be in default of the BAEL Concession Agreement **("SPV Default")** unless the default has occurred solely as a result of any breach of the BAEL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

(i) the performance security has been encashed and appropriated and BAEL fails to replenish or provide fresh performance security within a cure period of 30 days;
(ii) subsequent to the replenishment or furnishing of fresh performance security, BAEL fails to cure within a cure period of 90 days, the SPV Default for which whole or part of the performance security was appropriated;

(iii) BAEL do not achieve the latest outstanding project milestone and continues to be in default for 90 days;
(iv) BAEL abandons or manifests intention to abandon the construction or operation of the project highway without prior written consent of NHAI;
(v) project completion date does not occur within the specified period;
(vi) punch list items have not been completed within the specified period;
(vii) BAEL is in breach of the maintenance requirements or the safety requirements, as the case maybe;
(viii) BAEL has failed to make any payment to NHAI within the period specified in the BAEL Concession Agreement;
(ix) an escrow default has occurred and BAEL fails to cure the default within a cure period of 15 days;
(x) upon occurrence of a financial default, the lenders' representative has by notice required NHAI to undertake suspension or termination, as the case maybe, in accordance with the substitution agreement and BAEL fails to cure the default within the cure period specified in the BAEL Concession Agreement;
(xi) a breach of any of the project agreements by BAEL has caused a material adverse effect;
(xii) BAEL create any encumbrance in breach of the BAEL Concession Agreement;
(xiii) BAEL repudiate the BAEL Concession Agreement or otherwise take any action or evidence or conveys an intention not to be bound by the BAEL Concession Agreement;
(xiv) change in ownership has occurred in breach of the BAEL Concession Agreement;
(xv) there is a transfer, pursuant to law either of (i) the rights and/or obligations of BAEL under any of the project agreements, or of (ii) all or part of the assets or undertaking of BAEL and such transfer causes a material adverse effect;
(xvi) an execution levied on any of the assets of BAEL has cause material adverse effect;
(xvii) BAEL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the BAEL or for the whole or material part of its assets that has a material bearing on the project;
(xviii) BAEL has been, or is in the process of being liquidated, dissolved, wound up, amalgamated or reconstituted in manner that would cause, in the reasonable opinion of NHAI, a material adverse effect;
(xix) a resolution for winding up of BAEL is passed, or any petition for winding up of BAEL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof or BAEL is ordered to wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of BAEL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of BAEL under the BAEL Concession Agreement and project agreement; and provided that:

    (a) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the BAEL Concession Agreement and the project agreements;
    (b) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the BAEL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of the BAEL as at the appointed date; and
    (c) each of the project agreements remains in full force and effect;

(xx) any representation or warranty of BAEL herein contained which is, as of the date hereof, found to be materially false or BAEL is at any time hereafter found to be in breach thereof;
(xxi) BAEL submit to NHAI any statement, note or other document, in written or electronic form, which has a material effect of NHAI's rights, obligations or interests and which is false in material particulars;
(xxii) BAEL has failed to fulfil any obligation, for which failure termination has been specified in the BAEL Concession Agreement; or
(xxiii) BAEL commits default in complying with any other provision of the BAEL Concession Agreement if such a default causes material adverse effect on NHAI.

Without prejudice to any other rights or remedies which NHAI may have under the BAEL Concession Agreement, upon the occurrence of an SPV Default, the NHAI shall be entitled to terminate the BAEL Concession Agreement by issuing a termination notice to BAEL. Before issuing the termination notice, NHAI shall, by notice, inform of its intention to issue a termination notice and grant 15 days to BAEL to make a

representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the BAEL Concession Agreement.

Termination for NHAI Default

In the event that any of the defaults specified below shall have occurred, and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the BAEL Concession Agreement, NHAI shall be deemed to be in default of the BAEL Concession Agreement **("NHAI Default")** unless the default has occurred as a result of any breach of the BAEL Concession Agreement by BAEL or due to force majeure. The defaults referred to herein shall include:

(i) NHAI commits a material default in complying with any of the provisions of the BAEL Concession Agreement and such default has a material adverse effect on BAEL;
(ii) NHAI has failed to make any payment to BAEL within the period specified in the BAEL Concession Agreement;
(iii) NHAI repudiates the BAEL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the BAEL Concession Agreement; or
(iv) the state commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on BAEL and the breach continues for a period of 90 days from the date of notice given in this behalf by BAEL to NHAI.

Without prejudice to any other right or remedy which BAEL may have under the BAEL Concession Agreement, upon occurrence of NHAI default, BAEL shall, subject to the provisions of the substitution agreement, be entitled to terminate the BAEL Concession Agreement by issuing a termination notice to NHAI; provided that before issuing the termination notice, the BAEL shall by a notice inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation, and may after the expiry of such 15 days, whether or not it is in receipt of such representation, issue the termination notice.

J. ***Termination Payment***

Termination Payment shall become due and payable to BAEL within 15 days of a demand being made to NHAI with the necessary particulars, and in the event of any delay, NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. Provided that such delay shall not exceed 90 days. For the avoidance of any doubt, it is expressly agreed that termination payment shall constitute full discharge by NHAI of its payment obligations in respect thereof hereunder.

K. ***Defects Liability after Termination***

BAEL shall be responsible for all defects and deficiencies in the project highway for a period of 120 days after termination, and shall have the obligations to repair or rectify, at their own cost, all defects and deficiencies observed by the independent engineers in the project highway during the aforesaid period. In the event that BAEL fail to repair or rectify such defect or deficiency within 15 days from the date of notice issued by NHAI in this behalf, NHAI shall be entitled to get the same repaired or rectified at BAEL's risk and cost so as to make the project highway conform to the maintenance requirements. All costs incurred by NHAI hereunder shall be reimbursed by BAEL to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the Escrow Account.

L. ***Performance Security***

BAEL shall, for the performance of its obligations under the BAEL Concession Agreement during the construction period, provide to NHAI no later than 180 days from the date of BAEL Concession Agreement, an irrevocable and unconditional guarantee from a bank for a sum equivalent to ₹1071.90 million in the form set forth in the BAEL Concession Agreement ("**Performance Security**"). Until such time the Performance Security is provided by BAEL and the same comes into effect, the bid security shall remain in force and effect, and upon such provision of the Performance Security, NHAI shall release the bid security to BAEL.

M. ***O&M obligations of BAEL***

During the operation period, BAEL shall operate and maintain the project highway in accordance with the BAEL Concession Agreement either by itself, or through the O&M contractor and if required, modify, repair or otherwise make improvements to the project highway to comply with the provisions of the BAEL Concession Agreement, applicable laws and applicable permits, and conform to specifications and standards and good industry practice. The obligations of BAEL shall include:

(i) permitting safe, smooth and uninterrupted flow of traffic on the project highway during normal operating conditions;
(ii) collecting and appropriating the fee;
(iii) minimising disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and maintaining liaison with emergency services of the state;
(iv) carrying out periodic preventive maintenance of the project highway;
(v) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavements markings, lighting, road signs and other traffic control devices;
(vi) undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;
(vii) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the project highway;
(viii) preventing with the assistance of the concerned law enforcement agencies, any encroachments on the project highway;
(ix) protection of the environment and provision of equipment and materials thereof;
(x) operations and maintenance of all communication, control and administrative systems necessary for the efficient operation of project highway;
(xi) maintaining a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and
(xii) complying with safety requirements in accordance with the BAEL Concession Agreement.

BAEL shall remove promptly from the project highway all surplus construction machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the project highway in a clean, tidy and orderly condition, and in conformity with the applicable laws, applicable permits and good industry practice. For avoidance of doubt, it is agreed that the debris and material excavated shall be carried to and deposited at a place to be decided in consultation with NHAI/independent engineer.

BAEL shall maintain, in conformity with good industry practice, all stretches of approach roads, over passes, under passes or other structures situated on the site but not forming part of the carriageway.

N. ***Insurance during concession period***

BAEL shall effect and maintain at its own cost, during the construction period and the operation period, such insurances for such maximum sums as may be required under the financing agreements, and the applicable laws, and such insurances as may be necessary or prudent in accordance with good industry practice. BAEL shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on NHAI as a consequence of any act or omission of BAEL during the construction period. BAEL shall procure that in each insurance policy, NHAI shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by BAEL after repayment of senior lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of senior lenders' dues.

O. ***Liability and Indemnity***

General Indemnity

BAEL will indemnify, defend, save and hold harmless NHAI and its officers, servants, agents, government instrumentalities and government owned and/or controlled entities/enterprises, (the "**Authority Indemnified Persons**") against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by BAEL of any of its obligations under the BAEL Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by BAEL to any user or from any negligence of BAEL under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of the BAEL Concession Agreement on the part of Authority Indemnified Persons.

NHAI will indemnify, defend, save and hold harmless BAEL against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of (i) defect in title and/or the rights of NHAI in the land comprised in the site, and/or (ii) breach by NHAI of any of its obligations under the BAEL Concession Agreement or any related agreement, which materially and adversely affect the performance by BAEL of its obligations under the BAEL Concession Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of the BAEL Concession Agreement or any related agreement and/or breach of its statutory duty on the part of BAEL, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of BAEL.

Indemnity by BAEL

Without limiting the generality of the above clause, BAEL shall fully indemnify, hold harmless and defend NHAI and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(i) failure of BAEL to comply with applicable laws and applicable permits;
(ii) payment of taxes required to be made by BAEL in respect of the income or other taxes of BAEL's contractors, suppliers and representatives; or
(iii) non-payment of amounts due as a result of materials or services furnished to BAEL or any of its contractors which are payable by BAEL or any of its contractors.

Without limiting the generality of the provisions of the BAEL Concession Agreement, BAEL shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may suffer, or pay by reason of any demands, claims, suits, or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by BAEL or by BAEL's contractors in performing BAEL's obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, BAEL shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the project highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, BAEL shall promptly make every reasonable effort to secure for NHAI a licence, at no cost to NHAI, authorising continued use of the infringing work. If BAEL is unable to secure such licence within a reasonable time, BAEL shall, at its own expense, and without impairing the specifications and standards, either replace the affected work or part, or process thereof with non-infringing work or part or process, or modify the same so that It becomes non-infringing.

P. ***Effect of Force Majeure Event on the concession***

Upon occurrent of any force majeure event prior to the appointed date, the period set forth in the BAEL Concession Agreement for achieving financial close shall be extended by a period equal in length to the duration of the force majeure event.

At any time after the appointed date, if any force majeure event occurs:

(i) before COD, the concession period and the dates set forth in the project completion schedule shall be extended by a period equal in length to the duration for which such force majeure event subsists; or

(ii) after COD, whereupon BAEL is unable to collect fee despite making best efforts or it is directed by NHAI to suspend the collection thereof during the subsistence of such force majeure event, the concession period shall be extended by a period, equal in length to the period during which BAEL was prevented from collection of fee on account thereof, provided that in the event of partial collection of fee where the daily collection if less than 90% of the average daily fee, NHAI shall extend the concession period in proportion to the loss of fee on a daily basis. For the avoidance of doubt, loss of 25% in collection of fee as compared to the average daily fee for four days shall entitle BAEL to extension of one day in the concession period.

Q. *Suspension of BAEL rights*

Suspension upon BAEL default

Upon occurrence of BAEL default, NHAI shall be entitled, without prejudice to its other rights and remedies under the BAEL Concession Agreement including rights of termination, to (i) suspend all rights of BAEL under the BAEL Concession Agreement including BAEL's right to collect fee, and other revenues, and (ii) exercise such rights itself and perform the obligations or authorise any other person to exercise or perform the same on its behalf during such suspension. Suspension shall be effective forthwith upon issue of notice by NHAI to BAEL and may extend up to a period not exceeding 180 days from the date of issue of such notice; provided that upon written request from BAEL and lender's representative, NHAI shall extend the aforesaid period of 180 days by a further period not exceeding 90 days.

Authority to act on behalf of BAEL

During the period of suspension, NHAI shall, on behalf of BAEL, collect all fee and revenues under and in accordance with the BAEL Concession Agreement and deposit the same in the escrow account. NHAI shall be entitled to make withdrawals form the escrow account for meeting the costs incurred by it for remedying and rectifying the cause of suspension, and thereafter for defraying the expenses specified in the BAEL Concession Agreement.

During the period of suspension hereunder, all assets and liabilities in relation to the project highway shall continue to vest in BAEL and all things done or actions taken, including expenditure incurred by NHAI for discharging the obligations of BAEL under and in accordance with the BAEL Concession Agreement and the project agreements, shall be deemed to have been done or taken for and on behalf of BAEL and BAEL undertakes to indemnify NHAI for all costs incurred during such period. BAEL hereby licenses and sub-licenses respectively, NHAI or any other person authorised by it under the BAEL Concession Agreement to use during suspension, all intellectual property belonging to or licenced to BAEL with respect to the project highway and its design, engineering, construction, operation and maintenance, and which is used or created by BAEL in performing its obligations under the BAEL Concession Agreement.

Revocation of Suspension

In the event that NHAI shall have rectified or removed the cause of suspension within a period not exceeding 90 days from the date of suspension, it shall revoke the suspension forthwith and restore all rights of BAEL under the BAEL Concession Agreement.

Upon BAEL having cured BAEL default within a period not exceeding 90 days from the date of suspension, NHAI shall revoke the suspension forthwith and restore all rights of BAEL under the BAEL Concession Agreement.

Substitution of BAEL

At any time during the period of suspension, the lenders' representative, on behalf of senior lenders, shall be entitled to substitute BAEL under and in accordance with the substitution agreement, and upon receipt of notice, thereunder from the lenders' representative, NHAI shall withhold termination for a period not exceeding 180 days from the day of suspension, and any extension thereof under the BAEL Concession Agreement, for enabling the lenders' representative to exercise its rights of substitution on behalf of senior lenders.

Termination

At any time during the period of suspension under the BAEL Concession Agreement, BAEL may by notice require the authority to revoke the suspension and issue a termination notice. Subject to the rights of the lenders' representative to undertake substitution in accordance with the provisions of the BAEL Concession Agreement and within the period specified in the BAEL Concession Agreement, NHAI shall, within 15 days of receipt of such notice, terminate the BAEL Concession Agreement under and in accordance with the BAEL Concession Agreement.

Notwithstanding anything to the contrary contained in the BAEL Concession Agreement, in the event that suspension is not revoked within 180 days from the date of suspension or within the extended period, if any, set forth in the BAEL Concession Agreement, the BAEL Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have terminated by mutual agreement of the parties and all the provisions of the BAEL Concession Agreement shall apply, *mutatis mutandis*, to such termination as if a termination notice had been issued by NHAI upon occurrence of a BAEL default.

5. Concession agreement executed between SBHL ("Concessionaire") and The Governor of Rajasthan (acting through the Chief Engineer (NH), PWD, GoR) (the "Authority") on behalf of Ministry of Road Transport and Highways Government of India dated June 29, 2012 for development and operation of Sikar-Bikaner Section of NH-11 from Km 340.188 of NH 11 to Km 557.775 of NH 11 via Sikar bypass and Bikaner bypass from Km 553.869 of NH 11 to Km 267.325 of NH 89, by two-laning with paved shoulder in the State of Rajasthan on DBFOT basis, for a period of 25 years ("SBHL Concession Agreement").

A. *Grant of Concession*

Subject to the provisions of the SBHL Concession Agreement, the applicable laws and applicable permits, the Authority has granted SBHL exclusive right, license and authority during the subsistence of the SBHL Concession Agreement to construct, operate and maintain the project for 25 years commencing from the appointed date as mentioned in the SBHL Concession Agreement.

Subject to and in accordance with the SBHL Concession Agreement, the concession granted shall oblige or entitle (as the case maybe) SBHL to:

(i) right of way, access and license to the site for the purpose of and to the extent conferred by the provisions of the SBHL Concession Agreement;
(ii) finance and construct the project highway;
(iii) manage, operate and maintain the project highway and regulate the use thereof by third parties;
(iv) demand, collect and appropriate fee from vehicles and users liable for payment of fee for using the project highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;
(v) perform and fulfil all the obligations under and in accordance with the SBHL Concession Agreement;
(vi) bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of SBHL under the SBHL Concession Agreement; and
(vii) neither assign, transfer or sublet or create any lien or encumbrances on the SBHL Concession Agreement or the concession thereby granted or on the whole or any part of the project highway nor transfer, lease or part possession thereof, save and except as expressly permitted by the SBHL Concession Agreement or the substitution agreement.

B. *Concession Fees*

In consideration of the grants of concession under this SBHL Concession Agreement, concession fee payable by SBHL to the Authority shall be ₹1 per year during the term of the SBHL Concession Agreement (**"Concession Fees"**).

C. ***Escrow Account***

SBHL shall, prior to the appointed date, open and establish an escrow account **("Escrow Account")** and shall deposit the following inflows and receipts into it: i) all funds constituting the financial package; ii) all fee and any other revenues from or in respect of the project highway, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and iii) all payments by the Authority, after deduction of any outstanding Concession Fees. The nature and scope of the Escrow Account shall be as per the agreement entered into amongst SBHL, the Authority, the escrow bank and the senior lenders **("Escrow Agreement").**

D. ***Withdrawals during concession period***

SBHL shall, at the time of opening of the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the escrow bank instructing that deposits in the Escrow Account shall be appropriated in the following order each month, or at a shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

(i) all taxes due and payable by SBHL for and in respect of the project highway;
(ii) all payments relating to construction of the project highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;
(iii) operation and maintenance **("O&M")** expenses, subject to the ceiling, if any, set forth in the financing agreements;
(iv) O&M expenses and other costs and expenses incurred by the Authority in accordance with the provisions of the SBHL Concession Agreement and certified by the Authority as due and payable to it;
(v) Concession Fee due and payable to the Authority;
(vi) monthly proportionate provision of debt service due in an accounting year;
(vii) all payment and damages certified by the Authority as due and payable to it by SBHL, including repayment of revenue shortfall loan;
(viii) monthly proportionate provision of debt service payments due in an accounting year in respect of subordinated debt;
(ix) any reserve requirements set forth in the financing agreements; and
(x) balance, if any, in accordance with the instructions of SBHL.

SBHL shall not in any manner modify the order of payment specified above, except with prior written approval of the Authority.

E. ***Withdrawals upon Termination***

Notwithstanding anything to the contrary contained in the SBHL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination be appropriated in the following order:

(i) all taxes due and payable by SBHL in respect of the project highway;
(ii) 90% of the debt due excluding subordinated debt;
(iii) outstanding Concession Fees;
(iv) all payments and damages certified by the Authority as due and payable to it by SBHL including premium and repayment of the revenue shortfall loan;
(v) retention and payments relating to the liability for defects and deficiencies set forth in the SBHL Concession Agreement;
(vi) outstanding debt service including the balance of debt due;
(vii) outstanding subordinated debt;
(viii) incurred or accrued O&M expenses;
(ix) any other payments required to be made under the SBHL Concession Agreement; and

(x) balance, if any, in accordance with the instructions of SBHL, provided that no appropriations shall be made until a vesting certificate has been issued by the Authority.

F. *Change of Scope*

the Authority may, notwithstanding anything to the contrary contained in the SBHL Concession Agreement, require the provision of additional works and services which are not included in the scope of the projects as contemplated in the SBHL Concession Agreement (**"Change of Scope"**). Any such Change of Scope shall be made in accordance with the provisions of the SBHL Concession Agreement and the costs thereof shall be expended by SBHL and reimbursed to it by the Authority in accordance with the SBHL Concession Agreement.

If SBHL determines at any time that a Change of Scope is necessary for providing safer and improved services to the users, it shall by notice in writing require the Authority to consider such Change of Scope. the Authority within 15 days of receipt of such notice, either accept it with modifications, if any, and initiate proceedings thereof or inform SBHL in writing of its reasons for not accepting it.

G. *Compensation for Breach of Agreement*

In the event of SBHL being in material default or breach of the SBHL Concession Agreement, it shall pay to the Authority by way of compensation, all direct costs suffered or incurred by the Authority as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any breach or default in respect of which damages are expressly specified and payable under the SBHL Concession Agreement or for any consequential losses incurred by NHAI.

In the event of the Authority being in material default or breach of the SBHL Concession Agreement at any time after the appointed date, it shall pay SBHL, by way of compensation, all direct costs suffered or incurred by SBHL as a consequence of such material default within 30 days of receipt of the demand supported by necessary particulars thereof. No such compensation shall be payable for any breach or default in respect of which damages have been expressly specified in the SBHL Concession Agreement.

H. *Termination of the SBHL Concession Agreement*

Termination for SBHL Default

Save as otherwise provided in the SBHL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and SBHL fail to cure the default within the cure period set forth in the SBHL Concession Agreement, or where no cure period is specified, then within a cure period of 60 days, SBHL shall be deemed to be in default of the SBHL Concession Agreement **("SPV Default")** unless the default has occurred solely as a result of any breach of the SBHL Concession Agreement by the Authority or due to force majeure. The defaults referred to herein shall include:

(i) the performance security has been encashed and appropriated and SBHL fails to replenish or provide fresh performance security within a cure period of 30 days;
(ii) subsequent to the replenishment or furnishing of fresh performance security, SBHL fails to cure within a cure period of 90 days, the SPV Default for which whole or part of the performance security was appropriated;
(iii) SBHL do not achieve the latest outstanding project milestone and continues to be in default for 120 days;
(iv) SBHL abandons or manifests intention to abandon the construction or operation of the project highway without prior written consent of the Authority;
(v) project completion date does not occur within the specified period;
(vi) punch list items have not been completed within the specified period;
(vii) SBHL is in breach of the maintenance requirements or the safety requirements, as the case maybe;
(viii) SBHL has failed to make any payment to the Authority within the period specified in the SBHL Concession Agreement;
(ix) an escrow default has occurred and SBHL fails to cure the default within a cure period of 15 days;

(x) upon occurrence of a financial default, the lenders' representative has by notice required the Authority to undertake suspension or termination, as the case maybe, in accordance with the substitution agreement and SBHL fails to cure the default within the cure period specified in the SBHL Concession Agreement;
(xi) a breach of any of the project agreements by SBHL has caused a material adverse effect;
(xii) SBHL creates any encumbrance in breach of the SBHL Concession Agreement;
(xiii) SBHL repudiates the SBHL Concession Agreement or otherwise takes any action or evidence or conveys an intention not to be bound by the SBHL Concession Agreement;
(xiv) change in ownership has occurred in breach of the SBHL Concession Agreement;
(xv) there is a transfer, pursuant to law either of (i) the rights and/or obligations of SBHL under any of the project agreements, or of (ii) all or part of the assets or undertaking of SBHL and such transfer causes a material adverse effect;
(xvi) an execution levied on any of the assets of SBHL has cause material adverse effect;
(xvii) SBHL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the SBHL or for the whole or material part of its assets that has a material bearing on the project;
(xviii) SBHL has been, or is in the process of being liquidated, dissolved, wound up, amalgamated or reconstituted in manner that would cause, in the reasonable opinion of the Authority, a material adverse effect;
(xix) a resolution for winding up of SBHL is passed, or any petition for winding up of SBHL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof or SBHL is ordered to wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of SBHL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of SBHL under the SBHL Concession Agreement and project agreement; and provided that:

    (a) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the SBHL Concession Agreement and the project agreements;
    (b) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the SBHL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of the SBHL as at the appointed date; and
    (c) each of the project agreements remains in full force and effect;

(xx) any representation or warranty of SBHL herein contained which is, as of the date hereof, found to be materially false or SBHL is at any time hereafter found to be in breach thereof;
(xxi) SBHL submit to the Authority any statement, note or other document, in written or electronic form, which has a material effect of the Authority's rights, obligations or interests and which is false in material particulars;
(xxii) SBHL has failed to fulfil any obligation, for which failure termination has been specified in the SBHL Concession Agreement; or
(xxiii) SBHL commits default in complying with any other provision of the SBHL Concession Agreement if such a default causes material adverse effect on the Authority.

Without prejudice to any other rights or remedies which the Authority may have under the SBHL Concession Agreement, upon the occurrence of an SPV Default, the Authority shall be entitled to terminate the SBHL Concession Agreement by issuing a termination notice to SBHL. Before issuing the termination notice, the Authority shall, by a notice, inform SBHL of its intention to issue a termination notice and grant 15 days to SBHL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the SBHL Concession Agreement.

Termination for the Authority's Default

In the event that any of the defaults specified below shall have occurred, and the Authority fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the SBHL Concession Agreement, the Authority shall be deemed to be in default of the SBHL Concession Agreement

("the Authority's Default") unless the default has occurred as a result of any breach of the SBHL Concession Agreement by SBHL or due to force majeure. The defaults referred to herein shall include:

(i) the Authority commits a material default in complying with any of the provisions of the SBHL Concession Agreement and such default has a material adverse effect on SBHL;
(ii) the Authority has failed to make any payment to SBHL within the period specified in the SBHL Concession Agreement;
(iii) the Authority repudiates the SBHL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the SBHL Concession Agreement; or
(iv) the state commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on SBHL and the breach continues for a period of 90 days from the date of notice given in this behalf by SBHL to the Authority.

Without prejudice to any other right or remedy which SBHL may have under the SBHL Concession Agreement, upon occurrence of the Authority's default, SBHL shall, subject to the provisions of the substitution agreement, be entitled to terminate the SBHL Concession Agreement by issuing a termination notice to the Authority; provided that before issuing the termination notice, the SBHL shall by notice inform the Authority of its intention to issue the termination notice and grant 15 days to the Authority to make a representation, and may after the expiry of such 15 days, whether or not it is in receipt of such representation, issue the termination notice.

I. ***Termination Payment***

Termination Payment shall become due and payable to SBHL within 15 days of a demand being made to the Authority with the necessary particulars, and in the event of any delay, the Authority shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. Provided that such delay shall not exceed 90 days. For the avoidance of any doubt, it is expressly agreed that termination payment shall constitute full discharge by the Authority of its payment obligations in respect thereof hereunder.

J. ***Defects Liability after Termination***

SBHL shall be responsible for all defects and deficiencies in the project highway for a period of 120 days after termination, and shall have the obligations to repair or rectify, at their own cost, all defects and deficiencies observed by the independent engineers in the project highway during the aforesaid period. In the event that SBHL fail to repair or rectify such defect or deficiency within 15 days from the date of notice issued by the Authority in this behalf, the Authority shall be entitled to get the same repaired or rectified at SBHL's risk and cost so as to make the project highway conform to the maintenance requirements. All costs incurred by the Authority hereunder shall be reimbursed by SBHL to the Authority within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, the Authority shall be entitled to recover the same from the Escrow Account.

K. ***Performance Security***

SBHL shall, for the performance of its obligations under the SBHL Concession Agreement during the construction period, provide to the Authority no later than 180 days from the date of SBHL Concession Agreement, an irrevocable and unconditional guarantee from a bank for a sum equivalent to ₹325.40 million in the form set forth in the SBHL Concession Agreement ("**Performance Security**"). Until such time the Performance Security is provided by SBHL and the same comes into effect, the bid security shall remain in force and effect, and upon such provision of the Performance Security, the Authority shall release the bid security to SBHL.

Notwithstanding anything to the contrary in the SBHL Concession Agreement, in the event Performance Security is not provided by SBHL within a period of 180 days from the date of SBHL Concession Agreement, the Authority may encash the bid security and appropriate the proceeds thereof as damages, and thereupon all rights, privileges, claims and entitlements of SBHL under and arising out of the SBHL Concession Agreement

shall be deemed to have been waived by, and to have ceased with the concurrence of SBHL, and SBHL Concession Agreement shall be deemed to have been terminated by mutual agreement of the parties.

L. ***O&M obligations of SBHL***

During the operation period, SBHL shall operate and maintain the project highway in accordance with the SBHL Concession Agreement either by itself, or through the O&M contractor and if required, modify, repair or otherwise make improvements to the project highway to comply with the provisions of the SBHL Concession Agreement, applicable laws and applicable permits, and conform to specifications and standards and good industry practice. The obligations of SBHL shall include:

(i) permitting safe, smooth and uninterrupted flow of traffic on the project highway during normal operating conditions;
(ii) collecting and appropriating the fee;
(iii) minimising disruption to traffic in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and maintaining liaison with emergency services of the state;
(iv) carrying out periodic preventive maintenance of the project highway;
(v) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavements markings, lighting, road signs and other traffic control devices;
(vi) undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;
(vii) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the project highway;
(viii) preventing with the assistance of the concerned law enforcement agencies, any encroachments on the project highway;
(ix) protection of the environment and provision of equipment and materials thereof;
(x) operations and maintenance of all communication, control and administrative systems necessary for the efficient operation of project highway;
(xi) maintaining a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and
(xii) complying with safety requirements in accordance with the SBHL Concession Agreement.

SBHL shall remove promptly from the project highway all surplus construction machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the project highway in a clean, tidy and orderly condition, and in conformity with the applicable laws, applicable permits and good industry practice. For avoidance of doubt, it is agreed that the debris and material excavated shall be carried to and deposited at a place to be decided in consultation with the Authority/independent engineer.

SBHL shall maintain, in conformity with good industry practice, all stretches of approach roads, over passes, under passes or other structures situated on the site but not forming part of the carriageway.

M. ***Insurance during concession period***

SBHL shall effect and maintain at its own cost, during the construction period and the operation period, such insurances for such maximum sums as may be required under the financing agreements, and the applicable laws, and such insurances as may be necessary or prudent in accordance with good industry practice. SBHL shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of SBHL during the construction period. SBHL shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by SBHL after repayment of senior lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of senior lenders' dues.

N. ***Liability and Indemnity***

General Indemnity

SBHL will indemnify, defend, save and hold harmless the Authority and its officers, servants, agents, government instrumentalities and government owned and/or controlled entities/enterprises, (the "**Authority Indemnified Persons**") against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by SBHL of any of its obligations under the SBHL Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by SBHL to any user or from any negligence of SBHL under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of the SBHL Concession Agreement on the part of Authority Indemnified Persons.

the Authority will indemnify, defend, save and hold harmless SBHL against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (i) defect in title and/or the rights of the Authority in the land comprised in the site, and/or (ii) breach by the Authority of any of its obligations under the SBHL Concession Agreement or any related agreement, which materially and adversely affect the performance by SBHL of its obligations under the SBHL Concession Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of the SBHL Concession Agreement or any related agreement and/or breach of its statutory duty on the part of SBHL, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of SBHL.

Indemnity by SBHL

Without limiting the generality of the above clause, SBHL shall fully indemnify, hold harmless and defend the Authority and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(i) failure of SBHL to comply with applicable laws and applicable permits;
(ii) payment of taxes required to be made by SBHL in respect of the income or other taxes of SBHL's contractors, suppliers and representatives; or
(iii) non-payment of amounts due as a result of materials or services furnished to SBHL or any of its contractors which are payable by SBHL or any of its contractors.

Without limiting the generality of the provisions of the SBHL Concession Agreement, SBHL shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may suffer, or pay by reason of any demands, claims, suits, or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by SBHL or by SBHL's contractors in performing SBHL's obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, SBHL shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the project highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, SBHL shall promptly make every reasonable effort to secure for the Authority a licence, at no cost to the Authority, authorising continued use of the infringing work. If SBHL is unable to secure such licence within a reasonable time, SBHL shall, at its own expense, and without impairing the specifications and standards, either replace the affected work or part, or process thereof with non-infringing work or part or process, or modify the same so that It becomes non-infringing.

O. *Effect of Force Majeure Event on the concession*

Upon occurrent of any force majeure event prior to the appointed date, the period set forth in the SBHL Concession Agreement for achieving financial close shall be extended by a period equal in length to the duration of the force majeure event.

At any time after the appointed date, if any force majeure event occurs:

(i) before COD, the concession period and the dates set forth in the project completion schedule shall be extended by a period equal in length to the duration for which such force majeure event subsists; or
(ii) after COD, whereupon SBHL is unable to collect fee despite making best efforts or it is directed by the Authority to suspend the collection thereof during the subsistence of such force majeure event, the concession period shall be extended by a period, equal in length to the period during which SBHL was prevented from collection of fee on account thereof, provided that in the event of partial collection of fee where the daily collection if less than 90% of the average daily fee, the Authority shall extend the concession period in proportion to the loss of fee on a daily basis. For the avoidance of doubt, loss of 25% in collection of fee as compared to the average daily fee for four days shall entitle SBHL to extension of one day in the concession period.

P. *Suspension of SBHL rights*

Suspension upon SBHL default

Upon occurrence of SBHL default, the Authority shall be entitled, without prejudice to its other rights and remedies under the SBHL Concession Agreement including rights of termination, to (i) suspend all rights of SBHL under the SBHL Concession Agreement including SBHL's right to collect fee, and other revenues, and (ii) exercise such rights itself and perform the obligations or authorise any other person to exercise or perform the same on its behalf during such suspension. Suspension shall be effective forthwith upon issue of notice by the Authority to SBHL and may extend up to a period not exceeding 180 days from the date of issue of such notice; provided that upon written request from SBHL and lender's representative, the Authority shall extend the aforesaid period of 180 days by a further period not exceeding 90 days.

Authority to act on behalf of SBHL

During the period of suspension, the Authority shall, on behalf of SBHL, collect all fee and revenues under and in accordance with the SBHL Concession Agreement and deposit the same in the escrow account. the Authority shall be entitled to make withdrawals form the escrow account for meeting the costs incurred by it for remedying and rectifying the cause of suspension, and thereafter for defraying the expenses specified in the SBHL Concession Agreement.

During the period of suspension hereunder, all rights and liabilities vested in SBHL in accordance with the provisions of the SBHL Concession Agreement shall continue to vest therein and all things done or actions taken, including expenditure incurred by the Authority for discharging the obligations of SBHL under and in accordance with the SBHL Concession Agreement and the project agreements, shall be deemed to have been done or taken for and on behalf of SBHL and SBHL undertakes to indemnify the Authority for all costs incurred during such period. SBHL hereby licenses and sub-licenses respectively, the Authority or any other person authorised by it under the SBHL Concession Agreement to use during suspension, all intellectual property belonging to or licenced to SBHL with respect to the project highway and its design, engineering, construction, operation and maintenance, and which is used or created by SBHL in performing its obligations under the SBHL Concession Agreement.

Revocation of Suspension

In the event that the Authority shall have rectified or removed the cause of suspension within a period not exceeding 90 days from the date of suspension, it shall revoke the suspension forthwith and restore all rights of SBHL under the SBHL Concession Agreement. For the avoidance of doubt, the parties expressly agree that the Authority may, in its discretion, revoke the suspension at any time, whether or not the cause of suspension has been rectified or removed hereunder.

Upon SBHL having cured SBHL default within a period not exceeding 90 days from the date of suspension, the Authority shall revoke the suspension forthwith and restore all rights of SBHL under the SBHL Concession Agreement.

Substitution of SBHL

At any time during the period of suspension, the lenders' representative, on behalf of senior lenders, shall be entitled to substitute SBHL under and in accordance with the substitution agreement, and upon receipt of notice, thereunder from the lenders' representative, the Authority shall withhold termination for a period not exceeding 180 days from the day of suspension, and any extension thereof under the SBHL Concession Agreement, for enabling the lenders' representative to exercise its rights of substitution on behalf of senior lenders.

Termination

At any time during the period of suspension under the SBHL Concession Agreement, SBHL may by notice require the authority to revoke the suspension and issue a termination notice. Subject to the rights of the lenders' representative to undertake substitution in accordance with the provisions of the SBHL Concession Agreement and within the period specified in the SBHL Concession Agreement, the Authority shall, within 15 days of receipt of such notice, terminate the SBHL Concession Agreement under and in accordance with the SBHL Concession Agreement.

Notwithstanding anything to the contrary contained in the SBHL Concession Agreement, in the event that suspension is not revoked within 180 days from the date of suspension or within the extended period, if any, set forth in the SBHL Concession Agreement, the SBHL Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have terminated by mutual agreement of the parties and all the provisions of the SBHL Concession Agreement shall apply, *mutatis mutandis*, to such termination as if a termination notice had been issued by the Authority upon occurrence of a SBHL default.

6. Concession agreement executed between TRDCL and Kerala Road Fund Board ("Board"), Executive Engineer, Public Works Department, Government of Kerala ("Government Agency") dated March 16, 2004 to undertake the project on build, operate and transfer basis for upgrading and expanding the transport facility network in the State of Kerala, for a period of 17.5 years ("TRDCL Concession Agreement").

A. *Grant of Concession*

Subject to and in accordance with the terms, conditions and covenants set forth in the Concession Agreement, the Board and the Government Agency (collectively the "**Concessioning Authority**")**,** has granted and authorized TRDCL to design, engineer, procure, finance, construct, operate and maintain the project/project facilities and to exercise and/or enjoy rights, powers, benefits, privileges, authorisations and entitlements as set forth in the TRDCL Concession Agreement.

B. *Annuity*

Subject to the provisions of the TRDCL Concession Agreement and in consideration of TRDCL accepting the concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in the TRDCL Concession Agreement, the Board agrees and undertakes to pay to TRDCL, on each annuity payment date, the sum of ₹177.49 million ("**Annuity**").

C. *Change of Scope*

The Board/Government Agency may, notwithstanding anything to the contrary contained in the TRDCL Concession Agreement, require changes in the scope of the project ("**Change of Scope**"), involving additional capital expenditure or a reduction in capital expenditure, as the case may be, not exceeding in either case ₹64.00 million in aggregate. The Change of Scope may be required by the Board by an order issued in accordance with

the procedure set forth in the TRDCL Concession Agreement.

D. ***Termination of the TRDCL Concession Agreement***

TRDCL Event of Default

Any of the following events shall constitute an event of default by TRDCL ("**TRDCL Event of Default**") unless such event has occurred as a result of one or more reasons set out in the TRDCL Concession Agreement:

(i) TRDCL has failed to achieve financial close within 6 months from the date mentioned in the TRDCL Concession Agreement;

(ii) TRDCL has failed to adhere to the design requirements and/or construction requirements and such failure, in the reasonable estimation of the project engineer, is likely to delay achievement of commercial operations date ("**COD**") beyond 120 days of the scheduled project completion date;

(iii) TRDCL has failed to achieve COD within 120 days from the scheduled project completion date;

(iv) TRDCL is in material breach of operations & maintenance ("**O&M**") requirements;

(v) any representation made or warranties given by TRDCL under the TRDCL Concession Agreement is found to be false or misleading;

(vi) TRDCL has created any encumbrance on the project site/project facilities in favour of any person save as otherwise expressly permitted under the TRDCL Concession Agreement;

(vii) TRDCL has failed to ensure minimum shareholding requirements specified in the TRDCL Concession Agreement;

(viii) a resolution has been passed by the shareholders of TRDCL for the voluntary winding up of TRDCL;

(ix) any petition for winding up of TRDCL has been admitted and liquidator or provisional liquidator has been appointed or TRDCL has been ordered to be wound up by court of competent jurisdiction except for the purpose of amalgamation or reconstruction with the prior consent of the Board, provided that, as part of such amalgamation or reconstruction, the property, assets and undertaking of TRDCL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of TRDCL under the TRDCL Concession Agreement and the project agreement, and provided further that:

  (i) the amalgamated or reconstructed entity has the technical capability and operating experience necessary for the performance of its obligations under the TRDCL Concession Agreement and the project agreements;

  (ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the TRDCL Concession Agreement and the project agreements and has a credit worthiness at least as good as that of TRDCL as at the commencement date; and

  (iii) each of the project agreements remains in full force and effect;

(x) a default has occurred under any of the financing documents and any of the lender(s) has recalled its financial assistance and demanded payment of the amounts outstanding under the financing documents or any of them as applicable;

(xi) TRDCL has abandoned the project facilities;

(xii) TRDCL has repudiated the TRDCL Concession Agreement or has otherwise expressed an intention not to be bound by the TRDCL Concession Agreement;

(xiii) TRDCL has suffered an attachment levied on any of the assets located or comprised in the project site/project facilities, causing a material adverse affect on the project and such attachment has continued for a period exceeding 90 days;

(xiv) TRDCL has delayed any payment that has fallen due under the TRDCL Concession Agreement for 90 days or more; and

(xv) TRDCL has otherwise been in material breach of any of its other obligations under the TRDCL Concession Agreement.

Concessioning Authority Event of Default

Any of the following events shall constitute an event of default by Concessioning Authority ("**Concessioning Authority Event of Default**"), unless caused by a TRDCL Event of Default or a force majeure event:

(i) Concessioning Authority is in breach of any of its obligations under the TRDCL Concession Agreement and has failed to cure such breach within 30 days of receipt of notice thereof issued by TRDCL;

(ii) the Government Agency or the Board has repudiated the Concession Agreement or otherwise expressed its intention not to be bound by the TRDCL Concession Agreement;

(iii) the Government Agency or the Board has (a) failed to execute the substitution agreement in accordance with the TRDCL Concession Agreement, (b) or having executed the same is in breach of any of its obligations there under and such breach has not been cured within 30 days from the date of written notice thereof given by TRDCL;

(iv) the Government Agency or the Board has unreasonably withheld or delayed grant of any approval or permission, which TRDCL is obliged to seek under the TRDCL Concession Agreement, and thereby caused material adverse effect;

(v) any representation made or warranties given by the Government Agency or the Board under the TRDCL Concession Agreement has been found to be false or misleading; and

(vi) the Board has delayed the payment of any amount that has fallen due in terms of the TRDCL Concession Agreement beyond 90 days.

Termination for TRDCL Event of Default

(i) Without prejudice to any other right or remedy which the Government Agency or the Board may have in respect thereof under the TRDCL Concession Agreement, upon the occurrence of a TRDCL Event of Default, the Board shall, subject to the provisions of substitution agreement, be entitled to terminate the TRDCL Concession Agreement as hereinafter provided, under due intimate to the project engineer.

(ii) If the Board decided to terminate the TRDCL Concession Agreement, pursuant to clause (i) above, it shall in the first instance issue preliminary notice to TRDCL. Within 30 days of receipt of the preliminary notice, TRDCL shall submit to the project engineer and the Board, in sufficient detail, the manner in which it proposes to cure the underlying event of default. In case of non-submission of TRDCL's proposal to rectify within 30 days, the Board shall be entitled to terminate the TRDCL Concession Agreement by issuing termination notice and to appropriate the performance security, if subsisting.

(iii) If TRDCL's proposal to rectify is submitted within 30 days, TRDCL shall have further period of 30 days to remedy/cure the underlying event of default. If, however, TRDCL fails to remedy/cure the underlying event of default within such further period allowed, the Board shall be entitled to terminate the TRDCL Concession Agreement by issue of termination notice and to appropriate the performance security if subsisting.

Termination for Concessioning Authority Event of Default

(i) Without prejudice to any other right or remedy which the TRDCL may have in respect thereof under the TRDCL Concession Agreement, upon the occurrence of a Concessioning Authority Event of Default, TRDCL shall be entitled to terminate the TRDCL Concession Agreement as hereinafter provided, under due intimate to the project engineer.

(ii) If TRDCL decided to terminate the TRDCL Concession Agreement, pursuant to clause (i) above, it shall in the first instance issue preliminary notice to the Board. Within 30 days of receipt of the preliminary notice, the Government Agency or the Board shall forward to TRDCL its proposal to remedy/cure the underlying event of default. In case of non-submission of Concessioning Authority's proposal to rectify within 30 days, TRDCL shall be entitled to terminate the TRDCL Concession Agreement by issuing a termination notice.

(iii) If the Concessioning Authority's proposal to rectify is forwarded to TRDCL within 30 days, the Board or the Government Agency, as the case maybe, shall have further period of 30 days to remedy/cure the underlying event of default. If, however, the Board or the Government Agency fails to remedy/cure the

underlying event of default within such further period allowed, TRDCL shall be entitled to terminate the TRDCL Concession Agreement by issue of termination notice.

Termination Payments

Upon termination of the TRDCL Concession Agreement, after the commencement date or from the date of commencement of construction works, as notified by TRDCL to the project engineer, whichever is earlier, TRDCL shall be entitled to receive termination payment as under ("**Termination Payment**"):

(i) Prior to COD

If the TRDCL Concession Agreement is terminated due to Concessioning Authority Event of Default (including early determination referred to in the TRDCL Concession Agreement), TRDCL shall receive from the Board, Termination Payment equal to book value and interest thereon @ SBI PLR + 5% p.a. from the Commencement Date or from the commencement of construction works, as notified by TRDCL to the project engineer, whichever is earlier.

(ii) After COD

(a) If the TRDCL Concession Agreement is terminated due to TRDCL Event of Default, the Board shall pay Termination Payment equal to 70% of the book value or the debt due, whichever is lower, as on the termination date.

(b) If the TRDCL Concession Agreement is terminated due to TRDCL Event of Default (including early determination referred to in the TRDCL Concession Agreement), TRDCL shall receive from the Board, Termination Payment equal to the higher of debt due or 150% of book value.
Provided that the Board shall be entitled to deduct from the Termination Payment any amount due and recoverable under the TRDCL Concession Agreement by the Government Agency/the Board, from TRDCL as on the termination date.

E. ***Performance Security***

a. TRDCL shall, for due and punctual performance of its obligations during the implementation period, deliver to the Board, performance security of a sum of ₹25.00 million, within three business days.

b. The performance security shall be valid up to nine months after COD and shall be substantially in the format provided in the TRDCL Concession Agreement.

c. If the TRDCL Concession Agreement is terminated due to any event other than a TRDCL Event of Default, the performance security if subsisting as of the termination date shall, subject to Concessioning Authority's right to receive or recover amounts, if any, due from TRDCL under the TRDCL Concession Agreement, be duly discharged and released to TRDCL.

F. ***Insurance***

(i) Implementation period

TRDCL shall at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the implementation period such insurance as are necessary including but not limited to the following:

(a) builders' all risk insurance;
(b) comprehensive third party liability insurance including injury or death to personnel/representatives of persons who may enter the project site;
(c) workmen's compensation insurance;

(d) any other insurance that may be necessary to protect TRDCL, its employees and its assets against loss, damage, destruction, business interruption or loss of profit including insurance against all force majeure events that are insurable.

(ii) Operations period

TRDCL shall at its cost and expense, purchase and maintain by re-instatement or otherwise, during the operations period insurance against:

(a) loss, damage or destruction of the project facilities, at replacement value;
(b) TRDCL's general liability arising out of the concession;
(c) liability to third parties;
(d) any other insurance that may be necessary to protect TRDCL, its employees and its assets against loss, damage, destruction, business interruption or loss of profit including insurance against all force majeure events that are insurable.

G. *General Liability and Indemnity*

TRDCL shall indemnify, defend and hold the Concessioning Authority harmless against any and all proceedings, actions and third party claims arising out of a breach by TRDCL of any of its obligations under the TRDCL Concession Agreement except to the extent that any such claim has arisen due to breach by Concessioning Authority of any of its obligations under the TRDCL Concession Agreement or a force majeure event which is a political event.

The Concessioning Authority shall, indemnify, defend and hold harmless TRDCL against any and all proceedings, actions, third party claims for loss, damage and expense of whatever kind and nature arising out of breach by Concessioning Authority, its officers, servants and agents of any obligations of Concessioning Authority under the TRDCL Concession Agreement except to the extent that any such claim has arisen due to breach by TRDCL of any of its obligations under the TRDCL Concession Agreement.

Other Agreements

1. Settlement Agreement executed between National Highways Authority of India and Barwa Adda Expressway Limited dated September 30, 2024 ("BAEL Settlement Agreement")

A. The amount of full and final settlement

(i) NHAI and BAEL agreed that the amount of full and final settlement against the claims and counter claims by both BAEL and NHAI is 42.70 million and payable to BAEL.
(ii) NHAI and BAEL acknowledge, undertake and agree that payment of the total amount shall constitute a valid discharge under the BAEL Settlement Agreement. All claims and counter claims by both parties are settled and there are no other past, present or there shall not be any future liabilities, claims or counter claims by either party pertaining to the claims and counter claims.

B. Obligations of parties to the BAEL Settlement Agreement

Obligations of NHAI

NHAI undertakes and agrees that the amount admissible in terms of the BAEL Settlement Agreement shall be paid to BAEL within the agreed time frame.

Obligations of BAEL

(i) BAEL undertakes and agrees that the case of harmonious substitution is dealt separately with the finance wing of NHAl, and it is informed that both premium and interest along with penalty will be deposited by BAEL to the finance wing of NHAI as per the terms decided between NHAI finance wing and BAEL.

(ii) BAEL agrees not to raise any claims or damages against NHAI for all the disputes settled in the BAEL Settlement Agreement including delay in handing over encumbrance free land by NHAI and delay in achievement of completion certificate under any clause of the BAEL Concession Agreement and otherwise. It will be treated as final settlement of claims and counter claims of BAEL and NHAI for the claims referred by the parties to conciliation.

(iii) BAEL agrees to indemnify and hold NHAI harmless against any claim of third party, including sub-contractor, statutory authority, if any, arising in relation to the claims being settled through the BAEL Settlement Agreement.

C. Terms of Settlement

(i) NHAI and BAEL acknowledge and agree that the amount for settlement included in the BAEL Settlement Agreement is the full and final amount due/payable by one party to the second party in relation to the disputes under the BAEL Concession Agreement and all matters ancillary or related thereto.

(ii) NHAI and BAEL, each confirms that it does not have any residual, pending or any other claim disputes or differences against each other in respect of the BAEL Project and all claims, demands, disputes and undertakings of the BAEL and NHAI for the disputes referred by both parties to conciliation including that arising out of or in relation to the BAEL Concession Agreement against the other party stands full settled without any further recourse whatsoever.

2. *Unit escrow agreements*

The escrow agreements entered into between (i) the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, SCOL and the Unit Escrow Agent; and (ii) the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, IDBI Trusteeship Services Limited and the Unit Escrow Agent, provide for an escrow mechanism for holding the Units for the Eligible Creditors and Eligible Creditors who are ECB lenders, respectively. For details, please see the section "*Unit Distribution Information and Procedure – Escrow Mechanism*" on page 397.

INFORMATION CONCERNING THE UNITS

Unitholding of the Trust

Particulars	Number of Units
Units	
Units issued and outstanding prior to this Unit Distribution	455,477,143
Units outstanding after this Unit Distribution	455,477,143

Unitholders holding more than 5% of the Units

Sr. No.	Name of Unit Holders	As on date of the Placement Memorandum		Post-Unit Distribution[#]	
		Number of Units	Percentage of holding (%)	Number of Units	Percentage of holding (%)
1.	IL&FS Transportation Networks Limited*	219,993,908	48.30	[●]	[●]
2.	Infrastructure Leasing and Financial Services Limited*	124,870,622	27.42	[●]	[●]
3.	IL&FS Financial Services Limited	108,535,475	23.83	[●]	[●]
4.	Roadstar Infra Private Limited	Nil	-	[●]	[●]

[*] *Pursuant to the IL&FS Interim Distribution SOP as approved by the board of directors of IL&FS in its meeting held on May 15, 2024, IL&FS and ITNL will continue to hold 31,593,908 Units after the Unit Distribution which will be held by them for a period of one year from the date of Unit Distribution in accordance with Regulation 12(3) of the InvIT Regulations. These Units correspond to the recovery amount for contingent claims that are either ''admitted contingent claims' or 'contingent claims that are neither admitted nor rejected and under appeal/adjudication at various fora'. These Units will be locked in with IL&FS and ITNL for a period of at least one year from the date of listing of Units or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. The Units which remain unallocated post finalisation of the contingent claims shall form part of pool of Units used for settlement of other creditors of the IL&FS Group which will be kept in separate demat accounts which will be controlled by the Investment Manager and will be released after a one year lock-in period, in consultation with SEBI. Prior to filing the Final Placement Memorandum, the Investment Manager shall enter into letter arrangements with IL&FS and ITNL for being a joint signatory to the demat accounts where such Units will be kept in relation to contingent claims. Under no circumstance such Units would be held in a beneficial interest capacity by any of the IL&FS entities.*

[#] *To be updated in the Final Placement Memorandum prior to filing with SEBI and the Stock Exchanges.*

Unitholding of the Sponsor and Sponsor Group

Please see below table for details in relation to the current unitholding of the Sponsor and Sponsor Group:

S. No.	Name of Entity	No. of units held	% of holding
1.	Roadstar Infra Private Limited	Nil	-
2.	IL&FS Transportation Networks Limited	219,993,908	48.30
3.	IL&FS	124,870,622	27.42
4.	Sabarmati Capital One Limited	2,000,000	0.44
5.	IL&FS Financial Services Limited	108,535,475	23.83
6.	Elsamex Maintenance Services Limited	Nil	-
TOTAL		455,400,005	99.98

Unitholding of the Investment Manager, Project Manager and Trustee

The Investment Manager, Project Manager and Trustee currently do not hold any Units.

Unitholding of the directors of the Investment Manager

The directors of the Investment Manager currently do not hold any Units.

Sponsor and Sponsor Group lock-in

Pursuant to SEBI's letter dated March 20, 2024, the Trust has received an exemption from strict enforcement of Regulation 12(3A) of the InvIT Regulations, with reference to the requirement of holding certain Units by the Sponsor and Sponsor Group entities for a certain period of time, subject to the Sponsor holding not less than 15% of the Units on a post-issue basis for a period of three years. Accordingly, 68,806,097 Units, equivalent to not less than 15% of total outstanding Units post the Unit Distribution, are proposed to be distributed to the Sponsor, which will be held by the Sponsor for a period of at least three years from the date of listing of the Units. For details see "*Unit Distribution Procedure and Information*" on page 392.

IL&FS and ITNL will be holding 31,593,908 Units for a period of at least one year from the date of listing or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units, or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. For details see "*Unit Distribution Procedure and Information*" on page 392.

Other Unitholders

As on the date of this Placement Memorandum, Bhopal E-governance Limited holds 77,138 Units, by way of a Deed of Assignment dated December 6, 2021, and will not be participating in the Unit Distribution.

Minimum offer size requirements

For exemptions granted by SEBI in relation to minimum offer size requirements as required under the InvIT Regulations, see "*Unit Distribution Procedure and Information*" on page 392.

Minimum investment requirements

For exemptions granted by SEBI in relation to minimum investment requirements as required under the InvIT Regulations, please see the section "*Unit Distribution Procedure and Information*" on page 392.

FINANCIAL INDEBTEDNESS AND DEFERRED PAYMENTS

The details of indebtedness of the Trust and the Projects SPVs as at September 30, 2024, together with a brief description of certain material covenants of the relevant financing agreements, are provided below:

(in ₹ million)

Sr. No.	Name of the Project SPV	Pre-Unit Distribution Principal Amount outstanding, as on September 30, 2024	Post-Unit Distribution Principal Amount outstanding^
1.	**HREL**		
	Secured loans availed from banks and financial institutions	2,079.70	[•]
	Unsecured loans availed from related party [a]	2,033.36	[•]
	Total Borrowings	4,113.06	[•]
2.	**MBEL**		
	Secured loans availed from banks and financial institutions	14,589.90	[•]
	Unsecured loans availed from related party [a]	10,253.57	[•]
	Total Borrowings	24,843.47	[•]
3.	**SBHL**		
	Secured loans availed from banks and financial institutions	3,424.20	[•]
	Unsecured loans availed from related party and others [b]	2,359.61	[•]
	Total Borrowings	5,783.81	[•]
4.	**TRDCL**		
	Secured loans availed from banks and financial institutions	0.00	[•]
	Unsecured loans availed from related party [a]	764.35	[•]
	Total Borrowings	764.35	[•]
5.	**PSRDCL**		
	Secured loans availed from banks, and financial institutions	5,189.91	[•]
	Unsecured loans availed from banks, financial institutions and related party [c]	12,889.80	[•]
	Total Borrowings	18,079.71	[•]
6.	**BAEL**		
	Secured loans availed from banks, financial institutions and related party [d]	12,591.20	[•]
	Unsecured loans availed from related party [d]	6,813.64	[•]
	Total Borrowings	19,404.84	[•]

^Will be determined upon completion of the Unit Distribution. To be updated in the Final Placement Memorandum prior to filing with SEBI and the Stock Exchanges.

Notes:

[a] In case of HREL, MBEL and TRDCL, entire amount of unsecured borrowings are owed to the Trust

[b] b In case of SBHL, unsecured borrowings amounting to ₹2359.61 million is owed to its related parties, i.e., the Trust and IFSL. Subsequent thereto, the Trust has acquired debt of Rs 299.14 million from IFSL and thereupon entire unsecured debt is owed to the Trust.

[c] In case of PSRDCL, unsecured borrowings amounting to ₹11,598.50 million is owed to its related party, i.e., the Trust

[d] In case of BAEL, secured borrowings amounting to ₹1,311.70 million are owed to its related party, i.e. IL&FS Financial Services Limited and unsecured borrowings amounting to ₹6,813.64 million (net of IND- AS adjustments ₹6,430.43 million) are owed to its related party, i.e. IL&FS Transportation Networks Limited. Post September 30, 2024 these related parties debt has been taken over by the Trust.

Principal terms of the borrowings availed by the Project SPVs from external lenders:

1. *Security:* The borrowings availed by the Project SPVs**,** are secured by, amongst others:

   (i) All movable tangible and intangible assets, receivables, cash and investments both present and future created

as part of the project;

(ii) The charge, assignment rights title, benefits, claims and demands under the relevant project agreements;

(iii) All the monies lying in the Escrow Account (*as defined under the relevant financing agreements*) into which all the investments in the project and all project revenues and insurance proceeds are to be deposited; and

(iv) First ranking assignment of all insurance, clearances and interests of the relevant Project SPV.

2. *Prepayment:* The Project SPVs may prepay the borrowings availed by them. For certain Project SPVs, prepayment may attract a prepayment penalty of 1.00%, subject to non-compliance with the terms set forth in the respective agreements. Prepayments are applied to outstanding debts in the inverse order of maturity.

3. *Restrictive covenants*: Without prior consent of the lenders, the Project SPVs shall not:

(i) Sell, assign or dispose off their assets as specified in the respective financing agreements;

(ii) Create any charge, lien, encumbrances or other security interests over their assets other than as specified in the respective financing agreements;

(iii) Enter into additional borrowing arrangements;

(iv) Effect changes in their business or capital structure;

(v) Enter into schemes for amalgamation, arrangement, reconstruction, consolidation or reorganisation; and

(vi) Not to induct onto their board any person identified as a wilful defaulter by the RBI.

If a lender turns down the Project SPVs' request for the above terms, but the Project SPV still goes ahead, the lender shall have the right to call up the facilities sanctioned.

4. *Events of default:* Borrowing arrangements entered into by the Project SPVs contain standard events affecting the Project SPVs, including but not limited to:

(i) failure to pay any sum under the relevant financing agreements;

(ii) breach of obligations in the performance of the financial covenants under the relevant financing agreements;

(iii) failure to create security within the time period stipulated; and

(iv) upon occurrence of an event which may have a material adverse effect.

5. *Consequence of event of default:* In terms of the borrowing arrangements entered into by the Project SPVs, the following, amongst others, are the consequences of default:

(i) Cancellation of suspension of available commitments; and

(ii) Enforcement of security interests.

Principal terms of the non-convertible debentures issued by HREL

HREL has issued and allotted 8.50% and 8.75% (later revised to 7.50%) redeemable, listed, rated, secured non-convertible debentures of a nominal value of ₹1,00,000 each on a private placement basis, amounting to ₹7,150.00 million ("**HREL Debentures**").

The principal terms of the debenture trust deed dated February 10, 2017, as amended (the "**Deed**") entered into by

HREL in relation to the HREL Debentures are as follows:

1. *Security:* The HREL Debentures are secured by (i) a first ranking *pari passu* charge over all of its tangible moveable properties and assets, both present and future, except project assets; (ii) first ranking *pari passu* charge over all bank accounts of the issuer including without limitation the escrow account and the debt service reserve account except the distribution account and any other bank account of HREL established pursuant to the transaction documents; (iii) first ranking *pari passu* charge/assignment on all intangible assets of the issuer; (iv) assignment by way of security in: (a) all the right, title, interest, benefits, claims and demands of the issuer in the project agreement, (b) the right, title and interest of the issuer in, to and under all the authorisations, (c) all the rights, titles, interest, benefits, claims and demands of the issuer in any guarantees, letters of credit, liquidated damages and performance bonds that may be provided by any party to the project agreements in favour of the issuer, and (d) all the right, title, interest, benefits, claims and demands of the issuer under all insurance contracts and insurance proceeds.

   Furthermore, so long as the monies remain due and outstanding to debenture holders: (a) HREL shall take prior written consent of the debenture trustee for any new project agreements that it may enter into and shall assign its rights and interests in such additional project agreements in favour of all the debenture holders by way of a first charge, and (b) HREL shall notify the debenture holders and/or debenture trustee of all its acquisitions of immovable properties and mortgage the same in favour of the debenture holders. The security shall be created and perfected within 30 days from the deemed date of allotment. The security created is a continuing security and will extend to the ultimate balance of debt, regardless of any intermediate payment or discharge and shall not be affected by winding up or by any merger or amalgamation, reconstruction of HREL.

2. *Tenor and Repayment:* HREL will, on the applicable redemption date as per the Deed, unconditionally pay to, or to the order of, each debenture holder in Indian Rupees, the aggregate of the applicable redemption amounts and all other amounts due to that debenture holder in respect of the debentures being redeemed on that redemption date in accordance with the terms and conditions and the financing agreements. Any payment so made will to that extent be a good discharge to HREL in respect to the amounts payable by HREL.

   HREL shall, on each coupon payment date as per the Deed, unconditionally pay to, or to the order of, each debenture holder in Indian Rupees, the accrued aggregate coupon in accordance with the terms and conditions and the financing agreements in respect of the debentures held by such debenture holder. Subject to other terms of the Deed, each coupon period for each series of debentures shall be for a duration of six months and not extend beyond the relevant final redemption date as per the Deed.

3. *Negative Covenants:* The Deed provides that HREL shall not affect any of the following, without the prior written consent of the senior lenders:

   (i) incur any additional indebtedness except for the permitted indebtedness as per the Deed;

   (ii) create or permit to subsist any guarantee or indemnity in respect of any financial indebtedness obtained by any person, including group companies;

   (iii) create or permit to subsist any encumbrance over any of its assets;

   (iv) enter into any amalgamation, demerger, merger or corporate reconstruction;

   (v) any change in the capital structure whereby the sponsor ceases to hold 51.00% of the issued and paid-up capital of HREL;

   (vi) engage in any other business or trade other than the project;

   (vii) shift of management control from the sponsor;

   (viii) amendment to its constitutional documents that adversely effects rights of debenture holders;

(ix) alter accounting policies or financial year; and

(x) make any loan or provide any form of credit accommodation, or give or issue any guarantee, indemnity, bond or letter or credit to or for the benefit of any person.

4. *Events of Default:* The Deed provides certain events of defaults, including:

(i) non-payment;

(ii) non-compliance with obligations under transaction documents;

(iii) initiation of insolvency proceedings against HREL;

(iv) HREL abandons or threatens to abandon the whole or part of the project;

(v) HREL ceases to have necessary rights to possess and use all or any material portion of any project site;

(vi) material adverse effect;

(vii) any administrative, regulatory or judicial action, suit or proceeding under or relating to any environmental law is instituted against HREL, or the operation and maintenance of the project poses a hazard to the environment, health or safety;

(viii) HREL debentures ceases to be rated by any rating agency; and

(ix) any amendment to the constitutional documents of HREL without prior approval of the debenture trustee which is prejudicial to rights of the secured parties or to the security created under the transaction documents.

5. *Consequences of Events of Default:* The Deed provides certain consequences of events of default, including:

(i) declaration by a written notice to HREL, by the debenture trustee, if directed by the majority debenture holders, that the debt shall be due and payable forthwith;

(ii) termination of concession agreement;

(iii) substitution of HREL under the concession agreement; and

(iv) enforcement of security and exercise of such other rights and remedies as may be available to the debenture trustee.

Principal terms of the non-convertible debentures issued by MBEL

MBEL has issued and allotted 9.20% (later revised to 8.75%) redeemable, unlisted, rated, secured non-convertible debentures of a nominal value of ₹1,00,000 each on a private placement basis, amounting to ₹3,550.00 million ("**MBEL Debentures**").

The principal terms of the debenture trust deed dated March 29, 2017, as amended (the "**Deed**") entered into by MBEL in relation to the MBEL Debentures are as follows:

1. *Security:* The MBEL Debentures are secured by, *inter alia*, including (i) a first mortgage and *pari passu* charge on all the MBEL's immovable properties, both present and future, except project assets; (ii) first *pari-passu* charge on all the MBEL's tangible moveable assets, both present and future except project assets; (iii) a first *pari-passu* charge over all accounts of MBEL including without limitation the escrow account and the debt service reserve account; and (iv) first *pari passu* charge on all intangible assets of the issuer.

2. *Covenant to Pay/Redemption:*

(i) MBEL will pay interest to the debenture holders, the interest on each interest payment date, the interest on application money on the first interest payment date, and the redemption installment on scheduled redemption date, and pay all other debenture payments on the relevant payment date;
(ii) MBEL will pay the debenture holders the aggregate debenture payments of all debentures in case of acceleration upon occurrence of even of default;
(iii) MBEL will comply with all obligations under the deed and pay and repay all monies payable by the issuer to the debenture trustee and the debenture holders pursuant to the terms of the deed; and
(iv) The debenture holders shall subscribe to the whole of debentures in two series, in one or more tranches, at the shole discretion of the initial subscriber.

3. *Representations and Covenants*: MBEL provides certain representations, *inter alia,* including that:

(i) MBEL and the sponsor are duly organized, have requisite authority to own its assets and is a public limited company;
(ii) MBEL has not incurred any liabilities other than those contemplated in the transaction documents, and has no subsidiary;
(iii) The MBEL Concession Agreement is in full force and effect, and no event of default has taken place thereunder;
(iv) There are no circumstances that are expected to result in material adverse effect;
(v) MBEL has delivered to the debenture trustee a true and complete certified copy of each of the project documents, and the conditions precedent thereunder have been satisfied in full or waived as per the terms; and
(vi) MBEL does not have any outstanding security interest except for what is permitted.

MBEL also covenants with the debenture trustee that at all times until the final settlement date, it is in compliance with the certain covenants including, *inter alia*, the following:

(i) Affirmative covenants: (a) MBEL shall use proceeds of the debentures only for the purpose as set forth in the deed; (b) MBEL shall establish to the debenture trustee that certain financial covenants have been maintained; (c) MBEL shall obtain a credit rating of itself from a credit rating agency; and (d) MBEL shall ensure compliance with environmental, health, safety and social requirements.

(ii) Negative covenants: (a) Unless with the prior consent of the debenture trustee or NHAI, MBEL shall not change its capital structure, agree to formulate any scheme for its merger or restructuring, or lease, transfer or dispose of its assets; (b) MBEL shall not make any capital expenditure or acquire fixed assets except as may be permitted under the debenture documents or with the prior approval of the debenture trustee, other than normal capital expenditure; (c) MBEL shall not make any restricted payments, unless the restricted payment conditions have been complied with; (d) MBEL shall not create any security interest on its assets other than permitted security interests; and (e) MBEL shall not abandon the MBEL Project.

4. *Events of Default*: The Deed provides certain events of defaults, *inter alia*, including:

(i) non-payment;
(ii) non-compliance with obligations under transaction documents;
(iii) Security has not been created or any event which is prejudicial to security has occurred
(iv) inability of MBEL to pay debts;
(v) initiation of insolvency proceedings against MBEL; and
(vi) change in ownership.

Principal terms of the non-convertible debentures issued by PSRDCL

PSRDCL has issued and allotted 8% redeemable, unlisted, unrated, secured/unsecured (as the case may be) non-convertible debentures of a nominal value of ₹1,000 each on a private placement basis, amounting to ₹8,894.90 million ("**PSRDCL Debentures**").

The principal terms of the debenture trust deed dated December 13, 2023, as amended (the "**Deed**") entered into by PSRDCL in relation to the PSRDCL Debentures are as follows:

1. *Security*: The secured PSRDCL Debentures are secured by way of a charge on (i) all the tangible moveable assets, except the project assets; (ii) all accounts of PSRDCL in relation to the PSRDCL Project; (iii) all intangible assets of PSRDCL; and (iv) assignment by way of security in: (a) all the right, title, interest, benefits, claims and demands of the issuer in the project documents, (b) the right, title and interest of PSRDCL in, to and under all clearances, (c) all the rights, titles, interest, benefits, claims and demands of PSRDCL in any guarantees, letters of credit, liquidated damages and performance bonds that may be provided by any party to the project documents, and (d) all the right, title, interest, benefits, claims and demands of PSRDCL under all insurance contracts.

2. *Covenant to Pay/Redemption*: PSRDCL shall pay to the debenture holders: (i) the principal amount of the PSRDCL Debentures, which are subject to redemption, on the redemption date; (ii) the interest on the debentures; (iii) in case of default in payment of interest, or other fees or any other default under the Deed or any other restructuring document on the redemption date, PSRDCL shall pay to the majority debenture holders, default interest in addition to the payment of interest on the defaulted amounts; and (iv) additional interest in case of non-submission of audited books of accounts/ balance sheet by PSRDCL, default/ breach by PSRDCL in complying with any conditions mentioned under the sanction letters and non-compliance with external debt service coverage ratio.

3. *Representations and Covenants*: PSRDCL provides certain representations, *inter alia*, including that:

   (i) PSRDCL and the Sponsor are duly organized, have requisite authority to own its assets and is a public limited company;
   (ii) PSRDCL has field all applicable tax returns;
   (iii) PSRDCL is in compliance with all relevant laws;
   (iv) There are no circumstances that are expected to result in material adverse effect; and
   (v) PSRDCL has obtained or caused the procurement of al comprehensive insurances.

PSRDCL also agrees that it shall abide by and ensure continued compliance with certain covenants, including, *inter alia*, the following:

Affirmative covenants: PSRDCL agrees and acknowledges (a) that the majority debenture holders shall appoint a specialized agency for specialized monitoring; (b) PSRDCL shall furnish certified true copies of certain financial documents as at the end of such year; (c) all assets should be kept fully insured and the related documents shall be submitted to the senior secured lenders / facility agent; and (d) it shall maintain proper and adequate books of records and accounts.

Negative covenants: Without approval of the majority debenture holders/debenture trustees, PSRDCL shall not (a) undertake any new project or scheme of expansion or acquisition of fixed assets; (b) effect any change in its capital structure which leads to any dilution in controlling stake / management control of the Sponsor; (d) create any subsidiary; and (f) undertake any merger, scheme of arrangement.

Financial covenants: (a) An escrow agreement shall be executed by all parties; (b) PSRDCL shall not open or maintain or operate any bank accounts other than the specified ones, without the permission of the majority debenture holders; (c) PSRDCL shall ensure that no change is made to the general nature and conduct of the business.

4. *Events of Default:* The Deed provides certain events of defaults, including:

(i) default in payments;
(ii) default in performance of covenants and conditions;
(iii) misrepresentation;

(iv) material adverse effect;
(v) cross default; and
(vi) abandonment of the PSRDCL Project.

Principal terms of the non-convertible debentures issued by BAEL

BAEL has issued and alloted 8% redeemable, unlisted, unrated, secured/unsecured (as the case may be) non-convertible debentures of a nominal value of ₹1,000 each on a private placement basis, amounting to ₹7,743.47 million ("**BAEL Debentures**").

The principal terms of the debenture trust deed dated November 12, 2024, as amended (the "**Deed**") entered into by BAEL in relation to the BAEL Debentures are as follows:

1. *Security:* The payments for the secured BAEL Debentures shall be secured by security interest in favour of the debenture trustee acting for the benefit of the debenture holder in a form satisfactory to the debenture The security created in favour of the debenture trustee shall rank *pari passu* inter se the debenture holder and shall also rank pari passu with the facilities made available under the master restructuring agreement. BAEL shall create security time period provided in the Deed or as may be prescribed by the debenture holder; and BAEL shall take all steps and actions to perfect the security granted by BAEL in the secured assets in terms of this Deed

2. *Covenant to Pay:* The Debentures constitute direct, senior, unconditional obligations of BAEL. BAEL shall, on each of the redemption date, unconditionally pay to, or to the order of, each debenture holder in Indian Rupee, the aggregate of the redemption amounts and all other amounts due in respect of the Debentures being redeemed on the redemption date in accordance with the Deed.

3. *Negative Covenants:* The Deed provides that BAEL shall not affect any of the following, without the prior written consent of the debenture trustee:

   (i) BAEL shall not, and shall not agree to, create, incur, assume or suffer to exist any encumbrance upon or with respect to any property, revenues or assets (real, personal or mixed, tangible or intangible) other than a permitted security interest; and

   (ii) BAEL shall not enter into any agreements with a 'related party' (as defined under Companies Act, 2013).

4. *Events of Default:* The Deed provides certain events of defaults, including:

   (i) non-payment;
   (ii) non-compliance with obligations under transaction documents;
   (iii) misrepresentation;
   (iv) material adverse effect;
   (v) cross default; and
   (vi) proceedings against BAEL.

This is an indicative list of the terms of the borrowings availed by the Project SPVs and there may be additional terms, conditions and requirements under the various borrowing arrangements entered into by the Project SPVs. Where applicable and in relation to any debentures issued by the Project SPVs, the term 'lenders' may include the relevant debenture trustee and/or the debenture holders.

Given the nature of these borrowings and the terms of prepayment, the aggregate outstanding borrowing amounts may vary from time to time. In addition to the above, the Project SPVs may, from time to time, enter into re-financing arrangements and draw down funds thereunder, prior to the filing of the Final Placement Memorandum.

Principal terms of the borrowings by HREL, MBEL, SBHL, BAEL and TRDCL from the Trust

The Trust has disbursed certain unsecured facilities on similar terms to HREL, MBEL, SBHL, BAEL and TRDCL (individually, a "**Borrower**", and collectively, the "**Borrowers**") through unsecured short-term loans by the Trust

(acting through its Trustee) to HREL, MBEL, SBHL, BAEL and TRDCL by way of certain loan agreements (the "**Trust Loan Agreements**").

The key terms of the Trust Loan Agreements include:

Lender	Roadstar Infra Investment Trust (acting through the Trustee) ("**Lender**").
Nature of the debt	Unsecured short-term loan from the Trust to the Borrower (the "**Trust Loan**").
Transaction Documents/Financing Documents	"**Transaction Documents**" shall mean, collectively, the relevant Trust Loan Agreement and any other agreement, undertaking, power of attorneys or document, as may be designated as a Transaction Document (as defined under the relevant Trust Loan Agreement) by the Lender.
Term	The Trust Loan shall remain in force until the earlier of: (a) the final settlement date (as defined under the relevant Trust Loan Agreement); and (b) the expiry or termination of the relevant concession agreement.
Grant of Facility and Purpose	Subject to the terms and conditions of the relevant Trust Loan Agreement and in accordance with the relevant deed of assignment and at the request of a Borrower, the Lender has granted to the Borrowers, unsecured financial assistance to the extent as mentioned in Schedule I of the relevant Trust Loan Agreement ("**Facility**")
Repayment	The Borrower shall repay the principal amount of the Facility to the Lender on such dates being the Repayment Date (as defined under the relevant Trust Loan Agreement). A Borrower may (at the discretion of, and as per the instructions of, the Investment Manager and in accordance with the provisions of the Trust Documents and Applicable Law) repay an amount which is less than the principal amount due on the Repayment Date. No penalty shall be payable on such unpaid amount. The non-payment of the unpaid amount in accordance with the Transaction Documents shall not be deemed to be an Event of Default (as defined under the relevant Trust Loan Agreement).
Interest	(a). The Facility shall carry an interest at such rate and on such terms as mentioned in Schedule I of the relevant loan agreement, which may be reset at the discretion of the Lender. Upon such reset, the Lender shall intimate the reset interest rate to the Borrower and the Borrower shall thereafter be liable to pay Interest on the Facility at the reset interest rate, which shall become the interest rate on and from the date from which Interest has been reset. (b). The Borrower shall pay, to the Lender other statutory levies as applicable, from time to time, if any, in relation to the Facility.
Conditions Subsequent	Without prejudice to the rights of the Lender under the relevant Trust Loan Agreement, the Lender shall be entitled to prescribe such other actions which the Borrower shall be obligated to fulfil in the manner and in the time limit as may be prescribed by the Lender.
Events of default	The occurrence of any of the following events or circumstances shall constitute an Event of Default: (a). **Non-Payment**: The Borrower fails to pay any amount under the relevant Trust Loan Agreement when the same becomes due and payable. Provided, if the failure of the Borrower to pay such amount is due to any technical fault in the banking system, and the Borrower makes such payment within 2 (two) business days therefrom, it shall not constitute an Event of Default. (b). **Misrepresentation**: Any representation or warranty made by the Borrower (or any of its officers) or any other information furnished by the Borrower in the report or otherwise provided by the Borrower from time to time in accordance with Trust Loan Agreement if proven to be incorrect in any material respect when made. (c). **Illegality**: It becomes unlawful for the Borrower to perform any of its obligations under the Trust Loan Agreement.

	(d). **Breach of Covenants and Undertakings**: The Borrower commits any breach of the covenants or undertakings under the Trust Loan Agreement or under the Transaction Documents and fails to remedy such breach within 90 (ninety) days from the date of such breach. (e). **Insolvency**: The Borrower fails to pay its debts as such debts become due, or admits in writing its inability to pay its debts, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the Borrower seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization of the Borrower, or seeking arrangement, compromise, adjustment, protection, relief, or composition of its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a liquidator, receiver, trustee, or other similar official for it or for any substantial part of its property and such proceeding is not dismissed within a period of 30 (thirty) days from the date of the filing of application in respect thereof. Any application is filed for a corporate insolvency resolution proceeding against the Borrower under the Insolvency and Bankruptcy Code, 2016 and such application is not dismissed within a period of 30 (thirty) days from the date of the filing of application thereof. (f). **Nationalisation or Expropriation**: Any government authority or any related agency, instrumentality or department thereof has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the Borrower or whole or part of the assets of the Borrower or the whole or substantially whole or part the Project (as defined under the relevant Trust Loan Agreement), resulting in the Borrower being deprived or threatened to deprive to carry on its business or which will have an adverse effect on the operation of the business of the Borrower. (g). **Ownership**: Any change in ownership, control, shareholding of the Borrower without the prior written approval of the Lender. (h). **Termination of the Concession Agreement**: Termination of the relevant concession agreement for any reason whatsoever. (i). **Event of Default under the Concession Agreement**: An event of default under the relevant concession agreement and the Borrower fails to remedy such event of default within the timelines provided under the concession agreement for the same.
Consequences of event of default	If an Event of Default has occurred, the Lender may (subject to relevant loan agreement, law and without prejudice to any other rights it may have under law) accelerate the repayment of facility and all other amounts outstanding in relation thereto by delivery of a written notice to the Borrower (the "**EOD Notice**"). Upon receipt of the EOD Notice, all amounts outstanding under the facility (including accrued interest) shall become due and payable by the Borrower with immediate effect and shall be repaid immediately upon the issue of the EOD Notice. Notwithstanding the foregoing, upon receipt of a notice of Event of Default as specified in the relevant Trust Loan Agreement, the Lender may, waive such Event of Default, at its sole discretion.
Covenants	1. At all times until the Final Settlement Date under the relevant Trust Loan Agreement, the Borrower shall at all times: (a). Comply with all law;

	(b). Pay (including by way of making good faith estimated payments on a timely basis in accordance with appropriate procedures established for such purpose) (i) all taxes, assessments, reassessments and governmental charges or levies imposed upon it or upon its property and assets and (ii) all lawful claims and obligations that, if unpaid, might by law operate as a lien upon any of its property and/or assets; (c). Preserve and maintain its corporate existence, legal structure, legal name, rights, privileges and franchises; (d). Permit the Lender or its agents or representatives to examine the records, registers and books of account and visit and inspect any of the properties of the Borrower and discuss the affairs, finances and accounts of the Borrower with, and be advised as to the same by, any officers or directors and auditors of the Borrower. All costs of such inspection shall be borne by the Borrower; (e). Keep, proper books of records and accounts in which full and accurate entries shall be made of all financial transactions and the assets and business of the Borrower in accordance with applicable Indian accounting standards from time to time and in accordance with law; (f). Obtain, comply with and do all that is necessary to maintain in full force and effect and supply, on demand, certified copies to the Lender of all necessary authorisations: (i) required to enable it to perform its obligations under the Transaction Documents; (ii) to ensure the legality, validity, enforceability or admissibility of the Transaction Documents in evidence in India; and (iii) to enable it to carry on its business as it is being conducted from time to time. (g). Comply with the terms of the relevant project agreements (including the relevant concession agreement) and Trust Documents. 2. The Borrower shall: (a). immediately inform the Lender (i) if it has notice of any event which constitutes or might constitute an Event of Default, specifying the nature of such Event of Default and any steps the Borrower has taken or proposes to take to remedy the same, (ii) of any application having been made for its winding up or insolvency or any statutory notice of its winding up or insolvency under the provisions of the Companies Act, 2013 having been received, or other legal process intended to be filed or initiated against the Borrower and affecting the title to the Borrower's material properties or if a receiver is appointed of any of its properties or any part of its business or undertaking, (iii) of any litigation or governmental proceeding pending or threatened against the Borrower, and (iv) any proposal by any government authority to compulsorily acquire the Borrower; and (b). immediately on demand by the Lender, furnish to them such information and data as may be required by them. 3. The Borrower shall, do such acts, deeds, matters and things and execute such other documents in the form and substance satisfactory to the Lender which in the Lender's opinion shall be necessary or advisable.

	4. The Borrower undertakes, agrees and confirms that the availing of the facility will not increase or cause to increase the financial liability of the Authority in any manner, and the Borrower shall not jeopardize the interest of the Authority in any manner.
Security	Unsecured
Tax & Costs	Unless otherwise agreed to by the Lender, the Borrower shall: (a) during the currency of the Facility bear all such imposts, duties and taxes (including interest and other taxes, if any) as may be levied from time to time by any Government Authority, pertaining to or in respect of the Facility; and (b) pay all other costs, charges and expenses in any way incurred by the Lender (or any its agents or representatives) (including costs of investigation of title and requisite due diligence to protect the interests of the Lender) and such other costs if and when the Borrower is required to pay according to Law for the time being in force. In the event of a Borrower failing to pay the monies referred to in clauses (A) and (B) above, the Lender shall be at liberty (but shall not be obliged) to pay the same. The Borrower shall reimburse all sums paid by the Lender promptly on receiving intimation thereof from the Lender.
Governing Law	This Agreement shall in all respects be governed by and construed in accordance with the laws of India.

* *SBHL had availed certain financial facilities from Empower India Limited ("**Empower**") and Empower had in turn availed financial facilities from IFSL. The National Company Law Appellate Tribunal vide its order dated September 3, 2024 approved that the facilities between SBHL, Empower and IFSL be collapsed such that IFSL becomes the direct lender to SBHL (and such loan, being the "**IFSL SBHL Loan**"), instead of Empower. Accordingly, by way of a deed of assignment dated October 22, 2024, the IFSL SBHL Loan is now assigned by IFSL to the Trust, in consideration of which the Trust on October 23, 2024 has issued 29,91,438 Units to IFSL.*

Principal terms of the borrowing availed by PSRDCL from the Trust

The Trust has disbursed certain unsecured facilities to PSRDCL ("**Borrower**") for the purpose of repayment of debts to external lenders (the "**PSRDCL Trust Loan**") by way of a loan agreement, as amended ("**PSRDCL Trust Loan Agreement**"). The key terms of the PSRDCL Trust Loan are as follows:

Conditions Precedent	The conditions precedent, *inter alia*, include the following: (a). all related Restructuring Documents (as defined under the PSRDCL Trust Loan Agreement), including execution of necessary agreements between all the External Lenders (as defined under the PSRDCL Trust Loan Agreement), the Trust and the Borrower, creation and perfection of the security interest, are completed by the external lenders and other relevant parties concerned in consonance with the PSRDCL Resolution Plan (as defined under the PSRDCL Trust Loan Agreement) being implemented; (b). the new capital structure of the Borrower on account of and/or changes in the terms of conditions of the existing secured facility, the existing unsecured facility and the PSRDCL Trust Loan get duly reflected in the books of all the external lenders concerned and the Borrower; and (c). the Borrower is not in default with any of the External Lenders (as defined under the PSRDCL Trust Loan Agreement) and the Trust. (d). Requisite approvals have been procured by the Borrower towards the transfer and change in management and control of the Borrower from ITNL to the Trust and the restructuring of the existing secured and unsecured facilities.

	(e). The entire paid-up equity and voting share capital of the Borrower, along with its management and control, shall have been transferred from ITNL to the Trust and conditions precedent to such transfer, whether under contract or relevant laws, should either have been satisfied or waived. (f). Approval of NCLT/NCLAT: The PSRDCL Resolution Plan as defined in the must be approved by the NCLT and NCLAT in terms of the IL&FS Resolution Framework (as defined under the PSRDCL Trust Loan Agreement) and, conditions/objections (if any) in respect thereto should have been satisfied by the Borrower and/or the Trust.
Voluntary Prepayment	The Borrower shall have the option to prepay, at any time and after giving a prior notice of at least 30 (thirty) days to the Trust (being under insubordination to the rights of the external lenders as defined in the PSRDCL Trust Loan Agreement), the restructured InvIT rupee facility, in part before the Repayment Dates (as defined under the PSRDCL Trust Loan Agreement) as set forth in the relevant financing documents, together with all interests, other charges and monies due and payable to the Trust (being under insubordination to the rights of the external lenders) upto the date of such prepayment and subject to payment of the Prepayment Premium (as defined under the PSRDCL Trust Loan Agreement).
Representations and Warranties	(a). The Borrower makes the representations and warranties to the Trust as set out in Schedule 5 (Representations and Warranties) of the PSRDCL Trust Loan Agreement. Further, each of the representations and warranties set out in Schedule 5 (Representations and Warranties) are deemed to be made by the Borrower by reference to the facts and circumstances then existing on the date of PSRDCL Trust Loan Agreement and shall be repeated on each date until the Final Settlement Date (as defined under the PSRDCL Trust Loan Agreement). (b). The Borrower agrees and undertakes to abide by the covenants and undertakings set out in Schedule 4 (Covenants and Undertakings) of the PSRDCL Trust Loan Agreement on the date thereof and at all times until the restructured InvIT Rupee Facility (as defined under the PSRDCL Trust Loan Agreement) has been duly and irrevocably discharged in full only after repayment of the portion of the restructured secured facility and restructured unsecured facility of the external lenders in full.
Negative Pledge	The Borrower shall not: (a). undertake any guarantee obligations; (b). declare dividend for any year except as permitted under the Restricted Payments clause of the PSRDCL Trust Loan Agreement); (c). make any repayment of the loans and deposits and discharge other liabilities except its liability towards the existing project and existing debt which is shown in fund flow statement and liabilities/obligations under this (PSRDCL Trust Loan Agreement); and (d). make any change in the management set-up which has a material adverse effect (as defined under the PSRDCL Trust Loan Agreement).

Leverage

In accordance with and subject to the InvIT Regulations, the provisions of the Trust Deed, and the borrowing policy adopted by the Investment Manager, the aggregate consolidated borrowings and deferred payments of the Trust may be up to 49.00% of the aggregate of the value of the InvIT Assets, subject to compliance with the conditions prescribed under Regulation 20 of the InvIT Regulations. The SEBI pursuant to its letter dated December 3, 2021 has granted an exemption to the Trust from complying with the conditions specified under Regulation 20 of the InvIT Regulations until the completion of this Unit Distribution.

Post-Unit Distribution Indebtedness of the Trust

The post-Unit Distribution consolidated borrowings and deferred payments of the Trust will be formulated and approved by the Investment Manager in accordance with the Borrowing Policy. The indebtedness and deferred payments of the Trust, net of cash and cash equivalents, on a consolidated basis, shall not exceed 49.00% of the aggregate value of the InvIT Assets, subject to any additional indebtedness incurred after listing of Units in accordance with applicable law.

Status of lender consents

The Project SPVs have already been transferred to the Trust. The Project SPVs have availed debt from certain external lenders and financial institutions and consents from the respective lenders and financial institutions are required for and in connection with the Unit Distribution. As on the date of this Placement Memorandum, the Project SPVs do not require any consents from the lenders in relation to the Unit Distribution. For further details, please see the section "*Risk Factors*" on page 63.

Borrowing Policy

The Investment Manager shall ensure that all funds borrowed in relation to the Trust are in compliance with the InvIT Regulations. Accordingly, the Investment Manager has formulated a borrowing policy to outline the process for borrowing monies in relation to the Trust. For further details, please see the section "*Corporate Governance – Investment Manager – Policies of the Trust – Borrowing Policy of the Trust*" on page 144.

VALUATION

In accordance with Regulation 21(7) of the InvIT Regulations, the Valuer has undertaken a valuation of the Project SPVs. Consequent to the aforesaid valuation, the Valuer has prepared a valuation report dated December 17, 2024 (the "**Valuation Report**"), which has been included as Annexure A.

A. Summary of the Valuation and Valuation Methodology

For details in relation to the summary of the valuation and valuation methodology, see the Valuation Report, included as Annexure A. The Valuation Report sets out the Valuer's opinion as to the fair enterprise value of the Project SPVs as on June 30, 2024.

B. Frequency of Valuation

In accordance with the InvIT Regulations, after the listing of the Units pursuant to the Unit Distribution, a full valuation of the Trust Assets (including physical inspection of each of the Trust's infrastructure projects) shall be conducted by the Valuer not less than once every financial year, and that such a full valuation shall be conducted at the end of each financial year, within two months from the end of such financial year.

The valuation report received by the Investment Manager shall be submitted to Stock Exchanges within 15 days from the receipt of such valuation reports.

C. Declaration of NAV

The Investment Manager shall ensure that computation and declaration of NAV of the Trust is based on the valuation done by the Valuers, not later than 15 days from the date of valuation.

D. Traffic Reports and Technical Reports

The traffic and technical reports specific to the relevant sub-sector, will be relied upon for the purpose of the valuations of the Trust Assets, and the contents of such reports will be factored into the valuation reports. Accordingly, the traffic and technical reports shall be updated once a year and submitted to the Stock Exchanges within the time periods specified for the submission of valuation reports under the InvIT Regulations.

DISTRIBUTION

Statements contained in this section "Distribution" that are not historical facts are forward-looking statements. Such statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those that may be projected. Under no circumstances should the inclusion of such information herein be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions by the Trustee, the Sponsor, the Investment Manager, the Placement Agent or any other person. Eligible Creditors are cautioned not to place undue reliance on these forward-looking statements that are stated only as at the date of this Placement Memorandum. For details in relation to such forward-looking statements, please see the section "Forward-Looking Statements" on page 17.

The net distributable cash flows of the Trust (the "**Distributable Income**") are based on the cash flows generated from the underlying operations undertaken by the SPVs. For details of the business and operations presently undertaken by the SPVs, please see the section "*Our Business*" on page 207. Presently, cash flows receivable by the Trust may include, *inter alia*, dividends proceeds from buy-back or capital reduction from any Project SPV.

In terms of the InvIT Regulations, not less than 90.00% of the net distributable cash flows of the SPVs, shall be distributed to the Trust in proportion of its holding in such SPVs, subject to applicable provisions in the Companies Act, 2013, as amended, and not less than 90.00% of the net distributable cash flows of the Trust shall be distributed to the Unitholders.

However, if any infrastructure asset is sold by the Trust or holding company or an SPV, or if the equity shares or interest in the holding company/ SPV are sold by the Trust; (i) if the Trust proposes to re-invest the sale proceeds into another infrastructure asset, it shall not be required to distribute any sales proceeds to the Trust or to the unitholders; or (ii) if the Trust proposes not to invest the sale proceeds into any other infrastructure asset within a period of one year, it shall be required to distribute the same in accordance with the distribution Requirements.

Further, in terms of the InvIT Regulations, with regard to distribution of net distributable cash flows by any Holding Company to the Trust, 100.00% of cash flows received by the Holding Company from underlying SPVs shall be distributed to the Trust (net of any expenses and applicable taxes including withholding taxes) and with respect to the cash flows generated by a Holding Company on its own, not less than 90.00% of such net distributable cash flows shall be distributed by the Holding Company to the Trust.

Pursuant to the InvIT Regulations and the Distribution Policy, the Trust shall declare and distribute at least 90.00% of the Distributable Income to the Unitholders, at least once in every financial year such that the time period between any two declarations of distributions shall not exceed one year. However, if any infrastructure asset is sold by the Trust or the SPVs, or if the equity shares or interest in the SPVs are sold by the Trust; if the Trust proposes to re-invest the sale proceeds into another infrastructure asset within one year, it shall not be required to distribute any sales proceeds to the Trust or to the Unitholders. Further, if the Trust proposes not to invest the sale proceeds into any other infrastructure asset within one year, it shall be required to distribute the same in the manner specified above. In accordance with the InvIT Regulations, distributions by the Trust shall be made within five working days from the record date. The distribution, when made, shall be made in Indian Rupees. Any amount remaining unclaimed or unpaid out of the distributions declared by the Trust shall be transferred to the 'Investor Protection and Education Fund' constituted by SEBI, in such manner as may be specified by SEBI.

For details on the risks relating to distribution, please see the section "*Risk Factors*" on page 63.

Distribution Policy

Method of calculation of Distributable Income

The Distributable Income of Trust shall be calculated in accordance with the InvIT Regulations and any circular, notification or guidance issued thereunder. Presently, Trust proposes to calculate distributable income in the manner provided below:

I. *Calculation of net distributable cash flows at each SPV level:*

Cash flow from operating activities as per Cash Flow Statement of HoldCo/ SPV
(Add) Cash Flows received from SPV's which represent distributions of NDCF computed as per relevant framework *(refer note 1 and 9 below) (relevant in case of* Holdco***)***
(Add) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis)
(Add) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs or Investment Entity adjusted for the following • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations
(Add) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or Investment Entity not distributed pursuant to an earlier plan to reinvest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently
(Less) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss Account and any shareholder debt / loan from Trust
(Less) Debt repayment (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)
(Less) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with banks / financial institution from whom the Trust or any of its SPVs/ Holdco have availed debt, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ Holdco, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ Holdco, (iv). agreement pursuant to which the SPV/ HoldCo operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations; or – *(refer note 2)*
(Less) any capital expenditure on existing assets owned / leased by the SPV or Holdco, to the extent not funded by debt / equity or from reserves created in the earlier years *(refer note 10)*
NDCF for HoldCo/ SPV's

II. ***Calculation of net distributable cash flows at the consolidated Trust level:***

Cashflows from operating activities of the Trust
(Add) Cash flows received from SPV's / Investment entities which represent distributions of NDCF computed as per relevant framework **(***refer note 1 and 9 below***)**
(Add) Treasury income / income from investing activities of the Trust (interest income received from FD, any investment entities as defined in Regulation 18(5), tax refund, any other income in the nature of interest, profit on sale of Mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further clarified that these amounts will be considered on a cash receipt basis).
(Add) Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs/ Holdco or Investment Entity adjusted for the following • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs

Cashflows from operating activities of the Trust
• Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations
(Add) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs/ Hold cos or Investment Entity not distributed pursuant to an earlier plan to re-invest as per Regulation 18(7) of InvIT Regulations or any other relevant provisions of the InvIT Regulations, if such proceeds are not intended to be invested subsequently.
(Less) Finance cost on Borrowings, excluding amortisation of any transaction costs as per Profit and Loss account of the Trust.
(Less) Debt repayment at Trust level (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt in any form or funds raised through issuance of units).
(Less) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i). loan agreement entered with financial institution, or (ii). terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its SPVs/ Holdco, or (iii). terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its SPVs/ Holdco, or (iv). agreement pursuant to which the Trust operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v). statutory, judicial, regulatory, or governmental stipulations; or – *(refer note 2)*
(Less) any capital expenditure on existing assets owned / leased by the InvIT, to the extent not funded by debt / equity or from contractual reserves created in the earlier years *(refer note 10)*
NDCF at Trust level

Notes/ Other Rules:

1. NDCF computed at SPV level for a particular period to be added under this line item, even if the actual cashflows from SPV to InvIT has taken place post that particular period, but before finalization and adoption of accounts of the InvIT.

2. The specified agreements could be for either PPP or non-PPP projects. The Trust retains the option to distribute any surplus amounts, unless such surplus is required to create reserves for any subsequent period.

3. The option to retain 10% distribution under Regulation 18(6) of the InvIT Regulations needs to be computed by taking together the retention done at SPV level and Trust level.

Illustration:

Particulars	**SPV A**	**SPV B**	**Total at SPV level**
NDCF as computed	100	150	250
Amount retained by SPV	5	10	15
Net amount distributed to Trust	**95**	**140**	**235**

Trust	**Scenario 1**	**Scenario 2**
Received from SPV	235	235
Add:- other items at Trust level for computation of NDCF	65	(35)
Total NDCF	**300**	**200**
Combined NDCF for computing maximum retention		
NDCF of Trust (A)	300	200

Trust	Scenario 1	Scenario 2
NDCF of SPV's (B)	250	250
Less: - Amount distributed by SPV's (C)	(235)	(235)
D = A + B -C	**315**	**215**
Maximum retention amount – 10% of D	**31.5**	**21.5**
Amount already retained by SPV	15	15
Max amount that can be retained by Trust	16.5	6.5

4. Further, Trust along with its SPVs needs to ensure that minimum 90% distribution of NDCF be met for a given financial year on a cumulative periodic basis as specified for mandatory distributions in the InvIT regulations (subject to provisions of Note 1 above).

5. Surplus cash available in SPVs due to:

   (i) 10% of NDCF withheld in line with the Regulations in any earlier year or half year or

   (ii) Such surplus being available in a new SPV on acquisition of such SPV by InvIT

   (iii) Any other reason, excluding if such surplus cash is available due to any debt raise could be considered for distribution by the SPV to the InvIT, or by the Trust to its Unitholders in part or in full, but needs to be disclosed separately in the NDCF computation and Distribution.

6. Similarly, any restricted cash (disclosed as such) should not be considered for NDCF computation by the SPV or InvIT (e.g. unspent CSR balance for any year deposited in a separate account as per Companies Act which will be utilized in subsequent years, DSRA reserve, major maintenance reserve etc).

7. Further, it is expressly provided that no Trust or SPVs can distribute any cashflows by obtaining external debt, except to the extent clarified in note 2 above (this will exclude any working capital / OD facilities obtained by Trust/ SPVs as part of Treasury management / working capital purposes as long as they are squared off within the quarter).

8. Further, it is also clarified that Proceeds from sale of infrastructure investments, infrastructure assets or shares of SPVs or investment entity adjusted for transaction costs or repayment of debt taken for such assets or other items as mentioned above which is intended to be reinvested or planned to be reinvested as per Regulation 18(7) of InvIT Regulations, could be temporarily parked in overdraft accounts or used to repay any additional/ unrelated debt. Further if such proceeds are not intended to be reinvested as per the timeline provided in the Regulations and such net proceeds are to be distributed back to Unitholders, then redrawing such temporarily parked funds to distribute such net proceeds will not be considered as a contravention of note 7 above.

9. Cash flows received from SPV's / Investment entities which represent distributions of NDCF computed as per relevant framework at the Trust level for further distribution to Unitholders shall exclude any such cash flows used by the Trust for onward lending to any other SPVs / Investment entities to meet operational / interest expenses or debt servicing of such other SPVs / Investment entities.

10. Capital expenditure include amounts incurred and paid towards asset enhancement and are capitalized to asset value in the financial statements including lease payments. It is further clarified that Existing Assets as referred to in this line item includes any new structure / building / other infrastructure constructed on an existing infrastructure asset which is already a part of the InvIT.

The Distributable Income of Trust shall be calculated in compliance with the InvIT Regulations and any circular, notification or guidance issued thereunder, Income-tax Act, 1961 ("**IT Act**") and other applicable law. The actual amount received by the unitholders will be subject to taxes and other statutory deductions, if applicable.

For the purposes of the IT Act, any income distributed by the Trust to the unitholders shall be deemed to be of the same nature and in the same proportion in the hands of the unitholder as it had been received by, or accrued to, the Trust. Accordingly, the Trust may follow either the receipt approach or the accrual approach subject to the provisions of the IT Act and applicable accounting standards.

In terms of the InvIT Regulations, if the distribution is not made within 15 days of declaration, the Investment Manager shall be liable to pay interest to the Unitholders at the rate of 15% per annum or such other rate as may be specified under applicable law, whichever is lower, until the distribution is made. Such interest shall not be recovered in the form of fees or any other form payable to the Investment Manager by the Trust.

Amendment

(i). Any amendment/variation of the distribution policy shall require the prior approval of the board of directors of the Investment Manager.

(ii). Notwithstanding the above, the distribution policy will stand amended to the extent of any change in applicable law, including any amendment to the InvIT Regulations, without any action from the Investment Manager or approval of the Unitholders of the Trust.

For risks in relation to distribution, please see the section "*Risk Factors*" on page 63.

History of Distributions

Details of the distributions distributed by the Project SPVs between the fiscals 2021 to 2024 to the Trust are as follows:

(in ₹ million)

Particulars	Fiscal 2023-24					
	SBHL	MBEL	HREL	PSRDCL	TRDCL	Total
Interest	164.95	617.46	144.60	314.99	64.64	1,306.64
Principal	1.30	79.99	196.50	1,074.87	40.23	1,392.89
Total	166.25	697.45	341.10	1,389.86	104.87	2,699.53

Note: The Trust acquired PSRDCL in Fiscal 2023-24.

(in ₹ million)

Particulars	Fiscal 2022-23				
	SBHL	MBEL	HREL	TRDCL	Total
Interest	177.22	836.94	-	17.99	1,032.15
Principal	15.70	157.36	300.00	-	473.06
Total	192.92	994.30	300.00	17.99	1,505.21

Note: The Trust acquired 2 (two) Project SPVs in Fiscal 2022-23, i.e. HREL and TRDCL.

(in ₹ million)

Particulars	Fiscal 2021-22		
	MBEL	SBHL	Total
Interest	244.57	-	244.57
Principal	36.72	-	36.72
Total	281.29	-	281.29

Note: As on March 31, 2022, the Trust had only acquired 2 (two) Project SPVs, i.e. MBEL and SBHL. However, please note that SBHL was acquired by the Trust towards the end of Fiscal 2021-22, i.e. on March 22, 2022, and the first distribution from SBHL to the Trust was made in Fiscal 2022-23, post the execution of debt restructuring documents with the senior lenders of SBHL.

DISCUSSION AND ANALYSIS BY THE DIRECTORS OF THE INVESTMENT MANAGER OF THE FINANCIAL CONDITION, RESULTS OF OPERATIONS AND CASH FLOWS OF THE PROJECT SPVS OF THE TRUST

You should read the following discussion and analysis of our financial condition, results of operations and cash flows in conjunction with the sections entitled "Summary of Combined Financial Statements" and "Audited Special Purpose Combined Financial Statements" on pages 29 and 425, respectively. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to, those described in the section entitled "Risk Factors" on page 63. Actual results could differ materially from those contained in any forward-looking statements and for further details regarding forward-looking statements, kindly refer to the section entitled "Forward-Looking Statements" on page 17.

The Audited Special Purpose Combined Financial Statements are prepared in accordance with Ind AS, which differs in certain respects from Indian GAAP, International Financial Reporting Standards and U.S. GAAP. Our fiscal year ends on March 31 of each year, and references to a particular fiscal are to the twelve-month period ended March 31 of that year. For the sole purposes of the Special Purpose Financial Statements, references to "we", "us" and "our" are to the Project SPVs on a combined basis.

Overview

Unit Distribution and Trust Formation Overview

The Union of India, acting through the Ministry of Corporate Affairs, had filed a company petition under sections 241 and 242 of the Companies Act, 2013 against the IL&FS Group before the NCLT on the grounds of, *inter alia*, that the affairs of the IL&FS Group were being conducted in a manner prejudicial to public interest. Subsequently, the NCLT directed suspension of the then existing board of directors of IL&FS and constitution of a new board of directors of IL&FS comprising the nominees of the Ministry of Corporate Affairs (the "**New Board**"). The New Board, undertaking steps for designing and implementing a fair and orderly resolution of the outstanding debt of the entire IL&FS Group, and for the purposes of resolution of certain portion of the debt of ITNL proposed the setting up of an infrastructure investment trust.

Consequently, Roadstar Infra Investment Trust as sponsored by Roadstar Infra Private Limited, was established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations.

The Trust has acquired each of the Project SPVs. Please refer to the section "*Formation Transactions in relation to the Trust*" on page 26 for more information in relation to the shareholding of the Trust in the Project SPVs. The proposed Unit Distribution will be in accordance with (i) the Resolution Framework as approved by the NCLAT vide its order dated March 12, 2020 and/or any other appropriate judicial authority and in terms of the interim distribution as approved by the NCLAT vide its order dated May 31, 2022 and (ii) a distribution plan setting out the details and manner of distribution of, among other assets, the Units issued by the Trust as may be approved by the board of directors of IL&FS.

For more details in relation to the Resolution Framework and the holding of the Trust in the Project SPVs, please refer to sections "*Unit Distribution Background*" and "*Formation Transactions in relation to the Trust"* on pages 389 and 26, respectively.

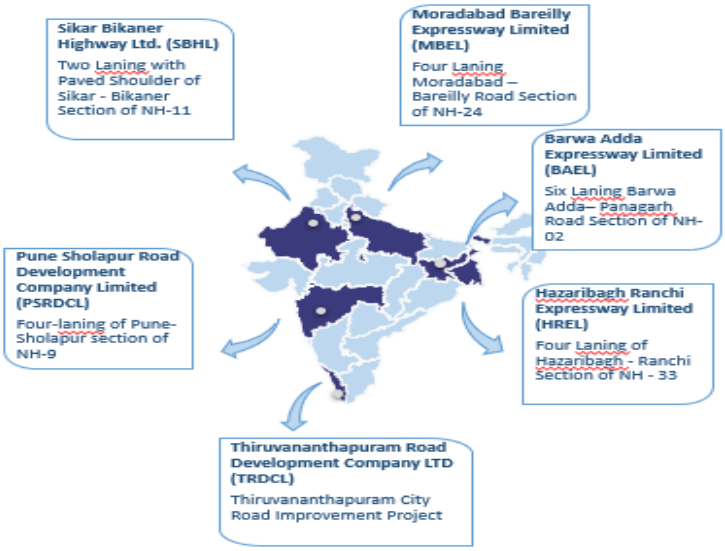
Business Overview

The Trust is established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly, and is registered under the InvIT Regulations. The Trust, through its Project SPVs, together operates 6 road assets, aggregating to 685.16 kms, located across 6 states in India.

The Project SPVs had a weighted average residual concession life (weighted on the basis of residual life-time pre-MM EBITDA) of 13.54 years as on March 31, 2024 and a weighted average operating history (weighted on the basis

of Fiscal 2024 estimated pre-MM EBITDA, assuming COD and appointed date as the beginning date for BOT/DBFOT assets) of 9.19 years as on March 31, 2024.

The map below sets forth the location of our projects in the Project SPVs:



The tables below set forth an overview of the Project SPVs:

S. No.	Relevant Project SPV	Project length and number of lanes	State(s)	Residual Life (in years, as of September 30, 2024)	Model	Actual Revenue from Toll Fee / Annuities in FY 2024 (in ₹ million)
1.	Hazaribagh Ranchi Expressway Limited	73.50 kms 4 lanes	Jharkhand	3.82 years	Annuity	702.02
2.	Moradabad Bareilly Expressway Limited*	121.00 kms 4 lanes	Uttar Pradesh	11.17 years	Toll	3,390.09
3.	Pune Sholapur Road Development Company Limited*	102.08 kms 4 lanes	Maharashtra	6.79 years	Toll	2,165.67
4.	Sikar Bikaner Highway Limited*	237.58 kms 2/4 lanes	Rajasthan	13.38 years	Toll	826.02
5.	Thiruvananthapuram Road Development Company Limited**	28.12 kms (excluding phase I**) 2/3/4/6 lanes	Kerala	Phase II- 2.39 years Phase III- 5.39 years Phase IV-6.67 years	Annuity	143.95
6.	Barwa Adda Expressway Limited*	122.88 kms 6 lanes	Jharkhand/West Bengal	9.49 years	Toll	2,636.47
Total		685.16				9,864.22

Notes:
** Extendable based on target traffic as per provisions contained in the respective Concession Agreement*
*** Phase I concession period ended in July, 2022*

In addition to the Project SPVs, the Trust through the Investment Manager may also have the ability to acquire new projects. For further details, please see the sections "*Corporate Governance*" and "*Related Party Transactions*" on pages 138 and 325, respectively. The Investment Manager is responsible for managing the Trust and the Project SPVs, as well as undertaking investment decisions relating to us and our assets. The Investment Manager meets the experience criteria as required under the SEBI InvIT Regulations. As required under the InvIT Regulations, the experience of the Investment Manager in fund management or advisory services or development in the infrastructure sector is above 5 years. Further, the Investment Manager is responsible for defining our strategic direction, including in relation to our future acquisitions, divestments or enhancement of assets. For further details, please see "*Parties to the Trust – The Investment Manager – Roadstar Investment Managers Limited*" – on page 114.

The Trustee, Axis Trustee Services Limited, is a trusteeship company registered with SEBI as a debenture trustee under the Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993, as amended. On behalf of our Unitholders, the Trustee is responsible for (a) ensuring that our business objectives and investment policies comply with the provisions of the InvIT Regulations and other applicable law, and (b) monitoring the activities of the Investment Manager (in terms of the Investment Management Agreement) and the Project Manager (in terms of the Project Implementation and Management Agreement). For further details, please see "*Parties to the Trust – The Trustee – Axis Trustee Services Limited*" on page 101.

The Project Manager, Elsamex Maintenance Services Limited, is responsible for the operations and management of the Trust and ensuring compliance with the respective concession agreements and project documents, making arrangements for appropriate maintenance, oversee the progress of development, status of approvals and other aspects of the projects of the SPVs. The Project Manager has been appointed as per the terms of the Project Implementation and Management Agreement. In addition, the Project Manager has entered into operations and maintenance agreements with the respective SPVs for providing operations and management for the SPVs. Neither the Project Manager nor any of the promoters or directors of the Project Manager (i) is debarred from accessing the securities market by SEBI; (ii) are or have been a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/ or (iii) are or have been declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters published by the RBI. For further details, please see "*Parties to the Trust – The Project Manager – Elsamex Maintenance Services Limited*" – on page 129.

Each financial year, we intend to distribute a minimum of 90.00% of the net distributable cash flows of the Trust available for distribution to our Unitholders. For further details, please see, "*Distribution*" on page 288.

Our revenue from operations for the six month period ended September 30, 2024, Fiscal 2024 Fiscal 2023, and Fiscal 2022 were ₹5,492.72 million, ₹11,658.14 million, ₹9,940.48 million, and ₹7,631.12 million, respectively. Our profit / (loss) after tax for the six month period ended September 30, 2024, Fiscals 2024, 2023, and 2022 were (₹ 6,858.39 million), (₹108.73 million), (₹1,131.52 million), and ₹995.87 million respectively.

For details of credit ratings obtained by the Trust, please see "*General Information – Credit ratings"* on page 100.

Factors Affecting Our Results of Operations

Our business, prospects, results of operations and financial condition have been, or are expected to continue to be, affected by a number of factors, including the following:

Fluctuating Revenue from Toll Road Projects

Tariff terms for our BOT Roads are determined and revised, in accordance with the relevant concession agreements and as per the NH Fee Rules, and wholesale price index variations. Traffic volume may be affected by a number of factors beyond our control, including general economic conditions, alternate routes, alternate means of transportation, location of toll plazas, weather conditions, demographic changes, fuel prices, reduction in commercial or industrial activities in the regions served by the roads and natural disasters, the COVID 19 pandemic or any public disturbances such as strikes. Our lenders may have the right to periodically reset our interest rates, which may increase based on

their review of our credit profile and perceived risks in our operations or a change in their cost of funding due to the overall interest rate regime.

Under the relevant concession agreements, our Project SPVs have rights to construct and operate the road projects exclusively for fixed periods of time and we receive annuities /or collect tolls, as the case may be, for the use of our roads. However, we may be faced with competition from new road projects developed by the central and state governments, that may be in the immediate vicinity of our roads and as such, are not within our control. There can be no assurance that our road projects will compete effectively against such roads that connect the same locations. Any material decrease in the actual traffic volume as compared to our forecasted traffic volume could have a material adverse effect on our cash flows from our tolling projects, which in turn can adversely affect our business, prospects, financial condition and results of operation.

Interest Rate Fluctuations

As our infrastructure business is capital intensive, our projects are funded to a large extent by debt, and as a result we are exposed to interest rate risks. Any increase in interest expense may have an adverse effect on our results of operations and financial condition. Our current debt facilities carry interest at variable rates as well as fixed rates with the provision for periodic reset of interest rates. As of September 30, 2024, the majority of our indebtedness was subject to variable interest rates. Considering the capital-intensive nature of the infrastructure business, an increase in interest expense at the Project SPV level is likely to have a significant adverse effect on our financial results.

General economic conditions in India and the level of investment and activity in the infrastructure sector

Other than HREL and TRDCL, which are annuity based projects, the Project SPVs derive almost all of their revenue from toll-road operations. Demand for toll roads is primarily dependent on sustained economic development in the regions that they operate in and government policies relating to infrastructure business. As a result, our performance and growth are dependent on the performance of the Indian economy, which, in turn, depends on various factors. The Indian economy has been affected by the recent global economic uncertainties, volatility in interest rates, currency exchange rates, commodity and electricity prices, adverse conditions affecting agriculture and various other macroeconomic factors.

Recent Indian governments have been focused on encouraging private participation in the infrastructure sector. Furthermore, pace of construction is expected to rise steadily to reach approximately 19 km per day by fiscal 2028 . (Source: CRISIL Report) However, there can be no assurance that similar policies and investment will be continued in the future. The rate of economic liberalization could decrease, and specific laws and policies affecting foreign investment, currency exchange rates and other matters affecting investment in India could change as well. In the road sector, there can be no assurance that the GoI's engagement with and outreach to private sector operators, including us, will continue in the future. A significant change in India's economic liberalization and deregulation policies, in particular, those relating to the road sector, could disrupt business and economic conditions in India generally and our business in particular. Additionally, an increase in trade deficit or a decline in India's foreign exchange reserves could negatively impact interest rates and liquidity, which could adversely impact the Indian economy and our business.

Dependence on support from governmental schemes and policies

Significant changes in government policy for the road infrastructure sector could have a significant effect on our revenues, expenditure and growth prospects as they relate to future projects (if any). For instance, on August 26, 2015, the Cabinet Committee on Economic Affairs amended its earlier approval dated May 13, 2015 to allow 100.00% equity divestment after two years of completion for all BOT projects, irrespective of the year of award. The earlier policy allowed such divestments only for projects awarded prior to September 30, 2009. The results of operations of future projects are likely to be affected by budgetary allocations made by various central and state government agencies for the infrastructure sector. Furthermore, trends in particular government's approach to infrastructure such as, slowdowns in the volume of BOT or TOT projects for which concessions are granted, may affect our business, financial condition and results of operations. Policies relating to tolling methodologies, exemptions and changing political or social imperatives can also affect our business.

Operational Enhancement, Maintenance Cost Optimization and Post-Acquisition Capital Structure Optimization

Our profitability is dependent on our ability to undertake efficient operational enhancements, optimize maintenance costs and create robust capital structures for our projects. For example, we use microsurfacing and crack sealing as preventive maintenance with the aim to enhance the life of the roads constructed as part of the Project SPVs. These operational enhancements allow to improve user experiences which may in turn also increase revenue. Any issues in deploying such technologies or a failure to maintain strong relationships with local communities may adversely affect our operations and results of operations.

We seek to use disciplined, prudent and innovative capital structure management to unlock value by reducing cost of debt and maximizing free cash flow. However, the availability of credit and cost of financing in India is also a significant factor, and if there is any adverse development leading to an increase in the cost of financing or decrease in availability of funds from lenders, we may have difficulty accessing the financial markets, which could make it more difficult or expensive to obtain funding.

Competition

We face competition from other road operators, financial investors and other InvITs in acquiring and managing profitable concessions for future projects. We also face competition from new road projects developed by the central and state governments, that may be in the immediate vicinity of our roads and as such, are not within our control. The competition for road projects varies depending on the size, nature and complexity of the project and on the geographical region in which the project is to be executed. Some competitors may have greater financial resources, economies of scale and operating efficiencies than us.

Tax benefits for road infrastructure sector in India

Certain Project SPVs are entitled to certain benefits under Section 80-IA of the Income-tax Act, 1961, as amended, if certain conditions are satisfied. However, the benefits to these Project SPVs may expire at various points of time. Any expiry, termination or GoI withdrawal of these tax benefits could result in an increase in the our tax expenses, thereby adversely affecting our results of operations and cash flows. There has been an increase in the GST rates applicable for O&M and construction of roads. The SPVS are eligible to claim such increases under "*change in law*" provision under the respective concession agreements, but recovery and the extent thereof, may be subject to various approvals from the authority.

Purpose and basis of accounting and preparation of special purpose Ind AS financial statements

The Audited Special Purpose Combined Financial Statements of the Project SPVs comprise the combined balance sheet as at September 30, 2024, March 31, 2024, March 31, 2023, and March 31, 2022 and the combined statement of profit and loss, combined cash flow statement, combined statement of changes in equity and a summary of significant accounting policies and other explanatory information for the six month period ended September 30, 2024, and for the fiscal years ended March 31, 2024 March 31, 2023, and March 31, 2022.

The Audited Special Purpose Combined Financial Statements of the Project SPVs have been prepared in accordance with the Indian Accounting Standards and/or any addendum thereto as defined in the Rule 2(1)(a) of the Companies (Indian Accounting Standard) Rule, 2015, as amended (Ind AS) and the InvIT Regulations. The Project SPVs have uniformly applied the accounting policies during the periods presented.

The Audited Special Purpose Combined Financial Statements are special purpose financial statements and have been prepared by the Investment Manager to meet the requirements of InvIT Regulations and for inclusion in this Placement Memorandum prepared by the Investment Manager in connection with the proposed private placement of units of Trust. As a result, the Audited Special Purpose Combined Financial Statements may not be suitable for another purpose. As permitted by para 41 of the Guidance Note, comparative figures for the six month period ended September 30, 2024 have not been given. Further, the Audited Special Purpose Combined Financial Statements are not prepared in accordance with the requirements of Schedule III notified under the Companies Act, 2013.

As required by the InvIT regulations, the Audited Special Purpose Combined Financial Statements are prepared, based on an assumption that all SPVs were part of Trust for such period when Trust was not in existence. However, the Audited Special Purpose Combined Financial Statements may not be representative of the position which may prevail after the Project SPVs are transferred to Trust.

The Audited Special Purpose Combined Financial Statements are presented in Indian Rupees which is also the functional currency of the Project SPVs and all values are rounded to the nearest millions, unless otherwise indicated. Certain amounts that are required to be disclosed and do not appear due to rounding-off or construes value less than Rupees five thousand, are expressed as 0.00 (zero).

These Audited Special Purpose Combined Financial Statements have been prepared on going concern basis in accordance with accounting principles generally accepted in India. Further, the financial statements have been prepared on historical cost basis except for certain financial assets and financial liabilities, which are measured at fair values as explained in relevant accounting policies.

The Audited Special Purpose Combined Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances. If one of the Project SPVs uses accounting policies other than those adopted in the Audited Special Purpose Combined Financial Statements for like transactions and events in similar circumstances, appropriate adjustments are made to that Project SPVs member's financial statements in preparing the Audited Special Purpose Combined Financial Statements to ensure conformity with the Project SPVs' accounting policies.

The financial statements of all entities used for the purpose of combination are drawn up to same reporting date as that of the Project SPVs, i.e., year ended on March 31 and the six month period ended September 30, 2024.

Basis of Combination

a) Combine like items of assets, liabilities, equity, income, expenses and cash flows of the SPVs, and;

b) The Audited Special Purpose Combined Financial Statements of all the SPVs have been combined by combining/adding like items of assets, liabilities, equity, income, expenses.

c) The Special Purpose Financial Statements of all the SPVs have been combined based on the assumption that all the SPVs are part of a single group for the entire period presented pursuant to the InvIT Regulations.

d) The tax expenses are combined for all the expenses actually incurred by the combining businesses in accordance with the Guidance Note on Combined and Carve-Out Financial Statements.

e) Share capital has been presented by adding the individual capitals of each of the Project SPVs. For the proportionate share of the capital attributable to the non-controlling interest. Management has disclosed this amount separately from the combined capital.

f) Other equity has been presented by adding the individual other equities of each of the SPVs. For the proportionate share of the other equity attributable to the non-controlling interest, management has disclosed this amount separately from the combined other equity.

g) Interests in following joint venture are accounted for using the equity method, after initially being recognized at the net book value of the entity as at April 1, 2020.

Name of SPV	Description of asset	Current shareholding
TRDCL	Set up to develop, widen, strengthen, operate, construct and maintain the Thiruvananthapuram City Roads Improvement Project ("TCRIP") under the Annuity Concession Agreement dated March 16, 2004 as amended.	IL&FS Transportation Networks Limited – 50.00% (upto December 18, 2022) The Trust (from December 19, 2022) Punj Lloyd Limited – 50.00%

Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. The principal accounting estimates used have been described under the relevant income/expense and/or asset/liability item in these financial statements. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

Project SPVs determine future estimated revenue, future estimated traffic count, discounting rate etc. at each balance sheet which is used to arrive at amortization & impairment of intangible Assets, deferred tax calculation, provision for overlay etc. During the current financial year management has obtained a traffic study report which is prepared by an independent consultant to estimate future traffic revenue/traffic count.

Further, the Group has applied the principles of prudence and substance over form for recognition and measurement of its assets and liabilities.

In the process of applying the Group's accounting policies, management has made the following judgements, which have a risk of causing a material adjustment to the carrying amounts of assets and liabilities within the current financial year in case of following:

1. Useful life of property, plant & equipment;
2. Amortization of intangible assets;
3. Provision for overlay;
4. Deferred tax;
5. Impairment testing of intangible asset(s) – based on independent assessment;

I. Key estimations in relation to provision for overlay

Provision for overlay is estimated based on the Technical Due Diligence Report obtained from an independent consultant taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, anticipated technological changes. All these evaluations and assessments involve judgements on part of the management in estimating future revenue, future estimated traffic count, discounting factor, requirement for incurring overlay expense, etc.

II. Key estimations in relation to deferred tax assets group

Project SPVs estimate whether the Project SPVs will earn sufficient taxable profit in future periods. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the temporary differences become deductible. The amount of the deferred tax assets considered realizable could be reduced in the near term, if estimates of future taxable income during the carry forward period are reduced.

III. Key estimations in relation to useful lives of property, plant and equipment & intangible assets, Amortization of Intangible assets and Impairment assessment of Intangible asset

Useful lives of property, plant and equipment & intangible Assets (other than the life prescribed under Schedule II of the Companies Act, 2013) are estimated based on the Traffic Study Report obtained from an independent consultant taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, anticipated technological changes. Impairment assessment in respect of Intangible Asset has been carried based on net present value of future operating cash flow which is again based on certain estimates used by the Independent Valuer. All these evaluations and assessments involve judgements on part of the management in estimating future revenue, future estimated traffic count, future cash flows, discounting factor, etc.

IV. Contractual obligation to restore the infrastructure to a specified level of serviceability

The Project SPVs have contractual obligations to maintain the infrastructure to a specified level of serviceability or restore the infrastructure to a specified condition during the concession period and/or at the time of hand over to the grantor of the SCA. Such obligations are measured at the best estimate of the expenditure that would be required to settle the obligation at the balance sheet date. In case of concession arrangements under intangible asset model, the timing and amount of such cost are estimated and recognized on a discounted basis by charging costs to revenue on the units of usage method i.e. on the number of vehicles expected to use the project facility, over the period at the end of which the overlay is estimated to be carried out based on technical evaluation by independent experts.

Current versus Non-Current Classification

The Project SPVs' present assets and liabilities in the balance sheet based on current / non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realised within twelve months after the reporting period, or;
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as noncurrent assets and liabilities. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Project SPVs have identified twelve months as their operating cycle.

Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Project SPVs and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government. The specific recognition criteria described below must also be met before revenue is recognised.

Accounting for rights under service concession arrangements and revenue recognition:

1. <u>Recognition and measurement</u>

The Project SPVs build, operate and maintain infrastructure assets under public-to-private Service Concession Arrangements ("**SCAs**"), which is an arrangement between the "grantor" (a public sector entity/authority) and the "operator" (a private sector entity) to provide services that give the public access to major economic and social facilities utilizing private-sector funds and expertise. The infrastructures accounted for by the Project SPVs as concessions are mainly related to the activities concerning roads, tunnels, and other infrastructure facilities.

Concession contracts are public-private agreements for periods specified in the SCAs including the construction, upgradation, restoration of infrastructure and future services associated with the operation and maintenance of assets in the concession period. Revenue recognition, as well as the main characteristics of these contracts.

With respect to service concession arrangements, revenue and costs are allocated between those relating to construction services and those relating to operation & maintenance services, and are accounted for separately. Consideration received or receivable is allocated by reference to the relative fair value of services delivered when the amounts are separately identifiable. The infrastructure used in a concession are classified as an intangible asset or a financial asset, depending on the nature of the payment entitlements established in the concession agreement.

When the demand risk to the extent that the Project SPVs have a right to charge the user of infrastructure facility, the Project SPVs recognize revenues from construction services for public facilities (infrastructures) by the percentage-of-completion method and recognize the consideration for construction services at its fair value, as an intangible asset. The Project SPVs accounts for such intangible asset (along with the present value of committed payments towards concession arrangement to the grantor at the appointed date e.g. negative grant, premium etc.) in accordance with the provisions of Ind AS 38 and is amortized based on projected traffic count or revenue, as detailed in Note 3.1.iv, taking into account the estimated period of commercial operation of infrastructure which generally coincides with the concession period. Intangible asset is capitalized when the project is complete in all respects and when the Project SPVs receive the final completion certification from the grantor as specified in the concession agreement and not on completion of component basis as the intended purpose and economics of the project is to have the complete length of the infrastructure available for use. The component-based certification which is received is an intermediate mechanism provided in the Concession Agreement to provide a right to collect eligible toll to compensate the Project SPVs for cost recovery during construction period and for any delays beyond the control of the Project SPVs. However, where there is other than temporary delay due to reasons beyond the control of the Project SPVs the management may treat constructed portion of the infrastructure as a completed project. Eligible toll revenue collected on receipt of the component-based certification is reduced from the cost of construction, as the construction work on remaining portion is still in progress and the entire asset is not ready for its intended purpose.

When the amount of the arrangement consideration for the provision of public services is substantially fixed by a contract, the Project SPVs recognize revenues from construction services for public facilities (infrastructures) by the percentage-of-completion method and recognizes the consideration as a financial asset and the same is classified as “Receivables against Service Concession Arrangements”. The Project SPVs account for such financial assets at amortized cost, calculates interest income based on the effective interest method and recognizes it in revenue as Finance Income.

Contractual obligation to restore the infrastructure to a specified level of serviceability

The Project SPVs have contractual obligations to maintain the infrastructure to a specified level of serviceability or restore the infrastructure to a specified condition during the concession period and/or at the time of hand over to the grantor of the SCA. Such obligations are measured at the best estimate of the expenditure that would be required to settle the obligation at the balance sheet date. In case of concession arrangements under intangible asset model, the timing and amount of such cost are estimated and recognised on a discounted basis by charging costs to revenue on the units of usage method i.e. on the number of vehicles expected to use the project facility, over the period at the end of which the overlay is estimated to be carried out based on technical evaluation by independent experts.

Revenue recognition

Once the infrastructure is in operation, the treatment of income is as follows:

Revenue for concession arrangements under intangible asset model is recognized in the period of collection of toll which generally coincides with the usage of public service or where from such rights have been auctioned, in the period to which auctioned amount relates.

i. Revenue from construction contracts

The Project SPVs recognize and measure revenue, costs and margin for providing construction services during the period of construction of the infrastructure in accordance with Ind AS 115 'Revenue from Contracts with Customers'.

When the outcome of a construction contract can be estimated reliably and it is probable that it will be profitable, contract revenue and contract costs associated with the construction contract are recognized as revenue and expenses respectively by reference to the percentage of completion of the contract activity at the reporting date. The percentage of completion of a contract is determined considering the proportion that contract costs incurred for work performed up to the reporting date bear to the estimated total contract costs.

For the purposes of recognizing revenue, contract revenue comprises the initial amount of revenue agreed in the contract, the variations in contract work, claims and incentive payments to the extent that it is probable that they will result in revenue and they are capable of being reliably measured.

The percentage of completion method is applied on a cumulative basis in each accounting period to the current estimates of contract revenue and contract costs. The effect of a change in the estimate of contract revenue or contract costs, or the effect of a change in the estimate of the outcome of a contract, is accounted for as a change in accounting estimate and the effect of which are recognised in the Statement of Profit and Loss in the period in which the change is made and in subsequent periods.

When the outcome of a construction contract cannot be estimated reliably, revenue is recognised only to the extent of contract costs incurred of which recovery is probable and the related contract costs are recognised as an expense in the period in which they are incurred.

ii. *Borrowing cost related to SCAs*

In case of concession arrangement under intangible asset model, borrowing costs attributable to the construction of infrastructure assets are capitalized up to the date of the final completion certificate of the asset / facility received from the authority for its intended use specified in the concession agreement. All borrowing costs subsequent to the capitalization of the intangible assets are charged to the Statement of Profit and Loss in the period in which such costs are incurred.

iii. *Amortization of intangible asset under SCA*

The intangible rights relating to infrastructure assets, which are recognised in the form of right to charge users of the infrastructure asset are amortized by taking proportionate of actual traffic count for the period over total projected traffic count from project to cost of intangible assets; i.e. proportionate of actual traffic for the period over total projected traffic count from the intangible assets expected to be earned over the balance concession period as estimated by the management. However, with respect to toll road assets constructed and in operation as at March 31, 2016, the amortization of such intangible rights are based on actual revenue earned compared to total projected revenue from the project over the balance concession period to cost intangible assets, instead of traffic count.

Total projected revenue / traffic count is reviewed at the end of each financial year and is adjusted to reflect any changes in the estimates which lead to the actual collection at the end of the concession period.

iv. Claims

Claims raised with the concession granting authority towards reimbursement for costs incurred due to delay in handing over of unencumbered land to the Project SPVs for construction or other delays attributable solely to the concession granting authority are recognised when there is a reasonable certainty that there will be inflow of economic benefits to the Project SPVs. The claims, when recognised as such, are reduced from the carrying amount of the intangible asset under the service concession arrangement, to the extent the claims relate to costs earlier included as a part of the carrying amount of these assets. Further, these claims are credited to profit or loss to the extent they relate to costs earlier debited to profit or loss. The claims are presented separately as a financial asset.

v. Accounting of receivable and payable from / to the grantor (Grants)

Receivable towards the concession arrangement from the grantor. When the arrangement has a contractual right to receive cash or other financial asset from the grantor specifically towards the concession arrangement (in the form of grants) during the construction period or otherwise, such a right, to the extent eligible, is recorded as financial asset in accordance with Ind AS 109 "Financial Instruments," at amortized cost.

For intangible assets where the Project SPVs have availed the exemption under D7AA of Ind AS 101, the Financial asset has to be recognized only for all such receivables post April 01, 2015.

Interest Income

Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate ("**EIR**").

Dividends:

Revenue is recognised when the Project SPVs' right to receive the payment is established, which is generally when shareholders approve the dividend

Taxes

Current Income Tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Project SPVs operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in other comprehensive income or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments In subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse In the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date. Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in other comprehensive or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Goods and Service Tax Paid on Acquisition of Assets or on Incurring Expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

- When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

- When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

Borrowing Costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Project SPVs. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

Provisions

Provisions are recognised when the Project SPVs have a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPVs expect some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

Contingent Liabilities and Contingent Assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPVs or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPVs do not recognise a contingent liability but discloses its existence in the financial statements. A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements. Contingent liabilities and contingent assets are reviewed at each balance sheet date.

Financial Instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial Assets Initial Recognition and Measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognised on the trade date, i.e., the date that the Project SPVs commits to purchase or sell the asset.

Subsequent Measurement

For purposes of subsequent measurement, financial assets are classified in following categories;

- at amortised cost
- at fair value through profit or loss ("**FVTPL**")
- at fair value through other comprehensive income ("**FVTOCI**")

Financial Assets at amortised Cost

A financial asset is measured at the amortised cost if both the following conditions are met:

a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and;
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Project SPVs. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss / Other Comprehensive Income

All investments in scope of Ind AS 109 are measured at fair value. The Project SPVs investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Project SPVs makes such election on an instrument-by-instrument basis. The classification is made on initial recognition and is irrevocable. The gain / loss on sale of investments are recognised in the Statement of Profit and Loss.

Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of the Project SPVs of similar financial assets) is primarily derecognised (i.e. removed from the Project SPVs balance sheet) when:

The rights to receive cash flows from the asset have expired, or;

The Project SPVs have transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPVs have transferred substantially all the risks and rewards of the asset, or (b) the Project SPVs have neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPVs have transferred their rights to receive cash flows from an asset or enters into a pass-through arrangement, they evaluate if and to what extent they have retained the risks and rewards of ownership. When they have neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPVs continue to recognise the transferred asset to the extent of the Project SPVs continuing involvement. In that case, the Project SPVs also recognise an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPVs have retained.

Property, plant and equipment

Property, plant and equipment acquired by the Project SPVs are reported at acquisition cost, with deductions for accumulated depreciation and impairment losses, if any.

The acquisition cost includes the purchase price (excluding refundable taxes) and expenses, such as delivery and handling costs, installation, legal services and consultancy services, directly attributable to bringing the asset to the site and in working condition for its intended use.

Where the construction or development of any asset requiring a substantial period of time to set up for its intended use is funded by borrowings, the corresponding borrowing costs are capitalised up to the date when the asset is ready for its intended use.

All assets are depreciated on a straight line method ("**SLM**") of depreciation, over the useful life of assets as prescribed under Schedule II of the Companies Act, 2013 other than assets specified in para below

Following assets are depreciated over a useful life other than the life prescribed under Schedule II of the Companies Act, 2013 based on internal technical evaluation, taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, past history of replacement, anticipated technological changes etc.:

Asset	Useful life based on SLM
Data processing equipment (server & networking)	4
Mobile phones and iPad /tablets	Fully depreciated in the year of purchase
Specialised office equipment	3
Vehicles	5
Assets provided to employees	3

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets. However, when there is no reasonable certainty that ownership will be obtained by the end of the lease term, assets are depreciated over the shorter of the lease term and their useful lives.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying of the asset and is recognised in profit or loss.

Intangible assets (other than those covered by SCAs)

Intangible assets, other than those covered by SCAs, comprise of software and amounts paid for acquisition of commercial rights under an "Operation and Maintenance" agreement for a toll road project and are depreciated as follow:

Asset Type	Useful Life
Licensed software	Over the license period
Intellectual property rights	5 - 7 years
Commercial rights acquired under operations and maintenance Agreement	The minimum balance period of the concession agreement relating to the corresponding toll road project

Intangible assets are reported at acquisition cost with deductions for accumulated amortisation and impairment losses, if any.

Acquired intangible assets are reported separately from goodwill if they fulfil the criteria for qualifying as an asset, implying they can be separated or they are based on contractual or other legal rights and that their market value can be established in a reliable manner.

An impairment test of such intangible assets is conducted annually or more often if there is an indication of a decrease in value. The impairment loss, if any, is reported in the Statement of Profit and Loss.

Intangible assets, other than those covered by SCAs, are amortised on a "straight line" basis over their estimated useful lives. The estimated useful life of software is four years. The amount paid for acquisition of the rights under the "Operations and Maintenance" agreement is amortised over the minimum balance period (as at the time of acquisition) of the concession agreement relating to the corresponding toll road project.

Impairment of tangible and intangible assets

At the end of each reporting period, the Project SPVs reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest Group of cash-generating units for which a reasonable and consistent allocation basis can be identified. In assessing value in use, the estimated future cash flows are discounted to their present value using appropriate discount rate.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually, or whenever there is an indication that the asset may be impaired. Recoverable amount is the higher of fair value less costs of disposal and value in use.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss.

A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit or loss unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

Impairment of Financial Assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category. For financial assets other than trade receivables, as per Ind AS 109, the Project SPVs

recognize 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition. The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of Non-financial Assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's ("**CGU**") fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Group's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial Liabilities

Initial recognition and measurement:

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Project SPVs financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent Measurement

The measurement of financial liabilities depends on their classification, as described below:

1. Financial liabilities at fair value through Profit or Loss: Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for Trading are recognised in the Statement of Profit and Loss.

2. Loans and Borrowings: After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the EIR amortisation process.

   Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

3. De-recognition: A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

4. Offsetting of Financial Instruments: Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

Investment in Subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

Foreign Currencies

The Group's financial statements are presented in INR, which is also the Group's functional currency. The Group does not have any foreign operation and has assessed the functional currency to be INR.
Transactions and Balances Transactions in foreign currencies are initially recorded by the Group at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.
Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

Fair value Measurement

The Group measures financial instruments, such as, derivatives at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPVs use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPVs' management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPVs accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the management of Investment Manager presents the valuation results to the Audit Committee and the Group's independent auditors. This includes a discussion of the major assumptions used in the valuations. For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Distribution to Unit Holders

The Project SPVs recognise a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

Cash and Cash Equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Group's cash management.

Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the year are adjusted for the effects of all dilutive potential units.

Key source of information:

The preparation of financial statements in conformity with Ind AS requires the Group makes estimates and assumptions that affect the reported amounts of income and expenses of the period, the reported balances of assets and liabilities and the disclosures relating to contingent liabilities as of the date of the financial statements. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates include

allowance for doubtful loans /other receivables, fair value measurement etc. Difference, if any, between the actual results and estimates is recognized in the period in which the results are known.

Non-controlling interest

Non-controlling interest represents the share of reserve and capital attributable to the shareholders of the SPVs who have not agreed to exchange their share in the SPVs for Units of the Trust and will not become unitholders. Below is the list of shareholders of the SPVs for whom non-controlling interest has been recognised. Non-controlling interests in the results and equity of subsidiaries are shown separately in the Audited Special purpose Combined Statement of Profit and Loss, Combined Statement of Change in Equity and Combined Balance Sheet separately.

Name of SPV	Shareholder	% Shareholding in SPV (as on reporting date)
HREL	Punj Lloyd Limited	0.01%
TRDCL	Punj Lloyd Limited	50.00%
PSRDCL	East Nippon Expressway Company (NEXCO)	9.09%

Ind AS-110 requires entities to attribute the profit or loss and each component of other comprehensive income to the owner of Project SPVs and to the non-controlling interest. This requirement needs to be followed even if this results in the non-controlling interest having a deficit balance. Non-controlling interest balance is stated at cost. Ind AS 101 requires the above requirement to be followed prospectively from the date of transition.

Principal Components of Combined Statement of Profit and Loss

Income

Our total income consists of revenue from operations and other income.

Revenue from operations

Revenue from operations primarily comprises toll revenue, operation and maintenance income, overlay income, construction income, finance income.

- ***Toll revenue:*** Toll revenue represents revenue collected by the Project SPVs as per the respective concession agreements. Our toll revenue primarily consists of toll fees collected by Project SPVs in line with the respective concession agreements.

- ***Operation and maintenance income***: Operation and maintenance income represents the income accrued on the operation and maintenance expenses incurred along with a markup under the annuity model. Revenues from operations and maintenance services are recognized in each period as and when services are rendered in accordance with Ind AS 115.

- ***Overlay income:*** This income represents the income accrued on the overlay expenses incurred along with a markup under annuity model. Revenues from overlay services are recognized in each period as and when services are rendered in accordance with Ind AS 115.

- ***Construction income:*** This income represents cost of work performed on the contract and the proportionate margin, using the percentage of completion method.

- ***Finance income:*** Finance income consists of interest income on financial assets which is created in accordance with Ind AS by adopting financial asset model for future annuity receivables from the concessioning authorities.

Other income

Other income primarily consists of income from utility shifting and COS work interest on bank deposits, interest on income tax refund/others, gain on disposal of property, plant and equipment, excess provisions written back, gain on mutual fund investments, miscellaneous income, modification gain on financial instrument, insurance claim received / receivable, net gain/(loss) arising on financial assets designated as at FVTPL, reversal of expected credit loss on claim receivable from NHAI and reversal of provision for impairment of intangible asset (net).

Expenses

Our expenses consist of construction costs and cost of material consumed, operating expenses, employee benefits expense, finance costs, depreciation and amortization expense and other expenses.

- ***Construction cost and cost of material consumed:*** Construction cost and cost of material consumed comprise costs from consumption of material, expenses arising from changes in inventories of finished goods, work-in-progress and stock-in-trade, and costs arising of out construction costs.

- ***Operating expenses:*** Operating expenses comprise operation and maintenance expenses, provision for overlay expenses, utility shifting and cost of services expenses, expenses arising out of penalties for maintenance, and toll plaza expenses.

- ***Finance costs:*** Finance costs comprise interest on loans and debentures, finance charges, security trustee fees, finance charges on provision for overlay, others interests, expected credit loss on claims and receivables, and NHAI premium unwinding cost.

- ***Depreciation and amortization of expense:*** Depreciation and amortisation expense comprises depreciation of property, plant and equipment and amortisation of intangible assets.

Results of Operations

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Particulars	For the six month period ended September 30, 2024	Percentage of Total Income	For the fiscal year ended March 31, 2024	Percentage of Total Income	For the fiscal year ended March 31, 2023	Percentage of Total Income	For the fiscal year ended March 31, 2022	Percentage of Total Income
Income								
Revenue from Operations	5,492.72	73.97%	11,658.14	90.23%	9,940.48	81.44%	7,631.12	87.88%
Other Income	1,932.78	26.03%	1,262.06	9.77%	2,266.07	18.56%	1,052.55	12.12%
Total Income (I+II)	**7,425.50**	100.00%	**12,920.20**	**100%**	**12,206.55**	**100.00%**	**8,683.67**	**100.00%**
Expenses								
Construction costs and Cost of material consumed	667.58	8.99%	1,845.17	14.28%	641.78	5.26%	-	-
Operating Expenses	1,126.89	15.18%	1,936.99	14.99%	3,044.23	24.94%	1,553.59	17.89%
Employee benefits expense	-	-	-	-	-	-	-	-
Finance Costs	7,996.95	107.70%	6,258.37	48.44%	6,727.54	55.11%	4,102.08	47.24%
Depreciation and Amortisation Expense	1,489.17	20.05%	2,903.00	22.47%	2,609.70	21.38%	1,958.71	22.56%
Other Expenses	2,945.92	39.67%	173.50	1.34%	647.78	5.31%	161.28	1.86%
Total Expenses	**14,226.51**	191.59%	**13,117.03**	**101.52%**	**13,671.03**	**112.00%**	**7,775.66**	**89.54%**
Profit / (Loss) Before Tax	**-6,801.01**	-91.59%	**(196.83)**	**(1.52%)**	**(1,464.48)**	**(12.00%)**	**908.01**	**10.46%**
Share of Profit/ (Loss) of Joint Ventures (Net of Provision)	-	-	-	-	-	-	-	-
Profit / (Loss) Before Exceptional Items and Tax	**-6,801.01**	-91.59%	**(196.83)**	**(1.52%)**	**(1,464.48)**	**(12.00%)**	**908.01**	**10.46%**
Exceptional Items	-		-	-	-	-	-	-
Profit / (Loss) Before Tax (VII + VIII)	**-6,801.01**	-91.59%	**(196.83)**	**(1.52%)**	**(1,464.48)**	**(12.00%)**	**908.01**	**10.46%**
Less: Tax Expense								
Current Tax	-	-	-	-	-	-	-	-
Adjustment of Tax relating to earlier year	-	-	-	-	(369.67)	(3.03%)	-	-
Deferred Tax	57.38	0.77%	(88.10)	(0.68%)	36.71	0.30%	(87.86)	(1.01%)
Total Tax Expenses	**57.38**	0.77%	**(88.10)**	**(0.68%)**	**(332.96)**	**(2.73%)**	**(87.86)**	**(1.01%)**
Profit / (Loss) After Tax (IX - X)	**-6,858.39**	-92.36%	**(108.73)**	**(0.84%)**	(1,131.52)	(9.27%)	995.87	11.47%
Total comprehensive income for the year attributable to non-controlling interests *	**(39.41)**	**(0.53%)**	(81.99)	**(0.63%)**	(83.42)	(0.68%)	65.57	0.76%
Total comprehensive income for the year attributable to owners of Project SPVs **	**(6,818.98)**	**(91.83%)**	(26.74)	**(0.21%)**	(1,048.10)	(8.59%)	930.30	10.71%
Other Comprehensive Income								

Particulars	For the six month period ended September 30, 2024	Percentage of Total Income	For the fiscal year ended March 31, 2024	Percentage of Total Income	For the fiscal year ended March 31, 2023	Percentage of Total Income	For the fiscal year ended March 31, 2022	Percentage of Total Income
- Items that will not be reclassified to standalone statement of profit and loss	-	-	-	-	-	-	-	-
- Income tax relating to items that will not be reclassified to standalone statement of profit and loss	-	-	-	-	-	-	-	-
Total Comprehensive Income for the year :(XI + XII)	(6,858.39)	**(92.36%)**	(108.73)	**(0.84%)**	(1,131.52)	(9.27%)	995.87	11.47%
Total comprehensive income for the year attributable to non-controlling interests *	**(39.41)**	**(0.53%)**	(81.99)	**(0.63%)**	(83.42)	(0.68%)	65.57	0.76%
Total comprehensive income for the year attributable to owners of Project SPVs**	**(6,818.98)**	**(91.83%)**	(26.74)	**(0.21%)**	(1,048.10)	(8.59%)	930.30	10.71%
Earnings per Unit (of ₹100/- each)								
(1) Basic (In Rupees)	**(14.97)**	-	**(0.06)**	-	**(2.30)**	-	**2.04**	-
(2) Diluted (In Rupees)	**(14.97)**	-	**(0.06)**	-	**(2.30)**	-	**2.04**	-

Notes:

** This represents the share of profits attributable to the shareholders of the SPVs who have not agreed to exchange their shares in the SPVs for Units of Trust and will not become the unitholders of InvIT Trust.*

*** This represents the share of profits attributable to the shareholders of the SPVs / who have agreed to exchange their shares in the SPVs for Units of InvIT Trust and are proposed to become the unitholders of InvIT Trust.*

Six month **period ended September 30, 2024**

Total Income

Our total income for the six month period ended September 30, 2024 was ₹7.425.50 million.

Revenue from operations

Our revenue from operations for the six month period ended September 30, 2024 was ₹5,492.72 million, on account of toll revenue of ₹4,570.94 million, recognition of construction income of ₹702.63 million and finance income, operation and maintenance income and overlay income pursuant to Ind AS 115 aggregating to ₹219.15 million

Other income

Other income for the six month period ended September 30, 2024 was ₹1,932.78 million, on account of excess provision of ₹1,302.06 million written back and balance primarily on account of interest income on financial assets at amortised cost and insurance claims received /receivables.

Total expenses

Total expenses for the six month period ended September 30, 2024 were ₹14,226.51 million, primarily on account of construction contract costs, operating expenses, depreciation and amortization expense, financial costs and other expenses.

Construction costs and cost of material consumed

Construction costs and cost of material consumed for the six month period ended September 30, 2024 were ₹667.58 million. This was primarily due to construction work undertaken for BAEL.

Operating Expenses

Operating expenses for the six month period ended September 30, 2024 were ₹1,126.89 million.

Employee Benefits Expenses

Employee benefit expenses were nil for the six month period ended September 30, 2024.

Finance costs

Finance costs for the six month period ended September 30, 2024 were ₹7,996.95 million, primarily attributable to interest on loans for fixed period, interest on debentures, finance charges on provision for overlay and unwinding cost of NHAI premium. This also includes interest cost of ₹4,008.58 million w.e.f. April 1, 2021 and ₹ 961.40 million interest on delayed payment of premium to NHAI in respect of BAEL

Depreciation and amortisation expense

Depreciation and amortization expense for the six month period ended September 30, 2024 was ₹1,489.17 million.

Other expenses

Other expenses for the six month period ended September 30, 2024 were ₹2,945.92 million, on account of one time modification loss of ₹1,526.50 million and provision for doubtful and bad debts of ₹1,325.05 million in BAEL and balance primarily on account of legal and consultation fees, deputation cost, modification loss on financial asset and corporate social responsibility expenses.

Tax Expenses

Tax expenses for the six month period ended September 30, 2024 were ₹57.38 million, primarily on account of deferred tax.

Loss before exceptional items and tax

As a result of the factors outlined above, our loss before exceptional items and tax for the six month period ended September 30, 2024 was ₹ 6,801.01 million.

Total comprehensive loss for the year

As a result of the factors outlined above, our loss for the six month period ended September 30, 2024 was ₹6,858.39 million.

Comparison of fiscal years ended March 31, 2023 and March 31, 2024

Total Income

Total income increased by 5.85 % from ₹12,206.55 million for the fiscal year ended March 31, 2023 to ₹12,920.20 million in fiscal year ended March 31, 2024. This was primarily due to an increase in toll revenue, increase of construction activities in BAEL and interest income.

Revenue from operations

Revenue from operations increased by 17.28 % from ₹9,940.48 million in the fiscal year ended March 31, 2023 to ₹11,658.14 million in the fiscal year ended March 31, 2024. This was primarily due to an increase in toll revenue from ₹8,471.81 million in the fiscal year ended March 31, 2023 to ₹9,018.25 million in the fiscal year ended March 31, 2024, increase in construction income from ₹679.65 million in March 2023 to ₹1,937.87 million in fiscal year ended March 31, 2024 and which was partially offset by a decrease in finance income from ₹498.26 million in the fiscal year ended March 31, 2023 to ₹388.89 million in the fiscal year ended March 31, 2024.

Other Income

Other income decreased by 44.31 % from ₹2,266.07 million in the fiscal year ended March 31, 2023 to ₹1,262.06 million in the fiscal year ended March 31, 2024. This was primarily due to recognition of one time write back of ₹ 1,283.30 million in fiscal year ended March 31, 2023.

Total Expenses

Total expenses decreased by 4.05 % from ₹13,671.03 million in the fiscal year ended March 31, 2023 to ₹13,117.03 million in the fiscal year ended March 31, 2024. This was primarily due to a significant decrease in provisions for overlay expenses, increase in interest cost and increase in depreciation and amortization expenses.

Construction costs and cost of material consumed

Construction costs and cost of material consumed increased by 187.51 % from ₹641.78 million in the fiscal year ended March 31, 2023 to ₹ 1,845.17 million in the fiscal year ended March 31, 2024. This was primarily due to increase in construction activity.

Operating expenses

Operating expenses decreased by 36.37 % from ₹ 3,044.23 million in the fiscal year ended March 31, 2023 to ₹1,936.99 million in the fiscal year ended March 31, 2024.

Employee benefits expenses

Employee benefit expenses were nil for the fiscal year ended March 31, 2023 and remained nil in the Fiscal year ended March 31, 2024.

Finance Costs

Finance costs decreased by 6.97% from ₹6,727.54 million in the fiscal year ended March 31, 2023 to ₹6,258.37 million in the fiscal year ended March 31, 2024. This was primarily due to decrease in interest on bank, overdrafts, loans and debentures**.**

Depreciation and amortisation expense

Depreciation and amortization expenses increased by 11.24% from ₹2,609.70 million in the fiscal year ended March 31, 2023 to ₹2,903.00 million in the fiscal year ended March 31, 2024. This was primarily due to increase in amortisation of intangible assets.

Other expenses

Other expenses decreased by 73.22% from ₹647.78 million in the fiscal year ended March 31, 2023 to ₹173.50 million in the fiscal year ended March 31, 2024. This was primarily due to modification loss on financial assets and provision for doubtful and bad debts

Loss before exceptional items and tax

As a result of the above outlined factors, our loss before exceptional items and tax decreased by 86.56% from loss of ₹ 1,464.48 million in the fiscal year ended March 31, 2023 to a loss of ₹196.83 million in the fiscal year ended March 31, 2024.

Tax expenses

Tax expenses decreased by 73.54% from negative ₹332.96 million in the fiscal year ended March 31, 2023 to negative ₹88.10 million in the fiscal year ended March 31, 2024. This was primarily due to adjustment of tax pertaining to previous year of ₹369.67 million in fiscal year ended March 31, 2023.

Total comprehensive income for the year

As a result of the factors outlined above, total comprehensive income for the year increased from losses of ₹1,131.52 million in the fiscal year ended March 31, 2023 to losses of ₹108.73 million in the fiscal year ended March 31, 2024.

Comparison of fiscal years ended March 31, 2022 and 2023

Total Income

Total income increased by 40.57% from ₹8,683.67 million for the fiscal year ended March 31, 2022 to ₹12,206.55 million in fiscal year ended March 31, 2023. This was primarily due to an increase in toll revenue, recommencement of construction activities in BAEL and write back of excess provisions.

Revenue from operations

Revenue from operations increased by 30.26% from ₹7,631.12 million in the fiscal year ended March 31, 2022 to ₹9,940.48 million in the fiscal year ended March 31, 2023. This was primarily due to an increase in toll revenue from ₹6,895.36 million in the fiscal year ended March 31, 2022 to ₹8,471.81 million in the fiscal year ended March 31, 2023, recognition of construction income of ₹679.65 million in fiscal year ended March 31, 2023 and which was partially offset by a decrease in finance income from ₹581.61 million in the fiscal year ended March 31, 2022 to ₹498.26 million in the fiscal year ended March 31, 2023.

Other Income

Other income increased by 115.29% from ₹1,052.55 million in the fiscal year ended March 31, 2022 to ₹2,266.07 million in the fiscal year ended March 31, 2023. This was primarily due to write back of excess provisions of ₹1,283.30 million.

Total Expenses

Total expenses increased by 75.82% from ₹7,775.66 million in the fiscal year ended March 31, 2022 to ₹13,671.03 million in the fiscal year ended March 31, 2023. This was primarily due to a significant increase in provisions for overlay expenses, increase in interest cost and increase in depreciation and amortization expenses.

Construction costs and cost of material consumed

There were no construction costs and cost of material consumed in the fiscal year ended March 31, 2022. Construction costs and cost of material consumed were ₹641.78 million in the fiscal year ended March 31, 2023, on account of recommencement of construction activity in BAEL.

Operating expenses

Operating expenses increased by 95.95% from ₹1,553.59 million in the fiscal year ended March 31, 2022 to ₹3,044.23 million in the fiscal year ended March 31, 2023.

Employee benefits expenses

Employee benefit expenses were nil for the fiscal year ended March 31, 2022 and remained nil in the Fiscal year ended March 31, 2023.

Finance Costs

Finance costs increased by 64.00% from ₹4,102.08 million in the fiscal year ended March 31, 2022 to ₹6,727.54 million in the fiscal year ended March 31, 2023. This was primarily due to recognition of interest cost in HREL and PSRDCL (for senior lenders) with effect from April 1, 2021 in the fiscal year ended March 31, 2023.

Depreciation and amortisation expense

Depreciation and amortization expenses increased by 33.24% from ₹1958.71 million in the fiscal year ended March 31, 2022 to ₹2,609.70 million in the fiscal year ended March 31, 2023. This was primarily due to increase in amortisation of intangible assets.

Other expenses

Other expenses increased by 301.65% from ₹161.28 million in the fiscal year ended March 31, 2022 to ₹647.78 million in the fiscal year ended March 31, 2023. This was primarily due to modification loss on financial assets and provision for doubtful and bad debts.

Profit before exceptional items and tax

As a result of the above outlined factors, our profit before exceptional items and tax decreased by 261.28% from profit of ₹908.01 million in the fiscal year ended March 31, 2022 to a loss of ₹1,464.48 million in the fiscal year ended March 31, 2023.

Tax expenses

Tax expenses increased by 278.97% from ₹87.86 million in the fiscal year ended March 31, 2022 to ₹332.96 million in the fiscal year ended March 31, 2023. This was primarily due to adjustment of tax pertaining to previous year, since no notice was received for the fiscal year ended March 31, 2017 for BAEL, and the assessment for the fiscal year ended March 31, 2018 had been concluded, therefore the excess tax provision was reversed during the fiscal year ended March 31, 2023.

Total comprehensive income for the year

As a result of the factors outlined above, total comprehensive income for the year decreased from ₹995.87 million in the fiscal year ended March 31, 2022 to losses of ₹1,131.52 million in the fiscal year ended March 31, 2023.

Liquidity and Capital Resources

Our main sources of liquidity are cash flow from operating activities, investing activities and financing activities.

Our main liquidity requirements are primarily for routine operations, maintenance expenses, capital expenditure and servicing of debt.

As of September 30, 2024 , our cash and cash equivalents totaled ₹ 2,073.35 million and bank balances other than cash and cash equivalents totaled ₹ 7,460.27 million. As of September 30, 2024, our total current liabilities were ₹ 25,476.96 million.

Cash flows

Particulars	March 31			Six month period ended September 30, 2024
	2022	2023	2024	
Net cash generated/(used) in operating activities	6,945.96	9,148.39	7,224.57	3,485.45
Net cash generated/(used) in investing activities	(7,643.01)	(85.89)	1,903.10	154.34
Net cash generated/ (used) in financing activities	(2,444.18)	(8,049.18)	(8,810.66)	(3,840.12)
Cash and cash equivalents at the end of the period	**943.35**	**1,956.67**	**2,273.68**	**2,073.35**

Net cash generated from operating activities

Net cash generated from operating activities for the six month period ended September 30, 2024 was ₹3,485.45 million, primarily arising out of positive working capital and increase in operations of the Project SPVs.

Net cash generated from operating activities for the fiscal year ended March 31, 2024 was ₹7,224.57 million, primarily arising out of positive working capital and increase in operations of the Project SPVs.

Net cash generated from operating activities for the fiscal year ended March 31, 2023 was ₹9,148.39 million, primarily arising out of positive working capital and increase in operations of the Project SPVs.

Net cash generated from operating activities for the fiscal year ended March 31, 2022 was ₹6,945.96 million, primarily arising out of positive working capital and increase in operations of the Project SPVs.

Investing Activities

Net cash generated from investing activities for the six month period ended September 30, 2024 was ₹154.34 million.

Net cash generated in investing activities for the fiscal year ended March 31, 2024 was ₹1,903.10 million.

Net cash used in investing activities for the fiscal year ended March 31, 2023 was ₹85.89 million.

Net cash used in investing activities for the fiscal year ended March 31, 2022 was ₹7,643.01 million

Financing Activities

Net cash used in financing activities for the six month period ended September 30, 2024 was ₹3,840.12 million, primarily attributable to finance costs paid amounting to ₹1,946.24 million, repayment of borrowings amounting to ₹1,594.90 million and movement in term loan borrowings ₹298.98 million.

Net cash used in financing activities for the fiscal year ended March 31, 2024 was ₹8,810.66 million, primarily attributable to finance costs paid amounting to ₹4,992.45 million and repayment of borrowings amounting to ₹3,145.44 million.

Net cash used in financing activities for the fiscal year ended March 31, 2023 was ₹8,049.18 million, primarily attributable to finance costs paid amounting to ₹4,053.46 million and repayment of borrowings amounting to ₹3,995.72 million.

Net cash used in financing activities for the fiscal year ended March 31, 2022 was ₹2,444.18 million, primarily attributable to finance costs paid amounting to ₹2,282.30 million and repayment of borrowings amounting to ₹161.88 million.

Indebtedness

Our borrowings consist of term loans taken from banks, secured optionally convertible debentures and unsecured optionally convertible debentures and non-convertible debentures. The table below sets forth further details on our current and non-current financing obligations that were outstanding as at September 30, 2024; March 31, 2024. March 31, 2023; and March 31, 2022:

(in ₹ million)

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term
Secured – at amortised cost								
(i) Bonds / Debentures								
(a) from Other parties	5,843.73	1,074.33	6,319.8	999.03	7,436.71	866.80	6,855.07	2,473.55
- from related parties	-	-	-	-	-	-	-	-
(ii) Term Loans								
- from Banks	15,232.71	1,795.45	16,309.04	1,619.34	16,973.55	2,698.45	14,009.79	7,266.60
- from Financial Institutions	10,925.58	1,691.41	11,252.99	1,548.00	11,819.60	1,228.82	12,163.07	942.35
- from related parties	974.20	337.50	1,011.70	300.00	1,062.70	249.00	1,323.74	198.00
Unsecured – at amortised cost								
(i) Bonds / Debentures								
- from Other parties	904.26	4.83	967.70	2.01	-	244.06	-	-
- from related parties	7,882.57	33.81	7,605.57	16.70	-	-	-	-
- from Banks								
- from Financial Institutions								
(i) Term Loans								
- from Other parties	-	-	-	299.14	-	299.14	-	299.14
- from related parties	23,652.56	1,489.75	23,707.69	1,313.41	28,765.31	2,976.67	19,718.03	12,045.49
- from Financial Institutions	239.64	22.21	289.69	24.23	314.93	88.83	-	1,000.00
- from banks	110.21	10.15	132.93	11.08	144.00	40.62	-	450.12
Less: Unamortised borrowing cost	(198.73)	(0.46)	(198.73)	(0.46)	(198.73)	(0.46)	(198.73)	(0.46)
Less: Deemed Equity	(184.02)	-	(184.02)	-	(184.02)	-	(184.02)	
Total	**65,382.71**	**6,458.98**	**67,214.40**	**6,132.48**	**66,134.05**	**8,691.93**	**53,686.95**	**24,674.79**

As at September 30, 2024, the Project SPVs' total borrowings (secured and unsecured) was ₹71,841.69 million, consisting of unsecured borrowings of ₹33,966.78 million and secured borrowings of ₹37,874.91 million. As at March 31, 2024, the Project SPVs' total borrowings (secured and unsecured), was ₹73,346.88 million, consisting of unsecured borrowings of ₹33,986.94 million and secured borrowings of ₹39,359.93 million. Of the total borrowing as at September 30, 2024, ₹26,245.05 million is borrowing in the Project SPVs from the Trust and in respect of BAEL, an additional ₹6,813.64 million has been assigned to the Trust in accordance with the Deed of Assignment post September 30, 2024. Most of the Project SPVs' financing arrangements are secured by their movable and immovable assets, including charges on their equipment and intangible assets relating to financial assets relating to their respective projects.

Capital Expenditure

Historically, our capital expenditure requirements have principally consisted of construction cost and related expenses during development of intangible assets and periodic major maintenance expenses.

Our capital expenditures in the six month period ended September 30, 2024 and the fiscal years ended March 31, 2024 March 31, 2023, and March 31, 2022 totalled ₹964.73 million, ₹2,729.95 million ₹2,158.87 million, and ₹178.15 million, respectively. Historically, our capital expenditure needs have been financed through a combination of the cash flow generated by our operations, debt from related parties and debt financing from banks and financial institutions.

Sufficiency of Working Capital

The Investment Manager confirms that the Trust has the ability to meet its working capital requirements for at least 12 months from the date of this Placement Memorandum.

Related Party Transactions

We have in the past engaged, and in the future may engage, in related party transactions. For a description of our related party transactions, see the section entitled "*Related Party Transactions*" on page 325.

Historical and planned capital expenditure

Other than in the ordinary course of business and expenses incurred due to certain regulatory requirements, we do not anticipate any further capital expenditures for the Project SPVs as at September 30, 2024.

Seasonality

Traffic volume tends to decrease during the monsoon season and conversely tends to increase during holiday seasons. While the northern parts of India experience monsoon rains during the period from June or July until September or October every year, the southern parts of India, especially coastal parts of Andhra Pradesh, experience monsoon rains even during the months of October to December. The monsoon season may also restrict our ability to carry on activities related to its operation and maintenance of toll roads.

Unusual or Infrequent Events or Transactions

Except as described in this Placement Memorandum, there have been no events or transactions to our knowledge which may be described as "unusual" or "infrequent".

Off-Balance Sheet Arrangements

We did not have any material off-balance sheet arrangements during the fiscal periods presented.

Quantitative and Qualitative Information on Market Risks

We are exposed to various financial risks. These risks are primarily categorised into credit risk, liquidity risk and market risk.

Credit Risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Project SPVs are exposed to credit risk from its investing activities including deposits with banks and other financial instruments. As at June 30, 2024, the credit risk is considered low since, the investment is in the form of deposits with the bank, which are considered to have high degree of safety.

Liquidity Risk

Liquidity risk arises from the Project SPVs' inability to meet its cash flow commitments on time. Project SPVs' objective is to, at all times, maintain optimum level of liquidity to meet its cash and collateral requirements. The Project SPVs closely monitors their liquidity position and deploys a disciplined cash management system. Project SPVs' liquidity is managed centrally with operating units forecasting their cash and liquidity requirements. Treasury pools the cash surplus from across the different operating units and then arranges to either fund the net deficit or invest the net surplus in the market.

The Project SPVs manage liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities. The endeavour of The Project SPVs is to constantly improve the ratio of short term to long term maturity profile so as to minimise the risk of having to refinance the borrowing at regular short intervals.

Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

There has been no change to the Project SPVs' exposure to market risks or the manner in which these risks are managed and measured.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Project SPVs exposure to the risk of changes in market interest rates relates primarily to the Project SPVs long-term debt obligations with floating interest rates.

The Project SPVs manage their interest rate risk by having a balanced portfolio of fixed and variable rate borrowings. The interest rate risk exposure is mainly from changes in fixed and floating interest rates. The interest rate are disclosed in the respective notes to the financial statement of the Project SPVs.

Price Risk

The Project SPVs exposure to price risk arises from investments held and classified in the Combined Balance Sheet at fair value through profit or loss. To manage the price risk arising from investments, the Project SPVs diversify their portfolio of assets.

Foreign Currency Risk

Foreign currency risk is the risk that the fair value or future cash flows of an exposure will fluctuate because of changes in foreign exchange rates. The Project SPVs do not have any foreign currency exposure.

Other price risks

The Project SPVs are exposed to equity price risks arising from equity investments which is not material. For further information, please see the section "*Audited Special Purpose Combined Financial Statements*" on page 425.

Significant developments since September 30, 2024

Pursuant to a debenture trust deed dated November 12, 2024, BAEL has issued and allotted 8% redeemable, unlisted, unrated, secured/unsecured (as the case may be) non-convertible debentures of a nominal value of ₹1,000 each on a private placement basis, amounting to ₹7,743.47 million. For more details, please see the section "*Financial Indebtedness - Principal terms of the non-convertible debentures issued by BAEL"* on page 280**.**

Except as disclosed above and elsewhere in this Placement Memorandum, to our knowledge no circumstances have arisen since September 30, 2024, that could materially and adversely affect or are likely to affect, our operations, trading or profitability, or the value of our assets or our ability to pay our material liabilities within the next 12 months.

The month-wise unaudited revenue for the Project SPVs from the date of the latest financial statements included in this Placement Memorandum until the completed month before the filing of this Placement Memorandum has been provided below:

(in ₹ million)

Relevant Project SPV	Month ended		
	January 31, 2025	December 31, 2024	November 30, 2024

Moradabad Bareilly Expressway Limited	279.26	304.12	317.10
Barwa Adda Expressway Limited	277.45	274.56	248.09
Sikar Bikaner Highway Limited	79.00	81.84	79.52
Pune Sholapur Road Development Company Limited	211.94	220.27	198.42

Capitalisation Statement

(in ₹ million)

Particulars	Pre-Unit Distribution as at September 30, 2024	Post-Unit Distribution**
Non-current Borrowings	65,382.71	[●]
Current maturities of non-current borrowings	6,458.98	[●]
Interest accrued on borrowings	7,063.33	[●]
Less: Cash and cash equivalent, bank balances other than cash and cash equivalents net of restricted deposits and deposits with banks*	(7,932.46)	[●]
Total Debt of SPV Group (A)	**70,972.56**	[●]
Equity share capital	8,801.97	[●]
Other equity	(27,872.63)	[●]
Total Debt of SPV Group (B)	**(19,070.66)**	[●]
Debt equity ratio [A/(A+B)]	1.37	[●]

**Cash and cash equivalents have been considered after excluding restricted deposits amounting to INR 1,601.17 million*
*** To be updated in the Final Placement Memorandumprior to filing with SEBI and the Stock Exchanges.*

RELATED PARTY TRANSACTIONS

In terms of Regulation 2(1)(zv) of the InvIT Regulations, a related party shall be as defined as under the Companies Act, 2013 or under the applicable accounting standards and shall also include: (i) Parties to the Trust; and (ii) promoters, directors, and partners of the Parties to the Trust. Further, related parties also include such persons and entities as defined in terms of the applicable accounting standards, being Ind AS 24 on "*Related Party Disclosures*" ("**Related Parties**") in relation to related party transactions for the financial years ended March 31, 2024, March 31 2023 and March 31, 2022 as per Ind AS 24. For further details in relation to related party transactions, please see the section "*Audited Special Purpose Combined Financial Statements*" on page 425. The Parties to the Trust, may, from time to time, enter into related party transactions, in accordance with applicable law.

Procedure for dealing with Related Party Transactions

To ensure proper approval, supervision and reporting of the transactions between the Trust and its Related Parties, the IM Board has adopted the policy in relation to related party transactions and conflict of interests ("**RPT Policy**"), pursuant to its resolution dated January 25, 2024, to regulate the transactions between the Trust and its Related Parties. The key terms of the RPT Policy are provided below:

RPT Policy

A brief description of the RPT Policy is as follows:

The RPT Policy is adopted to regulate the transactions of the Trust with its Related Parties (as defined below), based on the laws and regulations applicable to the Trust and best practices.

"Related Party of the Trust"/ "Related Parties" shall be defined under the Companies Act, 2013, as amended or under applicable accounting standards and shall also include (a) the Sponsor and its sponsor group (as defined under the InvIT Regulations), the Investment Manager, the Project Manager and the Trustee; and (b) any promoters, directors and partners of persons mentioned in (a) above.

A. Some other key definitions in the RPT Policy are as below:

a) "**Act**" means the Companies Act, 2013, as amended.

b) "**Associate**" of any person shall have the meaning ascribed to such term under the InvIT Regulations.

c) "**Audit Committee**" means the audit committee constituted by the Board pursuant to Section 177 of the Act and in compliance with the applicable provisions of the InvIT Regulations.

d) "**Board**" means the board of directors of Roadstar Investment Managers Limited.

e) "**Director**" means a director on the Board.

f) "**Investment Manager**" means Roadstar Investment Managers Limited, the investment manager of the Trust.

g) "**Project Manager**" means Elsamex Maintenance Services Limited, the project manager of the Trust.

h) **"Related Party Transactions"** shall mean any transactions between the Trust and any Related Party of the Trust. Further, any transaction between the Trust and one or more infrastructure investment trusts having a common investment manager or sponsor, or a transaction where any of the Investment Manager or the sponsor is an associate of the investment manager or sponsor of the other infrastructure investment trust(s), shall be deemed to be related party transactions for such parties.

i) "**Sponsor**" shall mean Roadstar Infra Private Limited, the sponsor of the Trust.

j) "**SPV**" shall have the meaning ascribed to such term under the InvIT Regulations.

k) "**Trustee**" means Axis Trustee Services Limited, the trustee to the Trust.

l) "**Unit**" shall mean an undivided beneficial interest of the InvIT, and such Units together represent the entire beneficial interest of the InvIT.

m) "**Unitholder**" means any person who owns Units of the Trust.

B. Objectives of the RPT Policy

a) The objective of the RPT Policy is to ensure proper approval, supervision and reporting of the transactions between the Trust and its Related Parties.

b) In accordance with the InvIT Regulations, the Investment Manager will ensure that all future Related Party Transactions shall be:

(i) on an arm's length basis;
(ii) in accordance with the relevant accounting standards;
(iii) in the best interest of the Unitholders;
(iv) consistent with the strategy and investment objectives of the Trust; and
(v) in compliance with applicable law.

C. Review and approval

a) The Investment Manager will ensure that an approval from the Unitholders shall be obtained prior to entering into any transaction after the initial public offer, with any Related Party, in accordance with Regulation 22 of the InvIT Regulations:

(i) if the total value of all the Related Party Transactions entered in a financial year, pertaining to acquisition or sale of assets, whether directly or through an SPV, or investments into securities, exceeds 5% of the value of the assets of the Trust or any other threshold prescribed by the InvIT Regulations,

(ii) if the value of the funds borrowed from Related Parties exceeds 5% of the total consolidated borrowings of the Trust and the SPVs, or any other threshold prescribed by the InvIT Regulations.

b) As a general rule, the Investment Manager must demonstrate to the Board that future Related Party Transactions satisfy the criteria set out in Paragraph B above at the time of recommending the same for the approval of the Board.

c) The Investment Manager will maintain a register to record all Related Party Transactions entered into by the Trust and the basis on which they are entered into.

d) The Investment Manager will establish an internal control system so as to ensure that all future Related Party Transactions are compliant with the InvIT Regulations and applicable accounting standards. The Investment Manager shall also ensure compliance with any additional guidelines issued in this regard by SEBI and other relevant regulatory, statutory or governmental authorities from time to time.

e) In addition to any other requirement that may be prescribed in terms of the InvIT Regulations or other applicable laws, all Related Party Transactions to be entered into will be reviewed, approved and/or ratified by the Audit Committee.

f) The Audit Committee may grant omnibus approval for Related Party Transactions. Each such omnibus approval shall be valid for a period not exceeding one year from the date of such approval, and Related Party Transactions undertaken after the expiry of such period shall require fresh approval of the Audit Committee. The Audit Committee shall review, on a periodic basis, the details of Related Party Transactions entered into by the Trust pursuant to the omnibus approval.

g) The Board shall review at least quarterly in each financial year the Related Party Transactions entered into during such quarter to ascertain that the guidelines and procedures established to monitor the Related Party Transactions have been complied with. The review by the Board may include the examination of the nature of the transaction and its supporting documents or such other data as may be deemed necessary by the Board.

h) While considering a Related Party Transaction, any director on the Board who has a potential interest in any Related Party Transaction will recuse himself or herself and abstain from discussion, review and voting on the Related Party Transaction. Further, while considering voting on a Related Party Transaction which requires approval of the Unitholders, voting by any person who is a related party in such transaction as well as associate of such person(s) shall not be considered on the specific issue.

i) The Investment Manager shall ensure that the profits from Related Party Transactions have arisen from legitimate business transactions.

D. Disclosure and Reporting

a) The Investment Manager shall submit to the Trustee, quarterly reports on the activities of the Trust, including the status of compliance with the requirements specified under the InvIT Regulations in relation to Related Party Transactions, within such time as may be prescribed in the InvIT Regulations and applicable law.

b) Related Party Transactions shall be disclosed: (a) in the placement memorandum with respect to any such transactions entered into prior to the offer of units and any such proposed transactions subsequent to the offer; and (b) to the stock exchanges and the Unitholders periodically, in accordance with the InvIT Regulations and the agreements to be entered into with the stock exchanges in relation to the listing of the Units. The Investment Manager shall adequately disclose the details of any fees or commissions received or to be received by such Related Party(ies), with respect to any Related Party Transaction, to the stock exchanges.

c) If any Related Party has an interest in the business which competes or is likely to compete (directly or indirectly) with the activities of the Trust, the placement memorandum shall disclose: (a) details of such business including an explanation as to how such business shall compete with the Trust, (b) a declaration that Related Party shall perform its duty in relation to the Trust independent of its related business, (c) declaration as to whether acquisition of such business by the Trust is intended and its details, if applicable.

d) In accordance with the InvIT Regulations, the annual report to be submitted by the Investment Manager to all Unitholders, electronically or by physical copies, and to the stock exchanges within three months from the end of the financial year, shall contain, *inter alia*, details of all Related Party Transactions during the year, value of which exceeds 5.00% of value of the Trust Assets; and details of monies lent by the Trust to the SPV it has investment in.

E. The Board may specify any additional guidelines with respect to Related Party Transactions in compliance with applicable law, as it deems fit.

F. Notwithstanding the above, this RPT Policy will stand amended to the extent of any change in applicable law, including any amendment to the InvIT Regulations, without any action from the Investment Manager or approval of the Unitholders of the Trust.

Related Party Transactions

Acquisition of the Project SPVs by the Trust

Share Purchase Agreements ("SPAs")

IL&FS Transportation Networks Limited (the "**Seller**"), the Trustee (acting on behalf of the Trust), the Investment Manager and each of the Project SPVs, have entered into an SPA by way of which, the Trust has purchased, and the relevant seller has sold, the entire issued, subscribed and paid-up share capital of the relevant Project SPVs ("**Sale Shares**") (other than HREL and TRDCL, where the third-party shareholder will continue to hold certain percentage of the equity share capital, subject to compliance with the InvIT Regulations). The key indicative terms of the SPAs are as follows:

Sale and purchase: The Seller agrees to sell and transfer the Sale Shares to the Trust and the Trust agrees to acquire the Sale Shares, free and clear of all set-off or counter claim or encumbrances, together with the rights, title, interest and benefits appertaining thereto, on the Closing Date (*as defined in the SPAs*). In consideration for the purchase of the Sale Shares, the Trust and Investment Manager hereby agrees to allot Units (the "**Consideration Units**") to the seller.

Conditions precedent: The obligation of the parties to proceed with the Closing (*as defined in the SPAs*) is conditional upon the fulfilment (or waiver) of each of the following conditions:

a. All necessary consents required to be obtained by the Seller ("**Seller Consents**") in connection with the completion of the Proposed Transaction (*as defined in the SPAs*), as set out in Schedule III of the SPA, have been obtained;

b. Save and except the IL&FS Group entities that are: (i) creditors of the Company (*as defined in the relevant SPAs*); and (ii) proposing to assign the receivables (owed to them by the Company) to the Trust in the manner described in the Company Receivables Assignment Deed (*as defined in the SPAs*), final sanction letters have been issued by the other financial creditors of the Company in a form and manner acceptable to the Trustee and Investment Manager in connection with the proposed restructuring of such financial debt of the Company which is outstanding on Closing Date;

c. Provision of the certified management accounts of the Company as of a date not earlier than fifteen days from (but excluding) the Closing Date;

d. The delivery of the Final Equity Value (*as defined in the SPAs*) by the Investment Manager to the other parties along with:

   (i) The valuation report based on which the Final SPV Value (*as defined in the SPAs*) and Final Equity Value have been determined; and

   (ii) A written confirmation on whether the Final Equity Value is lower or higher than the Initial Equity Value (*as defined in the SPAs*) (as set out in Clause 3 of the SPA) along with details of the difference between the Final Equity Value and the Initial Equity Value;

e. Written intimation by the Investment Manger on behalf of the Trust to the other parties of the face value of each Consideration Unit to be allotted to the Seller; and

f. Each Party (*as defined in the SPAs*) confirming to the other Party that: (i) there is no writ, judgement, injunction, decree, or similar order passed by any Indian Court restraining that Party from consummating or undertaking the actions to be taken by that Party on Closing; or (ii) where such judgement, injunction, decree, or similar order (referred to above) if passed, has been stayed.

Closing: The closing shall occur on such time and place and/or on date as the parties may mutually agree in writing. The date on which all the actions set out as set out in the 'Closing Actions' below are completed shall be referred to as the Closing Date.

Closing Actions: Subject to the terms and conditions of the SPAs, the parties undertake to comply with their respective obligations as specified under the SPAs below on the Closing date:

a. The Investment Manager (on behalf of the Trust) shall:

   (i) Undertake and execute corporate actions and forms for the issue and credit of the relevant number of Consideration Units to the Seller proportionate to its shareholding of the Sale Shares and cause the credit of (i) the Consideration Units proportionate to its respective shareholding of the Sale Shares to such designated account as notified by the Seller at the time of the Closing in accordance with Applicable Law (*as defined under the SPAs*) where the Final Equity Value is more than nil; or (ii) cash to the designated accounts of the Seller in terms of the SPAs where the Final Equity Value is negative or nil.

   (ii) Deliver irrevocable and unconditional instructions to the depository participant to credit such number of Consideration Units based on the Final Consideration (*as defined under the SPAs*) determined in terms of the SPAs to such designated account as notified by the Seller at the time of Closing, free and clear of any Encumbrances (*as defined under the SPAs*), as applicable;

   (iii) In order to meet the minimum number of shareholders required under the Companies Act, it shall designate and nominate, prior to or on the Closing Date by written intimation to the Seller and the Company (*as defined under the relevant SPAs*), the nominees of the Trust to purchase such number of Sale Shares as may be set out in such written intimation in order to satisfy the aforementioned requirement; and

   (iv) In consultation with the Trustee, appoint nominees of the Trust as additional directors on the board of directors of the Company in order to comply with requirement under Regulation 18(3)(b) of the InvIT Regulations and undertake all such corporate actions as may be necessary for such appointment.

b. Upon receipt of the Consideration Units in accordance with (a) above, the Seller shall undertake the actions below:

   (i) Deliver an irrevocable and unconditional delivery instruction slip to its depository participant, instructing the depository participant to transfer the Sale Shares held by it to the Trust Demat Account (*as defined under the SPAs*), free and clear of any Encumbrances;

   (ii) Procure that the relevant depository participant acknowledges such instructions and provide a copy of such acknowledgement to the Trust and the Investment Manager; and

   (iii) Do all such acts and deeds as may be required to procure the depository participant to transfer the Sale Shares to the relevant Trust Demat Account on the Closing Date.

c. Upon delivery of the relevant requisite documents as specified above the Company shall hold a meeting of its board of directors whereby a resolution noting the transfer of the Sale Shares from the Seller to the Trust shall be passed.

   Notwithstanding anything contained to the contrary herein, no transaction or event set out in the SPA shall have been deemed to have been completed unless the transactions as contemplated in the Company Receivables Assignment Deed are completed.

Representations and Warranties: Each party to the SPAs declares, states, represents and warrants and affirms in respect of itself as of the date hereof and as of the Closing Date that:

a. It has been duly incorporated and validly exists under applicable law;

b. The execution and delivery by it of the SPAs and the performance by it of the obligations has been duly authorised by all necessary corporate action; and

c. The SPAs have been duly executed and delivered by each Party and constitutes legal, valid and binding obligations of such Party enforceable against the relevant Party in accordance with its terms.

d. The Seller (either individually and/or jointly as the case may be) is the owner of the relevant Sale Shares and has legal title to the relevant Sale Shares owned by the Seller.

e. The transfer of the Sale Shares to the Trust, upon receipt of the approval from the Hon'ble NCLT, shall be free and clear of all Encumbrances as on the Closing Date.

f. The Trust (acting through the Trustee) declare, represent, warrant and affirm in respect of itself as of the date hereof and as of the Closing Date that:

   (i) The execution, delivery and performance of the SPAs by the Trust and the consummation of the Proposed Transaction by the Trust does not and shall not (a) conflict with or result in a breach of the terms, conditions or provisions of, (b) constitute a default under (whether with or without the passage of time, the giving of notice or both), or (c) result in a violation of, the Trust Documents.

   (ii) The Trust has complied with and is currently in compliance with all applicable laws.

   (iii) As on the date of the SPAs and the Closing Date, all Consents (as defined under the SPAs) (other than Seller Consents) required to be obtained for the execution and delivery of the SPAs, in the country of its incorporation, have been obtained and are in full force and effect. As on the Closing Date, all Consents (other than Seller Consents) required to be obtained by the Trust for the performance of its obligations under the SPAs have been obtained and are in full force and effect, unless otherwise provided for in the SPAs.

g. That there are no proceedings pending or threatened (that the Trust is aware of) in writing, against or affecting the Trust in which it is sought to restrain or prohibit the Proposed Transaction, or that prohibits the Trust from, entering into the SPA or performing its obligations hereunder, including purchasing the Sale Shares.

h. The Parties irrevocably and unconditionally agree and acknowledge that the Sale Shares are being sold on an "as is where is" basis and "as is what is" basis and the parties make no representation or warranties other than the representations and warranties set out in the SPA, whether express, implied, oral, collateral statutory, customary or otherwise.

Termination: The SPAs shall be effective from the date of execution of the SPAs and shall continue to be valid and in full and effect for a period of nine months from the Execution Date (*as defined under the SPAs*) or such other period as may be agreed upon by mutual consent of the parties to the SPA.

Notwithstanding, the SPAs may be terminated by mutual consent of the parties to the respective SPAs in writing at any time. Termination of the SPA shall be without prejudice to the accrued rights and obligations of any of the parties to the SPA.

Deed of Assignments ("DOAs")

Each of the Project SPVs has entered into separate deed of assignments with the Trustee (acting on behalf of the Trust) ("**Assignee Lender**"), the Investment Manager, ITNL and their respective lenders forming part of the IL&FS Group (ITNL and other respective lenders of the relevant Project SPVs referred to collectively as "**IL&FS Unitholders**" and such deeds "**Deed of Assignments**"). By way of such Deed of Assignments, the IL&FS Unitholders have received Units of the Trust as consideration for the transfer and assignment of the entire amount of receivables (as contemplated under the respective Deed of Assignment) due from the relevant Project SPVs, to the Assignee Lender.

Operations and Maintenance Agreements ("O&M Agreements")

Pursuant to the concession agreements, each of the Project SPVs has entered into O&M Agreements with the Project Manager, the Investment Manager and the Trustee. By way of such O&M Agreements, the Project Manager, undertakes to conduct, *inter alia*, routine maintenance and periodic overlay, toll user/fee collection and toll operation activities of the Project SPVs, as applicable.

Debt Restructuring Agreements

Each of the Project SPVs have entered into debt restructuring agreements with their respective lenders, to modify the terms of the borrowings and align such terms of the borrowings with the ability of the respective Project SPVs to service the amounts falling due for payment from their respective cash flows.

Present and On-going Related Party Transactions

Related Party Transactions of the Trust in relation to the setting up of the Trust and this Unit Distribution

A number of present and on-going transactions with certain Related Parties have been, or will be, entered into in relation to the setting up of the Trust and the functioning of the Trust. The Trustee and the Investment Manager confirm that the following related party transactions have been, or shall be, entered into, on an arm's length basis in accordance with the relevant accounting standards, in the best interest of the Unitholders, consistent with:

(i). Trust Deed
Please see the section "*Parties to the Trust – Key Terms of the Trust Deed*" on page 103 for a description of the terms of the Trust Deed. The Trustee has received a sum ₹0.001 million towards the initial settlement of the Trust from the Sponsor.

(ii). Investment Management Agreement
Please see the section "*Parties to the Trust – Key Terms of the Investment Management Agreement*" on page 117 for a description of the terms of the Investment Management Agreement.

(iii). Project Implementation and Management Agreements
Please see the section "*Parties to the Trust – Key terms of the Project Implementation and Management Agreements*" on page 130 for a description of the terms of the Project Implementation and Management Agreements.

(iv). Share Purchase Agreement
Please see this section "*Related Party Transactions – Share Purchase Agreements*" on page 328 for the description of the terms of the Share Purchase Agreement entered into for the transfer of Project SPVs by the Trust.

Borrowings from Related Parties

Borrowings in the form of inter-corporate deposits, and other short term and subordinated loans were provided to certain Project SPVs. For details, please see the section "*Financial Indebtedness and Deferred Payments*" on page 274.

Potential Conflicts of Interest

The Investment Manager has established certain procedures to deal with conflict of interest issues. For further details on management of potential conflicts of interest, please see this section "*Related Party Transactions – Procedure for dealing with Related Party Transactions*" on page 325.

REGULATIONS AND POLICIES

The following description is a summary of certain sector specific laws currently in force in India, which are applicable to the business of the Project SPVs, and the Trust, in the road infrastructure sector. The information summarized in this section has been obtained from statutes, regulations, publications, and sector-specific policies available in the public domain. The description set out below is not exhaustive and is only intended to provide general information to Eligible Creditors, and is neither designed as, nor intended to substitute, professional legal advice and regulatory approvals. The interpretations, as provided hereinbelow, are subject to modification or clarification by subsequent legislative, judicial or administrative decisions. For information regarding regulatory approvals obtained by the Project SPVs and the Trust, please see the section "Regulatory Approvals" on page 342.

Regulatory Framework on Road Infrastructure

The regulatory framework in India in the highways sector, implemented on a public-private partnership ("**PPP**") basis, mainly derives its source from the primary legislations of National Highways Authority of India Act, 1988 (the "**NHAI Act**") and the National Highways Act, 1956 (the "**NH Act**") enacted by the Indian parliament, each as amended or supplemented.

The National Highways Act, 1956

The policy of the MoRTH, in implementing the NH Act, is to vest the MoRTH with the power to declare a national highway and for acquisition of land for this purpose. The GoI, by notification, can declare the intention to acquire any land for a 'public purpose' as envisaged by the law and such land can be used for building, maintenance, management and operation of the declared national highways throughout the country. The NH Act prescribes the procedure for such land acquisition. The procedure includes, *inter alia*, a declaration of an intention to acquire, entering and surveying such land, hearing of objections, a declaration of the acquisition and the power to take possession. The NH Act also provides for payment of compensation to owners and any other person whose right of enjoyment or ownership in the land has been affected. The NH Act vests MoRTH with the power to appoint a competent authority for the effective implementation of the NH Act and its policies. The said appointed authority retains the right and power to (a) survey, make any inspection, valuation or enquiry; (b) take levels; (c) dig or bore into sub-soil; (d) set out boundaries and intended lines of work; (e) mark such levels, boundaries and lines placing marks and cutting trenches; or (f) do such other acts or things as may be laid down by rules made in this behalf by that government.

All the notified national highways shall vest in the name of the Union and for the purposes, shall include all lands appurtenant thereto and all the bridges, culverts, tunnels and other enlisted constructions under the said NH Act. The Central Government shall assume the responsibility of maintaining and construction of national highways in proper condition in accordance to the law. The Central Government also retains the right to levy fee over the services and benefits rendered in relation to the use of such national highways.

The GoI is responsible for the development and maintenance of national highways. However, it may direct that such functions may also be exercised by the government of a state in which the highway is located or by any officer or authority subordinate to the GoI or to the state government. Further, the GoI has the power to enter into an agreement with any person for the development and maintenance of a part or whole of the highway. Such person would have the right to collect and retain fees at such rates as may be notified by the GoI and will also have the powers to regulate and control the traffic, for proper management of the highway, in accordance with the provisions of the Motor Vehicles Act, 1988, as amended. The GoI also has the power to make rules for carrying out the purposes of the NH Act.

The National Highways (Amendment) Act, 2017, entails the competent authority to issue reports to the Central Government in respect of any land (either acquired or proposed to be acquired) which is, either under incorrect revenue record or which is not required due to change in geometry or alignment of the construction, to issue order for the de-notification of such land from the acquisition for development and maintenance of the national highway. In pursuance of the foregoing amendment to the statute, the National Highways Rules, 1957, have been amended to ensure the exercise of the power under the NH Act. These rules provide for periodic regulatory compliance and reporting standards to be followed by the competent authority in reporting to the Central Government.

The National Highways Authority of India Act, 1988

The NHAI Act was enacted in pursuance of the powers of the Central Government for appointing a competent authority under the NH Act and provides for the constitution of an authority for the development, maintenance and management of national highways and for matters connected therewith or incidental thereto. In accordance with the NHAI Act, the GoI carries out development and maintenance of the national highways through NHAI. Subject to the provisions of the NHAI Act, the NHAI has the power to enter into and perform any contract necessary for the discharge of its functions. The NHAI has the power to acquire any land to discharge its functions, and such acquired land will be deemed to be land needed for a 'public purpose'. The NHAI Act prescribes a limit in relation to the value of the contracts that may be entered into by NHAI. However, the NHAI may enter into contracts exceeding the specified value, on obtaining prior approval of the GoI. The NHAI Act provides that the contracts for acquisition, sale, or lease of immovable property on behalf of the NHAI cannot exceed a term of 30 years unless previously approved by the GoI.

NHAI's objective is to ensure that all contract awards and procurements conform to the best industry practices with regard to transparency of process, adoption of bid criteria to ensure healthy competition in award of contracts. In accordance with the NHAI Act, the NHAI shall consist of a full time chairman, not more than 6 full time members and not more than 6 part time members who are being appointed by the Central Government.

In view of the challenging task of construction, development, and management of national highways being undertaken by NHAI, the Committee on Public Undertakings selected the subject "National Highways Authority of India (NHAI)" for comprehensive examination and report. National Highways Development Project ("**NHDP**") was launched in 1998 with the objective of developing roads of international standards which facilitate smooth flow of traffic. The NHDP envisages creation of roads with enhanced safety features, better riding surface, grade separator and other salient features.

As per the NHAI Works Manual, 2006, NHAI's function is to develop maintain and manage the national highways and any other highways vested in, or entrusted to it by the government. The sources of finance available to the NHAI include fund assistance from external funding agencies like the World Bank and the Asian Development Bank. NHAI's role encompasses involving the private sector in provision, maintenance, and operation of the national highways.

Financing of the NHDP

The GoI, under the Central Road and Infrastructure Fund Act, 2000 created a fund which is required to be utilized for the development and maintenance of national highways (the "**Central Road Fund**"). Section 18 of the NHAI Act also provides for the creation of a separate NHAI Fund. Any capital grant or aid received, loan taken, borrowing made, or any other sum received by the NHAI is credited to the NHAI Fund. Certain sources for financing of the NHDP are through dedicated accruals under the Central Road Fund by levy of cess on fuel as well as involving the private sector and encouraging public private partnerships. The NHDP is also financed through long-term external loans from the International Bank of Reconstruction and Development, the Asian Development Bank and the Japan Bank for International Cooperation as well as through tolling of roads for different projects undertaken by the NHAI.

Private Participation in NHDP

In an effort to attract private sector participation in the NHDP, the NHAI has issued model concession agreements ("**MCAs**") which have been formulated by Planning Commission of India or NITI Aayog and other departments of Central Government where a private entity, being the concessionaire, is, through an international competitive bidding ("**ICB**") process, awarded a concession (in form of a bundle of licenses) to build, own, operate and collect toll on a road for a specified period of time. The concession to develop highway projects is given by the NHAI or other governmental authorities under various models of PPP like:

(i) Build, Operate, Transfer (BOT)/ Design, Build, Finance, Operate and Transfer (DBFOT) – In this model, the entire designing, financing and construction is undertaken by the concessionaire at its own cost. The concessionaire is entitled to collect toll or receive annuity payments from the NHAI, as the case may be, during the concession period after the construction of the highway project. The bid for the project may either be selected basis the lowest grant wanted by the private developer from the NHAI or the highest premium the private developer is willing to pay to NHAI, in the form of additional concession fee. The concessionaire at the end of the concession period transfers the highway project to the NHAI (free of charge and clear of all encumbrances). The concessionaire's investment in the highway project is recovered directly through user fees collected by way of tolls. Under the BOT model, the projects which are generally not viable based on toll revenue alone, the NHAI or the relevant governmental authority provides concessionaire with a capital grant upto certain percentage of the project cost to increase the viability of projects and the quantum of such grant is determined on a case to case basis. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI.

(ii) Hybrid Annuity Model (HAM) – In this model, the NHAI or the relevant governmental authority invests 40% (forty percent) of the construction cost of the project in (five) equal instalments and the balance amount is infused by the private developer. The private developer recovers his investment in the form of annuity payments received by it over a period of 15 (fifteen) years. Additionally, there is no revenue risk for the private developer under HAM model because the toll is collected by the NHAI or relevant governmental authorities unlike the BOT model where the private developer collects it.

(iii) Toll, Operate and Transfer (TOT) – In this model, the road projects which are in operational phase are awarded by the NHAI or relevant governmental authorities to the concessionaire. The NHAI passes on the toll collection rights and operation and maintenance obligations to the concessionaire against payment of upfront concession fees quoted by the concessionaire as a part of the bidding process.

The bidding for the projects takes place in two stages as per the process provided below:

1. in the pre-qualification (RFQ) stage, the NHAI selects certain applicants on the basis of technical and financial expertise, prior experience in implementing similar projects and previous track record; and

2. in the bidding (RFP) stage, the NHAI invites financial bids from the pre-qualified applicants at the RFQ-stage on the basis of which the concession is awarded to the successful bidder by the NHAI for implementation of the project.

In accordance with the MCAs for projects above ₹1,000 million, the concessionaire meets the upfront cost and expenditure on annual maintenance and recovers the entire cost along with the interest from toll collections during the concession period. As per the 'Guidelines for Investment in Road Sector' issued by MoRTH in 2009, in order to increase the viability of projects, a capital grant of up to 40% of the project cost is provided by the NHAI or the GoI. The quantum of grant is determined on a case to case basis and typically constitutes the bid parameter in Build, Operate, Transfer ("**BOT**") projects which are generally not viable based on toll revenue alone. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI. The concessionaire at the end of the concession period transfers the road back to the Government (free of charge and clear of all encumbrances). The concessionaire's investment in the road is recovered directly through user fees collected by way of tolls. As per the MCAs for annuity based projects, the concessionaire is required to meet the entire upfront cost (no grant is paid by the NHAI or the GoI) and the expenditure on annual maintenance for annuity based projects. The concessionaire recovers the entire investment through pre- determined annuity payments to be made by the NHAI or the GoI. Furthermore, MoRTH approved certain amendments to the model concession agreement, inter-alia, in relation to deferment of premium payments.

Exit Policy

The CCEA in May 2015 approved a comprehensive exit policy framework with the objective to mobilize funds in the market. In pursuance thereto, NHAI, *vide* Circular No. NHAI/1103/CGM(FA)/4/2015 dated June 9, 2015 permitted divestment of 100% equity by concessionaires/developers after two years of completion of construction to facilitate unlocking of funds for new infrastructure projects. The equity divested is required to be invested by promoters in new projects. This comprehensive exit policy framework is expected to harmonize certain conditions across all concessions signed prior to 2009 with the policy framework for post 2009 contracts which permit divestment of equity up to 100%, two years after completion of construction. In line with the spirit of quoted circular, the NHAI issued another circular dated September 9, 2015 followed by the circular dated November 19, 2015, on the same subject, allowing the promoter to use the proceeds from the sale of divested equity of the concessionaire in one or more of the following:

(i). to reinvest in incomplete NHAI projects;
(ii). to reinvest any other highway projects;
(iii). any other power sector projects; or
(iv). to retire their debt to financial institutions in any other infrastructure projects.

Relaxation in the 'change in ownership' clause in Hybrid Annuity Model (HAM) projects

The MoRTH, *vide* circular dated November 10, 2020 and November 27, 2020, read along with the NHAI circular dated December 31, 2020, amended the MCAs in respect of project implemented under the HAM model, and permitted the selected bidder/consortium members, for the new as well as subsisting national highways project under the HAM-model, to dilute their equity six months after COD is achieved for the respective project.

Rationalized Compensation

The CCEA in November 2015 approved a policy for rationalized compensation to concessionaires for languishing national highway projects in BOT mode for delays that are not attributable to the concessionaires. Under the policy, the NHAI is authorized to allow an extension of the concession period for BOT (Toll) projects while keeping the original operation period unchanged. The NHAI has also been authorised to pay compensatory annuities to the concessionaire corresponding to the actual period of delay that is not attributable to the concessionaire upon successful completion of the project. In these cases, the construction period will be enhanced but the tenure of the concession will remain unchanged.

One Time Fund Infusion Scheme

The CCEA in October 2015 gave its approval to the NHAI for a one-time infusion of funds with the purpose of reviving and physically completing stalled projects in the advanced stages of completion. As per the policy, the amount of funds required in each case shall be approved by NHAI on a case to case basis.

Bidder Information

MoRTH has developed the Bidder Information Management System ("**BIMS**") to streamline the process of pre-qualification of bidders for EPC mode of contracts for all national highway works, with enhanced transparency and objectivity. BIMS works as a data base of bidder information that covers basic details, civil works experience, cash accruals and network, and annual turnover so that bidders' pre-qualification can be assessed based on evaluation parameters like threshold capacity and bid capacity from already stored data and the technical evaluation can be carried out in a faster manner.

Land Acquisition

While land is acquired for national highway projects under the NH Act, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (the "**Land Acquisition Act**") must also be complied with. MoRTH has issued comprehensive guidelines on land acquisition for national highways taking into account the applicability of the Land Acquisition Act.

Arbitral Awards

CCEA on August 31, 2016 approved various measures to revive the construction sector. An office memorandum dated September 5, 2016 was issued by the National Institute for Transforming India with certain proposals. On November 20, 2019, the CCEA approved certain proposals in relation to the arbitrations by or against government entities, for the effective implementation of the CCEA's decision on August 31, 2016 on its initiatives to revive the construction sector. Initially, the CCEA had approved the proposal that government agencies will be required to pay 75% of the arbitral award to the concessionaire against a bank guarantee, in cases where the award already announced is challenged. However, pursuant to a press release dated November 20, 2019, the CCEA approved, inter-alia, that where a government entity has challenged an arbitral award, resultant of which the amount of the arbitral award has not been paid, 75% of such award will be paid by the government entity to the contractor or the concessionaire against a bank guarantee only for the said 75% and not for its interest component. In relation to interest payable to the government entity, if a subsequent court order required the refund of 75% of the amount, the payment of such amounts will be required to be made as per the court orders.

Applicable Rules

As per the NH Act and the NHAI Act, the Central Government is empowered to make rules in order to further the objects of NH Act and NHAI Act. In exercise of such power, the Central Government has framed certain rules which are, amongst others, as follows:

- The National Highways Rules, 1957, as amended;
- National Highways Authority of India (Budget, Accounts Audit, Investment of Funds and Powers to enter Premises) Rules, 1990, as amended;
- The National Highways Tribunal (Procedure for Appointment as Presiding Officer of the Tribunal) Rules, 2003, as amended;
- The National Highways Tribunal (Procedure) Rules 2003;
- National Highways Authority of India (The Term of Office and Other Conditions of Service of Members) Rules, 2003, as amended;
- The Central Road Fund (State Roads) Rules, 2007;
- The National Highways Tribunal (Financial and Administrative Powers) Rules, 2004;
- The National Highways Tribunal (Procedure for Investigation of Misbehaviour or Incapacity of Presiding Officer) Rules, 2003;
- The National Highways Fee (Determination of Rates and Collection) Rules, 2008, as amended;
- The Highway Administration Rules, 2004;
- The National Highways (Collection of Fees by any person for the use of Section of National Highways/Permanent Bridges/Temporary bridge on National Highways) Rules, 1997
- The National Highways (Fee For The Use Of National Highways and Permanent Bridge-Public Funded Project) Rules, 1997;
- The National Highways (Rate of Fee) Rules, 1997;
- Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Act, 1996 and the rules framed thereunder, as amended;
- C.E.A. (Measures Relating to Safety and Electric Supply) Regulations, 2010;
- Central Electronical Authority (Measures Relating to Safety and Electric Supply) Regulations, 2020; and
- Indian Electricity Rules, 1956

Environmental Compliances and Regulations

Infrastructure projects must also ensure compliance with environmental legislations such as the Water (Prevention and Control of Pollution) Act, 1974 ("**Water Pollution Act**"), the Air (Prevention and Control of Pollution) Act, 1981 ("**Air Pollution Act**") and the Environment Protection Act, 1986, as amended ("**Environment Act**", together with the Water Pollution Act and the Air Pollution Act, the "**Environment Protection Acts**"). The Water Pollution Act aims to prevent and control water pollution. This legislation provides for the constitution of a central pollution control

board ("**Central Pollution Control Board**" or "**CPCB**") at the Central level and state pollution control boards ("**State Pollution Control Boards**" or "**SPCBs**", together with the Central Pollution Control Board, the "**PCBs**") at the State levels. The functions of the CPCB includes, among other things, coordination of activities of the SPCBs, collecting data relating to water pollution and the measures devised for the prevention and control of water pollution and prescription of standards for streams or wells. The SPCBs are responsible for, among other things, the planning for programmes for prevention and control of pollution of streams and wells, collecting and disseminating information relating to water pollution and its prevention and control, inspection of sewage or trade effluents, works and plants for their treatment and to review the specifications and data relating to plants set up for treatment and purification of water, laying down or annulling the effluent standards for trade effluents and for the quality of the receiving waters, and laying down standards for treatment of trade effluents to be discharged. These authorities issue consent to establish and consent to operate which are to be required to be renewed periodically. These authorities also have the power of search, seizure and investigation if the authorities are aware of or suspect violation of such regulations. This legislation prohibits any person from establishing any industry, operation or process or any treatment and disposal system, which is likely to discharge trade effluent into a stream, well or sewer, or bring into use any new or altered outlet for discharge of sewage, or begin to make any new discharge of sewage without taking prior consent of the SPCBs.

In context of the environmental compliances and regulations, the National Green Tribunal Act, 2010 (the "**NGT Act**") is an important legislation which provides for the establishment of a National Green Tribunal ("**NGT**") for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

In accordance with the Forest (Conservation) Act, 1980, state governments are not permitted to make any order de-reserving any reserved forest or directing the use of forest land for a non-forest purpose, or assignment of any forest land through lease or otherwise to any private person or corporation without the approval of the GoI. The Ministry of Environment, Forest and Climate Change ("**MoEF**") mandates the Environment Impact Assessment ("**EIA**") must be conducted for specified projects. In the process, the MoEF receives proposals or the setting up of projects and assesses their impact on the environment before granting clearances to the projects.

The EIA Notification S.O. 1533, issued on September 14, 2006 (the "**EIA Notification**") as amended and amended from time to time, under the provisions of the Environment Protection Act, prescribes that new construction of specified projects require prior environmental clearance from the MoEF. The environment clearance must be obtained from MoEF according to the procedure specified in the EIA Notification. No construction work or preparation of land by the project management except for securing the land, relating to the setting up of a specified project can be undertaken until such clearance is obtained. Under the EIA Notification, the environmental clearance process for new projects consists of four stages – screening, scoping, public consultation and appraisal. After completion of public consultation, the applicant is required to make appropriate changes in the draft 'EIA Report' and the 'Environment Management Plan.' The final EIA Report has to be submitted to the concerned regulatory authority for appraisal. The regulatory authority is required to give its decision within 105 days of the receipt of the final EIA Report. The EIA Guidance Manual for Highways, 2010 explains the four stages of the environmental clearance process and the contents of the EIA Report required to be submitted by highway projects.

Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended, impose an obligation and duty on the owners and operators of any facility or industry with a capability to create hazardous materials to safely dispose of such material in transport and other means of collecting and storing. Each occupier and operator of any facility generating hazardous waste is required to obtain an approval from the relevant state pollution control board for collecting, storing and treating the hazardous waste.

Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015

In September 2015, MoRTH has launched Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015, which will require road developers to earmark 1% of a project's total cost for planting of

trees and shrubs along the national highways. Under this policy, the maintenance of such plantations will be outsourced through a bidding process to plantation agencies. MoRTH/NHAI will appoint the authorized agency for empanelment of such plantation agencies.

Public Liability Insurance Act, 1991

The Public Liability Insurance Act, 1991 (the "**Public Liability Act**"), imposes liability on the owner or controller of hazardous substances for any damage arising out of an accident involving such hazardous substances. A list of 'hazardous substances' covered by the legislation has been enumerated by the GoI by way of a notification. The owner or handler is also required to take out an insurance policy insuring against liability under the legislation. The rules made under the Public Liability Act mandate that the employer has to contribute towards the Environment Relief Fund, a sum equal to the premium paid on the insurance policies. This amount is payable to the insurer.

Labour Laws and Other Regulations

The laws and regulations to employment that may be applicable to the Trust, the Investment Manager, the Sponsor, and the Project SPVs include the following:

- Factories Act, 1948;
- Contract Labour (Regulation and Abolition) Act, 1970;
- Payment of Bonus Act, 1965;
- Employees' State Insurance Act, 1948;
- Employees' Provident Funds and Miscellaneous Provisions Act, 1952;
- Payment of Gratuity Act, 1972;
- Shops and Commercial Establishments Acts, where applicable;
- Minimum Wages Act, 1948;
- Industrial Disputes Act, 1947;
- Employees' Compensation Act, 1923;
- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013;
- Child Labour (Prohibition and Regulation) Act, 1986; and
- Maternity Benefit Act, 1961.

The Occupational Safety, Health and Working Conditions Code, 2020 (enacted by the Parliament of India and assented to by the President of India on September 28, 2020) will come into force on such date as may be notified in the official gazette by the Central Government and different dates may be appointed for different provisions of the Occupational Safety, Health and Working Conditions Code, 2020. Once effective, it will subsume, amongst others, the Factories Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970.

The Code on Social Security, 2020 (enacted by the Parliament of India and assented to by the President of India on September 28, 2020) has been notified to the extent of Section 142 of the Code on Social Security, 2020 and will come into force in its entirety on such date as may be notified in the official gazette by the Central Government. Different dates may be appointed for different provisions of the Code on Social Security, 2020. Once effective, it will subsume, amongst others, the Employees' Compensation Act, 1923, the Employees' State Insurance Act, 1948, the Employee's Provident Fund and Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972.

The Code on Wages, 2019 (enacted by the parliament of India and assented to by the President of India on August 8, 2019) was notified in the official gazette by the Central Government on September 18, 2020 to the extent of the rules governing the constitution and functions of the central advisory board under the Code on Wages. Once notified and effective in its entirety, it will subsume the Equal Remuneration Act, 1976, the Minimum Wages Act, 1948, the Payment of Bonus Act, 1965 and the Payment of Wages Act, 1936. Further, multiple states have been issuing draft rules in relation to the same.

In addition to the above, various state shops and commercial establishments acts are also applicable to the Project SPVs.

Other applicable law

The Motor Vehicles Act, 1988

The development, maintenance and management as well as control of the National Highways are regulated by the NH Act and the NHAI Act. Under the Motor Vehicles Act, 1988, some powers have been delegated to the Transport Department of the State Governments.

Section 138 of the Motor Vehicles Act, 1988 further empowers the State Governments to make rules for the control of traffic, including for the purpose of the removal and the safe custody of vehicles including their loads which have broken down or which have been left standing or have been abandoned on roads; the installation and use of weighing devices; the maintenance and management of wayside amenities complexes; the exemption from all or any of the provisions of relating to fire brigade vehicles, ambulances and other special classes or descriptions of vehicle, subject to such conditions as may be prescribed; the maintenance and management of parking places and stands and the fee, if any, which may be charged for their use; prohibiting the taking hold of or mounting of a motor vehicle in motion; prohibiting the use of foot-paths or pavements by motor vehicles, generally, the prevention of danger, injury or annoyance to the public or any person, or of danger or injury to property or of obstruction to traffic.

Motor Vehicles (Amendment) Act, 2019

The Motor Vehicles (Amendment) Act, 2019, is targeted towards bringing changes in the transport sector to encourage safer driving practices among Indian motor vehicle drivers. It proposes to create a National Road Safety Board, which has been notified by the MoRTH in September 2021. The National Road Safety Board shall be responsible for promoting road safety, innovation and adoption of new technology and for regulating traffic and motor vehicles.

Indian Trusts Act, 1882

The Indian Trusts Act, 1882 ("**Trusts Act**") governs all private trusts in India.

The Trusts Act sets out the purpose for which private trusts can be established, the manner in which they may be created, executed and extinguished. The person creating a trust under the Trusts Act is the author of such trust, the person to whom the author grants the power and authority to regulate the trust is the trustee and the persons for whose benefit such trust has been created are the beneficiaries of such trust. The Trust Act sets out the rights, duties, liabilities and powers of the trustees and the beneficiaries vis-a-vis the trust. The Trust has been settled in accordance with the provisions of the Trusts Act.

Control of National Highways (Land and Traffic) Act, 2002

The Control of National Highways (Land and Traffic) Act, 2002 (the "**Control of NH Act**") provides for control of land within national highways, right of way and traffic moving on national highways and also for removal of unauthorised occupation thereon.

In accordance with the provisions of the Control of NH Act, the Central Government has established Highway Administrations. Under the Control of NH Act, all land that forms part of a highway which vests in the Central Government, or that which does not already vest in the Central Government but has been acquired for the purpose of highways shall be deemed to be the property of the Central Government. The Control of NH Act prohibits any person from occupying any highway land or discharging any material through on such land without the permission of the Highway Administration or any officer authorised by such administration. The Control of NH Act permits the grant of lease and license for use of highway land for temporary use.

Indian Tolls Act, 1851

In accordance with the Indian Tolls Act, 1851 (the "**Tolls Act**"), the state governments have been vested with the power to levy tolls at such rates as they deem fit, to be levied upon any road or bridge, made or repaired at the expense of the Central or any state government. The tolls levied under the Tolls Act, are deemed to be 'public revenue' and the collection of tolls can be placed under any person the State governments' deem fit. Such persons are enjoined with the same responsibilities as if they were employed in the collection of land revenue. Further, all police officers are bound to assist the toll collectors when required in the implementation of the Tolls Act. The Tolls Act further gives power for recovery of toll and exempts certain category of people from payment of toll.

National Highways Fee (Determination of Rates and Collection) Rules, 2008

The National Highways Fee (Determination of Rates and Collection) Rules, 2008 (the "**NH Fee Rules**"), regulates the collection of fee for the use of national highways. In accordance with the NH Fee Rules, the GoI may, by a notification, levy fee for use of any section of a national highway, permanent bridge, bypass or tunnel forming part of a national highway, as the case may be. However, the GoI may, by notification, exempt any section of a national highway, permanent bridge, bypass or tunnel constructed through a public funded project from levy of such fee.

The NH Fee Rules supersede the National Highways (Temporary Bridges) Rules, 1964, the National Highways (Collection of Fees by any Person for the Use of Section of National Highways/ Permanent Bridge/ Temporary Bridge on National Highways) Rules, 1997, the National Highways (Fees for the use of National Highways Section and Permanent Bridges Public Funded Project) Rules, 1997 and the National Highways (Rate of Fees) Rules, 1997 other than in respect of things done or omitted to be done under such rules prior to supersession. The NH Fee Rules do not apply to agreements and contracts executed or bids invited prior to the publication of such rules i.e. prior to December 5, 2008.

The collection of fee in case of a public funded project shall commence within 45 days from the date of completion of the project. The NH Fee Rules further provide for the base rate of fee applicable for the use of a section of the national highway for different categories of vehicles and the fees collected by the executing authority shall be remitted to the GoI. However, the GoI may, by notification, allow any or all of the executing authorities to appropriate the whole, or part of such fees for purposes as may be specified.

FASTag lanes on fee plazas is a policy initiative of the GoI in which there is an exclusive lane in the fee plaza for movement of vehicles fitted with FASTag. The FASTag is a device which is fitted on the front windscreen of vehicles to indicate online toll payment. The amended NH Fee Rules impose a penalty equivalent to two times the fee applicable if a vehicle not fitted with FASTag enters the exclusive FASTag lane. However, in case a user is unable to pay, due to malfunctioning electronic toll collection infrastructure, the user will be permitted to pass the fee plaza without payment.

The NH Fee rules were also amended to provide that the driver or owner of a mechanical vehicle which is loaded in excess of permissible load specified for its category, (i) shall not be permitted to use the national highway or cross the fee plaza until the excess load has been removed, and (ii) shall be liable to pay a fee to the toll collection agency equal to ten times of the fee applicable to such category of mechanical vehicle. However, in case no weighbridge has been installed at the toll plaza, no fee for overloading shall be levied.

The National Highways Rules, 1957 (the "NH Rules")

The NH Rules provide that in situations where the estimate cost of the execution of any original work on a national highway exceeds ₹ 1,000,000, a detailed estimated of the cost is to be forwarded to the GoI. An application for allotment of funds for meeting expenditure on an original work on a national highway must also be made to the GoI. The executing agency of the highway is required to furnish monthly progress reports and a completion report on the conclusion of the work. The NH Rules also give the consulting engineer of the GoI the right to inspect the work while it is in progress or after completion.

National Monetisation Pipeline (NMP)

NITI Aayog has developed the pipeline, in consultation with infrastructure line ministries, based on the mandate for 'Asset Monetisation' for roads and highways, amongst others, under Union Budget 2021-22. The framework for monetisation of core asset monetisation has three key imperatives: (i) monetization of 'rights' not 'ownership' i.e. assets will be handed back to the government at the end of transaction life; (ii) brownfield de-risked assets and stable revenue streams; and (iii) structured partnerships under defined contractual frameworks with strict performance standards. This shall include selection of de-risked and brownfield assets with stable revenue generation profile with the overall transaction structured around revenue rights. The primary ownership of the assets under these structures shall be with the government.

Provisions under the Constitution of India and other legislations in relation to collection of toll

Entry 59, List II of Schedule VII read with Article 246 of the Constitution of India vests state governments with the power to levy tolls. Further, in accordance with the Tolls Act, state governments have been vested with the power to levy tolls at such rates as they deem fit.

Foreign Investment Regulations

Foreign investment in Indian securities is governed by the provisions of the FEMA, as amended, read with the applicable FEMA Rules, the FEMA (Mode of payment and Reporting of Non-Debt Instruments) Regulations, 2019 and the consolidated FDI Policy issued by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government. Foreign investment is permitted (except in the prohibited sectors) either through the automatic route or the approval route, depending upon the sector in which foreign investment is sought to be made. Under the FEMA Rules and the current consolidated FDI Policy, effective from October 15, 2020, an infrastructure investment trust registered and regulated by the SEBI under the InvIT Regulations, being an 'investment vehicle', is permitted to receive foreign investment from a person resident outside India (subject to Press Note 3 (2020 series)), including an FPI or an NRI subject to the terms and conditions specified in the FEMA Rules.

Downstream investment by an infrastructure investment trust shall be regarded as indirect foreign investment if neither the sponsor nor the investment manager of such an infrastructure investment trust is Indian 'owned and controlled' as defined in FEMA Rules.

Downstream investment by an 'investment vehicle' shall have to conform to the sectoral caps and conditions/restrictions, if any, as applicable to the company in which the downstream investment is made as per the FDI Policy. Foreign investment of up to 100% through the automatic route is permitted in the infrastructure sector in India. An infrastructure investment trust that receives foreign investment shall be required to make such report and in such format to the RBI or to the SEBI as may be prescribed by them from time to time.

The payment for the units of an infrastructure investment trust acquired by a person resident or registered/ incorporated outside India shall be made by an inward remittance from abroad through banking channels or by way of swap of shares of an SPV, or out of funds held in a Non-resident External ("**NRE**") or Foreign Currency Non-resident Bank ("**FCNR(B)**") account maintained in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016.

Further, any person who is a non-resident and holds units of an infrastructure investment trust in accordance with the FEMA Rules may pledge such units (i) in favour of a bank in India to secure the credit facilities being extended to the Indian company for bona fide purposes; (ii) in favour of an overseas bank to secure the credit facilities being extended to the person, or a person resident outside India who is the promoter of the Indian company or the overseas group company of the Indian company; (iii) in favour of a Non-Banking Financial Company registered with the RBI to secure credit facilities being extended to the Indian company for bona fide purposes; and (iv) subject to the authorized dealer bank satisfying itself of the compliance of the conditions stipulated by the RBI in this regard.

In addition to the above, compliance with the provisions of various tax-related legislations, intellectual-property related legislations and other applicable law for our day-to-day operations is also required.

REGULATORY APPROVALS

Provided below are the material consents, licenses, permissions, registrations and approvals from the Government, various governmental agencies and other statutory and/or regulatory authorities with which (i) the Trust and the Project SPVs can undertake the Unit Distribution and the transactions contemplated in relation to the Unit Distribution; and (ii) the Trust and the Project SPVs can undertake their respective current business activities, as applicable. Unless otherwise stated, these approvals are valid as of the date of this Placement Memorandum. In the event that any of the approvals and licenses that are required for the Project SPV's business operations expire in the ordinary course of business, the Project SPVs will apply for such renewal from time to time. For details in connection with the regulatory and legal framework within which the Trust and the Project SPVs operate, please see the section "Regulations and Policies" on page 332.

A. Approvals in relation to the Unit Distribution

1. Resolution dated April 2, 2024, passed by the board of directors of the Investment Manager in relation to the Unit Distribution and other incidental matters.

2. In-principle listing approval from NSE dated July 22, 2024, extended by way of its letters dated October 28, 2024 and February 10, 2025.

3. In-principle listing approval from BSE dated July 22, 2024, extended by way of its letters dated November 7, 2024 and February 10, 2025.

4. Final approval issued by NHAI in relation to the transfer of BAEL to the Trust by harmonious substitution dated November 18, 2024.

5. Approval dated November 29, 2022, to HREL issued by the NHAI in relation to transfer of HREL to the Trust and other related matters.

6. Approval dated December 22, 2021, to MBEL issued by the NHAI in relation to transfer of 85.50% shareholding of MBEL to the Trust and other related matters.

7. Approval dated May 13, 2024 issued by the NCLT in relation to the transfer of remaining 14.50% shareholding of MBEL to the Trust.

8. Approval dated April 18, 2023, to PSRDCL issued by the NHAI in relation to transfer of PSRDCL to the Trust and other related matters.

9. Approval dated September 6, 2021, to SBHL issued by the Office of the Chief Engineer, Public Works Department, Rajasthan, Jaipur in relation to 100% divestment in shareholding of SBHL to the Trust and other related matters.

B. Approvals in relation to the Trust

1. Certificate of registration dated December 22, 2020, bearing registration number IN/InvIT/20-21/0015, issued by SEBI to the Trust pursuant to Regulation 3 of the InvIT regulations, for registration of the Trust as an infrastructure investment trust.

C. Material Business Approvals in relation to Project SPVs

1. HREL

a. Provisional Completion Certificate dated April 12, 2013 issued by Unihorn India Private Limited, Independent Engineer for four-laning of the Hazaribagh-Ranchi section of NH-33 (Km 40.500 to Km 114.000) in the state of Jharkhand on BOT (Annuity) basis.

b. Completion Certificate dated April 28, 2015 issued by Unihorn India Private Limited, Independent Engineer for four-laning of the Hazaribagh-Ranchi section of NH-33 (Km 40.500 to Km 114.000) in the state of Jharkhand on BOT (Annuity) basis.

c. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated October 25, 2023.

d. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India, renewed on April 1,2024, valid upto March 31, 2025, for construction, operation & maintenance of Hazaribagh-Ranchi section of NH-33 from Km 40.500 to 114.00 in the state of Jharkhand, for 443/A, Hazaribagh Ranchi Express Limited, Road No-5, Ashok Nagar, Ranchi, Jharkhand- 840032.

2. SBHL

a. Provisional Completion Certificate dated October 10, 2015 issued by TP Velayudhan (Independent Engineer, Intercontinental Consultants and Technocrats Private Limited) for development and operation of Sikar-Bikaner section of NH-11 (Km 340.188 of NH-11 to Km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from Km 553.869 of NH-11 to Km 267.325 of NH-89) by two-laning with paved shoulder in the State of Rajasthan on DBFOT basis.

b. Additional Provisional Completion Certificate dated August 16, 2016 issued by TP Velayudhan (Independent Engineer, Intercontinental Consultants and Technocrats Private Limited) for additionally completed length of 22.091 Km in the development and operation of Sikar-Bikaner section of NH-11 (Km 340.188 of NH-11 to Km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from Km 553.869 of NH-11 to Km 267.325 of NH-89) by two-laning with paved shoulder in the State of Rajasthan on DBFOT basis.

c. Provisional Completion Certificate dated April 5, 2018 issued by TP Velayudhan (Independent Engineer, Intercontinental Consultants and Technocrats Private Limited) for completion of balance 2.91 Km of the project in development and operation of Sikar-Bikaner section of NH-11 (Km 340.188 of NH-11 to Km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from Km 553.869 of NH-11 to Km 267.325 of NH-89) by two-laning with paved shoulder in the State of Rajasthan on DBFOT basis.

d. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India renewed on December 22, 2023, valid upto December 21, 2025 for operation & maintenance work of Road of Sikar-Bikaner Section, for Rashidpura-Khuri Toll Plaza, Vpo-Laxmangarh, Sikar, Rajasthan- 332315.

e. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated November 7, 2023.

3. PSRDCL

a. Provisional Completion Certificate dated August 23, 2013 issued by A.P Singh (Independent Engineer, Intercontinental Consultants and Technocrats Private Limited.) for four-laning of Pune-Solapur section of NH-9 (Km 144.400 to Km 249.000) in the State of Maharashtra on DBFOT basis.

b. Completion Certificate dated February 3, 2016 issued by Lt. Gen. (Retd.) S. Ravi Shankar (Independent Engineer, Intercontinental Consultants and Technocrats Private Limited) for four-laning of Pune-Solapur section of NH-9 (Km 144.400 to Km 249.000) in the State of Maharashtra on DBFOT basis.

c. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India renewed on July 1, 2024, valid upto May 26, 2025 for operation & maintenance work of four-laning of Pune-Solapur section of NH-65 from Km 150.050 to Km 251.325 under NHDP phase III pkg., for at post Sawaleshwar toll plaza, Tal- Mohol, Dist- Solapur- 413213, Tal- Mohol, Dist- Solapur, Maharashtra- 413213.

d. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated November 2, 2023.

4. MBEL

a. Provisional Completion Certificate dated January 6, 2015 issued by Edward Haire (Independent Engineer, Louis Berger Group Inc.) for four-laning of the Moradabad-Bareilly section of NH-24 (Km. 148.000 to Km. 262.000) on DBFOT basis.

b. Provisional Completion Certificate dated November 4, 2015 issued by Edward Haire (Independent Engineer, Louis Berger Group Inc.) for four-laning of the Moradabad-Bareilly section of NH-24 (Km. 148.000 to Km. 262.000) on DBFOT basis.

c. Completion certificate dated July 30, 2019 issued by Anupam Gupta (Executive Director, LEA Associates South Asia Private Limited) for four-laning of the Moradabad-Bareilly section (Km. 148.000 to Km 262.000) of NH 24 on DBFOT basis.

d. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India on November 28, 2023, valid upto November 27, 2025, for operation & maintenance of toll plaza road for Km 148.00 to Km 269.800 for toll plaza Niyamatpur, Ekrotiya, NH-09 old NH-24, vill. Harsainpur PO Dalatpur, Moradabad, Uttar Pradesh-244926.

e. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated October 25, 2023.

5. TRDCL

a. Provisional Completion Certificate dated March 6, 2008, issued by Kerala Road Fund Board for completion of Phase I in Thiruvananthapuram City Road Improvement Project, divided in 4 phases.

b. Provisional Completion Certificate dated November 8, 2012, issued by Kerala Road Fund Board for completion of Phase II in Thiruvananthapuram City Road Improvement Project, divided in 4 phases.

c. Provisional Completion Certificate dated February 20, 2015, issues by Kerala Road Fund Board for completion of Phase III in Thiruvananthapuram City Road Improvement Project, divided in 4 phases.

d. Provisional Completion Certificate dated November 15, 2016, issued by Kerala Road Fund Board for completion of Phase IV in Thiruvananthapuram City Road Improvement Project, divided in 4 phases.

e. Completion Certificate dated May 8, 2017, issued by Kerala Road Fund Board for Thiruvananthapuram City Road Improvement Project, divided in 4 phases.

f. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated October 31, 2023.

g. Certificate of registration issued under Section 7 of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Registering Officer, Government of Kerela valid upto December 31, 2025.

6. BAEL

a. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India renewed on August 6, 2024, valid upto August 2, 2025, for tolling operation at Banskopa, Panagarh, for Plot No.-A0105 and A-106, SSB Sarani, Secgor-2A, Bidhannagar Durgapur, Purba Bardhaman, West Bengal- 713212.

b. License issued under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 by the Office of the Licensing Officer, Government of India on November 30, 2023, valid upto August 2, 2025, for operation maintenance and tolling activity for the project in various stretches within Km 398.240 to km 521.120 in the state of Jharkhand and West Bengal for Belyad Toll Plaza, Maithan near Maithan Police Station, PO- Maithan, Dhanbad, Jharkhand- 828207.

c. Intimation receipt under Rule 9 of the Maharashtra Shops & Establishment (Regulation of Employment and Condition of Service) Act, 2017 dated October 15, 2023.

D. Approvals applied for but not yet received

1. Trademark registration for the corporate logo and name of the Trust.

E. Approvals for which applications are yet to be made

Nil

LEGAL AND OTHER INFORMATION

Except as stated in this section, there is no material civil litigation, criminal litigation or actions by regulatory authorities, in each case involving the Project SPVs, the Trust, the Sponsor and the Sponsor Group, the Investment Manager, the Project Manager, or any of their respective Associates and the Trustee, that are currently pending as on the date of this Placement Memorandum.

For the purpose of this section, details of all criminal matters and regulatory actions involving the Trust (including the Project SPVs), the Sponsor, the Investment Manager, the Project Manager, or any of their respective Associates, the Trustee and the Sponsor Group, that are currently pending have been disclosed. Further, any civil matter (including all outstanding cases, litigations, claims and legal notices) involving an amount equivalent to, or more than, the amounts as disclosed below, in respect of the (i) Trust, its associates and the Project SPVs; (ii) the Sponsor, the Project Manager, the Investment Manager and each of their respective Associates and Sponsor Group; and (iii) the Trustee has also been disclosed. Details of proceedings related to direct and indirect taxes have been disclosed in a consolidated manner, indicating the number of cases and the total amount.

For the Trust (including the Project SPVs), the consolidated revenue for the period ended March 31, 2024, was ₹ 6884.79 million. Accordingly, in respect of the Trust, its Associates (apart from entities which are Associates of the Sponsor, Investment Manager and the Project Manager) and each of the Project SPVs, all outstanding civil matters (including all outstanding cases, litigations, claims and legal notices) which involve an amount exceeding ₹ 344.24 million (being 5.00% of the consolidated revenue of the Trust and the Project SPVs for the financial year ended March 31, 2024) have been considered material. Additionally, all cases where an adverse outcome would materially and adversely affect the business, operations or financial position or reputation of each of the Trust or the Project SPVs, irrespective of the amount involved, may also be identified as material litigation and disclosed.

For the Sponsor, the consolidated revenue for the year ended March 31, 2024, was ₹ 95.46 million. Accordingly, in respect of the Sponsor and its Associates and the Sponsor Group, all outstanding civil matters (including all outstanding cases, litigations, claims and legal notices) which involve an amount exceeding ₹4.77 million (being 5.00% of the consolidated revenue for the year ended March 31, 2024) have been considered material.

Additionally, all outstanding cases involving the Sponsor, its Associates and the Sponsor Group, where an adverse outcome would materially and adversely affect the business, operations or financial position or reputation of the Sponsor and Sponsor Group, irrespective of the amount involved, have been considered as material and disclosed.

For the Investment Manager, the standalone revenue for the year ended March 31, 2024, was ₹ 95.46 *million. Accordingly, in respect of the Investment Manager and its Associates, all outstanding civil matters which involve an amount exceeding ₹ 4.77 million (being 5.00% of the standalone revenue for the year ended March 31, 2024) have been considered material.*

For the Project Manager, the standalone revenue for the year ended March 31, 2024, was ₹ 1,979.33 million Accordingly, in respect of the Project Manager and its Associates, all outstanding civil matters (including all outstanding cases, litigations, claims and legal notices) which involve an amount exceeding ₹ 98.97 million (being 5.00% of the standalone revenue for the year ended March 31, 2024) have been considered material.

Additionally, all outstanding cases involving the Investment Manager, the Project Manager or any of their Associates, where an adverse outcome would materially and adversely affect the business, operations or financial position or reputation of the Investment Manager or the Project Manager, irrespective of the amount involved, have been considered as material and disclosed.

For the Trustee, the total consolidated income for the financial year ended March 31, 2024, was ₹ 578.78 million. Accordingly, in respect of the Trustee, all outstanding cases which involve an amount exceeding ₹ 28.94 million (being 5.00% of the total consolidated income for the financial year ended March 31, 2024) have been considered material.

For entities which are common Associates of the Sponsor, the Investment Manager and/or the Project Manager, where

the abovementioned materiality thresholds in relation to the Sponsor, the Investment Manager and the Project Manager apply, the higher of the thresholds in terms of amount applicable to the Sponsor, the Investment Manager and the Project Manager have been considered material.

Further, in cases where outcome of one litigation impacts one or more other litigations, which individually are below materiality threshold, but collectively above, such cases have also been disclosed.

I. Litigation and Regulatory Actions against the Trust and its Associates

Nil

II. Litigation involving the Project SPVs

Material civil proceedings filed against the Project SPVs

MBEL

(i) The Collector of Stamps, Moradabad, passed an *ex-parte* order dated August 17, 2022 ("**Ex-parte Order**"), directing MBEL to pay stamp duty of ₹253.4 million in relation to a concession agreement dated February 19, 2010, entered into between MBEL and NHAI. MBEL had filed a restoration application before the Collector of Stamps against the Ex-parte Order, which was dismissed by an order dated July 27, 2023. Consequently, a writ petition was filed before the Allahabad High Court against the dismissal order dated July 27, 2023, and the Ex-parte Order. On May 8, 2024, the Allahabad High Court quashed both impugned orders and remanded the matter back to the Collector of Stamps, Moradabad for reconsideration. The Collector of Stamps at Moradabad disposed the case *vide* order dated October 16, 2024. and levied a stamp duty of ₹164.7 million, along with an interest at the rate of 1.5% per month. Thereafter, MBEL filed a writ petition challenging the order dated October 16, 2024. The writ petition is admitted and recovery is stayed by the High Court of Allahabad. Matter is currently pending.

PSRDCL

(i) Roadway Solutions India Private Limited ("**Roadway Solutions**") has filed a suit before the Court of Hon'ble Civil Judge, Senior Division, Pune, against ITNL, IL&FS Engineering and Construction Company Limited ("**IECCL**"), and PSRDCL for recovery of an amount of ₹820.77 million together with future interest of 24.00% per annum from the due date till realisation of the entire amount. This pertains to the construction of the four-laning project at Pune Solapur site, wherein IECCL issued a work order and subsequently assigned it to Roadway Solutions on June 15, 2012. Additionally, IECCL issued a letter of intent dated October 14, 2011. As per the letter, Roadway Solutions was obligated to commence mobilization activities immediately for the timely execution of the project. However, allegedly IECCL failed to hand over the clear site and make the due payments and hence the suit. The matter is currently pending.

Material civil proceedings filed by the Project SPVs

PSRDCL

(i) Arbitration proceedings were initiated by PSRDCL against NHAI claiming compensation for, *inter alia*, delays in handing over land for development of project, idling of resources, change of scope etc., under the concession agreement dated September 30, 2009, resulting in an arbitral award of ₹5,479.60 million in favour of PSRDCL ("**Award**"). NHAI filed an application under Section 34 of the Arbitration and Conciliation Act, 1996, ("**Act**") for setting aside the arbitral award which was dismissed by the Delhi

High Court ("**High Court**"). The said dismissal has been impugned by way of an appeal under Section 37 of the Act before the High Court by NHAI. In addition to this, PSRDCL has also filed an execution petition for seeking execution of the Award before the High Court. The matter is currently pending.

(ii) PSRDCL has filed a writ petition before the Delhi High Court challenging the unreasoned dismissal of its claim under Vivad Se Vishwas II (Contractual Disputes) One-Time Settlement Scheme ("**Scheme**"). PSRDCL has sought direction against NHAI for consideration of its awarded claim of ₹ 4657.66 million under the Scheme, along with a post-award interest at the rate of 9% per annum. The matter is currently pending.

TRDCL

Arbitration proceedings were initiated by TRDCL on December 17, 2020, against Kerala Road Fund Board (**"Board"**) claiming ₹3,586.70 million towards material contractual breaches on part of the Board, repayment of allegedly wrongly deducted annuity payments, and escalation in cost for construction, under the concession agreement dated March 16, 2004. A statement of defence has been filed by the Board on June 9, 2022. The final arguments have been concluded and the matter is now reserved for an award.

III. Litigation involving the common associates of the Sponsor, the Project Manager and the Investment Manager

Material Civil proceedings filed against ITNL

(i) 63 Moons Technologies Limited (**"63 Moons"**) has filed a suit before the Bombay High Court against IL&FS and ITNL, as well as former and present directors and key management personnel of ITNL (collectively, **"defendants"**) seeking a collective amount of ₹2,823.16 million, comprising principle and accrued interest, owing to a default in servicing of the non-convertible debentures of ITNL that 63 Moons had purchased from the capital markets. Summons were served to some of the defendants and subsequently, a written statement has been filed by the defendants. The matter is currently pending.

(ii) Savronik System India Private Limited ("**Savronik**") had filed an operational claim against ITNL before National Company Law Tribunal, Mumbai (**"NCLT"**) for an amount of ₹1,539.14 million for the work completed by it for the Chenani Nashri Tunnelway Limited project ("**Project**"). The claim has been made in relation to the contract signed between Savronik BCC JV Private Limited, a joint venture company of Savronik, Beigh Construction Company Limited and ITNL on March 21, 2015 ("**Contract**") for four-laning of Chenani/Nashri section of NH 1A. NCLT by way of its order dated July 27, 2020, instructed a claims management advisor (**"CMA"**) to verify the claim which was quantified at ₹183.47 million by the CMA. In relation to the claim quantified by the CMA, ITNL has filed an application seeking the following: i) setting aside of the admitted amount; ii) taking into considering an amount of ₹232.80 million that is due to be paid by Savronik to ITNL to be deducted from the claim made by Savronik. This payment was in relation to mobilisation advance paid to Savronik; direct deposit in Savronik's bank account towards payment for the 18 running bills/invoices; and payment to various third parties engaged by Savronik. NCLT clubbed both applications and directed the CMA to further verify the disputed claims. Following this, Grant Thornton Bharat LPP filed its report, and ITNL has subsequently filed an additional affidavit challenging the non-acceptance of certain claims by Grant Thornton Bharat LLP. The matter is currently pending.

Material Civil proceedings filed by ITNL

(i) ITNL has filed a summary suit before the Bombay High Court ("**High Court**") against Kohinoor Projects Private Limited (**"Kohinoor"**) claiming an amount of ₹883.13 million along with interest in relation to

a short-term unsecured loan of ₹360.00 million that was granted to Kohinoor on October 29, 2009, for one year at an interest rate of 16.00% per annum, in accordance with the agreement dated October 29, 2009, singed between Kohinoor and ITNL, which remains unpaid despite repeated demand being raised by ITNL. The matter is currently pending.

(ii) ITNL has filed writ petitions in the Karnataka High Court against the Government of Karnataka ("**GoK**) over the wrongful invocation of bank guarantees amounting to ₹220.60 million for two greenfield airport projects at Shimoga and Gulbarga. ITNL contends that GoK wrongfully invoked bank guarantees of ₹123.70 million for Shimoga and ₹96.90 million for Gulbarga, breaching the project development agreements ("**PDA**") and land lease deeds ("**LLD**") signed between GoK instrumentalities and the airport developers. ITNL has investments in Regional Airports Holdings International Limited which managed the affairs of Gulbarga Airport Developer Private Limited and Shimoga Airport Developer Private Limited. The matter is currently pending.

(iii) ITNL has filed a petition under Section 131 of the Companies Act, 2013, for the revision of financial statements for the FY 2018-2019 and 2019-2020. The matter is currently pending.

Regulatory proceedings involving ITNL

(i) A show cause notice dated October 20, 2021, was issued to ITNL, under Section 23E of the Securities Contracts (Regulation) Act, 1956 (**"SCRA"**). The notice found ITNL to be in violation of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Uniform Listing Agreement dated November 24, 2015, between ITNL and the National Stock Exchange (**"ULA"**), the erstwhile Equity Listing Agreement (ELA) until November 30, 2015, and the Accounting Standard on 'Related Party Disclosures'. As a result of these violations, the adjudication order dated September 15, 2022, was passed by the SEBI which imposed a penalty of ₹10.00 million on ITNL under Section 23E of the SCRA (**"Order"**). ITNL has filed an appeal against the Order seeking review and possible modification. The matter is currently pending.

(ii) A show cause notice dated May 19, 2022, was issued to IL ITNL by SEBI under Rule 4(1) of SEBI (Procedure for Holding Inquiry and Imposing Penalties) Rules, 1995, read with Section 15-I of SEBI Act, 1992. This notice is for adjudication under Section 15 A(b) of the SEBI Act concerning alleged non-compliance with Regulation 8 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015. The matter involves the alleged failure to cooperate with Credit Rating Agencies (CRAs) and submit no default statement/information regarding servicing of its debt obligations to CRAs. The case is currently pending.

(iii) ITNL has filed an appeal against the order of SEBI dated September 15, 2022, which levied a penalty on ITNL for alleged violations of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 relating to related party transactions. SEBI has suo moto stayed the enforcement of the penalty against ITNL pending the outcome of the decision in the civil appeal pending before the Supreme Court. The Securities Appellate Tribunal has also stayed the effect and operation of the SEBI order against all parties. The matter is currently pending.

(iv) A show cause notice dated March 12, 2024, was issued by the Registrar of Companies, Mumbai, under sections 454 and 197, read with section 198 of the Companies Act, 2013. The notice alleges contravention of section 198, i.e. calculation of profits leading to a purported breach of section 197 i.e payment of managerial remunerations to managing directors and a whole-time director for the financial years 2016-2017 and 2017-2018. ITNL duly replied to this notice *vide* letter dated April 17, 2024.

(v) A show cause notice dated July 15, 2024, was issued by Punjab National Bank (SASTRA division, New Delhi) identifying the default in the loan account of ITNL as 'wilful defaulter'. ITNL has duly responded to this notice with a letter dated August 21, 2024.

Material Civil Proceedings filed against IL&FS

(i) An individual ("**Plaintiff**") has filed a declaration suit against the State of Uttar Pradesh, IL&FS, and others ("**Defendants**"), before civil judge, Noida, alleging that certain portion of the land provided to IL&FS and Noida Toll Bridge Company Limited ("**NTBCL**") under the concession agreement dated November 12, 1997, executed among New Okhla Industrial Development Authority, IL&FS and Noida Toll Bridge Company Limited for construction of the Noida Toll bridge by the State of Uttar Pradesh, was disputed and hence could not have been provided. The Plaintiff has prayed for the appointment of a receiver for toll collection since it has been alleged that pending disposal of the suit, NTBCL would not have any right to collect tolls. Preliminary objections raised by NTBCL on jurisdiction and cause of action have been rejected. The matter is currently pending.

(ii) Arbitration proceedings have been initiated by Ambience Developers and Infrastructure Private Limited (**"Ambience"**) against IL&FS in relation to a business centre services agreement executed between IL&FS and Ambience in 2008 for a premises of 83,660.00 square feet being occupied by IL&FS in Ambience Park, Gurgaon (**"Agreement"**). Pursuant to an issue in relation to renewal of the Agreement, Ambience had asked IL&FS to vacate the premises and has claimed damages of ₹894.49 million for occupying the premises thereafter, along with ₹9.035 million per day till the premises are vacated and interest at 2.00% per annum. In response to the arbitration, IL&FS has filed an injunction suit before the District Court, Gurgaon ("**Court**") against which an application under section 8 of the Arbitration and Conciliation Act, 1996 was filed by Ambience which was rejected by the Court by way of its order dated December 19, 2017. **The order of the Court has been challenged by Ambience which is currently pending**. IL&FS has also filed an interim application before District Court Gurgaon under Order 39, Rule 1 & 2, read with Section 151 of the Code of Civil Procedure, 1908, seeking injunction of the arbitration proceedings pending the injunction suit in the Court. Arbitral proceeding has been stayed in view of the order dated July 5, 2024 in civil revision passed by the Punjab & Haryana High Court till final adjudication and disposal. The matter is currently pending.

(iii) Oman International Bank SAOG (**"Bank"**) has filed a civil suit against Iridium India Telecom Limited (**"IITL"**) and IL&FS under Code of Civil Procedure, 1908 before Bombay High Court, claiming ₹109.11 million along with interest at 15.18% per annum from August 2000 till the payment. This suit is in relation to default of a short-term loan of ₹100.00 million provided by the Bank to IITL for which security was provided by IL&FS by way of letter of support dated April 7, 1999 in which misrepresentations were allegedly made by IL&FS. However, in view of the moratorium order passed by the NCLAT, the suit has been adjourned *sine die* on July 15, 2019 with liberty to mention as and when the moratorium comes to an end. The matter is currently pending.

(iv) Small Industries Development Bank of India (**"SIDBI"**) has filed an application under Section 45QA of the Reserve Bank of India Act, 1934, before the National Company Law Tribunal, Mumbai, against IL&FS pursuant to default in repayment of inter corporate deposits of ₹5,000.00 million issued by SIDBI to IL&FS. Upon continuous follow ups by SIDBI for releasing the due payments towards the corporate deposits, IL&FS released only part sum of ₹500.00 million on August 31, 2018. IL&FS *vide* its letter dated September 3, 2018, said that this payment is towards the principal dues against FDR No. STD/M/R/2017-2018/0024. However, on November 5, 2019, the matter was adjourned *sine die* in view of the moratorium order passed by NCLAT dated October 15, 2018. The matter is currently pending.

(v) An individual (**"Plaintiff**") has filed a public interest litigation ("**PIL**") against IL&FS and others before the Gujarat High Court alleging (a) appointment of IL&FS as joint venture partner by the Government of Gujarat without inviting public bids in relation to management services contract under the garb of Gujarat International Financial Tec-City Co. Ltd. (JVC) on a pre-selected basis**,** (b) IL&FS through its nominated directors & with the connivance of Government of Gujarat nominated directors, appointed various consultants some of them being affiliates of IL&FS to outsource core services.(c) offering development rights i.e. development rights were granted at a discounted price without inviting bids awarded to subsidiary of IL&FS. These rights were first proposed to be allotted only through a bidding process which was not done. The price of these rights was given at a significant discount to the general price agreed for award of these rights to other interested parties. These rights were awarded to IL&FS at a discounted price without inviting bids who, in turn transferred to its subsidiary which prejudicially affected income of the Government of Gujarat i.e. 1.00% premium over landed project cost because the same was not collected. Therefore, causing loss to public at large. Such rights were offered at discounted prices under agreement dated May 15, 2007 (d) squandering/ siphoning of public money belonging to Gujarat International Financial Tec-City Co. Ltd. (GIFT) as a government company by IL&FS resulting in a loss to the exchequer among other things. The matter is currently pending.

(vi) Certain individuals ("**Plaintiffs**") have filed a suit before Bombay High Court against IL&FS and others seeking an order directing IL&FS to not effect transfer of 500 equity shares of Ashapura Minechem Limited lying with IL&FS as a depository participant and to freeze the demat account to the extent of 500 equity shares of Ashapura Minechem Limited. It has been submitted by IL&FS that it is not a depository participant of 500 shares and hence not a necessary party to the suit. IL&FS has moved a notice of motion for deleting its name from the suit. The matter is currently pending.

(vii) Nina Waterproofing Systems Private Limited ("**Nina**") has filed a petition before National Company Law Tribunal, Mumbai, under Section 45QA of the Reserve Bank of India Act, 1934, against IL&FS in relation to default in repayment of inter corporate deposits of ₹110.00 million placed by Nina with IL&FS. However, on September 6, 2021, the matter was adjourned s*ine die* in view of the moratorium order passed by NCLAT dated October 15, 2018. The matter is currently pending.

(viii) A commercial suit has been filed by Arcons Infrastructure and Construction Private Limited ("**Arcons**") before the Bombay High Court against India Factoring and Finance Solutions Private Limited (**"IFFSPL**"), ITNL, IL&FS and others for restraining IFFSPL from acting upon the factoring agreement dated July 5, 2018**,** executed among India Factoring & Finance Solutions Private limited and Arcons**,** and calling upon ITNL to honour the bill of exchange dated July 9, 2018**.** IL&FS has been made a party because there is a direct prayer against it i.e. IL&FS along with ITNL be directed to furnish security to satisfy the Plaintiffs' claim and also direct the defendants (including IL&FS), their agents, persons claiming through them be restrained from selling, transferring, or in any manner dealing with the immovable & fixed assets in India. The matter is currently pending.

(ix) Certain individuals ("**Plaintiffs**") have filed a writ petition against State of Uttar Pradesh, IL&FS and others before the Allahabad High Court being aggrieved by the fact that a parcel of land owned by them, which was agreed to be acquired by Nagar Nigam, Saharanpur for a Municipal Solid Waste Unit to be developed as part of the Saharanpur Smart City Project, was not acquired. IL&FS has been made a party to this suit because IL&FS Township & Urban Assets Limited which is a subsidiary of IL&FS is the project management consultant for the Saharanpur Smart City Project as per the contract agreement dated August 2, 2018. The matter is currently pending.

(x) A suit for permanent injunction has been filed by Hill County Villa Owners Association and Hill County Apartment Owners Association ("**Plaintiffs**") before Junior civil judge, Medchal, against Hill County Properties Limited and IL&FS (**"Defendants"**) under Section 26 of the Code of Civil Procedure, 1908,

seeking direction for restraining the Defendants from interfering with the lawful possession and enjoyment of the property situated at Kinder Garden Community Center admeasuring 12768.47 swaure metres in Sy. No. Part of 192/p, 201/p and 282/p situated in the layout of Hill County at Bachupally village, Quthbullapur Mandal, Medchal district bounded by North : Hill County Villas, South : amenities (religious places earmarked), East : Road, West : Hill County Apartments by the plaintiffs. Matter is currently pending.

(xi) A suit for recovery has been filed by Deeplok Financial Services Limited and others ("**Plaintiffs**") before the commercial court, Alipore, against certain individuals ("**Defendants**"), IL&FS, IFSL and A.K. Capital Services Limited in relation to a total sum of ₹95.52 million taken by Defendants from the Plaintiffs from time to time with a promise of payment of principal sum after expiry of seven years and payment of an assured sum for those seven years at the rate of 7.85% to 8.56% on the principal sum. As a way of security, the Defendants had assured allotment of preference shares of any of their blue-chip companies i.e. IL&FS and IFSL which were promised to be purchased back by the Defendants. In return of these preference shares as security, the Plaintiffs were made to make payment of the principal sum in the name of IL&FS and IFSL. After receiving the principal sum, the assured sum promised to be paid annually was paid for about two and a half year after which no further payments have been made by the Defendants who keep refusing to make any payments. Hence, the suit for recovery of money has been filed. The matter is currently pending.

The arbitration concerns disputes arising from a concession agreement between Noida Toll Bridge Company Limited ("**NTBCL**"), IL&FS, and New Okhla Industrial Development Authority ("**NOIDA**"). NTBCL, a special purpose vehicle incorporated by IL&FS, developed the Delhi Noida Toll Bridge Project. NTBCL has alleged breaches by NOIDA, including failure to grant development rights and failure to revise fees annually. NTBCL seeks compensation under and modifications to the concession agreement. Further, IL&FS, who is also a party to the agreement, filed a separate claim based on misrepresentation, loss of shares' value, and reduced returns. NOIDA had raised an objection regarding the jurisdiction of the arbitral tribunal which was subsequently dismissed by the tribunal. The dismissal order was challenged by NOIDA before the Delhi High Court. However, the High Court also dismissed the said application *vide* order dated January 31, 2019. Thereafter, NOIDA filed a special leave petition before the Supreme Court challenging the order of the Delhi High Court. The Supreme Court stayed the arbitration proceeding *vide* order dated April 04, 2019. The matters are currently pending. In the *interregnum*, a public interest litigation was filed before the Allahabad High Court by the Federation of Noida Residents Welfare Association ("**FONRWA**"), seeking, *inter alia*, to restrain NTBCL from collecting tolls on the DND flyway, a direct 8-lane expressway connecting New Delhi to Noida. The Allahabad High Court allowed the petition *vide* its order dated October 26, 2016. This order was challenged through a special leave petition; however, the Supreme Court, *vide* its order dated December 20, 2024, upheld the Allahabad High Court's decision and further directed that the arbitration proceedings between NOIDA and NTBCL be heard and decided separately on their own merits. NTBCL has filed a review petition before the Supreme court against the order dated December 20, 2024. Both the matters are currently pending.

(xii) Certain appeals have been filed before the Hon'ble Supreme Court challenging the March 12, 2020 order passed by the NCLAT, particularly contesting the moratorium granted and the resolution framework established by the NCLAT. It is to be noted that the next tentative date of hearing, as indicated on the Hon'ble Supreme Court's website, is scheduled for February 19, 2025. The following appeals have been clubbed and are heard by the Supreme Court together:

S. No.	Appeals	Appellant v/s IL&FS
1.	C.A.2989-2990/2020	Hindustan Zinc Limited Employees Contributory Provident Fund Trust
2.	C.A. No. 496-497 / 2021	India Infrastructure Finance Company Limited

S. No.	Appeals	Appellant v/s IL&FS
3.	C.A. No. 2356 / 2021	Bharat Heavy Electricals Ltd (Bap Unit) Employees Provident Fund Trust
4.	C.A. No. 5011 / 2021	BHEL Employees Provident Fund Trust, Jhansi
5.	C.A. No. 4675 / 2021	BHEL Employees Provident Fund Trust, Bangalore
6.	C. A. No. 6220 of 2021	Bharat Heavy Electricals Limited New Delhi Provident Fund
7.	C.A. No. 6211 / 2021	BHEL Employees Provident Fund Trichy
8.	C.A. No. 6210 / 2021	BHEL PPD EPF Trust, Chennai
9.	C.A. No. 6209 / 2021	Bharat Heavy Electricals Employees Gratuity Fund
10.	C.A (D) No. 9513 / 2021	SREI Infrastructure Finance Limited
11.	C.A. No. 2392 / 2021	BHEL Employees Provident Fund Trust, Ranipur, Hardwar
12.	C.A. No. 4567 / 2021	Maharashtra Metro Rail Corporation Limited
13.	C.A. No. 260 / 2021	PPL Employees Provident Fund Trust
14.	C.A. No. 4721 / 2021	BHEL Employees Provident Fund Trust, Bhopal
15.	Diary No. 17014/2020	IDBI Bank Limited
16.	C.A. No. 3323-3324/2020	L&T Infra Debt Fund Limited
17.	C.A. NO. 3529-3520/2020	63 Moons Technologies Ltd.
18.	C.A. NO. 6800-6801/2021	IL&FS Infrastructure Debt Fund
19.	C.A. NO. 334-335/2021	Yes Bank Limited
20.	C.A. NO. 189/2021	Aditya Birla Finance Limited
21.	C.A. No. 253 / 2021	Zuari Industries Ltd. Employees Provident Fund
22.	C.A. NO. 3752-3754/2022	GAIL (India) Limited
23.	SLP (C) NO. 27471/2023	DLF LIMITED v IECCL
24.	C.A. 3209/2019	Sanjay Kumar Ruia v IECCL

(i) An appeal was filed by DSP Asset Managers Private Limited before NCLAT seeking condonation of delay in filing a claim with Grant Thornton Bharat LLP. The matter is currently pending.

(ii) An application was filed by New Tirupur Area Development Corporation Limited ("**NTADCL**") on April 3, 2024. The application aims to set off ₹1162.00 million owed by IL&FS to NTADCL with the amount of ₹1729.00 million payable by NTADCL to IL&FS.

(iii) An application was filed by Yes Bank Limited (now substituted with J.C. Flowers Asset Reconstruction Company Private Limited). The application seeks the transfer of Chenani Nashri Tunnelway Limited into the Trust. The next date for proceedings in this case has not been intimated.

(iv) An application was filed by the administrator of SREI Infrastructure Finance Ltd. ("**SIFL**") under section 66 of the Insolvency & Bankruptcy Code, 2016, before the NCLT Kolkata bench against Fagne Songadh Expressway Limited ("**FSEL**"), SIFL group entities, and ex-management. The application aims to impugn the SIFL Loan, purportedly further on-lent by FSEL, as a fraudulent transaction. It seeks directions against FSEL and two promoters of the SREI Infrastructure Finance Ltd. group to reimburse ₹ 2704.5 million, and 18% interest from October 1, 2021. This application was filed on April 8, 2024. In the proceedings related to applications filed under section 66 of the Insolvency & Bankruptcy Code, 2016, NCLT directed third parties included in this application to submit requests for discharge. The matter is currently pending.

(v) I.A. (IB) 470 of 2024 was filed by Fagne Songadh Expressway Limited ("**FSEL**") before the NCLT Kolkata Bench against SREI Infrastructure Finance Ltd. ("**SIFL**") group entities and ex-management. FSEL submitted a discharge application seeking to be removed as a respondent to the Section 66 Application filed by SIFL before the NCLT, Kolkata Bench. This application was filed on April 10, 2024. The matter is currently pending.

(vi) The Union of India has initiated proceedings against IL&FS and others under sections 241-242 of the Companies Act, 2013, with various company applications, including IL&FS, ITNL and IL&FS Financial Services Limited. These proceedings involve multiple petitions filed against IL&FS Group entities. The next date for these proceedings is yet to be determined.

(vii) Small Industries Development Bank of India ("**SIDBI**") has filed petitions against IFSL under section 45 QA of the Reserve Bank of India Act, 1934, seeking recovery of deposits amounting to ₹5000 million, each. These cases has been adjourned *sine die* due to the moratorium order passed by NCLAT. The matters are currently pending.

(viii) Cube Highways & Infrastructure II Ltd. ("**Cube**") filed commercial suit against IL&FS Transportation Networks Ltd. and others in the Bombay High Court. IL&FS and ITNL are defendants to the suit. The suit was filed by Cube seeking an injunction restraining the transfer of the shares of Chenani Nashri Tunnelway Limited (**"CNTL"**) to the IL&FS InvIT and specific performance of the SPA dated December 4, 2020. Additionally, Cube filed two interim applications, both seeking an injunction restraining the transfer of the shares of CNTL. The matter is currently pending.

(ix) In a lawsuit filed by 63 Moons Technologies Limited and others against IL&FS and ITNL, the plaintiffs seek damages amounting to ₹ 2,823.16 million for allegedly causing financial loss by manipulating the books of accounts of ITNL. IL&FS and ITNL, as defendants, have filed limited written statements seeking dismissal of the suit due to the subsisting moratorium. The matter is currently pending.

(x) In a summary suit, Mukund Sapre filed a suit against IL&FS and another. IL&FS and ITNL are defendants to the suit. The suit was filed for the recovery of outstanding dues and termination benefits from the defendants. It's worth noting that this suit will be transferred to the Bombay City Civil Court due to a change in the pecuniary jurisdiction of the High Court. The matter is currently pending

(xi) ICICI Bank Limited ("**ICICI Bank**") filed a writ petition against Union of India and others. IL&FS and IL&FS Engineering and Construction Company Limited ("**IECCL**") are respondents to the writ petition. The petition seeks, among other things, expeditious hearing of an interim application in a company petition filed before the NCLT, Mumbai Bench. The matter is currently pending.

Material Civil Proceedings filed by IL&FS

(i) IL&FS has initiated arbitration proceedings against Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited **("MPAKVN")** and Madhya Pradesh State Industrial Development Corporation **("MPSIDC")** claiming ₹261.35 million for recovery of the amounts spent by IL&FS, for the construction and maintenance of the Rau Pithampur Bridge and approach road under concession agreement dated June 15, 1990 executed between MPAKVN, MPSIDC and IL&FS**.** The arbitration tribunal passed an award, dated September 16, 2008, directing MPAKVN and MPSIDC to pay ₹129.30 million to IL&FS along with interest of 6.00% per annum from September 2008 until the payment. This award has been challenged by MPAKVN and MPSIDC under section 34 of the Arbitration and Conciliation Act, 1996 before the District Judge, Indore. The matter is currently pending.

(ii) IL&FS has filed a suit for specific performance before District Court, Gurgaon, against Ambience Developers and Infrastructure Private Limited (**"Ambience"**) in relation to the business centre services agreement executed between IL&FS and Ambience in 2008 for a premises of 83,660 square feet being occupied by IL&FS in Ambience Park, Gurgaon (**"Agreement"**). As per the Agreement, the period of occupation was an initial period of nine years and a subsequent three years of rent free period. However, pursuant to some confusion regarding the renewal of the Agreement, IL&FS was asked to vacate the

premises by Ambience. The suit seeks to enforce IL&FS's right for the rent free period and to secure the security deposit of ₹105.10 million. Ambience has filed an application under Section 8 of the Arbitration and Conciliation Act, 1996. The matter is currently pending.

For details of the arbitration proceedings initiated by Ambience in this matter, please refer to "Material Proceedings filed against IL&FS".

(iii) A memorandum of agreement **("MoA")** was entered into between IL&FS and Government of Rajasthan **("GoR")** for the project under Bhamashah Financial Empowerment Scheme **("BFFS project").** The BFFS Project was put on hold and IL&FS claimed compensation of ₹722.10 million from GoR for expenses incurred during implementation phase but the claim was rejected by GoR along with IL&FS's notice of arbitration. An application under Section 11 of the Arbitration and Conciliation Act, 1996 **("Act")** was filed by IL&FS before the Rajasthan High Court **("High Court")** seeking appointment of arbitrator. An arbitration award dated April 24, 2021, was passed in favor of IL&FS allowing its entire claim of ₹1340.80 million excluding interest **("Arbitration Award").** Opposing the Arbitration Award, an application under section 34 of the Act was filed by GoR before the Commercial Court, Jaipur **("Commercial Court")** which was dismissed, and the Arbitration Award was upheld by way of an order dated April 12, 2022. The order dated April 12, 2022, was appealed against by GoR under Section 37 of the Act before the High Court which by way of its order dated October 14, 2022, set aside the Arbitration Award and the order dated April 12, 2022 of the Commercial Court. A special leave petition has been filed by IL&FS under Article 136 of the Constitution of India before the Supreme Court of India against the order of the High Court dated October 14, 2022. Further, GoR has also filed a special leave petition on November 9, 2023 against IL&FS before the Supreme Court impugning the order dated October 14, 2022. Both the cross appeals are currently pending.

(iv) A company petition has been filed by IL&FS and others before the National Company Law Tribunal, Mumbai, (**"NCLT**") against Digital Port Limited Dighi Port Limited ("**DPL**"), Balaji Infra Projects Limited ("**BIPL**"), Vijay Kalantri, Vishal Kalantri, Vinay Kalantri, Mohini Kalantri, Sangeeta Kalantri, and Vikas Kalantri, alleging illegal issuance of shares by DPL to BIPL, in violation of certain shareholders' agreement executed among the parties to the company petition to reduce IL&FS's shareholding in DPL below 51.00%. NCLT, by way of its order dated August 8, 2016, has directed DPL to maintain status quo in respect of the disputed shares. The matter is currently pending.

(v) IL&FS filed an application for approval for the sale/resolution process of Chenani Nashri Tunnelways Limited ("**CNTL**"), eventually approved by Justice (Retd.) D.K. Jain. Cube subsequently filed an application to be impleaded and seek approval in the same case. Later, Cube filed another application seeking urgent listing of the previous case and requesting an injunction against the transfer of CNTL to the Trust.

(vi) IL&FS filed C.A. No. 9 of 2023 seeking approval of an OTS agreement between IFSL and Amrit Environmental Technologies Private Limited ("AETPL") facilitated through Orient Green Power Company Limited, AETPL's Corporate Guarantor. Justice Jain's approval was received on August 7, 2022. Subsequently, the NCLT application related to this matter was filed on December 12, 2022, and is currently pending.

(vii) IL&FS has filed an application against the insolvency resolution professional /resolution professional of Attivo Economic Zone Pvt. Ltd. ("**AEZ***"*) before the NCLAT, Delhi for setting aside and quashing the letter dated September 12, 2023, issued by AEZ to IL&FS Financial Services Limited rejecting the claim of the ₹5,049.03 million and ousting it from the committee of creditors of AEZ.

(viii) An application filed by IL&FS before the NCLAT seeks to challenge the impugned notice dated June 28, 2021 ("**Impugned Notice**"), issued by the Assistant Commissioner of Sales Tax in Mumbai. The notice aims to recover an amount from the company's account with Punjab National Bank, aggregating ₹2,249.10 million, pertaining to FY 2011 and 2012, and FY 2015 and 2016. IL&FS contends that the recovery notice is invalid due to the company being under a moratorium, preventing any recovery actions. The matter is currently pending.

(ix) An application was filed on behalf of IL&FS and other group companies against various banks ("**Respondents**") before the NCLAT, Delhi that had issued show cause notices for the declaration of the companies and its directors as wilful defaulters. The application sought orders of restraint against the banks from initiating and/or pursuing such proceedings. This matter was heard on March 19, 2024, and the court granted interim relief stating that no coercive actions are to be taken against the companies and directors until further orders are issued. The NCLAT was pleased to issue notice on the application and has restrained the Respondents from taking any actions in contravention of the directions contained in the order dated October 15, 2018. The NCLAT, *vide* its order dated March 19,2024, has restrained banks from taking any such coercive actions, as they are in contravention of the directions contained in the order dated October 15, 2018, which accorded protection against such actions to the newly appointed directors by the New Board of IL&FS. The matter is currently pending.

(x) IL&FS filed a writ petition against the Assistant Commissioner of Income Tax – Circle 14(1)(1) and others. The petition challenges the reassessment proceedings initiated by the income tax authorities for the assessment year 2015-16. Reassessment has been stayed pursuant to an order dated February 12, 2024, passed by the High Court, which was extended on March 19, 2024. The matter is currently pending.

(xi) IL&FS filed a writ petition against the Assistant Commissioner of Income Tax – Circle 14(1)(1) and others. The petition challenges the reassessment proceedings initiated by the income tax authorities for the assessment year 2017-18. Reassessment has been stayed pursuant to an order dated February 12, 2024, passed by the High Court, which was extended on March 19, 2024. The matter is currently pending.

Material Criminal proceedings filed against IL&FS

(i) Oman International Bank SAOG (**"Bank"**) has filed a criminal complaint against Iridium India Telecom Limited (**"IITL"**), IL&FS and others under Sections 420, 465, 467 read with section 120 of Indian Penal Code, 1860 before Additional Chief Metropolitan Magistrate Court at 47th Court, Esplanade, Mumbai alleging misrepresentation regarding financial position of IITL in the letter of support dated April 7, 1999 issued by IL&FS, based on which a short term loan of ₹100.00 million was sanctioned to IITL by the Bank. Prior to this, the Bank had also filed similar complaint before the Economic Offences Wing, Mumbai which was dismissed. The matter was also taken up to the Supreme Court contending that the letter of support should be treated as guarantee, but the claim was rejected. The criminal complaint is currently pending.

(ii) Certain individuals have filed criminal miscellaneous petition before Punjab and Haryana High Court, under section 482 of the Code of Criminal Procedure, 1973, against Union of India, Emerald Lands (India) Private Limited **("Emerald"),** IL&FS, IL&FS Financial Services Limited and others, alleging that Emerald, along with IL&FS, IFIN, and other entities, engaged in public money laundering and fraudulent activities. The petitioners sought a directive for the Central Bureau of Investigation, Enforcement Directorate, and Central Vigilance Commissioner to investigate these allegations. The case highlighted overvaluation of land, illegal land transactions, and misuse of funds. The petition was

dismissed on April 3, 2023, for want of prosecution. Subsequently, another criminal miscellaneous petition was filed by the petitioners seeking to recall the dismissal order of April 3, 2024. The matter is currently pending.

(iii) Gilroy Rodrigues has filed a company petition against IL&FS under section 74(2) of the Companies Act, 2013. The matter is currently pending.

Material Criminal proceedings filed by IL&FS

(i) IL&FS has filed a criminal complaint against Dhanashree Vhatkar, an ex-employee of IL&FS (**"Accused"**) under sections 427, 441 and 453 of the Indian Penal Code, 1860, before Metropolitan Magistrate Court, Bandra alleging criminal trespass on the premises of IL&FS after working hours on December 19, 2015. The Accused was granted anticipatory bail opposing which an intervention application was filed by IL&FS which was rejected. A petition under section 482 of Cr.P.C. 1973 for quashing the complaint has been filed by the Accused before the Bombay High Court where the matter is currently pending.

Note: Common associates of the Sponsor, Project Manager and the Investment Manager viz. ITNL and IL&FS also form part of the Sponsor Group.

IV. Litigation involving the common associates of the Sponsor and the Project Manager

Material Civil proceedings filed against common associates of the Sponsor and the Project Manager

*Srinagar Sonamarg Tunnelway Limited ("**SSTL**")*

(i) IL&FS filed an application before the NCLAT on behalf of SSTL, seeking direction upon the National Highways and Infrastructure Development Corporation Limited ("**NHIDCL**") to grant its consent for the foreclosure of the SSTL project and to execute the settlement agreement, subject to the approval of Justice (Retd.) D.K. Jain without imposing any further conditions or deductions. By an order dated November 22, 2024, the NCLAT allowed the application filed by SSTL. Consequently, NHIDCL has filed a civil appeal before the Supreme Court challenging the NCLAT's order dated November 22, 2024. The matter is currently pending.

Fagne Songadh Expressway Limited ("FSEL")

(i) SREI Equipment Finance Limited (**"SREI"**) has filed an application against FSEL through its administrator under section 66 of the Insolvency and Bankruptcy Code, 2016 before National Company Law Tribunal, Kolkata alleging fraudulent/related party transactions between SREI and FSEL and have made a claim of ₹2,705.40 million with interest in relation to the loan sanctioned by SREI to FSEL. Furthermore, ILFS filed the discharge application on behalf of FSEL because FSEL is not a necessary party, not a proper party. The matter is currently pending.

Karyavattom Sports Facility Limited ("KSFL")

(i) Premier International Convention Centre and Hotel ("**Premier**") has filed a writ petition before the High Court of Kerala at Ernakulam against the Government of Kerala (GoK), KSFL, ITNL and IL&FS. The NCLT had initially approved the sale of 100% shareholding held by ITNL in KSFL to a consortium led by Premier through its order dated June 4, 2024. However, following a meeting with the Minister of

Sports and IL&FS on August 14, 202414, the government declared the share sale approval illegal and invalid. The government then proposed to take over the Greenfield Stadium for ₹ 1,750 million, the highest bid amount, and instructed IL&FS to freeze the share sale process. Premier has challenged this government decision before the High Court. The Kerala High Court subsequently stayed the government's decision on September 5, 2024. IL&FS has filed a common reply on behalf of KSFL and ITNL. The matter is currently pending.

Jharkhand Road Projects Implementation Company Limited ("JRPICL")

(i) Sadbhav Engineering Limited (**"Sadbhav"**) had initiated arbitration proceedings against JRPICL claiming a sum of ₹1,519.40 million on the basis of non- fulfilment of the terms of the contract executed between parties dated October 16, 2009, for execution of all design, engineering, procurement, construction, completion, and maintenance during the implementation period in respect of Ranchi Ring Road of Jharkhand ring. An arbitration award dated August 6, 2022 was passed in favour of Sadbhav for ₹726.50 million plus interest at 10.00% from the date of claim (**"Arbitration award"**) against which JRPICL has filed an application under section 34 of the Arbitration and Conciliation Act, 1996 (**"Act")** before the Delhi High Court. Sadbhav filed an application before the Ranchi Commercial Court ("**Court**") under section 36 of the Act, seeking the execution of the arbitration award. On April 10, 2024. The Court allowed the execution application, issued a garnishee notice to the Government of Jharkhand (GoJ), and directed Sadbhavto obtain an order from the NCLAT confirming that no stay existed against the execution of the arbitral award. Consequently, Sadbhav filed an application with the NCLAT for further clarification. IL&FS has also filed an application on behalf of JRPICL for clarification. In its order dated August 28, 2024, the NCLAT clarified that the stay against enforcement actions concerning JRPICL remained unchanged. IL&FSbrought the NCLAT's clarification to the attention of the Court and requested appropriate orders for the dismissal or disposal of the execution petition in line with the protection granted by the stay order. Matter is currently pending.

(ii) GKC Projects Limited **("GKC Projects")** had initiated arbitration proceedings against JRPICL in relation to the Adityapur Kandra Project, claiming a sum of ₹1,730.10 million, as compensation for losses due to underutilization of plants, equipment, and resources during the original tenure of the construction agreement dated June 11, 2015, along with compensation for damages during extended stay under the construction agreement. An arbitration award dated March 28, 2023, was passed in favour of GKC Projects for ₹1,130.00 million (**"Arbitration award"**) against which JRPICL has filed an application under section 34 of the Arbitration and Conciliation Act, 1996 (**"Act")** before Ranchi commercial court. GKC Projects has also filed an application before the Ranchi District Court (**"Court**") under Section 36 of the Act seeking execution of the Arbitration award. On April 10, 2024, the court allowed the execution application, issued a garnishee notice to the Government of Jharkhand (GoJ), and directed GKC to obtain an order from the NCLAT confirming that no stay existed against the execution of the arbitral award. Consequently, GKC filed an application with the NCLAT for further clarification. IL&FS also filed an application on behalf of JRPICL for clarification. In its order dated August 28, 2024, the NCLAT clarified that the stay against enforcement actions concerning JRPICL remained unchanged. IL&FS brought the NCLAT's clarification to the attention of the Court and requested appropriate orders for the dismissal or disposal of the execution petition in line with the protection granted by the stay order. This matter is currently pending.

(iii) GKC Projects Limited **("GKC Projects")** had initiated arbitration proceedings against JRPICL in connection with the construction agreement dated July 28, 2011, that relates to the Chaibasa Kandra Chowk Project, claiming ₹2,182.30 million for deployment of necessary equipment and manpower. An arbitration award was passed on May 4, 2023, in favour of JRPICL, rejecting all the claims of GKC Projects (**"Arbitration Award"**). GKC Projects has challenged the Arbitration Award before the Ranchi District Court. This matter is currently pending.

(iv) An application is filed by Sadbhav Engineering Limited and GKC Projects Limited before the NCLAT, seeking reliefs *inter alia* to restrain the IL&FS and JRPICL from making any payment to its related party unsecured creditor i.e. ITNL from the annuity amounts (both outstanding and due) received or to be received from the Government of Jharkhand pending disposal of clarification application filed by the Sadbhav Engineering Limited & GKC Projects Limited. The matter is currently pending.

(v) Sadbhav Engineering Limited ("**Petitioner**") has filed a writ petition before the Jharkhand High Court ("**Court**") against the State of Jharkhand, Jharkhand Accelerated Road Development Company Limited ("**JARDCL**") and JRPICL challenging the non-payment of a ₹1,138.9 million bonus verified under a concession agreement. The Petitioner has sought the deposit of ₹1,138.9 million with the Court, interest at State Bank of India prime lending rate + 2% per annum from May 8, 2013, and the immediate release of 50% of the bonus with proportionate interest. The matter is currently pending.

(vi) State of Jharkhand filed a letters patent appeal ("**LPA**") before the Jharkhand High Court on December 9, 2024, challenging the order dated April 9, 2024. The order directed the Government of Jharkhand to pay ₹1,064.78 million to JRPICL and Jharkhand Accelerated Road Development Company Limited. This payment pertained to claims approved under an administrative order dated March 30, 2016, issued by the Government of Jharkhand, which remains unpaid despite the directive. The matter is currently pending.

Baleshwar Kharagpur Expressway Limited ("BKEL")

State Bank of India ("**SBI**") filed an application before the NCLAT ("**Application"**), seeking a declaration that the premium payment to NHAI is not a going concern payment and that NHAI should be restrained from taking any coercive action that would jeopardize the recovery of the dues owed to the lenders. NCLAT *vide* order dated April 2, 2024, allowed the Application. civil appeal (**"Appeal"**) has been filed by the NHAI before the Supreme Court, against the impugned order dated April 2, 2024, passed by the NCLAT. . The matter is currently pending.

MP Border Checkpost Development Company Limited ("MPBCDCL")

(i) Canara Bank has filed an application against MPBCDCL, seeking reliefs related to the termination of the Project. The bank has requested an order to restrain MPBCDCL from claiming any monies in its escrow account as 'going concern' expenses, as MPBCDCL and the Madhya Pradesh Road Development Corporation Limited have terminated the project, and MPBCDCL is no longer operational. Additionally, Canara Bank seeks permission to withdraw the funds lying in the escrow account of MPBCDCL in accordance with the escrow agreement and concession agreement. Further, Canara Bank contends that claims related to concession fees or other expenses cannot be consider as 'going concern' expenses because the project is no longer operational. The matter is currently pending.

(ii) Canara Bank has filed an application seeking relief against MP Road Development Corporation Limited ("**MPRDCL**") and MPBCDCL. It has sought a direction that MPRDCL cannot recover and MPBCDCL is not obligated to pay, amounts such as concession fees, independent engineer fees, delay damages, or other claims. These claims include interest, default interest, and penal interest. The payments must comply with the waterfall mechanism under an escrow agreement. This mechanism prioritizes debt repayment to senior lenders by MPBCDCL before any such payments are made. The application also seeks a declaration that payments like concession fees, additional concession fees, and related interest demanded by MPRDCL do not qualify as 'going concern' payments for MPBCDCL. It emphasizes adherence to the escrow agreement's provisions. It also disputes the classification of certain claims as 'going concern' expenses. The matter is currently pending.

IL&FS Rail Limited ("IRL")

(i) Enso Infrastructure Limited (**"Enso"**) has filed a petition before National Company Law Tribunal, Chandigarh ("**NCLT"**) against ITNL, IRL and its subsidiaries (Rapid Metro Rail Gurgaon Limited and Rapid Metro Rail Gurgaon South Limited) under sections 241 and 242 read with sections 210, 213, 244 and 246 of the Companies Act, 2013 alleging oppression and mismanagement in relation to the operation and mismanagement**.** The matter is currently pending.

(ii) Enso Infrastructure Limited (**"Enso"**) has filed a petition before National Company Law Appellate Tribunal ("**NCLAT"**) against IL&FS, IRL and its subsidiaries (Rapid Metro Rail Gurgaon Limited ("**RMGL**") and Rapid Metro Rail Gurgaon South Limited ("**RMGSL**")) for contempt of the moratorium order dated October 15, 2018 passed by NCLAT and disposing off assets of the company by seeking termination of the concession agreement dated December 9, 2009 and January 3, 2013 executed among RMGL and Haryana Urban Development Authority ("**HUDA**") and RMGSL and HUDA. The act has been alleged to be against section 14(1)(b) of the Insolvency and Bankruptcy Code, 2016 and also against the interest of the company's lenders and creditors. The matter is currently pending.

Rapid Metro Rail Gurgaon South Limited ("RMGSL")

Note: Kindly refer to the matter disclosed under IL&FS Rail Limited ("IRL") above, initiated by Enso Infrastructure Limited since those also involve RMGSL as a party.

Rapid Metro Rail Gurgaon Limited ("RMGL")

Note: Kindly refer to the matters disclosed under IL&FS Rail Limited ("IRL") above, initiated by Enso Infrastructure Limited, since those also involve RMGL as a party.

(i) An individual ("**Plaintiff**") has filed a case against RMGL and others ("**Defendants**") before the Civil Court, Gurugram. RMGL had an agreement with the legitimate owners of the depot land. However, due to an internal dispute among the plaintiff and other defendants in relation to the depot land, the former has filed the case claiming his share in the land. The matter is currently pending.

(ii) A special leave petition ("**SLP**") has been filed by the National Media Centre ("**NMC**") against State of Haryana, RMGL and others ("**Defendants**") before the Supreme Court, against dismissal of a writ petition by the Punjab and Haryana High Court. The writ petition was filed challenging the taking over of a portion of a society's land by the government of Haryana without acquiring it under the Land Acquisition Act and without providing any compensation. The land fell within the part earmarked for widening of the road and installation of utilities. The matter is currently pending. RMGL during implementation of its Metro project has erected few pillars on the captioned land parcel hence was included as party.

RIDCOR Infra Projects Limited ("RIPrL")

(i) Punjab National Bank has initiated recovery proceedings against RIPrL before the Debt Recovery Tribunal in relation to the loan of ₹2,594.30 million including interest. The matter is currently pending.

(ii) Bank of Baroda has initiated recovery proceedings against RIPrL before the Debt Recovery Tribunal in relation to the loan of ₹462.60 million including interest. The matter is currently pending.

(iii) Central Bank of India has initiated recovery proceedings against RIPrL before the Debt Recovery Tribunal in relation to the loan of ₹470.60 million including interest. The matter is currently pending.

(iv) State Bank of India has initiated recovery proceedings against RIPrL before the Debt Recovery Tribunal in relation to the loan of ₹450.00 million including interest. The matter is currently pending.

Road Infrastructure Development Company of Rajasthan Limited ("RIDCOR")

(i) RIDCOR had given a contract for toll collection to the applicant, R.K. Jain Infra Projects Private Limited on its road Alwar Bhiwadi. Due to Covid-19, the traffic on the roads was reduced and the collection also dipped and was not as per the expected revenue. The contractor demanded relief in depositing the toll collection proceeds by seeking force majeure relief. The company has provided relief mirroring that of another government-owned toll operator and aggrieved with such relief, the Contractor invoked Arbitration. The High Court has passed an order appointing Justice Mohammed Rafiq as the sole arbitrator. The parties have submitted their pleadings. Since the arbitrator has been appointed in the in the matter, the application was declared infructuous.

(ii) RK Jain Infra Projects Pvt. Ltd. initiated arbitration proceedings against RIDCOR concerning a contract for toll collection along the Alwar-Sikandara Road. The onset of the Covid-19 pandemic resulted in a decrease in road traffic, leading to a corresponding decline in toll collection revenue below anticipated levels. Seeking relief, the contractor invoked force majeure provisions to request adjustments in toll collection proceedings, which were granted by the Company in accordance with the relief given by another government owned toll operator. Dissatisfied with the relief provided, the Contractor pursued arbitration. The High Court intervened, appointing (retd.) Justice Sabina as the sole arbitrator. Both parties have submitted their respective pleadings. With the arbitrator now appointed and the arbitration process underway.

(iii) Prakash Asphaltings & Toll Highways (India) Limited ("**Plaintiff**") has initiated arbitration proceedings against RIDCOR in relation to the contract dated June 26, 2020**,** awarded to the Plaintiff for collection of user fees and operation of toll plazas along the Hanumangarh -Kishangarh Road ("**Contract**"). Due to the Kisan Andolan/ Farmers agitation, the toll collection at the plazas was disrupted and Plaintiff had requested concession in depositing the toll collection under the force majeure clause. However, being unsatisfied with the concession granted, based on the Plaintiff's request, the Contract was terminated, and arbitration was invoked. The matter is currently pending before the Arbitration Tribunal.

(iv) RIDCOR appointed IVRCL for Integrated Improvement cum Performance based maintenance of Alwar-Sikandra stretch and Pachpadra to Ramji Ki Gol. IVRCL claimed additional charges incurred during the contract due to cost escalations and other factors amounting to ₹250.00 million. IVRCL initiated arbitration seeking payment Claims and counterclaims were made. However, due to the moratorium, the arbitration proceedings are on hold.

(v) Punjab National Bank has filed an application before the National Company Law Tribunal, Delhi ("**NCLT**") against RIDCOR in its capacity as the lead bank of the consortium team under Rule 11 read with Rule 31 of National Company Law Appellate Tribunal Rules, 2018 seeking clarification of the order dated October 15, 2018 alleging that RIDCOR cannot be prevented from servicing its debts in light of the order dated October 15, 2018 as there are sufficient monies in its Trust and Retention Account (TRA). The matter is currently pending.

(vi) Suits have been filed by certain individuals ("**Plaintiffs**") before Rajasthan High Court, Jodhpur, against RIDCOR and others ("**Defendants**") in relation to land acquisition for establishment of toll plaza at Hanumangarh. RIDCOR is merely a proforma party and no relief has been sought against it, as RIDCOR

has entered into concessions agreements with the Government of Rajasthan. The matter is currently pending.

(vii) An individual ("**Plaintiff**") has filed a public interest litigation before the Rajasthan High Court against RIDCOR, alleging violation of Rule 8 of the Rajasthan State Highway Fees (Determination of Rates and Collection) Rules, 2015, in light of installation of illegal toll plaza in Bhiwadi, demanding shift of the toll plaza outside Bhiwadi The matter is currently pending.

(viii) Civil suits have been filed by certain individuals (**"Plaintiffs"**) who have illegally constructed shops and sheds on the sides of the mega highway road from Hanumangarh to Ratangarh, before Rajasthan High Court, Jodhpur *vide* civil writ petition against Government of Rajasthan and RIDCOR (**"Defendants"**) seeking direction to the defendants for determining line of centre on the highway and then removing the encroachments and till then a stay on removal of shops. The matter is currently pending.

(ix) A Writ Petition before High Court, Jaipur Bench is filed by RIDCOR against the order passed by the District Judge, Bundi, in the matter of reference petition filed by the Respondents Mahavir Prasad Sharma and others under section 18 of the Land Acquisition Act, 1894. The Respondents claimed additional compensation amounting to approximately ₹146.20 million. The matter is pending before the High Court.

Road Infrastructure Development Company of Rajasthan Limited ("RIDCOR")

(i) Indian Bank has filed an application before the NCLAT seeking to change and declare the classification of the account of RIDCOR as a "green entity" and to declare that the moratorium order dated October 15, 2018 is not applicable to RIDCOR, as it is a profit-making entity. Indian Bank seeks from NCLAT to direct RIDCOR to pay the outstanding dues to the lenders banks. The matter is currently pending.

Civil Cases filed by Rajasthan Land Holding Limited:

(i) Rajasthan Land Holding Limited ("**RLHL**"), through a facility letter dated January 7, 2017, provided an unsecured term loan of ₹ 520 million to Kaleidoscope Developers Private Limited ("**KDPL**") at an interest rate of 13.75%, with the due date for repayment set as January 7, 2018. KDPL failed to repay the loan within the stipulated time. On July 10, 2024, KDPL requested RLHL to transfer the unsecured loan to Kaleidoscope Island Estates Private Limited ("**KIEPL**") books of account. KIEPL made a partial payment of ₹40 million to RLHL on behalf of KDPL, but the remaining loan amount is still outstanding. Consequently, RLHL has initiated corporate insolvency resolution process under section 7 of the Insolvency and Bankruptcy Code, 2016 against KIEPL to recover the outstanding loan of ₹ 520 million, plus interest, totaling ₹1000.50 million. *Vide* order dated October 4, 2024, NCLT Mumbai has issued a notice to KIEPL. The matter is currently pending.

Noida Toll Bridge Company Limited (NTBCL)

(i) Osmanabad Janata Sahakari Bank Limited ("**Bank**") has filed a special appeal before the Allahabad High Court (**"Court"**) against its order dated October 24, 2005, by which it had sanctioned a scheme of arrangement of NTBCL with its creditors, seeking a stay of the judgment. Further, an application has been moved by the Bank against NTBCL seeking directions for prosecuting NTBCL along with Textile Co-operative Bank Limited and Jain Sahkari Bank, Hirabagh for misleading the Bank for purchase of 4,400 deep discount bonds and the loss suffered by the Bank due to the same. The matter is currently pending.

(ii) A suit has been filed by certain individuals ("**Plaintiffs**") before the court of civil judge, senior division, Noida, against NTBCL and others ("**Defendants**") seeking directions for restraining the Defendants from dispossessing the Plaintiffs from, and/or interfering in the use of the property situated at Milkiat Sarkar Village Naya Bas, near DND Flyway and also preventing them from causing injury to the crops of the Plaintiffs cultivating on the land. This is a suit filed before the Court of Civil Judge, Senior Division, Noida Phase-II Court, Gautam Budh Nagar, seeking to restrain the Defendants from dispossessing the Plaintiff from, and/or interfering in the use of, and/or causing injury to the crops of the Plaintiffs cultivating upon the property situated at Milkiat Sarkar Village Naya Bas, Near NTBCL/ Delhi Noida Direct Flyway. The said land is being utilized by NTBCL as part of the project. The matter is currently pending The matter was dismissed *vide* order dated April 23, 2024 for want for prosecution. However, a restoration application has been filed. The matter is currently pending. A suit has been filed by an individual ("**Plaintiff**") before the court of civil judge, senior division, Noida, against NTBCL and others ("**Defendants**") seeking directions for the competent authorities to cancel the allotment of land given for construction of the Delhi Noida Bridge project as per the agreement dated November 12, 1997, entered into between NTBCL, IL&FS & NOIDA. The matter is currently pending.

(iii) NAKS Creators, a sole proprietor ("**NAKS**") and another has initiated arbitration proceedings against Noida Toll Bridge Company Limited **("NTBCL")** under the following license agreements signed between NAKS and NTBCL. The first license agreement was signed on August 23, 2018, for advertising on the erstwhile South Delhi Municipal Corporation ("**SDMC**") side of the Delhi Noida Direct ("**DND**") flyway. The second license agreement was dated November 1, 2018, for advertising on the erstwhile East Delhi Municipal Corporation ("**EDMC**") and New Okhla Industrial Development Authority ("**Noida**") side of the DND flyway. These agreements were terminated by NTBCL, following which arbitration proceedings were initiated by NAKS**.** The matter is currently pending.

Material civil proceedings filed by common associates of the Sponsor and the Project Manager

Karyavattom Sports Facilities Limited ("KSFL")

(i) A writ petition has been filed by KSFL against the Directorate of Sports & Youth Affairs of Kerala and others to release the amount of ₹3,178.9 million to KSFL, along with applicable taxes, for the outstanding annuities for the financial years 2019 to 2024. The matter is currently pending.

East Hyderabad Expressway Limited ("EHEL")

(i) EHEL has initiated arbitration under the Arbitration and Conciliation Act, 1996 ("**Act**") in relation to missed annuity payments, delays in annuity payments, and the wrongful deduction of a maintenance penalty amounting to ₹1,174.30 million by the Hyderabad Metropolitan Development Authority ("**Authority**") under the concession agreement dated August 3, 2007. EHEL has filed its statement of claim. As per the direction on the Arbitral Tribunal, the respondent has filed their statement of defence and counter claim total amounting to ₹746.10 million on September 13, 2024. EHEL is due to file the rejoinder to the statement of defence and counter claim filed by the Authority. The matter is currently pending.

Vansh Nimay Infraprojects Limited ("VNIL")

(i) VNIL has initiated arbitration proceedings against Nagpur Municipal Corporation (**"NMC"**) for claims aggregating to ₹5,413.69 million under the concessional agreement dated March 9, 2007 executed between VNIL and NMC on account of loss in concessional fares, non-revision of fares, loss due to illegal competing transport, and non-utilisation of the bus advertisement potential. The matter is currently pending.

MP Border Checkpost Development Company Limited ("MPBCDCL")

(i) MPBCDCL had initiated arbitration proceedings against the Madhya Pradesh Road Development Corporation **("MPRDC")** before Madhya Pradesh Arbitration Tribunal (**"Tribunal"**) claiming ₹27,743.20 million that includes compensation of ₹13,402.60 million and termination payment of ₹13,370.00 million in relation to the agreement dated November 10, 2010 executed between MPBCDCL and MPRDC for development of 24 border check post in Madhya Pradesh. For speedy resolution of the matter, a writ petition was filed before the Madhya Pradesh High Court (**"High Court"**), Jabalpur. This petition was clubbed with a public interest litigation filed by a third party on the larger issue of pendency of matters before the Tribunal. The matter is currently pending.

(ii) MPBCDCL has filed a reference petition before the Madhya Pradesh Arbitration Tribunal, Bhopal **("Tribunal")** claiming an amount of ₹27,743.20 million against Madhya Pradesh Road Development Corporation **("MPRDC")** under the concession agreement dated November 10, 2010. MPRDC had awarded the contract of construction, operation and maintenance of border check posts at 24 locations in Madhya Pradesh to MPBCDL. Owing to MPRDC's failure to perform obligations, the concession agreement was terminated by MPBCDCL on October 31, 2018. Till the termination, MPBCDCL could complete work on 19 check posts but could not successfully operate these due to traffic leakages and failure of the transport department to grant permission for unloading overloaded commercial vehicles and filed the reference petition. The matter is currently pending.

(iii) IL&FS has filed an application at NCLAT on behalf of MPBCDCL against Canara Bank, seeking directions to release necessary funds to maintain MPBCDCL operational status. This request is based on prior orders from the NCLAT dated February 11, 2019 and May 29, 2019, which Canara Bank has violated by not releasing the required funds, putting MPBCDCL viability at risk. IL&FS seeks prayed to release the monies required by MPBCDCL for its going concern expenses. The matter is currently pending.

Jharkhand Road Projects Implementation Company Limited ("JRPICL")

(i) JRPICL filed a writ petition before the Jharkhand High Court **("High Court")** against the State of Jharkhand and others in relation to non-payment of its claim amounting to ₹1,064.70 million in relation to the concession agreement dated October 14, 2009, executed between JRPICL, State of Jharkhand and Jharkhand Accelerated Road Development Company Limited for Ranchi Patratu Ramgarh Project-II. This payment pertained to claims approved under an administrative order dated March 30, 2016, issued by the Government of Jharkhand, which remains unpaid despite the directive. The High Court allowed the petition and directed the Government of Jharkhand to pay ₹1,064.70 million to JRPICL. In view of the non-compliance of the order, JRPICL filed a contempt petition against the Government of Jharkhand. The matter is currently pending.

(ii) IL&FS has filed an application before National Company Law Appellate Tribunal (**"NCLAT"**) for recategorization of JRPICL's solvency status from 'green' to 'red' with effect from July 1, 2023, based on an 'objective solvency test' conducted by a resolution consultant i.e. Alvarez and Marsal India Private Limited ("**A&M**"). IL&FS contended that JRPICL was expected to receive annuities of ₹1,790.00 million for the period of April to September 2023 from the Government of Jharkhand. However, since no such annuities have been received till date, the solvency status of JRPICL may be recategorized. This matter is currently pending.

Jharkhand Infrastructure Implementation Company Limited ("JIICL")

(i) IL&FS has filed an application before National Company Law Appellate Tribunal (**"NCLAT"**) for taking on record the updated solvency categorization exercise carried out by A&M which recommends continuing the classification of JIICL as a red entity in light of further defaults by the Government of Jharkhand in paying annuities which fell due in May, 2023. This matter is currently pending.

(ii) IL&FS has filed an application before National Company Law Appellate Tribunal (**"NCLAT"**) against Punjab National Bank seeking refund amounting to ₹1,450.00 million from the senior lenders under the loan agreement as a result of their failure to comply with the NCLAT order dated May 11, 2023 which required them to grant certain waivers in lieu of recategorization of JIICL's solvency status from "Green to Red". No such waivers were granted and the said amount was allegedly unlawfully debited from the escrow account of JIICL which was made under the escrow agreement dated May 12, 2023. The matter is currently pending.

(iii) A writ petition has been filed against the Government of Jharkhand seeking the release of ₹ 2232.28 million to JIICL, along with interest thereon, for the outstanding annuities payable under the concession agreement dated August 7, 2015. The matter is currently pending.

Rapid Metro Rail Gurgaon Limited ("RMGL")

(i) RMGL has filed a petition before the Punjab and Haryana High Court (**"High Court"**), against Municipal Corporation of Gurgaon **("MCG")** against MCG's notice dated January 27, 2015, directing RMGL to deposit ₹300.00 million for putting advertisements on RMGL metro site (stations and alignment) in contravention to the Haryana state government's letter dated March 20, 2013, that exempted RMGL from sharing any revenue with MCG for five years. The High Court by way of its order dated February 4, 2015, had asked MCG to not remove advertisements and had asked RMGL to furnish surety for ₹300.00 million which was duly furnished. The matter is currently pending.

(ii) RMGL had initiated arbitration proceedings against the Haryana Shehari Vikash Pradhikaran (formerly Haryana Urban Development Authority) **("HUDA")** and Haryana Mass Rapid Transport Corporation Limited ("**HMRTC"**) before an arbitration tribunal (**"Tribunal"**) claiming ₹20,767.66 million that includes compensation and termination payment on account of debt due and adjusted equity in relation to the agreement dated December 9, 2009 executed between HUDA and RMGL for the development of a metro link from Sikenderpur to NH#8 in Gurugram. The matter is currently pending.

Rapid Metro Rail Gurgaon South Limited ("RMGSL")

(i) RMGSL had initiated arbitration proceedings against the Haryana Shehari Vikash Pradhikaran (formerly Haryana Urban Development Aurhority) **("HUDA")** and Haryana Mass Rapid Transport Corporation Limited (**HMRTC**) before an arbitration tribunal (**"Tribunal"**) claiming ₹25,038.90 million that includes compensation and termination payment on account of debt due and adjusted equity in relation to the agreement dated January 3, 2013 executed between HUDA and RMGSL for the development of a metro link from Sikenderpur to sector 56 along Golf Course Road in Gurugram. The matter is currently pending.

GRICL Rail Bridge Development Company Limited ("GRBDCL")

(i) GRBDCL has filed a petition on April 28, 2023, under section 271(a) of the Companies Act, 2013 before National Company Law Tribunal, Ahmedabad (**"NCLT"**), for its winding up pursuant to the NCLT order dated March 31, 2023. The matter is currently pending.

Road Infrastructure Development Company of Rajasthan Limited ("RIDCOR")

(i) A petition has been filed by RIDCOR before the Rajasthan High court, Jaipur, against the decision of the chief information commission dated July 2, 2007, that held RIDCOR to be a public authority and thus being obligated to disclose information as per the Right to Information Act, 2005. The matter is currently pending.

Material criminal proceedings filed against common associates of the Sponsor and the Project Manager

ITNL Road Infrastructure Development Company Limited ("IRIDCL")

(i) A criminal case under sections 279 and 237 of the Indian Penal Code, 1860, before the Chief Judicial Magistrate, Rajsamand, against IRIDCL in relation to IRIDCL's ambulance getting involved in an accident with a trailer on Gomti – Beawar section of National Highway in the State of Rajasthan. The matter is currently pending.

IL&FS Rail Limited ("IRL")

(i) Ashish Begwani, Director, Enso Infrastructure Limited, has filed a first information report ("**F.I.R.**") before the Economic Offences Wing, P.S Mandir Marg, New Delhi against 22 entities comprising of 4 IL&FS group entities (including Rapid Metro Rail Gurgaon Limited ("**RMGL**") and Rapid Metro Rail Gurgaon South Limited ("**RMGSL**"), IRL is named as party in the F.I.R. and 18 people including former and present directors, officers of IL&FS, ITNL, IRL in relation to certain contracts awarded by IRL between June 2010 and August 2014 alleging collusion of the accused company and various bogus entities to fabricate invoices for non-existent work, resulting in the siphoning of substantial funds. A charge sheet has been filed in the matter The matter is currently pending.

Rapid Metro Rail Gurgaon South Limited ("RMGSL")

(i) Kindly refer to the criminal case disclosed under IL&FS Rail Limited ("IRL") above, filed by Ashish Begwani, director, Enso Infrastructure Limited, since that also involves RMGSL as a party.

Rapid Metro Rail Gurgaon Limited ("RMGL")

(i) Kindly refer to the criminal case disclosed under IL&FS Rail Limited ("IRL") above, filed by Ashish Begwani, director, Enso Infrastructure Limited, since that also involves RMGL as a party.

Material criminal proceedings filed by common associates of the Sponsor and the Project Manager

ITNL Road Infrastructure Development Company Limited ("IRIDCL")

(i) IRIDCL and an employee of IRIDCL has filed a case under section 279 of the Indian Penal Code, 1860, before Judicial Magistrate First Class court, Beawar, Ajmer, against an anonymous person (**"Accused"**) in relation to a road accident involving the employee sitting in the vehicle of IRIDCL, moving towards Beawar from toll plaza 84, when the vehicle was hit by the car of the Accused. The matter is currently pending.

RIDCOR Infra Projects Limited ("RIPrL")

(i) RIPrL has filed a first information report ("**FIR**") against S.S. Enterprises for submission of counterfeit bank guarantees dated April 11, 2017 of amount ₹32.99 million in accordance with the agreement dated April 11, 2017 executed between RIPrL and S.S. Enterprises for collection of user fee on Mathura (U.P

Border) - Bharatpur at user fee collection plaza Gundwa for the period March 31, 2017 till March 31, 2019. The matter is currently pending.

V. Litigation involving the Sponsor and Sponsor Group

There are no material pending litigations involving the Sponsor.

Material civil proceedings filed against IL&FS Financial Services Limited ("IFSL")

(i) Corporation Bank filed a case against Ind Bharat Thermal Power Limited & Others before the Debt Recovery Tribunal, Delhi under section 19 of the Recovery of Debts and Bankruptcy Act, 1993 for a claim of ₹9.074 million. There is no claim against IFSL which has been made a party along with the consortium of banks and financial institutions. The matter is currently pending.

(ii) Punjab National Bank has filed recovery proceedings before the Debts Recovery Tribunal, Delhi, against Ind Bharat Thermal Power Limited and all consortium banks including IFSL ("**Defendants**") for recovery of its dues from Ind Bharat Thermal Power Limited in relation to loan facility. The matter is currently pending.

(iii) SKIL Infrastructure Limited has filed a case against IFSL in the Commercial Civil Court, Ahmedabad. This case has been filed by the borrower. The case pertains to the restructuring of the account. The matter is currently pending.

(iv) Small Industries Development Bank of India ("**SIDBI**") had placed an Inter-Corporate Deposit (ICD) of ₹5000.00 million with IFSL. Due to IFSL 's failure to repay, SIDBI has filed an application against IFSL under section 45QA of the Reserve Bank of India Act, 1934, before the National Company Law Tribunal (NCLT) Bench at Mumbai. The application seeks directions for the repayment of ₹5000.00 million (under commercial papers), along with interest and other charges. However, the proceedings are currently stayed due to the a moratarium order of the NCLAT. The matter is currently pending.

(v) Visa Energy Ventures Limited ("**VEVL**") and Visa Infrastructure Limited ("**VIL**") (collectively, the "**Plaintiffs**") have filed a civil suit before the Calcutta High Court against IFSL, State Bank of India ("**SBI**") and Karvy Stock Broking Limited (collectively the "**Defendants**") seeking declaration that the deed of assignment dated September 9, 2015, executed between IFSL and SBI for assignment of debt and underlying pledge of shares held by VEVL and VIL in Visa Steel Limited ("**VSL**") is illegal, null and void, and further declaration that IFSL is bound to accept repayment of ₹250.00 million along with interest. The matter is currently pending.

(vi) Edelweiss ARC initiated an insolvency proceeding under section 7 of IBC against Adel Landmarks Limited. IFSL provided a term loan of ₹1370.00 million to Adel Landmarks Limited, another loan of ₹600.00 million to the same company, and a loan of ₹2400.00 million ("**Golden Glow Facility**") to Golden Glow Estates Private Limited. Legal proceedings for recovery are ongoing. IFSL is a financial creditor and has filed its claim with the RP. IFSL had filed an application before the NCLT for rejecting the claims for EARC since the said claims were already admitted in Adel Landmarks CIRP. After much contest, IFSL's application was allowed and EARC claims were rejected. EARC has filed an appeal against the said order. The appeal of EARC is pending adjudication.

(vii) IFCI initiated insolvency proceedings against Hi-Point Investment and Finance Private Limited and IFSL has sanctioned a term Loan of ₹1250.00 million under the loan agreement dated June 21, 2011, along with supplemental loan agreements dated May 29, 2013, and October 21, 2013, to the Hi-Point Investment and Finance Private Limited. IFSL is a financial creditor and has filed its claim with the

resolution professional ("**RP**"). IFSL is also a party to the various applications filed by the RP before the NCLT under the ongoing corporate insolvency resolution process. The settlement deed/ offer has been shared by Art Construction (Akshay Dhawan) and sent to IFSL by RP (Vikram Kumar) of Hi-point Investment. The liquidation order has been passed by NCLT, New Delhi. IFSL has filed its claim before the liquidator. The matter is currently pending.

(viii) Milky Investment and Trading Company filed a case against IFSL before the Debt Recovery Tribunal, Delhi under section 19 of the Recovery of Debts and Bankruptcy Act, 1993 seeking possession of the Second Floor in Anand Lok Property. The second floor of the property along with the proportionate portion on land is being claimed by Milky Investment. The matter is currently pending.

(ix) Resolution proceedings have been initiated by Union Bank of India, before National Company Law Tribunal, Delhi, against Era Infra Engineering Limited ("**Era**"). IFSL has extended a subordinate loan to one of the subsidiaries of Era i.e. West Haryana Highways Limited ("**WHHL**"). The resolution professional has filed a consolidated application seeking consolidation of all subsidiaries of Era including WHHL even though no resolution proceeding has been initiated against WHHL. This consolidated application is being contested by IFSL. The matter is currently pending.

(x) United Breweries Holdings Limited ("**UBHL**") had sought permission of Karnataka High Court to sell United Spirits Limited ("**USL**") shares (that were pledged to IFSL) to Diageo and Relay B V and from out of the sale proceeds to make payment of dues to the secured creditors. The Single judge bench of Karnataka High Court had allowed UBHL to sell USL shares and pay to its Creditors including IFSL. IFSL was paid approximately ₹1550.00 million. UBHL repaid amounts due to IFSL and got the release of pledged shares. The matter is currently pending.

(xi) Corporation Bank filed a case against Monet Power Company Limited ("**MPC**") and others before the Debt Recovery Tribunal, Delhi under the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 for a claim of ₹515.60 million. IFSL being a financial intuition was one of the lenders of MPC and hence IFSL has been made a pro forma defendant in the matter. The matter is currently pending.

(xii) Corporation Bank has filed an application before DRT Delhi seeking recovery of Rs. 146.45 million dues as on May 30, 2018 payable along with the future interest till payment from May 31, 2018, further the applicant has sought permission to sell the hypothecated assets of the borrower company and personal assets of respondent no. 1 to 4 (which includes IFSL). Monnet Power Company Limited approached the consortium of banks and financial institutions for subordinate financial facility of ₹2,300.00 million/ to set up a 1050 MW coal fired power plant at village Malibrahmani in Angul District. IFSL (i.e. respondent no. 4) was appointed as the facility manager to manage, operate and monitor a soft matter characterization facility till its completion and IL&FS Trust Company Limited (i.e. respondent no. 5) was appointed as lenders agent, as per the structured mezzanine credit facility memorandum of association. Due to continuous defaults in payment of the loan amount, the account of respondent no. 1 was classified as non-performing asset on September 28, 2014. A recall notice dated December 12, 2017 was issued by IFSL to respondent no. 1 on behalf of all subordinate lenders.

(xiii) Nina Concrete Systems Pvt. Ltd. has filed a petition against IFSL, seeking recovery of monies under section 45Q of the Reserve Bank of India Act, 1934. The next date for this case is yet to be determined, as it has been adjourned *sine die* on September 6, 2021, due to the the moratorium order passed by NCLAT. The matter is currently pending.

(xiv) Nina Water-proofing Systems Pvt. Ltd. has filed CP 447 of 2019 against IFSL, seeking recovery of monies under sections 45Q of the Reserve Bank of India Act, 1934. Similar to the previous case, this

matter has been adjourned sine die on September 6, 2021, due to the moratorium order passed by NCLAT. The matter is currently pending.

(xv) Nina Water-proofing Systems Pvt. Ltd. has filed CP 457 of 2019 against IFSL, seeking recovery of monies under sections 45Q of the Reserve Bank of India Act, 1934. This case has also been adjourned sine die on September 6, 2021, due to the moratorium order passed by NCLAT. The matter is currently pending.

Material civil proceedings filed by IL&FS Financial Services Limited ("IFSL")

(i) IFSL has filed 27 applications under section 7 of the Insolvency and Bankruptcy Code of India, 2016, between the years 2005 and 2023 against different entities, involving a total amount of ₹ 43.03 billion.

(ii) IFSL has filed 1 application under section 95 of the Insolvency and Bankruptcy Code of India, 2016, in the year 2022, against a personal guarantor, involving a total amount of ₹ 30.00 million**.**

(iii) IFLS has filed 35 civil suits/proceedings and commercial suits before different forums, between the years 2009 to 2021 in relation to recovery of loans, etc. granted to different entities, involving a total amount of ₹ 33.69 billion**.**

(iv) IFLS has filed 4 winding up petitions before different forums, between 2001 and 2013 under sections 433 and 439 of the Companies Act, 1956 in relation to loans granted to different entities, involving a total amount of ₹ 1.11 billion.

(v) IFLS has filed 8 recovery proceedings before the debts recovery tribunals, between the years 2015 and 2019 under section 19 of the Recovery of Debts and Bankruptcy Act, 1993, involving a total amount of ₹ 8.67 billion.

(vi) IFSL has filed suit against La Fin Financial Services Private Limited ("**La Fin**") before the Bombay High Court, seeking specific performance of letter of understanding dated August 20, 2009, issued by La Fin in favour of IFSL. Bombay High Court had granted an injunction restraining La Fin from assigning, transferring or encumbering any of its assets or properties, which was unsuccessfully challenged by La-Fin by way of an appeal. The matter is currently pending.

(vii) IFSL has filed a suit against Multi Commodity Exchange of India Limited ("**MCX-SX**") and another **("Defendants")** before the Bombay High Court in relation to the share purchase agreement executed between the parties as per which the Defendants had undertaken not to increase their share capital without prior written approval of IFSL. In March 2014, MCX – SX proposed a rights issue without obtaining prior written consent of IFSL. The suit has been filed seeking specific performance by MCX – SX to obtain prior consent from IFSL. The matter is currently pending.

(viii) IFSL has filed an application under section 14 of the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 before the court of chief metropolitan magistrate, Delhi ("**Court**"), against Collage Group Infrastructure Private Limited ("**Collage**") for enforcement of security granted to ILFS in relation to the term loan of ₹900.00 million granted to Collage under the loan agreement dated March 21, 2016 and ₹80.00 million granted to MNT Infratech Private Limited under the loan agreement dated March 22, 2018. An order allowing the application was passed by the Court and the same was challenged by the promoters of collage group before DRT. The matter is currently pending.

(ix) IFSL has filed an application under section 45QA of the Reserve Bank of India Act, 1934, before National Company Law Tribunal, Kolkata, against Vistar Financiers Private Limited, in relation to a term loan facility of ₹1550.00 million extended under the term loan agreement that turned into a non-performing asset on December 30, 2018. The matter has been dismissed by the NCLT Kolkata and the said dismissal order has been challenged by IFSL before the NCLAT. The matter is currently pending.

(x) IFSL has filed a civil suit against Accel Frontline Limited ("**Accel**") before the Madras High Court in relation to outstanding payment of rent as per the lease agreement. Accel has proposed to settle. The matter is currently pending.

(xi) IFSL has filed an application under section 45QA of the Reserve Bank of India Act, 1934, before National Company Law Tribunal, Chenani, against Trichem Holdings Limited, in relation to a term loan facility of ₹100.00 million extended under the term loan agreement that turned into a non-performing asset on June 1, 2018. The matter is currently pending.

(xii) IFSL has filed an application under section 14 of the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 before the court of chief metropolitan magistrate, Mumbai, against SKIL Infrastructure Limited ("**SKIL**") for enforcement of security granted to ILFS in relation to the term loan of ₹ 2500.00 million granted to SKIL under the loan agreement dated September 28, 2015. The matter is currently pending.

(xiii) IFSL has filed a writ petition before the Bombay High Court regarding the adjudication of stamp duty payable on its demerger from IL&FS. The superintendent of stamps by way of its order dated December 23, 2013, had demanded a stamp duty of ₹70.72 million and a penalty of ₹ 97.60 million in relation to the demerger. The imposed penalty was disputed by IFSL, but the dispute was rejected by the superintendent of stamps following which the demand notice was challenged before the chief controlling revenue authority, Pune which was also dismissed. The writ petition has been filed challenging the dismissal. The matter is currently pending.

(xiv) Himachal Sorang Power Private Limited ("**HSPPL**") was awarded with a hydroelectric power project. This project was to be acquired by TATA India Power Venture Private Limited. ("**TATA**") from the owners of HSPPL which comprised of Nagarjuna Construction Company ("**NCC**"), NHAI Consortium of Canara Bank and India Infrastructure Finance Company Limited Holding ("**NCCIHL**") and IECCL. Pending share transfer, NCC group submitted certain bank guarantees to TATA which were deposited with IFSL for safe custody and were to be returned to NCC on completion of the share transfer. Upon seeking clarification from TATA on whether to release the bank guarantee, TATA informed that certain conditions were not met and hence not to release the BGS. As the bank guarantees were expiring on January 30, 2019, IFSL and Aditya Birla Finance Limited filed an interpleader suit before the Bombay High Court.

(xv) IFSL has filed a petition under section 131 of the Companies Act, 2013, for the revision of financial statements for the FY 2018-2019 and 2019-2020 in case number 2709138 / 00977 / 2024. This petition is currently pending.

(xvi) A special leave petition has been filed by IFSL before the Supreme Court challenging the Bombay High Court's judgment dated August 12, 2021, refusing to quash SEBI's notice seeking to re-open proceedings which were dropped earlier on account of moratorium.

Material criminal proceedings filed against IL&FS Financial Services Limited ("IFSL")

(i) GC Property Private Limited (under liquidation) has filed a securitisation application under section 17 of the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002, against IFSL, before the Debts Recovery Tribunal, Mumbai. The matter is currently pending.

(ii) Quashing petition has been filed under section 482 of the Code of Criminal Procedure, 1973, by two of the directors of ARM Telecom Services Limited ("**ARM Telecom**") before the Bombay High Court in relation to the proceedings under section 138 of the Negotiable Instruments Act, 1881, filed by IFSL against ARM Telecom and its directors. The matter is currently pending.

(iii) Quashing petition has been filed under section 482 of the Code of Criminal Procedure, 1973, by one of the directors of Serveall Construction Private Limited ("**Serveall**") before the Bombay High Court in relation to the proceedings under section 138 of the Negotiable Instruments Act, 1881, filed by IFSL against Serveall and its directors. The matter is currently pending.

(iv) The case, involves IFSL as defendant, acting as the mortgagee of a property concerning SIVA Group. The legal proceedings concern the attachment of assets under the Prevention of Money Laundering Act (PMLA). The central issue is whether the provisions of the PMLA take precedence over other laws, including the Insolvency and Bankruptcy Code, 2016 and the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act. This matter is presently under adjudication before the Supreme Court.

Material criminal proceedings filed by IL&FS Financial Services Limited ("IFSL")

(i) IFSL has filed 34 criminal proceedings before different forums, between the years 2013 and 2021 under sections 138/141 of the Negotiable Instruments Act, 1881, against different entities/individuals, involving a total amount of approximately ₹ 21.28 billion.

(ii) An intervention application was filed by IFSL before the Supreme Court in a criminal case seeking permission for recovery as per law in relation to the loan of ₹2,350.00 million granted to Unitech Limited ("**Unitech**") under the loan agreement dated December 3, 2015, and the ₹550.00 million granted to Havelock Properties Limited under the loan agreement dated August 4, 2017. As per Supreme Court's order dated January 20, 2020, a new board of Unitech was constituted allowing them to formulate a resolution framework for the project lands. The resolution framework has been shared by the board and IFSL has also shared its suggestions towards the same. The matter is currently pending.

Material regulatory proceedings against by IL&FS Financial Services Limited ("IFSL")

(i) In the matter of IL&FS Financial Services Limited, a Show Cause Notice (SCN) dated July 8, 2021, was issued under section 15-I (3) of the Securities and Exchange Board of India Act, 1992. This notice re-opens adjudication proceedings for violations of the SEBI LODR Regulations, 2015, pursuant to a Show Cause Notice dated July 28, 2020. The previous adjudication proceedings were disposed of by an order of the adjudicating officer dated December 24, 2020. However, the proceedings have been adjourned sine die due to pending matters before the Hon'ble Supreme Court in SLP (C) No. 13107 of 2021 filed by IFSL.

Notes:
(1) ITNL and IL&FS also form part of the Sponsor Group and disclosures in relation to these have been made under "Litigation involving the common associates of the Sponsor, the Project Manager and the Investment Manager" above.
(2) Roadstar Infra Private Limited and Sabarmati Capital One Limited are other entities forming part of the Sponsor Group having no litigation involving them.

VI. Litigation involving the Project Manager and its associates

Material civil proceedings filed against EMSL

(i) A civil case under the Minimum Wages Act, 1948 has been filed by Mr. Binod Singh along with 29 other claimants against EMSL claiming alleged overtime wages from the year 2012 to 2020 in respect of their employment for works at Ranchi Patratu Highway and Ranchi Ring Road. The main allegation therein is that despite the actual work hours of the claimants being 12 hours, the wages have only been paid for 8 hours. The principal claim amount as per the allegations is ₹15.59 million, while the compensation demanded is ₹155.86 million, amounting to a total of ₹171.45 million. EMSL has filed a writ petition for quashing the case wherein the lower court proceedings have been stayed. The matter is currently pending.

Material criminal proceedings filed against EMSL

(i) A criminal case has been instituted by the Government of Gujarat under sections 304 and 114 of the Indian Penal Code, 1860 against some of the employees of EMSL before the Principal Sessions Judge, Rajkot, in relation to the collapse of a wall of the overbridge on the Jetpur-Gondal Rajkot national highway near Aji Dam at Rajkot at the (West Gujarat Expressway Limited project site) leading to the death of two persons. The matter is currently pending.

(ii) A criminal case has been instituted by the State of Maharashtra under sections 323, 353, 354-A, 504, 506 and 509 of the Indian Penal Code, 1860 against some of the employees of EMSL before II Adhoc District Judge and Assistant Sessions Judge, Khed, Maharashtra, in relation to an altercation between some police officers and the employees of EMSL when the former refused to pay the toll fee at the Chlakwadi Toll Plaza. The matter is currently pending.

(iii) A criminal case has been instituted by the State of Maharashtra under section 304(A) of the Indian Penal Code, 1860 against an employee of EMSL before the II Joint Judicial Magistrate First Class, Mohol, Maharashtra. The matter pertains to a fatal accident that happened on September 6, 2021, resulting in the death of one person on the Pune-Solapur Highway near Shivavarun village. The deceased was riding his motorbike at the time of the incident when unfortunately, he skidded on some water that had accumulated on the road due to the rainy season and met with an accident. Subsequent to the investigation, the case has been instituted in the year 2024 against the then Project Manager of EMSL at the site. The matter is currently pending.

Material criminal proceedings filed by EMSL

(i) A criminal case has been filed by EMSL through is authorized representative/employee, Mr. Kanak Singh, against Ahilya Developers Private Limited (**"Ahilya"**) and its directors under sections 420, 406, 465, 467 and 468 of the Indian Penal Code, 1860, before the Judicial Magistrate, Senior Division, Gandhinagar, for furnishing fake bank guarantee no. 00483722FG503439 dated 16.10.2017 of ₹20.00 million. In 2017, EMSL was sub-contracted the work of major road upgradation in Madhya Pradesh by ITNL – IECCL (JV) under agreement dated November 23, 2017, for (Madhya Pradesh Road Development Corporation Ltd.) Package 02 for which services of Ahilya were availed and an advance of ₹10.00 million was given against which the bank guarantee was furnished. Due to deficiency in services, Ahilya's services were terminated. At the time when EMSL tried encashing the bank guarantee, the same was found to be a fabricated document. The matter is currently pending.

(ii) A criminal case has been instituted by EMSL against the directors of Randal Infrastructure Private Limited (**"Randal"**) under sections 420, 406, 467 and 468 of the Indian Penal Code, 1860, before the additional Chief Judicial Magistrate, Patna, Bihar, for furnishing fake bank guarantee no. 4470PIBG1000007 dated June 20, 2017, of ₹5.50 million. In 2017, EMSL was sub-contracted the work of major road upgradation in Madhya Pradesh by ITNL – IECCL (JV) under agreements dated November 23, 2017, for Madhya Pradesh Road Development Corporation Limited ("**MPRDC**") Package 02 and agreement dated August 3, 2017, for MPRDC Package 10, for which services of Randal were availed and an advance of ₹5.50 million was given against which the bank guarantee was furnished. Due to deficiency in services, Randal's services were terminated. When EMSL tried encashing the bank guarantee, the same was found to be a fabricated document. The matter is currently pending.

(iii) An application under section 156(3) of the Code of Criminal Procedure, 1973 filed against Ms. Hemlata and other accused for offences under sections 379 and 406 of the Indian Penal Code, 1860 before Chief Judicial Magistrate, Seoni, Madhya Pradesh, for theft and criminal breach of trust regarding the construction equipment, machines and miscellaneous assets belonging to EMSL from the project site at Madhya Pradesh. EMSL was sub-contracted the work of major road upgradation in Madhya Pradesh by ITNL – IECCL (JV) under agreement dated August 3, 2017, for Madhya Pradesh Road Development Corporation Limited Package 11. Due to financial crunch, EMSL could not continue the work and many of the regional contractors and workers stole the construction equipment, machines and miscellaneous assets belonging to EMSL. The matter is currently pending.

(iv) A revision petition has been filed before I Sessions Judge, Waraseoni, Madhya Pradesh against the order dated December 4, 2020, of the Judicial Magistrate, First Class, Balaghat (M.P.) dismissing the application under section 156(3) of the Code of Criminal Procedure, 1973. The application was filed against M/s Kamakhya Suppliers (Proprietorship) through Mr. Mohan Sohane and other accused for offences under sections 379 and 406 of the Indian Penal Code, 1860 for theft and criminal breach of trust regarding the construction equipment, machines and miscellaneous assets belonging to EMSL from the project site at Madhya Pradesh. EMSL was sub-contracted the work of major road upgradation in Madhya Pradesh by ITNL – IECCL (JV) under agreement dated August 3, 2017, for Madhya Pradesh Road Development Corporation Limited Package. Due to financial crunch, EMSL could not continue the work and many of the regional contractors and workers stole the construction equipment, machines and miscellaneous assets belonging to EMSL. The matter is currently pending.

(v) A criminal complaint has been filed against M/s Aaryan Construction Company (Through Mr. Sanju) and other accused under sections 379, 406 and 420 of the Indian Penal Code, 1860, before the Judicial Magistrate, First Class, Bidar, Karnataka, for theft of materials/assets/machines of EMSL from the Bidar Humnabad Road Project ("**BHRP Project**") site. EMSL was sub-contracted the work of road widening/construction at the BHRP Project site, by IL&FS Engineering and Construction Company Ltd. through a sub-contract agreement dated April 13, 2017, for which services of the accused were availed by EMSL. Due to financial crunch, EMSL could not make the payment to the accused following which materials/assets/machines were lifted from the project site. The matter is currently pending.

(vi) A criminal complaint has been filed against Mr. Vishwanath Papde and other accused under sections 379, 406 and 420 of the Indian Penal Code, 1860 before the Judicial Magistrate Senior Division, Bhalki, Bidar, (Kar) for theft of materials/assets/machines belonging to EMSL from the Bidar Humnabad Road Project ("**BHRP Project**") site. EMSL had been sub-contracted the work of road widening/construction at the BHRP Project site, by M/s IL&FS Engineering and Construction Company Limited through a sub-contract agreement dated April 13, 2017, and for the said purpose EMSL has availed the services of the Accused. Due to financial crunch, EMSL could not make the payment to the Accused persons following which materials/assets/machines were lifted from the project site. The matter is currently pending.

VII. Litigation involving the Trustee

Nil

Taxation Proceedings

Details of all direct tax and indirect tax matters against the (i) the Trust, its Associates and the Project SPVs; (ii) the Sponsor, the Project Manager, the Investment Manager and their respective Associates, and the Sponsor Group as of the date of this Placement Memorandum, are as follows:

Sr. No.	Nature of Case	Number of cases	Amount involved (in ₹ million)
Trust and its Associates			
Trust			
1	Direct Tax	1	2.18
2	Indirect Tax	*Nil*	*Nil*
TRDCL			
1	Direct Tax	14	1,974.74
2	Indirect Tax	2	10.95
BAEL			
1	Direct Tax	1	223.65
2	Indirect Tax	1	0.55
MBEL			
1	Direct Tax	8	7,662.18
2	Indirect Tax	*Nil*	*Nil*
HREL			
1	Direct Tax	7	3,543.09
2	Indirect Tax	*Nil*	*Nil*
SBHL			
1	Direct Tax	2	1,431.24
2	Indirect Tax	*Nil*	*Nil*
PSRDCL			
1	Direct Tax	5	7.297.08
2	Indirect Tax	1	4.37
Sponsor and its associates ^			
1	Direct Tax	*Nil*	*Nil*
2	Indirect Tax	*Nil*	*Nil*
Project Manager and its associates ^			
1	Direct Tax	6	101.30
2	Indirect Tax	24	204.88
Investment Manager and its Associates^			
1	Direct Tax	6	1,493.21
2	Indirect Tax	1	360.69
Sponsor Group#			
1	Direct Tax	74	66,901.32
2	Indirect Tax	42	8,400.37
Common Associates of the Sponsor and Project Manager^^			
1	Direct Tax	119	42,731.06
2	Indirect Tax	19	6,708.25

^ Sponsor and its associates, Project manager and its associates, Investment Manager and its associates having common associates have been covered under the head "Common Associates of the Sponsor and Project Manager".

#ITNL & IL&FS, who are common associates of the Investment Manager, Project Manager and the Sponsor, have been covered under the head of 'Sponsor Group' only.
^^All associates of the Sponsor and the Project Manager are common and accordingly have been covered under the head "Common Associates of the Sponsor and Project Manager". This does not include ITNL and IL&FS as these tax litigations relating to these two entities have been covered under the head "Sponsor Group

SECURITIES MARKET OF INDIA

The information in this section has been extracted from documents available on the website of SEBI and the Stock Exchanges and has not been prepared or independently verified by the Parties to the Trust or the Placement Agent or any of their respective affiliates or advisors. The information below is given for the benefit of Eligible Creditors in the Unit Distribution. Eligible Creditors are advised to make their independent investigations and ensure that they are eligible to receive and hold the Units under Indian laws or regulations.

The Indian Securities Market

India has a long history of organized securities trading. In 1875, the first stock exchange was established in Mumbai. The BSE and the NSE, together hold a dominant position among the stock exchanges in terms of the number of listed companies, market capitalisation and trading activity.

Stock Exchange Regulation

Indian stock exchanges are regulated primarily by SEBI, as well as by the Government acting through the Ministry of Finance, Capital Markets Division, under the Securities Contracts (Regulation) Act, 1956 ("**SCRA**") and the Securities Contracts (Regulation) Rules, 1957 ("**SCRR**"). SEBI, in exercise of its powers under the SCRA and the SEBI Act, notified the SCR (SECC) Regulations, which regulate *inter alia* the recognition, ownership and governance of stock exchanges and clearing corporations in India together with providing for minimum capitalisation requirements for stock exchanges. The SCRA, the SCRR and the SCR (SECC) Regulations along with various rules, bye-laws and regulations of the respective stock exchanges, regulate the recognition of stock exchanges, the qualifications for membership thereof and the manner, in which contracts are entered into, settled and enforced between members of the stock exchanges.

The SEBI Act empowers SEBI to regulate the Indian securities markets, including stock exchanges and intermediaries in the capital markets, promote and monitor self-regulatory organisations and prohibit fraudulent and unfair trade practices. Regulations concerning minimum disclosure requirements by public companies, rules and regulations concerning investor protection, insider trading, substantial acquisitions of shares and takeover of companies, buy-backs of securities, employee stock option schemes, stockbrokers, merchant bankers, underwriters, mutual funds, foreign portfolio investors, credit rating agencies and other capital market participants have been notified by the relevant regulatory authority.

Listing and Delisting of Units

The InvIT Regulations provide for listing and delisting of units of infrastructure investment trusts on the stock exchanges.

BSE

Established in 1875, it is the oldest stock exchange in India. In 1957, it became the first stock exchange in India to obtain permanent recognition from the Government under the SCRA. It has evolved over the years into its present status as one of the premier stock exchanges of India.

NSE

NSE was established by financial institutions and banks to provide nationwide online, satellite-linked, screen-based trading facilities with market-makers and electronic clearing and settlement for securities including government securities, debentures, public sector bonds and units. It has evolved over the years into its present status as one of the premier stock exchanges of India. NSE was recognised as a stock exchange under the SCRA in April 1993 and commenced operations in the wholesale debt market segment in June 1994. The capital market (equities) segment commenced operations in November 1994 and operations in the derivatives segment commenced in June 2000.

Internet-based Securities Trading and Services

Internet trading takes place through order routing systems, which route client orders to exchange trading systems for execution. Stockbrokers interested in providing this service are required to apply for permission to the relevant stock exchange and also have to comply with certain minimum conditions stipulated by SEBI. The NSE became the first exchange to grant approval to its members for providing internet-based trading services. Internet trading is possible on both the "equities" as well as the "derivatives" segments of the NSE.

Trading Hours

Trading on both the NSE and the BSE occurs from Monday to Friday, between 9:15 a.m. and 3:30 p.m. IST (excluding the 15 minutes pre-open session from 9:00 a.m. to 9:15 a.m. that has been introduced recently). The NSE and the BSE are closed on public holidays. The recognised stock exchanges have been permitted to set their own trading hours (in the cash and equity derivatives segments) subject to certain conditions.

Trading Procedure

NSE has introduced a fully automated trading system called National Exchange for Automated Trading ("**NEAT**"), which operates on strict time/price priority besides enabling efficient trade. NEAT has provided depth in the market by enabling large number of members all over India to trade simultaneously, narrowing the spreads.

Depositories

The Depositories Act provides a legal framework for the regulation of depositories in securities and for matters connected therewith or incidental thereto. Further, SEBI has framed regulations in relation to the registration of such depositories, the registration of participants as well as the rights and obligations of the depositories, participants, companies and beneficial owners.

SELLING AND TRANSFER RESTRICTIONS

The distribution of this Placement Memorandum and the offer, sale, delivery or distribution of the Units is restricted by law in certain jurisdictions. Persons who may come into possession of this Placement Memorandum are advised to consult with their own legal advisors as to what restrictions may be applicable to them and to observe such restrictions. This Placement Memorandum may not be used for the purpose of an offer or invitation in any circumstances. Due to the following restrictions, Eligible Creditors are advised to consult legal counsel prior to purchasing or subscribing to the Units or making any resale, pledge or transfer of the Units.

Republic of India

This Placement Memorandum may not be distributed directly or indirectly in India or to residents of India and any Units may not be offered, sold or distributed directly or indirectly in India to, or for the account or benefit of, any resident of India except as permitted by applicable Indian laws and regulations.

The Units may not be offered, sold or distributed, directly or indirectly, and this Placement Memorandum, any offering materials and any advertisements in connection with the offering or distribution of the Units may be distributed or published in or from any country or jurisdiction except under circumstances that will result in compliance with any applicable rules and regulations of any such country or jurisdiction. The Unit Distribution will be made in compliance with the applicable SEBI InvIT Regulations.

Canada

Prospective Canadian investors/ Eligible Creditors are advised that the information contained within this Placement Memorandum has not been prepared with regard to matters that may be of particular concern to Canadian investors/ Eligible Creditors. Accordingly, prospective Canadian investors/ Eligible Creditors should consult with their own legal, financial and tax advisers concerning the information contained within this Placement Memorandum and as to the suitability of an investment in the Units in their particular circumstances.

The Units may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are both (i) accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and (ii) permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Such sales will be made only by a dealer duly registered under the applicable securities laws of the applicable province or in accordance with an exemption from the applicable registered dealer requirements. Any resale of the Units must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this Placement Memorandum (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Under Canadian securities law, National Instrument 33-105 *Underwriting Conflicts* (NI 33-105) provides disclosure requirements with respect to potential conflicts of interest between an issuer and underwriters, dealers or placement agents, as the case may be. To the extent any conflict of interest between us and any of the underwriters (or any other placement agent acting in connection with this offering) may exist in respect of this offering, the applicable parties to this offering are relying on the exemption from these disclosure requirements provided to them by section 3A.3 of NI 33-105 (Exemption based on U.S. disclosure).

Upon receipt of this Placement Memorandum, each Canadian purchaser/ Eligible Creditors hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la réception de ce document, chaque acheteur canadien confirme par les présentes qu'il a expressément*

exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières.

Dubai International Financial Centre

The Placement Memorandum relates to an Exempt Offer in accordance with the Markets Rules Module of the Dubai Financial Services Authority ("**DFSA**") Rulebook. The Placement Memorandum is intended for distribution only to persons of a type specified in the Markets Rules Module. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved the Placement Memorandum nor taken steps to verify the information set forth herein and has no responsibility for this Placement Memorandum. The securities to which the Placement Memorandum relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers or Eligible Creditors of the securities/ units offered or distributed should conduct their own due diligence on the securities. If you do not understand the contents of the Placement Memorandum, you should consult an authorized financial advisor.

In relation to its use in the Dubai International Financial Centre, the Placement Memorandum is strictly private and confidential and is being distributed to a limited number of investors/ Eligible Creditors and must not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose. The interests in the securities/ units may not be offered, sold or distributed directly or indirectly to the public in the Dubai International Financial Centre.

European Economic Area

In relation to each member state of the European Economic Area and the United Kingdom (each, a "**Relevant State**"), no Units have been offered or distributed or will be offered or distributed pursuant to the Unit Distribution to the public in that Relevant State prior to the publication of a prospectus in relation to the Units that has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of the Units may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation.

a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the Placement Agent and the Syndicate Members for any such offer; or

c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of the Units shall require the InvIT or any manager to publish a prospectus pursuant to article 3 of the Prospectus Regulation or supplement a prospectus pursuant to article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression "**offer to the public**" in relation to any Units in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any Units to be offered so as to enable an investor to decide to purchase or subscribe for any Units and the expression "**Prospectus Regulation**" means Regulation (EU) 2017/1129.

Hong Kong

The Placement Agent has represented, warranted and agreed that:

(i) it has not offered, sold or distributed and will not offer, sell or distribute in Hong Kong, by means of any document, any Units other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**") and any rules made under the SFO; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies

(Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "**CWUMPO**") or which do not constitute an offer to the public within the meaning of the CWUMPO; and

(ii) it has not issued or had in its possession for the purposes of the issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere any advertisement, invitation or document relating to the Units, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong), other than with respect to Units which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

Mauritius

The Units may not be offered, sold or distributed, directly or indirectly, to the public in Mauritius. Neither the Placement Memorandum nor any offering material or information contained herein relating to the offer or distribution of the Units may be released or issued to the public in Mauritius or used in connection with any such offer. The Placement Memorandum does not constitute an offer to sell the Units to the public in Mauritius and is not a prospectus as defined under the Companies Act 2001.

Singapore

The Placement Memorandum has not been and will not be registered as a prospectus in Singapore with the Monetary Authority of Singapore. Accordingly, the Placement Memorandum and any other document or material in connection with the offer, sale or distribution, or invitation for subscription, purchase or distribution, of the Units may not be circulated or distributed, nor may the Units be offered, sold or distributed, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act, (Chapter 289), of Singapore as modified and amended from time to time (the "**Securities and Futures Act**")) pursuant to Section 274 of the Securities and Futures Act, (ii) to a relevant person (as defined in Section 275(2) of the Securities and Futures Act) pursuant to Section 275(1) of the Securities and Futures Act, or any person pursuant to Section 275(1A) of the Securities and Futures Act, and in accordance with the conditions specified in Section 275 of the Securities and Futures Act, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the Securities and Futures Act.

Where the Units are subscribed or purchased under Section 275 of the Securities and Futures Act by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the Securities and Futures Act)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each as defined in Section 239(1) of the Securities and Futures Act) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Units pursuant to an offer made under Section 275 of the Securities and Futures Act except:

(1) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the Securities and Futures Act;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the Securities and Futures Act; or

(5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

Notification under Sections 309B(1)(a) and 309B(1)(c) of the SFA: The InvIT determined, and hereby notifies all relevant persons (as defined in Section 309A of the SFA) that the Units are: (A) prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and (B) Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAAN16: Notice on Recommendations on Investment Products).

Taiwan

The Units have not and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued, offered or distributed within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering, sale and distribution of the Units in Taiwan.

United Arab Emirates (excluding the Dubai International Financial Centre)

This document does not constitute or contain an offer and distribution of securities/ units to the general public in the United Arab Emirates ("**UAE**"). No offering, marketing, promotion, advertising or distribution (together, "**Promotion**") of this document or the Units may be made to the general public in the UAE unless: (a) such Promotion has been approved by the UAE Securities and Commodities Authority (the "**SCA**") and is made in accordance with the laws and regulations of the UAE, including SCA Board of Directors' Chairman Decision no. (3/R.M.) of 2017 (the "**Promotion and Introduction Regulations**"), and is made by an entity duly licensed to conduct such Promotion activities in the UAE; or (b) such Promotion is conducted by way of private placement made: (i) only to non-natural persons "Qualified Investors" (as such term is defined in the Promotion and Introduction Regulations); or (ii) otherwise in accordance with the laws and regulations of the UAE; or (c) such Promotion is carried out by way of reverse solicitation only upon an initiative made in writing by an investor in the UAE. None of the SCA, the UAE Central Bank, the UAE Ministry of Economy or any other regulatory authority in the UAE has reviewed or approved the contents of this document nor does any such entity accept any liability for the contents of this document.

United Kingdom

The Placement Memorandum is only directed at, and will only be provided to, persons to whom interests may lawfully be promoted pursuant to section 21 of the Financial Services and Markets Act 2000 (the "**FSMA**"). In particular, this Placement Memorandum is only directed at, and will only be provided to, investment professionals ("**Relevant Persons**") within the meaning of article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 ("**FPO**"). Any investment or investment activity to which the Placement Memorandum relates is available only to Relevant Persons and dealings hereunder will be made only with Relevant Persons. Persons who are not investment professionals within the meaning of article 19 of the FPO should not rely on the Placement Memorandum.

The Placement Memorandum has not been delivered for approval to the United Kingdom Financial Conduct Authority in the United Kingdom or to an authorized person within the meaning of the FSMA. No approved prospectus within the meaning of section 85 of the FSMA or of the Prospectus Regulation has been published or is intended to be published in relation to the Offer. The Placement Memorandum does not constitute a prospectus for the purposes of the FSMA or the Prospectus Regulation.

United States of America

Each purchaser/ Eligible Creditor acknowledges and represents that:

i. it understands and agrees that the Units have not been and will not be registered under the U.S. Securities Act or with any securities regulatory authority of any state, territory or other jurisdiction of the United States and may not be offered, resold, pledged or otherwise transferred, except (1) in an offshore transaction

complying with Rule 903 or Rule 904 of Regulation S, (2) pursuant to an exemption from the registration requirements of the U.S. Securities Act, or (3) pursuant to an effective registration statement under the U.S. Securities Act and (4) in accordance with all applicable securities laws of any state, territory or other jurisdiction of the United States;

ii. it understands that in the event Units are held in certificated form, such certificated Units will bear a legend substantially to the following effect:

"THE SECURITY EVIDENCED HEREBY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. **SECURITIES ACT**"), ANY STATE SECURITIES LAWS IN THE UNITED STATES OR THE SECURITIES LAWS OF ANY OTHER JURISDICTION AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED, EXCEPT: (A) IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH RULE 903 OR RULE 904 OF REGULATION S UNDER THE U.S. SECURITIES ACT; (B) PURSUANT TO AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT; OR (C) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE U.S. SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. NO REPRESENTATION CAN BE MADE AS TO THE AVAILABILITY OF THE EXEMPTION PROVIDED UNDER THE U.S. SECURITIES ACT FOR RESALES OF THIS SECURITY.";

iii. any resale made other than in compliance with the above stated restrictions shall not be recognised by the InvIT;

iv. it agrees that it will give to each person to whom it transfers Units notice of any restrictions on transfer of such Units; and

v. it acknowledges that the InvIT, the Sponsor and the Placement Agent and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that, if any of such acknowledgements, representations or agreements deemed to have been made by virtue of its purchase of Units are no longer accurate, it will promptly notify the InvIT, the Sponsor and the Placement Agent, and if it is acquiring any Units as a fiduciary or agent for one or more accounts, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Other Jurisdictions

The distribution of this Placement Memorandum and the distribution of the Units may be restricted by law in certain jurisdictions. Persons into whose possession this Placement Memorandum comes are required to inform themselves about, and to observe, any such restrictions to the extent applicable.

RIGHTS OF UNITHOLDERS

The rights and interests of Unitholders are included in this Placement Memorandum and the InvIT Regulations. Under the Trust Deed and the Investment Management Agreement, these rights and interests are safeguarded by the Trustee and the Investment Manager, respectively. Any rights and interests of Unitholders as specified in this Placement Memorandum would be deemed to be amended to the extent of any amendment to the InvIT Regulations.

Beneficial Interest

Each Unit represents an undivided beneficial interest in the Trust. A Unitholder has no equitable or proprietary interest in the InvIT Assets and is not entitled to transfer of the InvIT Assets (or any part thereof) or any interest in the InvIT Assets (or any part thereof) of the Trust. A Unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Trust Deed and the Investment Management Agreement.

Ranking

No Unitholder of the Trust shall enjoy superior voting or any other rights over another Unitholder. Further, the Units shall not have multiple classes, except for any subordinate Units that may be issued only to the Sponsor and their Associates, where such subordinate units carry only inferior voting or any other rights compared to other Units in the future in accordance with Regulation 4(2)(h) of the InvIT Regulations.

Redressal of grievances

The Investment Manager shall ensure adequate and timely redressal of all Unitholders' grievances pertaining to the activities of the Trust, and the Trustee shall periodically review the status of Unitholders' complaints and their redressal undertaken by the Investment Manager. The Stakeholders' Relationship Committee of the Investment Manager shall monitor the status of complaints and their redressal, and maintain records of grievances and actions taken for the same. For details, please see the section "*Corporate Governance*" on page 138.

Distribution

The Unitholders shall have the right to receive distribution in accordance with the InvIT Regulations, the Distribution Policy and in the manner provided in this Placement Memorandum. For details, please see the section "*Distribution*" on page 288.

Nominee Directors

Unitholder(s), holding not less than 10.00% of the total outstanding Units, either individually or collectively, shall be entitled to nominate one director on the board of directors of the Investment Manager. In this regard, we shall undertake the relevant actions in due course in accordance with the SEBI Circular dated September 11, 2023 entitled "SEBI/HO/DDHS-PoD-2/P/CIR/2023/153" and the InvIT Regulations. We have also adopted the Policy on Unitholder Nominee Directors on January 25, 2024, and such policy has been uploaded on the website of the Investment Manager. For details, please see the section "*Corporate Governance*" on page 138.

Meeting of Unitholders

Meetings of Unitholders will be conducted in accordance with the InvIT Regulations.

Passing of resolutions

1. With respect to any matter requiring approval of the Unitholders:

(i) a resolution shall be considered as passed when the votes cast by Unitholders, so entitled and voting, in favour of the resolution exceed a certain percentage as specified in the InvIT Regulations, of votes cast against;

(ii) the voting may be done by postal ballot or electronic mode;

(iii) a notice of not less than 21 (twenty one) days shall be provided to the Unitholders;

(iv) voting by any person who is a related party in such transaction, as well as associates of such person(s) shall not be considered on the specific issue; and

(v) the Investment Manager shall be responsible for all the activities pertaining to conducting of meeting of the Unitholder, subject to oversight by the Trustee.

However, for issues pertaining to the Investment Manager, including a change in Investment Manager, removal of Investment Manager or change in control of Investment Manager; the Trustee shall convene and handle all activities pertaining to conduct of the meetings. Additionally, for issues pertaining to the Trustee, including change in Trustee, the Trustee shall not be involved in any manner in the conduct of the meeting.

2. For the Trust:

(i) an annual meeting of all Unitholders shall be held not less than once a year within 120 days from the end of each financial year and the time between two meetings shall not exceed 15 months;

(ii) with respect to the annual meeting of Unitholders,

(a) any information that is required to be disclosed to the Unitholders and any issue that, in the ordinary course of business, may require approval of the Unitholders may be taken up in the meeting including:

- latest annual accounts and performance of the Trust;
- approval of auditors and fee of such auditors, as may be required;
- latest valuation reports;
- appointment of valuer, as may be required; and
- any other issue;

(b) for any issue taken up in such meetings which require approval from the Unitholders other than as specified in Regulation 22(6) of the InvIT Regulations and paragraph 4 below, votes cast in favour of the resolution shall be more than the votes cast against the resolution.

3. In case of the following, approval from the Unitholders shall be required where the votes cast in favour of the resolution shall be more than the votes cast against the resolution:

(i) any approval from the Unitholders required in terms of Regulation 18 (*Investment conditions and dividend policy)*, Regulation 19 (*Related Party Transactions*) and Regulation 21 *(Valuation of assets*) of the InvIT Regulations;

(ii) any borrowings, in excess of the limits specified under Regulation 20(2) of the InvIT Regulations;

(iii) any transaction, other than any borrowing, the value of which is equal to or greater than 25% (twenty five per cent) of the InvIT Assets;

(iv) increasing period for compliance with investment conditions to one year in accordance with Regulation 18(5)(c) of the InvIT Regulations;

(v) any issue, in the ordinary course of business, which in the opinion of the Sponsor or the Trustee or the Investment Manager, is material and requires approval of the Unitholders, if any;

(vi) any issue for which SEBI or the stock exchanges requires approval; and

(vii) de-classification of the status of Sponsor.

4. In case of the following, approval from the Unitholders shall be required where the votes cast in favour of the resolution shall not be less than one and a half times the votes cast against the resolution:

(i) any change in Investment Manager including removal of the Investment Manager or change in control of the Investment Manager;

(ii) the Trustee and Investment Manager proposing to seek delisting of units of the Trust under clause (e) of sub-regulation (1) of regulation 17 of the InvIT Regulations;

(iii) any issue, not in the ordinary course of business, which in the opinion of the Sponsor or Investment Manager or Trustee requires approval of the Unitholders;

(iv) any material change in investment strategy or any change in the management fees of the Trust;

(v) any issue for which SEBI or the designated stock exchanges require approval;

(vi) any issue taken up on request of the Unitholders including:

(a) removal of the Investment Manager and appointment of another investment manager to the Trust;

(b) removal of the Auditors and appointment of another auditors to the Trust;

(c) removal of the Valuer and appointment of another valuer to the Trust;

(d) any issue which the Unitholders have sufficient reason to believe that is detrimental to the interest of the Unitholders;

(e) change in the Trustee, if Unitholders have sufficient reason to believe that acts of the Trustee are detrimental to the interest of Unitholders; and

(f) delisting of the Trust, if the Unitholders have sufficient reason to believe that such delisting would act in the interest of the Unitholders

With respect to the rights of the Unitholders under clause 4(vi) above:

(i) not less than 25% of the Unitholders by value, other than any party related to the transactions and its associates, shall apply, in writing, to the Trustee for the purpose;

(ii) on receipt of such application, the Trustee shall require, with the Investment Manager to place the issue for voting in the manner as specified in the InvIT Regulations;

(iii) with respect to clause 4(iv)(e) above, not less than 60% of the Unitholders by value shall apply, in writing, to the Trustee for the purpose.

5. In case of the following, approval from 75% of Unitholders by value shall be required:

(i) In case of any borrowing by the Trust in terms of limit specified in clause (b) of sub-regulation 3 of Regulation 20 of the InvIT Regulations;

(ii) In case that any person other than the Sponsor, its related parties and its associates, acquires Units of the Trust, which taken together with Units held by such person and by persons acting in concert with such persons in the Trust, exceeds 25% of the value of the outstanding Units of the Trust (value of Units held by parties related to the transaction shall not be considered for this specific purpose);

Provided that if the required approval is not received, the person acquiring the Units shall provide an exit option to the dissenting Unitholders to the extent and in the manner as may be specified by SEBI;

(iii) Prior to any change in Sponsor or inducted sponsor or change in control of Sponsor or inducted sponsor (value of Units held by parties related to the transaction shall not be considered for this specific purpose).

If the required approval is not received:

a. in case of change in Sponsor or inducted sponsor, the proposed inducted sponsor shall provide the dissenting Unitholders an option to exit by buying their units in the manner specified by SEBI; and

b. in case of change in control of the Sponsor or inducted sponsor, the said Sponsor or inducted sponsor shall provide the dissenting Unitholders an option to exit by buying their Units in the manner specified by SEBI.

Information rights

The Investment Manager, on behalf of the Trust, shall also submit such information to the Stock Exchanges and Unitholders, on a periodical basis as may be required under the InvIT Regulations and the Listing Agreement entered into with the Stock Exchange. The Investment Manager (on behalf of the Trust) shall disclose to the Stock Exchange, Unitholders and SEBI, all such information and in such manner as specified under the InvIT Regulations and such other requirements as may be specified by SEBI. The Investment Manager, on behalf of the Trust, shall also provide disclosures or reports specific to the sector or sub-sector in which the Trust has invested or proposes to invest, in the manner as may be specified by SEBI.

Dispute Resolution

All claims, differences or disputes between the Unitholders and the Investment Manager arising out of or in relation to the activities of the Investment Manager in the securities market shall be submitted to a resolution mechanism that includes mediation and/or conciliation and/or arbitration, in accordance with the procedure specified by SEBI pursuant to the Master Circular for Online Resolution of Disputes in the Indian Securities Market dated July 31, 2023 issued by the SEBI and bearing reference number SEBI/HO/OIAE/OIAE_IAD-1/P/CIR/2023/145, as amended.

No loss or damage or expenses incurred by the Investment Manager or officers of the Investment Manager, including those in relation to resolution of claims or disputes of unitholders, shall be met out of the trust property.

The Investment Manager shall redress investor grievances within the timelines specified under the InvIT Regulations in the manner as specified by SEBI.

Buy-back, Listing and Delisting of Units

Any buy-back, listing or delisting of Units, shall be in accordance with the Trust Deed and the InvIT Regulations.

DILUTION

Dilution is the amount by which the Unit Value exceeds the net asset value ("**NAV**") per Unit, immediately after the completion of this Unit Distribution. NAV per Unit is determined by subtracting the total liabilities of the Trust from the total assets of the Trust and dividing by the number of Units issued and outstanding immediately before this Unit Distribution. There was no *pro forma* NAV before this Unit Distribution for the Units.

The Trust will distribute up to 455,477,143 Units valued at ₹100 for each Unit, resulting in a combined NAV of the Trust of approximately ₹ [●] million or ₹ [●] per Unit based on the total number of Units outstanding after the completion of this Unit Distribution. This represents an immediate dilution in combined NAV of approximately ₹ [●] per Unit to the Sponsor and an immediate dilution in combined NAV of approximately ₹ [●] per Unit to other Unitholders, receiving Units in this Unit Distribution.

The following provides the per Unit dilution as on [●]:

Combined NAV per Unit before this Unit Distribution	₹ [●]
Combined NAV per Unit after this Unit Distribution	₹ [●]
Dilution in NAV per Unit to the Sponsor attributable to the Sponsor	[●]
Dilution in NAV per Unit to Unitholders (other than the Sponsor)	[●]
Dilution to Unitholders (other than the Sponsor)	[●]

* *To be updated in Final Placement Memorandum prior to filing with SEBI and the Stock Exchanges.*

UNIT DISTRIBUTION BACKGROUND

A. Resolution Process

The Union of India, acting through the MCA, had filed a company petition under Sections 241 and 242 of the Companies Act, 2013 against IL&FS Group entities before the NCLT, Mumbai Bench ("**NCLT**") on the grounds of, among others, that the affairs of the IL&FS Group entities were being conducted in a manner prejudicial to public interest. Subsequently, the NCLT directed suspension of the then existing board of directors of IL&FS and constitution of a new board of directors of IL&FS comprising the nominees of the MCA (the "**New Board**"). The New Board undertook various steps for implementing a fair and orderly resolution of the outstanding debt of the IL&FS Group entities with a view to maximize value and balance various stakeholder interests.

The New Board also submitted a report titled "*Report on Progress and Way Forward*" dated October 30, 2018, to the MCA setting out, *inter alia*, the various options for the resolution of a certain portion of the debt of the IL&FS Group entities and the indicative way forward. Accordingly, an asset monetization process was initiated in December 2018 which included 14 operating assets owned by ITNL. On August 30, 2019, ITNL received bids for 10 such operating assets. However, bids wherein the highest bid price was higher than the average fair market value, as computed by an independent valuer, were received for only 4 out of the 10 operating assets. The New Board, in conjunction with its independent advisors, decided to proceed with the divestment process for such assets.

Therefore, for the remaining assets, the New Board proposed the setting up of an InvIT under the InvIT Regulations and other applicable laws. Accordingly, this proposal was identified by the New Board which in turn was filed by the MCA with the NCLAT vide an affidavit dated January 9, 2020, and was reiterated *vide* an affidavit filed by the MCA with the NCLAT on February 7, 2020. Subsequently, the NCLAT, has approved in entirety the resolution procedure for the IL&FS Group entities set out by the MCA in its affidavits, vide its order and judgment dated March 12, 2020 (the "**March 2020 Order**").

Accordingly, the proposal for the formation of the InvIT was tabled for the consideration of the committee of creditors of ITNL ("**ITNL COC**") and a meeting of the ITNL COC was held on June 15, 2020 ("**First COC Meeting**"). The e-voting, seeking in-principle approval on the InvIT structure, commenced on June 23, 2020, and was completed on July 11, 2020. A majority of the members of the ITNL COC voted in favor of the InvIT structure.

A subsequent meeting of the ITNL COC was held on November 20, 2020 (the "**Second COC Meeting")** wherein the proposal of the InvIT was explained to the ITNL COC in detail. Post the Second COC Meeting, a detailed note relating to the InvIT proposal was shared with the members of the ITNL COC on November 27, 2020, providing a detailed update on, *inter alia*, the status of resolution of ITNL (including the various modes of resolution) and mechanism for computation of the Units that are proposed to be issued by the InvIT to ITNL.

Additionally, as part of the voting pursuant to the Second COC Meeting, which voting commenced on December 4, 2020, the ITNL COC, *inter alia*, assented to the final approval for the structure and implementation of the proposed InvIT by the Trust.

In parallel to the abovementioned, an application was filed before Hon'ble (Justice) D.K. Jain on July 16, 2020, which was further supplemented vide a supplementary memorandum dated August 8, 2020. Pursuant to such applications, Hon'ble (Justice) D.K. Jain vide letter dated September 5, 2020, inter alia, approved the setting up of the proposed InvIT.

B. Formation of the InvIT

Consequently, the Trust, as sponsored by the Sponsor, was established with the objective of owning, operating and investing in infrastructure projects in India, directly or indirectly. In-principle approval was received from SEBI for registration of the InvIT under the InvIT Regulations on September 2, 2020, and subsequently, the Trust was granted registration as an InvIT by the SEBI by way of a registration certificate bearing no. IN/InvIT/20-21/0015 on December

22, 2020.

C. Approval from the Competition Commission of India and the NCLT

Further, as per the requirements contemplated under the Competition Commission of India (Procedure in regard to the transaction of business relating to combinations) Regulations, 2011, as amended, the Sponsor (on behalf of the Trust) and the creditors of the IL&FS Group entities had filed a notification in Form-I under the 'Green Channel' route notification with the CCI on January 20, 2021. Prior to making this filing, the parties had attended pre-filing consultations with officers of the CCI on April 27, 2020, August 25, 2020, September 2, 2020 and January 6, 2021, to confirm the satisfaction of the 'Green Channel' criteria and other filing requirements. Consequently, the CCI issued an acknowledgment of such filing on January 20, 2021, pursuant to which the transaction had been deemed to be approved by the CCI as of January 20, 2021.

Subsequently, by way of its order dated September 15, 2021, the NCLT, inter alia, approved the implementation of the Trust.

D. Current Status

Currently, the Trust has completed the acquisition of Hazaribagh Ranchi Expressway Limited, Moradabad Bareilly Expressway Limited, Pune Sholapur Road Development Company Limited, Sikar Bikaner Highway Limited, Thiruvananthapuram Road Development Company Limited and Barwa Adda Expressway Limited and has issued Units of the Trust to IL&FS Transportation Networks Limited and certain IL&FS Group entities, namely, Infrastructure Leasing & Financial Services Limited, IL&FS Cluster Development Initiative Limited, IL&FS Airports Limited, IL&FS Financial Services Limited, and Sabarmati Capital One Limited, against the sale of shares and assignment of debt owed by such Project SPVs to the respective IL&FS Group entities, which Units are further proposed to be distributed by way of the Unit Distribution, to the Eligible Creditors in terms of the Resolution Framework, setting out the details and manner of interim distribution of, among other assets, the Units issued by the Trust as may be approved by the NCLT and/or any other appropriate judicial authority (such plan, the "**Distribution Plan**").

Further, the proposed Unit Distribution does not involve any fund raising and is being undertaken with the sole objective of debt resolution. Considering the foregoing and in the interest of the resolution of the debt provided by the Eligible Creditors to the IL&FS Unitholders, SEBI, in furtherance of the March 2020 Order and orders passed by the NCLAT approving the Interim Distribution Framework, has in the past by way of its letters dated September 2, 2020, December 3, 2021, June 23, 2022 and June 7, 2023, granted exemptions from compliance with certain provisions of the InvIT Regulations, for, inter alia, the purposes of registration of the Trust.

Pursuant to the receipt of registration by the Trust and in terms of the March 2020 Order approving the Resolution Framework, the Investment Manager undertook steps towards the timely completion of the acquisition of special purpose vehicles and towards the completion of the Unit Distribution. However, the process got delayed due to various factors, such as (i) the delay in receipt of sanction of debt restructuring from lenders of certain special purpose vehicles, (ii) delays in receipt of certain necessary approvals from relevant judicial authorities, and (iii) the COVID-19 global pandemic. Hence, despite its best efforts, the Trust was unable to complete the Unit Distribution within a period of 3 years from the date of its registration. Subsequently, pursuant to a requests for extension addressed by the Trust to SEBI, SEBI has extended the validity of the registration of the Trust till March 31, 2025. Subsequently, by way of letter for exemption dated March 12, 2024, the Trust has sought, and SEBI by way of its letter dated March 20, 2024, has granted, certain exemptions from compliance with specific provisions of the InvIT Regulations and the Master Circular, for the purposes of completion of this Unit Distribution.

E. Distribution

As indicated above, it is contemplated that the Units allotted to (and currently held by) the IL&FS Group entities as consideration of the transfer of their respective interests in the Project SPVs would be distributed to the creditors of such IL&FS Group entities. For further details, please see the section "*Formation Transactions in Relation to the*

Trust" and "*Unit Distribution Procedure and Information*" on pages 26 and 392, respectively.

While the intention of the Unit Distribution is to ensure that external creditors (i.e., non-IL&FS Group entities) receive Units from the IL&FS Group entities as part of the Resolution Framework, in certain cases, the creditors of the IL&FS Unitholders are actually other IL&FS Group entities themselves ("**Intragroup Creditors**").

Considering that the second proviso to Regulation 12(3) of the InvIT Regulations specifies that any units held by the sponsor and sponsor group members in excess of 15.00% shall be held for a period of not less than one year from the date of listing of the units, the Units held by the Intragroup Creditors (being part of the Sponsor Group) would be incapable of being distributed to their respective external creditors (i.e., non-IL&FS Group entities) for the entirety of such period. Accordingly, the objective of distributing the Units to external creditors would not be achieved. Accordingly, a preliminary distribution ("**Preliminary Distribution**") was implemented in terms of the exemption granted by SEBI by way of its letter dated March 20, 2024.

UNIT DISTRIBUTION PROCEDURE AND INFORMATION

Please see below a summary, intended to provide a general outline of the procedures for the Allocation and Allotment of the Units to Eligible Creditors pursuant to the Unit Distribution.

Eligible Creditors are advised to inform themselves of any restrictions or limitations that may be applicable to them under applicable law to which they are subject and should consult their respective advisors in this regard. Eligible Creditors will be required to confirm, and will be deemed to have represented, to the Trustee, the Investment Manager, the Placement Agent, the Distributing Unitholders and their respective directors, officers, agent, affiliates and representatives, that they are eligible under all applicable laws, rules, regulations, guidelines and approvals to receive the Units. The Investment Manager, the Sponsors, the Distributing Unitholders and the Placement Agent and their respective directors, officers, agent, affiliates and representatives accept no responsibility or liability for advising any Eligible Creditor on whether such Eligible Creditor is eligible to receive the Units.

Authority for the Unit Distribution

The Trust is undertaking this Unit Distribution in accordance with Regulation 14(2) of the InvIT Regulations and pursuant to the Resolution Framework, subject to certain exemptions granted by SEBI. The Unit Distribution was authorised and approved by the IM Board on April 2, 2024. This Placement Memorandum has been approved by the IM Board on February 11, 2025.

The Trust has received the in-principle approvals of NSE and BSE for the listing of the Units on NSE and BSE respectively pursuant to the letters each dated July 22, 2024. The validity of the in-principle approval of NSE has been extended by way of letters dated October 28, 2024 and February 10, 2025. The validity of the in-principle approval of BSE has been extended by way of letters dated November 7, 2024 and February 10, 2025. The Investment Manager has filed a copy of the Draft Placement Memorandum and this Placement Memorandum and will file a copy of the Final Placement Memorandum, with SEBI and the Stock Exchanges, in compliance with the provisions of the InvIT Regulations.

Neither the Trust, Trustee, Project Manager, Investment Manager or any of its directors have been declared as 'Fraudulent Borrowers' by the lending banks or financial institution or consortium, in terms of RBI master circular dated July 1, 2016, as amended.

The Units have not been, and will not be, registered, listed or otherwise qualified in any jurisdiction outside India and may not be distributed, and Unit Distribution may not be made to persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction.

Eligible Creditors should note that Allotment will only be in the dematerialized form. Eligible Creditors will not have the option of receiving Allotment in physical form. On Allotment, the Units will be traded only on the dematerialized segment of the Stock Exchanges.

Unit Distribution Information

Minimum offer size requirements

Exemption from strict enforcement of Regulation 14(1)(c) of the InvIT Regulations, with reference to requirement of the minimum issue size of an initial offer of units has been granted by SEBI way of its letter dated March 20, 2024. Accordingly, minimum issue size requirements as stipulated under Regulation 14(1)(c) of the InvIT Regulations are not applicable to this Unit Distribution. The Units will be distributed to the Eligible Creditors based on a predetermined formula as per the manner of distribution of proceeds revised by the New Board ("**Revised Distribution Framework**") in accordance with (and for the reasons set out in) the "*Second Addendum to the Third Progress Report*" dated December 5, 2019, with no actual subscription or investment by the Eligible Creditors. For details in relation to the process of this Unit Distribution, see "*Unit Distribution Procedure and Information - Process of Allotment and Allocation of Units*" and "*Unit Distribution Procedure and Information - Timelines for Allotment and Listing of Units*" on page 395.

Minimum investment requirements

Exemption from strict enforcement of Regulation 14(2)(c) of the InvIT Regulations, with reference to requirement of the minimum investment from any investor has been granted by SEBI way of its letter dated March 20, 2024. Considering the unique nature of the current Unit Distribution and taking into account that no actual investment is being made in the Trust and only Units are being distributed to Eligible Creditors, minimum investment requirements are not applicable to this Unit Distribution. For details in relation to the process of this Unit Distribution, see "*Unit Distribution Procedure and Information – Process of Allotment and Allocation of Units*" on page 395.

Sponsor and Sponsor Group lock-in

Exemption from strict enforcement of Regulation 12(3A) of the InvIT Regulations, with reference to the minimum holding requirement of Units as a percentage of total outstanding units by the Sponsor and Sponsor Group entities for the specified periods of time, has been granted SEBI by way of its letter dated March 20, 2024. Accordingly, the Sponsor is only required hold the mandatory unitholding, being not less than 15.00% of post distribution unit capital, post the Unit Distribution, as contemplated under Regulation 12(3) of the InvIT Regulations for a period of 3 years from the date of listing and accordingly, minimum unitholding by the Sponsor and Sponsor Group on a staggered scale is not applicable to the Sponsor and the Sponsor Group. The Sponsor currently holds no Units in the Trust and will be distributing Units as part of the Unit Distribution to comply with the aforestated lock-in requirements.

Pursuant to the IL&FS Interim Distribution SOP as approved by the board of directors of IL&FS in its meeting held on May 15, 2024, IL&FS and ITNL will continue to hold 31,593,908 Units after the Unit Distribution which will be held by them for a period of one year from the date of Unit Distribution in accordance with Regulation 12(3) of the InvIT Regulations. These Units correspond to the recovery amount for contingent claims that are either 'admitted contingent claims' or 'contingent claims that are neither admitted nor rejected and under appeal/adjudication at various fora'. These Units will be locked in with IL&FS and ITNL for a period of at least one year from the date of listing of Units or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. The Units which remain unallocated post finalisation of the contingent claims shall form part of pool of Units used for settlement of other creditors of the IL&FS Group which will be kept in separate demat accounts which will be controlled by the Investment Manager and will be released after a one year lock-in period, in consultation with SEBI. Prior to filing the Final Placement Memorandum, the Investment Manager shall enter into letter arrangements with IL&FS and ITNL for being a joint signatory to the demat accounts where such Units will be kept in relation to contingent claims. Under no circumstance such Units would be held in a beneficial interest capacity by any of the IL&FS entities.
See "*Information Concerning the Units*" on page 272.

Preliminary distribution

The Units allotted to (and currently held by) the IL&FS Group as consideration of the transfer of their respective interests in the Project SPVs to the Trust were distributed to the Eligible Creditors of such IL&FS Group entities as per the Resolution Framework.

While the intention of the Unit Distribution is to ensure that Eligible Creditors (i.e., non-IL&FS Group entities) receive Units from the IL&FS Group entities as part of the Resolution Framework, in certain cases, the creditors of the IL&FS Unitholders are actually other IL&FS Group entities themselves ("**Intragroup Creditors**"). To prevent a situation where in the Units held by the relevant IL&FS Unitholders would be distributed to (and held by) Intragroup Creditors even after the Unit Distribution, a preliminary distribution of such Units to the Intragroup Creditors was undertaken. The details of the Preliminary Distribution are set forth below:

The unitholding of the IL&FS Group entities that currently hold Units ("**IL&FS Unitholders**"), before and after the Preliminary Distribution is set out below:

S. No.	Name of Entity	Pre-Preliminary Distribution		Post Preliminary Distribution	
		No. of units held *	% of holding	No. of units held	% of holding
1.	IL&FS Transportation Networks Limited	259,230,728	56.91	219,993,908	48.30
2.	IL&FS	89,114,264	19.57	124,870,622	27.42
3.	Sabarmati Capital One Limited	14,160,483	3.11	2,000,000	0.44
4.	IL&FS Financial Services Limited	72,621,899	15.94	108,535,475	23.83
5.	IL&FS Airports Limited*	2,663,185	0.58	-	-
6.	IL&FS Cluster Development Initiative Limited*	17,609,446	3.87	-	-

* *Pursuant to the Preliminary Unit Distribution, these entities have divested their unitholding in the Trust and hence are no longer participating in the Unit Distribution.*

The Units distributed to the Intragroup Creditors pursuant to the Preliminary Distribution are, in turn, distributed in terms of the Resolution Framework to their external creditors (i.e., non-IL&FS Group entities) pursuant to the Unit Distribution.

In this regard exemption from strict enforcement (i) of second proviso of Regulation 12(3) of the InvIT Regulations, with reference to requirement of holding of Units in excess of the minimum 15% of the Units for one year to allow the Preliminary Distribution to the Intragroup Creditors and subsequently to the Eligible Creditors; and (ii) of Regulation 16(10) of the InvIT Regulations, with reference to requirement of Units to be held by persons other than the Sponsor Group for one year from the date of listing has been granted by SEBI by way of its letter dated March 20, 2024.

Pursuant to the IL&FS Interim Distribution SOP as approved by the board of directors of IL&FS in its meeting held on May 15, 2024, IL&FS and ITNL will continue to hold 31,593,908 Units after the Unit Distribution which will be held by them for a period of one year from the date of Unit Distribution in accordance with Regulation 12(3) of the InvIT Regulations. These Units correspond to the recovery amount for either 'admitted contingent claims' or 'contingent claims that are neither admitted nor rejected and under appeal/adjudication at various fora'. These Units will be locked in with IL&FS and ITNL for a period of at least one year from the date of listing of Units or until such time as the claims either crystallize into a debt requiring satisfaction through distribution of Units or are discharged / extinguished (as applicable). Post such time period, the board of IL&FS, in consultation with the Investment Manager, GT and A&M, will decide the treatment of any remaining Units. The Units which remain unallocated post finalisation of the contingent claims shall form part of pool of Units used for settlement of other creditors of the IL&FS Group which will be kept in separate demat accounts which will be controlled by the Investment Manager and will be released after a one year lock-in period, in consultation with SEBI. Prior to filing the Final Placement Memorandum, the Investment Manager shall enter into letter arrangements with IL&FS and ITNL for being a joint signatory to the demat accounts where such Units will be kept in relation to contingent claims. Under no circumstance such Units would be held in a beneficial interest capacity by any of the IL&FS entities.

The Resolution Framework, *inter alia*, contemplates that the proceeds of resolution received by any IL&FS Group entity can only be distributed in accordance with the Revised Distribution Framework which was approved by way of the March 12 Order. The March 12 Order also provides for October 15, 2018 to be 'cut-off date' and only those liabilities existing as of that date be admitted by the claims management advisor i.e. GT and consequently form part of the overall pool of creditors.

Further, the amount distributable to each class of creditors, including for those to whom the Unit Distribution will be made, will be computed by the resolution consultant i.e. A&M in accordance with the Revised Distribution Framework. The March 12 Order also grants power to the board of IL&FS to suitably modify the distribution framework with respect to the Unit Distribution, considering various factors such as existing contractual arrangements, jurisdictional issues, regulatory requirements, and cost-benefit analysis.

Accordingly, GT shall update the report on the revised claim amount which is due to creditors as of cut-off date considering the changes i.e. payouts post October 15, 2018 ('**Cut-off Date**'), crystallisation of liabilities, contingent claims etc. and review treatment of auto debits occurred and review of the same post Cut-off Date. The revised report shall be shared with A&M and the board of directors of IL&FS. A&M shall prepare calculations for the proposed Unit Distribution to the Eligible Creditors in accordance with the Revised Distribution Framework and the calculations shall be validated by GT.

Process of Allotment and Allocation of Units

Considering the unique nature of the current Unit Distribution and taking into account that no actual investment is being made in the InvIT and only Units are being distributed to Eligible Creditors, the following steps will be undertaken for the purposes of completion of the Unit Distribution:

S. No.	Steps for Unit Distribution*
1.	Filing of Draft Placement Memorandum with SEBI;
2.	Seeking in-principle approval from the Stock Exchanges;
3.	Receipt of Stock Exchanges comments on the Draft Placement Memorandum and granting of the in-principle approvals;
4.	Receipt of SEBI comments on the Draft Placement Memorandum and subsequently filing of an updated draft placement memorandum with SEBI;
5.	Identification of the Eligible Creditors to whom the Units will be distributed in terms of the Unit Distribution, in accordance with the Resolution Framework as approved by March 2020 Order, and the interim distribution as approved by the orders passed by the NCLAT from time to time order will be undertaken by a duly appointed intermediary on or prior to filing of the Placement Memorandum. See "*The Unit Distribution*" on page 19 for details of the identified Eligible Creditors.
6.	Filing of the Placement Memorandum with SEBI – the Placement Memorandum will be filed not less than 5 days prior to the allocation of Units to Eligible Creditors, instead of five days prior to the opening of the issue as required in terms of Regulation 14(2) of the InvIT Regulations;
7.	Allocation of Units to the Eligible Creditors;
8.	Finalization of the Final Placement Memorandum and circulation of the Final Placement Memorandum along with an intimation letter/e-mail to the Eligible Creditors as per the allotment determined; and
9.	Allotment and Unit Distribution to be completed within a period which is not less than 30 days from the filing of the Placement Memorandum.

**The Trust is permitted to undertake the allotment and listing of Units in accordance with framework mentioned above, the Revised Distribution Framework and the Distribution Plan approved by the NCLAT by the SEBI by way of its letter dated March 20, 2024.*

Timelines for Allotment and Listing of Units

Exemption from strict enforcement of paragraph 15.1 of the InvIT Master Circular, with reference to requirement of listing of Units within six working days from the closure of the issue has been granted by SEBI way of its letter dated March 20, 2024. Considering the unique nature of the current Unit Distribution, there will be no opening and closing of issue, also see "*The Unit Distribution*" on page 19 in this regard.

The Allotment and Unit Distribution shall be completed within a period which is not less than 30 days from the filing of this Placement Memorandum. Thereafter, the Investment Manager shall make the requisite applications for listing of the Units on the Stock Exchanges.

An indicative series of steps to be undertaken from the date of allocation of Units have been provided below:

S. No.	Details of Activities	Due Dates*
1.	Filing of the Placement Memorandum with SEBI – the Placement Memorandum will be filed not less than 5 days prior to the allocation of Units to Eligible Creditors, instead of five days prior to the opening of the issue as required in terms of Regulation 14(2) of the InvIT Regulations;	Tuesday, February 11, 2025
2.	Board meeting for approval of Allocation of Units	On or about Wednesday, February 19, 2025
3.	Finalization of the Final Placement Memorandum and circulation of the Final Placement Memorandum along with an intimation letter/e-mail to the Eligible Creditors as per the allotment determined	On or about Monday, March 3, 2025
4.	Allotment of Units	On or about Tuesday, March 4, 2025
5.	Investment manager on behalf of the Trust and the relevant IL&FS Group Entities to initiate corporate action for credit of units of the Trust to the demat account of the Eligible Creditors in the private placement.	On or about Tuesday, March 4, 2025
6.	Receipt of confirmation by Investment Manager from depositories for credit of Units in demat accounts the Eligible Creditors in the private placement, and lock-in of units to the extent applicable.	On or about Wednesday, March 5, 2025
7.	Post successful allotment, Investment Manager on behalf of Trust shall make listing application to stock exchange(s) for listing and trading permission	On or about Thursday, March 6, 2025
8.	Stock exchange(s) to issue notice for listing and commencement of trading.	On or about Thursday, March 6, 2025
9.	Stock exchange to send the notice to depositories in order to change the status of ISIN to active.	On or about Thursday, March 6, 2025
10.	Trading commences	On or about Friday, March 7, 2025

** Timelines are indicative and subject to change.*

Additional Procedures in relation to the Unit Distribution

1. GT, shall electronically circulate serially numbered copies of this Placement Memorandum to Eligible Creditors, along with an intimation letter/e-mail which will include the details of the Eligible Creditors' claim, recovery amount and demat account details. The list of Eligible Creditors to whom the serially numbered copies of this Placement Memorandum will be circulated, shall be determined by the Investment Manager, and the board of directors of IL&FS, in accordance with the Resolution Framework.

2. Unless a serially numbered Placement Memorandum is addressed to a particular Eligible Creditor, no intention to allotment shall be deemed to have been made to such Eligible Creditor. Even if such documentation were to come into the possession of any person other than the intended recipient, no distribution shall be deemed to have been made to such person and such person shall not be eligible to participate in the Unit Distribution.

3. Upon determination of the Eligible Creditors to whom Allocation shall be made, GT, in consultation with Investment Manager and the board of directors of IL&FS, will send the intimation letter/e-mail, along with a serially numbered Final Placement Memorandum, to the Eligible Creditors who have been Allocated Units.

The dispatch of an intimation letter/e-mail shall be deemed a valid, binding and irrevocable contract in respect of the number of Units Allocated to the Eligible Creditor.

4. Upon the dispatch of intimation letter/e-mail to successful Eligible Creditors, the Investment Manager and Distributing Unitholder shall Allot Units of the Trust as per the details in the intimation letter/e-mail sent to successful Eligible Creditors. The Investment Manager will intimate the Stock Exchanges about the details of the Allotment and apply for approval of the Units for listing and trading of the Units on the Stock Exchanges after the credit of Units into the demat accounts of the successful Eligible Creditors.

5. Allottees are advised to instruct their respective depository participant to accept the Units that may be Allotted to them pursuant to the Unit Distribution into their respective demat accounts.

6. The Units that have been credited to the demat accounts of the Eligible Creditors shall be listed and eligible for trading on the Stock Exchanges only upon the receipt of final listing and trading approvals from the Stock Exchanges. Eligible Creditors are advised to apprise themselves of the status of the receipt of the permissions from the Stock Exchanges or the Investment Manager.

Escrow Mechanism

- The Trustee (on behalf of the Trust), the Investment Manager, the Distributing Unitholders, Unit Escrow Agent has entered into a Unit Escrow Agreement and the Trustee (on behalf of the Trust), the Investment Manager, the Distributing Unitholders, IDBI Trusteeship Services Limited (acting on behalf of and in its capacity as the trustee to ECB lenders) and the Unit Escrow Agent has entered into a ECB Unit Escrow Agreement (together, the "**Escrow Agreements**").

- The Escrow Agreements relate to the deposit of Units by the Distributing Unitholders into escrow accounts for the purposes of crediting the Units to the demat account of the relevant Eligible Creditors. The Escrow Agreements contemplate the opening of three distinct escrow accounts, i.e., (i) account designated as "ROADSTAR INFRA INVESTMENT TRUST - Unit Distribution Escrow Account", wherein the total Distributed Units will be credited ("**Main Escrow Account**") before their distribution to the relevant Eligible Creditor's demat account; (ii) account designated as "ROADSTAR INFRA INVESTMENT TRUST - Unclaimed Units Account – Resident", wherein units pertaining to such Eligible Creditors will be held until all necessary consents, governmental or otherwise, and authorizations, legal opinions and other documentations, as applicable for relevant Eligible Creditors (for the purpose of holding the Units of the Trust), are obtained by the Investment Manager (on behalf of the Trust) and GT ("**Second Escrow Account**"); and (iii) account designated as "ROADSTAR INFRA INVESTMENT TRUST - Unclaimed Units Account – Non Resident", wherein units pertaining to eligible ECB lenders are lenders will be held ("**Third Escrow Account**").

- The Units in the Second Escrow Account and the Third Escrow Account will be kept for maximum period of seven years from the date of listing of the Units on the Stock Exchanges ("**Second Escrow Period**"). In the event where such Units are not claimed by the relevant Eligible Creditor by the end of the Second Escrow Period, the board of directors of the Investment Manager will prepare a plan for the treatment of such Units, in consultation with GT and A&M.

- The credit of Units to ECB Eligible Creditors from the Third Escrow Account shall be made upon receipt of relevant regulatory approvals in relation to such foreign holders and the credit of Units to the remaining Eligible Creditors from the Second Escrow Account shall be made upon receipt of the relevant undertakings and approvals, as applicable.

- Further, a Unit escrow bank account is contemplated to keep any distributions on the Distributed Units in escrow.

- As part of the Unit Distribution process, and as detailed above, Eligible Creditors are required to execute the Clawback Undertaking and share it with GT in order to receive the Units. Thereafter, GT shall provide the copy of the Clawback Undertakings received from the Eligible Creditors and a list of such Eligible Creditors who were unable to share the executed Undertakings, to the Investment Manager and the Placement Agent, and the

Investment Manager shall provide a copy of the resolution of its board of directors (or a duly authorized committee thereof) approving the distribution of the Units to the Eligible Creditors, pursuant to the Unit Distribution to the Unit Escrow Agent, the Distributing Unitholders and the Placement Agent. For avoidance of doubt, please note that such Distributed Units shall be distributed from the relevant Unit Escrow Account to the Eligible Creditors, upon a confirmation from Investment Manager to GT, stating that they have obtained the necessary Undertaking from the relevant Eligible Creditor, which confirms that the relevant Eligible Creditor can receive the Distributed Units through the Unit Distribution.

Allotments, if any, made to FVCIs in the Unit Distribution are subject to the respective rules and regulations that are applicable to each of them.

Please note that the onus of getting relevant approvals with respect to receiving the Units of the Trust in different jurisdictions is on the Eligible Creditors, and such units which are supposed to be credited to such foreign Eligible Creditors would be kept in a separate escrow account until such approvals are obtained by the Eligible Creditors.

ELIGIBLE CREDITORS MUST PROVIDE THEIR DEMAT ACCOUNT DETAILS, THEIR DEPOSITORY PARTICIPANT'S NAME, DEPOSITORY PARTICIPANT IDENTIFICATION NUMBER, BENEFICIARY ACCOUNT NUMBER AND BANK ACCOUNT DETAILS IN THE IDENTIFICATION FORM TO BE CIRCULATED TO THEM BY THE INVESTMENT MANAGER/ DULY APPOINTED INTERMEDIARY. ELIGIBLE CREDITORS MUST ENSURE THAT THE NAME GIVEN IN THE IDENTIFICATION FORM IS EXACTLY THE SAME AS THE NAME IN WHICH THE DEMAT ACCOUNT IS HELD.

IT IS THE SOLE RESPONSIBILITY OF THE ELIGIBLE CREDITORS TO ENSURE THEIR ELIGIBILITY TO RECEIVE UNITS IN THEIR DEMAT ACCOUNTS AND TO COMPLY WITH APPLICABLE LAW FOR RECIPT OF SUCH UNITS IN THEIR RESPECTIVE DEMAT ACCOUNTS.

Method of Allocation

The Investment Manager shall determine the Allocation in terms of the procedure specified in "*Unit Distribution Procedure and Information - Process of Allotment and Allocation of Units*" and "*Unit Distribution Procedure and Information - Timelines for Allotment and Listing of Units*" on page 395 and subject to the InvIT Regulations, SEBI Guidelines and other applicable laws.

THE DECISION OF THE INVESTMENT MANAGER AND THE BOARD OF DIRECTORS OF IL&FS, IN ACCORDANCE WITH THE RESOLUTION FRAMEWORK FOR THE ALLOCATION OF ALLOCATION OF UNITS SHALL BE FINAL AND BINDING ON ALL ELIGIBLE CREDITORS. ELIGIBLE CREDITORS MAY NOTE THAT ALLOCATION OF THE UNITS IS AT THE DISCRETION OF THE INVESTMENT MANAGER AND THE BOARD OF DIRECTORS OF IL&FS, SUBJECT TO THE RESOLUTION FRAMEWORK. NEITHER THE INVESTMENT MANAGER, THE BOARD OF DIRECTORS OF IL&FS NOR THE PLACEMENT AGENT ARE OBLIGED TO ASSIGN ANY REASON FOR ANY SUCH NON-ALLOCATION.

Intimation Letter/E-mail

Based on the allocation, the Investment Manager, in consultation with a duly appointed intermediary and the board of directors of IL&FS, in their sole and absolute discretion, will decide the Eligible Creditors to whom the serially numbered intimation letter/e-mail shall be sent, pursuant to which the details of Units Allocated to them shall be notified to such Eligible Creditors. Further, details of the amounts payable for Allotment of the Units in their respective names shall be notified to such Eligible Creditors. Additionally, the intimation letter/e-mail will include the probable designated date, being the date of credit of the Units to the respective Eligible Creditor's demat account ("**Designated Date**").

Eligible Creditors, who have been Allocated Units, would also be sent a serially numbered Final Placement Memorandum either in electronic form or by physical delivery along with the intimation letter/e-mail. The dispatch

of the serially numbered Final Placement Memorandum and the intimation letter/e-mail to Eligible Creditors shall be deemed a valid, binding and irrevocable contract in respect of the number of Units Allocated to each successful Eligible Creditors.

Eligible Creditors are advised to instruct their Depository Participant to accept the Units that may be Allotted to them pursuant to the Unit Distribution.

Eligible Creditors' Demat Account and Bank Account Details

Eligible Creditors should note that on the basis of Eligible Creditors' PAN, DP ID and Client ID provided by them, the Registrar will obtain from the Depository the demographic details including the Eligible Creditors' address and bank account details (including the nine-digit Magnetic Ink Character Recognition ("**MICR**") code as appearing on a cheque leaf) (the "**Demographic Details**"), from the Depository. Eligible Creditors are advised to immediately update their bank account details, PAN and Demographic Details as appearing in the records of the Depository Participant and ensure that they are true and correct.

Closing Date and Allotment of the Units

The Trustee and the Investment Manager will endeavour to complete the Allotment by the Closing Date.

In accordance with the InvIT Regulations, the Units will be issued and Allotment shall be made only in dematerialised form to the Allottees. The Investment Manager (on behalf of the Trust) and the Registrar have entered into:

- Tripartite agreement dated October 8, 2021 with NSDL; and
- Tripartite agreement dated October 28, 2021 with CDSL.

Following the Allotment of the Units, the Investment Manager will apply for final listing and trading approval from the Stock Exchanges. The Investment Manager and the Placement Agent shall endeavour to list the Units on the Stock Exchanges within 30 Working Days from the Closing Date.

Other Instructions

Units in Dematerialised form with NSDL or CDSL

The Allotment shall be only in dematerialised form (i.e., not in physical certificates but represented by the statement issued through the electronic mode).

Allotment to a successful Eligible Creditor will be credited in electronic form directly to the beneficiary account (with the Depository Participant) of such Eligible Creditor.

Units in electronic form can be traded only on the Stock Exchanges having electronic connectivity with NSDL and CDSL. The Stock Exchanges have electronic connectivity with NSDL and CDSL. The trading of the Units would be in dematerialised form only for all Unitholders in the respective demat segment of the Stock Exchanges. For details in respect of the minimum trading lot, please see the section entitled "*The Unit Distribution* " on page 19.

Undertakings of the Investment Manager:

(i). There shall be only one denomination for the Units of the Trust; and

(ii). It shall comply with such disclosure and accounting norms specified by SEBI from time to time.

Sponsor de-linkage

Pursuant to the Unit Distribution, the process of liquidation of assets of the certain IL&FS Group entities would be initiated and accordingly, the Sponsor, being a wholly-owned subsidiary of ITNL, will be required to be divested or

liquidated. Considering that the Sponsor is required to hold a minimum continuing interest for 3 years as per the InvIT Regulations, in order to facilitate the Sponsor in holding such continuing interest, the Sponsor will be de-linked from the IL&FS Group. The aforementioned de-linkage may be achieved in one of the following ways:

(i). Divestment of shareholding - Pursuant to the listing of the Units on the Stock Exchange, the IL&FS Group may initiate steps to divest the complete shareholding of the Sponsor to a third-party investor, thereby de-linking the Sponsor from the IL&FS Group; or

(ii). Conversion into a self-sponsored InvIT - Regulation 22(8) of the InvIT Regulations allows an existing sponsor of an InvIT to disassociate from the InvIT by seeking to convert the investment manager to a 'self-sponsored investment manager', and consequently, the InvIT to a 'self-sponsored InvIT' subject to satisfaction of the certain conditions specified therein. Subject to Unitholder approval and receipt of further exemptions from SEBI in that regard, the Trust may be converted to a self-sponsored InvIT by concluding the process of selling the Sponsor entity within a period of 3 years from the listing of the Units. If such sale of the Sponsor is concluded, the proceeds so received will be distributed to the Eligible Creditors.

STATEMENT OF TAX BENEFITS

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STATEMENT OF POSSIBLE TAX BENEFITS AVAILBLE TO ROADSTAR INFRA INVESTMENT TRUST AND ITS UNIT HOLDERS UNDER THE INCOME TAX ACT, 1961 IN CONNECTION WITH PROPOSED DISTRIBUTION OF UNITS OF ROADSTAR INFRA INVESTMENT TRUST

To,
The Board of Directors,
Roadstar Investment Managers Limited (the "**Investment Manager**") in its capacity as an Investment Manager of the Roadstar Infra Investment Trust (the "Issuer" or the "Trust")
The IL&FS Financial Centre, Plot no C22, G-Block,
Bandra Kurla Complex, Bandra (E),
Mumbai – 400071, Maharashtra, India.

Axis Capital Limited
1st Floor, Axis House
Pandurang Budhkar Marg, Worli
Mumbai 400 025
Maharashtra, India
(the "**Placement Agent**")

Roadstar Infra Investment Trust
acting through Axis Trustee Services Limited, as the trustee (the "**Trustee**")
Axis House
Bombay Dyeing Mills Compound
Pandurang Budhkar Marg
Worli,
Mumbai 400 025
(the "**Trust**" or the "**InvIT**")

Roadstar Infra Private Limited
The IL&FS Financial Centre,
Plot No. C-22, G Block,
Bandra Kurla Complex,
Bandra (E), Mumbai – 400051
(the "**Sponsor**")

Dear Sirs,
Ref: Statement of tax benefits available to the Roadstar Infra Investment Trust and its unitholders on proposed distribution of units ("**Unit Distribution**").

We refer to the proposed distribution of units of Roadstar Infra Investment Trust ('the Trust' or 'the InvIT'). We enclose herewith the statement showing the current position of possible special/general direct tax benefits available to the InvIT, and its unitholders (hereinafter referred to as "**the Statement**") as per the provisions of the Income-tax Act 1961 (read with Income Tax Rules, circulars, notifications) as amended by the Finance Act, 2024 (hereinafter referred to as the "Act"), as applicable as on date, for inclusion in the placement memorandum and the final placement memorandum (collectively, the "**Placement Documents"**) for the proposed distribution of units of the InvIT.

Several of these benefits are dependent on the InvIT or its unitholders fulfilling the conditions prescribed under the relevant provisions of the Act. Hence the ability of the InvIT or its unitholders to derive these direct tax benefits is dependent upon their fulfilling such conditions, which based on the business imperatives, the InvIT or its unitholders may or may not choose to fulfil.

The benefits discussed in the enclosed the Statement are neither exhaustive nor conclusive. The contents stated in the Statement are based on the information and explanations obtained from the Investment Manager. This Statement is

only intended to provide general information to guide the eligible creditors and is neither designed nor intended to be a substitute for professional tax advice. In view of the individual nature of the tax consequences and the changing tax laws, each eligible creditor is advised to consult their own tax consultant with respect to the specific tax implications arising out of their participation in the Unit Distribution. We are neither suggesting nor are we advising the investor to invest money or not to invest money based on this Statement.

1. Our engagement was undertaken in accordance with the Standard on Related Service (SRS) 4400 on "Engagements to Perform Agreed-upon Procedures regarding Financial Information" issued by the Institute of Chartered Accountants of India ('ICAI').

2. We conducted our examination in accordance with the "Guidance Note on Reports or Certificates for Special Purposes (Revised 2016)" (the "Guidance Note") issued by the Institute of Chartered Accountants of India. The Guidance Note requires that we comply with ethical requirements of the Code of Ethics issued by the Institute of Charted Accountants of India. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for firms that perform audits and reviews of Historical Financial information, and Other Assurance and Related Service Engagements.

3. Because the above procedures do not constitute an audit or a review made in accordance with generally accepted auditing standards in India, we do not express any assurance.

4. Had we performed additional procedures, or had we performed an audit in accordance with generally accepted auditing standards in India, other matters might have come to our attention that would have been reported.

In our opinion, the Statement presents tax benefits available as of 30 September 2024, to the Trust and its unitholders in accordance with the Act as at the date of our report.

We do not express any opinion or provide any assurance whether:

- The InvIT or its unitholders will continue to obtain these benefits as per the Statement in future; or
- The conditions prescribed for availing the benefits as per the Statement have been/would be met.

We hereby give our consent to include enclosed the Statement regarding the tax benefits available to the InvIT and its unitholders in the Placement Documents and other documents in connection with the proposed private placement of units, which the Investment Manager (on behalf of the InvIT) intends to submit to the Securities and Exchange Board of India, BSE Limited and National Stock Exchange of India Limited and any other authority, provided that the below statement of limitation is included in the Placement Documents.

The statement has been prepared solely in connection with the offering of units by the InvIT under the Securities and Exchange Board of India ("SEBI") (Infrastructure Investment Trusts) Regulations, 2014, as amended.

This certificate is issued at the request of the management of InvIT for use by the addresses mentioned herein and legal advisors appointed for the Unit Distribution, to be relied upon by all these addressees in course of their assignment and is not to be copied or circulated to any other person for any other purpose without our prior consent in writing. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
Firm Registration Number: 105146W/W100621

Hasmukh B Dedhia
Partner
ICAI Membership No: 033494
UDIN: 25033494BMJKBK1015

Place: Mumbai
Date: February 11, 2025

ANNEXURE TO STATEMENT OF POSSIBLE TAX BENEFITS AVAILABLE TO ROADSTAR INFRA INVESTMENT TRUST AND ITS UNITHOLDERS UNDER THE APPLICABLE LAWS IN INDIA

The information provided below sets out the possible tax benefits available to the unitholders in a summary manner only and is not a complete analysis or listing of all potential tax consequences of purchase, ownership and disposal of equity shares or units, under the Tax Laws presently in force in India. It is not exhaustive or comprehensive analysis and is not intended to be a substitute for professional tax advice.

UNITHOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS CONCERNING THE INDIAN TAX IMPLICATIONS AND CONSEQUENCES OF PURCHASING, OWNING AND DISPOSING OF UNITS, INCLUDING TAX IMPLICATIONS ON ANY DISTRIBUTIONS BY/ RECEIPTS FROM ROADSTAR INFRA INVESTMENT TRUST, IN THEIR PARTICULAR SITUATION.

The following is based on the provisions of the Income-tax Act, 1961 ('the Act') presently in force in India as amended by the Finance (No.2) Act, 2024 applicable for Financial Year ending 31 March 2025 relevant to the Assessment Year 2025-26. The Act is amended from time to time.

1. TAX BENEFITS AVAILABLE TO ROADSTAR INFRA INVESTMENT TRUST UNDER THE ACT

The following benefits are available to Roadstar Infra Investment Trust ('hereinafter referred to as 'the Trust' or 'InvIT') after fulfilling conditions as per the applicable provisions of the Act and the guidelines prescribed by the Securities and Exchange Board of India ('SEBI') including the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time ('SEBI Regulations').

The Trust is a business trust within the meaning of section 2(13A) of the Act which includes a trust registered as an Infrastructure Investment Trust under the SEBI Regulations made under the Securities and Exchange Board of India Act, 1992.

I. PROVISIONS UNDER THE ACT

1.1. Interest income received/ receivable from the underlying Special Purpose Vehicle(s) ('SPV'):

Interest received or receivable by the Trust from the SPVs (being Indian companies) shall be exempt from tax in case of receipt from SPVs as defined under section 10(23FC) of the Act.

As per the Explanation to section 10(23FC) of the Act, the expression "special purpose vehicle" means an Indian company in which the business trust holds controlling interest and any specific percentage of shareholding or interest, as may be required by the regulations under which such trust is granted registration.

In view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning any exempt income shall not be tax deductible. In case the Tax Authorities are not satisfied with the disallowance, the quantum of disallowance shall be computed in accordance with the provisions of section 14A read with Rule 8D of the Income-tax Rules, 1962 ('the Rules').

As per section 194A(3)(xi) SPVs are exempted from provisions of tax deduction at source ('TDS') in respect of interest paid or payable to the Trust, provided such interest is in relation to interest other than 'interest on securities'.

Further, as per provisions of section 193 pertaining to 'interest on securities' no Tax is deductible in respect of interest as referred to in section 10(23FC) which is received by the business trust from SPV as defined under section 10(23FC) of the Act.

1.2. Dividend income received/ receivable from the underlying SPVs:

Dividend received or receivable by the Trust from the SPVs shall be exempt from tax in case of receipt from SPV as defined under section 10(23FC) of the Act.

As per the explanation to section 10(23FC) of the Act, the expression "special purpose vehicle" means an Indian company in which the business trust holds controlling interest and any specific percentage of shareholding or interest, as may be required by the regulations under which such trust is granted registration.

In view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning any exempt income shall not be tax deductible. In case the Tax Authorities are not satisfied with the disallowance, the quantum of disallowance shall be computed in accordance with the provisions of section 14A read with Rule 8D of the Rules.

As per section 194, SPVs are exempted from provisions of TDS in respect of dividend distributed or paid to the Trust

1.3. Income from buy back of shares

The provisions of section 115QA of the Act mandate domestic companies i.e., SPV to pay an additional tax at the rate of 20% (plus applicable surcharge and cess) on buy-back of shares that takes place before 1 October 2024. Such tax is payable on the distributed income which means the consideration paid by the company on buy-back of shares as reduced by the amount, which was received by the company for issue of such shares, determined as per Rule 40BB of the Rules.

As per amendment made by Finance (No.2) Act, 2024 Section 115QA would not apply in respect of any buy-back of shares, that takes place on or after the 1 October 2024. Income arising from buy-back of shares that takes place before 1 October 2024 and which are subject to tax as per provisions of Section 115QA shall not be taxable as per section 10(34A) of the Act in the hands of the shareholders.

The entire consideration received by shareholders upon buyback of shares that takes place on or after the 1 October 2024 would be treated as dividend income and subject to tax in the hands of shareholders. As per section 194, SPVs are exempted from provisions of TDS in respect of dividend distributed or paid to the Trust. The cost incurred for purchase of such shares would be treated as capital loss in the hands of the shareholders.

In view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning any exempt income shall not be tax deductible in the hands of the trust. In case the Tax Authorities are not satisfied with the disallowance, the quantum of disallowance shall be computed in accordance with the provisions of section 14A read with Rule 8D of the Rules.

1.4. Taxability of income of the business trust in general unless exempted / specified otherwise under the provisions of the Act

As per section 115UA(2), the taxable total income of a business trust (including dividend and interest income from company other than SPV) shall be charged to tax at the Maximum Marginal Rate ('MMR') except for the income

chargeable to tax on transfer of short-term capital assets ('STCA') as per section 111A and transfer of long-term capital assets ('LTCA') as per section 112 of the Act. MMR refers to the rate of income-tax (including surcharge and cess on income-tax, if any) applicable in relation to the highest slab of income as specified in the Finance Act of the relevant year. Section 112A is not explicitly mentioned in section 115UA(2) of the Act.

Further, as per section 57 of the Act, no deduction shall be allowed against dividend income (which is taxable in the hands of the Trust) other than deduction on account of interest expense incurred wholly and exclusively for the purpose of earning such dividend and such interest expense shall not exceed 20% of the dividend income included in the total income for that year, without deduction under section 57 of the Act.

1.5. Taxability of capital gains

a. Period of holding:

Capital assets are classified as LTCA or STCA, based on the period of holding of those assets. Depending upon the said classification, the resultant gains on transfer of such capital assets shall be taxable either as short-term capital gains ('STCG') or as long-term capital gains ('LTCG'). As per the provisions of section 2(42A) of the Act as amended by Finance (No. 2) Act, 2024, a capital asset is regarded as STCA, if:

Sr. No.	Nature of asset	Period of holding before the date of transfer
(i)	Securities listed in a recognized stock exchange in India or units of the Unit Trust of India or units of an equity-oriented fund or zero coupon bonds	12 months or less
(ii)	Capital asset other than those covered in (i) above	24 months or less

b. STCG:

As per the provisions of section 111A of the Act, any income arising from transfer of STCA being an equity share in a company or a unit of an equity-oriented fund or a unit of a business trust transacted through a recognized stock exchange and chargeable to Securities Transaction Tax ('STT'), shall be taxable in the hands of the Trust at a concessional rate of 15% (plus applicable surcharge and cess). The rate of tax as amended by Finance (No. 2) Act, 2024 is increased from 15% to 20% for transfers taking place after 23 July 2024. However, the condition of chargeable to STT shall not apply to a transaction undertaken on a recognized stock exchange located in any International Financial Services Centre ('IFSC') and where the consideration for such transaction is paid or payable in foreign currency. STCG arising from transfer of STCA other than the shares and securities covered under section 111A of the Act, shall be taxed at the MMR in case of trust.

c. LTCG:

As per the provisions of section 112(1)(d) of the Act, gains arising on the transfer of LTCA shall be chargeable to tax in the hands of the Trust at the rate of 20% (plus applicable surcharge and cess). The rate of tax as amended by Finance (No. 2) Act, 2024 is reduced from 20% to 12.5% for transfers taking place after 23 July 2024.

For transfers taking place on or before 23 July **For transfers taking place after 23 July 2024**

2024 LTCG on transfer of listed securities (other than units) or zero- coupon bonds shall be taxable at lower of the following: - 10% (plus applicable surcharge and cess) without indexation benefit under second proviso to section 48; or - 20% (plus applicable surcharge and cess) with indexation benefit under second proviso to section 48	LTCG on all LTCA shall be taxed at 12.5% without indexation benefit.

Further, as per section 112A of the Act, gains exceeding INR 0.125 million arising on the transfer of LTCA, being an equity share in a company or a unit of an equity-oriented fund or a unit of a business trust, transacted through a recognized stock exchange on which STT has been paid, shall be chargeable to tax in the hands of the Trust at the rate of 10% (plus applicable surcharge and cess) without applying the benefit under the first and second provisos to section 48 of the Act. The tax rate of 10% as amended by Finance (No. 2) Act, 2024 is increased to 12.5% for transfers taking place after 23 July 2024.

The condition of chargeable to STT shall not apply to a transaction undertaken on a recognized stock exchange located in any IFSC and where the consideration for such transaction is received or receivable in foreign currency.

d. Cost of acquisition:

Section 48 of the Act prescribes the mode of computation of capital gains and provides for deduction of cost of acquisition/ improvement and expenses incurred in connection with the transfer of a capital asset, from the sale consideration to arrive at the amount of capital gains. However, in certain situations, in respect of LTCG, section 48 of the Act provides for substitution of cost of acquisition/ improvement with indexed cost of acquisition/ improvement, which adjusts the cost of acquisition/ improvement by a cost inflation index as prescribed from time to time. Such indexation benefit shall not be available in respect of LTCA being bonds (other than specified bonds), debentures, and listed equity shares in a company or units of equity-oriented funds or units of a business trust referred to in section 112A of the Act.

e. Deemed sales consideration:

As per section 50CA of the Act, where the consideration on transfer of unquoted shares of a company, is less than the fair market value of such share determined in the manner prescribed under Rule 11UAD of the Rules, the value so determined shall for the purpose of section 48 of the Act, be deemed as the full value of consideration of such transfer.

f. Set-off and carry forward of capital losses:

Section 71 of the Act provides that long-term capital loss ('LTCL')/ short-term capital loss ('STCL') arising during the year cannot be set-off against income under any other head other than capital gains for the same year.

As per section 70 read with section 74 of the Act, LTCL, if any arising during the year can be set-off only against LTCG arising during the year and balance loss, if any, shall be allowed to be carried forward for eight assessment years immediately succeeding the assessment year for which the loss was first computed. Such carried forward LTCL can be set off only against LTCG during subsequent eight assessment years.

As per section 70 read with section 74 of the Act, STCL, if any arising during the year can be set-off against STCG as well as against the LTCG arising during the year and balance loss, if any, shall be allowed to be carried forward for eight assessment years immediately succeeding the assessment year for which the loss was first computed. Such carried forward STCL can be set off against both LTCG and STCG during subsequent eight assessment years.

2. TAX BENEFITS AVAILABLE TO THE UNITHOLDERS OF ROADSTAR INFRA INVESTMENT TRUST

2.1. Special benefits available to the Unitholders of the Trust

Following tax benefits are potentially available to the unitholders of the Trust subject to fulfillment of the conditions specified in the Act and SEBI Regulations:

a. Income distributed by the Trust:

As per the provisions of section 115UA(1) of the Act, any income distributed by the Trust to its unitholders shall be deemed to be of the same nature and in the same proportion in the hands of the unitholders as if such income had been received by or accrued to the Trust.

As per the provisions of section 10(23FD), any distributed income referred to in section 115UA received by the unitholders from the business trust, shall not be included in the total income of the unitholders except for the following income:

- Interest referred to in Section 10(23FC)(a) of the Act; and
- Specified dividend i.e., dividend income referred to in Section 10(23FC)(b) of the Act received in cases where SPV has exercised the option under section 115BAA of the Act.

SPVs have the option, subject to certain conditions, to choose a concessional tax rate of 22% (plus applicable surcharge and cess) under section 115BAA of the Act. In case, SPV has exercised the option under section 115BAA of the Act, any dividend distributed by the Trust out of the dividend paid by such SPV, shall be taxable in the hands of the unitholders. In other cases, the dividend distributed by the Trust out of the dividend paid by SPV which has not exercised the option under section 115BAA of the Act, shall be exempt in the hands of the unitholders under section 10(23FD) of the Act.

In view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning any exempt income shall not be tax deductible. In case the Tax Authorities are not satisfied with the disallowance, the quantum of disallowance shall be computed in accordance with the provisions of section 14A read with Rule 8D of the Rules.

Finance Act, 2023 has brought in an exception to the above by adding a new clause (xii) under section 56(2) of the Act to provide that any distribution received by unitholders that is not covered under section 10(23FC) or 10(23FCA) of the Act and that which is not chargeable to tax under section 115UA(2) of the Act in hands of trust, shall be charged to tax as 'income from other sources' in hands of unit holder provided such amount received (including similar distributions in earlier years to the same unitholders or any other unitholders) is in excess of the amount at which units were issued by the InvIT, as reduced by the amount charged to tax under this provision in earlier year. Such income shall be chargeable to tax at the rates applicable based on the status of the unitholder.

b. Transactions not regarded as a transfer under section 47(xvii) of the Act:

(The below implications are only relevant for the Sponsor)

According to section 47(xvii) of the Act, any transfer of a capital asset, being shares of an SPV to a business trust in exchange of units allotted by that trust to the transferor, shall not be regarded as a transfer and accordingly not be liable to capital gains tax.

According to section 49(2AC) of the Act, the cost of units acquired in lieu of shares in SPV, shall be deemed to be cost of acquisition of shares in SPV.

As per the amendment by the Finance Act, 2023, the amount of distribution received to the extent not chargeable to tax under section 56(2)(xii) of the Act and not covered under sections 10(23FC), 10(23FCA) or 115UA(2) of the Act, shall be reduced from the cost of acquisition of units.

As per clause (hc) of Explanation 1 to section 2(42A), for ascertaining the period of holding of such units, the period of holding of shares in SPV shall also be included.

Any notional gain or loss arising on transfer of shares of SPV to a business trust in exchange of units allotted by the trust as referred to in section 47(xvii), is to be excluded while calculating book profit for the purpose of Minimum Alternate Tax ('MAT') under section 115JB of the Act. Similarly, any notional gain or loss arising upon change in carrying amount of the said units, is to be excluded in calculating book profit for the levy of MAT under section 115JB of the Act.

In case of Sponsor other than company that is liable for Alternate Minimum Tax ('AMT') under the provisions of section 115JC of the Act, any gain or loss arising on transfer of shares of SPV to a business trust in exchange of units allotted by the trust as referred to in section 47(xvii), is to be included as part of the adjusted total income for the purpose of computing AMT liability. AMT paid by such Sponsor should be available as credit for set-off against future tax liability, provided it does not opt to be governed by the concessional tax rates under sections 115BAC or 115BAD of the Act. Further, actual gain or loss on disposal of units held by the unitholders as referred to in section 47(xvii), is considered for the purpose of MAT under section 115JB of the Act.

However, if the unitholder opts for concessional tax regime under section 115BAA or under section 115BAB of the Act, then MAT provisions under section 115JB shall not be applicable to such unitholder and the entire MAT credit available at the time of exercising the option for concessional tax-regime shall have to be foregone.

2.2. General benefits available to the Unitholders of the Trust:

2.2.1. Tax benefits in relation to resident Unitholders:

a. Income distributed by the Trust:

As stated in Para 2.1(a) above, income distributed by a business trust being in the nature of dividend from SPVs which is not exempt under section 10(23FD) of the Act, interest from SPVs, and income chargeable to tax under section 56(2)(xii) of the Act, shall be taxable in the hands of resident unitholders as under:

Status of unitholder	Tax rate (excluding surcharge and cess)
Domestic companies (refer Note 1, 2, and 3)	30%

Firms, Limited Liability Partnerships ('LLPs')	30%
Others (refer Note 4)	As per applicable rates, e.g., in case of individuals, income shall be taxed as per applicable slab rates, maximum being 30%

Note 1: As per Finance (No.2) Act, 2024, a tax rate of 25% (plus applicable surcharge and cess) shall be applicable to a domestic company for Financial Year 2024-25 relevant to the Assessment Year 2025-26 if the total turnover or gross receipts of such company in the Financial Year 2022-23 relevant to the Assessment Year 2023-24, did not exceed INR 4,000 million.

Note 2: Further, domestic companies exercising the option provided under section 115BAA or section 115BAB of the Act shall be chargeable to a concessional tax rate of 22% (plus surcharge at the rate of 10% and health and education cess at the rate of 4%), subject to fulfilment of conditions prescribed in the said sections.

Note 3: Finance Act, 2020 has inserted section 80M of the Act to eliminate the cascading tax effect in case of intercorporate dividends by providing a deduction in respect of dividends received from a company (including foreign company) and business trust to the extent such dividend is distributed before the specified time.

Note 4: Finance Act, 2023 has amended section 115BAC of the Act to provide that Individuals, HUF, Association of Persons ('AOP') (other than a co-operative society), Body of Individuals ('BOI') and Artificial Juridical Person ('AJP') will be taxed on its total income at the reduced tax rates ('New Regime'), subject to satisfaction of certain conditions. The income would however have to be computed without claiming prescribed deductions or exemptions.

b. Taxation as business income

Where the gains arising on the transfer of the units of INVIT are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act. The characterization of gains/ losses, arising from sale / transfer of units, as capital gains or business income would depend on the nature of holding in the hands of the unit holder and various other factors.

c. Capital gains on sale of units of the Trust:

Capital assets are classified as LTCA or STCA, based on the period of holding of these assets. As per provisions of Section 2(42A) as amended by Finance (No. 2) Act 2024, the determinative period of holding for units of the Trust held by the unitholders to qualify as LTCA is more than 12 months (36 months for transfers before 23 July 2024). Units held for less than 12 months (36 months for transfers before 23 July 2024) would be STCA.

While determining the period of holding for units of business trust allotted pursuant to exchange of shares of SPV as per clause (hc) of Explanation 1 to section 2(42A) of the Act, the period of holding for the units shall include the period for which the shares were held in the SPV.
Taxation of capital gains on sale of units of the Trust:

Nature of capital gains	Tax rate (excluding surcharge and cess)		
	Unitholders being domestic companies	**Unitholders being Firms / LLPs**	**Other Unitholders**
STCG on sale of units of the Trust being a listed InvIT, subject to STT	20% 15% (if transfer takes place before 23 July 2024)	20% 15% (if transfer takes place before 23 July 2024)	20% 15% (if transfer takes place before 23 July 2024)
LTCG (exceeding INR 0.125 million) on sale of units of the Trust being a listed InvIT, subject to STT	12.5% without the benefit of first and second provisos to section 48 10% for transfers before 23 July 2024	12.5% without the benefit of first and second provisos to section 48 10% for transfers before 23 July 2024	12.5% without the benefit of first and second provisos to section 48 10% for transfers before 23 July 2024

As per the amendment made by the Finance Act, 2023, the amount of distribution to the extent not chargeable to tax under section 56(2)(xii) of the Act and not covered under sections 10(23FC), 10(23FCA) or 115UA(2) of the Act, shall be reduced from the cost of acquisition of units for computing capital gains.

d. Set-off of losses:

Please refer to Para 1.5(f) above.

e. Applicability of MAT/ AMT:

In case of domestic companies that are liable to pay MAT under the provisions of section 115JB of the Act, the gains arising, if any, on sale of units of the Trust are to be included as part of book profits for the purpose of computing MAT liability. MAT paid by such companies should be available as credit for set-off against future tax liability, provided such companies do not opt to be governed by the concessional tax rates under sections 115BAA or 115BAB of the Act. Companies exercising the option to be taxed as per section 115BAA or section 115BAB of the Act have been excluded from the applicability of MAT.

However, as per clauses (iie)/(fc) of Explanation 1 to section 115JB of the Act, the following shall not be considered while computing book profits for levy of MAT:

- notional gain/loss on transfer of shares of SPV in exchange of units allotted by the business trust referred to in clause (xvii) of section 47; or
- notional gain/loss resulting from any change in carrying amount of said units; or
- gain on transfer of units allotted by the business trust referred to in clause (xvii) of section 47.

Further, as per clauses (k)/(iif) of Explanation 1 to section 115JB of the Act, any gain/loss on transfer of units referred to in clause (xvii) of section 47 of the Act shall be considered while computing the book profit for levy of MAT by taking into account the cost of the shares exchanged with the units referred to in the said clause or the carrying amount of the shares at the time of exchange where such shares are carried at a value other than the cost through statement of profit and loss, as the case may be.

In case of unitholders other than companies that are liable to AMT under the provisions of section 115JC of the Act, the gains arising, if any, on sale of units of the Trust are to be included as part of the adjusted total income for the

purpose of computing AMT liability. AMT paid by such unitholders should be available as credit for set-off against future tax liability, provided they do not opt to be governed by the concessional tax rates under sections 115BAC or 115BAD of the Act.

2.2.2. Tax benefits in relation to non-resident Unitholders:

A non-resident shall be liable to tax in India in respect of:

- Income received or deemed to be received in India; or
- Income accrued or arisen or deemed to have accrued or arisen in India in terms of the provisions of the Act.

As per section 90(2) of the Act, the provisions of the Act shall apply to the extent they are more beneficial than the provisions of the Double Taxation Avoidance Agreement ('DTAA') between India and the country of residence of the non-resident unitholder. However, for claiming DTAA benefit, the non-resident would have to provide relevant documents/declarations viz. tax residency certificate, e-filed Form 10F, etc. as per the requirements of the Act/ DTAA.

a. Dividend which is not exempt under section 10(23FD) of the Act (i.e., dividend received by the Trust from SPV who has exercised the option under section 115BAA of the Act):

The said dividend income will be taxable at the rate of 20% (plus applicable surcharge and cess) as per Section 115A of the Act. This is subject to relief, if any, under the applicable DTAA.

b. Interest income earned from the SPV and distributed by the Trust:

Any interest income which is not exempt under section 10(23FD) of the Act in the hands of the non-resident unitholders would be taxable at 5% (plus applicable surcharge and cess) as per Section 115A of the Act. This is subject to relief, if any, under the applicable DTAA.

c. Other distribution by the Trust not covered under section 115UA(2) of the Act:

As per section 56(2)(xii) of the Act, any distribution received by non-resident unitholders that is not covered under section 10(23FC) or 10(23FCA) of the Act and which is not chargeable to tax under section 115UA(2) of the Act, shall be chargeable to tax as 'income from other sources' provided such amount received (including similar distributions in earlier years to the same unitholder or any other unitholder) is in excess of the amount at which units are issued by the business trust, as reduced by the amount charged to tax earlier under this provision.

Subject to relief, if any, under the applicable DTAA, such other distribution of income shall be chargeable to tax in the hands of the non-resident unitholders as under:

Status of unitholder	**Tax rate under the Act (excluding surcharge and cess)**
Foreign companies	40%
Firms, LLPs	30%
Others	As per applicable rates, e.g., in case of individuals, income shall be taxed as per applicable slab rates, maximum being 30%

d. Capital gains on sale of units of the Trust:

Capital assets are classified as LTCA or STCA, based on the period of holding of these assets. The determinative period of holding for units of the Trust to qualify as LTCA is more than 12 months (36 months for units transferred before 23 July 2024). Units held for less than 12 months (36 months for units transferred before 23 July 2024) , would be STCA.

While determining the period of holding for units of business trust allotted pursuant to exchange of shares of SPV as per clause (hc) of Explanation 1 to section 2(42A) of the Act, the period of holding for the units shall include the period for which the shares were held in the SPV.

Subject to applicable DTAA relief, if any, taxation of capital gains on sale of units of the Trust shall be as under:

Nature of Capital gains	**Tax rate under the Ac (excluding surcharge and cess)**
STCG on sale of units of the Trust being a listed InvIT, subject to STT	20% / 15% (For transfer before 23 July 2024)
LTCG on sale of units of the Trust being a listed InvIT, subject to STT	12.5%/ 10% (For transfers before 23 July 2024)

As per the amendment made by the Finance Act, 2023, the amount of distribution to the extent not chargeable to tax under section 56(2)(xii) of the Act and not covered under sections 10(23FC), 10(23FCA) or 115UA(2) of the Act, shall be reduced from the cost of acquisition of units for computing capital gains.

e. Set-off of losses:

Please refer to Para 1.5(f) above.

Applicability of MAT/ AMT:
While computing book profits to determine the applicability of MAT, in respect of income a foreign company being interest or dividend, or capital gains accruing or arising on transactions in "securities" within the meaning of section 2(h) of the Securities Contracts (Regulation) Act, 1956 should be excluded if such income is credited by the foreign company to its statement of profit and loss account and the income-tax payable thereon under the Act is at a rate less than rate of tax on book profits presently being 15% (excluding surcharge and cess).

Further, the MAT provisions shall not be applicable in case of a foreign company:

- if such foreign company is a resident of a country with which India has entered into a DTAA and such foreign company does not have a permanent establishment in India in terms of provisions of the applicable DTAA; or

- if such foreign company is a resident of a country with which India does not have a DTAA and such foreign company is not required to seek registration under any law for the time being in force relating to companies.

In case of unitholders other than companies that are liable to AMT under the provisions of section 115JC of the Act,

the gains arising, if any, on sale of units of the Trust are to be included as part of the adjusted total income for the purpose of computing AMT liability. AMT paid by such unitholders should be available as credit for set-off against future tax liability, provided they do not opt to be governed by the concessional tax rates under sections 115BAC or 115BAD of the Act.

2.2.3. Special tax benefits in relation to Unitholders being Foreign Institutional Investors ('FIIs') / Foreign Portfolio Investors ('FPIs')

a. As per the provisions of section 2(14) of the Act, any securities held by an FII which has invested in such securities in accordance with the regulations made under the Securities and Exchange Board of India Act, 1992, shall be regarded as a capital asset. Accordingly, any income arising on transfer of such capital assets shall be in the nature of capital gains.

b. The determinative period of holding for such units to qualify as LTCA is more than 12 months (36 months for units transferred before 23 July 2024). Thus, units held for up to 12 months (36 months for units transferred before 23 July 2024) shall qualify as STCA.

c. LTCG exceeding INR 0.125 million arising in the hands of FIIs/ FPIs on transfer of units of the Trust through a recognized stock exchange on which STT has been paid, shall be taxable under section 112A of the Act – please refer to Para 1.5I above.

d. LTCG arising in the hands of FIIs/ FPIs on transfer of units of the Trust, which is not effected through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 10%, without the benefit contained in the first and second provisos to section 48 of the Act (plus applicable surcharge and cess) in accordance with section 115AD of the Act. For transfers after 23 July 2024, as amended by Finance (No. 2) Act, 2024, the tax rate has increased to 12.5% without the benefit contained in the first and second provisos to section 48 of the Act (plus applicable surcharge and cess). (Subject to applicable DTAA relief, if any).

e. Similarly, STCG on transfer of the units of the Trust shall be chargeable to tax at the rate of 15% (plus applicable surcharge and cess) as per the provisions of section 111A of the Act provided such transfer is made through a recognized stock exchange and the transaction is subject to STT. For transfers after 23 July 2024, as amended by Finance (No. 2) Act, 2024, the tax rate has increased to 20% (plus applicable surcharge and cess). (Subject to applicable DTAA relief, if any).

f. However, as per section 115AD(1)(ii) of the Act, STCG arising to the FIIs/ FPIs on transfer of units of the Trust, which is not through a recognized stock exchange and not subject to STT, shall be taxable at the rate of 30% (plus applicable surcharge and cess).

g. As per section 196D(2) of the Act, TDS shall not apply in respect of income by way of capital gains arising from the transfer of securities referred to in section 115AD of the Act payable to FIIs/ FPIs.

h. On any other income in respect of securities referred to in section 115AD(1)(a) of the Act, other than capital gains and interest income subject to TDS under section 194LD of the Act, TDS shall apply at 20% (plus applicable surcharge and cess) as per section 196D of the Act, subject to applicable DTAA relief, if any.

2.2.4. Special tax benefits in relation to Unitholders being Mutual Funds:

a. Exemption is provided under section 10(23D) of the Act in respect of income of:

- Mutual Funds registered under the Securities and Exchange Board of India Act, 1992 or Regulations made thereunder; and
- Mutual Funds set up by public sector banks or public financial institutions and Mutual Funds authorised by the Reserve Bank of India will be exempt from income tax, subject to such conditions as the Central Government may, by notification in the Official Gazette, specify in this behalf.

b. As per the provisions of section 196 of the Act, TDS shall not apply on any sum payable to a Mutual Fund specified under section 10(23D) of the Act. Accordingly, the Trust is not required to withhold tax on any sum payable to Mutual Fund specified under section 10(23D) of the Act.

2.2.5. Special tax benefits in relation to Unitholders being Venture Capital Companies ('VCC') / Venture Capital Funds ('VCF'):

For VCC/ VCF registered prior to 21 May 2012

Under Section 10(23FB) of the Act, any income from investment in a Venture Capital Undertaking ('VCU') arising to a VCC/ VCF (not being an investment fund specified in clause (*a*) of Explanation 1 to section 115UB) to whom a certificate of registration has been granted before 21 May 2012 under SEBI (Venture Capital Funds) Regulations, 1996, or as a sub-category of Category I Alternative Investment Fund ('AIF') as is regulated under SEBI (AIF Regulations), 2012 made under the SEBI Act, 1992, shall be exempt from income tax, subject to conditions specified therein.

Further, as per Section 115U of the Act, any income derived by a person out of investments made in a VCC/ VCF shall be taxable in the hands of the person making the investment in the same manner as if it were the income accruing or arising to or received by such person had the investments been made directly in the VCU.

For VCC/ VCF registered post 21 May 2012

VCC/VCF registered post 21 May 2012 shall be classified as a Category 1 AIF which shall be governed by the SEBI (AIF) Regulations, 2012. For such fund, benefit of section 10(23FB) and section 115U shall not be applicable and the AIF shall be governed by section 115UB read with section 10(23FBA) and 10(23FBB) which states that business income earned by such AIF shall be taxable in the hands of the AIF and exempt in the hands of the unitholders, and other income earned viz. capital gains, income from other sources shall be exempt in the hands of the AIF and taxable in the hands of the unitholders.

2.2.6. Special tax benefits in relation to Unitholders being certain specified person

a. As per section 10(23FE) of the Act, dividend, interest, income taxable under section 56(2)(xii) of the Act and LTCG arising from investments made by 'specified person' in India, whether in the form of debt or share capital or unit, shall be exempt, if such investment is:

- made on or after 1 April 2020 but on or before 31 March 2024;
- is held for at least 3 years; and
- inter alia, is in a business trust

b. Further, such specified person (subject to certain conditions prescribed in section 10(23FE)) shall include:

- Wholly owned subsidiary of Abu Dhabi Investment Authority

- Sovereign Wealth Funds as notified by the Central Government
- Pension funds as notified by the Central Government

II. TAX DEDUCTION AT SOURCE

a. Withholding of tax by SPV:

As per section 193 and 194A of the Act, the SPV shall not be required to withhold taxes when they make payment of interest to the Trust.

As per section 194 of the Act, the SPV shall not be required to withhold taxes when they make payment of dividend to the Trust.

b. Withholding of tax by the Trust:

As per the provisions of section 115UA(1) of the Act, the income distributed by the Trust shall be deemed to be of the same nature and in the same proportion in the hands of the unitholders as if such income was received by or accrued to the Trust.

The distribution of income, in the nature of interest or dividend, by the trust to the unitholders, would be subject to TDS under section 194LBA of the Act at the time of credit of such payment to the account of the unitholders, or at the time of payment thereof, whichever is earlier. The rate of withholding as per section 194LBA of the Act shall be as under:

- On interest income:
  - 10% in case of resident unitholder; and
  - 5% in case of non-resident unitholder

- On dividend income, being that proportion of dividend earned from an SPV which has exercised the option of beneficial tax regime under section 115BAA of the Act
  - 10% in case of resident unitholder; and
  - 20% in case of non-resident unitholder

- On dividend income, being that proportion of dividend earned from an SPV which has not exercised the option of beneficial tax regime under section 115BAA of the Act, no TDS shall apply.

- The TDS rates above shall be subject to surcharge, cess and DTAA benefit, if applicable.

- On certain distributions proposed to be considered as income for the unitholders, as per the amendment introduced in the Finance Act, 2023, it would be pertinent to note that the Finance Act, 2023 has not introduced any separate withholding tax provisions with respect to such distributions. Accordingly, the Trust may be required to withhold tax under section 195 of the Act. The withholding tax rate applicable on such distributions shall be determined on the basis of the tax residential status of the unitholder and applicable DTAA benefits, if any.

c. Withholding of tax in case of transfer of shares/securities:

No tax is deductible at source from income by way of capital gains arising to a resident unitholder under the present provisions of the Act.

However, as per the provisions of section 195 of the Act, any income on transfer of units of the Trust by non-resident unitholders may be subject to TDS at the rate under the domestic tax laws or under the DTAA, whichever is beneficial to the assessee (other than FIIs/ FPIs which are subject to provisions of section 196D(2) of the Act – please refer to Para 2.2.3 above). The TDS shall be subject to any lower withholding tax certificates that may have been issued by the Tax Authorities to the unitholders under the provisions of the Act.

Applicability of DTAA benefit, if any, shall be subject to furnishing of relevant documents/declarations viz. tax residency certificate, e-filed Form 10F, etc. by the non-resident unitholders.

Buyer and seller of unlisted shares/securities also need to check the applicability of TDS under section 194Q of the Act read with the Tax Collection at Source ('TCS') provisions under section 206C(1H) of the Act. As per the clarification issued by the Central Board of Direct Taxes ('CBDT') vide Circular No. 17/2020 dated 29 September 2020, the provisions of section 206C(1H) shall not apply in relation to transactions in securities and commodities which are traded through recognized stock exchanges or cleared and settled by recognized clearing corporation, including recognized stock exchanges or recognized clearing corporation located in IFSC.

Further, vide Circular No. 13/ 2021 dated 30 June 2021, the CBDT has clarified that if buyer has deducted tax on a transaction under section 194Q of the Act, the seller is not required to collect tax under section 206C(1H) of the Act on the same transaction. However, if, for any reason, tax has been collected by the seller under section 206C(1H) before the buyer could deduct tax under section 194Q of the Act on the same transaction, then buyer need not to deduct tax at source under section 194Q of the Act.

d. **TDS at higher rate where Permanent Account Number ('PAN') details are not furnished by the unitholders - section 206AA of the Act**

As per section 206AA of the Act, where a taxpayer does not possess a PAN, taxes have to be withheld on payment of income to the taxpayer (where chargeable to tax) at higher of the following:

- At the rate specified in the Act; or
- At the rate or rates in force; or
- At the rate of 20% / 5% where tax is required to be deducted under sections 194-O or 194Q

Rule 37BC was introduced with effect from 24 June 2016 to provide for relaxation from higher TDS under section 206AA if the non-resident payee furnishes prescribed details and documents to the payer of specified income. Similar provisions are there under section 206CC of the Act in relation to TCS.

e. **TDS at higher rate in case of non-filers of income-tax return - section 206AB of the Act**

The Finance Act, 2021 had introduced a new provision - section 206AB in the Act for deducting tax at higher rates on payments made to non-filers of income-tax returns. Section 206AB of the Act applies where any sum or income or amount is paid, or payable or credited, by a person to a specified person and tax is required to be deducted at source as per provisions of the Act (except under sections 192, 192A, 194B, 194BB, 194-IA, 194-IB, 194LBC, 194M or 194N of the Act).

Specified person means a person who has not filed the return of income for the assessment year relevant to the previous year immediately preceding the financial year in which tax is required to be deducted for which time limit for furnishing return of income under section 139(1) of the Act has expired and the aggregate of TDS and TCS is INR 50,000 or more in the said previous year. Further, specified person shall not include a non-resident who does not have a permanent establishment in India or any other person who is not required to furnish return of income for the assessment year relevant to the said previous year and is notified by the Government in this regard.

In case the aforesaid section is applicable, tax shall be deducted at higher of the followings rates:

- twice the rate specified in the relevant provision of the Act; or
- twice the rate or rates in force; or
- the rate of 5%.

If provisions of section 206AA and section 206AB of the Act are applicable to a specified person, then, tax shall be deducted at higher of the two rates provided under the respective sections of the Act. Similar provisions are there under section 206CCA of the Act in relation to TCS.

III. OTHER PROVISIONS

a. Section 94(7) of the Act (commonly known as dividend stripping)

Section 94(7) of the Act provides that where:

(i) Any person buys or acquires any securities or unit within a period of three months prior to the record date[1];

(ii) Such person sells or transfers such securities within three months after such record date or such unit within nine months after such record date;

(iii) The dividend or income on such securities or unit received or receivable by such person is exempt then, the loss, if any, arising on account of such purchase and sale of securities or unit, to the extent of the dividend or income received or receivable on such securities or unit, shall be ignored for computing income chargeable to tax.

Finance Act, 2022 has extended the applicability of section 94(7) to a business trust as defined in section 2(13A) of the Act.

b. Section 94(8) of the Act (commonly known as bonus stripping)

Section 94(8) of the Act provides that where:

(i) Any person buys or acquires any securities or units within three months prior to the record date[2];

(ii) Such person is allotted additional securities or units without any payment on the basis of holding of such securities or units on such date;

(iii) Such person sells or transfers all or any of the securities or units within nine months after the record date, while continuing to hold all or any of the additional securities or units referred in clause (ii) above

then, the loss, if any, arising on account of such purchase and sale of all or any of the securities or units shall be ignored

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[1] *Record date means a date fixed for the purposes of entitlement of the holder of the securities or units, as the case may be, to receive dividend, income, or additional securities or units without any consideration, as the case may be*

[2] *Record date means a date fixed for the purposes of entitlement of the holder of the securities or units, as the case may be, to receive dividend, income, or additional securities or unit without consideration, as the case may be*

for computing income chargeable to tax and notwithstanding anything contained in any other provision of the Act, the amount of loss so ignored shall be deemed to be the cost of purchase or acquisition of such additional securities or units referred to in clause (ii) above as are held on the date of such sale or transfer.

Finance Act, 2022 has extended the applicability of section 94(8) to a business trust as defined in section 2(13A) of the Act.

Notes to statement

General tax rates and provisions:

1. The income-tax rates specified in this note are as applicable for the Financial Year 2024-25 relevant to the Assessment Year 2025-26, and are exclusive of surcharge and cess, if any. Rates of surcharge and Health and Education cess are as provided below:

Surcharge:
Domestic companies:

(i) If the total income does not exceed INR 10 million – Nil
(ii) If the total income exceeds INR 10 million but does not exceed INR 100 million - 7 %
(iii) If the total income exceeds INR 100 million - 12 %

Foreign companies:

(i) If the total income does not exceed INR 10 million - Nil
(ii) If the total income exceeds INR 10 million but does not exceed INR 100 million – 2%
(iii) If the total income exceeds INR 100 million – 5%

Individuals, HUF, AOP, BOI:

(i) If the total income does not exceed INR 5 million - Nil
(ii) If the total income (including dividend income or income under the provisions of section 111A, section 112 and section 112A of the Act) exceeds INR 5 million but does not exceed INR 10 million – 10%
(iii) If the total income (including dividend income or income under the provisions of section 111A, section 112 and section 112A of the Act) exceeds INR 10 million but does not exceed INR 20 million – 15%
(iv) If the total income (excluding dividend income or income under the provisions of section 111A, section 112 and section 112A of the Act) exceeds INR 20 million but does not exceed INR 50 million – 25%
(v) If the total income (excluding dividend income or income under the provisions of section 111A, section 112 and section 112A of the Act) exceeds INR 50 million – 37%
(vi) If the total income (including dividend income or income under the provisions of section 111A. section 112 and section 112A of the Act) exceeds INR 20 million, but is not covered under (iv) and (v) above – 15%

However, in case the total income includes any income by way of dividend or income under the provisions of

section 111A, section 112 or section 112A of the Act, surcharge in respect of that part of income shall not exceed 15%.

In case of an Association of Persons consisting of only companies as its members, surcharge shall not exceed 15% even if the total income exceeds INR 10 million.

The above surcharge is subject to marginal tax benefit as per the Act.

As per the Finance (No.2) Act, 2024, in case of Individuals, HUF, AOP (other than a co-operative society), BOI, AJP taxable under the New Regime prescribed under section 115BAC of the Act, the surcharge shall not exceed 25% even if the total income exceeds INR 20 million.

Firms, LLPs

(i) If the total income does not exceed INR 10 million – Nil
(ii) If the total income exceeds INR 10 million - 12 %

The above surcharge is subject to marginal tax benefit as per the Act.

Health and Education cess:

In all cases, Health and Education cess will be levied at the rate of 4% of the aggregate of income-tax and surcharge.

2. The stated benefits will be available only to the sole/ first named holder in case the units are held by joint holders.

3. The TDS rates mentioned in the given document may be subject to any concessions introduced/ allowed by the Government under any policy, press release, etc. Also, the same may also be subject to lower/ nil withholding tax certificates which may be furnished by the unitholders.

4. In respect of non-residents, the tax rates and the consequent taxation mentioned above shall be further subject to any benefits available under the applicable DTAA, if any, between India and the country in which the non-resident has fiscal domicile. Further, it is pertinent to meet the terms and conditions viz. tax residency, Principal purpose test, beneficial ownership test etc. as enacted in DTAAs entered into by India with various countries based on Multilateral Instrument ('MLIs') to implement tax treaty related measures to prevent Base Erosion and Profit Shifting ('BEPS').

5. The tax implications/ benefits stated in this document are subject to General Anti Avoidance Rules ('GAAR') provisions under the Act. GAAR may be invoked by the Indian Income Tax Authorities in case arrangements are found to be impermissible avoidance arrangements. Further, in case GAAR provisions are invoked, the onus to prove that the main purpose of an arrangement was not to obtain any tax benefit is on the taxpayer. Also, any resident or non- resident may approach the Board for Advance Rulings (earlier Authority for Advance Rulings) to determine whether an arrangement can be regarded as an impermissible avoidance arrangement.

6. This statement does not discuss any tax consequences in a country outside India of an investment in the units of The Trust. The unitholders / investors in the country outside India are advised to consult their own

professional advisors regarding possible tax consequences that apply to them in such country outside India.

7. This statement is intended only to provide general information to the investors and is neither designed nor intended to be substituted for professional tax advice. In view of the individual nature of tax consequences, each investor is advised to consult his/her own tax advisor with respect to specific tax consequences of his/her participation in the scheme.

8. No assurance is given that the revenue authorities/courts will concur with the views expressed herein. Our views are based on the existing provisions of law and its interpretation, which are subject to changes from time to time. We do not assume responsibility to update the views consequent to such changes. We shall not be liable for any claims, liabilities or expenses relating to this assignment except to the extent of fees relating to this assignment, as finally judicially determined to have resulted primarily from bad faith or intentional misconduct. We will not be liable to any other person in respect of this statement.

9. This statement of possible direct tax benefits enumerated above is as per the Act as amended by the Finance (No.2) Act, 2024 applicable for the Financial Year ending 31 March 2025 relevant to the Assessment Year 2025-26. The above statement of possible Direct-tax Benefits sets out the possible tax benefits available to the Trust and its unitholders under the current tax laws presently in force in India. Several of these benefits available are dependent on the Trust or its unitholders fulfilling the conditions prescribed under the relevant tax laws.

10. The information provided above sets out the possible tax benefits available to the unitholders in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership, transfer and disposal of equity shares and units, under the current tax laws presently in force in India. It is not exhaustive or comprehensive and is not intended to be a substitute for professional advice. Investors are advised to consult their own tax advisor with respect to the tax implications arising on account of any investment in equity shares or units (including tax implications on account of any distributions by/ receipts from the Trust), particularly in view of the fact that certain recently enacted legislation may not have a direct legal precedent or may have a different interpretation impacting the benefits, which an investor can avail.

LEGAL MATTERS

S&R Associates does not make, or purport to make, any statement in this Placement Memorandum and is not aware of any statement in this Placement Memorandum which purports to be based on a statement made by it, and it makes no representation, express or implied, regarding, and to the extent permitted by law takes no responsibility for, any statement in or omission from this Placement Memorandum.

Cyril Amarchand Mangaldas does not make, or purport to make, any statement in this Placement Memorandum and is not aware of any statement in this Placement Memorandum which purports to be based on a statement made by it, and it makes no representation, express or implied, regarding, and to the extent permitted by law takes no responsibility for, any statement in or omission from this Placement Memorandum.

INDEPENDENT ACCOUNTANTS

Audited Special Purpose Combined Financial Statements have been prepared in accordance with the Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 prescribed under Section 133 of the Companies Act, 2013 read with the InvIT Regulations and the circulars issued thereunder and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India. The Audited Special Purpose Combined Financial Statements included in this Placement Memorandum have been audited by KKC & Associates LLP (*formerly known as Khimji Kunverji and Co. LLP*), the statutory auditors of the Trust, as stated in their audit report dated January 4, 2025, included in this Placement Memorandum.

AUDITED SPECIAL PURPOSE COMBINED FINANCIAL STATEMENTS

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Independent Auditor's Report on Special Purpose Combined Financial Statements

To,
Board of Directors,
Roadstar Investment Managers Limited (the "Investment Manager")
[As the Investment Manager of Roadstar Infra Investment Trust (the "InvIT")]
The IL&FS Financial Centre
Plot No. C22, G-Block
Bandra Kurla Complex, Bandra (E)
Mumbai - 400051

Opinion

1. We have audited the accompanying "Special Purpose Combined Financial Statements" of the Special Purpose Vehicles (SPVs) of the InvIT, subsidiary companies namely, (i) Moradabad Bareilly Expressway Limited (MBEL),(ii) Sikar Bikaner Highway Limited (SBHL), (iii) Hazaribagh Ranchi Expressway Limited, (HREL), (iv) Pune Sholapur Road Development Company Limited (PSRDCL), (v) Barwa Adda Expressway Limited (BAEL) and (vi) Joint Venture namely, Thiruvananthapuram Road Development Company Limited (TRDCL); (each individually referred to as "SPVs" and together referred to as the "SPV Group"), which comprise the Combined Special Purpose Balance Sheets as at period ended 30 September 2024 and for the year ended 31 March 2024 ,31 March 2023 and 31 March 2022, the Combined Special Purpose Statements of Profit and Loss (including Other Comprehensive Income), the Combined Special Purpose Cash Flow Statements, the Combined Special Purpose Statements of Changes in Equity for the year ended on those dates, Combined Statement of net assets at fair value for the six months ended 30 September 2024 and for the year ended 31 March 2024, Combined Statement of Total Returns for the six months ended 30 September 2024 and for the year ended 31 March 2024, and a Summary of Significant Accounting Policies and Other Explanatory Information (the "Special Purpose Combined Financial Statements").

2. In our opinion and to the best of our information and according to the explanations given to us, Special Purpose Combined Financial Statements give a true and fair view of the combined state of affairs of the SPV Group as at period ended 30 September 2024, and for the year ended 31 March 2024, 31 March 2023 and 31 March 2022, its combined loss including other comprehensive income, its combined cash flows and its combined changes in equity for the period and year ended on those dates, its combined statement of net asset at fair value, as at 30 September 2024 and for the year ended 31 March 2024, and its combined statement of total returns at fair values, for the Period ended 30 September 2024 and for the year ended 31 March 2024 in accordance with the basis of preparation as set out in Note No. 1.2.2.1 to the Special Purpose Combined Financial Statements.

Basis of Opinion

3. We conducted our audit in accordance with the Standards of Auditing (SAs) issued by the Institute of Chartered Accountants of India (the "ICAI"). Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Combined Financial Statements section of our report. We are independent of the InvIT in accordance with the Code of Ethics issued by the ICAI together with the ethical requirements that are relevant to our audit of the Combined Financial Statements, and we have fulfilled our

ethical responsibilities in accordance with these requirements and Code of Ethics. We believe that the audit evidence obtained by us is sufficient and appropriate to provide a basis for our audit opinion on the Combined Financial Statements.

Material Uncertainty on Going Concern

In case of Barwa Adda Expressway Limited (BAEL) :

4. We draw attention to Note No. 41(b), 41(j), 41(k), 41(f),44(c),44(d), and 45 of the accompanying special purpose Combined Financial Statements the Company has accumulated losses and its net worth has been fully eroded, the Company has earned profit during current period, however, there are losses in previous years and it may be unable to meet its obligations (financial and operational) as and when they fall due. As at 30 September 2024, the Company has a negative net worth of Rs. 17,378.18 million and its Current financial Liabilities exceeds the Current financial Assets by Rs. 10,308.99 million. These conditions along with other matters including the mitigating factor considered by the management, set forth in Note No. Note No. 34 to 38, 40 and 43, indicate the existence of a material uncertainty that may cast significant doubt about the company's ability to continue as a going concern. Our Opinion is not modified in respect of this matter.

Emphasis of Matter – (EOM)

5. We draw attention to Note 1.2.2.1 to the Special Purpose Combined Financial Statements, which describes the purpose and basis of preparation of the said Special Purpose Combined Financial Statements. The Special Purpose Combined Financial Statements have been prepared by the management of the Investment Manager solely for inclusion in Placement Memorandum in accordance with the requirements of Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time including any circulars issued thereunder (the "InvIT Regulations") in connection with the proposed distribution of units by the InvIT on private placement basis. As a result, the Special Purpose Combined Financial Statements may not be suitable for any another purpose.

6. **Summary of EOMs by Auditors of SPVs**

The respective auditors of a subsidiary and a joint venture have drawn attention in their respective audit reports, without modifying their respective opinion, on following matters:

Sr No	Name of entity	Year	EOM
01	BAEL	30 September 2024	a. We draw attention to Note No. 34 of the accompanying special purpose financial statements wherein the company has stated that the Ministry of Corporate Affairs (MCA), Government of India, has vide its letter dated

			October 1, 2018 initiated investigation by Serious Fraud Investigation Office (SFIO) against IL&FS (erstwhile ultimate holding company) and its group companies under Section 212 (1) of the Companies Act, 2013. As a part of investigation of affairs of ITNL (the erstwhile Holding Company), SFIO has also been seeking from ITNL various information including relating to project undertaken by the Company (for which ITNL acted as Development Contractor and promoter). The investigation is in progress and it is understood that the relevant information is being provided by ITNL to the agency. At this stage, no material impact/ implications had arisen from the aforesaid developments. As part of resolution process, post September 30, 2024, the equity capital of the Company has been acquired by Roadstar Infra Investment Trust (RIIT) and as per Company's assessment there will not be any impact for the aforesaid exercise. b. We draw attention to Note No. 35 of the accompanying special purpose financial statements wherein the company has stated that National Company Law Appellate Tribunal ("NCLAT") had passed an order on October 15, 2018 ("Interim Order") in Company Appeal (AT) 346 of 2018, imposing moratorium on the creditors of IL&FS and its 348 group companies, which includes the Company. Further, NCLAT vide its order dated February 11, 2019 had also classified the Company under the "Red Category" based on a 12 month cash flow solvency test, indicating it is not in a position to discharge its entire Debt as and when due. Accordingly, the Company is permitted to make only those payments necessary to maintain and preserve the going concern status. This consequently also resulted in downgrade of debt ratings of the Company. NCLAT wide its order dated March 12, 2020, had upheld its interim order of October 15, 2018. The said order specifies October 15, 2018 as the date of initiation of the Resolution Process of the Company. Accordingly the Company has not accrued any interest, default interest, penal interest and any other similar

			charges after the said cut-off date of October 15,2018 and also not repaid any principal amount of debt due. As a result, Rs. 411.01 million (during the period October 2018 to March 2020) recovered by the banks (towards interest and principal) from the Escrow accounts of the Company maintained with them is being treated as Receivable from banks in these financial statements. The Company has written to the banks for recoveries of the same amounts in view of moratorium extended by the October 15, 2018 Order of NCLT. These amounts have not been handed back to the Company till date. Further, the balances as confirmed by the lenders, in some cases, are not in agreement with the books of the company which is under reconciliation. During the current financial period, further Rs. 1039.70 million (Previous year: Rs. 1935.00 million) recovered by the banks from the Escrow accounts of the Company maintained with them. The company has disclosed the amount of such recoveries as at September 30, 2024 amounting to Rs. 3,385.71 million (Previous Year Rs. 2,346.01 million) as an Amount Receivable from Bank. c. We also draw attention to Note No. 36 of the accompanying special purpose financial statements wherein the company has stated that in line with the affidavit filed by Ministry of Corporate Affairs (MCA) to the Hon'ble NCLAT on May 21, 2019, the cut-off date of October 15, 2018 ("Cut-Off Date") was proposed, on account of inter alia the fact that the Hon'ble NCLAT had passed the Order on October 15, 2018, which inter alia granted certain reliefs to the IL&FS Group and also restricted certain coercive actions by the creditors of the IL&FS Group. In terms of the Resolution Framework Reports, the proposal made is that all liabilities relating to the relevant IL&FS Group Entity, whether financial (including interest, default interest, indemnity claims and additional charges), operational debt (including interest, indemnity or other claims) as well as statutory claims (including tax, employment and labour related claims), whether existing at or relating to a

			period prior to the Cut-Off Date should not continue accruing. Accordingly, the interest expenses are accounted on borrowings until October 15, 2018. With the approval of NCLT, NHAI, and the lenders, post September 30, 2024, the Company's shareholding was acquired by Roadstar Infra Investment Trust (RIIT). As part of this resolution, the entire debt of the Company has been restructured. Accordingly, interest amounting to ₹ 4,008.58 million on secured senior lender borrowings, accrued for the period from April 1, 2021, to September 30, 2024, has been recognized during the current year. This includes interest on a portion of the senior debt, against which Non-Convertible Debentures (NCDs) issued post-September 30, 2024, considering an extension of the concession period by four years. Interest on unsecured group debt will be accrued starting October 17, 2024, the effective date of the Company's acquisition by RIIT. d. We draw attention to Note No. 40 of the accompanying special purpose financial statements wherein the company has stated that as per the Minutes of Meeting with Lenders Consortium held on dated March 16, 2023, the company is to incur capital cost of Rs. 5,339.30 million for completing the remaining construction activities, these costs shall not provide any incremental revenue for the company beyond the revenue stream as of now. However, these would be required to complete the entire stretch of the project and is one of the contractual obligations of the company. The amount is as determined by the Independent Engineer of NHAI, and the company is reassessing the same. The costs as and when incurred will be treated as part of the cost of the intangible assets. The Company has already awarded a contract for substantial amount work to be executed. e. We draw attention to Note No. 43 of the accompanying special purpose financial statements wherein the company has stated that the project concession period is 20 years and the appointed date of the project was April 1, 2014.

			Accordingly, the project concession ends in March 2034. As per the Clause 29.1.2, in the event Actual Average Traffic shall have fallen short of the Target Traffic, then for every 1% (one per cent) shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5% (one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. As per the traffic projections, there will be lower traffic as on target date and hence, the Company is eligible for extension of the concession period of 5 years 3 months (subject to maximum of 4 years) i.e. the concession period will be till June 2038 including 3 months extension for Covid. Such an extension of concession period has been considered for accounting of amortisation, impairment and negative premium payable to NHAI. f. We draw attention to Footnote to Note No. 7 of the accompanying special purpose financial statements wherein the company has stated that in prior periods, the Company had recognized a claim receivable from the Authority amounting to ₹1,286.36 million, based on Paragraph 6 of the letter issued by NHAI (Reference No. 15017/1/2013/PIU(DUP)/1832 dated September 25, 2019). Additionally, the Company had recorded liabilities of ₹1,237.88 million towards the negative change of scope related to de-scoped works and other claims by NHAI, and ₹124.70 million for a possible penalty for overloading. As part of a comprehensive settlement agreement dated September 30, 2024, with NHAI, these claims have been resolved, resulting in a net recoverable amount of ₹42.70 million from NHAI. Accordingly, the remaining balances have been adjusted during the current period, with ₹1,237.88 million written back and ₹1,324.39 million written off. The amounts written off include ₹80.55 million of other recoverable and ₹0.18 million recoverable from other parties (Refer to Notes 19 and 23). Further, as part of the settlement, the Company was required

			to pay ₹166.50 million as a penalty for harmonious substitution. Consequently, an additional liability of ₹41.80 million (₹166.50 million less ₹124.70 million already provided) has been recorded in the books of accounts.
02	PSRDCL	30 September 2024	a. We would like to draw your attention to Note no. 38 of the Special purpose financial statements, wherein it is mentioned that, During the previous financial year ended March 31, 2024, the Company's shareholding was transferred to Roadstar Infra Investment Trust (RIIT), an InvIT, following due approvals from the lenders, the authority, and the NCLT. Pursuant to this transfer, no interest was payable to the lenders for the period from October 16, 2018, to March 31, 2021. Interest accrued up to October 15, 2018, was converted into a loan, and the lenders executed a loan agreement with restructured terms. Debt servicing under these revised terms commenced in June 2023.Additionally, the senior lenders had recovered ₹230.48 million post-October 15, 2018, which was adjusted against the outstanding debt as per the distribution plan approved by the NCLAT. While the senior lenders have incorporated the restructuring of debt into their books, a review of the statements of account received from them indicates a variance in the balances for five out of twelve lenders. As of September 30, 2024, the net variance between the debt balances reported by the senior lenders and those recorded in the Company's books is ₹22.89 million. The Company is actively engaging with the senior lenders to reconcile and resolve this discrepancy. Management is of the view that the resolution of these matters will not have any impact on the financial statements of the Company
03	SBHL	31 March 2024	a. *"We draw attention to Note No. 12.2 to the Interim Special Purpose financial statements, wherein it has been mentioned that a loan from the unrelated party obtained in 2017-18 has not been restructured with other loans due the reasons mentioned in the said note. As stated in the said note the unrelated lender has not provided balance confirmation as on March*

			31, 2024. Further, the outstanding balance of the said unrelated lender is not in agreement with the books of the company due to reasons mentioned in the said note. Our opinion is not modified for the above matters." The details pertaining to above-mentioned point have been placed at Note No 14 to the Special Purpose Combined Financial Statements.
04	PSRDCL	31 March 2024	a. *"We draw your attention to Note no. 38 of the Special purpose financial statements wherein it is mentioned that, During the current financial year, the Company's shareholding was transferred to Roadstar Infra Investment Trust (RUT), an InvIT, after receiving due approval from the lenders, authority, and NCLT. Pursuant to this transfer, no interest was payable to the lenders for the period from 16th October 2018 to 31st March 2021. The interest accrued until 15th October 2018 was converted into a loan. The revised debt amount as of October I 5, 2018 was agreed by the lenders as a part of restructuring of debt, subject to approval from NHAI for extension of concession period. However, based on representation from Company, some lenders have given waiver of such condition. The lenders executed a loan agreement with restructured terms, and the debt was serviced from June 2023 onwards in accordance with these revised terms. The senior lenders had also recovered Rs. 230.48 million post-October 15, 2018 and in accordance with the distribution plan approved by NCLAT, this amount was adjusted against the outstanding debt."* *"However, based on the statement of account received from the senior lenders, it appears that eight out of twelve lenders have not given effect to the execution of the debt restructuring agreement and the recovery of Rs. 230.48 million and continued to charge interest at a higher rate on old outstanding debt numbers. This has resulted in a net variance of Rs. 2,697.86 million between the debt balances reported in the statement of account provided by the*

			senior lenders and the Company's records. The Company is in discussions with the senior lenders to resolve this discrepancy." *"The debt restructuring proposal has been approved by all the senior lenders. However, Bank of Baroda has added provisions seeking right to recompense subject to the same being allowed by NCLA T. The company has submitted an application seeking directives from NCLAT, praying that lenders are not entitle to interest during moratorium and right to recompense. The issue is currently awaiting decision by NCLAT and has been disclosed as contingent liability (Ref Note 30). Management is of the opinion that the outcome of these discussions will not have any impact on the financial statements of the Company. Our audit opinion is not modified in respect of the above matter."* The details pertaining to above-mentioned point have been placed at Note No 44(b) to the Special Purpose Combined Financial Statements. b. *"We draw your attention to Note no. 34 of the Special Purpose financial statements wherein it is mentioned that, During the financial year 2021-22, senior lenders had initiated forensic audit of the Company through independent third party for the period 1st Jun 2010 to 31st Mar 2016. The Forensic Audit closed by lenders with a remark as "Fraud Account". Company has made representation based on the facts strongly contesting the classification of the account and challenged the wrong classification of the account by the forensic auditors. Notwithstanding the above, it is to be noted that al l the lenders have approved the transfer of asset by ITNL to InvIT and have sanctioned the debt restructuring proposal. The company is not envisaging any impact on account of this in the financial statements. Our audit opinion is not modified in respect of the above matter."*

			The details pertaining to above-mentioned point have been placed at Note No.41(m) to the Special Purpose Combined Financial Statements.
05	BAEL	31 March 2024	a. *"We draw attention to the Note No. 34 of the accompanying Ind AS Special Purpose Financial Statements wherein the company has stated that The Ministry of Corporate Affairs (MCA), Government of India, has vide its letter dated October 1, 2018 initiated investigation by Serious Fraud Investigation Office (SFIO) against IL&FS (ultimate holding company) and its group companies under Section 212 (1) of the Companies Act, 2013. As a part of investigation of affairs of ITNL (the Holding Company), SFIO has also been seeking from ITNL various information including relating to project undertaken by the Company (for which ITNL acted as Development Contractor and promoter). The investigation is in progress and it is understood that the relevant information is being provided by ITNL to the agency. At this stage, no material impact/ implications had arisen from the aforesaid developments. However, an uncertainty relating to the future outcome of the regulatory actions is not determinable at this stage;"* The details pertaining to above-mentioned point have been placed at Note No 41(b) to the Special Purpose Combined Financial Statements. b. *"We draw attention to the Note No. 35 of the accompanying Ind AS Special Purpose Financial Statements wherein the company has stated that pursuant to the "Third Progress Report - Proposed Resolution Framework for the IL&FS Group" dated 17 December, 2018 and the "Addendum to the Third Progress Report - Proposed Resolution Framework for IL&FS Group" dated January 15, 2019 ("Resolution Framework Report") submitted by the Company to the Ministry of Corporate Affairs, Government of India which, in turn, was filed with the Hon'ble National Company Law Appellate Tribunal ("NCLAT"), the creditors of the Company were invited*

			(via advertisement(s) dated May 22, 2019) to submit their claims as at October 15, 2018 with proof, on or before 5 September, 2019 (later extended till February 5, 2020)) to a Claims Management Advisor ("CMA") appointed by the IL&FS Group. The amounts claimed by the financial and operational creditors are assessed for admission by the CMA. *The CMA, vide their various communications to the management of the Company, have submitted their report on the status of the claims received and its admission status. The report is subject to updation based on additional information / clarification that may be received from the creditors in due course.* *Management of the Company has reviewed the claims made by third parties with the CMA, and reconciled them with the books of accounts and accounted in the books of accounts appropriately.* The details pertaining to above-mentioned point have been placed at Note No 41(i) to the Special Purpose Combined Financial Statements. c. *"We draw attention to the footnote to Note No. 35 of the accompanying Ind AS Special Purpose Financial Statements wherein the company has stated that the National Company Law Appellate Tribunal ("NCLAT") had passed an order on October 15, 2018 ("Interim Order") in Company Appeal (AT) 346 of 2018, imposing moratorium on the creditors of IL&FS and its 348 group companies, which includes the Company. Further, NCLAT vide its order dated February 11, 2019 had also classified the Company under the "Red Category" based on a 12-month cash flow solvency test, indicating it is not in a position to discharge its entire Debt as and when due. Accordingly, the Company is permitted to make only those payments necessary to maintain and preserve the going concern status. This consequently also resulted in downgrade of debt ratings of the Company. NCLAT wide its order dated March 12, 2020, had upheld its interim order of October 15,*

			2018. The said order specifies October 15, 2018 as the date of initiation of the Resolution Process of the Company. Accordingly, the Company has not accrued any interest, default interest, penal interest and any other similar charges after the said cut-off date of October 15,2018 and also not repaid any principle amount of debt due. As a result, Rs.411.01 Million (during the period October 2018 to March 2020) recovered by the banks (towards interest and principal) from the Escrow accounts of the Company maintained with them is being treated as Receivable from banks in these financial statements. The Company has written to the banks for recoveries of the same amounts in view of moratorium extended by the October 15, 2018 Order of NCLT. These amounts have not been handed back to the Company till date. Further, the balances as confirmed by the lenders, in some cases, are not in agreement with the books of the company which is under reconciliation. *During the current financial year, further Rs. 1,935.00 Million recovered by the banks from the Escrow accounts of the Company maintained with them. The company has disclosed the amount of such recoveries as at March 31, 2024 amounting to Rs. 2,346.01 Million (Previous Year Rs.411.01 Million) as an Amount Receivable from Bank.* *We also draw attention to the Note No. 36 of the accompanying Ind AS Financial Statements wherein the company has stated that, in line with the affidavit filed by Ministry of Corporate Affairs (MCA) to the Hon'ble NCLAT on May 21, 2019, the cut-off date of October 15, 2018 ("Cut-Off Date") was proposed, on account of inter alia the fact that the Hon'ble NCLAT had passed the Order on October 15, 2018, which inter alia granted certain reliefs to the IL&FS Group and also restricted certain coercive actions by the creditors of the IL&FS Group.* *In terms of the Resolution Framework Reports, the proposal made is that all liabilities relating to the relevant IL&FS Group Entity, whether financial*

			(including interest, default interest, indemnity claims and additional charges), operational debt (including interest, indemnity or other claims) as well as statutory claims (including tax, employment and labour related claims), whether existing at or relating to a period prior to the Cut-Off Date should not continue accruing. *Accordingly, the interest expenses are accounted on borrowings until October 15, 2018;"* The details pertaining to above-mentioned point have been placed at Note No 44(c)&(d) to the Special Purpose Combined Financial Statements. d. *"We draw attention to the Note No. 40 of the accompanying Ind AS Special Purpose Financial Statements wherein the company has stated that, as per the Minutes of Meeting with Lenders Consortium held on dated March 16, 2023, the company is to incur capital cost of Rs. 533.93 Crore for completing the remaining construction activities, these costs shall not provide any incremental revenue for the company beyond the revenue stream as of now. However, these would be required to complete the entire stretch of the project and is one of the contractual obligation of the company. The amount is as determined by the Independent Engineer of NHAI and the company is reassessing the same. The costs as and when incurred will be treated as part of the cost of the intangible assets. The Company has already awarded contract for remaining work to be executed; "* The details pertaining to above-mentioned point have been placed at Note No 41(k) to the Special Purpose Combined Financial Statements. e. *"We draw attention to the Note No. 43 of the accompanying Ind AS Special Purpose Financial Statements wherein the company has stated that, the project concession period is 20 years and the*

			appointed date of the project was April 1, 2014. Accordingly, project concession ends in March 2034. As per the Clause 29 .1.2, in the event Actual Average Traffic shall have fallen short of the Target Traffic, then for every 1 % (one per cent) shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5%(one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. As per the traffic projections, there will be lower traffic as on target date and hence, the Company is eligible for extension of concession period of 5 years 3 months (subject to maximum of 4 years) i.e. the concession period will be till June 2038. Such extension of concession period has been considered for accounting of amortisation, impairment and negative premium payable to NHAI. In view of this, an addition of Rs. 787.35 Million was recognised as addition to Intangible asset during previous year ended March 31, 2020, being the net present value of premium payable for extended period." The details pertaining to above-mentioned point have been placed at Note No 45 to the Special Purpose Combined Financial Statements. f. We draw attention to Footnote to Nole No. 7 of the accompanying special purpose financial statements wherein the company has staled that in prior periods, the Company had recognized a claim receivable from the Authority amounting to 1,286.36 million, based on Paragraph 6 of the letter issued by NHAI (Reference No. I 50I7/I/2013/PIU(DUP)/I 832 dated September 25, 2019). Additionally, the Company had recorded liabilities of 1,237.88 million towards the negative change of scope related to de-scoped works and other claims by NHA1, and 124. 70 million for a possible penalty for overloading.

			As part of a comprehensive settlement agreement dated September 30, 2024, witl1 NHAJ, these claims have been resolved, resulting in a net recoverable amount of 70 million from NHAI. Accordingly, the remaining balances have been adjusted during the current period, with 1,237.88 million written back and 1,324.39 million written off The amounts written off include 80.55 million of other recoverable and 0.18 million recoverable from other parties (Refer to Notes 19 and 23). Further, as part of the settlement, the Company was required to pay 166.50 million as a penalty for harmonious substitution. Consequently, an additional liability ofNI.80 million (166.50 million less 124.70 million already provided) has been recorded in the books of accounts. The details pertaining to above-mentioned point have been placed at Note No 5 note(A) to the Special Purpose Combined Financial Statements
06	PSRDCL	31 March 2023	a. *"We draw your attention to Note no. 32 of the financial statements wherein it is mentioned that, The Ministry of Corporate Affairs (MCA), Government of India, has vide its letter dated October I, 2018 initiated investigation by Serious Fraud Investigation Office (SFIO) against IL&FS (ultimate holding company) and its group companies under Section 212 (I) of the Companies Act, 2013. As a part of investigation of affairs of ITNL (the Holding Company), SFIO has also been seeking from ITNL various information including relating to project undertaken by the Company (for which ITNL acted as Development Contractor and promoter). The investigation is in progress, and it is understood that the relevant information is being provided by ITNL to the agency. At this stage, no material impact/ implications had arisen from the aforesaid developments. However, an uncertainty relating to the future outcome of the regulatory actions is not determinable at this stage.* b. *"We draw your attention to Note no. 35 of the financial statements wherein it is mentioned that, During the current financial year owing to approval*

			by NCLT on October 14, 2022, for transfer of asset to InvIT and restructuring process being approved by the secured lenders , the company has accounted interest for senior secured loan effective April I, 2021 as per the new terms and conditions mentioned in revised sanction letters received from secured lenders. The lenders have agreed to the balances as of April I, 2021, which align with the claims submitted by all lenders as of October 15, 2018. These claims have been admitted by the Claim Management Advisor, as part of the Resolution Process approved by the NCL T. However, no debt servicing is done for any lender in current period as the loan agreement with the senior and other lenders for revised term & conditions are yet to be executed. Under the circumstances, the lenders have continued to classified the loan account as Non-Performing Asset. Company expects the loan account to be re-classified as standard, once the company makes the payment upon execution of loan agreement. *Based on the statement of account received from the senior lenders, it appea1·s that they have not given effect of the debt restructuring and the recovery of Rs. 230.48 million, which they did post October 15, 2018 and continued to charge interest at a higher rate on old outstanding debt numbers, the company has recognised interest based on revised sanction letters received from the secured lenders. This has resulted in a variance of Rs. Rs. 1453.58 million between the debt balances reported in the statement of account provided by the senior lenders and the Company's records. Company is in the process of complying the conditions as stated in sanction letters and is not envisaging any additional interest burden over and above interest rates as specified in revised sanction letters from secured lenders."*
07	SBHL	31 March 2023	a. *"We draw attention Note No 33 (b) of the financial statement, company and senior lenders have entered into a restructuring agreement, however the said plan has not been implemented by the lenders*

			due to reasons as stated in note. Consequently the outstanding balances of borrowings as per lenders and books of the company are not in agreement due to different interest rates, recovery amount debited after October 15th 2018 etc." b. *"We draw attention to Foot note (2) to Note No. 12 of the financial statement, the outstanding balance of one of the unrelated lenders is not in agreement with the books of the company due to reasons as mentioned in the said note. Further restructuring agreement with said lender has not yet been finalized."*
08	BAEL	31 March 2023	a. *"We draw attention to Note No. 30 of the accompanying financial statements, the National Company Law Tribunal has ordered for reopening and recasting of the books of accounts for the financial years 2012-13 to 2017-18 of the holding company IL&FS Transportation Networks Limited, ultimate holding company IL&FS India Limited and a subsidiary thereof viz. IL&FS Financial Services Limited only and management is of the view that it is not applicable to the company, it is expected that impact, if any, arising out of the said reopening / recasting would be limited to above mentioned three entities only. The process of reopening and recasting is still ongoing and hence the resultant / consequent impact, if any, that it may have on the financial statements of the company is not presently ascertainable"* b. *"We draw attention to Note No. 31 to the accompanying financial statements, the Ministry of Corporate Affairs, Government of India, has vide its letter dated October 1, 2018 initiated investigation by Serious Fraud Investigation Office (SFIO) against IL&FS Ltd. (ultimate holding company) and its group companies under Section 212 (1) of the Companies Act, 2013. As a part of its investigation of affairs of ITNL (the holding company), SFIO has been seeking from ITNL various information including relating to project undertaken by the Company (for which ITNL acted as development contractor and promoter).*

			The investigation is in progress and it is understood that the related information is being provided by ITNL to the agency. At this stage, no material impact / implications had arisen from the aforesaid developments. However, an uncertainty relating to future outcome of the regulatory action is not determinable at this stage." c. *"As mentioned in Note No. 32 of the accompanying financial statements, the books of accounts of IL & FS India Ltd. (the ultimate holding company) and certain companies of the group are being subject to a forensic audit by an independent third party who had submitted its report. Since the report does not related to the operations of the company, the company does not envisage any adjustments to its financial statements.* d. *We draw your attention to Note No. 40 to accompanying financial statements wherein the company has disclosed that Independent Engineer of NHAI has assessed that the company is required to incur an amount of Rs. 533.93 Crore to complete the pending work for which though contractually liable, the company shall not have any incremental revenue generation, which shall be shown as part of asset as and when incurred.* e. *We draw your attention to Note No. 34 & 35 to accompanying financial statements regarding NCLAT Order on Moratorium for financial creditors of the Company based on which Company has stopped servicing and accruing interest and repayment to financial creditors effective from October 15, 2018. Consequently, no interest has been accrued after October 15, 2018.* f. *Interest and principal aggregating to Rs. 41.10 Crore recovered by the financial creditors, still not being refunded to the company, is being shown as Receivable from such financial creditors and there is a corresponding difference between the balances as per banks vis-à-vis the balances as per books.*

			Pending completion of the resolution process, the ultimate impact on the financial statements is not presently determinable."
09	TRDCL	31 March 2023	*"We would like to draw your attention to Note no. 35 of the Financial Statements, wherein it is mentioned that,* *a. The Ministry of Corporate Affairs (MCA), Government of India, initiated an investigation by the Serious Fraud Investigation Office (SFIO) against IL&FS erstwhile ultimate holding company) and its group companies, as conveyed in the MCA's letter dated October 1, 2018. SFIO's investigation also includes the affairs of ITNL (the erstwhile Holding Company), and they have been requesting various information from ITNL, particularly related to the projects undertaken by the company where ITNL acted as the Development Contractor and promoter. ITNL has been cooperating with SFIO by providing the requested information as part of the ongoing investigation. As of now, no material impact or implications have arisen from these developments. The equity capital of ITNL has been transferred to RIIT (InvIT) as part of the resolution process, and based on the company's assessment, there is no expected impact from this exercise.* *b. The Board of Directors of ITNL (erstwhile holding company) has approved the restatement of its accounts and submitted them to the MCA. This restatement does not affect the financial statements of the Company for the current year.* *c. Additionally, an independent third party appointed by IL&FS Board (erstwhile ultimate holding company) submitted forensic audit report to ITNL (erstwhile holding company) during previous year ended March 31, 2022. Since the audit is primarily relating to operations of ITNL, Company is not envisaging*

			any adjustment in financial statement in this regard."
09	SBHL	31 March 2022	*a. We draw attention to Foot note to Note No. 34 of the financial statement, company has accounted for interest expense (excluding other charges by lenders) on its borrowings based on sanction letter/deed of assignment for restructuring received from the senior lenders/group companies and pursuant to the same interest expense of Rs. 361.17 million has been booked by the company during the current financial year. As stated in the said note the presently the loan agreement with lenders has not been executed, hence the repayments have not started and due to the same (Refer note no. 12 (2) (b)) the outstanding balances of debts with lenders are not in agreement with the books of accounts.*

Our opinion is not modified in respect of the above matter.

Key Audit Matters

7. Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Special Purpose Combined Financial Statements of the year. These matters were addressed in the context of our audit of the Special Purpose Combined Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined that there are no key audit matters to be communicated in our report.

8. **Summary of Key Audit Matters by Auditors of SPVs:**
The respective auditors of a subsidiary and a joint venture have drawn attention in their respective audit reports, without modifying their respective opinion, on following matters:

Sr No	Name of entity	Year	Key Audit Matters	Auditors Response to Key Audit Matters
01	BAEL	31 March 2024	Intangible Asset - Rights under Service Concession Arrangement	*"We assessed the Company's process for determining the expense on account of amortization of the Intangible Asset which involved testing of the design and operating effectiveness of the internal controls and substantive testing procedures as described below:*

				a) Assessed the management significant judgements I estimates used in evaluation of inputs for the purpose of determination of such amortisation in accordance with Ind AS 38. We carried out a combination of procedures involving enquiry and observation, and inspection of evidence in respect of verification of the same. *b)We assessed the process of preparation of and modifications in the amortisation schedule over the rema1mng concession period for determination of amortisation expense for the period under audit.* *c)Performed analytical procedures by comparing assumptions and fair values of the asset, basis the computed amortisation schedule on year-on-year basis and obtained reasons for the variances, wherever identified.*
02	BAEL	31 March 2024	Intangible Asset under Development	*"We assessed the Company's process for determining the additions to the Intangible Asset under development which involved testing of the design and operating effectiveness of the internal controls and substantive testing procedures as described below:* *a)Assessed the management significant judgements I estimates used in evaluation of inputs for the purpose of determination of such addition to the Intangible Asset under development in accordance with Ind AS 38. We carried out a combination of procedures involving enquiry and observation, and inspection of evidence in respect of verification of the same.* *b) We assessed the process of preparation of and modifications in the IRR Model over the concession period including relevant judgements and estimates for determination of margin over construction cost for the period under audit.* *c) Performed analytical procedures by comparing assumptions and fair values of the asset under development, basis the computed IRR Model on*

				year-on-year basis and obtained reasons for the variances, wherever identified."
03	BAEL	31 March 2024	Revenue Recognition	*"We assessed the Company's process for determining the revenue from operations on account of Toll Revenue and the Construction Income which involved testing of the design and operating effectiveness of the internal controls and substantive testing procedures as described below:* *a) Assessed the correctness, completeness and relevance of the management data gathered through multiple reporting platforms and performed a comparative analysis to assess the completeness of the revenue recorded on account of Toll Collections during the period under audit in accordance with Ind AS 115. We carried out a combination of procedures involving enquiry and observation, and inspection of evidence in respect of verification of the same.* *b) We assessed the process of preparation of and modifications in the IRR Model over the concession period including relevant judgements and estimates for determination of margin over construction cost for the period under audit.* *c) Performed analytical procedures by comparing assumptions and year-on- year comparison of the income in order to assess the relevant trends and obtained reasons for the variances, wherever identified."*

Management's Responsibility for the Combined Financial Statement

9. The Investment Manager of the InvIT is responsible for the preparation of these Special Purpose Combined Financial Statements that give a true and fair view of the combined financial position, combined financial performance including other comprehensive income, combined cash flows, combined net asset at fair value, combined total returns at fair values, combined statement of change in equity in accordance with the basis of preparation specified in note 1.2.2.1 to the Special Purpose Combined Financial Statements. The respective Board of Directors of the SPVs are responsible for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 2013; for safeguarding the assets of the SPVs and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and the design,

implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of these Special Purpose Combined Financial Statements by the Investment Manager, as aforesaid.

10. In preparing the Special Purpose Combined Financial Statements, the Board of Directors of the Investment Manager and the respective Board of Directors of the SPVs are responsible for assessing the ability of the SPVs to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the SPVs or to cease operations or has no realistic alternative but to do so. The Board of Directors of the Investment Manager and the respective Board of Directors of the SPVs are also responsible for overseeing the financial reporting process of the SPVs.

Auditor's Responsibility for the Combined Financial Statement

11. Our objectives are to obtain reasonable assurance about whether the Special Purpose Combined Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Special Purpose Combined Financial Statements.

12. As part of an audit in accordance with Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the Combined Financial Statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Combined Financial Statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial controls relevant to the preparation of the Combined Financial Statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances but not for expressing an opinion on the effectiveness of the internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Investment Manager, as well as evaluating the overall presentation of the Combined Financial Statements.

    We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

    We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Other Matter

13. We did not audit the financial statements and other financial information as at 30 September 2024,31 March 2024, 31 March 2023 and 31 March 2022 in respect of SPVs, whose financial statements are included in the Special Purpose Combined Financial Statements. These financial statements and other financial information have been audited by other auditors, for which financial statements, other financial information and auditor's reports have been furnished to us by the management. Our opinion on the Combined Financial Statements, in so far as it relates to the amounts and disclosures included in respect of the SPVs, is based solely on the reports of such other auditors.

Restriction on Distribution and Use

14. This report is addressed to and is provided to the Investment Manager solely for the purpose of inclusion in the Placement Memorandum in connection with the proposed distribution of units by the InvIT on private placement basis. Our report should not be used, referred to or distributed for any other purpose or to any other party without our prior written consent. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
Firm Registration Number: 105146W/W100621

Hasmukh B Dedhia
Partner
ICAI Membership No: 033494
UDIN: 25033494BMJKAG8571

Place: Mumbai
Date: 04 January 2025

Special Purpose Financial Statement
Roadstar Infra Investment Trust
COMBINED BALANCE SHEET

₹ in Millions

Particulars	Note No.	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
ASSETS									
Non-Current Assets									
(a) Property, Plant and Equipment	2		20.70		21.01		22.92		25.48
(b) Intangible Assets	3								
(i) Service Concession Arrangements (SCA)		54,565.54		56,053.70		58,954.81		61,543.31	
(ii) Intangible Assets Under Development		3,320.13	57,885.67	2,617.51	58,671.21	679.65	59,634.46	11.95	61,555.26
(c) Investment accounted for using equity method	4		0.00		0.00		0.00		0.00
(d) Financial Assets									
(i) Other Financial Assets	5		2,041.75		3,562.72		4,679.01		5,992.58
(e) Tax Assets									
(i) Deferred Tax Asset (Net)	6		562.53		619.92		531.82		568.53
(f) Other Non Current Assets	11		4.76		19.42		-		0.04
(g) Non Current Tax Assets (Net)	10		112.86		91.65		40.00		25.71
Total Non-Current Assets			60,628.27		62,985.93		64,908.21		68,167.61
Current Assets									
(a) Financial Assets									
(i) Investments	7	658.57		635.43		592.31		1,579.61	
(ii) Trade Receivables	8	37.00		52.29		142.81		26.32	
(iii) Cash and Cash Equivalents	9	2,073.35		2,273.68		1,956.67		943.35	
(iv) Bank Balances other than (iii) above	9	7,460.27		8,330.63		12,226.25		12,641.81	
(v) Other Financial Assets	5	8,958.46	19,187.65	7,913.38	19,205.41	5,412.01	20,330.05	5,963.48	21,154.57
(b) Current Tax Assets (Net)	10		221.43		197.81		192.40		154.99
(c) Other Current Assets	11		88.09		83.66		81.86		88.84
Total Current Assets			19,497.17		19,486.88		20,604.31		21,398.40
Total Assets			80,125.44		82,472.81		85,512.52		89,566.00
EQUITY AND LIABILITIES									
Equity									
(a) Share Capital	12	8,801.97		8,801.97		8,801.97		8,801.97	
(b) Other Equity	13	-27,872.63	-19,070.66	-21,053.65	-12,251.68	-21,026.90	-12,224.93	-18,830.57	-10,028.60
Equity attributable to controlling interest of RIIT INVIT GROUP			-19,070.66		-12,251.68		-12,224.93		-10,028.60
Non-controlling interest of RIIT INVIT GROUP			-10.72		28.69		110.68		194.11
LIABILITIES									
Non-Current Liabilities									
(a) Financial Liabilities									
(i) Borrowings	14	65,382.71		67,214.40		66,134.05		53,686.95	
(ii) Trade Payables	15								
a) Dues of Micro Enterprises and Small enterprises		-		-		-		-	
b) Dues of Other than Micro Enterprises and Small enterprises		-		-		-		-	
(iii) Other Financial Liabilities	16	6,890.90	72,273.61	5,246.84	72,461.24	5,095.57	71,229.62	4,881.17	58,568.12
(b) Provisions	17		1,456.25		962.00		2,117.64		1,017.23
Total Non-Current Liabilities			73,729.86		73,423.24		73,347.26		59,585.35
Current Liabilities									
(a) Financial Liabilities									
(i) Borrowings	14	6,458.98		6,132.48		8,691.93		24,674.79	
(ii) Trade Payables	15								
a) Dues of Micro Enterprises and Small enterprises		1.89		1.22		0.15		0.22	
b) Dues of Other than Micro Enterprises and Small enterprises		6,352.24		6,798.56		7,144.20		6,579.97	
(iii) Other Financial Liabilities	16	11,167.06	23,980.17	6,749.80	19,682.06	8,153.67	23,989.94	6,805.45	38,060.43
(b) Provisions	17		1,423.32		1,510.07		218.29		1,303.60
(c) Current Tax Liabilities (Net)	10		-		-		-		377.94
(d) Other Current Liabilities	18		73.47		80.43		71.27		73.18
Total Current Liabilities			25,476.96		21,272.56		24,279.51		39,815.15
Total Liabilities			99,206.82		94,695.80		97,626.77		99,400.50
Total Equity and Liabilities			80,125.44		82,472.81		85,512.52		89,566.00

Note 1 to 50 forms part of the Combined Financial Statements.

In terms of our report attached of even date
For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
ICAI Firm Registration No. : 105146W/W-100621

Hasmukh B. Dedhia
Partner
Membership No. : 033494

Place: Mumbai
Date : 04 January 2025

For and on behalf of Roadstar Investment Managers Limited
(Investment Manager of Roadstar Infra Investment Trust)

S K Mitra
Director
DIN - 00079961

Lubna Usman
Director
DIN - 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)
(M No: ACS 19792)

Place: Mumbai
Date : 04 January 2025

Special Purpose Financial Statement
Roadstar Infra Investment Trust
COMBINED STATEMENT OF PROFIT AND LOSS

₹ in Millions

	Particulars	Note No.	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
	Income					
I.	Revenue from Operations	19	5,492.72	11,658.14	9,940.48	7,631.12
II.	Other Income	20	1,932.78	1,262.06	2,266.07	1,052.55
III.	**Total Income (I+II)**		7,425.50	12,920.20	12,206.55	8,683.67
IV.	**Expenses**					
	Construction costs and Cost of material consumed	21	667.58	1,845.17	641.78	-
	Operating Expenses	22	1,126.89	1,936.99	3,044.23	1,553.59
	Employee benefits expense	23	-	-	-	-
	Finance Costs	24	7,996.95	6,258.37	6,727.54	4,102.08
	Depreciation and Amortisation Expense	25	1,489.17	2,903.00	2,609.70	1,958.71
	Other Expenses	26	2,945.92	173.50	647.78	161.28
	Total Expenses		14,226.51	13,117.03	13,671.03	7,775.66
V	**Profit / (Loss) Before Tax (III-IV)**		(6,801.01)	(196.83)	(1,464.48)	908.01
VI	Share of Profit/ (Loss) of Joint Ventures (Net of Provision (Refer Note No.4))		-	-	-	-
VII	**Profit / (Loss) Before Exceptional Items and Tax (V+VI)**		(6,801.01)	(196.83)	(1,464.48)	908.01
VIII	Exceptional Items		-	-		
IX	**Profit / (Loss) Before Tax (VII + VIII)**		(6,801.01)	(196.83)	(1,464.48)	908.01
X	**Less: Tax Expense**	27			-	
	(1) Current Tax		-	-	-	-
	(2) Adjustment of Tax relating to earlier year		-	-	(369.67)	-
	(3) Deferred Tax		57.38	(88.10)	36.71	(87.86)
	Total Tax Expenses		57.38	(88.10)	(332.96)	(87.86)
XI	**Profit / (Loss) After Tax (IX - X)**		(6,858.39)	(108.73)	(1,131.52)	995.87
	Total comprehensive income for the year attributable to non controlling interests *		(39.41)	(81.99)	(83.42)	65.57
	Total comprehensive income for the year attributable to owners of SPV Group**		(6,818.98)	(26.74)	(1,048.10)	930.30
XII	**Other Comprehensive Income**					
	- Items that will not be reclassified to standalone statement of profit and loss		-	-		
	- Income tax relating to items that will not be reclassified to standalone statement of profit and loss		-	-		
			-	-	-	-
XIII	**Total Comprehensive Income for the year :(XI + XII)**		(6,858.39)	(108.73)	(1,131.52)	995.87
	Total comprehensive income for the year attributable to non controlling interests *		(39.41)	(81.99)	(83.42)	65.57
	Total comprehensive income for the year attributable to owners of SPV Group**		(6,818.98)	(26.74)	(1,048.10)	930.30
	Earnings per Unit (of ₹ 100/- each)					
	(1) Basic (In Rupees)	28	(14.97)	(0.06)	(2.30)	2.04
	(2) Diluted (In Rupees)	28	(14.97)	(0.06)	(2.30)	2.04

Note 1 to 50 forms part of the Combined Financial Statements.

* This represents the share of profits attributable to the shareholders of the SPVs who have not agreed to exchange their shares in the SPVs for Units of Trust and will not become the unitholders of InvIT Trust.

** This represents the share of profits attributable to the shareholders of the SPVs / who have agreed to exchange their shares in the SPVs for Units of InvIT Trust and are proposed to become the unitholders of InvIT Trust.

In terms of our report attached of even date
For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
ICAI Firm Registration No. : 105146W/W-100621

Hasmukh B. Dedhia
Partner
Membership No. : 033494

Place: Mumbai
Date : 04 January 2025

For and on behalf of Roadstar Investment Managers Limited
(Investment Manager of Roadstar Infra Investment Trust)

S K Mitra
Director
DIN - 00029961

Lubna Usman
Director
DIN - 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)
(M No: ACS 19792)

Place: Mumbai
Date : 04 January 2025

Special Purpose Financial Statement
Roadstar Infra Investment Trust
Combined Cashflow statements

₹ in Millions

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit / (Loss) for the year	-6,858.44	-108.73	-1,131.52	995.87
Adjustments for:				
Depreciation and Amortisation Expense	1,489.17	2,903.00	2,609.70	1,958.71
Net Gain/(Loss) arising on Financial Assets designated as at FVTPL	-23.14	-43.12	-32.01	-51.36
Finance Costs recognised in Profit or Loss	7,926.71	5,965.67	6,382.72	3,845.77
Interest Income recognised in Profit or Loss	-298.71	-737.40	-654.05	-319.33
Reversal of Provision for Impairment	-0.00	-0.01	-	-292.79
(Loss) / Gain on disposal of property, plant and equipment	-	-0.03	-0.01	-
Provision for doubtful debts and receivables	-	11.92	108.03	-
Margin on construction	-35.05	-92.70		
Operation and Maintenance Income	-53.51	-107.13	-90.10	-73.57
Bad debts written off	1,324.39	-	-	-
Liabilities written back	-1,526.09	-14.68	-1,283.30	-18.32
Finance Income	-165.64	-388.89	-498.26	-581.61
Overlay Income	-	-206.00	-200.66	-80.58
Receipt of Annuities	708.61	1,326.51	1,785.36	1,651.76
(Gain) /Loss Modification on Financial Instrument	1,526.50	-326.27	275.13	-240.72
Provision for Overlay (Net)	530.86	981.30	2,060.01	995.18
Provision of Deferred Taxes Asset/Liability	57.38	-88.10	36.71	-87.86
Expenses towards damage & negative cahnge of scope	-	-	-	31.08
	-			
Operating profit before working capital changes and other adjustments	**4,603.04**	**9,075.34**	**9,367.75**	**7,732.23**
	-	-		-
Decrease in trade receivables (current and non current)	0.52	-1.74	-0.39	-1.90
(Increase)/decrease in other financial assets & other assets (current and non current)	-1,041.55	-1,998.98	-159.97	-183.10
Increase/ (Decrease) in financial liabilities & other liabilities (current and non current)	-49.41	237.34	360.43	-555.70
(Decrease) in trade and other payables	17.68	-30.32	10.20	-1.63
Cash flow from operating activities post working capital changes	**3,530.28**	**7,281.64**	**9,578.02**	**6,989.90**
Income tax paid (net)	**-44.83**	**-57.07**	**-429.63**	**-43.94**
Net cash generated from operating activities	**3,485.45**	**7,224.57**	**9,148.39**	**6,945.96**
Cash flows from investing activities				
Payments for property, plant and equipment, intangible assets	-787.78	-1,808.25	-682.81	-61.07
Major Maintenance Cost	-176.95	-921.70	-1,476.06	-117.08
Receipt / (deposit) in Fixed Deposit	1,370.51	4,012.17	-2,527.32	-5,914.84
Redemption of Mutual Fund (At Cost)	-	-	1,019.30	-
Interest received	293.87	415.88	501.28	206.76
Movement in other bank balances	-545.31	205.00		-322.51
Bank balance not consider as cash and cash equivalents	-	-	3,079.72	-1,434.27
Net cash used in investing activities (B)	**154.34**	**1,903.10**	**-85.89**	**-7,643.01**
Cash flows from financing activities				
Finance costs paid	-1,946.24	-4,992.45	-4,053.46	-2,282.30
Proceeds from borrowings	-	130.00	-	-
Repayment of borrowings	-1,594.90	-3,145.44	-3,995.72	-161.88
Movement in Term loan Borrowing	-298.98	-802.77	-	-
Net cash generated in financing activities (C)	**-3,840.12**	**-8,810.66**	**-8,049.18**	**-2,444.18**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)	**-200.33**	**317.01**	**1,013.32**	**-3,141.23**
Cash and cash equivalents at the beginning of the year	**2,273.68**	**1,956.67**	**943.35**	**4,084.58**
Cash and cash equivalents at the end of the year	**2,073.35**	**2,273.68**	**1,956.67**	**943.35**
Components of Cash and Cash Equivalents				
Cash on hand	2.01	2.44	1.87	2.17
Balances with Banks in current accounts	860.44	1,102.89	1,455.05	300.75
Balances with Banks in deposit accounts	1,210.90	1,168.35	499.75	640.43
Cash and Cash Equivalents	**2,073.35**	**2,273.68**	**1,956.67**	**943.35**

Note 1 to 50 forms part of the Combined Financial Statements.

In terms of our report attached of even date
For KKC & Associates LLP
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
ICAI Firm Registration No. : 105146W/W-100621

Hasmukh B. Dedhia
Partner
Membership No. : 033494

Place: Mumbai
Date : 04 January 2025

For and on behalf of Roadstar Investment Managers Limited
(Investment Manager of Roadstar Infra Investment Trust)

S K Mitra
Director
DIN - 00029961

Lubna Usman
Director
DIN - 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)
(M No: ACS 19792)

Place: Mumbai

Date : 04 January 2025

Special Purpose Financial Statement

Roadstar Infra Investment Trust

Statement of Changes in Equity:

A Equity share capital (Attributable to the owners of RIIT INVIT GROUP)

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	No of Shares	₹ in Million	No of Shares	₹ in Million	No of Shares	₹ in Million	No of Shares	₹ in Million
a. Equity Capital								
At the beginning of the year	8,96,21,00,000	8,962.10	8,96,21,00,000	8,962.10	8,96,21,00,000	8,962.10	8,96,21,00,000	8,962.10
Issued During the year	-	-	-	-	-	-	-	-
Less: Capital Reduction During the year								
Less: Minority Interest	(1,60,13,100)	(160.13)	(1,60,13,100)	(160.13)	(1,60,13,100)	(160.13)	(1,60,13,100)	(160.13)
Balance as at end of the year	8,97,81,13,100	8,801.97	8,97,81,13,100	8,801.97	8,97,81,13,100	8,801.97	8,97,81,13,100	8,801.97

B Other equity: (Attributable to the owners of RIIT INVIT GROUP)

₹ in Millions

Statement of Changes in Equity for the year ended March 31, 2022

Particulars	Reserves and Surplus					Total	Attributable to non-controlling interest	Total
	Retained earnings	Debenture Redemption	Deemed Equity	Share Premium	Capital Reserves			
Balance as at April 1, 2021	(31,145.88)	955.18	3,055.77	48.00	8,880.80	(18,206.13)	31.60	(18,174.53)
Profit / (Loss) for the year	995.87	(0.36)	-	-	-	995.51	(65.57)	929.94
Transfer (to) / from Debenture Redemption Reserve	0.36	-	-	-	-	0.36		0.36
Transfer from / (to) balance in the Statement of Profit and Loss			(1,586.35)	-	-	(1,586.35)		(1,586.35)
Balance as at end 31st March 2022	(30,149.66)	954.83	1,469.42	48.00	8,880.80	(18,796.61)	(33.97)	(18,830.58)

Statement of Changes in Equity for the year ended March 31, 2023

Particulars	Reserves and Surplus					Total	Attributable to non-controlling interest	Total
	Retained earnings	Debenture Redemption Reserve	Deemed Equity	Share Premium	Capital Reserves			
Balance as at April 1, 2022	(30,149.66)	954.83	1,469.42	48.00	8,880.80	(18,796.61)	(33.97)	(18,830.58)
Profit / (Loss) for the year	(1,131.52)	-	(1,148.23)	-	-	(2,279.75)	83.42	(2,196.33)
Transfer (to) / from Debenture Redemption Reserve	307.13	-	-	-	-	307.13		307.13
Transfer (to) / from deemed equity	178.79		-	-	-	178.79	-	178.79
Transfer from / (to) balance in the Statement of Profit and Loss	-	(307.13)	(178.79)	-	-	(485.92)		(485.92)
Balance as at end 31st March 2023	(30,795.25)	647.69	142.40	48.00	8,880.80	(21,076.36)	49.45	(21,026.91)

Statement of Changes in Equity for the year ended March 31, 2024

Particulars	Reserves and Surplus					Total	Attributable to non-controlling interest	Total
	Retained earnings	Debenture Redemption Reserve	Deemed Equity	Share Premium	Capital Reserves			
Balance as at April 1, 2023	(30,795.25)	647.69	142.40	48.00	8,880.80	(21,076.36)	49.45	(21,026.91)
Adjustments on Account of Acquisition of Subsidiary Companies	-	-	-	-	-	-		-
Profit / (Loss) for the year	(108.74)	-	-	-	-	(108.74)	81.99	(26.75)
Distribution	-	-	-	-	-	-		-
Transfer (to) / from Debenture Redemption Reserve	60.63	-	-	-	-	60.63		60.63
Transfer (to) / from deemed equity	-		-	-	-	-		-
Transfer from / (to) balance in the Statement of Profit and Loss	-	(60.63)	-	-	-	(60.63)		(60.63)
Balance as at end 31st March 2024	(30,843.36)	587.07	142.40	48.00	8,880.80	(21,185.10)	131.44	(21,053.65)

Statement of Changes in Equity for the period ended September 30, 2024

Particulars	Reserves and Surplus					Total	Attributable to non-controlling interest	Total
	Retained earnings	Debenture Redemption Reserve	Deemed Equity	Share Premium	Capital Reserves			
Balance as at April 1, 2024	(30,843.36)	587.07	142.40	48.00	8,880.80	(21,185.10)	131.44	(21,053.65)
Profit / (Loss) for the year	(6,858.39)	-	-	-	-	(6,858.39)	39.41	(6,818.98)
Transfer (to) / from Debenture Redemption Reserve	-	-	-	-	-	-		-
Transfer (to) / from deemed equity	-	-	-	-	-	-		-
Transfer from / (to) balance in the Statement of Profit and Loss	-	-	-	-	-	-		-
Balance as at end 30th September 2024	(37,701.75)	587.07	142.40	48.00	8,880.80	(28,043.49)	170.85	(27,872.63)

Note 1 to 50 forms part of the Combined Financial Statements.

In terms of our report attached of even date
For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
ICAI Firm Registration No. : 105146W/W-100621

Hasmukh B. Dedhia
Partner
Membership No. : 033494

Place: Mumbai
Date : 04 January 2025

For and on behalf of Roadstar Investment Managers Limited
(Investment Manager of Roadstar Infra Investment Trust)

S K Mitra
Director
DIN - 00019961

Lubna Usman
Director
DIN - 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)
(M No: ACS 19792)

Place: Mumbai
Date : 04 January 2025

Roadstar Infra Investment Trust
Summary of material accounting policies and other explanatory information

1: General Information & Material Accounting Policies

1.1 General information

Nature of Operations

The special purpose combined financial statements comprise financial statements of Moradabad Bareilly Expressway Limited ("MBEL"), Sikar Bikaner Highways Limited ("SBHL"), Hazaribagh Ranchi Expressway Limited ("HREL"),Thiruvananthapuram Road Development Company Limited ("TRDCL"), Pune Sholapur Road Development Company ("PSRDCL") and Barwa Adda Expressway Limited ("BAEL) (individually referred to as "SPV" and together referred to as "SPV Group") (hereinafter referred as Combined Financial Statements). The SPVs are companies domiciled in India and having their registered office at The IL&FS Financial Centre, Plot C-22, G- Block, Bandra Kurla Complex Bandra (E), Mumbai- 400051

MBEL, HREL, PSRDCL and BAEL are special purpose vehicles which have entered into Concession agreement with National Highways Authority of India (NHAI), SBHL a special purpose vehicle has entered into Concession agreement with Ministry of Road Transport and Highway (MoRTH), TRDCL a special purpose vehicle has entered into Concession agreement with Kerla Road Fund Board ("KRFB") to design, build, finance, operate and transfer (DBFOT) or build, operate and transfer (BOT) highways / roads in various locations.

The Roadstar Infra Investment Trust (the "Trust") is an Infrastructure Investment Trust registered under the Securities Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014 on December 22, 2020 having registration number IN/InvIT/20-21/0015. The Trust is settled by the Sponsor, Roadstar Infra Private Limited ("RIPL" or the "Sponsor"). Axis Trustee Services Limited is the Trustee to the Trust (the "Trustee") and Investment Manager for the Trust is Roadstar Investment Managers Limited (the "Investment Manager").

As required by the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India, the details of various entities comprised in the Combined Financial Statements is as given below:

Name of SPV	Residual Concession Life*	Shareholding by Trust*	Proposed Shareholding by Trust	Nature of Proposed Investment	Status	Principal Activities	Date of incorporation	Date of Commercial operation
MBEL	11.4 Years	100.00%	100.00%	Subsidiary	Operating	Construction and operation of road including toll collection	11-01-2010	06-01-2015
SBHL	17.5 Years	100.00%	100.00%	Subsidiary	Operating	Construction and operation of	13-04-2012	10-10-2015

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Name of SPV	Residual Concession Life*	Shareholding by Trust*	Proposed Shareholding by Trust	Nature of Proposed Investment	Status	Principal Activities	Date of incorporation	Date of Commercial operation
						road including toll collection		
HREL	3.8 Years	99.99%	99.99%	Subsidiary	Operating	Construction and operation of road including right to receive annuity	19-03-2009	15-09-2012
TRDCL	6.7 Years	50.00%	50.00%	Joint Venture	Operating	Construction and operation of road including right to receive annuity	01-03-2004	Ph 1 – 04-07-2007 Ph 2 – 22-02-2012 Ph 3 – 20-02-2015 Ph 4 – 31-05-2016
PSRDCL	11.0 Years	90.91%	90.91%	Subsidiary	Operating	Construction and operation of road including toll collection	21-08-2009	23-08-2013
BAEL	13.7 Years	#	100.00%	Subsidiary	Operating	Construction and operation of road including toll collection	23-04-2013	13-10-2017

* as on 30th September 2024

#Post September 30, 2024, the trust completed the acquisition of 100% ownership of BAEL.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on 04 January 2025 .

1.2. Material accounting policies

1.2.1 Overall consideration

The combined financial statements have been prepared using the material accounting policies and measurement bases summarised belothrew. These were used throughout all periods presented in the financial statement.

1.2.2 Basis of preparation and presentation

1.2.2.1 Basis of preparation/Combination

The Combined Financial Statements of the SPV Group comprise the Combined Balance Sheet as at 30 September 2024, 31 March 2024, 31 March 2023 and 31 March 2022 and the Combined Statement of Profit and Loss, Combined Cash Flow Statement, Combined Statement of Changes in Equity and a Summary of Material Accounting Policies and Other Explanatory Information for the period ended September 30, 2024, year ended 31 March 2024, 31 March 2023 and 31 March 2022

The combined financial statements of the SPV Group have been prepared in accordance with the Indian Accounting Standards and/or any addendum thereto as defined in the Rule 2(1)(a) of the Companies (Indian Accounting Standard) Rule, 2015, as amended (Ind AS) and SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations"). The SPV Group has uniformly applied the accounting policies during the periods presented.

The Combined Financial Statements are special purpose financial statements and have been prepared by the Investment Manager to meet the requirements of InvIT Regulations and for inclusion in the placement memorandum prepared by the Investment Manager in connection with the proposed private placement of units of Trust. As a result, the Combined Financial Statements may not be suitable for another purpose. As permitted by para 41 of the Guidance Note, comparative figures for the six-months period ended 30 September 2023 have not been given. Further, the Combined Financial Statements are not prepared in accordance with the requirements of Schedule III notified under the Companies Act, 2013

As required by the InvIT regulations, the Combined Financial Statements are prepared, based on an assumption that all SPV's were part of Trust for such period when Trust was not in existence. However, the Combined Financial Statements may not be representative of the position which may prevail after the SPV Group is transferred to Trust

The Combined financial statements are presented in India Rupees which is also the functional currency of the SPV Group and all values are rounded to the nearest millions, unless otherwise indicated.

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Roadstar Infra Investment Trust

Certain amounts that are required to be disclosed and do not appear due to rounding-off or construes value less than Rupees five thousand, are expressed as 0.00 (Zero)

These Combined Financial Statements have been prepared on going concern basis in accordance with accounting principles generally accepted in India. Further, the financial statements have been prepared on historical cost basis except for certain financial assets and financial liabilities, which are measured at fair values as explained in relevant accounting policies.

Combined financial statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances. If a member of the SPV Group uses accounting policies other than those adopted in the combined financial statements for like transactions and events in similar circumstances, appropriate adjustments are made to that SPV Group member's financial statements in preparing the combined financial statements to ensure conformity with the SPV Group's accounting policies.

The financial statements of all entities used for the purpose of combination are drawn up to same reporting date as that of the SPV Group, i.e., year ended on March 31 and stub period September 30, 2024

Basis of Combination:

(a) Combine like items of assets, liabilities, equity, income, expenses and cash flows of the SPV, and

(b) The Special purpose Combined Financial Statements of all the SPVs have been combined by combining/adding like items of assets, liabilities, equity, income, expenses.

(c) The Special purpose Combined Financial Statements of all the SPVs have been combined based on the assumption that all the SPVs are part of a single group for the entire period presented pursuant to the InvIT Regulations.

(d) The tax expenses are combined for all the expenses actually incurred by the combining businesses in accordance with the Guidance Note on Combined and Carve-Out Financial Statements.

(e) Share capital has been presented by adding the individual capitals of each of the SPVS. For the proportionate share of the Capital attributable to the Non-controlling interest. management has disclosed this amount separately from the combined capital.

(f) Other equity has been presented by adding the individual other equity's of each of the SPVs. For the proportionate share of the other equity attributable to the Non-controlling interest, management has disclosed this amount separately from the combined other equity

(g) Interests in following joint venture are accounted for using the equity method, after initially being recognised at the net book value of the entity as at April 1, 2020

Name of SPV	Description of asset	Current shareholding
TRDCL	Set up to develop, widen, strengthen, operate, construct and maintain the Thiruvananthapuram City Roads Improvement Project	1) IL&FS Transportation Networks Limited – 50% (upto 18th December 2022)

	(TCRIP) under the Annuity Concession Agreement	The Trust (from 19th December 2022) 2) Punj Lloyd Limited – 50%

1.2.2.2. Summary of Material Accounting Policies

a) Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. The principal accounting estimates used have been described under the relevant income/expense and/or asset/liability item in these financial statements. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

SPV Group determines future estimated revenue, future estimated traffic count, discounting rate etc. at each balance sheet which is used to arrive at Amortization & Impairment of Intangible Assets, Deferred Tax Calculation, provision for overlay etc. During the Current financial year management has obtained a traffic study report which is prepared by an independent consultant to estimate future traffic revenue/traffic count.

Further, the Group has applied the principles of prudence and substance over form for recognition and measurement of its assets and liabilities.

In the process of applying the Group's accounting policies, management has made the following judgements, which have a risk of causing a material adjustment to the carrying amounts of assets and liabilities within the current financial year in case of following:

I. Useful life of Property, Plant & Equipment.

II. Amortization of Intangible assets;

III. Provision for Overlay;

IV. Deferred Tax;

V. Impairment testing of Intangible Asset – based on independent assessment;

i) Key estimations in relation to Provision for Overlay

Provision for Overlay is estimated based on Traffic Study report obtained from an independent consultant taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, anticipated technological changes. All these evaluations and

assessments involve judgements on part of the management in estimating future revenue, future estimated traffic count, discounting factor, requirement for incurring overlay expense, etc.

ii) Key estimations in relation to deferred tax assets Group

SPV Group estimates whether the SPV Group will earn sufficient taxable profit in future periods. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the temporary differences become deductible. The amount of the deferred tax assets considered realizable could be reduced in the near term, if estimates of future taxable income during the carry forward period are reduced

iii) Key estimations in relation to Useful lives of Property, plant and equipment & Intangible assets, Amortization of Intangible assets and Impairment assessment of Intangible asset

Useful lives of Property, plant and equipment & Intangible Assets (other than the life prescribed under Schedule II of the Companies Act, 2013) are estimated based on Traffic Study report obtained from an independent consultant taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, anticipated technological changes. Impairment assessment in respect of Intangible Asset has been carried based on NPV of future operating cash flow which is again based on certain estimates used by the Independent Valuer. All these evaluations and assessments involve judgements on part of the management in estimating future revenue, future estimated traffic count, future cash flows, discounting factor, etc.

iv) **Contractual obligation to restore the infrastructure to a specified level of serviceability**

The SPV Group has contractual obligations to maintain the infrastructure to a specified level of serviceability or restore the infrastructure to a specified condition during the concession period and/or at the time of hand over to the grantor of the SCA. Such obligations are measured at the best estimate of the expenditure that would be required to settle the obligation at the balance sheet date. In case of concession arrangements under intangible asset model, the timing and amount of such cost are estimated and recognised on a discounted basis by charging costs to revenue on the units of usage method i.e. on the number of vehicles expected to use the project facility, over the period at the end of which the overlay is estimated to be carried out based on technical evaluation by independent experts.

b) Current Versus Non-Current Classification

The SPV Group presents assets and liabilities in the balance sheet based on current / non-current classification. An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as noncurrent assets and liabilities. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The SPV Group has identified twelve months as its operating cycle.

c) Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the SPV Group and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government. The specific recognition criteria described below must also be met before revenue is recognised.

Accounting for rights under service concession arrangements and revenue recognition

c.1 Recognition and measurement

The SPV Group's SPV builds, operates and maintains infrastructure assets under public-to-private Service Concession Arrangements (SCAs), which is an arrangement between the "grantor" (a public sector entity/authority) and the "operator" (a private sector entity) to provide services that give the public access to major economic and social facilities utilizing private-sector funds and expertise. The infrastructures accounted for by the SPV Group's SPV as concessions are mainly related to the activities concerning roads, tunnels, and other infrastructure facilities.

Concession contracts are public-private agreements for periods specified in the SCAs including the construction, upgradation, restoration of infrastructure and future services associated with the operation and maintenance of assets in the concession period. Revenue recognition, as well as, the main characteristics of these contracts.

With respect to service concession arrangements, revenue and costs are allocated between those relating to construction services and those relating to operation & maintenance services, and are accounted for separately. Consideration received or receivable is allocated by reference to the relative fair value of services delivered when the amounts are separately identifiable. The

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Roadstar Infra Investment Trust

infrastructure used in a concession are classified as an intangible asset or a financial asset, depending on the nature of the payment entitlements established in the concession agreement.

When the demand risk to the extent that the SPV Group's SPV has a right to charge the user of infrastructure facility, the SPV Group's SPV recognizes revenues from construction services for public facilities (infrastructures) by the percentage-of-completion method, and recognizes the consideration for construction services at its fair value, as an intangible asset. The SPV Group's SPV accounts for such intangible asset (along with the present value of committed payments towards concession arrangement to the grantor at the appointed date e.g Negative Grant, premium etc) in accordance with the provisions of Ind AS 38 and is amortized based on projected traffic count or revenue, as detailed in Note 3.1.iv, taking into account the estimated period of commercial operation of infrastructure which generally coincides with the concession period. Intangible asset is capitalized when the project is complete in all respects and when the SPV Group's SPV receives the final completion certification from the grantor as specified in the Concession Agreement and not on completion of component basis as the intended purpose and economics of the project is to have the complete length of the infrastructure available for use. The component-based certification which is received is an intermediate mechanism provided in the Concession Agreement to provide a right to collect eligible toll to compensate the SPV Group's SPV for cost recovery during construction period and for any delays beyond the control of the SPV Group's SPV. However, where there is other than temporary delay due to reasons beyond the control of the SPV Group's SPV the management may treat constructed portion of the infrastructure as a completed project. Eligible toll revenue collected on receipt of the component based certification is reduced from the cost of construction, as the construction work on remaining portion is still in progress and the entire asset is not ready for its intended purpose.

When the amount of the arrangement consideration for the provision of public services is substantially fixed by a contract, the SPV Group recognizes revenues from construction services for public facilities (infrastructures) by the percentage-of-completion method, and recognizes the consideration as a financial asset and the same is classified as "Receivables against Service Concession Arrangements". The SPV Group accounts for such financial assets at amortized cost, calculates interest income based on the effective interest method and recognizes it in revenue as Finance Income.

Contractual obligation to restore the infrastructure to a specified level of serviceability

The SPV Group's SPV has contractual obligations to maintain the infrastructure to a specified level of serviceability or restore the infrastructure to a specified condition during the concession period and/or at the time of hand over to the grantor of the SCA. Such obligations are measured at the best estimate of the expenditure that would be required to settle the obligation at the balance sheet date. In case of concession arrangements under intangible asset model, the timing and amount of such cost are estimated and recognised on a discounted basis by charging costs to revenue on the units of usage method i.e. on the number of vehicles expected to use the project facility, over the period at the end of which the overlay is estimated to be carried out based on technical evaluation by independent experts.

Revenue recognition

Once the infrastructure is in operation, the treatment of income is as follows:

Revenue for concession arrangements under intangible asset model is recognized in the period of collection of toll which generally coincides with the usage of public service or where from such rights have been auctioned, in the period to which auctioned amount relates.

i. **Revenue from construction contracts**

The SPV Group's SPV recognizes and measures revenue, costs and margin for providing construction services during the period of construction of the infrastructure in accordance with Ind AS 115 'Revenue from Contracts with Customers'.

When the outcome of a construction contract can be estimated reliably and it is probable that it will be profitable, contract revenue and contract costs associated with the construction contract are recognized as revenue and expenses respectively by reference to the percentage of completion of the contract activity at the reporting date. The percentage of completion of a contract is determined considering the proportion that contract costs incurred for work performed upto the reporting date bear to the estimated total contract costs.

For the purposes of recognizing revenue, contract revenue comprises the initial amount of revenue agreed in the contract, the variations in contract work, claims and incentive payments to the extent that it is probable that they will result in revenue and they are capable of being reliably measured.

The percentage of completion method is applied on a cumulative basis in each accounting period to the current estimates of contract revenue and contract costs. The effect of a change in the estimate of contract revenue or contract costs, or the effect of a change in the estimate of the outcome of a contract, is accounted for as a change in accounting estimate and the effect of which are recognised in the Statement of Profit and Loss in the period in which the change is made and in subsequent periods.

When the outcome of a construction contract cannot be estimated reliably, revenue is recognised only to the extent of contract costs incurred of which recovery is probable and the related contract costs are recognised as an expense in the period in which they are incurred.

ii. **Borrowing cost related to SCAs**

In case of concession arrangement under intangible asset model, borrowing costs attributable to the construction of infrastructure assets are capitalized up to the date of the final completion certificate of the asset / facility received from the authority for its intended use specified in the Concession Agreement. All borrowing costs subsequent to the capitalization of the intangible assets are charged to the Statement of Profit and Loss in the period in which such costs are incurred.

iii. Amortization of intangible asset under SCA

The intangible rights relating to infrastructure assets, which are recognised in the form of right to charge users of the infrastructure asset are amortized by taking proportionate of actual traffic count for the period over total projected traffic count from project to cost of intangible assets; i.e. proportionate of actual traffic for the period over total projected traffic count from the intangible assets expected to be earned over the balance concession period as estimated by the management. However, with respect to toll road assets constructed and in operation as at March 31, 2016, the amortization of such intangible rights are based on actual revenue earned compared to total projected revenue from the project over the balance concession period to cost intangible assets, instead of traffic count.

Total projected revenue / traffic count is reviewed at the end of each financial year and is adjusted to reflect any changes in the estimates which lead to the actual collection at the end of the concession period.

iv. Claims

Claims raised with the concession granting authority towards reimbursement for costs incurred due to delay in handing over of unencumbered land to the SPV Group's SPV for construction or other delays attributable solely to the concession granting authority are recognised when there are is a reasonable certainty that there will be inflow of economic benefits to the SPV Group's SPV. The claims when recognised as such are reduced from the carrying amount of the intangible asset under the service concession arrangement, to the extent the claims relate to costs earlier included as a part of the carrying amount of these assets. Further, these claims are credited to profit or loss to the extent they relate to costs earlier debited to profit or loss. The claims are presented separately as a financial asset

v. Accounting of receivable and payable from / to the grantor (Grants)

a) Receivable towards the concession arrangement from the grantor
When the arrangement has a contractual right to receive cash or other financial asset from the grantor specifically towards the concession arrangement (in the form of grants) during the construction period or otherwise, such a right, to the extent eligible, is recorded as financial asset in accordance with Ind AS 109 *"Financial Instruments,"* at amortized cost.

For Intangible assets where the [the SPV Group / the Group's SPV has availed the exemption under D7AA of Ind AS 101, the Financial asset has to be recognized only for all such receivables post April 01, 2015

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Roadstar Infra Investment Trust

c.2 Interest Income :

Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

c.3 Dividends :

Revenue is recognised when the SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

d) Taxes

Current Income Tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the SPV Group operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments In subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse In the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it

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is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date. Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Goods and Service Tax Paid on Acquisition of Assets or on Incurring Expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

- When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.
- When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

e) Borrowing Costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of SPV Group's. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

f) Provisions

Provisions are recognised when the SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will

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be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

g) Contingent Liabilities and Contingent Assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The SPV Group does not recognise a contingent liability but discloses its existence in the financial statements. A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements. Contingent liabilities and contingent assets are reviewed at each balance sheet date.

h) Financial Instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial Assets Initial Recognition and Measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the SPV Group commits to purchase or sell the asset.

Subsequent Measurement

For purposes of subsequent measurement, financial assets are classified in following categories;

- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at Amortised Cost

A financial asset is measured at the amortised cost if both the following conditions are met:

a) The asset is held within a business model whose objective is to hold assets for collecting contractual

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cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the SPV Group. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss / Other Comprehensive Income

All investments in scope of Ind AS 109 are measured at fair value. The SPV Group investment in Debt oriented mutual Fund which are held for trading, are classified as at FVTPL. The SPV Group makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain / loss on sale of investments are recognised in the Statement of Profit and Loss.

Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a the SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the SPV Group's balance sheet) when:

The rights to receive cash flows from the asset have expired, or

The SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the SPV Group has transferred its rights to receive cash flows from an asset or enters into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the SPV Group continues to recognise the transferred asset to the extent of the SPV Group's continuing involvement. In that case, the SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the SPV Group has retained.

i) Property, plant and equipment

Property, plant and equipment acquired by the SPV Group are reported at acquisition cost, with deductions for accumulated depreciation and impairment losses, if any.

The acquisition cost includes the purchase price (excluding refundable taxes) and expenses, such as delivery and handling costs, installation, legal services and consultancy services, directly attributable to bringing the asset to the site and in working condition for its intended use.

Where the construction or development of any asset requiring a substantial period of time to set up for its intended use is funded by borrowings, the corresponding borrowing costs are capitalised up to the date when the asset is ready for its intended use.

All assets are depreciated on a Straight Line Method (SLM) of Depreciation, over the useful life of assets as prescribed under Schedule II of the Companies Act, 2013 other than assets specified in para below

Following assets are depreciated over a useful life other than the life prescribed under Schedule II of the Companies Act, 2013 based on internal technical evaluation, taking into account the nature of the asset, the estimated usage of the asset, the operating conditions of the asset, past history of replacement, anticipated technological changes etc.:

Asset	Useful life based on SLM
Data Processing Equipment (Server & Networking)	4
Mobile Phones and I pad / Tablets	Fully depreciated in the year of purchase
Specialised office equipment's	3
Vehicles	5
Assets provided to employees	3

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets. However, when there is no reasonable certainty that ownership will be obtained by the end of the lease term, assets are depreciated over the shorter of the lease term and their useful lives.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the

difference between the sales proceeds and the carrying of the asset and is recognised in profit or loss.

Intangible assets (other than those covered by SCAs)

Intangible assets, other than those covered by SCAs, comprise of software and amounts paid for acquisition of commercial rights under an "Operation and Maintenance" agreement for a toll road project and are depreciated as follow:

Asset Type	Useful Life
Licensed Software	Over the licence period
Intellectual Property Rights	5 - 7 years
Commercial Rights acquired under Operations and Maintenance Agreement	The minimum balance period of the concession agreement relating to the corresponding toll road project

Intangible assets are reported at acquisition cost with deductions for accumulated amortisation and impairment losses, if any.

Acquired intangible assets are reported separately from goodwill if they fulfil the criteria for qualifying as an asset, implying they can be separated or they are based on contractual or other legal rights and that their market value can be established in a reliable manner.
An impairment test of such intangible assets is conducted annually or more often if there is an indication of a decrease in value. The impairment loss, if any, is reported in the Statement of Profit and Loss.

Intangible assets, other than those covered by SCAs, are amortised on a "straight line" basis over their estimated useful lives. The estimated useful life of software is four years. The amount paid for acquisition of the rights under the "Operations and Maintenance" agreement is amortised over the minimum balance period (as at the time of acquisition) of the concession agreement relating to the corresponding toll road project.

j) Impairment of tangible and intangible assets

At the end of each reporting period, the SPV Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest Group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

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In assessing value in use, the estimated future cash flows are discounted to their present value using appropriate discount rate.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually, or whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs of disposal and value in use.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss.
A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit or loss unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

Impairment of Financial Assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category. For financial assets other than trade receivables, as per Ind AS 109, the Group recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition. The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of Non-financial Assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Group's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial Liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent Measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Profit or Loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or Losses on Liabilities held for Trading are Recognised in the Statement of Profit and Loss.

Loans and Borrowings

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of Financial Instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

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k) Investment in Subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

l) Foreign Currencies

The Group's financial statements are presented in INR, which is also the Group's functional currency. The Group does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and Balances Transactions in foreign currencies are initially recorded by the Group at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

m) Fair value Measurement

The Group measures financial instruments, such as, derivatives at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

- Financial instruments (including those carried at amortised cost) (note 31)
- Quantitative disclosure of fair value measurement hierarchy (note 31)

n) Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

o) Distribution to Unit Holders

The Group recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

p) Cash and Cash Equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Group's cash management.

q) Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the year are adjusted for the effects of all dilutive potential units.

Key source of information

The preparation of financial statements in conformity with Ind AS requires the Group makes estimates and assumptions that affect the reported amounts of income and expenses of the period, the reported balances of assets and liabilities and the disclosures relating to contingent liabilities as of the date of the financial statements. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates include allowance for doubtful loans /other receivables, fair value measurement etc. Difference, if any, between the actual results and estimates is recognised in the period in which the results are known.

r) Non-Controlling Interest

Non-Controlling Interest represent the share of reserve and capital attributable to the shareholders of the SPVs who have not agreed to exchange their share in the SPVs for Units of Trust and will not become unitholders. Below is the list of shareholders of the SPVs for whom Non-controlling interest has been recognised. Non-controlling interests in the results and equity of subsidiaries are shown separately in the Special purpose Combined Statement of Profit and Loss, Combined Statement of Change in Equity and Combined Balance Sheet separately

Name of SPV	Shareholder	% Holding in SPV (as on reporting date)
HREL	Punj Lloyd Limited	0.01%
TRDCL	Punj Lloyd Limited	50.00%
PSRDCL	East Nippon Expressway Company (NEXCO)	9.09%

Ind AS-110 requires entities to attribute the profit or loss and each component of other comprehensive income to the owner of SPV Group and to the non-controllig interest. This requirement needs to be followed even if this results in the non-controlling interest having a deficit balance. Non-controlling interest balance is stated at cost. Ind AS 101 requires the above requirement to be followed prospectively from the date of transition.

2. Property, Plant and Equipment

₹ in Millions

Particulars	Cost				Accumulated Depreciation				Carrying Amount	
	Balance at April 1, 2021	Additions	Deductions	Balance at March 31, 2022	Balance at April 1, 2021	Depreciation expense	Deductions	Balance at March 31, 2022	As at March 31, 2022	As at March 31, 2021
Property Plant and Equipment :										
Land	-			-	-			-	-	-
Building and structures	-			-	-			-	-	-
Vehicles	11.03	-	-	11.03	11.03	-	-	11.03	0.00	0.00
Data processing equipments	3.21	-	-	3.21	2.80	0.32	-	3.12	0.09	0.41
Office premises	-	-	-	-	-	-	-	-	-	-
Office equipments	0.50	-	-	0.50	0.50	-	-	0.50	0.00	0.00
Leasehold improvements	-	-	-	-	-	-	-	-	-	-
Furniture and fixtures	0.02	-	-	0.02	0.02	-	-	0.02	0.00	0.00
Electrical installations	-	-	-	-	-	-		-	-	-
Plant and machinery	4.63	23.81	-	28.45	2.83	0.22		3.05	25.39	1.80
	-			-	-					
Total	19.39	23.81	-	43.21	17.19	0.54	-	17.72	25.48	2.21

Particulars	Cost				Accumulated Depreciation				Carrying Amount	
	Balance at April 1, 2022	Additions	Deductions	Balance at March 31, 2023	Balance at April 1, 2022	Depreciation expense	Deductions	Balance at March 31, 2023	As at March 31, 2023	As at March 31, 2022
Property Plant and Equipment :										
Land	-			-	-			-	-	-
Building and structures	-			-	-			-	-	-
Vehicles	11.03	-	-	11.03	11.03	-	-	11.03	0.00	0.00
Data processing equipments	3.21	-	-0.25	2.96	3.12	0.08	-0.25	2.95	0.01	0.09
Office premises	-	-	-	-	-	-	-	-	-	-
Office equipments	0.50	-	-0.46	0.04	0.50	-	-0.46	0.04	0.00	0.00
Leasehold improvements	-	-	-	-	-	-	-	-	-	-
Furniture and fixtures	0.02	-	-	0.02	0.02	-	-	0.02	-	0.00
Electrical installations	-	-	-	-	-	-		-	-	-
Plant and machinery	28.45	-	-	28.45	3.05	2.48		5.53	22.91	25.39
Total	43.20	-	(0.71)	42.50	17.72	2.56	(0.71)	19.57	22.92	25.48

Particulars	Cost				Accumulated Depreciation				Carrying Amount	
	Balance at April 1, 2023	Additions	Deductions	Balance at March 31, 2024	Balance at April 1, 2023	Depreciation expense	Deductions	Balance at March 31, 2024	As at March 31, 2024	As at March 31, 2023
Property Plant and Equipment :										
Land	-	-	-	-	-	-	-	-	-	-
Building and structures	11.03	-	-	11.03	11.03	-	-	11.03	-	-
Vehicles	2.96	-	-	2.96	2.95	-	-	2.95	0.01	0.00
Data processing equipments	-	-	-	-	-	-	-	-	-	0.01
Office premises	0.04	-	-	0.04	0.04	-	-	0.04	-	-
Office equipments	-	-	-	-	-	-	-	-	-	0.00
Leasehold improvements	-	-	-	-	-	-	-	-	-	-
Furniture and fixtures	0.02	-	-	0.02	0.02	-	-	0.02	-	-
Electrical installations	-	-	-	-	-	-	-	-	-	-
Plant and machinery	28.45	-	-	28.45	5.53	1.91	-	7.45	21.00	22.91
	-			-	-					
Total	42.50	-	-	42.50	19.57	1.91	-	21.49	21.01	22.92

Particulars	Cost				Accumulated Depreciation				Carrying Amount	
	Balance at April 1, 2024	Additions	Deductions	Balance at September 30, 2024	Balance at April 1, 2024	Depreciation expense	Deductions	Balance at September 30, 2024	Balance at September 30, 2024	Balance at March 31, 2023
Property Plant and Equipment :										
Land	-	-	-	-	-	-	-	-	-	-
Building and structures	11.03	-	-	11.03	11.03	-	-	11.03	-	-
Vehicles	2.96	-	-	2.96	2.95	-	-	2.95	0.01	0.01
Data Processing Equipment	-	-	-	-	-	-	-	-	-	-
Office premises	0.04	-	-	0.04	0.04	-	-	0.04	-	-
Office equipments	-	-	-	-	-	-	-	-	-	-
Leasehold improvements	-	-	-	-	-	-	-	-	-	-
Furniture and fixtures	0.02	0.69	-	0.71	0.02	-	-	0.02	0.69	-
Electrical installations	-	-	-	-	-	-	-	-	-	-
Plant and machinery	28.45	-	-	28.45	7.45	1.00	-	8.45	20.00	21.00
Total	42.50	0.69	-	43.18	21.49	1.00	-	22.49	20.70	21.01
Capital work-in-progress (B)	-	-	-	-	-	-	-	-	-	-
Total (A+B)	42.50	0.69	-	43.18	21.49	1.00	-	22.49	20.70	21.01

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Notes forming part of the Combined Financial Statements

3. Intangible Assets

₹ in Millions

Particulars	Cost				Accumulated Amortisation					Provision for Impairment	Carrying Amount	
	Balance at April 1, 2021	Additions	Deductions	Balance at March 31, 2022	Balance at April 1, 2021	Amortisation expense	Deductions	Reversal of Impairment	Balance at March 31, 2022		As at March 31, 2022	As at March 31, 2020
Software / Licences acquired	0.01	-	-	0.01	-	-	-		0.00		-	0.01
Commercial rights acquired	-	-		-	-	-	-		-		-	-
Others	-	-		-	-	-	-		-		-	-
Subtotal (a)	0.01	-	-	0.01	-	-	-		0.00		-	0.01
Rights under service concession arrangements	88,784.19	44.73	-	88,828.92	9,163.49	1,958.17	-		11,121.66	16,163.95	61,543.31	63,166.37
Subtotal (b)	88,784.19	44.73	-	88,828.92	9,163.49	1,958.17	-		11,121.66	16,163.95	61,543.31	63,166.37
Intangible assets under development (c)	2.40	9.55	-	11.95	-	-	-		-	-	11.95	-
Subtotal (c)	2.40	9.55	-	11.95	-	-	-		-		11.95	-
Total (a+b+c)	88,786.60	54.28	-	88,840.88	9,163.49	1,958.17	-		11,121.66	16,163.95	61,555.26	63,166.38

Particulars	Cost				Accumulated Amortisation					Provision for Impairment	Carrying Amount	
	Balance at April 1, 2022	Additions	Deductions	Balance at March 31, 2023	Balance at April 1, 2021	Amortisation expense	Deductions	Reversal of Impairment	Balance at March 31, 2023		As at March 31, 2023	As at March 31, 2022
Software / Licences acquired	0.01	-		0.01	-	-	-		0.00		-	-
Commercial rights acquired	-	-		-	-	-	-		-		-	-
Others	-	-		-	-	-	-		-		-	-
Subtotal (a)	0.01	-	-	0.01	-	-	-		0.00		-	-
Rights under service concession arrangements	88,828.92	18.64	-	88,847.56	11,121.66	2,607.14	-		13,728.81	16,163.95	58,954.81	61,543.31
Subtotal (b)	88,828.92	18.64	-	88,847.56	11,121.66	2,607.14	-		13,728.81	16,163.95	58,954.81	61,543.31
Intangible assets under development (c)	11.95	686.33	(18.64)	679.65	-	-	-		-	-	679.65	11.95
Subtotal (c)	11.95	686.33	(18.64)	679.65	-	-	-		-		679.65	11.95
Total (a+b+c)	88,840.88	704.97	(18.64)	89,527.22	11,121.66	2,607.14	-		13,728.81	16,163.95	59,634.46	61,555.26

Particulars	Cost				Accumulated Amortisation					Provision for Impairment	Carrying Amount	
	Balance at April 1, 2023	Additions	Deductions	Balance at March 31, 2024	Balance at April 1, 2022	Amortisation expense	Deductions	Reversal of Impairment	Balance at March 31, 2024		As at March 31, 2024	As at March 31, 2023
Software / Licences acquired	0.01	-	-	0.01	0.00	-	-		0.00	-	-	-
Commercial rights acquired	-	-	-	-	-	-	-		-	-	-	-
Others	-	-	-	-	-	-	-		-	-	-	-
Subtotal (a)	0.01	-	-	0.01	0.00	-	-		0.00		-	-
Rights under service concession arrangements	88,847.56	-	-	88,847.56	13,728.81	2,901.09	-		16,629.90	16,163.95	56,053.70	58,954.81
Subtotal (b)	88,847.56	-	-	88,847.56	13,728.81	2,901.09	-		16,629.90	16,163.95	56,053.70	58,954.81
Intangible assets under development (c)	679.65	1,937.87	-	2,617.51	-	-	-		-	-	2,617.51	679.65
Subtotal (c)	679.65	1,937.87	-	2,617.51	-	-	-		-	-	2,617.51	679.65
Total (a+b+c)	89,527.22	1,937.87	-	91,465.08	13,728.81	2,901.09	-		16,629.90	16,163.95	58,671.21	59,634.46

Particulars	Cost				Accumulated Amortisation					Provision for Impairment	Carrying Amount	
	Balance at April 1, 2024	Additions	Deductions	Balance at September 30, 2024	Balance at April 1, 2023	Amortisation expense	Deductions	Reversal of Impairment	Balance at September 30, 2024		As at September 30, 2024	As at March 31, 2024
Software / Licences acquired	0.01	-	-	0.01	0.00	-	-		0.00	-	-	-
Subtotal (a)	0.01	-	-	0.01	0.00	-	-		0.00		-	-
Rights under service concession arrangements	88,847.56	-	-	88,847.56	16,629.91	1,488.17			18,118.08	16,163.95	54,565.54	56,053.70
Subtotal (b)	88,847.56	-	-	88,847.56	16,629.91	1,488.17			18,118.08	16,163.95	54,565.54	56,053.70
Intangible assets under development	2,617.51	702.62	-	3,320.13	-	-	-		-	-	3,320.13	2,617.51
Subtotal (c)	2,617.51	702.62	-	3,320.13	-	-	-		-	-	3,320.13	2,617.51
Total (a+b+c)	91,465.08	702.62	-	92,167.70	16,629.91	1,488.17			18,118.07	16,163.95	57,885.67	58,671.21

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

3.1 Estimates under Service Concession Arrangements :

Note :

1) Under the Service Concession Arrangements, the Group has received the right to charge users of the public services, such rights are recognized and classified as "Intangible Assets". Such a right is not an unconditional right to receive consideration because the amounts are contingent to the extent that the public uses the service and thus are recognized and classified as intangible assets.

2) The book value of such an intangible asset is recognized by the company at the fair value of the constructed asset. The intangible assets is amortised on the basis of units of usage or revenue over the remaining concession period

3) In respect of BAEL:

Based on the provisions of the concession agreement, the company is entitled to an extension in the concession period due to shortfall in traffic and premium fees shall be payable to NHAI in respect of the said extended period. Accordingly, amortisation over the increased concession period has been charged.

The construction cost includes GST. The Company has the right to claim this GST from NHAI under the "Change in Law" provisions of the concession agreement and will recognize this claim in the financial statements upon approval of the claim by NHAI.

4) In respect of SBHL:

a) The book value of an intangible asset is recognized by the company at the fair value of the constructed asset which comprise the actual construction cost plus the margins @ 11%. The intangible assets is amortised on the basis of units of usage over the lower of the remaining concession period

These factors are consistent with the assumptions made in the all previous years.

₹ in Million

Particulars	Upto /As at September 30, 2024	Upto /As at March 31, 2024	Upto /As at March 31, 2023	Upto /As at March 31, 2022
Margin on Construction services recognized in respect of Intangible Assets	341.19	341.19	341.19	341.19
Carrying Amount of Intangible Assets	7,629.24	7,752.79	8,263.97	8,263.97
Carrying Amount of Intangible Assets under development	-	-	-	-
Amortization charge in respect of intangible assets	1,521.10	1,397.55	1,125.23	867.72
Total Estimated traffic count for the project (Over the balance life of Concession period)	116.78	109.54	120.34	131.87
Total Provision for overlay in respect of intangible assets	869.81	796.86	756.07	534.10

Particulars	For the year ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Amortization charge in respect of Intangible Assets	123.55	272.32	257.51	206.54

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4. Investment accounted as per equity method

₹ in Millions

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Investment accounted as per equity method 1,70,30,000 (March 31, 2024 : 1,70,30,000; March 31, 2023 : 1,70,30,000; March 31, 2022 : 1,70,30,000) equity shares of Rs.10 each fully paid of Thiruvananthapuram Road Development Company Limited	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00
Note:				
Percentage ownership interest	50%	50%	50%	50%
Net assets	(49.09)	(44.29)	(29.79)	(1,874.82)
RIIT 's share of net assets (Minimum Re 1/-)	0.00	0.00	0.00	0.00

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Roadstar Infra Investment Trust

5. Other Financial Assets

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Unsecured, considered good unless otherwise mentioned								
Receivable under Service Concession Arrangements	1,787.17	901.56	2,262.18	916.10	3,088.43	737.14	4,078.66	1,245.61
Others Receivable from Authority	42.70	5,807.06	1,286.36	5,850.32	1,286.36	5,933.35	1,286.36	5,891.93
Allowance for Expected Credit Loss - Note (A)	0.00	(1202.53)	(143.28)	(1283.08)	(143.28)	(1307.98)	(143.28)	(1254.05)
Interest Accrued - Related Party	-	-	-	-	26.61	-	26.61	-
Security Deposits - Others - Unsecured	12.06	-	8.89	-	9.88	-	8.99	-
Allowance for ECL - Security deposit	(1.97)	-	(1.97)	-	-	-		
Receivable from Lenders and banks	-	3,385.71	-	2,346.01	411.01	-	735.24	-
Receivable from Lenders - Interest on Loan*	-	3.08	-	1.89	-	1.68	-	7.81
Receivable from Lenders - Interest on loan**	-	1.89	-	1.89	-	-	-	
Bank deposits with more than 12 months maturity	50.00	-	-	-	-	-	-	
Other Advances	1.76	39.58	-	11.91	-	13.93	-	11.68
Other Financial Assets	150.02	25.36	150.54	71.59	-	31.83	-	21.97
Less : Allowance for bad and doubtful receivables		(3.42)		(3.42)			-	-
Grant receivable	-	2.06	-	2.06		2.06	-	2.06
Total	**2,041.75**	**8,958.46**	**3,562.72**	**7,913.38**	**4,679.01**	**5,412.01**	**5,992.58**	**5,963.48**

*Excess Interest debited by Lender

₹ in Million

Name of the lender	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Unique Waste Processing Company Limited	-	-	0.39	0.39
L&T Finance Limited *	-	0.60	-	-
Bank of Baroda	1.29	1.29	1.29	7.42
Receivable from related parties	**1.29**	**1.89**	**1.68**	**7.81**

*Effective December 4, 2023, L&T Finance Limited, L&T Infra Credit Limited, and L&T Mutual Fund Trustee Limited merged with L&T Finance Holdings Limited. Subsequently the name of L&T Finance Holdings Limited has been changed to L&T Finance Limited, effective from March 28, 2024.

Note (A) (i): The Arbitral Tribunal had passed an award on November 30, 2017 directing NHAI to pay PSRDCL a sum of Rs. 547.96 Crores. (including interest till the date of award) towards claims filed against NHAI. NHAI had thereafter filed an appeal before the Delhi High Court. The Delhi High Court during hearing of the appeal ordered NHAI to deposit the entire award amount with the Court. NHAI deposited the entire amount with the Court. PSRDCL had recognised interest on claim recoverable upto March 31, 2018. Since NHAI has already deposited the award amount with Court and appeal is pending disposal, as a matter of prudence no further interest on claim recognised in the books since 1st April 2018 till reporting date.
An execution petition has been filed by PSRDCL for release of the award money. The said execution petition was listed on April 15, 2019, & November 15, 2019. The matter was adjourned to 16th Feb, 2021
This matter is again adjourned to future date however the date is awaited as court are not in regular flow or working due to ongoing pandemic.
PSRDCL expects to settle the matter by end of the financial year March 31, 2025 and hence no further provision for expected credit loss is required.

Note (A) (ii) In respect of BAEL, the Company had recognized a claim receivable from the Authority amounting to ₹1,286.36 million, based on Paragraph 6 of the letter issued by NHAI (Reference No. 15017/1/2013/PIU(DUP)/1832 dated September 25, 2019). Additionally, the Company had recorded liabilities of ₹1,237.88 million towards the negative change of scope related to de-scoped works and other claims by NHAI, and ₹124.70 million for a possible penalty for overloading.
As part of a comprehensive settlement agreement dated September 30, 2024, with NHAI, these claims have been resolved, resulting in a net recoverable amount of ₹42.70 million from NHAI. Accordingly, the remaining balances have been adjusted during the current period, with ₹1,237.88 million written back and ₹1,324.39 million written off. The amounts written off include ₹80.55 million of other recoverable and ₹0.18 million recoverable from other parties (Refer to Notes 19 and 23).
Further, as part of the settlement, the Company was required to pay ₹166.50 million as a penalty for harmonious substitution. Consequently, an additional liability of ₹41.80 million (₹166.50 million less ₹124.70 million already provided) has been recorded in the books of accounts.

6. Deferred Tax

₹ in Millions

The following is the analysis of Deferred Tax Assets/(Liabilities) presented in the balance sheet:

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Deferred Tax Assets	2,222.45	2,206.16	2,137.39	2,033.02
Deferred Tax Liabilities	(1,659.92)	(1,586.24)	(1,605.57)	(1,464.49)
Deferred Tax Asset / (Liabilities) (Net)	**562.53**	**619.92**	**531.82**	**568.53**

The income tax expense for the period can be reconciled to the accounting profit as follows:

Particulars	As at September 30, 2024	Year ended March 31, 2024	Year ended March 31, 2023	Year ended March 31, 2022
Profit/(Loss) before tax from continuing operations	(103.81)	(241.27)	(502.88)	(149.31)
Substantively Enacted Rate (%)	29.12%	29.12%	29.12%	29.12%
Accounting Profit multiplied by Tax Rate	(30.23)	(70.26)	(146.44)	(43.48)
Effect of income that is exempt from taxation	-	-	-	0.00
Effect of deferred taxes reversal in the tax holiday period	(2729.41)	(2178.89)	(2084.03)	(2046.27)
Effect of expenses that are not deductible in determining taxable profit	537.19	43.00	93.07	56.73
Effect of excessive depreciation disallowed in Taxation	1828.10	1815.33	1823.65	1616.92
Deferred Tax on Overlay Provision	(168.18)	(229.10)	(218.07)	(152.43)
Total	**(562.53)**	**(619.92)**	**(531.82)**	**(568.53)**

Footnotes :

a) Deferred Tax assets and Deferred Tax liabilities have been offset wherever the Group has a legally enforceable right to set off Current Tax Assets against Current Tax Liabilities and where the Deferred Tax Assets and Deferred Tax Liabilities relate to income taxes levied by the same taxation authority

b) Deferred Tax Asset in respect of Unabsorbed Business Loss/ Depreciation and Provision for overlay has been recognized to the extent reversals of Deferred Tax Liability and Taxable Profits are available before tax holiday period.

c) Significant management judgement is considered in determining provision for income tax, Deferred Tax Assets and liabilities and recoverability of Deferred Tax Assets. The recoverability of Deferred Tax Assets is based on estimate of the taxable income for the period over which Deferred Tax Assets will be recovered. The Group has unabsorbed business losses/depreciation and Provision for Overlay which according to the management will be used to set off taxable profit arising in subsequent years from operation of the Group

The profitability projections used for determining the recoverability of Deferred Tax Asset has number of variables viz. Revenue projections, restructuring of debt, incurrence of overlay etc which are subject to change Group has appointed an outside agency for traffic study and technical study for major maintenance , which have been used in profitability projections.

The carrying amount of Deferred Tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered

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₹ in Millions

7. Investments - Current

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
Investment in Mutual funds (Fair value through profit or loss- FVTPL) #								
(a) BOI AXA Liquid Fund - Regular Plan - Growth (LFRGG)*	230713.487	658.57	230713.487	635.43	230713.487	592.31	281779.487	684.32
(b) Investments in HDFC Liquid Fund - Growth	-	-	-	-	-	-	215638.248	895.29
Total Investments (A)	2,30,713.49	658.57	2,30,713.49	635.43	2,30,713.49	592.31	4,97,417.74	1,579.61

*Lien marked on BOI AXA Mutual Fund with IDBI Trustee
Valued through FVTPL
NAV :

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
(a) BOI AXA Liquid Fund - Regular Plan - Growth	2854.4874	2754.2063	2567.3176	2428.5799
(b) HDFC Liquid Fund - Growth	-	-	-	4151.7977

8 Trade Receivables

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Trade receivables from others								
-Unsecured, considered good	-	37.00	-	52.29	-	142.81	-	26.08
Less : Allowance for bad and doubtful debts	-	-	-	-	-	-	-	-
Trade receivables from related parties	-	-	-	-	-	-	-	-
-Credit impaired	-	17.90	-	18.10	-	13.52	-	13.50
-Unbilled Revenue	-	-	-	-	-	-	-	0.24
Less : Allowance for bad and doubtful debts	-	(17.90)	-	(18.10)	-	(13.52)	-	(13.50)
Total	-	37.00	-	52.29	-	142.81	-	26.32

8.1 Trade Receivables Ageing schedule for the year ended as on September 30, 2024

Particulars	Not Due	Less than 1 year	1 - 2 years	2 - 3 years	More than 3 years	Total
(i) Undisputed Trade receivables – considered good	25.36	-	-	-	-	25.36
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	11.63	5.28	0.06	16.97
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-
(iv) Disputed Trade Receivables–considered good	-	-	-	-	-	-
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	12.56	12.56
Less : Allowance for bad and doubtful debts	-	-	-	-5.28	-12.62	-17.90
Total	25.36	-	11.63	-	-	37.00

8.2 Trade Receivables Ageing schedule for the year ended as on March 31, 2024

Particulars	Not Due	Less than 1 year	1 - 2 years	2 - 3 years	More than 3 years	Total
(i) Undisputed Trade receivables – considered good	35.38	11.63	5.28	-	-	52.29
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-
(iv) Disputed Trade Receivables–considered good	-	-	-	-	-	-
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	18.10	18.10
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-18.10	-18.10
Total	35.38	11.63	5.28	-	-	52.29

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Notes forming part of the Combined Financial Statements
8.3 Trade Receivables Ageing schedule for the year ended as on March 31, 2023

Particulars	Not Due	Less than 1 year	1 - 2 years	2 - 3 years	More than 3 years	Total
(i) Undisputed Trade receivables – considered good	13.38	124.14	0.02	3.19	2.08	142.81
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	12.75	12.75
(iv) Disputed Trade Receivables–considered good	-	-	-	-	-	-
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-12.75	-12.75
Total	**13.38**	**124.14**	**0.02**	**3.19**	**2.08**	**142.81**

₹ in Millions

8.4 Trade Receivables Ageing schedule for the year ended as on March 31, 2022

Particulars	Not Due	Less than 1 year	1 - 2 years	2 - 3 years	More than 3 years	Total
(i) Undisputed Trade receivables – considered good	12.85	8.09	3.19	0.51	1.66	26.32
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	13.50	13.50
(iv) Disputed Trade Receivables–considered good	-	-	-	-	-	-
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-13.50	-13.50
Allowance for bad and doubtful debts					-	-
Total	**12.85**	**8.09**	**3.19**	**0.51**	**1.66**	**26.32**

9 Cash and Cash Equivalents

For the purposes of the statement of cash flows, Cash and Cash Equivalents include cash on hand and in banks, net of outstanding bank overdrafts. Cash and Cash Equivalents at the end of the reporting period as shown in the statement of cash flows can be reconciled to the related items in the balance sheet as follows:

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Balances with Banks				
In current accounts	860.44	1,102.89	1,455.05	300.75
In deposit accounts (refer note (a) below)	1,210.90	1,168.35	-	-
Cash in hand	2.01	2.44	1.87	2.17
Balances held as margin money or as security against borrowings- with original maturity of less than 3 months	-	-	499.75	640.43
Cash and Cash Equivalents	**2,073.35**	**2,273.68**	**1,956.67**	**943.35**
In term deposits with maturity more than 3 months but less than 12 months (refer note (b) & (d) below)	6,717.17	7,592.37	12,015.49	12,312.67
Balances held as margin money or as security against borrowings (refer note (c) below)	671.38	671.38	103.05	103.05
Interest Accrued	71.72	66.88	107.71	226.09
Other Bank Balances	**7,460.27**	**8,330.63**	**12,226.25**	**12,641.81**

Notes:

a) In MBEL Rs. 269.78 million (31 March 2024 : Rs. 166.78 million), (31 March 2023 : Rs. 499.69 million), (31 March 2022 : Rs. 536.85 million) held as margin money or as security against borrowings.

b) In MBEL Rs. 410.01 million (31 March 2024 : Rs. 512.88 million), (31 March 2023 : Rs. 156.90 million) held as margin money or as security against borrowings.

c) In terms of the provisions of loan agreement executed by SBHL, it is required to create Debt Service Reserve Account (DSRA) to meet the debt service requirements equivalent to the debt servicing for the next quarter. Accordingly, Company has created Fixed Deposits amounting ₹ 185.00 Millions as on 30th September 2024 (₹ 185.00 Millions as on 31st March 2024), (₹ 85.00 Millions as on 31st March 2023) and got them lien marked.

b) In BAEL, balances of Rs. 250.00 million (31 March 2024 : Rs. 250.00 million) , (31 March 2023 : Rs. 250.00 million) held as margin money or as security against borrowings

10. Tax Assets and Liabilities

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
A) Current Tax Assets								
Others								
Advance Payment of Taxes	112.86	314.58	91.65	291.70	40.00	286.29	25.71	248.88
Less- Provision for Bad Debts/Non Receivable	-	(93.15)	-	(93.89)	-	(93.89)	-	(93.89)
Total	**112.86**	**221.43**	**91.65**	**197.81**	**40.00**	**192.40**	**25.71**	**154.99**
B) Current Tax Liabilities								
Provision for Tax	-	-			-		-	377.94
Total	-	-			-		-	377.94

In respect of BAEL:

As against the tax liability of Rs. 37.79 crores the Company had made provision of Rs. 37.64 crores and Rs. 50.08 crores in the financial for FY 2016-17 & FY 2017-18 respectively considering profit as per accounting done under IND-AS, however in the return of income, the Company has eliminated notional adjustment in profits under IND-AS and paid the tax of Rs. 15.83 crores and Rs. 35.46 crores for the financial for FY 2016-17 & FY 2017-18 respectively. The company has filed the letter to the tax authorities, fully disclosing the facts and the stand taken for filing the return of income. The above views has been taken on the basis of ;

(i) various judicial precedents on " Notional Vs Real Income" concept and
(ii) CBDT Circular no 24 of 2017 clarifying that "adjustments on account of Service Concession Arrangements would be included in the Transition Amount and also on an ongoing basis" is not binding on the company.

Pending final outcome / completion of assessment for the respective year, the company continues to carry the excess provision.
As no notice was received for FY 2016-17, and the assessment for FY 2017-18 has been concluded, the excess tax provision has been reversed during the financial year 2022-23.
In view of change in Income Tax Act, for then existing clause (iih) of Explanation 1 to sub-section (2) of section 115JB by the Finance (No. 2) Act, 2019, w.e.f. 1-4-2020, Company does not have any MAT Tax liability for the year ended September 30, 2024.

In case of HREL :

i) In light of the Company's decision to adopt the new tax regime, the tax liability for the current year is nil. This is due to the utilization of carry-forward tax losses, which have offset the taxable income for the year.

ii) The Deferred Tax Assets/Liability has not been recognised as the same if provided would be reversed in the tax holiday period

11. Other Current & Non-Current Assets

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
(Unsecured, Considered good unless otherwise mentioned)								
Capital Advances								
-Unsecured, considered good - Related Party	-	-	-	-	-	8.78	-	-
Prepaid Expenses	-	22.27	-	31.03	-	37.49	-	36.04
Indirect Tax balances / Receivable*	-	69.86	-	65.54	-	49.25	-	51.60
Allowance for Indirect Tax balances / Receivables - Doubtful		(14.72)		(14.06)		(14.06)		(8.33)
Other current assets	-	10.67	-	0.94	-		-	-
Mobilisation advances considered good	4.76	-	19.42	-	-	-	-	-
Other advances	-	-	-	0.21	-	0.40	0.04	9.53
Total	4.76	88.09	19.42	83.66	-	81.86	0.04	88.84

* In respect of BAEL, during the financial year 2022-23, year WCT receivable of Rs. 3.23 Mn has been written off against ECL provision.
In respect of PSRDCL, includes appeal fee of Rs 4.7 mn paid for FY 2016-17 under Maharashtra Value Added Tax Act, 2002 during the financial year 2020-21

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

12. Share Capital

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Equity Shares	Amount	Equity Shares	Amount	Equity Shares	Amount	Equity Shares	Amount
Authorised Capital	1,02,37,10,000	10,237.10	1,02,37,10,000	10,237.10	1,02,37,10,000	10,237.10	1,02,37,10,000	10,237.10
Equity Shares of ₹ 10/- each fully paid								
Issued, Subscribed and Paid up capital	8,94,60,86,900	8,801.97	8,94,60,86,900	8,801.97	8,94,60,86,900	8,801.97	8,94,60,86,900	8,801.97
Equity Shares of ₹ 10/- each fully paid								
Total	**8,94,60,86,900**	**8,801.97**	**8,94,60,86,900**	**8,801.97**	**8,94,60,86,900**	**8,801.97**	**8,94,60,86,900**	**8,801.97**

12.1 Reconciliation of the number of Shares outstanding at the beginning and at the end of the year / period:

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	₹ in Millions	Number of equity shares	₹ in Millions	Number of equity shares	₹ in Millions	Number of equity shares	₹ in Millions
Shares outstanding at the beginning of the year / period	93,02,70,070	8,801.97	93,02,70,070	8,801.97	93,02,70,070	8,801.97	93,02,70,070	8,801.97
Shares issued during the year	-	-	-	-	-	-	-	-
Shares outstanding at the end of the year / period	**93,02,70,070**	**8,801.97**	**93,02,70,070**	**8,801.97**	**93,02,70,070**	**8,801.97**	**93,02,70,070**	**8,801.97**

12.2 Details of Share holders holding more than 5% in Moradabad Bareilly Expressway Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
Roadstar Infrastructure Investment Trust	22,16,60,000	100.00%	18,95,19,309	85.50%	18,95,19,309	85.50%	-	-
IL&FS Transportation Networks Limited	-	-	3,21,40,691	14.50%	3,21,40,691	14.50%	18,95,19,309	85.50%
Infiniti Realty Opportunities Trust	-	-	-	-	-	-	3,21,40,691	14.50%
Total	**22,16,60,000**	**100.00%**	**22,16,60,000**	**100.00%**	**22,16,60,000**	**100.00%**	**22,16,60,000**	**100.00%**

Footnote : As a part of resolution process, and with due approvals of lenders , Authority and NCLAT, shareholding of the company has been changed. Consequently, Share Purchase Agreement executed amongst IL&FS Transportation Networks Limited (ITNL) , Axis Trustee Services Limited (as the Trustee of Roadstar Infra Investment Trust (RIIT)) , Roadstar Investment Managers Limited and the Company, for the transfer of 85.50% share holding from ITNL to RIIT on December 24, 2021

12.3 Details of Share holders holding more than 5% in Hazaribagh Ranchi Expressway Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
IL&FS Transportation Networks Limited	-	-	-	-	13,09,86,900	99.99%	13,09,86,900	99.99%
Roadstar Infrastructure Investment Trust	13,09,86,900	99.99%	13,09,86,900	99.99%	-	-	-	-
Total	**13,09,86,900**	**99.99%**	**13,09,86,900**	**99.99%**	**13,09,86,900**	**99.99%**	**13,09,86,900**	**99.99%**

Footnote : As a part of resolution process, and with due approvals of lenders , Authority and NCLAT, shareholding of the company has been changed. Consequently, Share Purchase Agreement executed amongst IL&FS Transportation Networks Limited (ITNL) , Axis Trustee Services Limited (as the Trustee of Roadstar Infra Investment Trust (RIIT)) , Roadstar Investment Managers Limited and the Company, for the transfer of share holding from ITNL to RIIT on December 16, 2022

12.4 Details of Share holders holding more than 5% in Sikar Bikaner Highway Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
IL&FS Transportation Networks Limited	-	-	-	-	-	-	12,40,50,000	100.00%
Roadstar Infrastructure Investment Trust	12,40,50,000	100.00%	12,40,50,000	100.00%	12,40,50,000	100.00%	-	-
Total	12,40,50,000	100.00%	12,40,50,000	100.00%	12,40,50,000	100.00%	12,40,50,000	100.00%

Footnote : As a part of resolution process, and with due approvals of lenders , Authority and NCLAT, shareholding of the company has been changed. Consequently, Share Purchase Agreement executed amongst IL&FS Transportation Networks Limited (ITNL) , Axis Trustee Services Limited (as the Trustee of Roadstar Infra Investment Trust (RIIT)) , Roadstar Investment Managers Limited and the Company, for the transfer of share holding from ITNL to RIIT on March 23, 2022

12.5 Details of Share holders holding more than 5% in Barwa Adda Expressway Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
IL&FS Transportation Networks Limited	24,35,00,000	100.00%	24,35,00,000	100.00%	24,35,00,000	100.00%	24,35,00,000	100.00%
Total	24,35,00,000	100.00%	24,35,00,000	100.00%	24,35,00,000	100.00%	24,35,00,000	100.00%

12.6 Details of Share holders holding more than 5% in Pune Sholapur Road Development Company Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
IL&FS Transportation Networks Limited	-	-	16,00,00,000	90.91%	16,00,00,000	90.91%	16,00,00,000	90.91%
Roadstar Infra Investment Trust	16,00,00,000	90.91%	-	-	-	-	-	-
East Nippon Expressway Company (NEXCO)	1,60,00,000	9.09%	1,60,00,000	9.09%	1,60,00,000	9.09%	1,60,00,000	9.09%
Total	17,60,00,000	100.00%	17,60,00,000	100.00%	17,60,00,000	100.00%	17,60,00,000	100.00%

Footnote : As a part of resolution process, and with due approvals of lenders , Authority and NCLAT, shareholding of the company has been changed. Consequently, Share Purchase Agreement executed amongst IL&FS Transportation Networks Limited (ITNL) , Axis Trustee Services Limited (as the Trustee of Roadstar Infra Investment Trust (RIIT)) , Roadstar Investment Managers Limited and the Company, for the transfer of share holding from ITNL to RIIT on May 16, 2023

12.7 Details of Share holders holding more than 5% in Thiruvananthapuram Road Development Company Limited

Shareholder	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity	Number of equity shares	% holding in the equity
IL&FS Transportation Networks Limited	-	-	-	-	1,70,30,000	50.00%	1,70,30,000	50.00%
Roadstar Infra Investment Trust	1,70,30,000	50.00%	1,70,30,000	50.00%	-	-	-	-
Punj Lloyd Limited	1,70,30,000	50.00%	1,70,30,000	50.00%	1,70,30,000	50.00%	1,70,30,000	50.00%
Total	3,40,60,000	100.00%	3,40,60,000	100.00%	3,40,60,000	100.00%	3,40,60,000	100.00%

As a part of resolution process, and with due approvals of lenders , Authority and NCLAT, shareholding of the company has been changed. Consequently, Share Purchase Agreement executed during the financial year 2022-23, amongst IL&FS Transportation Networks Limited (ITNL) , Axis Trustee Services Limited (as the Trustee of Roadstar Infra Investment Trust (RIIT)) , Roadstar Investment Managers Limited and the Company, for the transfer of share holding from ITNL to RIIT on December 19, 2022

The Company has only one class of equity shares having a par value of Rs.10/- per share. Each holder of equity shares is entitled to one vote per share. The company declares and pays dividends in Indian rupees. The dividend, if any proposed, by the Board of Directors is subject to the approval of the shareholders in the ensuing Annual General Meeting.

In the event of liquidation of the company, the holders of equity shares will be entitled to receive remaining assets of the company, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

No dividend declared during period ended September 30, 2024, year ended March 31, 2024, March 31, 2023 and March 31, 2022

13. Other Equity

₹ in Millions

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
(i) Reserves and Surplus				
Retained earnings	(37,269.12)	(30,450.14)	(30,484.03)	(29,921.85)
Debenture Redemption Reserve	587.01	587.01	647.64	954.77
Deemed Equity	142.27	142.27	142.27	1,469.29
Share Premium	43.64	43.64	43.64	43.64
Capital Resaves	8,623.57	8,623.57	8,623.57	8,623.57
Balance at end of the year (A)	**(27,872.63)**	**(21,053.65)**	**(21,026.90)**	**(18,830.57)**
Capital Contribution # (B)	0.00	0.00	0.00	0.00
Total	**(27,872.63)**	**(21,053.65)**	**(21,026.90)**	**(18,830.57)**

Initial contribution in Equity accounted investee, TRDCL is recognized at Net Book value as at April 01, 2021. Since Net Book value was negative, the same is restricted to Re 1/-

Footnotes :

1. Debenture Redemption Reserve relates to Debentures to be redeemed to external Borrowers

2. Since HREL had issued non convertible debentures in the year ended March 31, 2017, in terms of Section 71 of the Companies Act, 2013 read with the Rule 7 (B) of The Companies (Share Capital and Debentures) Rules, 2014 is required to create Debenture Redemption Reserve to the extent of 10% of the value of outstanding privately placed Debentures until such debentures are redeemed, to which adequate amounts shall be credited from out of its profits every year. Company has investment of Rs 658.57 mn (March 31, 2024 : Rs 635.43 mn, March 31, 2023: Rs 592.31 Mn : March 31, 2022 Rs 684.32 mn) (FVTPL) in BOI AXA Liquid Fund - Regular Plan - Growth (LFRGG) and HDFC Liquid Fund - Growth, towards Debt Service Reserve Account.

3. In case of HREL, during FY 2016-17 loan aggregating Rs 1980.00 mn from IL&FS Transportation Networks Limited (ITNL) were converted into zero coupon with repayment at the end of the concession period. Accordingly, HREL had recognized deemed equity of Rs 1285.40 mn in FY 2016-17 in accordance with IND-AS. Company had done unwinding of interest aggregating of Rs 137.17 mn on the said deemed equity till October 15, 2018 through statement of profit and loss account. In view of change in terms of the above mentioned debt of Rs 1980.00 mn, the deemed equity has been reversed during the financial year 2022-23.

4. In case of MBEL, since the company had issued non convertible debentures , in terms of Section 71 of the Companies Act, 2013 read with the Rule 7 (B) of The Companies (Share Capital and Debentures) Rules, 2014 is required to create Debenture Redemption Reserve to the extent of 10% of the value of outstanding privately placed Debentures until such debentures are redeemed, to which adequate amounts shall be credited from out of its profits every year. Accordingly, for the year ended March 31, 2022, 10% of the value of debenture outstanding has transferred to Debenture Redemption Reserve.

5. Pursuant to loan agreement of entered with RIIT during FY 2021-22, zero coupon debt converted into Unsecured loan post transfer of shares from ITNL to RIIT

6. Capital Reserve represents grant received by the Company from NHAI during construction period prior to April 1, 2015

Roadstar Infra Investment Trust

Associates LLP Chartered Accountants

14. Borrowings

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Long-term	Current portion	Long-term	Current portion	Long-term	Current portion	Long-term	Short-term
Secured – at Amortised cost								
(i) Bonds / Debentures								
- from Other parties	5,843.73	1,074.33	6,319.84	999.03	7,436.71	866.80	6,855.07	2,473.55
- from related parties	-	-	-	-	-	-	-	-
(ii)Term Loans								
- from Banks	15,232.71	1,795.45	16,309.04	1,619.34	16,973.55	2,698.45	14,009.79	7,266.60
- from Financial Institutions	10,925.58	1,691.41	11,252.99	1,548.00	11,819.60	1,228.82	12,163.07	942.35
- from related parties	974.20	337.50	1,011.70	300.00	1,062.70	249.00	1,323.74	198.00
Unsecured – at amortised cost								
(i) Bonds / Debentures								
- from Other parties	904.26	4.83	967.70	2.01	-	244.06	-	-
- from related parties	7,882.57	33.81	7,605.57	16.70	-	-	-	-
- from Banks								
- from Financial Institutions								
(i)Term Loans								
- from Other parties	-	-	-	299.14	-	299.14	-	299.14
- from related parties	23,652.56	1,489.75	23,707.69	1,313.41	28,765.31	2,976.67	19,718.03	12,045.49
- from Financial Institutions	239.64	22.21	289.69	24.23	314.93	88.83	-	1,000.00
- from banks	110.21	10.15	132.93	11.08	144.00	40.62	-	450.12
Less: Unamortised borrowing cost	(198.73)	(0.46)	(198.73)	(0.46)	(198.73)	(0.46)	(198.73)	(0.46)
Less: Deemed Equity	(184.02)	-	(184.02)	-	(184.02)	0.00	(184.02)	
Total	**65,382.71**	**6,458.98**	**67,214.40**	**6,132.48**	**66,134.05**	**8,691.93**	**53,686.95**	**24,674.79**

1) in respect of SBHL:
a) During the previous financial year 2021-22, the Company's shareholding was transferred to Roadstar Infra Investment Trust (RIIT), an InvIT, after receiving due approval from the lenders, authority, and NCLT. Pursuant to this transfer, no interest was payable to the lenders for the period from 16th October 2018 to 31st March 2021. The interest accrued until 15th October 2018 was converted into a loan. The revised debt number as of October 15, 2018 was agreed by the lenders as a part of restructuring of debt.

b) During the financial year 2017-18, the Company availed a short-term loan of ₹290 million from M/s Empower India Limited. The loan carried an interest rate of 13.35% and was to be repaid within 13 months from the date of disbursement. However, pursuant to the NCLT order dated October 15, 2018, and subsequent order dated March 12, 2020, neither interest nor principal payments were made to the lender. Additionally, the Company has not recognized any interest for the period from October 15, 2018, to March 31, 2021.
In the financial year 2022-23, the Company entered into a restructured loan agreement with its senior lenders and the holding entity. However, no restructuring agreement was executed with Empower India Limited. The lender continued to charge compounding interest at the rate of 13.35% along with penal interest for non-payment. During the current financial year, as per the NCLAT order, Empower India Limited was substituted by IL&FS Financial Services Limited ("IFIN") effective September 2, 2024. Furthermore, on October 22, 2024, IFIN assigned all economic interests in this loan to the Roadstar Infra Investment Trust, effective retrospectively from March 22, 2022

c) During the year 2023-24, as a part of giving effect of the loan restructuring process, one of the consortium senior lenders given an additional credit of Rs 6.53 million to the loan account. This action of bank deviated from the terms outlined in the restructuring agreement and was not consistent with the actions of the other consortium lenders. Efforts were made to address this discrepancy with the senior lender in question. However, the matter remains unresolved at present. As a result, the outstanding balance in the company's books does not align with the lender's records, basis confirmation received.

2) in respect of BAEL:
Hon'ble NCLAT vide its order dated 12th March 2020 affirmed the stay on servicing of debts vide its earlier order dated 15th October 2018, in view of which, the company has stopped making repayments falling due after October 15, 2018. Details of scheduled repayments, which have fallen due as on March 31, 2024 are as under:
Further, in view of the liquidity constraints, the company has not been able to comply with the loan covenants including the maintenance of DSRA.
In respect of unsecured loans from related parties, the compliance of the terms of the loan documents such as repayment, interest etc. could not be done due to the aforesaid NCLAT order.

Rs. Mn

Secured Term Loan	Installment due for 31-12-2018 & 31-03-2019	Quarterly installments due FY 2020-2021	Quarterly installments due FY 2021-2022	Quarterly installments due FY 2022-2023	Quarterly installments due FY 2023-2024	Quarterly installments due period ended September 2024
Secured Term Loan - Bank of Baroda	5.00	100.00	220.00	320.00	127.50	85.00
Secured Term Loan - UCO Bank	2.00	40.00	88.00	128.00	51.00	34.00
Secured Term Loan - IIFCL	4.00	80.00	176.00	256.00	102.00	68.00
Secured Term Loan - IFCI	1.90	38.00	83.60	121.60	48.45	32.30
Secured Term Loan - IFIN	1.50	30.00	66.00	96.00	102.00	25.50
Tota Installment due	**14.40**	**288.00**	**633.60**	**921.60**	**430.95**	**244.80**

3) In respect of PSRDCL, in September 2018 Indusind bank adjusted, against the various loans which Indusind bank advanced to various ITNL's subsidiaries, fixed deposit of IL&FS Ltd maintained with Indusind Bank without the permission of IL&FS Ltd. For PSRDCL, Indusind bank adjusted principal amount of Rs 194.11 mn against the fixed deposit. IL&FS Ltd has accepted such adjustment in FY 2021-22 and hence accordingly adjustment was made in the books of accounts of the PSRDCL during FY 2021-22.

Note 14 (1) : for Repayment term and security details of the outstanding non current borrowings (including current maturities) refer table below:

Sl No	Nature of Borrowing	Name of the SPV	Tenure	Total No of Instalments	Frequency as at September 30, 2024 (MLY/QTY/HY)	Amount As at September 30, 2024	Amount As at March 31, 2024	Amount As at March 31, 2023	Amount As at March 31, 2022	Rate of Interest As at September 30, 2024	Rate of Interest As at March 31, 2024	Rate of Interest As at March 31, 2023	Rate of Interest As at March 31, 2022	Security Offered
1	Secured - Debentures													
	- from Others	MBEL	Till 2034	67	Quarterly	3,529.41	3,531.19	3,536.99	3,492.79	10.25%	10.25%	10.25%	8.75%	(a) All movable, tangible and intangible assets other than project assets and their related document of title, receivables, cash and investments created as part of the projects. (b) All the monies lying in Escrow Account into which all the investments in the Project and all Project revenues and insurance proceeds are to be deposited. (c) Assignment of all rights, title, benefits, claims and demands of the Borrowers under Project Agreements i.e. Concession agreement, Substitution agreement, Construction contract and operations contract, etc. (d) Assignment of all rights under project guarantees obtained pursuant to development contract or operations contract, if any relating to the project. (e) First ranking assignment of all contract, documents insurance contracts/insurance Proceeds (Security Trustee to be named as loss payee), clearances and interests of the Borrower. (f) Debt Service Reserve Account and any other accounts required to be created by the Borrower under any Project agreement contract.
2	Secured Term Loans:													
	- from Banks	MBEL	Till 2034	69	Quarterly	3,602.41	3,691.28	3,811.49	3,830.60	8.90% - 9.40%	8.90% - 9.40%	8.90% - 9.00%	8.75%	
	- from Financial Institutions	MBEL	Till 2034	69	Quarterly	7,458.09	7,642.09	7,889.52	7,946.53	10.25%	10.25%	10.25%	8.75%	
3	Unsecured Term Loans:													Not Applicable
	- from related parties	MBEL	Till 2034	56	Quarterly	10,253.57	10,283.57	10,233.56	10,548.20	9.00% - 9.50%	9.00% - 9.50%	9.00%	8.75%	
1	Secured Term Loans:													
	- from Banks	SBHL	Till Dec 2034	54	Quarterly	3,424.20	3,443.99	3,483.58	3,958.61	8.60% - 8.90%	8.60% - 8.90%	8.00% - 8.60%	0.08	a) A first pari-passu charge in favour of the Senior Lenders/Security Trustee for the benefit of the Senior Lenders in a form satisfactory to the Senior Lenders, of all the Borrower's immovable assets to the extent permissible by the Concession Agreement, if any both present and future, save and except Project Assets; b) A first pari-passu charge in favour of Senior Lenders/Security Trustee for the benefit of the Senior Lenders of all the Borrower's moveable properties, both present and future, save and except the Project Assets; c) A first pari-passu charge of all the bank accounts including but not limited to the Escrow Account opened in a designated bank, where all cash flows from the Project shall be deposited, and the sub Account (or any account in substitution thereof) that may be opened in accordance with this Agreement and supplementary Escrow Agreement, or any other Project Agreement, provided such first charge shall only be to the extent permitted as per the waterfall of priorities prescribed under Escrow Agreement and Concession Agreement. d) A first pari-passu charge of on all revenues of the Borrower from the Project or otherwise, Project's book debts, operating cash flow, commissions or revenues of whatsoever nature from the Project. e) a first charge by way of assignment of or creation of Security Interest on all the rights, title, interest, benefits, claims and demand whatsoever of the Borrower under the Concession Agreement and Project Agreement, to the extent covered by or in accordance with Substitution Agreement; f) Non Disposal Undertaking to hold 51% Units of the Borrower for the tenor of the facility, subject to the provisions of Concession Agreement.
2	Unsecured Term Loans:													Not Applicable
	- from Other Parties	SBHL	Ref Note 14(b)	Ref Note 14(b)	Quarterly	-	299.14	299.14	299.14	13.35%	13.35%	13.35%	13.35%	
	- from related parties	SBHL	Till 2038	58	Quarterly	2,359.61	2,061.12	2,062.42	2,078.12	8.00%	8.00%	8.00%	0.08	
1	Secured - Debentures													
	- from Others	HREL	Till April 2027	40	Half yearly	2,079.70	2,379.44	2,940.55	5,835.83	7.50%	0.075	8.00% - 7.50%	8.00%	The Company has issued and allotted 8.50% redeemable, listed, rated, secured non-convertible debentures of a nominal value of INR 1,00,000 each on a private placement basis, aggregating to INR 538.00 crores in accordance with the Terms and Conditions ("Senior Financing") and 8.75% redeemable, listed, rated, secured non-convertible debentures of a nominal value of INR 1,00,000 each on a private placement basis, aggregating to INR 177.00 crores in accordance with the Terms and Conditions ("Junior Financing"). The Debentures have the benefit of Security over the Secured Assets. The Debentures comprising the Senior Debentures are issued as Series A Debentures, comprising 10 sub-series of Debentures numbered Series A1 – Series A10. The Debentures comprising the Junior Financing are issued as Series B Debentures, comprising 10 sub-series of Debentures numbered Series B1 – Series B10. (i) a first ranking pari passu charge over all the Company's tangible moveable properties and assets, both present and future, except the Project Assets; (ii) a first ranking pari passu charge over all bank accounts of the Issuer including without limitation, the Escrow Account (or any account in substitution thereof) and the Debt Service Reserve Account except the Distribution Account, in all funds from time to time deposited therein and in all Permitted Investments or other securities representing all amounts credited to the Escrow Account and the Debt Service Reserve Account and any other bank accounts of the Company established pursuant to the Transaction Documents, including all revenues and receivables (including Fee) of the Issuer from the Project or otherwise, provided that (a) the same shall be applied in accordance with the waterfall of priority of payment as specified in Clause 31 of the Concession Agreement and Clause 4 of the Escrow Agreement, and shall, in no case, exceed beyond the limits set out therein; (b) the charge over the receivables shall be enforceable by the Debenture Holders or on their behalf, only for the purpose of ensuring that the receivables are credited to the Escrow Account that shall be applied in accordance with the waterfall of priority of payment specified in Clause 31 of the Concession Agreement and Clause 4 of the Escrow Agreement; (iii) a first ranking pari passu charge/ assignment on all the intangible assets of the Issuer including but not limited to goodwill, rights, undertakings and uncalled capital both present and future, except the Project Assets (as such term is defined in the Concession Agreement), provided that the charge on uncalled capital shall be subject to Clause 5.3, Clause 7.1(k) and Clause 31 of Concession Agreement; (iv) assignment by way of Security in: (a) all the right, title, interest, benefits, claims and demands whatsoever of the Issuer in the Project Agreements; (b) the right, title and interest of the Issuer in, to and under all the Authorisations; (c) all the right, title, interest, benefits, claims and demands whatsoever of the Issuer in any guarantees, letters of credit, including but not limited to contractor guarantees, liquidated damages and performance bonds that may be provided by any party to the Project Agreements in favour of the Issuer; and (d) all the right, title, interest, benefits, claims and demands whatsoever of the Issuer under all Insurance Contracts and Insurance Proceeds;

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Sl No	Nature of Borrowing	Name of the SPV	Tenure	Total No of Instalments	Frequency as at September 30, 2024 (MLY/QTY/HY)	Amount As at September 30, 2024	Amount As at March 31, 2024	Amount As at March 31, 2023	Amount As at March 31, 2022	Rate of Interest As at September 30, 2024	Rate of Interest As at March 31, 2024	Rate of Interest As at March 31, 2023	Rate of Interest As at March 31, 2022	Security Offered
2	Secured Term Loans:													
	- from related parties	HREL	NA	0	Half yearly	-	-	-	210.04	0	0	0	0	Term loan from holding company is secured by second pari passu charge over all assets other than the project assets
3	Unsecured Term Loans:													Not Applicable
	- from related parties	HREL	Till April 2027	2	Two bullet payment	2,033.36	2,033.36	2,229.86	1,921.07	7.50%	7.50%	0.075	12.70% - 13.25%	
1	Secured - Debentures													
	- from banks	PSRDCL	Till 2032	36	Quarterly	957.27	1,021.04	1,061.70	-	8.00%	8.00%	0.08	-	Secured by hypothecation of: (i) All movable, tangible and intangible assets other than the Project Assets; (ii) All the monies lying in Escrow Account into which all the investments in the Project and all Project revenues, Receivables, Cash and insurance proceeds in Project accounts, Debt Service Reserve Account and any other bank accounts relating to/connected with the Project and all rights, title, interest, benefits, claims and demands whatsoever of the Borrower in, to, under and in respect thereof and all monies including all cash flows and receivables and all proceeds arising from / in connection with the Project and all insurance proceeds payable into the said accounts, which have been/are deposited / credited / lying therein, all investments, assets, instruments and securities which represent amounts in the said accounts, both present and future, provided such charge over the Escrow Account shall only be to the extent permissible as per the water fall of priorities specified in the Concession Agreement and Escrow Agreement. (iii) All contractual rights, assignment rights, applicable permits, title, interest, benefits, claims and demands whatsoever of the Borrowers in, to under and or in respect of all the Project Agreements including agreements, contracts, indemnities, guarantees, and all other documents/writings in respect of the Project and all licenses, security, permits, approvals and consents in respect of the Project which are now executed or hereafter to be executed and delivered by the Borrower, including, without limitation, the right to compel performance thereunder, and to be substituted for the Borrower therein, and to commence and conduct either in the name of the Borrower or in its own name or otherwise any proceedings against any Person in respect of any breach of the Project (iv) All rights under project guarantees obtained pursuant to construction, development contract or operations contract if any relating to the project provided such assignment shall be limited to and to arise to the extent provided under the Substitution Agreement
2	Secured Term Loans:													
	- from Banks	PSRDCL	Till 2032	36	Quarterly	4,232.64	5,059.71	6,256.33	7,366.58	8% / 1yr MCLR	8% / 1yr MCLR	8% + 1yr MCLR	10.95%	
3	Unsecured - Debentures													1) During the current financial year 2023-24, persuant to restructuring of debt as approved by senior lenders, out of unsecured term loan of Rs 1450.12 mn, a part of the unsecured debt aggregating Rs 859.70 mn was converted into unsecured Non-Convertible Debenture (NCD) at 8% pa compounded monthly to be paid proportionaly at the time of the principal being repaid on each payment date so as to maintain 8%. 2) During the current financial year 2023-24, Company's shareholding transferred to Roadstar Infra Investment Trust (RIIT), an InvIT, after due approval from the lenders, authority and NCLT. During thenine month period ended, persuant to restructuring of debt as approved by senior lenders, out of unsecured term loan of Rs 12,056.90 mn, a part of the unsecured debt aggregating Rs 7,130.00 mn was converted into unsecured Non-Convertible Debenture (NCD) at 8% pa compounded monthly to be paid proportionaly at the time of the principal being repaid on each payment date so as to maintain 8%.
	- from Others	PSRDCL	Till 2032	36	Quarterly	909.09	968.72	1,008.33	-	8%	8%	0.08		
	- from related parties	PSRDCL	Till 2036	48	Quarterly	7,916.38	7,622.27	-	-	8%	0.08			
4	Unsecured Term Loans:													
	- from Banks	PSRDCL	Till 2032	36	Quarterly	120.36	144.00	184.62	450.12	8% / 1yr MCLR	8% / 1yr MCLR	8% + 1yr MCLR	11.25%	
	- from Financial Institutions	PSRDCL	Till 2032	36	Quarterly	261.85	313.91	403.76	1,000.00	8% / 1yr MCLR	8% / 1yr MCLR	8% + 1yr MCLR	11.00%	
	- from related parties	PSRDCL	Till 2032	36	Quarterly	3,682.12	3,819.40	10,402.50	10,402.50	8%	0.08	11.25% to 16%	11.25% to 16%	
1	Secured Term Loans:													
	- from Banks	BAEL	Till June 2030	51	Quarterly	6,120.60	6,120.60	6,120.60	6,120.60	12%	12%	12%	12%	(i) Term loans from banks and financial institutions are secured by hypothecation of: (a) All movable, tangible and intangible assets, receivables, cash and investments created as part of the projects. (b) All the monies lying in Escrow Account into which all the Investments in the Project and all Project revenues and insurance proceeds are to be deposited. (c) Assignment of all rights, title, benefits, claims and demands of the Borrowers under Project Agreements i.e. Concession agreement, Substitution agreement, Construction contract and operations contract, etc. (d) Assignment of all rights under project guarantees obtained pursuant to development contract or operations contract, if any relating to the project. (e) First ranking assignment of all contract, documents insurance contracts/insurance Proceeds (Security Trustee to be named as loss payee), clearances and interests of the Borrower. (f) Debt Service Reserve Account and any other accounts required to be created by the Borrower under any Project agreement contract.
	- from Financial Institutions	BAEL	Till June 2030	51	Quarterly	5,158.90	5,158.90	5,158.90	5,158.90	12%	12%	12%	12%	
	- from related parties	BAEL	Till June 2030	51	Quarterly	1,311.70	1,311.70	1,311.70	1,311.70	12%	12%	12%	12%	Term loan from Holding Company is secured by way of second pari passu charge over all assets other than project assets
2	Unsecured Term Loans:													Not Applicable
	- from related parties	BAEL	Commence from March 31, 2031	9	Quarterly	6,813.64	6,813.64	6,813.64	6,813.64	12% - 13%	12% - 13%	12% - 13%	12% - 13%	

15. Trade Payables

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Trade Payables to Micro and Small Enterprises	-	1.89	-	1.22	-	0.15	-	0.22
Trade Payables other than Micro and Small Enterprises								
-To Related Parties	-	4,460.67	-	4,658.98	-	4,762.75	-	4,876.75
-To Others	-	1,891.57	-	2,139.58	-	2,381.45	-	1,703.22
Total	-	6,354.13	-	6,799.78	-	7,144.35	-	6,580.19

15.1 Trade Payables Ageing schedule for the year ended as on September 30, 2024

Particulars	Outstanding for following periods from due date of payment					
	Not Due	Less than 1 year	1 -2 years	2 - 3 years	More than 3 years	Total
(i) MSME	-	1.89	-	-	-	1.89
(ii) Related Parties	13.46	237.35	101.50	50.99	4,057.37	4,460.67
(iii) Others	66.00	1,592.75	173.54	12.16	47.13	1,891.57
(iv) Disputed dues – MSME	-	-	-	-	-	-
(v)Disputed dues - Others	-	-	-	-	-	-
Total (a) + (b)	79.45	1,831.98	275.05	63.15	4,104.50	6,354.13

15.2 Trade Payables Ageing schedule for the year ended as on March 31, 2024

Particulars	Outstanding for following periods from due date of payment					
	Not Due	Less than 1 year	1 -2 years	2 - 3 years	More than 3 years	Total
(i) MSME	-	1.22	-	-	-	1.22
(ii) Related Parties	-	72.24	6.83	11.33	31.04	121.44
(iii) Others	3.06	2,454.15	162.65	20.53	4,036.73	6,677.11
(iv) Disputed dues – MSME	-	-	-	-	-	-
(v)Disputed dues - Others	-	-	-	-	-	-
Total	3.06	2,527.62	169.48	31.86	4,067.77	6,799.78

15.3 Trade Payables Ageing schedule for the year ended as on March 31, 2023

Particulars	Outstanding for following periods from due date of payment					
	Not Due	Less than 1 year	1 -2 years	2 - 3 years	More than 3 years	Total
(i) MSME	-	0.09	-	-	0.06	0.15
(ii) Related Parties	-	35.92	26.34	6.29	14.89	83.43
(iii) Others	3.25	1,056.88	226.89	1,408.17	4,365.56	7,060.77
(iv) Disputed dues – MSME	-	-	-	-	-	-
(v)Disputed dues - Others	-	-	-	-	-	-
Total	3.25	1,092.89	253.23	1,414.46	4,380.51	7,144.35

15.4 Trade Payables Ageing schedule for the year ended as on March 31, 2022

Particulars	Outstanding for following periods from due date of payment					
	Not Due	Less than 1 year	1 -2 years	2 - 3 years	More than 3 years	Total
(i) MSME	0.08	0.08	-	-	0.06	0.22
(ii) Related Parties	6.05	113.76	5.97	3.04	237.48	366.30
(iii) Others	7.62	444.74	49.14	4.63	5,707.55	6,213.67
(iv) Disputed dues – MSME	-	-	-	-	-	-
(v)Disputed dues - Others	-	-	-	-	-	-
Total	13.75	558.58	55.11	7.67	5,945.09	6,580.19

16. Other Financial Liabilities

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Premium payable to authority (refer note (A) below)	6,666.29	4,057.73	5,039.07	3,698.56	5,025.10	3,014.43	4,875.80	2,352.93
Interest Accrued Secured - Others	-	3,708.29	-	111.16	-	1,303.13	-	461.58
Interest accrued Secured - Related Party		-		-				
Interest Accrued Unsecured - Others	-	60.52	-	107.82	-	71.88	-	43.65
Interest accrued Secured and Unsecured - Related Party	-	3,294.52	-	2,790.31		3,221.40		3,416.70
Retention Money Payable - Others	219.17	30.40	195.98	30.40	70.47	49.66	5.37	31.97
Retention Money Payable - Related Party	5.44	9.94	11.79	9.09	-	491.54	-	495.54
Security Deposit	-	4.16	-	0.76	-	0.70	-	-
Penalty Non Fastag Payable to NHAI	-	1.50	-	1.70	-	0.90	-	3.08
Other Liabilities	-	-	-	-	-	0.03	-	-
Total	6,890.90	11,167.06	5,246.84	6,749.80	5,095.57	8,153.67	4,881.17	6,805.45

Footenote (A) : In accordance with the terms of the concession agreement, the Company is obligated to make monthly payments toward additional concession fees (premium) to NHAI. However, since February 2019, the Company was unable to remit these payments as the escrow bankers did not permit the disbursement. As part of an overall settlement with NHAI, the Company has paid the outstanding premium dues along with applicable interest during the current year.

Interest Over due in respect of BAEL:

Footnotes	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Secured Senior Debt - Related parties(IFIN)	428.90	17.47	17.47	17.47
Secured Senior Debt - Others	3,707.23	110.08	110.08	110.08
Unsecured Debt - Related parties (ITNL)	2,233.19	2,233.19	2,233.19	2,233.19
Unsecured Debt - Others	-	-	-	-
Total	6,369.32	2,360.74	2,360.74	2,360.74

In line with NCLAT order further accrual of interest has been stopped. (Ref Note No. 14)

17. Provisions

₹ in Millions

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Provision for Overlay (Refer note 1 below)	1,456.25	1,415.70	962.00	1,506.48	2,117.64	199.65	1,017.23	1,285.92
Other Provisions	-	7.62	-	3.59	-	18.64	-	17.68
Total	1,456.25	1,423.32	962.00	1,510.07	2,117.64	218.29	1,017.23	1,303.60

Note :

1. Provision for Overlay/ Replacement Cost in respect of Service Concession Assets

Provision for Overlay in respect of Toll Roads maintained by the Group under Service Concession Arrangements and classified as Intangible Assets represents contractual obligations to restore an infrastructure facility to a specified level of serviceability in respect of such asset. Estimate of the provision is measured using a number of factors, such as contractual requirements, technology, expert opinions and expected price levels. Because actual cash flows can differ from estimates due to changes in laws, regulations, public expectations, technology, prices and conditions, and can take place many years in the future, the carrying amounts of provision is reviewed at regular intervals and adjusted to take account of such changes.

1a. Movement in Provision for Overlay

Particulars	As at September 30, 2024	Year end March 31, 2024	Year end March 31, 2023	Year end March 31, 2022
Balance at the beginning of the year	2,468.48	2,317.28	2,303.16	2,093.55
Adjustments on account of acquisition of subsidiaries	-	-	-	-
Provision made during the year	465.40	815.51	1,715.62	739.27
Financial Cost on Overlay	117.63	165.79	344.40	255.91
Utilised for the year	-179.57	-830.10	-2,045.89	-785.57
Balance at the end of the year	2,871.94	2,468.48	2,317.29	2,303.16
Provision for Overlay Current	1,415.70	1,506.48	199.65	1,285.92
Provision for Overlay Non Current	1,456.24	962.00	2,117.64	1,017.24

18. Other Current Liabilities

Particulars	As at September 30, 2024		As at March 31, 2024		As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current	Non Current	Current	Non Current	Current
Statutory Dues	-	73.23	-	79.99	-	70.64	-	72.51
Mobilisation Advance Received						-		0.67
Unearned Revenue	-	0.24	-	0.44	-	-	-	-
Other Liabilities	-	-	-	-	-	0.63	-	-
Total	-	73.47	-	80.43	-	71.27	-	73.18

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19. Revenue from Operations

₹ in Millions

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Toll Revenue	4,570.94	9,018.25	8,471.81	6,895.36
Operation and Maintenance Income	53.51	107.13	90.10	73.57
Overlay Income	-	206.00	200.66	80.58
Construction Income	702.63	1,937.87	679.65	-
Finance income	165.64	388.89	498.26	581.61
Total	5,492.72	11,658.14	9,940.48	7,631.12

20. Other Income

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Income from Utility Shifting & COS work	73.43	92.64	118.45	2.26
Interest Income earned on Financial Assets that are not designated as at Fair Value through Profit or Loss				-
- Interest on Bank Deposits	298.71	737.40	654.05	319.33
- Interest on Income Tax Refund / others	-	4.18	2.85	0.46
Gain on disposal of Property, Plant and Equipment	-	0.03	0.03	-
Excess Provisions Written Back*	1,302.06	14.68	1,283.30	18.31
Gain on Mutual Fund Investments	-	-	47.20	-
Miscellaneous Income	0.20	11.41	0.06	-
Modification Gain on Financial Instrument	224.03	349.11	128.12	240.72
Insurance claim received / receivable	11.21	9.49	-	-
Other Gains and losses				
- Net Gain/(Loss) arising on Financial Assets designated as at FVTPL	23.14	43.12	32.01	51.36
Reversal of Expected Credit Loss on Claim receivable from NHAI (Refer footnote to Note 5)	-	-	-	127.32
Reversal of provision for impairment of intangible asset (net) (Refer Note 39(e))	-	-	-	292.79
Total	1,932.78	1,262.06	2,266.07	1,052.55

* It includes, in respect of SBHL, write back of debt liabilities of Rs. 13.81 mn in FY ended March 31, 2023, being the difference between financial claim admitted and liabilities as per the books as on October 15, 2018

21. Cost of Material Consumed & Construction Cost

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Construction contract costs	667.58	1,845.17	641.78	-
Total	667.58	1,845.17	641.78	-

22. Operating Expenses

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Operation and Maintenance Expenses	520.38	949.58	938.47	687.59
Provision for Overlay Expenses	465.40	894.86	1,897.25	812.21
Utility Shifting and COS Expenses	99.31	92.55	83.74	1.17
Penalty on delayed payment of NHAI premium	41.80	-	-	-
Penalty for maintenance	-	-	124.77	-
Toll plaza Expenses	-	-	-	52.62
Total	1,126.89	1,936.99	3,044.23	1,553.59

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23. Employee benefits expense

₹ in Millions

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Salaries and Wages	-	-	-	-
Contribution to provident and other funds	-	-	-	-
Staff welfare Expenses	-	-	-	-
Total	-	-	-	-

Note :- As the SPV Group does not have any employee on its payroll , Costs are recognised based on the amounts charged to the company by the employers of the respective employees based on the period for which the said resources have provided services to the SPV Group. Disclosures required to be made in accordance with Indian Accounting Standards (Ind AS 19) on "Employee Benefits" have not been made as such costs are determined by respective employers and separate figures in respect of such resources on the deputation are not available.

24. Finance Costs

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
(a) Interest Costs				
Interest on Bank, Overdrafts, Loans and Debentures				
- Interest on Loans for fixed period *	5,794.09	3,648.55	3,685.98	2,510.63
- Interest on Debentures *	657.16	1,269.89	1,698.41	309.79
(b) Other Borrowing Costs				
Finance Charges	6.69	19.74	5.54	9.57
Other Interest	961.40	0.06	0.42	0.14
Finance charges on Provision for Overlay	117.63	272.91	344.40	255.91
(d) Expected credit loss on Claims and receivables	-	-	53.88	159.35
(e) NHAI premium unwinding Cost	459.98	1,047.22	938.91	856.69
Total (a+b+c)	7,996.95	6,258.37	6,727.54	4,102.08

* During the financial year 2022-23, in case of MBEL, there has been interest rate reduction with restropective effect from 24-Dec-2021, hence an amount of Rs. 52.19 million has been reversed from financial year 2022-23 interest cost.

In view of imposition of moratorium by NCLAT vide its order dated 15th Oct 2018 , the SPV Group have not made provision for interest on funds borrowed from 15th Oct 2018 to 31st March 2021 for SBHL, PSRDCL, HREL and TRDCL. In case of SBHL, interest cost accounted in FY 2021-22. In case of HREL,TRDCL and PSRDCL interest cost accounted effective April 1, 2021 in FY 2022-23 .

In respect of BAEL, in view of imposition of moratorium by NCLAT vide its order dated 15th Oct 2018, reaffirmed vide its order dated 12th March 2020 , the company has not provided for interest from October 16, 2018 to 31 March, 2024 which approximates INR 13086.74 Million, on funds borrowed.

25. Depreciation and Amortisation Expense

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Depreciation of Property, Plant and Equipment (refer Note 2)	1.00	1.91	2.56	0.54
Amortisation of Intangible Assets (refer Note 3)	1,488.17	2,901.09	2,607.14	1,958.17
Total	1,489.17	2,903.00	2,609.70	1,958.71

26. Other Expenses

₹ in Millions

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Legal and Consultation Fees	51.39	87.01	77.13	85.84
Deputation Cost	3.10	6.21	8.24	12.35
Travelling and Conveyance	1.04	-	0.02	0.03
Rent	0.53	-	0.09	-
Rates and Taxes	12.12	6.31	2.23	0.42
Repairs and Maintenance	0.29	1.70	0.35	2.01
Bank commission/ Charges	2.42	5.58	5.84	11.41
Insurance	3.88	5.53	0.10	0.17
Printing and Stationery	-	-	0.00	0.01
Directors' Fees	1.97	4.68	2.47	-
Payment to Auditors (Refer Note 26.1)	3.89	6.91	4.00	3.46
Corporate Social Responsibility Exp. (Refer Note 26.2)	8.10	9.25	31.91	7.27
Damages and Negative Change of Scope	3.73	0.53	-	31.08
Advertising Expenses	0.26	-	0.18	0.55
Security Trustee Fee	0.15	0.30	0.62	0.30
Provision for Doubtful and bad debts	1,325.05	11.92	108.06	2.64
Modification Loss on Financial Asset	1,526.50	22.84	403.25	-
Miscellaneous Expenses	1.50	4.41	3.29	3.74
Comminication Expenses	-	0.32	-	-
Total	**2,945.92**	**173.50**	**647.78**	**161.28**

26.1 Payments to Auditors

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
a) For Audit	1.45	2.28	2.40	2.28
b) For Taxation Matters	0.25	0.53	0.48	0.60
c) For Other Services	1.29	3.09	0.88	0.38
d) For Reimbursement of Expenses	0.19	0.35	0.10	0.18
e) Goods and Services tax on above	0.71	0.66	0.14	0.02
Total	**3.89**	**6.91**	**4.00**	**3.46**

26.2 Expenditure incurred for Corporate Social Responsibility

₹ in Millions

In terms of Section 135 of the Companies Act, 2013, a Corporate Social Responsibility (CSR) Committee has been formed by the Group The areas for CSR activities as per the CSR policy are (i) Promotion of education, (ii) promoting gender equality and empowering women, (iii) reducing child mortality and improving maternal health, (iv) ensuring environmental sustainability, (v) employment enhancing vocational skills, (vi) social business projects, (vii) contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government or the State Governments for socioeconomic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women and (viii) such other matters as may be prescribed.

In line with Guidance Note on Accounting for Expenditure on Corporate Social Responsibility Activities, issued by the Institute of Chartered Accountants of India, the disclosure of the CSR expenditure during the year, is as under:

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
(a) Gross amount required to be spent by the Group during the year:	**8.10**	**9.25**	**31.91**	**7.27**
(b) Amount of Expenditure incurred for Previous year	5.03	6.67	2.17	-
(c) Amount of Expenditure incurred for Current year	-	-	8.95	-
(d) Total of previous years Shortfall	-	-	-	-
(e) Shortfall	29.31	-	20.79	7.27
Total	**29.31**	**6.67**	**31.91**	**7.27**

As per section 135(6) of the Companies Act, 2013, the unspent amount is required to be deposited in a designated bank account within 6 months of the end of the financial year. In case of SBHL, the Board of the SBHL has since passed a resolution to deposit the amount with the approved funds within stipulated time in accordance with Schedule VII of the Companies Act,2013 and Companies (Corporate Social Responsibility Policy) Rules,2014 ("the Rules") before December 31, 2022. Though SBHL has processed the payment within due date, lenders have not released the said payment, which is beyond the control of SBHL.

In respect of HREL, the Company has spent Rs. 1.64 mn during the current financial year as final payment. As a part of the agreement with IIT Bombay, Company is required make the donation over the period of three years.
Since the company does not have profit as computed under section 198 of the Company's Act, no corporate social responsibility expenditure is applicable for current year.

In resepct of BAEL, As per section 135(6) of the Companies Act, 2013, the unspent amount is required to be deposited in a designated fund defined under schedule VII within 6 months of the end of the FY. In view of moratorium granted by NCLAT (refer note 35) and Company was required to spend only those expenses which are required to maintain the going concern status and hence, Company was unable to release funds towards CSR amounting to Rs. 26.24 mn till the previous year.
During the previous year, the Company decided to undertake Research Projects on Pavements with Indian Institute of Technology, Bombay. The Company has spent Rs. Nil (Previous year: Rs. 9.25 mn) during the current financial period for the said Project and donated Rs. 5.03 mn of previous years to PM Cares Fund. As a part of the said projects, Company is required make the donation over the period of three years. Hence, the balance amount will be paid in the ensuing financial period/year.

In resepct of PSRDCL, in accordance with Section 135(6) of the Companies Act, 2013, the Company is required to deposit the unspent amount allocated for Corporate Social Responsibility (CSR) in a designated bank account within 6 months from the end of the financial year (FY). However, due to the moratorium granted by NCLAT and the need to prioritize expenses essential for maintaining the going concern status, the Company was unable to release funds towards CSR activities during the specified period. However, following the transfer of shareholding of the Company to the InvIT after March 31, 2024. CSR amount of Rs 17.63 mn has been paid to Clean Ganga Fund on 30th March 2024.

27. Tax Expense

27.1 Income Tax recognised in Profit or Loss

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Current Tax				
In respect of the current year	-	-	0.00	-
Adjustment of Tax pertaining to previous year	-	-	(369.67)	-
	-	-	(369.67)	-
Deferred Tax				
In respect of the current year	57.38	(88.10)	36.71	(87.86)
	57.38	(88.10)	36.71	(87.86)
Total	57.38	(88.10)	(332.96)	(87.86)

In case of HREL & PSRDCL:
i) In view of change in Income Tax Act, for then existing clause (iih) of Explanation 1 to sub-section (2) of section 115JB by the Finance (No. 2) Act, 2019, w.e.f. 1-4-2020, SPV Group does not have any MAT Tax liability
ii) The Deferred Tax Assets/Liability has not been recognised as the same if provided would be reversed in the tax holiday period

27.2 The income Tax Expense for the year can be reconciled to the accounting profit /(loss) as follows:

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Accounting (loss) before Income Tax	(6801.02)	(196.82)	(1464.50)	908.04
Income Tax Expense calculated at 27.82%	(1892.04)	(54.75)	(407.42)	252.62
Tax impact due to Subsidiries Losses after Elimination of Valuation and Interest Cost (Net)	2085.31	102.53	580.01	(204.59)
Impact of exemption u/s 10(23FC) of the Income Tax Act, 1961 available to the Trust	(135.88)	(135.88)	(135.88)	(135.88)
Provision for Impairment (Provision for doubtful advances)	0.00	0.00	0.00	0.00
Adjustments recognised in the current year in relation to the Current Tax of prior years	-	0.00	-369.67	-
Income Tax Expense reported in the Statement of Profit and Loss	57.38	(88.10)	(332.96)	(87.86)
Control Total	57.38	(88.10)	(332.96)	(87.86)

28. Earnings per unit

Up to September 30, 2024, the Trust acquired five SPVs, against which 38,48,00,000 units were issued in exchange for the assignment of debt to the respective creditors and the purchase of shares from the respective shareholders since the financial year 2021-22.

Post September 30, 2024, the Trust acquired an additional SPV, BAEL, and issued 6,76,85,705 units as partial consideration for the assignment of debt and settlement of payables. Further, post September 30, 2024, the Trust executed a Deed of Assignment and acquired a loan of Rs. 291.91 million in SBHL, against which 29,91,438 units were issued. Accordingly, in total, 45,54,77,143 units have been considered for the calculation of Earnings per Unit (EPU).

Particulars	Unit	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit for the year attributable to Unit Holders (A)	₹ in Millions	(6,818.98)	(26.74)	(1,048.10)	930.30
No of Units (B)	Number	45,54,77,143	45,54,77,143	45,54,77,143	45,54,77,143
Nominal value per Unit (C)	₹	100.00	100.00	100.00	100.00
Basic earnings per Unit (A/B)	₹	(14.97)	(0.06)	(2.30)	2.04
Diluted earnings per Unit (A/B)	₹	**(14.97)**	**(0.06)**	**(2.30)**	**2.04**

29.1. Categories of Financial Instruments

₹ in Millions

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
Financial Assets				
Investment	658.57	635.43	592.31	1,579.61
Cash and Bank Balances	9,533.62	10,604.31	14,182.93	13,585.16
Trade Receivable	37.00	52.29	142.81	26.32
Other Financial Assets measured at Amortised cost	11,000.21	11,476.10	10,091.01	11,956.06
Financial liabilities				
Borrowings (including Interest Accrued)	78,905.01	76,356.16	79,422.40	82,283.67
Trade Payables	6,352.24	6,798.56	7,144.20	6,579.97
Other Financial Liabilities	11,358.83	8,847.34	11,874.23	11,181.40

Foote note: The Carrying amount of current financial assets and current trade and other trade payables measured at amortised cost are considered to be same as their fair valuse, due to their short term in nature.
The Carrying value of Rupee Term Loan and Loan from Related Party are approximately at fair value as the instruments are at prevailing market rate.

29.2. Financial Risk Management Objectives

The SPV Group's fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.
The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.
In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

29.2 (a) Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.
There has been no change to the SPV Group's exposure to market risks or the manner in which these risks are managed and measured.

29.2 (b) Credit Risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The SPV Group is exposed to credit risk from its investing activities including deposits with banks and other financial instruments. As at March 31, 2023, the credit risk is considered low since low transactions of the SPV Group with external parties.

29.2 (c) Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The SPV SPV Group exposure to the risk of changes in market interest rates relates primarily to the SPV SPV Group long-term debt obligations with floating interest rates.
The SPV SPV Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings. The interest rate risk exposure is mainly from changes in fixed and floating interest rates. The interest rate are disclosed in the respective notes to the financial statement of the SPV SPV Group.

29.2 (d) Liquidity Risk

Liquidity risk arises from the SPV Group's inability to meet its cash flow commitments on time. SPV Group's objective is to, at all times, maintain optimum level of liquidity to meet its cash and collateral requirements. The SPV Group closely monitors its liquidity position and deploys a disciplined cash management system. SPV Group's liquidity is managed centrally with operating units forecasting their cash and liquidity requirements. Treasury pools the cash surplus from across the different operating units and then arranges to either fund the net deficit or invest the net surplus in the market.

The SPV Group manages liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities. The endeavour of The SPV Group is to constantly improve the ratio of short term to long term maturity profile so as to minimise the risk of having to refinance the borrowing at regular short intervals.

29.2.(d) (1) Liquidity and interest risk tables

The following tables detail the SPV Group's remaining contractual maturity for its non-derivative financial liabilities with agreed repayment periods. The tables have been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the SPV Group can be required to pay. The tables include both interest and principal cash flows. To the extent that interest flows are floating rate, the undiscounted amount is derived from interest rate curves at the end of the reporting period. The contractual maturity is based on the earliest date on which the SPV Group may be required to pay.

Particulars	As on September 30, 2024			As on March 31, 2024		
	Non-Interest Bearing	Variable Interest Rate Instruments	Fixed Interest Rate Instruments	Non-Interest Bearing	Variable Interest Rate Instruments	Fixed Interest Rate Instruments
Upto 1 year	574.17	15,035.22	10,109.90	776.48	14,736.68	9,797.74
1-3 years	5,822.54	15,517.08	6,621.60	1,844.90	15,726.84	4,563.77
3-5 years	-	18,226.89	4,968.16	-	18,083.05	7,786.57
More than 5 years	-	28,642.26	32,147.16	-	31,308.19	32,425.13
Total	6,396.71	77,421.45	53,846.82	2,621.38	79,854.76	54,573.21

Particulars	As on March 31, 2023			As on March 31, 2022		
	Non-Interest Bearing	Variable Interest Rate Instruments	Fixed Interest Rate Instruments	Non-Interest Bearing	Variable Interest Rate Instruments	Fixed Interest Rate Instruments
Upto 1 year	1,711.60	14,703.49	11,371.39	1,650.10	15,797.94	16,734.35
1-3 years	6,009.27	12,956.99	6,266.75	5,484.59	3,424.91	20,326.91
3-5 years	-	15,709.33	10,135.95	-	3,823.55	10,853.72
More than 5 years	-	36,281.74	35,527.20	1,663.54	12,700.98	45,909.55
Total	7,720.87	79,651.55	63,301.29	8,798.23	35,747.38	93,824.53

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The amounts included above for financial guarantee contracts are the maximum amounts the SPV Group could be forced to settle under the arrangement for the full guaranteed amount if that amount is claimed by the counterparty to the guarantee. Based on expectations at the end of the reporting period, the SPV Group considers that it is more likely than not that such an amount will not be payable under the arrangement. However, this estimate is subject to change depending on the probability of the counterparty claiming under the guarantee which is a function of the likelihood that the financial receivables held by the counterparty which are guaranteed suffer credit losses.

₹ in Millions

Particulars	As on September 30, 2024			As on March 31, 2024		
	Non-interest bearing	Variable interest rate instruments	Fixed interest rate instruments	Non-interest bearing	Variable interest rate instruments	Fixed interest rate instruments
Upto 1 year	6,094.62	-	2,593.73	6,395.37	-	3,473.59
1-3 years	8,580.72	-	2,159.26	9,017.13	-	2,050.94
3-5 years	-	-	-372.09	-	-	211.25
More than 5 years	152.63	-	-	152.15	-	-
Total	14,827.97	-	4,380.90	15,564.65	-	5,735.78

Particulars	As on March 31, 2023			As on March 31, 2022		
	Non-interest bearing	Variable interest rate instruments	Fixed interest rate instruments	Non-interest bearing	Variable interest rate instruments	Fixed interest rate instruments
Upto 1 year	875.26	-	1,092.84	188.71	-	2,260.63
1-3 years	8,716.06	-	1,808.59	6,937.64	-	2,546.99
3-5 years	-	-	1,331.63	-	-	834.39
More than 5 years	5.05	-	-	4.34	-	1,568.91
Total	9,596.37	-	4,233.06	7,130.69	-	7,210.92

The amounts included above for variable interest rate instruments for both non-derivative financial assets and liabilities is subject to change if changes in variable interest rates differ to those estimates of interest rates determined at the end of the reporting period.

The following table details the SPV Group's liquidity analysis for its derivative financial instruments. The table has been drawn up based on the undiscounted contractual net cash inflows and outflows on derivative instruments that settle on a net basis, and the undiscounted gross inflows and outflows on those derivatives that require gross settlement. When the amount payable or receivable is not fixed, the amount disclosed has been determined by reference to the projected interest rates as illustrated by the yield curves at the end of the reporting period.

Particulars	As on September 30, 2024		As on March 31, 2024	
	Interest rate swaps	Cross Currency Swaps	Interest rate swaps	Cross Currency Swaps
Upto 1 year 1-3 years 3-5 years More than 5 years	NIL			

29.2 (e) Foreign currency risk management

The SPV SPV Group does not have any foreign currency exposure.

29.2 (f) Interest rate sensitivity analysis

The SPV Group manages interest rate risk by having a balanced portfolio of fixed and variable rate of interest on loans and borrowings.
The sensitivity analyses below have been determined based on the exposure to interest rates for both derivatives and non-derivative instruments at the end of the reporting period. For floating rate liabilities, the analysis is prepared assuming the amount of the liability outstanding at the end of the reporting period was outstanding for the whole year. A 50 basis point increase or decrease represents management's assessment of the reasonably possible change in interest rates.

If interest rates had been 50 basis points higher/lower and all other variables were held constant, the SPV Group's:

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
0.50% Increase in basis points- INR				
Effect on profit before tax- INR	(361.12)	(368.65)	(376.05)	(393.72)
0.50% Decrease in basis points- INR				
Effect on profit before tax- INR	361.12	368.65	376.05	393.72

29.2 (g) Other price risks

The SPV Group is exposed to equity price risks arising from equity investments which is not material.

30. Capital Management ₹ in Millions

Capital includes amount attributable to the Unit holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Group may adjust the dividend payment to unitholders, return capital to unitholders or issue new units.
In case of HREL, the company manages its capital to ensure that it will be able to continue as going concern while maximising the return to shareholders and also complying with the ratios stipulated in the loan agreements through the optimisation of debt and equity balance .
The Group endeavours to maintain sufficient levels of working capital, current assets, and current liabilities which helps the company to meet its expense obligations while also maintaining sufficient cash flow

In resepct of BAEL, National Company Law Appellate Tribunal ("NCLAT") had passed an order on October 15, 2018 ("Interim Order") in Company Appeal (AT) 346 of 2018, imposing moratorium on the creditors of IL&FS (Ultimate Parent Company) and its 348 group companies, which includes the Company. Further, NCLAT vide its order dated February 11, 2019 has also classified the Company under the "Red Category" based on a 12 month cash flow solvency test. As a result of the foregoing, the Company's ability to raise funds has been substantially impaired, with normal business operations being substantially curtailed.
The IL&FS (Ultimate Parent Company) Board had been working on a resolution plan, with a view to enable value preservation for stakeholders of IL&FS (ultimate Parent Company) Group. The resolution plan, inter alia, involved sale of assets/ businesses/ companies owned by IL&FS (Parent of Joint Venture) Group. The framework and the strategies for effective capital management, thus, will be formulated post the implementation of the Resolution Plan. Similarly, the financial risk profile and the strategies for mitigation of such risks will be formulated post the implementation of the Resolution Plan.
Presently, the Capital and Financial Management activities are restricted to make only those payments necessary to maintain and preserve the going concern status.
The capital structure of the company consists of net debt (outside borrowings offset by cash and bank balances and subordinated debts from Sponsors and including accrued interest) and total equity of the Company (comprising issued capital, reserves, retained earnings and interest free debts from Sponsors).
The networth of the Company is negative, standing at Rs. (17,378.18) millions as at September 30, 2024. On the basis of cashflow projections of the next 12 months, the management is of the view that the going concern status of the company is not affected.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

30.1.1 Gearing Ratio

The Gearing Ratio at end of the reporting period was as follows.

Particulars	As on September 30, 2024	As on March 31, 2024	As on March 31, 2023	As on March 31, 2022
Borrowings (refer note 14)	71,841.68	73,346.87	74,825.98	78,361.74
Trade and Other Payables (refer note 15)	6,354.13	6,799.79	7,144.35	6,580.19
Other Financial Liabilities (refer note 16)	18,057.95	11,996.64	13,249.24	11,686.63
Less: Cash and Bank Balances	(9,533.62)	(10,604.31)	(14,182.93)	(13,585.16)
Net Debt (A)	**86,720.14**	**81,538.99**	**81,036.64**	**83,043.41**
Share Capital	8,801.97	8,801.97	8,801.97	8,801.97
Total Equity (B)	**8,801.97**	**8,801.97**	**8,801.97**	**8,801.97**
Gearing ratio (A / B)	**9.85**	**9.26**	**9.21**	**9.43**

Footnote:
(i) Debt is defined as long- and short-term borrowings including interest accrued (excluding derivative), as described in notes 14

(ii) Equity includes all capital and reserves of the Company that are managed as capital.

In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

31. Commitments for Expenditure

₹ in Millions

Particulars	Year ended September 30, 2024	Year ended March 31, 2024	Year ended March 31, 2023	Year ended March 31, 2022
(a) Estimated amount of contracts remaining to be executed on Capital Account and not provided for	1,848.20	2,347.56	3,826.99	3,608.68
(b) Estimated amount of contracts remaining to be executed on Operation and Maintenance and Overlay Expenses and not provided for @	15,859.60	15,614.83	15,126.14	14,538.98
(c) Estimated amount of contracts to be executed on security trusteeship fees (upto the end of repayment of last instalment of term loan)	-	-	4.50	1.00
Total	**17,707.80**	**17,962.39**	**18,957.63**	**18,148.66**

Note - @ Includes Operation & Maintenance Cost, which has been arrived at as per the agreement to programme management services , implementation services , construction supervision services cum O&M contract signed between SPV & EMSL.

In respect of BAEL, lenders consortium meeting held on dated March 16, 2023, approved revised total cost of Rs. 5339.30 in Mn for balance work to complete the project.

32. Contingent Liabilities

₹ in Millions

Particulars	Year ended September 30, 2024	Year ended March 31, 2024	Year ended March 31, 2023	Year ended March 31, 2022
(a) Claims against the group not acknowledged as debt	41.54	57.10	48.09	15.56
(b) Other money for which the group is contingently liable				
- Income Tax demands contested by the group	2,825.73	2,781.69	2,390.17	31.66
- VAT /WCT/GST demands contested by the group #	9.07	9.07	81.27	81.27
- Penalty for 'Delay in Filing Tax Audit Report for AY 2019-20	0.15	0.15	0.15	0.15
- Penalty recommended by IE	81.39	70.73	60.40	-
- Interest on non payment of NHAI Premium	-	726.32	423.08	254.19
- Claims by NHAI	290.46	290.46	290.46	423.06
- Other Tax Liability	0.05	0.05	-	-
Sub Total	**3,206.85**	**3,878.47**	**3,245.53**	**790.33**
Following financial implications have been identified by SBHL, which are as follows (not included above)				
a) Penalty for non appointment of Company Secretary u/s. 203(5) of Companies Act,2013	0.50	0.50	0.50	0.50
b) Penalty for non appointment of Chief Financial Officer u/s. 203(5) of Companies Act,2013	0.50	0.50	0.50	-
c) Not convened the Annual general Meeting for the financial year 2018-2019 within the prescribed time limit, signing of financial u/s 134(8), non-filing of INC 22, DIR-12 and DPT-3 with ROC etc	2.22	2.22	2.22	2.22
d) Penalty for non-compliance of section 135 (5) of Companies Act,2013	5.33	5.33	5.33	-
e) Stamp duty demand order by The Collector of Stamps, Moradabad for the concession agreement dated 19.02.2010 executed between MBEL and NHAI*	253.40	253.40	-	-
Sub Total	**261.95**	**261.95**	**8.55**	**2.72**
As per the completion certificate provided by the Authority company was required to complete certain work as per punch list attached with "Provisional Completion Certificate ". Authority has proposed to levy penalty for non completion of certain items in the punch list.	13.08	13.08	13.08	59.12
Penalty by Independent Engineer for operation and maintenance	Note 1	Note 1	Note 1	
Sub Total	**13.08**	**13.08**	**13.08**	**59.12**
Grand Total	**3,523.41**	**4,210.60**	**3,315.26**	**867.74**

Note:1 In SBHL, the IE has proposed to levy penalty as per Concession Agreement for certain operation and maintenance (O&M) non compliances (Plantation etc) amounting to Rs. 73714/- per day from November 2018 till compliance of these O&M issues. Group SPV - Sikar Bikaner Highway Limited has entered into an O&M Agreement with contractor, where in, penalty, if any is levied by authority for maintenance deficiency the same will be recovered from the Contractor

Note 2: SBHL received notice under section 37 of Rajasthan Stamp Act for stamp duty demand. During the current financial year 2023-24, Company settled the liability under the amnesty Scheme.

Note 3:The IE has proposed to levy penalty as per Concession Agreement for certain operation and maintenance (O&M) non compliances. BAEL has contested the same. Further, BAEL has entered into an O&M Agreement with contractor, where in, penalty, if any levied by authority for maintenance deficiency shall be recovered from the Contractor. Hence, the BAEL does not anticipate any costs towards the same.

BAEL has filed appeal against the order by paying pre-deposit of 10% of Tax amount.

Note 4: In case of PSRDCL, the debt restructuring proposal is approved by senior lenders, but Bank of Baroda includes provisions for right to recompense. The company has applied to NCLAT, contesting lenders' entitlement to interest during moratorium and recompense rights.

*Note 5: In case of MBEL, with reference to the Hon'ble Allahabad High Court Order dated 05 February 2024, the company has deposited demand draft No. 184364 dated 13 February 2024 of Rs. 15 Crore with the State Government.

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Roadstar Infra Investment Trust

33 Name of the Related Parties and Description of Relationship:

The name of the related parties and nature of relationship are as identified by the management with reference to the Trust and its proposed subsidiaries which are considered for the Special Purpose Combined Financial Statements pursuant to SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and are disclosed only with whom the Proposed Trust Group had transactions during the reported years.

a) **List of related parties**

Roadstar Infra Private Limited	Sponsor
Roadstar Investment Managers Limited	Investment Manager
Axis Trustee Services Limited	Trustee

b) Immediate Holding Company (SPV wise)

IL&FS Transportation Networks Limited	MBEL (upto 23 December 2021), SBHL (upto 21 March 2022), HREL (upto December 15, 2022), PSRDCL (upto 15 May 2023) and BAEL
Roadstar Infra Investment Trust	MBEL (w.e.f. 24 December 2021), SBHL (w.e.f. 22 March 2022), HREL (w.e.f. December 16, 2022), and PSRDCL (w.e.f. 16 May 2023)

c) Entities having Significant Influence over TRDCL

IL&FS Transportation Networks Limited	upto December 18, 2022
Roadstar Infra Investment Trust	w.e.f. December 19, 2022

d) Other related parties with whom the SPV Group have transactions during the reported years/period

Elsamex Maintenance Services Limited	Fellow subsidiary / Project Manager to the Trust
Infrastructure Leasing & Financial Services Lir	Ultimate Holding Company
IL&FS Financial Services Limited	Fellow Subsidiary
Elsamex Maintenance Services Limited	Fellow Subsidiary
Sabarmati Capital One Limited	Fellow Subsidiary
Bhopal E-Governance Limited	Fellow Subsidiary
IL&FS Cluster Development Initiative Limited	Fellow Subsidiary
IL&FS Airport Limited	Fellow Subsidiary
Sabarmati Capital One Limited	Fellow Subsidiary
ITNL Road Infrastructure Development Comp	Fellow Subsidiary
Punj Lloyd Limited	Entity having significant influence
Unique Waste Processing Company Limited	Fellow Subsidiary

Key Managerial Personnel (SPV wise)

MBEL:

Name	KMP	with effect from	upto
Ms. Jyotsna Matondkar	Nominee Director	28-12-2021	till date
Mr. Sachin Joshi	Nominee Director	02-06-2023	01-03-2024
Mr. LVR Kolath	Independent Director	26-02-2022	till date
Mr. Sunil Patel	Independent Director	13-01-2023	till date
Mr. Danny Samuel	Nominee Director	28-12-2021	04-10-2023
Mr. Krishna Ghag	Nominee Director	11-01-2010	28-12-2021
Ms. Shaivali Parekh	Nominee Director	16-10-2014	28-12-2021
Mr. Rajiv Dubey	Nominee Director	24-08-2016	30-04-2021
Mr. Parag Phanse	Nominee Director	19-03-2019	28-12-2021
Mr. Ravi Praveen Kumar	Nominee Director	20-12-2023	till date
Mr. Milind Gandhi	Nominee Director	04-03-2024	till date
Mr. Praveen Kumar	Manager	22-10-2019	till date
Mr. Nilesh Korde	CFO	30-03-2021	30-08-2022
Ms. Dipika Shinde	Company Secretary	27-05-2021	29-Dec-23
Mr Tejas Patil	Company Secretary	05-03-2024	till date
Mr. Vijay Kini	Nominee Director	28-12-2021	11-05-2023
Mr. Sanjay Rane	Independent Director	13-01-2022	10-10-2022
Mr. Rony Gonsalves	CFO	19-04-2023	Till date

SBHL:

Name	KMP	with effect from	upto
Mr. Ajay Menon	Nominee Director	19-03-2019	22-03-2022
Mr. Rajnish Saxena	Nominee Director	18-02-2020	22-03-2022
Mr. Sachin Joshi	Nominee Director	23-07-2019	07-07-2020
Mr. Mohit Bhasin	Nominee Director	24-08-2020	22-03-2022
Mr. Manish Satnaliwala	Nominee Director	22-03-2022	06-03-2023
Ms. Jyotsna Matondkar	Nominee Director	22-03-2022	Till Date
Mr. Ashutosh Sharma	Nominee Director	22-03-2022	10-03-2023
Mr. LVR Kolath	Independent Director	29-03-2022	Till Date
Mr. Sanjay Rane	Independent Director	29-03-2022	10-10-2022
Mr. Sunil Patel	Independent Director	12-01-2023	Till Date
Mr. Vijay Kini	Nominee Director	17-03-2023	11-05-2023
Mr. Sachin Joshi	Nominee Director	17-03-2023	29.02.204
Mr. Danny Samuel	Nominee Director	02-06-2023	Till Date
Mr. Ajay Vaidyanth	Nominee Director	02.03.2024	Till Date
Ms. Shweta Chavan	Company Secretary	27-05-2021	28-02-2022
Mr. Yogendra Dhandhadia	Chief Financial Officer	30-03-2021	13-05-2022
Mr. Arshad Shaikh	Company Secretary	22-03-2022	Till Date
Mr. Anil Kumar	Manager	16-05-2022	15-12-2023
Mr. Tushar Patil	Chief Financial Officer	21-01-2023	Till Date

HREL:

Name	KMP	with effect from	upto
Ms. Jyotsna Matondkar	Nominee Director	20-12-2022	till date
Mr. Sachin Joshi	Nominee Director	20-12-2022	29-Feb-24
Mr. Danny Samuel	Nominee Director	13-06-2023	29-Feb-24
Mr. L VR Kolath	Independent Director	13-02-2023	till date
Mr. Sunil Patel	Independent Director	13-02-2023	till date
Mr. Ravi Praveen Kumar	Nominee Director	04-03-2024	till date
Mr. Milind Gandhi	Nominee Director	04-03-2024	till date
Ms. Priyanka Upadhyay	Company Secretary	12-04-2022	31-03-2023
Ms. Madhura Kale	Company Secretary	28-06-2023	till date
Mr. Vicky Masani	Chief Financial Officer	30-03-2021	till date
Mr. Amit Prakash	Manager	17-05-2022	till date
Mr. Kiran Pal Adwal	Manager	22-10-2019	10-05-2022
Mr. Vijay Kini	Nominee Director	21-01-2015	11-05-2023
Mr. Parag Phanse	Nominee Director	19-03-2019	20-12-2022
Mr. Krishna Ghag	Nominee Director	10-10-2022	20-12-2022
Mr. Mohit Bhasin	Nominee Director	12-09-2020	01-10-2022
Mr. Sachin Joshi	Nominee Director	23-07-2019	07-07-2020

PSRDCL:

Name	KMP	with effect from	upto
Mr. Krishna Ghag	Nominee Director	19-03-2019	18-05-2023
Mr. Kazim Raza Khan	Nominee Director	19-03-2019	18-05-2023
Ms. Shavali Parekh	Nominee Director	19-03-2019	07-03-2022
Mr. Sachin Joshi	Nominee Director	24-03-2022	Till Date
Mr. Danny Samuel	Nominee Director	18-05-2023	Till Date
Ms. Jyotsna Matondkar	Nominee Director	18-05-2023	Till Date
Mr. Chandrashekar S. Payannavar	Independent Director	31-07-2023	Till Date
Mr. Sunil Patel	Independent Director	31-07-2023	Till Date
Mr. Mukesh Ranga	Company Secretary	22-07-2015	11-02-2022
Mr. Ravikumar Praveen	Manager	10-05-2017	09-05-2023
Ms. Disha Thakkar	Company Secretary	13-04-2022	30-09-2022
Mr. Dinesh Shahi	Manager	05-09-2022	Till Date
Mr. Vilas Ravanang	Chief Financial Officer	21-12-2023	Till Date
Ms. Sambhavna Verhani	Company Secretary	19-04-2023	19-07-2023
Ms. Vrushli Darji	Company Secretary	21-12-2023	Till Date

BAEL

Name	KMP	with effect from	upto
Mr. Ajay Menon	Nominee Director	17-07-2013	28-03-2024
Rajnish Saxena	Nominee Director	19-03-2019	till date
Mr Sachin Joshi	Nominee Director	24-03-2022	till date
Ms. Shaivali Parekh	Nominee Director	19-03-2019	07-03-2022
Mr. Danny Samuel	Nominee Director	28-03-2024	till date
Mr. Saikat Kar	Manager	18-09-2023	till date
Mr. Rakesh Thakur	Manager	22-09-2022	08-01-2023
Mr. Malay Kumar Datta	Manager	22-10-2019	03-08-2022
Riya Devulkar	Company Secretary	09-08-2021	till date
Amit Kumar Agarwal	Chief Financial Officer	11-10-2021	till date
Sunil Venkati Kondikopulla	Chief Financial Officer	30-03-2021	12-07-2021

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

33 (a) Balances and Transactions with Above Mentioned Related Parties for the period ended September 30, 2024

₹ in Millions

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	UPWL	Key Management personnel and relatives	Total
Balances:								
Equity share capital	6,367.10	-	2,435.00	-	-	-	-	8,802.10
Sub Debts- Long term Borrowings	4,392.98	-	6,693.50	1,311.70	-	-	-	12,398.18
Term loans	13,935.69	-	120.14		-	-	-	14,055.83
Trade Payables	-	-	4,026.22	-	416.66	-	-	4,442.89
Interest accrued but not due	501.20	-	2,233.19	17.47		-	-	2,751.87
Retention money payable	-	-	-	-	15.24	-	-	15.24
Reimbursement of Expenses - Payable	-	-	-	4.95	-	-	-	4.95
Professional Fees - Payable (ILFS)	-	12.84	-	-	-	-	-	12.84
Debentures - Non Convertible	7,916.38	-	-	-	-	-	-	7,916.38
Advanced received	1.47	-	-	-	16.00	-	-	17.47

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	UPWL	Key Management personnel and relatives	Total
Transactions:								
Deputation Cost	-	-	2.63	-	-	-	-	2.63
Construction Cost	-	-	-	-	32.07	-	-	32.07
Utility Shifting Works	-	-	-	-	28.03	-	-	28.03
Operation and maintenance	-	-	-	-	373.24	-	-	373.24
Overlay Expenses	-	-	-	-	55.46	-	-	55.46
Project management fees (Tolling)	-	-	-	-	18.28	-	-	18.28
Insurance	-	-	-	-	8.76	-	-	8.76
Interest Loan	803.74	-	-	-	-	-	-	803.74
Interest NCDs	309.86	-	-	-	-	-	-	309.86
Loan Repaid	177.93	-	-	-	-	-	-	177.93
Unsecured NCD Repaid	14.26	-	-	-	-	-	-	14.26
Supervision Charges	-	-	-	-	0.53	-	-	0.53
Reimbursement of Expenses	-	-	-	-	4.84	-	-	4.84
Insurance Claim Payable	-	-	-	-	1.44	-	-	1.44
Security Deposit Received	-	-	-	-	0.45	-	-	0.45
Advance paid	1.47	-	-	-	0.65	-	-	2.12
Director's fees								
Sachin Joshi	-	-	-	-	-	-	0.09	0.09
Danny Samuel	-	-	-	-	-	-	0.19	0.19
Jyotsna Matondkar	-	-	-	-	-	-	0.24	0.24
LIJU V RAJAN KOLATH	-	-	-	-	-	-	0.37	0.37
Sunil Patel	-	-	-	-	-	-	0.40	0.40
Ravi Kumar Praveen	-	-	-	-	-	-	0.09	0.09
Milind Gandhi	-	-	-	-	-	-	0.22	0.22
Chandrashekar S Payannavar	-	-	-	-	-	-	0.04	0.04

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

33 (a) Balances and Transactions with Above Mentioned Related Parties for the year ended March 31, 2024

₹ in Millions

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	UPWL	Key Management personnel and relatives	Total
Balances:								
Equity share capital	6,045.69	-	2,756.41	-	-	-	-	8,802.10
Sub Debts- Long term Borrowings	4,094.48	-	6,693.50	-	-	-	-	10,787.98
Term loans	14,112.97	-	120.14	1,311.70	-	-	-	15,544.81
Trade Payables	-	-	4,031.51	-	609.69	-	-	4,641.20
Interest accrued but not due	408.43	-	2,233.19	17.47	-	-	-	2,659.10
Mobilisation Advance	-	-		-	30.66	-	-	30.66
Retention money payable	-	-		-	20.88	-	-	20.88
Reimbursement of Expenses - Payable	-	-	-	4.95	-	-	-	4.95
Damage charges (Receivable)	-	-	-	-	-	-	-	-
Security Deposit received					0.45			0.45
Professional Fees - Payable (ILFS)	-	12.84	-	-	-	-	-	12.84
Provision for expenses	-	-	-	-	-	-	-	-
Debentures - Non Convertible	7,622.27	-	-	-	-	-	-	7,622.27

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	UPWL	Key Management personnel and relatives	Total
Transactions:								
Operation and maintenance	-	-	-	-	700.90	-	-	700.90
Overlay Expenses	-	-	-	-	135.40	-	-	135.40
Project management fees (Tolling)	-	-	-	-	34.82	-	-	34.82
Insurance	-	-	-	-	9.27	-	-	9.27
Interest Loan	1,594.28	-	-	-	-	-	-	1,594.28
Interest NCDs	515.01					-		515.01
Loan Repaid	1,257.52	-	-	-	-	-	-	1,257.52
Loan Taken	130.00	-	-	-	-	-	-	130.00
Unsecured NCD Repaid	21.39							21.39
Supervision Charges	-	-	-	-	15.85	-	-	15.85
Security Deposit Received	-	-	-	-	0.45	-	-	0.45
Interest Excess paid Recoverable w/off	-	-	-	-	-	0.39	-	0.39
Construction Cost	-	-	-	-	34.80	-	-	34.80
Out of pocket expenses			0.09					0.09
Advance paid					34.02			34.02
Advance adjusted					3.36			3.36
Damage Charges Recoverable					2.24			2.24
Deputation Cost			5.26					5.26
Director's fees								
Ajay Menon	-	-	-	-	-	-	0.14	0.14
Rajnish Saxena	-	-	-	-	-	-	0.14	0.14
Sachin Joshi	-	-	-	-	-	-	0.72	0.72
Danny Samuel	-	-	-	-	-	-	0.61	0.61
Jyotsna Matondkar	-	-	-	-	-	-	0.55	0.55
LIJU V RAJAN KOLATH	-	-	-	-	-	-	0.72	0.72
Sunil Patel	-	-	-	-	-	-	0.82	0.82
Krishna Ghag	-	-	-	-	-	-	0.11	0.11
Kazim Raza Khan	-	-	-	-	-	-	0.07	0.07
Ravi Kumar Praveen	-	-	-	-	-	-	0.06	0.06
Milind Gandhi							0.07	0.07
Chandrashekar S Payannavar							0.10	0.10
Vijay Kini	-	-	-	-	-	-	0.04	0.04

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Roadstar Infra Investment Trust

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

33 (b) Balances and Transactions with Above Mentioned Related Parties for the year ended March 31, 2023

₹ in Millions

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	ICDL	Sabarmati	UPWL	Key Management personnel and relatives	Total
Balances:										
Equity share capital	4,445.69	-	4,356.41	-	-	-	-	-	-	8,802.10
Sub Debts- Long term Borrowings	-	-	6,693.50	-	-	-	-	-	-	6,693.50
STL - Short term Borrowings	14,525.84	2,694.12	3,775.52	4,027.20	72.32	812.50	525.00	-	-	26,432.50
Trade Payables	-	-	4,401.89	-	270.74	-	-	-	-	4,672.63
Interest accrued	54.79	204.26	2,495.51	227.45	-	66.62	41.55	-	-	3,090.18
Mobilisation Advance	-	-	-	-	8.78	-	-	-	-	8.78
Trade Receivables	-	-	31.89	-	-	-	-	-	-	31.89
Retention Money Payable	-	-	486.75	-	15.22	-	-	-	-	501.97
Reimbursement of Expenses - Payable	-	-	-	4.95	-	-	-	-	-	4.95
Professional Fees - Payable (ILFS)	-	12.84	-	-	-	-	-	-	-	12.84
Interest On STL Payables	-	-	-	-	-	-	-	0.39	-	0.39

Transactions with Above Mentioned Related Parties

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	ICDL	Sabarmati	UPWL	Key Management personnel and relatives	Total
Transactions:										
Deputation Cost	-	-	9.79	-	-	-	-	-	-	9.79
Operation and maintenance	-	-	-	-	749.18	-	-	-	-	749.18
Tolling fees	-	-	-	-	45.84	-	-	-	-	45.84
Overlay Expenses	-	-	-	-	126.43	-	-	-	-	126.43
Project management fees (Tolling)	-	-	-	-	33.16	-	-	-	-	33.16
Insurance	-	-	-	-	10.97	-	-	-	-	10.97
Interest	1,056.69	-	-	-	-	-	-	-	-	1,056.69
Loan Repaid	473.06	-	-	-	-	-	-	-	-	473.06
Loan Taken	2,529.86	-	-	-	-	-	-	-	-	2,529.86
Credit note Insurance/Project Management fees	-	-	-	-	1.08	-	-	-	-	1.08
Supervision Charges	-	-	-	-	33.85	-	-	-	-	33.85
Reimbursement of Expenses	-	-	-	-	5.25	-	-	-	-	5.25
Insurance Claim Payable	-	-	-	-	1.17	-	-	-	-	1.17
Advertising Expenses	-	-	-	-	0.25	-	-	-	-	0.25
Interest payable transferred to Loan	-	-	179.84	-	-	-	-	-	-	179.84
Trade Receivable adjusted against loan	-	-	36.47	-	-	-	-	-	-	36.47
Loans Payable Written back	-	-	1,075.74	-	-	-	-	-	-	1,075.74
Interest on Loan Payable Written back	-	-	87.80	-	-	-	-	-	-	87.80
Trade Payable Written Back	-	2.56	83.44	3.31	-	-	-	-	-	89.31
Damage charges recoverable	-	-	5.28	-	-	-	-	-	-	5.28
Director's fees										
Ajay Menon	-	-	-	-	-	-	-	-	0.07	0.07
Rajnish Saxena	-	-	-	-	-	-	-	-	0.05	0.05
Sachin Joshi	-	-	-	-	-	-	-	-	0.07	0.07
Vijay Kini	-	-	-	-	-	-	-	-	0.31	0.31
Jyotsna Matondkar	-	-	-	-	-	-	-	-	0.09	0.09
Mohit Bhasin	-	-	-	-	-	-	-	-	0.03	0.03
Krishna Ghag	-	-	-	-	-	-	-	-	0.11	0.11
LIJU V RAJAN KOLATH	-	-	-	-	-	-	-	-	0.04	0.04
Sunil Patel	-	-	-	-	-	-	-	-	0.04	0.04
Sachin Joshi	-	-	-	-	-	-	-	-	0.13	0.13
Parag Phanse	-	-	-	-	-	-	-	-	0.12	0.12
Sanjay Rane	-	-	-	-	-	-	-	-	0.19	0.19
Sunil Hemchand Patel	-	-	-	-	-	-	-	-	0.06	0.06
Liju Varughese Rajan Kolath	-	-	-	-	-	-	-	-	0.17	0.17
Danny Samuel	-	-	-	-	-	-	-	-	0.04	0.04
Jyotsna Matondkar	-	-	-	-	-	-	-	-	0.10	0.10
Manish Kumar Satnaliwala	-	-	-	-	-	-	-	-	0.06	0.06
Ashutosh Sharma	-	-	-	-	-	-	-	-	0.06	0.06

Roadstar Infra Investment Trust

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Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

33 (c) Balances and Transactions with Above Mentioned Related Parties for the year ended March 31, 2022

₹ in Millions

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	SCOL	ICDL	IAL	Sabarmati	UPWL	Key Management personnel and relatives	Total
Balances:												
Equity Share Capital	3,135.69	-	5,344.87	-	-	-	-	-	-	-	-	8,480.56
Sub Debts- Long term Borrowings	-	-	8,673.50	-	-	-	-	-	-	-	-	8,673.50
STL - Short term Borrowings	12,469.04	2,694.12	5,074.86	4,027.20	-	-	812.50	-	525.00	-	-	25,602.72
Trade Payables	-	7.79	4,643.26	10.10	156.42	-	-	-	24.29	-	-	4,841.86
Interest Accrued	12.27	196.60	2,762.16	216.33	-	-	66.09	-	39.73	-	-	3,293.18
Trade Receivables	-	-	63.08	-	-	-	-	-	-	-	-	63.08
Retention Money Payable	-	-	486.75	-	26.54	-	-	-	-	-	-	513.29
Reimbursement of Expenses - Payable	-	-	-	4.95	-	-	-	-	-	-	-	4.95
Other Assets	-	-	-	-	0.49	-	-	-	-	-	-	0.49
Professional Fees - Payable (ILFS)	-	12.84	-	-	-	-	-	-	-	-	-	12.84
Interest Excess paid Recoverable	-	-	-	-	-	-	-	-	-	0.39	-	0.39
Project Management Fees - Provision for Credit note	-	-	-	-	-0.66	-	-	-	-	-	-	-0.66

Transactions with Above Mentioned Related Parties

Particulars	RIIT	ILFS	ITNL	IFIN	ESML	SCOL	ICDL	IAL	Sabarmati	UPWL	Key Management personnel and relatives	Total
Transactions:												
Deputation Cost	-	-	14.24	-	-	-	-	-	-	-	-	14.24
Operation and maintenance	-	-	209.44	-	406.36	-	-	-	-	-	-	615.80
Operation and maintenance - Credit Note	-	-	-19.47	-	-	-	-	-	-	-	-	-19.47
Tolling Fees	-	-	-	-	52.62	-	-	-	-	-	-	52.62
Overlay Expenses	-	-	33.56	-	-	-	-	-	-	-	-	33.56
Project management Fees (Tolling)	-	-	0.66	-	37.39	-	-	-	-	-	-	38.05
Project management Fees Credit Notes	-	-	-0.66	-	-	-	-	-	-	-	-	-0.66
Insurance	-	-	0.70	-	7.61	-	-	-	-	-	-	8.31
Interest Expenses	244.57	369.13	9.15	166.82	-	54.47	56.54	17.08	-	-	-	917.76
Loan Repaid	36.72	5,685.68	142.66	2,601.66	-	849.50	881.82	266.32	-	-	-	10,464.36
Loan Taken	10,427.64	-	-	-	-	-	-	-	-	-	-	10,427.64
Credit Note Insurance	-	-	0.13	-	0.44	-	-	-	-	-	-	0.57
Supervision Charges	-	-	1.78	-	9.17	-	-	-	-	-	-	10.95
Reimbursement of Expenses	-	-	0.26	-	11.59	-	-	-	-	-	-	11.85
Insurance Claim Payable	-	-	0.40	-	-	-	-	-	-	-	-	0.40
Professional Fees	-	-	-	-	2.84	-	-	-	-	-	-	2.84
Advertising Expenses	-	-	-	-	0.22	-	-	-	-	-	-	0.22
	10,708.93	**6,054.81**	**392.84**	**2,768.48**	**528.25**	**903.97**	**938.36**	**283.40**	**-**	**-**	**-**	**22,579.03**

Roadstar Infra Investment Trust
34. Disclosures Pursuant to SEBI Circulars
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016)

A *Project wise operating cash flows for the period ended 30th September 2024:* ₹ in Millions

Particulars	Moradabad Bareilly Expressway Limited	Sikar Bikaner Highways Limited	Hazaribagh Ranchi Expressway Limited	Thiruvananthapuram Road Development Company Limited	Pune Sholapur Road Development Company	Barwa Adda Expressway Limited
Profit / (Loss) for the year	(225.78)	(161.19)	17.73	(4.80)	(433.51)	(6,055.69)
Adjustments for:						
Depreciation and Amortisation Expense	480.02	123.55	-	-	535.90	349.70
Net Gain/(Loss) arising on Financial Assets designated as at FVTPL	-	-	(23.14)	-	-	-
Finance Costs recognised in Profit or Loss	1,235.61	255.15	163.27	30.66	790.54	5,482.13
Interest Income recognised in Profit or Loss	(22.87)	(18.59)	(0.32)	(5.88)	(53.97)	(202.97)
Reversal of Provision for Impairment	(0.00)	-	-	-	-	-
Provision for doubtful debts and receivables	-	-	-	9.06	-	
Operation and Maintenance Income	-	-	(53.51)	-	-	-
Finance Income	-	-	(165.64)	(28.09)	-	-
Overlay Income	-	-	-	(35.99)	-	-
Receipt of Annuities	-	-	708.61	123.63	-	-
Liabilities written back	-	(64.18)	-	-	-	(1,461.91)
(Gain) /Loss Modification on Financial Instrument	-	-	0.09	1.79	-	1,526.41
Provision for Overlay (Net)	19.62	128.41	-	-	188.17	194.66
Provision of Deferred Taxes Asset/Liability	-	57.38	-	-	-	-
Margin on construction						(35.05)
Operating profit before working capital changes and other adjustments	1,486.60	320.53	647.09	90.38	1,027.13	1,121.67
Working capital changes and other adjustmen	(8.50)	15.11	(30.82)	(53.93)	(144.42)	(904.12)
Cash flow from operating activities post	1,478.10	335.64	616.26	36.45	882.71	217.55
Income tax paid (net)	(2.68)	(1.49)	(12.82)	(3.42)	(6.64)	(21.21)
Net cash generated from operating activities	1,475.42	334.15	603.45	33.03	876.07	196.34

Project wise operating cash flows for the year ended 31 March 2024: ₹ in Millions

Particulars	Moradabad Bareilly Expressway Limited	Sikar Bikaner Highways Limited	Hazaribagh Ranchi Expressway Limited	Thiruvananthapuram Road Development Company Limited	Pune Sholapur Road Development Company	Barwa Adda Expressway Limited
Profit / (Loss) for the year	(422.88)	(153.17)	11.98	(14.50)	(901.89)	1,357.22
Adjustments for:						
Depreciation and Amortisation Expense	972.95	272.32	-	-	972.46	685.27
Net Gain/(Loss) arising on Financial Assets designated as at FVTPL	-	-	(43.12)	-	-	-
Finance Costs recognised in Profit or Loss	2,465.39	510.07	389.95	65.20	1,553.04	1,047.22
Interest Income recognised in Profit or Loss	(36.03)	(32.24)	-	(6.09)	(139.69)	(529.44)
Reversal of Provision for Impairment	(0.01)	-	-	-	-	-
(Loss) / Gain on disposal of property, plant and equipment	-	-	-	-	(0.03)	-
Provision for doubtful debts and receivables	2.36	-	6.14	10.69	3.42	
Operation and Maintenance Income	-	-	(107.13)	-	-	-
Finance Income	-	-	(388.89)	(72.38)	-	-
Overlay Income	-	-	(206.00)	(71.57)	-	-
Receipt of Annuities	-	-	1,326.51	192.28	-	-
Liabilities written back	(13.06)	-	-	-	(0.65)	(0.97)
(Gain) /Loss Modification on Financial Instrument	-	-	22.84	7.46	-	(349.11)
Provision for Overlay (Net)	179.36	147.65	-	-	427.26	227.03
Provision of Deferred Taxes Asset/Liability	-	(88.10)	-	-	-	-
Operating profit before working capital changes and other adjustments	3,148.08	656.53	1,012.28	111.08	1,913.92	2,344.52
Working capital changes and other adjustmen	(142.47)	(17.84)	113.86	(34.33)	41.29	(1,788.51)
Cash flow from operating activities post working capital changes	3,005.62	638.70	1,126.13	76.75	1,955.21	556.01
Income tax paid (net)	6.60	(3.23)	6.27	3.14	(15.06)	(51.65)
Net cash generated from operating activities	3,012.21	635.47	1,132.40	79.89	1,940.15	504.36

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Project wise operating cash flows for the year ended 31 March 2023:

₹ in Millions

Particulars	Moradabad Bareilly Expressway Limited	Sikar Bikaner Highways Limited	Hazaribagh Ranchi Expressway Limited	Thiruvananthapuram Road Development Company Limited	Pune Sholapur Road Development Company	Barwa Adda Expressway Limited
Profit / (Loss) for the year	(851.87)	(539.58)	308.76	1,845.03	(916.69)	867.86
Adjustments for:						
Depreciation and Amortisation Expense	904.73	257.51			838.73	608.73
(Loss) / Gain on disposal of property, plant and equipment					(0.01)	
Net Gain/(Loss) arising on Financial Assets designated as at FVTPL			(32.01)			
Finance Costs recognised in Profit or Loss	2,219.33	567.02	1,082.28	73.36	1,521.30	992.79
Interest Income recognised in Profit or Loss	-38.24	(54.54)	(78.94)	(15.71)	(159.23)	(323.10)
Provision for doubtful debts and receivables			108.03	397.73		
Operation and Maintenance Income			(90.10)			
Liabilities written back	-0.22		(1,252.84)	(2,020.38)	(27.43)	(2.81)
Finance Income			(498.26)	(108.64)		
Overlay Income			(200.66)	(159.55)		
Receipt of Annuities			1,785.36	352.33		
(Gain) /Loss Modification on Financial Instrument			403.25	(159.70)		(128.12)
Provision for Overlay (Net)	874.62	319.60			239.54	626.26
Provision of Deferred Taxes Asset/Liability		36.71				
Operating profit before working capital changes and other adjustments	**3,108.35**	**586.72**	**1,534.87**	**204.46**	**1,496.21**	**2,641.61**
Working capital changes and other adjustmen	178.27	20.07	-110.31	(0.69)	-381.95	504.19
Cash flow from operating activities post working capital changes	**3,286.62**	**606.79**	**1,424.55**	**203.77**	**1,114.26**	3,145.80
Income tax paid (net)	1.32	(2.05)	(29.85)	3.75	(6.82)	(392.23)
Net cash generated from operating activities	**3,287.94**	**604.74**	**1,394.70**	**207.52**	**1,107.44**	**2,753.57**

Project wise operating cash flows for the year ended 31 March 2022:

₹ in Millions

Particulars	Moradabad Bareilly Expressway Limited	Sikar Bikaner Highways Limited	Hazaribagh Ranchi Expressway Limited	Thiruvananthapuram Road Development Company Limited	Pune Sholapur Road Development Company	Barwa Adda Expressway Limited
Profit / (Loss) for the year	(924.89)	(61.45)	686.74	125.14	720.56	574.91
Adjustments for:						
Depreciation and Amortisation Expense	763.23	206.54			435.35	553.59
Net Gain/(Loss) arising on Financial Assets designated as at FVTPL			(51.36)			
Finance Costs recognised in Profit or Loss	2,464.90	361.32	0.24	9.86	3.27	1,016.04
Interest Income recognised in Profit or Loss	(27.57)	(32.51)	(53.77)	(10.24)	(96.83)	(108.65)
Reversal of Provision for Impairment	(0.00)	(292.79)				
Write back of Debt Liabilities	(0.30)	(18.02)				
Operation and Maintenance Income			(73.57)			
Finance Income			(581.61)	(128.78)		
Overlay Income			(80.58)	(133.30)		
Receipt of Annuities			1,651.76	258.38		
(Gain) /Loss Modification on Financial Instrument			(17.06)	17.54		(223.65)
Provision for Overlay (Net)	227.49	194.80			305.12	267.76
Provision of Deferred Taxes Asset/Liability		(87.86)				
Expenses towards damage & negative change of scope	21.9568		9.12			
Operating profit before working capital changes and other adjustments	**2,524.82**	**270.03**	**1,489.91**	**138.60**	**1,367.47**	**2,080.00**
Working capital changes and other adjustmen	(29.05)	13.97	(39.54)	(23.27)	(434.44)	(253.28)
Cash flow from operating activities post working capital changes	**2,495.77**	**284.00**	**1,450.37**	**115.33**	**933.03**	1,826.72
Income tax paid (net)	(1.86)	-	(31.50)	(8.39)	(1.58)	(9.00)
Net cash generated from operating activities	**2,493.91**	**284.00**	**1,418.87**	**106.94**	**931.45**	**1,817.72**

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Roadstar Infra Investment Trust

B Capitalisation statement

₹ in Millions

Particulars	Pre-issue as at 30 September 2024	As adjusted for Issue (refer note 1)
Non-current borrowings (refer note 14)	65,382.71	
Current maturities of non-current borrowings (refer note 14)	6,458.98	
Interest accrued on borrowings (refer note 16)	7,063.33	
Less: Cash and cash equivalent, Bank balances other than cash and cash equivalents net of restricted deposits and deposits with banks* (Refer note 9)	(7,932.46)	
Total Debt of SPV Group (A)	70,972.56	-
Equity share capital (refer note 12)	8,801.97	-
Other equity (refer note 13)	(27,872.63)	
Total Equity of SPV Group (B)	(19,070.66)	-
Debt equity ratio [A/(A+B)]	1.37	-

Note 1 Corresponding details post initial issue are not available as of now, hence the required disclosures in respect of the same have not been provided in the above table

*Cash and cash equivalents has been considered after excluding restricted deposits amounting Rs 1,601.17 million

C Debt payment history

Moradabad Bareilly Expressway Limited

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	11,333.37	3,531.19	10,283.57	11,701.01	3,536.99	10,233.56	11,777.13	3,492.79	10,548.20	11,763.54	3,467.26	10,562.83
Additional borrowings during the year	-	-	-	-	-	130.00						
Repayments during the year	(272.87)	(1.78)	(30.00)	(367.64)	(5.80)	(79.99)	(242.56)	(3.55)	(157.35)	(6.34)	(30.59)	(124.95)
Other adjustments / settlements during the year												
- Unwinding of interest							166.44	47.75	(157.29)	19.92	56.12	110.32
- Conversion of payables into loan												
Carrying amount of debt at the end of the year	11,060.49	3,529.41	10,253.57	11,333.37	3,531.19	10,283.57	11,701.01	3,536.99	10,233.56	11,777.13	3,492.79	10,548.20
Interest paid during the year	1137.37			2132.88			2170.11			2278.54		

Sikar Bikaner Highways Limited

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	3,743.13	-	2,061.12	3,782.72	-	2,062.42	4,257.75	-	2,078.12	4,224.00	-	88.78
Additional borrowings during the year												
Repayments during the year	(19.79)	-	(0.65)	(39.59)	-	(1.30)	(475.03)	-	(15.70)	-	-	-
Other adjustments / settlements during the year												
- Unwinding of interest	(299.14)		299.14									
- Conversion of payables into loan										33.75		1,989.34
Carrying amount of debt at the end of the year	3,424.20		2,359.61	3,743.13		2,061.12	3,782.72		2,062.42	4,257.75		2,078.12
Interest paid during the year	238.27			474.42			852.65			0		

Hazaribagh Ranchi Expressway Limited

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	-	2,379.44	2,033.36	-	2,940.55	2,229.86	-	5,835.83	2,131.11	-	5,835.83	2,131.11
Additional borrowings during the year												
Repayments during the year	-	(298.98)	-	-	(606.27)	(196.50)	-	(3,070.00)	(300.00)	-	-	-
Other adjustments / settlements during the year												
- Unwinding of interest		(0.76)			45.16			174.72				
- Conversion of payables into loan (net)									398.75			
Carrying amount of debt at the end of the year		2,079.70	2,033.36		2,379.44	2,033.36		2,940.55	2,229.86		5,835.83	2,131.11
Interest paid during the year	169.52			322.59			851.58			0		

Thiruvananthapuram Road Development Company Limited

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	-	-	764.35	-	-	804.58	367.64	-	1,875.21	367.64	-	1,875.21
Additional borrowings during the year												
Repayments during the year	-	-	-	-	-	(40.23)	(333.72)	-	-	-	-	-
Other adjustments / settlements during the year												
- Unwinding of interest												
- Conversion of payables into loan / Write back (net)							(33.92)		(1,070.63)			
Carrying amount of debt at the end of the year			764.35			764.35	-		804.58	367.64		1,875.21
Interest paid during the year	30.66			64.64			71.35			0		

Pune Sholapur Road Development Company

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	5,517.63	1,990.77	11,451.66	6,844.71	2,070.03	10,402.50	8,816.70	-	10,402.50	9,010.82	-	10,208.38
Additional borrowings during the year												
Repayments during the year	(902.77)	(203.98)	(163.03)	(1,327.08)	(247.79)	(1,076.23)				(194.12)	-	194.12
Other adjustments / settlements during the year												
- Unwinding of interest	-	79.59	309.86	-	168.53	515.01		305.13				
- Conversion of payables into loan / Write back (net)	-	-	-	-		1,610.39	(1,972.00)	1,764.90				
Carrying amount of debt at the end of the year	4,614.85	1,866.37	11,598.50	5,517.63	1,990.77	11,451.66	6,844.71	2,070.03	10,402.50	8,816.70		10,402.50
Interest paid during the year	401.08			2062.56			0			0		

Barwa Adda Expressway Limited

₹ in Millions

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties	Term Loan	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	11,279.50	-	8,125.34	11,279.50	-	8,125.34	11,279.50	-	8,125.34	11,279.50		8,125.34
Additional borrowings during the year												
Repayments during the year	-	-	-	-	-	-	-	-	-	-	-	-
Other adjustments / settlements during the year												
- Unwinding of interest												
- Conversion of payables into loan												
Carrying amount of debt at the end of the year	11,279.50		8,125.34	11,279.50		8,125.34	11,279.50		8,125.34	11,279.50		8,125.34
Interest paid during the year	0			0			0			0		

D Statement of net assets at fair value : #

₹ in Millions

Particulars	As at September 30, 2024		As at 31 March 2024	
	Book Value	Fair Value	Book Value	Fair Value
A. Assets	80,125.44	85,235.40	82,472.81	85,044.20
B. Liabilities (at book value)	99,206.82	99,206.82	94,695.80	94,695.80
C. Net Assets (A-B)	**(19,081.37)**	**(13,971.42)**	**(12,222.99)**	**(9,651.60)**

Fair values of total assets relating to the SPV Group (excluding JV - Ref Note 1.2.2.1 (g))as at 30 September 2024 and at 31 March 2024 as disclosed above are solely based on the fair valuation report of the independent valuer appointed under SEBI (Infrastructure Investment Trusts) Regulations, 2014

Note:

Project wise break up of fair value of assets *: ₹ in Millions

Particulars	As at September 30, 2024	As at 31 March 2024
Moradabad Bareilly Expressway Limited	30,548.40	31,312.30
Sikar Bikaner Highways Limited	10,046.70	9,426.30
Hazaribagh Ranchi Expressway Limited	4,187.80	4,491.60
Pune Sholapur Road Development Company	19,098.90	19,040.20
Barwa Adda Expressway Limited	21,353.60	20,773.80
Total	**85,235.40**	**85,044.20**

*Fair values of assets as disclosed above are the fair values of the total assets of the SPV Group which are included in the Combined Financial Statements.

E Statement of Total Return at Fair Value

Particulars	Year ended September 30, 2024	Year ended March 31, 2024
Total comprehensive income for the year (As per the Combined Statement of Profit and Loss)	(6,801.01)	(196.83)
Add: Other changes in fair value for the year *	191.20	(2,224.20)
Total Return	**(6,609.81)**	**(2,421.03)**

* In the above statement, other changes in fair value for the period ended 30 September 2024 has been computed based on the difference in fair values of total assets as at 30 September 2024 and as at 31 March 2024 which are based solely on the valuation report of the independent valuer appointed under SEBI (Infrastructure Investment Trusts) Regulations, 2014.

35. Significant terms of Service Concession Arrangements

The details of service concession arrangements of all the SPVs are as follows:

Moradabad Bareilly Expressway Limited:

Particulars	Project
Brief description of Concession	The agreement of concession was entered between NHAI and the Company on February 19, 2010. The construction cost of the project is estimated Rs. 2,404 Crores. NHAI will provide grant of Rs. 443.32 crores by way of equity support for meeting the total project cost. Company received Provisional Completion Certificate from the NHAI. Company has started the toll collection activity from January 7, 2015.
Nature of Assets	Intangible Asset
Year when SCA granted	2010
Period	25 years
Stage	Under Operation
Premature Termination	On event of default by either party.
Extension of period	As per conditions mentioned in Concession agreement.

Sikar Bikaner Highways Limited:

Particulars	Project
Nature of Assets	Intangible Asset
Year when SCA granted	2012
Period	25 years
Extension of period	As per conditions mentioned in Concession agreement.
Construction	Capitalised on August 16, 2016 on receipt of PCOD from
Premature Termination	On event of default by either party.
Special Term	N.A.
Brief description of Concession	The agreement of concession was entered between MoRTH through PWD and the Company on June 29, 2012. MoRTH will provide grant of Rs. 247.32 crores by way of equity support for meeting the total project cost. The construction period is of 2 years.

Hazaribagh Ranchi Expressway Limited:

Particulars	Project
Brief description of Concession	The Company has entered into a Concession Agreement with National Highways Authority of India (NHAI) on October 08, 2009 to Design, Engineer, Finance, Procure, Construct, Operate and Maintain 4 laning Hazaribagh-Ranchi section of NH-33 from km 40.500 to km 114.000 in the State of Jharkhand on Build, Operate and Transfer (Annuity) basis. The Concession Agreement envisages concession for a period of 18 years commencing from the Appointed date August 01, 2010 including construction period of 910 days required for 4 laning of the Project. The Company is entitled to receive half yearly Annuity of Rs.64.08Cr
Nature of Assets	Financial Asset
Year when SCA granted	2010
Period	18 years
Stage	Under Operation and Maintenance
Premature Termination	Force Majeure or on event of default by either party
Overlay	Has to be incurred as and when the riding quality falls below the standards specified in the Concession Agreement

Thiruvananthapuram Road Development Company Limited:

Particulars	Project
Nature of Assets	Financial Asset
Year when SCA granted	16 March 2004
Period	As per the below explanation given
Extension of period	
Construction	
Premature Termination	
Special Term	
Brief description of Concession	

Nature of Operations:

The Company has been set up to develop, widen, strengthen, operate, construct and maintain the Thiruvananthapuram City Roads Improvement Project (TCRIP) under the Annuity Concession Agreement. The Annuity Concession Agreement entered into between the Company and Government of Kerala on March 16, 2004, conferred the right to implement the project and recover the project cost and operating cost including returns thereon by way of a fixed annuity amount payable semi-annually over 17.5 years of concession period.

The Scheduled Project Completion Date (SPCD) for the Thiruvananthapuram City Road Improvement Project (TCRIP/the Project) was November 15, 2006 as per the Concession Agreement (CA) dated March 16, 2004. On account of delay in land delivery in accordance with the CA, the completion of the Thiruvananthapuram City Road Improvement Project (TCRIP/the Project) has been delayed. The Company had submitted a detailed plan/proposal for completion of the TCRIP to the Government of Kerala (GoK), based on revised land delivery schedule. The detailed plan/proposal included the revised cost of completion based on prevailing market rates and cost incurred on the Project by the Company on construction and incidental expenses. Accordingly a supplementary agreement was signed with Kerala Road Fund Board (KRFB) on January 4, 2008. The following are the salient features of the said supplemental agreement:

(a) GoK has provided financial assistance of Rs 15 Crores to the Company in the form of advance annuity, in two equal instalments to partly meet the cost of the project.

(b) The Project is divided into three phases based on the progress achieved so far. The stretches of roads which are substantially completed as per the Schedule DD of the Original Concession Agreement is identified as Phase – I. The remaining project as per the provisions of Original Agreement treated as the Phase – II & III.

(c) The commercial operations of all the Phases commenced

(d) The Company shall operate and maintain the project for a period of 15 years starting from COD.

(e) The Company formed for the construction and maintenance of the road project was unable complete the entire road project as the timelines to hand over encumbrance free land, were never met by the KRFB. In addition the land stretches handed over were too small and provided too late to justify the economics of the road project, under annuity. Despite the follow up by the Company with KRFB, there were no adequate satisfactory responses from KRFB to hand over encumbrance free land.

Considering the incomplete portion of the project, idling of resources, cost of capital, cost of increase in material due to price escalation and mobilization & demobilization to construct the road, the company had informed KRFB that it would be constrained to terminate the contract. Subsequently the Company and KRFB agreed to resolve through arbitration, to ensure the project is completed. The arbitration award was received in favour of the Company amounting to Rs 124.97 crores in the financial year 2009-2010.

Since the delivery of the project site could not be achieved by KRFB as per the revised schedule agreed under the Resumption agreement, the project got further delayed. Since both the company and KRFB were keen to complete the project, a new supplement agreement was entered into on 1st May, 2009. The revised project details as per new agreement are as follows

The Concessionaire to operate and maintain the Project/Project Facilities in accordance with the original agreement for period of 15 years after completion of the project Phase as given in the table below or till termination of these agreement.

Company has achieved substantial completion of work for 15.739 Kms. as on 22.02.2012 vide substantial completion certificate dated 08.11.2012 and proportionate annuity of Rs. 6.59 Crores have been awarded to the Company. Further, on 20.02.2015 Company has received substantial provisional completion certificate issued by the Kerala Road Fund Board (KRFB) and certify by Independent Engineer dated 20.02.2015 for 7.6 Kms under Phase III, Executive Committee of KRFB issue COD for the 4.774 Kms of corridors completed as on 31st May 2016.

Summary of various phases of the project is as under:

Phase	Length (Km)	Annuity Dates	COD	Hand Back date	Annuity Amount (Rs Cr)
Phase I	14.268	4th January and 4th July#	04-Jul-07	04-Jul-22	6.90
Phase II	15.739	22nd August and 22nd February	22-Feb-12	22-Feb-27	6.59
Phase III	7.600	20th August and 20th February	20-Feb-15	20-Feb-30	3.33
Phase IV	4.453	20th November and 30th May	30-May-16	30-May-31	1.92

 # Company has issued hand-back letter to the Authority 4th May 2022.

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Pune Sholapur Road Development Company :

Particulars	PSRDCL
Nature of Assets	Intangible assets
Year when SCA granted	30-09-2009
Period	19 years 295 days from appointment date i.e. 28/9/2011
Extension of period	No
Construction	Operational
Premature Termination	Premature termination is permitted only upon happening of a force majeure event or upon the parties defaulting on their obligation.
Special Term	Nil
Brief description of Concession	The Company has been set up with the main object of design engineering construction development finance operation and maintenance of 4 laning of Pune-Sholapur Section of NH-9 from KM 144.400 to KM 249.000 in the sate of Maharashtra under NHDP phase III on Design Build Finance Operate and Transfer (DBFOT) basis. The Company has entered into a Concession Agreement on September 30, 2009 with the National Highways Authority of India (NHAI), under the terms of which, the Company has obtained a Concession to Design, Finance, Construct, Operate and Maintain the Project for a period of 19 years 295 days commencing from the appointed date 28/9/2011 including construction period of 910 days required for 4 laning of the Project. Grant of ` 285 crores is receivable from NHAI as Equity support for the Project. In consideration for performing its obligations under the SCA, the Company is entitled to collect toll/user charges from the users of the infrastructure assets/facility on completion of the construction activities. At the end of the concession period, the Company will hand back the Road to the NHAI without additional consideration

Barwa Adda Expressway Limited:

Name of the concessionaire	Barwa Adda Expressway Limited
Start of concession period under concession agreement (Appointed date)	01-04-2014
Location	Panagarh Bypass in the state of Jharkhand and West Bengal
Type of Concession	DBFOT
Length (in lane kms)	122.88Km
End of concession period under concession agreement	2034
Period of concession since the appointed date	20 years
Brief description of Concession	The Company has been set up to design, build, finance and operate six laning of Barwa-Adda-Panagarh Section of NH 2 from 398.24 Km to 521.12 Km in the state of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT basis

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Roadstar Infra Investment Trust

36. Disclosure in respect of Micro and small enterprises

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to micro and small enterprises. On the basis or the information and records available with the management, there are no outstanding dues to the Micro and Small enterprises as defined in the Micro, Small mid Medium Enterprises Development Act, 2006 as set out in the following disclosures·

₹ in Millions

Particulars	As at September 30, 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
(a) the Principal amount and the interest due thereon (to be shown separately) remaining unpaid to any supplier at the end of each accounting year;	1.89	1.22	0.15	0.22
(b) the amount interest paid by the buyer in terms of section 16 of the Micro, Small and Medium Enterprises development Act, 2006 (27 of 2006), along with the amount of the payment made to the supplier beyond the appointed day during each accounting year;	-	-	-	-
(c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the Micro, Small and Medium Enterprises Development Act, 2006;	-	-	-	-
(d) Amount of interest accrued and remaining unpaid at the end of each accounting year; and	-	-	-	-
(e) The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues above are actually paid to the small enterprise, for the purpose of disallowance of a deductible expenditure under section 23 of the Micro, Small and Medium Enterprises Development Act, 2006.	-	-	-	-

37. Disclosure as Per Ind AS 115 Revenue from Contracts with Customers

A. Applicability of Ind AS 115

Ind AS 115 was issued on 28 March 2018 and supersedes Ind AS 11 Construction Contracts and Ind AS 18 Revenue and it applies, with limited exceptions, to all revenue arising from contracts with its customers. Ind AS 115 establishes a five-step model to account for revenue arising from contracts with customers and requires that revenue be recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The Ministry of Corporate Affairs(MCA), on March 28, 2018, notified Ind AS 115"Revenue from Contracts with Cutomers" as a part of the Companies (Indian Accounting Standards) Amendment Rules, 2018. The Company has followed the IND AS 115 accordingly.

Service contracts relating to Change of Scope have an original duration of one year or less and therefore the SPV Group uses practical expedient to not disclose unsatisfied performance obligations

B. Disaggregation of revenue

Set out below is the disaggregation of the SPV Group's revenue from contracts with customers:

Particulars	Sep 30, 2024	Mar 31, 2024	Mar 31, 2023	Mar 31, 2022
Type of Services				
Finance Income	165.64	388.89	498.26	581.61
Operation and maintenance income	53.51	107.13	90.10	73.57
Overlay income	-	206.00	200.66	80.58
Toll Income	4,570.94	9,018.25	8,471.81	6,895.35
Additional Construction Work - Change of Scope	717.09	74.21	82.19	-
Total Revenue from contracts with customers	**5,507.17**	**9,794.48**	**9,343.02**	**7,631.11**

Geographical markets

Particulars	Sep 30, 2024	Mar 31, 2024	Mar 31, 2023	Mar 31, 2022
India	5,507.17	9,794.48	9,343.02	7,631.11
Outside India	-	-	-	-
Total Revenue from contracts with customers	5,507.17	9,794.48	9,343.02	7,631.11

Timing of Revenue recognition

Particulars	Sep 30, 2024	Mar 31, 2024	Mar 31, 2023	Mar 31, 2022
Services transferred at a point in time	717.09	74.21	82.19	-
Services transferred over time	4,790.08	9,720.26	9,260.84	7,631.11
Total Revenue from contracts with customers	**5,507.17**	**9,794.48**	**9,343.02**	**7,631.11**

Contract Balances

Particulars	Sep 30, 2024	Mar 31, 2024	Mar 31, 2023	Mar 31, 2022
Receivable under Service Concession	2,688.73	3,178.28	3,825.60	5,324.27
Trade Receivable	54.90	70.39	156.33	39.63
Less: Expected Credit Loss	-17.90	-12.76	-13.53	-13.56
Total Receivable	**2,725.73**	**3,235.91**	**3,968.40**	**5,350.34**
Contract Liabilities	-	-	-	-

Reconciling the amount of revenue recognised in the statement of profit and loss with the contracted price

Particulars	Sep 30, 2024	Mar 31, 2024	Mar 31, 2023	Mar 31, 2022
Revenue as per contracted price	5,507.17	9,794.48	9,343.02	7,631.11
Adjustments	-	-	-	-
Rebate/Cash Discount	-	-	-	-
Revenue from contracts with customers	**5,507.17**	**9,794.48**	**9,343.02**	**7,631.11**

Performance obligation

Information about the SPV Group's performance obligations are summarised below:

Income from Rendering of Services

Income from sale of services is recognised when the company satisfies performance obligation by transferring promised services to the customer i.e. at a point in time for Change of Scope and the performance obligation in service of toll collection is recorded as per rates notified by NHAI and approved by management and payment is generally due at the time of providing service and in respect of annuity projects over time for finance income, Operation & maintenance income & overlay income.

38. Disclosure in respect of construction contract

₹ in Millions

Particulars	For the period ended September 30, 2024	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
Contract revenue recognised as revenue during the year	776.06	2,030.51	798.10	2.26

39. Fair Values

Financial Assets and Liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

Particulars	As on September 30, 2024		As on March 31, 2024		As on March 31, 2023		As on March 31, 2022	
	Carrying amount	Fair Value	Carrying amount	Fair Value	Carrying amount	Fair Value	Carrying amount	Fair Value
Financial Assets:								
Loans	-	-	-	-	-	-	-	-
Trade Receivable	37.00	37.00	52.29	52.29	142.81	142.81	26.32	26.32
Cash and Bank Balances	2,073.35	2,073.35	2,273.68	2,273.68	1,956.67	1,956.67	943.35	943.35
Other Bank Balance	7,460.27	7,460.27	8,330.63	8,330.63	12,226.25	12,226.25	12,641.81	12,641.81
Interest and Other Receivables	11,000.21	11,000.21	11,476.10	11,476.10	10,091.01	10,091.01	11,956.06	11,956.06
Investments	658.57	658.57	635.43	635.43	592.31	592.31	1,579.61	1,579.61
Financial Liabilities:								
Trade Payable	6,354.13	6,354.13	6,799.78	6,799.78	7,144.35	7,144.35	6,580.19	6,580.19
Borrowings	71,841.68	71,841.68	73,346.87	73,346.87	74,825.98	74,825.98	78,361.74	78,361.74
Other Financial Liabilities	18,057.95	18,057.95	11,996.64	11,996.64	13,249.24	13,249.24	11,686.63	11,686.63

39 (a). Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities
Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as on September 30, 2024

Particulars	As on September 30, 2024	Fair Value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments in Mutual Funds (Quoted)	NA	NA	NA	NA

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as on March 31, 2024

Particulars	As on March 31, 2024	Fair Value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments in Mutual Funds (Quoted)	NA	NA	NA	NA

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as on March 31, 2023

Particulars	As on March 31, 2023	Fair Value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments in Mutual Funds (Quoted)	NA	NA	NA	NA

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Notes forming part of the Combined Financial Statements
40. Segment Reporting

The SPV Group is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

41. Significant Events

(a) Non-Compliance of various provisions of Companies Act 2013 and other regulations:
The SPV Group is not in compliance pertaining to the filing of various forms relating appointment/ resignation of Directors, under the provisions of Companies Act 2013. Management with its best estimates has identified the potential financial implications and the same has been disclosed in contingent liability

(b) Investigations by Serious Fraud Investigation Office ("SFIO") and Forensic Audit :
The Ministry of Corporate Affairs (MCA), Government of India, has vide its letter dated October 1, 2018 initiated investigation by Serious Fraud Investigation Office (SFIO) against IL&FS (erstwhile ultimate holding company of MBEL, SBHL, HREL, PSRDCL and having significant influence in TRDCL and existing ultimate holding company of BAEL) and its group companies under Section 212 (1) of the Companies Act, 2013. As a part of investigation of affairs of ITNL (erstwhile holding company of MBEL, SBHL, HREL, PSRDCL and having significant influence in TRDCL and existing holding company of BAEL), SFIO has requested various information from ITNL, including details related to projects undertaken by the Company, where ITNL served as the Development Contractor and promoter.

The IL&FS Ltd has informed that the investigation by SFIO has now been completed, but the Company has not yet received any report from the agency or IL&FS Ltd. Consequently, at this stage, there are no known material impacts or implications arising from these developments. However, an uncertainty relating to the future outcome of the regulatory actions is not determinable at this stage.

(c) The Board of Directors of ITNL (erstwhile holding company) approved the restatement of its accounts and submitted them to the MCA. This restatement does not affect the financial statements of the Company for the any year / period.
(d) Additionally, an independent third party appointed by IL&FS Board (erstwhile ultimate holding company) submitted forensic audit report to ITNL (erstwhile holding company) during year ended March 31, 2023. Since the audit is primarily relating to operations of ITNL, SPV Group is not envisaging any adjustment in financial statement in this regard.

(e) Impairment On Intangible Asset
i) As part of the divestment process, during year ended March 31, 2020, MBEL, SBHL BAEL and PSRDCL had carried out independent valuation to determine the Fair Market Value (FMV) of the assets of the Company through 2 registered valuers appointed by the Board of Directors of IL & FS. The valuers had used the discounted cash flow methodology and provided the FMV. Shortfall in such FMV as compared to the carrying cost of the assets in the books of the these entities as on December 31, 2018 was recognized as impairment in the financial statements of the Company in the financial year ended March 31, 2019.
Company has carried out impairment testing of the intangible asset as March 31, 2021 based on discounting of future operating cash flow. The net present value of the future operating cash flows was more than then carrying value of the intangible asset. based on the revised traffic study report and discounting factor and hence a reversal of provision for impairment has been done during the year ended March 31, 2021 and March 31, 2023. The discount rate considered to determine net present value is based on the independent third party valuation report obtained by the holding company adjusted for company's specific borrowings rate

ii) The SPV Group has tested impairment of intangible by comparing the Value in use of the intangible asset with carrying amount where in the value in use is calculated based on present value of future cash flows expected to be derived from intangible assets. Based on the traffic survey report and technical study report for maintenance cost obtained from an independent expert agency, there is no impairment of asset during the year.

(f) The senior and other lenders have approved the restructuring of the debt of SBHL, MBEL, TRDCL, HREL & PSRDCL. Considering the restructuring of the debt, management believes that use of the going concern assumption for preparation of financial results is appropriate as the business operations of these entities will continue in foreseeable future

In respect of BAEL:
The Company has negative networth of Rs. 17378.18 Million as at September 30, 2024 and Current financial Liabilities exceeds the Current financial Assets by Rs. 10,379.73 million.
However, under the resolution framework approved by the Hon'ble NCLAT, with the necessary approvals from NHAI and lenders, the shareholding of the Company has been acquired by Roadstar Infra Investment Trust (RIIT), and the Company's entire debt has been restructured.

Pursuant to the aforesaid, management believes that use of the going concern assumption for preparation of these financial results is appropriate as the business operations of the Company will continue in foreseeable future.

(g) In respect of SBHL, during the financial year ended March 31, 2023, the lenders executed a loan agreement with restructured terms, and the debt was serviced in March 2023 in accordance with these revised terms. The senior lenders had also recovered Rs. 93.76 million post-October 15, 2018 and in accordance with the NCLT order, this amount was adjusted against the outstanding debt.

(h) Impact of Covid -19

The Government of India had announced the nationwide lock down with effect from Mar 25, 2020. The local administration of the state, has imposed ban on movement of public, across the state and imposed Sec 144 in entire state, which has resulted in significant reduction in traffic movement in the state. The authority ordered suspension of Toll operations with effect from March 25, 2020. However, the operations at Toll Plazas continued with respect to the regular maintenance of the Plazas. Tolling operations were subsequently resumed w.e.f. Apr 20, 2020. No toll revenue recognised for the period from Mar 25, 2020 to Mar 31, 2020 and period up to April 20, 2020.
State imposed lock down during the second wave of Covid-19 pandemic. Though there was no suspension of toll operations, the overall traffic was low during April and May 2021. Company has filed the claim for extension of concession period of three months in accordance with circular issued by MoRTH.

There was no major impact observed on Toll Traffic during the third wave of Covid-19 pandemic.

(i) Pursuant to the "Third Progress Report – Proposed Resolution Framework for the IL&FS Group" dated 17 December, 2018 and the "Addendum to the Third Progress Report – Proposed Resolution Framework for IL&FS Group" dated January 15, 2019 ("Resolution Framework Report") submitted by the Company to the Ministry of Corporate Affairs, Government of India which, in turn, was filed with the Hon'ble National Company Law Appellate Tribunal ("NCLAT"), the creditors of the Company were invited (via advertisement(s) dated May 22, 2019) to submit their claims as at October 15, 2018 with proof, on or before 5 June, 2019 (later extended till February 5, 2020)) to a Claims Management Advisor ("CMA") appointed by the IL&FS Group. The amounts claimed by the financial and operational creditors are assessed for admission by the CMA.

The CMA, vide their various communications to the management of the Company, have submitted their report on the status of the claims received and its admission status. The report is subject to Updation based on additional information / clarification that may be received from the creditors in due course.

Management of the SPV Group has reviewed the claims made by third parties with the CMA, and reconciled them with the books of accounts and accounted in the books of accounts appropriately

(j) In respect of BAEL, in view of NCLT orders, the Company has not serviced its debts to banks, financial institution and others. As a result of the same, there have been breach of covenants. The Banks and other have charged penal interest on defaults. The Company has not accounted for the same. Due to unforeseen circumstances, the Company has not been able to comply and report on various regulatory and other covenants. Aforesaid has resulted in downgrade of debt ratings of the Company.

(k) In respect of BAEL, as per the Minutes of Meeting with Lenders Consortium held on dated March 16, 2023, the company is to incur capital cost of Rs. 533.93 Crore for completing the remaining construction activities, these costs shall not provide any incremental revenue for the company beyond the revenue stream as of now. However, these would be required to complete the entire stretch of the project and is one of the contractual obligation of the company. The amount is as determined by the Independent Engineer of NHAI and the company is reassessing the same. The costs as and when incurred will be treated as part of the cost of the intangible assets. The Company has already awarded contract for remaining work to be executed.

l) In respect of BAEL, The National Company Law Tribunal ("NCLT"), vide order dated January 1, 2019, had allowed a petition filed by the Union of India, for re-opening of the books of accounts and re-casting the financial statements under the provisions of Section 130 of the Companies Act, 2013 for the financial years from 2012-13 to 2017-18, of Infrastructure Leasing & Financial Services Limited ("IL&FS"), and its subsidiaries namely IL&FS Financial Services Limited ("IFIN") and IL&FS Transportation Network Limited ("ITNL"), the holding Company.

During the year ended Marhc 2023, the Board of Directors of ITNL has taken on records restatement of its accounts for financial years 2014 to 2018 and approved the submission of the same to the MCA. This restatement does not affect the financial statements of the Company for the current period.

m) In respect of PSRDCL, during the financial year 2021-22, senior lenders initiated a forensic audit of the Company, conducted by an independent third party, covering the period from June 1, 2010, to March 31, 2016. The forensic audit was concluded by the lenders with the account being classified as a "Fraud Account." The Company has strongly contested this classification and has made representations based on the facts, challenging the accuracy of the forensic auditors' findings.
Despite this, it is important to note that all lenders have approved the transfer of the asset by ITNL to InvIT and have sanctioned the debt restructuring proposal. Furthermore, out of the 12 lenders, seven have upgraded the account, removing the "Fraud Account" classification. The Company is actively following up with the remaining lenders and does not anticipate any adverse impact on the financial statements as a result of this matter

42. Impact of Farmers Agitation (Kisan Aandolan)

Due to Farmers Agitation ("Kisan Aandolan"), against the Farm Bill introduced by Central Government, the toll operations at various toll plazas were suspended by farmers at various dated starting 13th January 2021. This is a Force Majeure due to indirect political event. SBHL has filed a claim with the Authority for compensation against the same. The insurance company has also been informed about compensating the loss of toll. Pending receipt of compensation, SBHL has not recognised any loss of toll revenue on account of this Force Majeure during the financial year. On 19-11-21, Central Government has announced repeal of Farm Bill and toll operations resumed on 9th December 2021. SBHL had claimed this loss under Special Contingency Policy which was not admitted by Insurance Company.

43. Balance Confirmation

Balance of trade payable and other financial Asset are subject to confirmation for SBHL.

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements
44. Debt Servicing and Interest Accrual

a) In respect of HREL, in line with the affidavit filed by Ministry of Corporate Affairs (MCA) to the Hon'ble NCLAT on May 21, 2019, the cut-off date of October 15, 2018 ("Cut-Off Date") was proposed, on account of inter alia the fact that the Hon'ble NCLAT had passed wide its order dated March 12, 2020, had upheld its interim order of October 15, 2018, which inter alia granted certain reliefs to the IL&FS Group and also restricted certain coercive actions by the creditors of the IL&FS Group.
In terms of the Resolution Framework Reports, the proposal made is that all liabilities relating to the relevant IL&FS Group Entity, whether financial (including interest, default interest, indemnity claims and additional charges), operational debt (including interest, indemnity or other claims) as well as statutory claims (including tax, employment and labour related claims), whether existing at or relating to a period prior to the Cut-Off Date should not continue accruing.
Accordingly, the interest expense were accounted on borrowings only until October 15, 2018.
Therefore, the interest expense from October 16, 2018 to March 31, 2021 were not accounted in line with above facts till March 31, 2023. This excluded any penal interest and other charges, that might be levied by the lenders.
During the financial year ended March 31, 2024, owing to restructuring process being approved by the secured lenders and related parties as lenders, HREL has accounted interest w.e.f April 1, 2021, in financial year 2022-23 as per the new terms and conditions mentioned in revised sanction letters received from secured lenders and agreement with related parties.

b) In case of PSRDCL, during the financial year ended March 31, 2024, the Company's shareholding was transferred to Roadstar Infra Investment Trust (RIIT), an InvIT, following due approvals from the lenders, the authority, and the NCLT. Pursuant to this transfer, no interest was payable to the lenders for the period from October 16, 2018, to March 31, 2021. Interest accrued up to October 15, 2018, was converted into a loan, and the lenders executed a loan agreement with restructured terms. Debt servicing under these revised terms commenced in June 2023.

Additionally, the senior lenders had recovered ₹230.48 million post-October 15, 2018, which was adjusted against the outstanding debt as per the distribution plan approved by the NCLAT. While the senior lenders have incorporated the restructuring of debt into their books, a review of the statements of account received from them indicates a variance in the balances for four out of twelve lenders. As of September 30, 2024, the net variance between the debt balances reported by the senior lenders and those recorded in the Company's books is ₹20.89 million. The Company is actively engaging with the senior lenders to reconcile and resolve this discrepancy.

Management is of the view that the resolution of these matters will not have any impact on the financial statements of the Company

c) In case of BAEL, National Company Law Appellate Tribunal ("NCLAT") had passed an order on October 15, 2018 ("Interim Order") in Company Appeal (AT) 346 of 2018, imposing moratorium on the creditors of IL&FS and its 348 group companies, which includes the Company. Further, NCLAT vide its order dated February 11, 2019 had also classified the Company under the "Red Category" based on a 12 month cash flow solvency test, indicating it is not in a position to discharge its entire Debt as and when due. Accordingly, the Company is permitted to make only those payments necessary to maintain and preserve the going concern status. This consequently also resulted in downgrade of debt ratings of the Company. NCLAT wide its order dated March 12, 2020, had upheld its interim order of October 15, 2018. The said order specifies October 15, 2018 as the date of initiation of the Resolution Process of the Company. Accordingly the Company has not accrued any interest, default interest, penal interest and any other similar charges after the said cut-off date of October 15,2018 and also not repaid any principle amount of debt due. As a result, Rs. 411.01 Million (during the period October 2018 to March 2020) recovered by the banks (towards interest and principal) from the Escrow accounts of the Company maintained with them is being treated as Receivable from banks in these financial statements. The Company has written to the banks for recoveries of the same amounts in view of moratorium extended by the October 15, 2018 Order of NCLT. These amounts have not been handed back to the Company till date. Further, the balances as confirmed by the lenders, in some cases, are not in agreement with the books of the company which is under reconciliation.
During the current financial year, further Rs. 1039.70 Million (Previous Year March 31, 2024 1935.00 Million and March 31, 2023: Rs. 411.01 Million) recovered by the banks from the Escrow accounts of the Company maintained with them. The company has disclosed the amount of such recoveries as at September 30, 2024 amounting to Rs.3385.71 Million (Previous Year March 31, 2024 2,346.01 Million and March 31, 2023: Rs. 411.01 Million) as an Amount Receivable from Bank.

d) In case of BAEL, In line with the affidavit filed by Ministry of Corporate Affairs (MCA) to the Hon'ble NCLAT on May 21, 2019, the cut-off date of October 15, 2018 ("Cut-Off Date") was proposed, on account of inter alia the fact that the Hon'ble NCLAT had passed the Order on October 15, 2018, which inter alia granted certain reliefs to the IL&FS Group and also restricted certain coercive actions by the creditors of the IL&FS Group. In terms of the Resolution Framework Reports, the proposal made is that all liabilities relating to the relevant IL&FS Group Entity, whether financial (including interest, default interest, indemnity claims and additional charges), operational debt (including interest, indemnity or other claims) as well as statutory claims (including tax, employment and labour related claims), whether existing at or relating to a period prior to the Cut-Off Date should not continue accruing. Accordingly, the interest expense are accounted on borrowings until October 15, 2018.
With the approval of NCLT, NHAI, and the lenders, post September 30, 2024, the Company's shareholding was acquired by Roadstar Infra Investment Trust (RIIT). As part of this resolution, the entire debt of the Company has been restructured. Accordingly, interest amounting to ₹ 4,008.58 million on secured senior lender borrowings, accrued for the period from April 1, 2021, to September 30, 2024, has been recognized during the current year. This includes interest on a portion of the senior debt, against which Non-Convertible Debentures (NCDs) issued post-September 30, 2024, considering an extension of the concession period by four years. Interest on unsecured group debt will be accrued starting October 17, 2024, the effective date of the Company's acquisition by RIIT.

45. Extension of Concession Period:

In case of PSRCL , the project concession period is 19 years 295 days commencing from the appointed date 28/9/2011 and the appointed date of the project was September 28, 2011. Accordingly project concession ends in September 28, 2031. As per the Clause 29.1.2, in the event Actual Average Traffic shall have fallen short of the Target Traffic (as on April 1, 2020), then for every 1% (one per cent) shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5% (one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. As per the traffic projections, there will be lower traffic as on target date and hence, the Company is eligible for extension of concession period of 3.96 years i.e. the concession period will be till July 28, 2035 including extension of 23 days on account of demonetisation. Such extension of concession period has been considered for accounting of amortisation and impairment for financial year ended March 31, 2021 and March 31, 2023. However, NHAI has granted an extension of the concession period for the Project for a total of 450 days, in response to the Company's request of equivalent to 3.96 years. The Company is currently contesting the decision made by NHAI regarding the lower extension granted. For accounting purposes, the extension of the concession period (450 days) has been considered for the amortization and impairment of the project for March 31, 2024 and period ended September 30, 2024.

In case of BAEL, the project concession period is 20 years and the appointed date of the project was April 1, 2014. Accordingly, project concession ends in March 2034. As per the Clause 29.1.2, in the event Actual Average Traffic shall have fallen short of the Target Traffic, then for every 1% (one per cent) shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5% (one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. As per the traffic projections, there will be lower traffic as on target date and hence, the Company is eligible for extension of concession period of 5 years 3 months (subject to maximum of 4 years) i.e. the concession period will be till September 2039. Such extension of concession period has been considered for accounting of amortisation, impairment and negative premium payable to NHAI. In view of this, an addition of Rs 787.35 Million was recognised as addition to Intangible asset during previous year ended March 31, 2020, being the net present value of premium payable for extended period.

In case of SBHL, the concession period for the project commenced on February 18, 2013, for a duration of 25 years, ending on February 18, 2038. As per Clause 29.1.2 of the agreement, if the Actual Average Traffic falls short of the Target Traffic as of April 1, 2020, the concession period may be extended by 1.5% for every 1% shortfall, subject to the payment of the stipulated Concession Fee. However, the total extension of the concession period is capped at 20% of the original concession period.
Accordingly, the Company filed a claim for extension, and Independent Engineer recommended an additional concession period, vide letter dated September 14, 2024, for a period of a five-years i.e. up to March 31, 2043. For accounting purposes, this five-year extension of the concession period has been considered in the amortization and impairment calculations for the project.

Roadstar Infra Investment Trust
Notes forming part of the Combined Financial Statements

46. Taxation

a) In view of amendment in Income Tax Act, for then existing clause (iih) of Explanation 1 to sub-section (2) of section 115JB by the Finance (No. 2) Act, 2019, w.e.f. 1-4-2020, SPV Group has no MAT Tax lability for the year ended March 31, 2021, 2022 and 2023

b) No deferred tax liability has been created as the reversal of the same will take place during the tax holiday period

47. Additional Regulatory Information required as per Schedule III:

a) The SPV Group does not have Immovable Property whose title deed are not held in the name of SPV Group .
b) The SPV Group does not have any investment property, hence the requirement regarding disclosure and valuation by a registered valuer as defined under rule 2 of Companies (Registered Valuers and Valuation) Rules, 2017 is not applicable.

c) The SPV Group has not revalued its Property, Pant and Equipment (including Right of Use assets) or intangible assets or both during the year.

d) The SPV Group has not given any Loans or advances in the nature of loans to specified persons.
e) The SPV Group does not have any capital work in progress and intangible assets under development
f) Benami property : There are no proceedings being initiated or are pending against the SPV Group for holding any benami property under the Benami Transactions (Prohibition) Act, 1988(45 of 1988) and rules made thereunder.
g) The HREL had issued secured (including the security of current assets.) listed non-convertible debentures in FY 2016-17 which were subscribed by banks and Financial Institution. SPV Group is not required to file any monthly or quarterly returns, except the intimation of quarterly results to stock exchanges by HREL

h) Wilful Defaulter : The SPV Group (except PSRDCL) has not been declared as wilful defaulter by any bank or financial institution or other lender. In case of PSRDCL, the lenders of the Company has issued SCN for declaration as wilful defaulter, which Company is strongly contesting the same

i) The SPV Group does not have any transactions or relationship with Struck Off Companies.
j) The SPV Group has Registered all the charges against its assets with Registrar of Companies (ROC) . There were no satisfaction of charge with ROC is pending

k) The SPV Group does not have any subsidiary SPV Group or step down companies .
l) This being special purpose financial statement, ratio analysis has not been given
m) There are no Scheme of Arrangements during the year.
n) The SPV Group has not advanced or loaned or invested funds to any other person(s) or entity(ties), including foreign entities (Intermediaries) from borrowed funds or share premium or any other source or kind of funds.
o) Additional information to be disclosed by way of Notes to Statement of Profit and Loss.
i) The SPV Group does not have any undisclosed income
ii) The SPV Group has not traded or invested in any kind of Crypto Currency or Virtual Currency.

48. Modification Loss / Gain

In HREL, due to delay in receipt of withheld annuity, the company has recorded a modification Loss of Rs 0.09 mn (March 31, 2024 Modification loss : Rs. 22.84 mn, March 31, 2023 Modifcation loss : 403.25 mn, Modification Gain : 17.06 mn) during the current year ended September 30, 2024, in accordance with the principles of IND-AS 109.

49. Other Matters

Information with regard to other matters specified in Schedule III to the act is either NIL or not applicable to the Group for the year.

50. Previous Year Comparatives

Previous year figures have been reclassified/regrouped wherever necessary to confirm to current year classification

In terms of our report attached of even date
For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
ICAI Firm Registration No. : 105146W/W-100621

Hasmukh B. Dedhia
Partner
Membership No. : 033494

Place: Mumbai
Date : 04 January 2025

For and on behalf of Roadstar Investment Managers Limited
(Investment Manager of Roadstar Infra Investment Trust)

S K Mitra
Director
DIN - 08029961

Lubna Usman
Director
DIN - 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)
(M No: ACS 19792)

Place: Mumbai
Date : 04 January 2025

PROJECTIONS OF REVENUE FROM OPERATIONS AND CASH FLOW FROM OPERATING ACTIVITIES

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AUDITORS' REPORT ON PROJECTIONS OF REVENUE FROM OPERATIONS AND CASH FLOWS FROM OPERATING ACTIVITIES

To,
The Board of Directors,
Roadstar Investment Managers Limited (the "Investment Manager") in its capacity as an Investment Manager of Roadstar Infra Investment Trust (the "Issuer" or the "Trust")
IL&FS Financial Centre
Plot C, G Block
Mumbai 400051

1. We, KKC and Associates LLP (earlier Khimji Kunverji & Co LLP), being the statutory auditors of the Trust, have been approached by the management of the Investment Manager for issuing this report in terms of the Letter of Engagement dated 01 December 2023. We have carried out our verification procedures in accordance with Standard on Assurance Engagement 3400, "The examination of Prospective Financial Information" ("SAE 3400") issued by the Institute of Chartered Accountants of India ("ICAI").

2. We have examined the accompanying statements ("the Projection information"), which are stamped and initialled by us for identification purpose only, of projections of revenue from operations and cash flows from operating activities and the underlying assumptions of Roadstar Infra Investment Trust (the "Issuer" or the "Trust") and its subsidiaries and joint venture, comprising of:

   I. Moradabad Bareilly Expressway Limited (MBEL)
   II. Sikar Bikaner Highway Limited (SBHL)
   III. Hazaribagh Ranchi Expressway Limited (HREL)
   IV. Thiruvananthapuram Road Development Company Ltd (TRDCL)
   V. Pune Sholapur Road Development Co Ltd (PSRDCL)
   VI. Barwa Adda Expressway Ltd (BAEL)

   (collectively, the "group") as described in Note (a) to project information i.e. the prospective combined financial information for the years ending March 31, 2026, 2027 and 2028.

3. **Responsibilities of management and Assumptions in the Projection Information**

   3.1 The preparation and presentation of the projections including the underlying assumptions and the basis of combination, set out in Note (b) to the Projection Information, is the responsibility of the Investment Manager and has been approved by the Board of Directors of the Investment Manager. Our responsibility is to examine the evidence supporting the assumptions (excluding the hypothetical assumptions) and other information in the Projection Information.

   3.2 The assumptions used for the preparation of these Statement of Projections have been provided to us by the Investment Manager to the Trust and relied upon by us as regards certain matters, including but not limited to estimates as under:
   a) Technical estimates of expected traffic.
   b) Future toll tariff.
   c) Changes in wholesale price index based on traffic study reports.
   d) Estimated future expenditure for major maintenance of roads.

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e) Assumptions/ expectations pertaining to future events and factors such as country's gross domestic product growth; general economic conditions; current and future traffic mix; per capita income and demographic changes; development of alternate/ feeder routes; alternate means of transportation; fuel prices; reduction in commercial or industrial activities in the regions served by the roads and natural disasters; government polices around mining, extraction of minerals etc.

All the above are based on reports issued by various third-party external experts.

Variation of any of the above factors may cause differences in the actual traffic volumes and monetary estimates, which may be materially different from the estimates thereof.

3.3 Our responsibility does not include verification of the accuracy of projections (including quantitative details). Therefore, we do not vouch for the accuracy of the same.

4. The Projection Information have been prepared for the proposed private placement of units (the "Issue") of the Trust in accordance with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended ("InvIT Regulations"). The projections have been prepared using a set of assumptions that include hypothetical assumptions about future events and the Investment Manager's actions that are not necessarily expected to occur, as set out in Note (b) to the Projection Information and has been approved by the Board of Directors of the Investment Manager. Consequently, users are cautioned that the Projection Information may not be appropriate for purposes other than that described above.

5. We have performed verification procedures in accordance with the Guidance Note on Audit Reports and Certificates (Revised 2016) for Special Purposes issued by ICAI, which requires that we comply with the ethical requirements of the Code of ethics issued by the ICAI. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that Performs Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements.

6. This Report is required by InvIT Regulations requiring the independent auditor to issue a report on the projections and is issued for the sole purpose of the proposed Issue in accordance with the InvIT Regulations.

7. We have carried out our examination of the Projection Information on a test basis. Based on our examination of the evidence supporting the assumptions (excluding the hypothetical assumptions), nothing has come to our attention which causes us to believe that these assumptions do not provide a reasonable basis for the Projection Information assuming that the Trust, post offer capital structure and corporate structure, are in existence from October 06, 2020, as more fully described in Note (b) to the basis of preparation of the Projection Information.

8. Further, in our opinion, nothing has come to our attention that causes us to believe, that the Projection Information read with the basis of preparation and notes thereon, has not been properly prepared on the basis of the assumptions as set out in Note (b) to the Projection Information, to the extent applicable, with the accounting policies and the basis of preparation used for the preparation of the historical special purpose combined financial statements of Roadstar Infra Investment Trust which is included in the Draft Placement Memorandum (the "DPM"). Even if the events anticipated under the hypothetical assumptions described above occur, actual results are still likely to be different from the projection since other anticipated events frequently do not occur as expected and the variation may be material.

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9. This report is addressed to and is provided to enable the Investment Manager to include it in the DPM in connection with the Issue of units of Roadstar Infra Investment Trust and the Projection Information may not be meaningful for any other purpose. It should not be used, referred to or distributed for any other purpose or by any person other than the addressees of this report. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

For **KKC & Associates LLP**
Chartered Accountants
(formerly Khimji Kunverji & Co LLP)
Firm Registration Number: 105146W/W100621

Hasmukh B Dedhia
Partner
ICAI MembershipNo:033494
UDIN: 25033494BMJKAI7258

Place: Mumbai
Date: 04 January 2025

Statement of projection of revenue from operations

INR Million

Particulars	For the Year ending March 31, 2026	For the Year ending March 31, 2027	For the Year ending March 31, 2028
A. Combined Projected revenue from operations			
Roadstar Infra Investment Trust	**10,752.7**	**11,728.2**	**13,399.2**
B. Project wise Projected revenue from operations			
I. Moradabad Bareilly Expressway Limited (MBEL)	3,769.3	4,127.8	4,612.3
II. Sikar Bikaner Highway Limited (SBHL)	974.6	1,093.2	1,221.3
III. Hazaribagh Ranchi Expressway Limited (HREL)	329.4	234.0	635.5
IV. Pune Sholapur Road Development Co Ltd (PSRDCL)	2,626.8	2,899.6	3,190.2
V. Barwa Adda Expressway Ltd (BAEL)	3,052.6	3,373.6	3,739.9

See accompanying notes forming an integral part of the Projection Information

For and on behalf of Board of Directors of Roadstar Investment Managers Limited in its capacity as an Investment Manager of Roadstar Infra Investment Trust

S K Mitra
Director
DIN: 00029961

Lubna Usman
Director
DIN: 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)

Place: Mumbai
Date: 4th January 2025

Roadstar Infra Investment Trust

MKC & associates LLP
UN
Chartered Accountants

Statement of projection of cash flow from operating activities

INR Million

Particulars	For the Year ending March 31, 2026	For the Year ending March 31, 2027	For the Year ending March 31, 2028
A. Combined Projected cash flow from operating activities			
Roadstar Infra Investment Trust	**9,265.7**	**10,722.3**	**11,845.9**
B. Project wise Projected cash flow from operating activities			
I. Moradabad Bareilly Expressway Limited (MBEL)	3,270.3	3,806.2	4,274.6
II. Sikar Bikaner Highway Limited (SBHL)	742.2	849.3	972.7
III. Hazaribagh Ranchi Expressway Limited (HREL)	1,137.9	1,130.9	1,118.8
IV. Pune Sholapur Road Development Co Ltd (PSRDCL)	2,416.5	2,681.9	2,961.7
V. Barwa Adda Expressway Ltd (BAEL)	2,020.0	2,578.0	2,860.3
C. Trust Standalone			
I. Roadstar Infra Investment Trust	(321.2)	(324.0)	(342.2)

See accompanying notes forming an integral part of the Projection Information

For and on behalf of Board of Directors of Roadstar Investment Managers Limited in its capacity as an Investment Manager of Roadstar Infra Investment Trust

S K Mitra
Director
DIN: 00029961

Lubna Usman
Director
DIN: 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)

Place: Mumbai
Date: 4th January 2025

Notes to the Projection Information of Roadstar Infra Investment Trust

a) General Information

Roadstar Infra Investment Trust (the "Trust") was settled on October 06, 2020, as a contributory irrevocable trust under the provision of the Indian Trusts Act, 1882. The Trust was registered as an infrastructure investment trust under the Securities Exchange Board of India ("SEBI") (Infrastructure Investment Trust) Regulations, 2014, as amended read together with circulars and guidelines issued thereunder (the "SEBI InvIT Regulations") on December 22, 2020, having registration number IN/InvIT/20-21/0015. The registered office address of the Trust is 6th Floor, IL&FS Financial Centre, Plot C, G Block, Bandra Kurla Complex, Mumbai 400051.

- Roadstar Infra Private Limited (the "Sponsors"), are companies registered in India are the Sponsor of the Trust.
- The Trustee to the Trust is Axis Trustee Services Limited (the "Trustee").
- Investment manager for the Trust is Roadstar Investment Managers Limited (the "Investment Manager").

The investment objective of the Trust is to carry on the activities of an infrastructure investment trust, as permissible under the SEBI InvIT Regulations. The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. All the Trust's Road projects are implemented and held through special purpose vehicles ("SPVs" together with the Trust referred to as " Trust").

Under the share purchase agreements entered amongst the Sponsors, the Trustee, the Investment Manager, and the relevant SPVs and their respective shareholders, Roadstar Infra Investment Trust has acquired / to be acquired 100% of fully paid-up equity shares of the SPVs except

I. TRDCL where 50% of fully paid-up equity shares has been acquired from their respective holders who has been issued and allotted units of Roadstar Infra Investment Trust.
II. PSRDCL where 90.91 % of fully paid-up equity shares has been acquired from their respective holders who has been issued and allotted units of Roadstar Infra Investment Trust.
III. HREL where 99.99 % of fully paid-up equity shares has been acquired from their respective holders who has been issued and allotted units of Roadstar Infra Investment Trust.
IV. BAEL where 100 % of fully paid-up equity shares has been acquired on October 17, 2024 from their respective holders who has been issued and allotted units of Roadstar Infra Investment Trust.

SPV wise profile has been indicated in below table:

Name of SPV	Residual Concession Life**	Shareholding by Trust*	Proposed Shareholding by Trust	Nature of Proposed Investment	Status	Principal Activities	Date of incorporation	Date of Commercial operation
MBEL	11.4 Years	100.00%	100.00%	Subsidiary	Operating	Construction and operation of road including toll collection	11-01-2010	06-01-2015
SBHL	18.5 Years	100.00%	100.00%	Subsidiary	Operating	Construction and operation of road including toll collection	13-04-2012	10-10-2015
HREL	3.8 Years	99.99%	99.99%	Subsidiary	Operating	Construction and operation of road including right to receive annuity	19-03-2009	15-09-2012
TRDCL	6.7 Years	50.00%	50.00%	Joint Venture	Operating	Construction and operation of road including right to receive annuity	01-03-2004	Ph 1 – 04-07-2007 Ph 2 – 22-02-2012 Ph 3 – 20-02-2015 Ph 4 – 31-05-2016
PSRDCL	11.0 Years	90.91%	90.91%	Subsidiary	Operating	Construction and operation of road including toll collection	21-08-2009	23-08-2013
BAEL	13.7 Years	#	100.00%	Subsidiary	Operating	Construction and operation of road including toll collection	23-04-2013	13-10-2017

* as on 30th Sep 2024

** Residual concession life has been considered including estimated extension period based on target traffic.

Post September 30,2024, the Trust has completed the acquisition of 100% ownership, following the necessary approvals received from the NHAI.

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Roadstar Infra Investment Trust

The prospective combined financial information of the Trust comprises of the projected revenue from operations and projected cash flows from operating activities of Trust's subsidiaries comprising of

I. Moradabad Bareilly Expressway Limited (MBEL)
II. Sikar Bikaner Highway Limited (SBHL)
III. Hazaribagh Ranchi Expressway Limited (HREL)
IV. Pune Sholapur Road Development Co Ltd (PSRDCL)
V. Barwa Adda Expressway Ltd (BAEL)

Interests in below mentioned joint venture are accounted for using the equity method and hence has not been considered in Projected Revenue from operation and projected cash flow from operating activities.

Name of SPV	Description of asset	Current shareholding
TRDCL	Set up to develop, widen, strengthen, operate, construct and maintain the Thiruvanthapuram City Roads Improvement Project (TCRIP) under the Annuity Concession Agreement	1) IL&FS Transportation Networks Limited – 50% (up to 18th December 2022) The Trust (from 19th December 2022) 2) Punj Lloyd Limited – 50%

b) Basis of preparation of Projection Information

The statements of projection of revenue from operations and projection of cash flows from operating activities of the subsidiaries as stated in Note a) above and the Trust for the financial years ending March 31, 2026, 2027 and 2028 along with the underlying assumptions and other explanatory information (the "Projection Information") have been compiled by the Investment Manager to the Trust solely for the purpose of inclusion in the Placement Memorandum and final Placement Memorandum in continuation with the draft private placement of the units of the Trust filed. Therefore, Projection Information should not be used or relied upon for any purpose other than described above.

The Projection Information have been prepared based on the accounting policies used for preparation of the historical Special Purpose Combined Financial Statements of the Trust as required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended including circulars and guidelines issued thereunder ("InvIT Regulations"), which are prepared in accordance with accounting principles of Indian Accounting Standards ("Ind AS") as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended prescribed under Section 133 of the Companies Act, 2013 read with InvIT Regulations and the Guidance Note on Combined and Carve- Out Financial Statements issued by the Institute of

Chartered Accountants of India. Projected cash flow from operating activities have been calculated using the direct method under Ind AS 7 - Statement of Cash Flows and is computed by deducting the projected operating expenses and income taxes from the projected revenue from operations and adjusted for projected non- cash expenses (if any). Projected cash flow from operating activities do not include any items pertaining to financing or investing in nature.

The Projection Information are presented in Indian Rupees. All values are rounded to the nearest million, unless otherwise indicated.

The Trust follows March 31st as its accounting year end. Accordingly, the Projection Information are prepared for the financial years ending March 31, 2026, March 31, 2027 and March 31, 2028 ('Projections Period').

It is clarified that the Projection Information have been prepared on the basis of a mixture of best-estimate (i.e. assumptions as to future events which are expected to take place and the actions expected to take place as of the date the information is prepared) and hypothetical assumptions (about future events and actions which may or may not necessarily take place).

Projection Information contains forecasts and projections that relate to future events including hypothetical assumptions, which are, by their nature, subject to significant risks and uncertainties. Events and circumstances may not occur as expected. Even if the events anticipated under the hypothetical assumptions described in the Projection Information occur, actual results are still likely to be different from those stated in the Projection Information since other anticipated events frequently do not occur as expected and the variation may be material. The actual results may therefore differ materially from those forecasted and projected.

These Projection Information has been adopted by the Board of Director of the Investment Manager on 04/01/2025.

A. Significant assumptions

The Projection Information has been prepared based on significant assumptions including hypothetical assumptions summarized below. The Investment Manager considers the assumptions to be appropriate and reasonable as at the date of the reporting. However, the investors should consider these assumptions as well as the Projection Information and make their own assessment of the future performance of the Trust.

The Investment Manager has obtained reports from a Independent third-party traffic consultant expert ("GMD Consultants for MBEL, Segmental Consulting & Infrastructure advisory P Ltd for SBHL and PSRDCL, HBS Infra Engineers India P Ltd for BAEL) ("Traffic Consultant") in assessment of the assumptions, market fundamentals, industry drivers and outlook amongst other things for the preparation of the Projection Information. The assumptions used in the Projection Information by the Investment Manager are substantially in line with the information and assumptions as per the analysis of Traffic Consultant.

The projections of the Trust have been prepared by combining the projections of revenue from operations and cash flows from operating activities of the Trust and SPVs, eliminating transactions between the Trust and SPVs and after considering the following:

I. REVENUE FROM OPERATIONS:

The SPVs' revenue from operations primarily consists of as below:

- For operational Toll Projects: Income from toll collection (Refer Para I (a))
- For under construction Toll projects: Income from toll collection and construction income (Refer Para I (a), (b))
- For operational Annuity Projects: O&M Income, Finance Income and Overlay Income derived from financial assets. (Refer Para I (c), (d), (e), (f))

a. Toll income:

The base data for the projections for toll income is based on the actual traffic data and tariff rates for the financial year 2023-24. Key variables for toll revenue growth are traffic growth, the wholesale price index ('WPI') which are based on Management estimates and details of the assumptions are as set forth below:

Project*	FY 2025-26	FY 2026-27	FY 2027-28
	Average Traffic Growth Rate (including diversion)		
MBEL	4.98%	6.12%	5.45%
SBHL	6.56%	5.67%	5.71%
PSRDCL	5.38%	3.93%	3.94%
BAEL	5.45%	5.47%	5.49%

* No assumptions involved for HREL and TRDCL since it receives fixed annuity income from NHAI / GOK.

WPI Assumptions	Reference WPI for Rate Revision (December of Previous Year) MBEL, SBHL and PSRDCL	Reference WPI for Rate Revision (December of Previous Year) BAEL	Reference Month
FY 2025-26	3.5%	3.5%	Dec 2024
FY 2026-27	6.5%	5.0%	Dec 2025
FY 2027-28	6.5%	5.0%	Dec 2026

b. Construction income:

All the Project SPVs are operational, and except in the case of BAEL, no major capital expenditure is expected and accordingly considered for arriving at construction income. Contract revenue associated with the construction of road is derived at cost of work expected to be performed on the contract plus proportionate margin (assumed at 5.25%), where required, using the percentage of completion method. Percentage of completion is the proportion of cost of work performed to date,

to the total estimated contract costs. Percentage of completion is determined based on the proportion of actual cost incurred to the total estimated cost of the project. The percentage of completion method is applied on a cumulative basis in each accounting period to the current estimates of contract revenue and contract costs. Contract cost include projected costs that relate directly to the specific contract and allocated cost that are attributable to the Construction of the road.

The cost of construction assumed is based on requirements as per the respective concession agreements and in line with management estimates based on current market practice. It is assumed that the construction will be completed within the estimated timelines considered for the purpose of these projections. The details of construction income assumed is as follows:

INR MN

SPV	FY 2025-26	FY 2026-27	FY 2027-28
BAEL	(822.5) *	-	-

*(822.5) assumed refund of GST on construction income on account of change in law.

c. Annuity Income from NHAI for Hazaribagh Ranchi Expressway Limited (HREL):
Annuity Income from PWD, GOK for Thiruvananthapuram Road Development Co Ltd (TRDCL):
HREL / TRDCL has the right to receive fixed annuity payments from NHAI / PWD, GOK during the concession period and has adopted financial asset model as prescribed by Appendix to Ind AS 115 "Revenue from Contracts with Customers" "Service Concession Arrangements". The key inputs of the financial asset model comprise of revenue inflows (annuity), projected expenses to earn the revenue, estimations on cost to build and maintain the asset, interest obligations based on financing pattern and other operational efficiencies. These inputs are based on circumstances existing and management judgement / assumption on the future expectations based on current situations. Judgements include estimates on changes in interest rates, cost inflation, government policy changes, etc. which are reviewed periodically by the management.

d. Finance Income on annuity receivable from NHAI / GOK
HREL and TRDCL have right to receive annuity payments from NHAI / GOK during the concession period and has adopted financial asset model as prescribed in para (I(c) Ind AS 115 "Revenue from Contracts with Customers" "Service Concession Arrangements".

e. Operation and Maintenance Income: Revenue from operation and maintenance of road based on operation and maintenance cost has been shown under revenue from operation in relation to HREL and TRDCL as explained in para (I(c) Ind AS 115 "Revenue from Contracts with Customers" "Service Concession Arrangements."

f. Periodic Maintenance Income: Revenue from periodic maintenance of road based on periodic maintenance cost has been shown under revenue from operation in relation to HREL and TRDCL as explained in para (I(c) Ind AS 115 "Revenue from Contracts with Customers" "Service Concession Arrangements"

II. CASH FLOW FROM OPERATION:

The SPVs' cash flow from operations primarily consists of as below:

- For operational Toll Projects: Income from toll collection, Operation & Maintenance Cost, Admin expense, change in working capital, taxes. Refer para I (a), II (a), (c), (f), (g)

Roadstar Infra Investment Trust

- For under construction Toll projects: Income from toll collection, NHAI Premium Paid, Operation & Maintenance Cost, Admin expense, change in working capital, taxes. Refer para I (a), II (a), (b), (c), (f), (g)
- For operational Annuity Projects: Annuity Receipts, Operation & Maintenance Cost, Admin expense, change in working capital, taxes. (Refer Para I (c) II (a), (c), (f), (g))
- For RIIT Trust: IM Fee, PM Fee, InvIT expense (Refer II (d) (e)

a. **OPERATING AND MAINTENANCE COST**

The operating and maintenance cost includes routine maintenance, manpower costs and operational expenses, including, but not limited to, road and site work expenses, employee benefit expenses and other operating and maintenance costs.

Those costs are projected based on management estimates in line with the technical report (the "Technical Report") provided by the technical consultant for each of the Project SPVs

The projected operating and maintenance cost corresponds with the projected traffic and is primarily based on the currently available information on actual operating and maintenance cost associated with the operation of the Project SPVs.

Based on the concession agreements, the potential periodic / major maintenance cost is provided for in the Statement of profit and loss for each year, and in the year of actual expenditure the same is adjusted against the provision created for the same. The projections do not envisage any unanticipated expenses which may be incurred due to any unforeseen circumstances.

Details of assumptions are as follows:

Particulars	Descriptions
Operational and Maintenance Expenditure	O&M expense: escalation at 5% per annum
Major maintenance expenditure	Major Maintenance Expense – Escalation at 5% per annum

The summary of projection of operation and maintenance cost is given below:

INR Million

Particulars	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**
Roadstar Infra Investment Trust (Combined)			
Operation & Routine Maintenance	1,168.09	1,224.60	1,271.48
Major Maintenance	1,513.84	635.24	1,526.84
Moradabad Bareilly Expressway Limited (MBEL)			
Operation & Routine Maintenance	291.17	305.72	321.01
Major Maintenance	-	15.00	27.17
Sikar Bikaner Highway Limited (SBHL)			
Operation & Routine Maintenance	214.75	225.49	236.76
Major Maintenance	466.72	30.00	-

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Roadstar Infra Investment Trust

Particulars	FY 2025-26	FY 2026-27	FY 2027-28
Hazaribagh Ranchi Expressway Limited (HREL)			
Operation and Routine Maintenance	125.04	131.29	142.59
Major Maintenance	-	-	419.89
Thiruvananthapuram Road Development Co Ltd (TRDCL)			
Operation and Routine Maintenance	48.18	48.70	32.05
Major Maintenance	-	170.27	21.00
Pune Sholapur Road Development Co Ltd (PSRDCL)			
Operation and Routine Maintenance	192.61	202.24	212.35
Major Maintenance	485.49	-	-
Barwa Adda Expressway Ltd (BAEL)			
Operation and Routine Maintenance	296.34	311.16	326.72
Major Maintenance	561.63	419.97	1,058.78

* Major Maintenance has been considered as cash flow from Investing activity.

b. Premium paid to National Highway Authority of India (NHAI)

As per concession agreement, BAEL are obliged to pay an annual amount of premium to NHAI. Total premium payable as per concession agreement has been capitalized as Intangible Assets.

c. Admin Expense

Admin expenses are included as part of the operating expenses of SPVs.

d. InvIT expenses

The Trust expenses are mainly projected based on the terms and conditions of the relevant agreements and / or based on Management's experience and judgement. The nature for the Trust expenses is described below:

1) Investment Manager fee

The Investment Manager is entitled to Management Fees shall be calculated annually and shall be an amount equal to 107.00 % (one hundred-and-seven per cent) of the costs incurred by the Investment Manager in providing the investment management services to the Trust under the Investment Management Agreement. For the purposes of this proposal, "costs" shall include all manpower expenses, administrative expenses, audit fees and operating expenses that may be, or are, debited to the Investment Manager's statement of profit and loss, excluding depreciation.

2) Project manager fee

The Project Manager is entitled to a Project Manager fee to be calculated @ 1.5% per annum, exclusive of applicable taxes, of the consolidated gross O&M and MM expense of the Trust at

KKC & Associates LLP Chartered Accountants
Roadstar Infra Investment Trust

the end of the reporting period.

e. Other InvIT expenses:

These include the other operating expenses of the InvIT. It is escalating at the rate of 5% of previous year.

f. Taxes

Current income tax is measured at the amount expected to be recovered from, or paid to, the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in India where the Trust operates and generates taxable income.

Certain SPVs are eligible for deduction under section 80IA of the Income Tax Act, 1961 for ten consecutive years. The tax is calculated under MAT provisions of Section 115JB of the Income Tax Act, 1961 based on the book profits of the Project SPVs. Minimum Alternate Tax (MAT) paid in accordance with the tax laws, which gives future economic benefits in the form of adjustment to future income tax liability, is considered as an asset if there is convincing evidence that the entity will pay normal income tax.

The Trust will receive interest and dividend income from the SPVs, which is considered exempt under the Income Tax Act, 1961. Hence, no income tax expense/cash flow is assumed during the projection period (except income tax on treasury income). The transaction of receipt of interest income will be eliminated in the Consolidated Statement of Profit and Loss and in the Consolidated Statement of Cashflows.

g. Changes in working capital.

The entire collection of tolls is in cash and routine expenses are in cash or a credit period is available. In these cases, the effective working capital deployed is relatively small or negative in certain instances. Further we believe the working capital is stable and not expected to vary drastically over a period. The impact of changes in working capital has been considered in the projected cash flows.

h. Other assumptions

a. The initial portfolio of SPVs remains unchanged through the Projection Period.
b. No further assets are acquired or divested during the Projection Period.
c. It has been assumed that no outflow on account of any litigation related matters including current pending litigations/contingent liabilities is expected to become due during the Projection Period.
d. There will be no material change in taxation legislation or other applicable legislation.
e. It has been assumed that no liability or liquidated damages on account of default in concession agreement shall devolve upon the Project SPVs during the Projections Period.
f. The relevant tax exemptions, tax remissions, and preferential tax treatments granted remain valid and applicable and that the terms and conditions thereto are complied with.
g. The Projections are based on assumptions and are subject to several factors. Investors should be aware that future events, including actual traffic growth rates, cannot be predicted with

Chartered Accountants
Roadstar India Investment Trust

any certainty and there may be deviations from the figures projected in the Projection Information.

h. The Projections have been prepared based on the Traffic Report's for traffic volume growth rates.

For and on behalf of Board of Directors of Roadstar Investment Managers Limited in its capacity as an Investment Manager of Roadstar Infra Investment Trust

S K Mitra
Director
DIN: 00029961

Lubna Usman
Director
DIN: 08299976

Danny Samuel
(Chief Executive Officer)

Milind Gandhi
(Chief Financial Officer)

Jyotsna Matondkar
(Company Secretary)

Place: Mumbai
Date: 4th January 2025

Roadstar Infra Investment Trust

KKC & Associates LLP
Chartered Accountants

MATERIAL CONTRACTS AND DOCUMENTS FOR INSPECTION

The following contracts, which are or may be deemed material have been entered or are to be entered into in due course. These contracts and also the documents for inspection referred to hereunder, may be inspected by Eligible Creditors at the principal place of business of the Trust, from 10:00 A.M. to 5:00 P.M., on all Working Days from the date of filing this Placement Memorandum until the date of listing of the Units pursuant to this Unit Distribution. Any of the contracts or documents mentioned in this Placement Memorandum may be amended or modified at any time if so required in the interest of the Trust or if required by the other parties, without reference to the Unitholders, subject to compliance with applicable law and the InvIT Documents.

1. Trust Deed entered into between the Settlor and the Trustee dated October 6, 2020, as amended.

2. SEBI registration certificate for the Trust bearing number IN/InvIT/20-21/0015 dated December 22, 2020 as an infrastructure investment trust.

3. Investment Management Agreement entered into between the Trustee (acting on behalf of the Trust) and the Investment Manager dated October 23, 2020, as amended.

4. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and HREL dated December 23, 2022.

5. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and SBHL dated March 25, 2022.

6. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and MBEL dated December 24, 2021.

7. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and TRDCL dated December 23, 2022.

8. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and PSRDCL dated May 18, 2023.

9. Project implementation and management agreement entered into between the Trustee (acting on behalf of the Trust), the Investment Manager, the Project Manager, and BAEL dated October 23, 2024**.**

10. Tripartite agreement dated October 8, 2021, among NSDL, the Trust, and the Registrar.

11. Tripartite agreement dated October 28, 2021, among CDSL, the Trust, and the Registrar.

12. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and HREL dated December 6, 2022.

13. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and TRDCL dated December 6, 2022.

14. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and MBEL dated December 6, 2021.

15. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and SBHL dated March 15, 2022.

16. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and PSRDCL dated March 29, 2023.

17. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and MBEL dated May 29, 2024.

18. Share purchase agreement entered into between the IL&FS Transportation Networks Limited, the Investment Manager, the Trustee (acting on behalf of the Trust) and BAEL dated October 11, 2024.

19. Placement Agreement entered into among the Investment Manager, the Trustee (acting on behalf of, and in its capacity as a trustee to, the Trust), the Sponsor, the Project Manager, the Placement Agent and the Distributing Unitholders, dated April 2, 2024.

20. Certified copies of the updated Memorandum and Articles of Association of the Investment Manager as amended from time to time.

21. Board resolution of the Investment Manager dated April 2, 2024, authorising this Unit Distribution.

22. Consents from the (i) Placement Agent; (ii) Legal counsel to the Trust as to Indian law; (iii) Legal Counsel to the Placement Agent as to Indian Law; (iv) Valuer; (v) Registrar; (vi) Compliance Officer of the Trust; (vii) Traffic Consultants; (viii) Technical Consultants; and (ix) Auditors.

23. Audited Combined Financial Statements and the report dated January 4, 2025 thereon.

24. Summary financial statements of the Sponsor for financial years ended March 31, 2024, March 31, 2023 and March 31, 2022.

25. Summary financial statements of the Investment Manager for the period ended March 31, 2024, March 31, 2023 and March 31, 2022.

26. Projections of Revenue from Operations and Cash Flow from Operating Activities and the report dated January 4, 2025 thereon.

27. The statement of tax benefits dated February 11, 2024, from the Auditors.

28. Letters received from SEBI dated September 2, 2020; December 3, 2021; June 23, 2022; June 7, 2023; March 20, 2024 and July 24,2024 that grant exemptions to the Trust from the strict enforcement of certain provisions of the InvIT Regulations and the InvIT Master Circular.

29. NCLAT orders dated March 12, 2020; May 31, 2022; July 6, 2022; January 19, 2023; February 13, 2023; April 26, 2023 and May 18, 2023 in relation to the Resolution Framework.

30. NCLT orders dated October 1, 2018; September 15, 2021; and October 14, 2022 in relation to the Resolution Framework.

31. In-principle listing approval dated July 22, 2024 issued by the NSE, extended by way of letters dated October 28, 2024 and February 10, 2025.

32. In-principle listing approval dated July 22, 2024 issued by the BSE, extended by way of letters dated November 7, 2024 and February 10, 2025.

33. Corporate governance policies of the Investment Manager.

34. Concession Agreement dated June 29, 2012 entered into between SBHL and the Governor of Rajasthan acting through the Chief Engineer(NH), Public Works Department, Government of Rajasthan, as amended or supplemented.

35. Concession Agreement dated February 19, 2010 entered into between MBEL and the National Highways Authority of India.

36. Concession Agreement dated March 16, 2004 entered into between TRDCL and the Kerala Road Fund Board, Executive Engineer, Public Works Department, Government of Kerala.

37. Concession Agreement dated May 8, 2013 entered into between BAEL and the National Highways Authority of India.

38. Supplementary Concession Agreement dated January 9, 2025 entered into between BAEL and the National Highways Authority of India.

39. Concession Agreement dated October 8, 2009 entered into between HREL and the National Highways Authority of India.

40. Concession Agreement dated September 30, 2009 entered into between PSRDCL and the National Highways Authority of India, as amended.

41. Settlement Agreement dated September 30, 2024 entered into between National Highways Authority of India and Barwa Adda Expressway Limited.

42. ECB Unit Escrow Agreement dated January 30, 2025 entered into between the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, IDBI Trusteeship Services Limited and KFin Technologies Limited.

43. Unit Escrow Agreement dated January 30, 2025 entered into between the Trustee, the Investment Manager, IL&FS, ITNL, IFSL, SCOL, and KFin Technologies Limited.

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Jagadip Narayan Singh
Independent Director

Date: February 11, 2025
Place: Delhi

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Dhanraj Tawade
Non-Executive Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Rajeev Uberoi
Independent Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Preeti Grover
Independent Director

Date: February 11, 2025
Place: Delhi

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Lubna Usman
Non - Executive Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Investment Manager and the Project SPVs is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Investment Manager and the Project SPVs are material, true, correct, not misleading and adequate.

For **Roadstar Investment Managers Limited**

Subrata Kumar Atindra Mitra
Independent Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group are material, true, correct, not misleading and adequate.

For **Roadstar Infra Private Limited**

Rakesh Chatterjee
Non- Executive Director

Date: February 11, 2025
Place: Delhi

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group are material, true, correct, not misleading and adequate.

For **Roadstar Infra Private Limited**

Jayashree Ramaswamy
Non - Executive Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Placement Memorandum in relation to the Sponsor, its Associates and the Sponsor Group are material, true, correct, not misleading and adequate.

For **Roadstar Infra Private Limited**

Sabina Bhavnani
Non - Executive Director

Date: February 11, 2025
Place: Mumbai

DECLARATION

The Trustee hereby declares and certifies that all relevant provisions of the InvIT Regulations, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Placement Memorandum is contrary to the applicable provisions of the InvIT Regulations, the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Trustee further certifies that all the statements and disclosures in this Placement Memorandum are material, true, correct, not misleading and adequate.

SIGNED BY THE TRUSTEE
For **AXIS TRUSTEE SERVICES LIMITED**

_____
Hardik Shah

Date: February 11, 2025
Place: Mumbai

DECLARATION

IL&FS Financial Services Limited, being a Distributing Unitholder hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) as applicable, have been complied with by IL&FS Financial Services Limited and no statement made in this Placement Memorandum in relation to itself is contrary to the applicable provisions of the InvIT Regulations (subject to exemptions granted by SEBI), the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Distributing Unitholder further certifies that all the statements and disclosures in this Placement Memorandum in relation to itself and the Unit Distribution are material, true, correct, not misleading and adequate.

FOR AND ON BEHALF OF IL&FS FINANCIAL SERVICES LIMITED

Name: Mr Kaushik Modak
Authorised Signatory

Date: February 11, 2025
Place: Mumbai

DECLARATION

Sabarmati Capital One Limited, being a Distributing Unitholder hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) as applicable, have been complied with by Sabarmati Capital One Limited and no statement made in this Placement Memorandum in relation to itself is contrary to the applicable provisions of the InvIT Regulations (subject to exemptions granted by SEBI), the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Distributing Unitholder further certifies that all the statements and disclosures in this Placement Memorandum in relation to itself and the Unit Distribution are material, true, correct, not misleading and adequate.

FOR AND ON BEHALF OF SABARMATI CAPITAL ONE LIMITED

(Ajay Swaminathan Vaidyanath)
Authorised Signatory

Date: February 11, 2025
Place: Mumbai

DECLARATION

IL&FS Transportation Networks Limited, being a Distributing Unitholder hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) as applicable, have been complied with by IL&FS Transportation Networks Limited and no statement made in this Placement Memorandum in relation to itself is contrary to the applicable provisions of the InvIT Regulations (subject to exemptions granted by SEBI), the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Distributing Unitholder further certifies that all the statements and disclosures in this Placement Memorandum in relation to itself and the Unit Distribution are material, true, correct, not misleading and adequate.

FOR AND ON BEHALF OF IL&FS TRANSPORTATION NETWORKS LIMITED

Name: **Milind Gandhi**
Authorised Signatory

Date: February 11, 2025
Place: Mumbai

DECLARATION

Infrastructure Leasing & Financial Services Limited, being a Distributing Unitholder hereby declares and certifies that all relevant provisions of the InvIT Regulations (subject to exemptions granted by SEBI), SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be) as applicable, have been complied with by Infrastructure Leasing & Financial Services Limited and no statement made in this Placement Memorandum in relation to itself is contrary to the applicable provisions of the InvIT Regulations (subject to exemptions granted by SEBI), the SCRA, SEBI Act and all rules, regulations and guidelines issued by the GoI or SEBI (as the case may be). The Distributing Unitholder further certifies that all the statements and disclosures in this Placement Memorandum in relation to itself and the Unit Distribution are material, true, correct, not misleading and adequate.

FOR AND ON BEHALF OF INFRASTRUCTURE LEASING & FINANCIAL SERVICES LIMITED

Name: Shekhar Prabhudesai
Authorised Signatory

Date: February 11, 2025
Place: Mumbai

ANNEXURE A - VALUATION REPORT

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Report on Enterprise Valuation of the Specified Companies of Roadstar Infra Investment Trust

Private and Confidential

Report Ref No: RVA2425BOMREP293 Date: 17/12/2024

Roadstar Infra Investment Trust
The IL&FS Financial Centre,
Plot No. C22, G-Block, Bandra Kurla Complex,
Bandra East, Mumbai – 400051

Kind attention: **Danny Samuel, Chief Executive Officer**

Sub: Valuation of the Specified Companies pursuant to Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended (the "SEBI InvIT Regulations")

Dear Sir,

We refer to our engagement letter dated November 29, 2024, wherein RBSA Valuation Advisors LLP ("RBSA") has been appointed by Roadstar Infra Investment Trust ("RIIT" / "Trust" / "InvIT"), as an independent valuer, as defined under Regulation 2(zzf) of the SEBI InvIT Regulations, to carry out the enterprise valuation of the following companies, as of September 30, 2024, of the Trust,

- Moradabad Bareilly Expressway Limited ("MBEL");
- Sikar Bikaner Highway Limited ("SBHL");
- Hazaribagh Ranchi Expressway Limited ("HREL");
- Thiruvananthapuram Road Development Company Ltd ("TRDCL");
- Pune Sholapur Road Development Company Limited ("PSRDCL") and;
- Barwa Adda Expressway Limited ("BAEL")[1].

The aforementioned companies are hereinafter together referred to as the "Specified Companies" or individually as the "Company" as the context may require. The Specified Companies are primarily engaged in operating and maintaining road projects on toll/annuity basis.

The Trust is registered with the Securities and Exchange Board of India ("SEBI") as an infrastructure investment trust under the SEBI InvIT Regulations bearing registration number IN/InvIT/20-21/0015. RIIT is sponsored by Roadstar Infra Private Limited ("RIPL" or the "Sponsor"). The Sponsor established RIIT on October 6, 2020, and RIIT was registered with SEBI on December 22, 2020, as an InvIT pursuant to the InvIT Regulations. Roadstar Investment Managers Limited ("RIML" / "Investment Manager") is the investment manager to the Trust, RIPL is the Sponsor to the Trust and Axis Trustee Services Limited (the "Trustee") is Trustee to the Trust, within the meaning of the SEBI InvIT Regulations.

We have been requested by the management of RIML (the "Management"), on behalf of the Trust, to carry out the enterprise valuation of the Specified Companies as per Regulation 21(7) contained in the Chapter V of the SEBI InvIT Regulations, in connection with the proposed listing of units of the Trust (the "Private Offering"). This Report has been prepared solely for the purpose of inclusion as part of the draft placement memorandum and the final placement memorandum and such other documents as may be required in accordance with the SEBI InvIT Regulations requiring an independent valuation.

[1] Acquired by the Trust on October 17, 2024

RBSA VALUATION ADVISORS LLP

We have analysed the information provided by the Management through broad inquiry, analysis and review but have not carried out a due diligence or audit of such information. We have relied on the explanations and information provided by/ on behalf of the Management. We have no present or planned future interest in the Sponsor, Trust, or the Specified Companies except to the extent of our appointment as an independent valuer. Our professional fees for the valuation are not contingent upon the values reported herein. Our valuation analysis should not be construed as an investment advice specifically, we do not express any opinion on the suitability or otherwise of entering into any financial or other transaction with the Trust / Specified Companies.

We enclose our valuation report (the "Report") providing our opinion on the fair enterprise valuation of the Specified Companies as of September 30, 2024 ("Valuation Date"), on a 'going concern value' premise. The attached Report details the valuation approach and methodologies, calculations, and conclusions with respect to this valuation.

Our valuation analysis must be considered as a whole. Selecting portions of our analysis or the factors we considered, without considering all factors and analysis together could create a misleading view of the process underlying the valuation conclusions. Valuation is a complex process and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lead to undue emphasis on any particular factor or analysis.

Our valuation conclusion included herein, and Report complies with the SEBI InvIT Regulations and guidelines, circular or notification issued by SEBI thereunder.

Please note that the Report must be read in conjunction with the Assumptions and Limiting Conditions, which are contained in Section 3 of this Report. This letter, the Report and the summary of valuation included herein may be provided to the Trust's advisors, the Securities and Exchange Board of India, other regulatory and supervisory authority, as may be required in connection with the Private Offering.

This letter should be read in conjunction with the attached Report.

For RBSA Valuation Advisors LLP,
(RVE No.: IBBI/RV-E/05/2019/110)

RBSA VALUATION ADVISORS LLP

Name: Samir D. Shah
Designation: Partner
Asset Class: Securities or Financial Assets
RV No.: IBBI/RV/06/2019/12263
Place: Mumbai

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1. Executive Summary

Roadstar Infra Investment Trust ("RIIT" or the "Trust" or "InvIT") is registered with SEBI as an infrastructure investment trust under the SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended ("the SEBI InvIT Regulations") (Registration Number: IN/InvIT/20-21/0015).

Roadstar Investment Managers Limited ("RIML" or the "Investment Manager") is the investment manager to the Trust, Roadstar Infra Private Limited ("RIPL" or the "Sponsor") is Sponsor to the Trust and Axis Trustee Services Limited is the Trustee to the Trust in accordance with the SEBI InvIT Regulations.

In financial year ("FY") 2021-22, RIIT acquired from IL&FS Transportation Network Limited's ("ITNL"), a subsidiary of Infrastructure Leasing & Financial Services Limited, equity stake in MBEL and SBHL. In FY 2022-23, RIIT acquired equity stakes in HREL and TRDCL from ITNL. RIIT acquired equity stake in PSRDCL in FY2023-24 and BAEL in FY2024-25[2]. The transactions with respect to the aforesaid acquisitions by RIIT are related party transactions.

The Trust has approached RBSA Valuation Advisors LLP ("RBSA") to determine the enterprise value of the Specified Companies of the Trust as per Regulation 21(7) of the SEBI InvIT Regulations as of September 30, 2024 ("Valuation Date") in connection with the Private Offering.

RIIT's current portfolio consists of the Specified Companies comprising of six BOT/Annuity Road Assets across six states and a present road network of 685 kilometres. The Specified Companies comprise of the following:

1.1. Moradabad Bareilly Expressway Limited ("MBEL") operates and maintains a four-lane highway with an aggregate length of ~121 kilometers ("Km") on a toll basis, between Moradabad and Bareilly on National Highway 24 in Uttar Pradesh;

1.2. Sikar Bikaner Highway Limited ("SBHL") operates and maintains a two/four lane highway with an aggregate length of ~238 Km on toll basis, between Sikar and Bikaner on National Highway 11 in Rajasthan;

1.3. Hazaribagh Ranchi Expressway Limited ("HREL") operates and maintains a four-lane highway with an aggregate length of ~73.5 Km on an annuity basis, between Hazaribagh and Ranchi by-pass on National Highway 33 in Jharkhand;

1.4. Thiruvananthapuram Road Development Company Ltd ("TRDCL") is an annuity project involving improvement of ~28 Km, of city road passes from National Highway 47 in Thiruvananthapuram, Kerala;

1.5. Pune Sholapur Road Development Company Limited ("PSRDCL") was awarded project by NHAI, to undertake design, engineering, construction, development, finance, and operation & maintenance of four laning of Pune-Sholapur section of NH-9 from 144.4 Km to 249.0 Km in the state of Maharashtra under National Highways Development Project Phase III on design, build, finance, operate and transfer (DBFOT) basis;

[2] Acquired on October 17, 2024

RBSA VALUATION ADVISORS LLP 3

1.6. Barwa Adda Expressway Limited ("BAEL") has been granted a 20-year concession by the NHAI for construction and widening of a six- lane highway, the Barwa-Adda-Panagarh section of NH-2 from 398.240 Km to 521.120 Km, including Panagarh bypass, in the states of Jharkhand and West Bengal under National Highway Development Program Phase-V on a Design-Build-Finance-Operate-Transfer (DBFOT) basis.

The following is the summary of the Specified Companies of the Trust:

Particulars	MBEL	SBHL	HREL	TRDCL
Stake Acquired	100.00%	100.00%	99.90%	50.00%
Date of Acquisition	Dec 24, 2021 (85.5%) May 31, 2024 (14.5%)	Mar 22, 2022	Dec 16, 2022	Dec 19, 2022
Acquisition Price	INR 6,827.3 Mn	INR 3,778.8 Mn	INR 1	INR 1
Debt as of Valuation Date #	INR 10,683.3 Mn	INR 2,359.6 Mn	INR 2,104.9 Mn	INR 764.3 Mn
Enterprise Value as of,				
March 31, 2022	INR 32,427.3 Mn	INR 10,476.9 Mn	*	*
March 31, 2023	INR 32,778.3 Mn	INR 9,052.6 Mn	INR 5,305.9 Mn	INR 810.7 Mn
March 31, 2024	INR 31,312.3 Mn	INR 9,426.3 Mn	INR 4,491.6 Mn	INR 716.3 Mn

Particulars	PSRDCL
Stake Acquired	90.91%
Date of Acquisition	May 16, 2023
Acquisition Price	INR 1
Debt as of Valuation Date #	INR 11,597.0 Mn
Enterprise Value as of,	
March 31, 2022	*
March 31, 2023	*
March 31, 2024	INR 19,040.2 Mn

Source: Management Information
** The Specified Companies were not acquired by the Trust as of the reporting date*
 # Represents debt taken by Specified Companies from the Trust

Valuation Analysis

Discounted Cash Flow ("DCF") method under the Income Approach has been adopted for determining the enterprise valuation of the Specified Companies. Free Cash Flow to Firm method under DCF has been applied based on the projected financial statements of the Specified Companies provided by the Management. The Business Enterprise Value has been computed by discounting the free cash flows to the firm, beginning October 1, 2024, until the end of the concession period using an appropriate Weighted Average Cost of Capital ("WACC").

The Trust had appointed independent consultants to carry out traffic study and estimation of toll revenue ("Traffic Study Reports") and technical study ("Technical Reports") for estimation of operating and maintenance expenses and major maintenance expenses, for the balance concession period of the Specified Companies. We have relied upon such Traffic Study Reports and Technical Reports provided by the Management for the Specified Companies for working out the enterprise valuation of the Specified Companies.

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Valuation of a company/ business is not a precise science, and the conclusions arrived at in many cases will be subjective and dependent on the exercise of individual judgment. There is, therefore, no indisputable single value and we normally express our opinion on the value as falling within a likely range. However, considering the nature of the engagement we have provided a single point value estimate. While we have provided our opinion on the enterprise value of the Specified Companies based on the information made available to us and within the scope and constraints of our engagement, others may have a different opinion. Accordingly, we expressly disclaim all liability for any loss or damage of whatever kind which may arise from any person acting on any information and estimates contained in this Report which are contrary to the stated purpose.

While our work has involved an analysis of financial and other information provided by/ on behalf of the Management, our engagement does not include an audit in accordance with generally accepted auditing standards of the Specified Companies. We have not carried out any independent technical evaluation or appraisal or due diligence of the assets or liabilities of the Specified Companies. Accordingly, we assume no responsibility and make no representations with respect to the accuracy or completeness of any information provided by/ on behalf of the Management. Our Report is subject to the scope, assumptions and limitations detailed hereinafter. As such the Report is to be read in totality, and not in parts, in conjunction with the relevant documents referred to herein and in the context of the purpose for which it is made.

Enterprise Valuation of the Specified Companies as of September 30, 2024 ("Valuation Date") has been carried out considering *inter-alia* historical performance of the Specified Companies, Traffic Study Reports and Technical Reports of independent consultants, business plan/ projected financial statements of the Specified Companies and other information provided by the Management, industry analysis and other relevant factors.

The valuation summary of the Specified Companies as of September 30, 2024, is as follows:

In INR Mn

Name of the Company	WACC	Business Enterprise Value #	Adjusted Enterprise Value *
MBEL	10.8%	29,830.0	30,548.4
SBHL	10.7%	9,286.6	10,046.7
HREL	9.4%	2,676.1	4,187.8
TRDCL	10.7%	383.3	686.5
PSRDCL	10.8%	17,771.8	19,098.9
BAEL @	11.1%	11,841.5	21,353.6
Total		**71,789.3**	**85,921.9**

 # Comprising present value of free cash flow to firm for the explicit period and release of net working capital at the end of explicit period. Excludes Contingent Claims.
** After considering adjustments, as appropriate, for cash and cash equivalents, advance tax, and contingent liabilities, etc.*
@ Read in conjunction with Note 2 on Page 43.

2. Engagement Overview

2.1 Roadstar Infra Investment Trust is registered with the Securities and Exchange Board of India as an infrastructure investment trust under the SEBI InvIT Regulations. RIML is the investment manager to the Trust, RIPL is the Sponsor to the Trust and Axis Trustee Services Limited is the Trustee to the Trust in accordance with the SEBI InvIT Regulation.

2.2 In accordance with Regulation 21(7) of SEBI InvIT Regulations, RBSA has been appointed as an independent valuer to undertake enterprise valuation of Specified Companies as on September 30, 2024, in connection with proposed listing of the units on one or more Indian stock exchanges consequent to the proposed private placement of the units of the Trust. (the "Private Offering").

2.3 RBSA Valuation Advisors LLP is a registered valuer entity under the Section 247 of the Companies Act, 2013 registered with the Insolvency and Bankruptcy Board of India having Registered Valuer Entity No. IBBI/RV-E/05/2019/110.

2.4 We declare that:

- We are competent to undertake the valuation;
- We are independent and have prepared the Report on a fair and unbiased basis; and
- We have valued the Specified Companies based on the valuation standards as specified/ applicable as per the SEBI InvIT Regulations.

2.5 The Valuation Date considered for the Enterprise Valuation of the Specified Companies is September 30, 2024. Valuation analysis and results are specific to the Valuation Date. A valuation of this nature involves consideration of various factors including the financial position of the Specified Companies as at the Valuation Date, trends in the equity stock market and fixed income security market, macro-economic and industry trends, etc.

3. Assumptions and Limiting Conditions

3.1. RBSA has been appointed as a Registered Valuer to carry out enterprise value of the Specified Companies of the Trust as per Regulation 21(7) of the SEBI InvIT Regulations as on the Valuation Date.

3.2. The basis of value applied in this engagement is fair value. Fair Value has been defined as per the valuation standards issued by the Institute of Chartered Accountants of India ("ICAI VS") as, "*Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the valuation date.*" Valuation is carried out on a 'going concern value' premise.

3.3. This Report, its contents and the results herein are specific to (i) the purpose of valuation agreed as per the terms of our engagement; (ii) the Valuation Date, and (iii) are based on the data detailed in the section - Sources of Information. The Management has represented that the business activities of the Specified Companies have been carried out in normal and ordinary course between Valuation Date and the Report Date and that no material changes have occurred in their operations and financial position between Valuation Date and the Report date.

3.4. Valuation is not a precise science, and the conclusions arrived at in many cases will, of necessity, be subjective and dependent on the exercise of individual judgement. In the ultimate analysis, our valuation will have to be tempered by the exercise of judicious discretion and judgment considering all the relevant factors. There will always be several factors, e.g., management capability, present and prospective competition, yield on comparable securities, market sentiment, etc. which may not be apparent from the Balance Sheet but could strongly influence the value. There is, therefore, no indisputable single value and while we normally express our opinion on the value as falling within a likely range, considering the nature, purpose, and requirement of the engagement we have provided a single point value. While we have provided our opinion on valuation based on the information available to us and within the scope and constraints of our engagement, others may have a different opinion.

3.5. Our valuation is based on the market, financial and other information provided by the Management and other information that was publicly available or sourced from subscribed databases, which have been relied upon for the purpose of valuation. The Management has represented to us that the information provided for valuation is complete, accurate, true, and correct to the best of their knowledge. We have relied on the Management representation concerning the financial data and operational data. We have carried out relevant analyses and evaluations through discussions, calculations, and such other means, as appropriate.

3.6. In accordance with the terms of our engagement letter and in accordance with the customary approach adopted in valuation exercise, our valuation does not constitute an audit or review in accordance with the auditing standards applicable in India, accounting / financial / commercial / legal / tax / environmental due diligence or forensic / investigation services and does not include verification or validation work. Accordingly, we express no audit opinion or any other form of assurance on the information provided.

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3.7. The Management has indicated to us, and they understand that any omissions, inaccuracies, or misstatements may materially affect our valuation analysis/conclusion. Accordingly, we assume no responsibility for any errors in the information provided by the Management and their impact on the Report. We reserve our right to alter our conclusions if it is found that the information provided to us by the Management was not reliable, accurate or complete.

3.8. We have relied on data from external sources to conclude the valuation. These sources are believed to be reliable and therefore, we assume no liability for the truth or accuracy of any data, opinions or estimates furnished by others that have been used in this analysis. Where we have relied on data, opinions or estimates from external sources, reasonable care has been taken to ensure that such data has been correctly extracted from those sources and /or reproduced in its proper form and context.

3.9. Valuation analysis may contain and/ or are based on estimates of future financial performance or opinions that represent reasonable expectations at a particular point of time. During the course of the valuation, we were provided with both written and verbal information. We have evaluated the information provided to us for Specified Companies by the Trust through inquiry, analysis and review but have not carried out a due diligence or audit of the information provided for the purpose of this engagement. Accordingly, such information, estimates or opinions are not offered as our predictions or our assurance that a particular level of income or profit will be achieved, that events will occur, or that a particular price will be offered or accepted. Because events and circumstances frequently do not occur as expected, there will usually be differences between predicted and actual results, and those differences may be material. We take no responsibility for the achievement of the predicted results as it is dependent on the actions, plans, and assumptions of the Management.

3.10. Our Report and the opinion contained herein is not nor should it be construed as advice relating to investing in, purchasing, selling, or otherwise dealing in securities of the Trust / Specified Companies or as providing management services or carrying out management functions. It is understood that this analysis does not represent a fairness opinion. The valuation analysis and results are governed by the concept of materiality.

3.11. This Report has been prepared for the purpose as stated herein and should not be relied upon for any other purpose. This Report is only for the sole use of the Trust and is restricted to the purpose indicated in the engagement letter. We shall not assume any responsibility to any third party to whom the Report is disclosed or otherwise made available. This restriction does not preclude RIML from providing a copy of the Report to third-party advisors ("Permitted Recipient'') whose review would be consistent with the intended use. We do not take any responsibility for the unauthorized use of this Report.

3.12. We owe responsibility only to the Trust that has appointed RBSA under the terms of the engagement letter. We will not be liable for any losses, claims, damages, or liabilities arising out of the actions taken, omissions of or advice given by any other third party to the Trust. In no event shall we be liable for any loss, damages, cost, or expenses arising in any way from fraudulent acts, misrepresentations, or willful default on part of the Trust, their directors, employees, or agents. In no circumstances shall the liability of the Valuer, its partners, directors, or employees, relating to the services provided in connection with the engagement set out in this Report exceed the amount paid to the Valuer in respect of the fees charged by it for these services.

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3.13. Any person/ party intending to provide finance to the Trust/ Specified Companies, invest/ divest shares of the Specified Companies/ units of Trust, if any, shall own do so after seeking their professional advice and after carrying out their own due diligence procedures to ensure that they are making an informed decision. If any person/ party (other than the Trust) chooses to place reliance on any matters included in the Report, they shall do so at their own risk and without recourse to RBSA. It is hereby notified that usage, reproduction, distribution, circulation, copying or otherwise quoting of this Report or any part thereof, except for the purpose as set out earlier in this Report, without our prior written consent, is not permitted, unless there is a statutory or a regulatory requirement to do so. RBSA accepts no responsibility or liability to any other party (including Permitted Recipient), in connection with this Report. It is clarified that reference to this Report in any document and / or filing or possession of this Report by any party, shall not be deemed to be an acceptance by RBSA of any responsibility or liability to any person/ party other than the Trust. RBSA accepts no duty, obligation, liability, or responsibility to any party, other than the Trust with respect to the services and/ or this Report.

3.14. Our valuation is primarily from a business perspective and does not consider various legal and other corporate structures beyond the limited information provided to us by the Management. Valuation is based on business, economy, market, and other conditions as they existed as of the Valuation Date. Subsequent events or circumstances could affect the conclusions set forth in our valuation include, without limitation, adverse changes in industry performance or market conditions and changes to the business, financial condition, and results of operations of the Specified Companies and therefore enterprise value of the Specified Companies. This Report is issued on the understanding that the Management has drawn our attention to all the matters, which they are aware of concerning the financial position of the Trust / Specified Companies and any other matter, which may have an impact on our opinion, on the valuation analysis as on the Valuation Date. Due to possible changes in market forces and circumstances, this Report can only be regarded as relevant as at the Valuation Date. RBSA is under no obligation to update, revise or reaffirm the valuation.

3.15. We have provided a copy of our draft Report to the Trust to review factual information in our Report as part of our standard practice to make sure that factual inaccuracies/omissions/etc. are avoided in our final Report.

3.16. The Report assumes that the Specified Companies comply fully with relevant laws and regulations applicable in their area of operations and usage unless otherwise stated, and that the Specified Companies will be managed in a competent and responsible manner. Further, unless specifically stated, this Report has given no consideration to matters of a legal nature, including issues of legal title and compliance with local laws, and litigations and other contingent liabilities that are not recorded/reflected in the financial statements provided to us. Valuation may be significantly influenced by adverse legal, title or ownership, encumbrance issues; we reserve our right to alter the conclusions should any such issues are brought to our knowledge at a later date.

3.17. In performing the valuation analysis set forth herein, we have made certain assumptions with respect to industry performance and general business and economic conditions, many of which are outside the control of the Specified Companies and subject to change.

3.18. We do not have any financial interest in the Trust, nor do we have any conflict of interest in carrying out this valuation. Further, the information provided by the Management has been appropriately reviewed in carrying out the valuation.

3.19. Certain clarifications were provided by the Management orally, without confirmation in writing. We have assumed that such verbal information or clarifications provided to us is reliable, accurate and complete in all respects. We reserve the right to alter our conclusions should any information that we are not aware of at the time of preparing this Report comes to light that has a material impact on the conclusions herein.

3.20. The numbers in the tables may not add up due to rounding off.

Limitation of Liabilities:

- It is agreed that, having regard to RBSA's interest in limiting personal liability and exposure to litigation of its personnel, the Sponsor, the Trust, or the Trustee will not bring any claim in respect of any damage against any of RBSA's personnel.

- In no circumstances, RBSA shall be responsible for any consequential, special, direct, indirect, punitive or incidental loss, damages or expenses (including loss of profits, data, business, opportunity cost, goodwill or indemnification) in connection with the performance of the services whether such damages are based on breach of contract, tort, strict liability, breach of warranty, negligence, or otherwise.

- In the particular circumstances of this case, our liability (in contract or under statute or otherwise) for any loss or damage caused, shall be limited to the amount of fees actually received by us, as laid out in the engagement letter, for such valuation work.

- It is clarified that RIML / Trust will be solely responsible for any delays, additional costs, or other liabilities caused by or associated with any deficiencies in their responsibilities, misrepresentations, incorrect and incomplete information including information provided to determine the assumptions.

- We have relied upon the information provided by the Management in respect of the material claims/ litigations/ penalties/ tax disputes for the purposes of disclosure in this Report.

4. Sources of Information

For the purpose of undertaking this valuation exercise, we have relied on the following sources of information provided by/on behalf of the Management:

- Audited special purpose financial statements of Specified Companies for the six months period ended September 30, 2024;
- Concession agreement for the Specified Companies;
- Reports of independent consultants appointed by Trust for traffic study and estimation of toll revenue for the balance concession period of the Specified Companies, beginning October 1, 2024, for toll road projects;
- Report of independent consultants appointed by the Trust for technical study for estimation of operating and maintenance expenses and major maintenance expenses,
  - beginning October 1, 2023, till the balance concession period for MBEL, HREL, TRDCL, PSRDCL and BAEL;
  - beginning April 1, 2024, till the balance concession period for SBHL; ("Technical Reports") and
  - managements' estimate of the said expenses for the period ending March 31, 2025, based on actual expenses incurred till September 30, 2024;
- Projected financial statements of the Specified Companies for the balance period of the concession agreement which the Management expects to be their best estimate of the expected performance of the Specified Companies going forward ("Management Projections");
- Discussions with the Management to *inter-alia* understand historical and expected future performance of the Specified Companies, key value drivers and other factors affecting the business of Specified Companies;
- Capital IQ's database of publicly traded companies.

We have also obtained the explanations, information, and representations, which we believed were reasonably necessary and relevant for our exercise from the Management.

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5. Procedures

We have carried out the Enterprise Valuation of the Specified SPVs, to the extent applicable, in accordance with ICAI Valuation Standards, 2018 ("ICAI VS") issued by the Institute of Chartered Accountants of India.

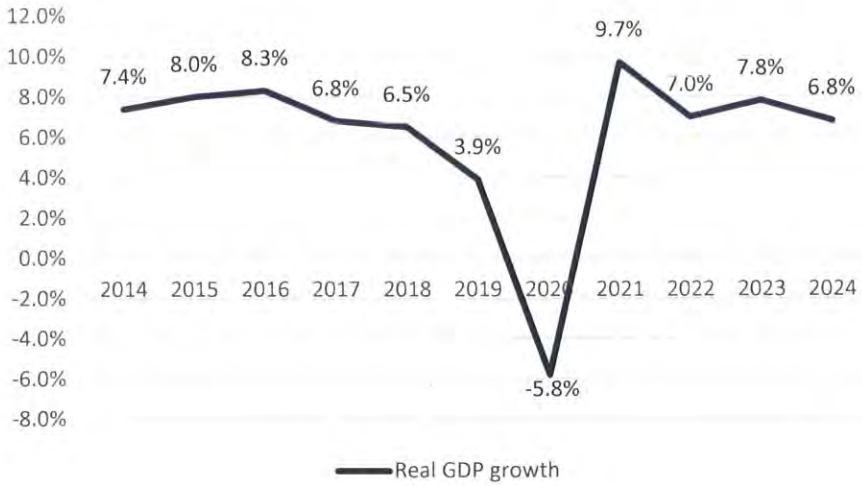
We have adopted the following procedures for carrying out the valuation analysis:

- Considered audited special purpose financial statements of Specified Companies for the period ended September 30, 2024;
- Considered the key terms of concession agreement;
- Analysis of the Management Projections;
- Considered the Traffic Study Reports and Technical Reports;
- Analysis of the key economic and industry factors which may affect the valuation of the Specified Companies;
- Analysis of the information available in public domain/ subscribed databases in respect of the comparable companies as considered relevant by us;
- Selection of valuation approach and valuation methodology/(ies), in accordance with ICAI VS, as considered appropriate and relevant by us;
- Analysis of other publicly available information, as considered relevant by us;
- Determination of Business Enterprise Value and Adjusted Enterprise Value of the Specified Companies.

6. Industry Overview

Indian Economy

- India, ranked as the fifth largest economy, has been amongst the fastest growing economies in the world over the past few years, with a GDP growth of 6.8% in Financial Year 2024 (*Source: IMF*)



Road Infrastructure in India

- India has the second-largest road network in the world, spanning a total of ~6.67 Mn kilometers (kms). This road network transports 64.5% of all goods in the country and 90% of India's total passenger traffic uses road network to commute.

Particulars	In Km	% Share
National Highways	1,46,145	2%
State Highways	1,79,535	3%
Other Roads	6,345,403	95%
Total	**6,671,083**	

Source: IBEF Roads Industry Report August 2024

Strong momentum in expansion of roadways

- In FY24, ~12,349 km of National Highways have been constructed. In FY23, the Ministry of Road Transport and Highways constructed national highways extending ~10,993 kms. In FY 22 the same was ~10,457 kms.
- National Highways increased from 91,287 km in 2013-14 to 1,46,145 km in 2023-24, and the pace of construction had improved from 12.1 km a day in 2014-15 to 42.03 km in FY23.
- The length of 4 lanes and above NH increased by 2.6 times from 18,371 km (2014) to 48,422 km.
- The length of operational High-Speed Corridors of NHs network has increased from 93 km in 2014 to about 2,138 km in 2024.

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- As of March 2023, the Pradhan Mantri Gram Sadak Yojana (PMGSY) has constructed over 7 lakh kilometers of rural roads since its inception in 2000, aiming to provide all-weather road connectivity to unconnected villages across India. Madhya Pradesh being the highest contributor followed by Rajasthan accounting for 88,425 Kms and 72,875 Kms respectively.
- Bharatmala Pariyojana, a flagship government program, aims to develop about 34,800 kilometers of highways for improving connectivity across India. As part of Phase 1, about 35 Multimodal Logistics Parks and 500 projects have been planned, with a significant focus on highways.
- Summary of Phase 1 Components and approved outlay of for the same are as follows: -

Sr. No.	Components	Length (Km)	Length completed up to 31.03.2024	Outlay (INR crore)
1	Economic corridors development	9,000	5,432	120,000
2	Inter- corridors & feeder roads	6,000	2,245	80,000
3	National Corridors Efficiency Improvement	5,000	2,003	100,000
4	Border and International Connectivity Roads	2,000	1,345	25,000
5	Coastal and port connectivity roads	2,000	178	20,000
6	Expressways	800	1,565	40,000
7	Balance Road works under NHDP	10,000	4,461	1,50,000
	Total		**17,411**	**5,35,000**

Source: MoRTH Website

Highway construction in India

Source: IBEF Roads Industry Report August 2024

Growth Drivers

Growing Demand	•Rise in two and four wheeler population •Increasing freight traffic •Strong trade and tourist flows between states
Policy Support	•Greater Government focus on infrastructure •Standardised processes for bidding and tolling and clear policy framework •Tax SOPS, FDI,FII encouragement
Increasing Investment	•In the Union Budget 2024-25, ~INR 2.72 Lakh Crore has been allocated to MorTH. •A surge in private investments is projected in the highway sector from Rs. 20,000 Cr to almost Rs. 1 trillion in 6-7 years. •Cumulative FDI Inflows in construction development stood at US$ 33.91 billion between April 2000-March 2024.

Source: IBEF Roads Industry Report August 2024

Future growth prospects:

- Under "Parvatmala Pariyojana", the Government of India plans to develop 250+ projects with a Ropeway length of 1,200+ km over five years.
- A total of 600+ sites are planned to be awarded by 2024-25 of which 144 Wayside Amenities (WSAs) have already been awarded.
- The Union Ministry of Environment, Forests and Climate Change (MoEF & CC) has asked the National Highways Authority of India (NHAI) and other agencies to use fly ash to build roads within a 300-km radius of coal or lignite-based thermal power plants.

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7. Valuation Approach and Methodology

VALUATION APPROACHES		
INCOME APPROACH	**MARKET APPROACH**	**ASSET APPROACH**
Estimates value based on the present value of future earnings of cash	Estimates value based on the multiples of comparable companies and precedent comparable transactions	Estimates value based on the fair value of the business' assets less the fair value of its liabilities
Applied	Not applied	Not Applied

Basis and Methodology of Valuation:

- **Basis of Valuation**
  It means the indication of the type of value being used in an engagement. Fair Value as per ICAI VS defined as under:
  "Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the valuation date."

  Fair value basis has been adopted for enterprise valuation of the Specified Companies.

- **Valuation Date**
  Valuation date is the specific date at which the value of the assets to be valued gets estimated or measured. Valuation is time specific and can change with the passage of time *inter-alia* due to changes in the condition of the asset to be valued and market parameters. Accordingly, valuation of an asset as at a particular date can be different from other date(s).
  The Valuation Date considered for the enterprise value of the Specified Companies is September 30, 2024 ("Valuation Date"). The attached Report is drawn up by reference to accounting and financial information as of the Valuation Date.

- **Premise of Value**
  Premise of Value refers to the conditions and circumstances how an asset is deployed. In the present case, we have determined the enterprise value of the Specified Companies on a Going Concern Value defined as under:

  "Going concern value is the value of a business enterprise that is expected to continue to operate in the future."

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Approach & Method	Applied/Not Applied	Description	Rationale
Income Approach Discounted Cash Flow Method (DCF)	Applied	▪ In the DCF method under the Income approach, forecast cash flows are discounted back to the valuation date, estimating a net present value of the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business ▪ A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries ▪ The rate at which the future cash flows are discounted (the "discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is Weighted Average Cost of Capital ("WACC") or Cost of Equity (Ke), reflecting an optimal as opposed to actual financing structure	• Management has provided financial projections for the Specified Companies, which represents their best estimate of the expected performance of the Specified Companies for the balance tenor of their respective concession period. Considering the aforementioned, DCF method has been adopted to estimate the enterprise value of the Specified Companies
Market Approach • Market Price Method	Not Applied	▪ Under this method, the value of a company is arrived at considering its market price over an appropriate period	▪ As the Specified Companies are not listed, this method is not applied
Market Approach • Comparable Companies Multiples ("CCM") Method	Not Applied	▪ Under the Comparable Companies Method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company	▪ The Specified Companies are operational and do not have project implementation risk. Further, the projected income and cash flows of the Specified Companies primarily depend on the key terms of the respective concession agreements, residual tenor, project-specific characteristics/ factors, etc. which may

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Approach & Method	Applied/Not Applied	Description	Rationale
		▪ The appropriate multiple is generally based on the performance of listed companies with similar business models and size	differ from the other projects. Accordingly, this method is not adopted
Market Approach • Comparable Transaction Multiples ("CTM") Method	Not Applied	▪ Under Comparable Transaction Multiples Method, the value of shares /business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company ▪ Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration is given to the specific characteristics of the business being valued	▪ The projected income and cash flows of the Specified Companies primarily depend on the key terms of the respective concession agreements, residual tenor, project-specific characteristics/ factors, etc. which may differ from the other projects. We have not adopted this methodology due to unavailability of information in public domain involving recent transactions in similar projects
Asset based Approach • Adjusted Net Asset Value Method	Not Applied	▪ Under the Adjusted Net Asset Value Method, a Valuation of a 'going concern' business is computed by adjusting the assets and liabilities to the fair market value as of the Valuation Date ▪ A net asset value methodology is typically most appropriate when: ▪ Valuing a holding company or a capital-intensive company. ▪ Losses are continually generated by the business; or ▪ Valuation methodologies based on a company's net income or cash flow levels indicate a value lower than its adjusted net asset value	▪ The Specified Companies have entered into concession agreements and their revenues are largely predetermined for the residual period of the project. In such a scenario, the true worth of the business is reflected in its future earning capacity rather than the historical cost of the project. The valuation of the Specified Companies is carried out on a 'going concern' premise ▪ Since the Net Asset value does not capture the future earning potential of the businesses, we have not adopted the Asset approach for the valuation of the Specified Companies

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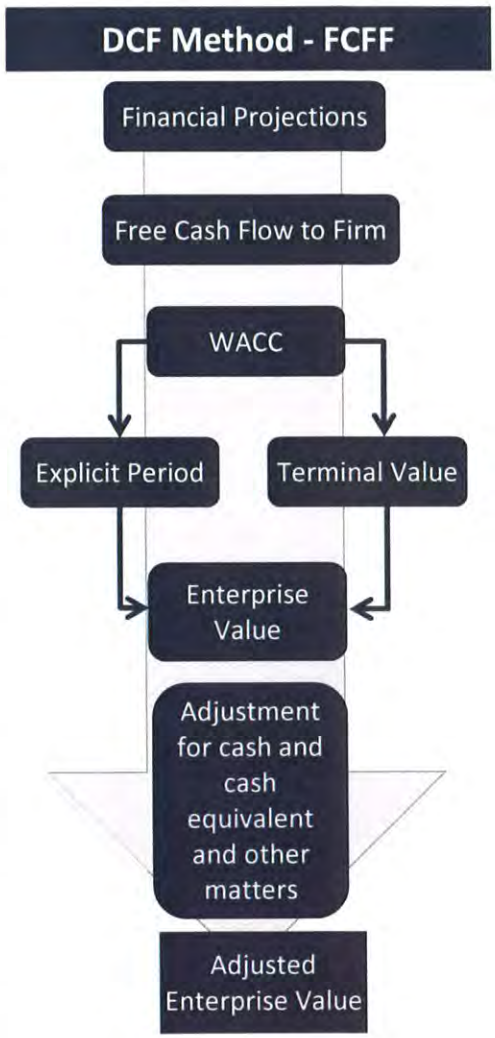
Income Approach

The Income Approach is widely used for valuation under "Going Concern" basis. It focuses on the income generated by a company in the past as well as its future earning capability.

Discounted Cash Flow ("DCF") Method

- Under the DCF method, the business is valued by discounting its free cash flows for the explicit forecast period and the perpetuity value thereafter.
- Free Cash Flows to Firm ("FCFF") under the DCF method has been applied for estimating the enterprise value of the Specified Companies.
- FCFF represent the cash available for distribution to both, the owners, and creditors of the business. FCFF for the explicit period and perpetuity value is discounted by the Weighted Average Cost of Capital ("WACC") to derive the net present value. The WACC is an appropriate rate of discount to calculate the present value of the future cash flows as it considers equity–debt risk by incorporating debt–equity ratio of the firm.
- Enterprise Value ("EV") is derived by aggregating the present value of FCFF for the balance tenor of the Concession Agreement ("Explicit period") and Terminal value at the end of the Explicit period.
- Terminal value is estimated based on the business' potential for further growth beyond the Explicit period. Considering *inter-alia,* the estimated economic life of the projects, Terminal value has been estimated considering release of net working capital, at the end of the Explicit period.
- The Enterprise Value of the Specified Companies have been determined as an aggregate of the present value of FCFF for the Explicit period and Terminal value. Company specific adjustments have been done to estimate the Adjusted enterprise value.



Weighted Average Cost of Capital (WACC)

WACC has been estimated as under:

Particulars	Definition/Formula
WACC	Ke * (E/ (D + E)) + Kd * (1-T) * (D/ (D + E))
Where:	
Ke	cost of equity
E	market value of equity
Kd	cost of debt
D	market value of debt
T	effective tax rate

For the purpose of valuation, the cost of equity is derived using the Capital Asset Pricing Model ("CAPM") as follows:

Particulars	Definition/Formula
Ke	Rf + ß * (Rm – Rf) + α
Where:	
Rf	the return on risk-free assets
Rm	the expected average return of the market
(Rm – Rf)	the average risk premium above the risk – free rate that a "market" portfolio of assets is earning
ß	the beta factor, being the measure of the systematic risk of a particular asset relative to the risk of a portfolio of all risky assets
α	Company specific risk factor (alpha) if any

A summary of WACC for the Specified Companies is appended as per **Appendix 1**.

8. Valuation of the Specified Companies

Key assumptions underlying the projections as provided by the Management are as follows:

- **Operating Revenues:** Operating revenues for Specified Companies are projected based on the Traffic Study Reports of independent consultants appointed by the Trust / annuity payments to be received as per the concession agreements.

  - **Tollable traffic growth projections**
    Tollable traffic growth projected by the traffic consultant is summarized below in terms of the compound annual growth rate (CAGR) for the period from FY2025 to the financial year in which the concession period ends.

Particulars	Expected year in which the concession period ends	Average PCU* CAGR (base year FY2025)
MBEL	March 31, 2036	~5.3%
SBHL	March 31, 2043	~4.5%
PSRDCL	March 31, 2036	~3.7%
BAEL	March 31, 2039	~3.7%

** PCU – Passenger Car Units*

  - **Toll Rates**
    The traffic consultant has estimated the toll rates for the forecast years based on the National Highway Fee (Determination of Rates and Collection) Rules, 2008 and amendment thereto and considering a WPI inflation factor of ~5%.

  - **Projected Toll Revenue**
    The toll revenue growth as projected in terms of the compound annual growth rate (CAGR) for the period from FY2025 till the financial year in which the concession period ends is as below,

Particulars	CAGR (base year FY2025)
MBEL	~10.6%
SBHL	~10.0%
PSRDCL	~9.3%
BAEL	~8.5%

- **Operating Expenses**: Operating expenses include cost to collect toll, including staff and consumables for manual toll collection, violation enforcement, agency contract administration and oversight costs. Operating & maintenance expenses through the concession period were provided by the Management, which are based on the Technical Reports. The Management has projected that these cost would generally escalate at ~4-5% for the forecast years for all the Specified Companies.

  The said expenses are

  - **Corporate Social Responsibility Expenses**: As per the Management input, we have accounted for the CSR expenses in the DCF analysis.

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- **Major Maintenance & Repair Expenses (MMR / Periodic maintenance)**: Maintenance expenses are costs incurred on a regular basis to keep an asset working in its optimal condition. For the year FY25, MMR expenditure estimated by the Management and for the Projected Period, the same is supported by Technical Reports of independent consultants.

- **Depreciation and Amortization**: Amortization of toll collection rights is calculated on a revenue-based model for MBEL, SBHL, PSRDCL and BAEL. The ratio of toll revenues generated in a year to the total toll revenue expected over the term of the concession agreement is used to amortise the concession rights over the term.

- **Taxes:** Income taxes are estimated considering, as appropriate, brought forward business losses and unabsorbed depreciation, MAT credit, balance tax holiday period, tax depreciation/ amortisation policy followed by the Specified Companies, MAT rate and corporate income tax rate.

- **Working Capital:** Considering the nature of the business of operating toll road projects, the additional working capital requirement is not expected to be significant for the projected period.

- **GST on Annuity:** Effective Jan 1, 2023, BOT annuity projects have been brought under the purview of Goods and Sales Tax. Accordingly, HREL and TRDCL have paid GST on the annuities received from authority. The Management has represented that GST will be reimbursed by NHAI/ Kerela Road Fund Board along with annuity payments. Accordingly, the receivables pertaining to GST have been assumed to be received in FY25.

- **Contingent Liabilities:** These have been factored considering the nature of liabilities and our discussions with the Management.

- **COVID/ Other Extensions:** NHAI has issued a circular granting 90 days extension in the concession period as a relief on account of the impact of Covid-19 pandemic. Further, the Management has also considered extension of concession period considering shortfall in projected traffic (vis-a-vis actuals) and other reasons. Management has applied for this extension and is certain of its approval. Consequently, such extended concession period or the period which has been approved by independent engineer subsequently has been considered for the valuation exercise.

- The projected figures for the period ending March 31, 2025, are the balancing figure between projected full financial year ending March 31, 2025, and the audited figures up to September 30, 2024.

8.1 Moradabad Bareilly Expressway Limited ("MBEL")

8.1.1 Company Overview

- Moradabad Bareilly Expressway Limited (MBEL) is a Special Purpose Vehicle (SPV) incorporated in January 2010. MBEL was engaged to expand the existing two-lane road to a four-lane road in the Moradabad-Bareilly section of National Highway 24 from 148.000 Km to 262.000 Km (design length of approximately 114 Km) in the state of Uttar Pradesh under National Highway Development Program Phase III on a Design-Build-Finance-Operate-Transfer basis (DBFOT") basis. A concession agreement dated February 19, 2010, was entered between the NHAI and MBEL. The project commenced tolling on January 6, 2015.

- **Details of MBEL:**

Parameters	Details
Length of Project	~ 121.0 Km
Concession Period – Start	December 4, 2010
Concession Period – End	March 3, 2036 (including extension period)
Extension of concession period	90 days on account of Covid 19
Concession Type	DBFOT

Source: Management information

8.1.2 Valuation Analysis

- We have considered the Management Projections of MBEL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 10.8% has been considered for the valuation. **Refer Appendix 1**
- Considering inter-alia, the aforementioned, Business Enterprise Value and Adjusted Enterprise Value of MBEL as on September 30, 2024, is estimated at INR 29,830.0 Mn and INR 30,548.4 Mn respectively. For details, **refer Appendix 2.**

8.1.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. <u>List of one-time sanctions/approvals which are obtained or pending:</u>
The list of sanctions/ approvals obtained by MBEL till September 30, 2024, is provided in **Appendix 3.**

B. <u>List of up to date/ overdue periodic clearances:</u>
The Management represented that there are no up to date/overdue periodic clearances in relation to MBEL as of September 30, 2024.

C. <u>Statement of assets included:</u>
The statement of assets of MBEL as of September 30, 2024, is provided in **Appendix 4.**

D. <u>Estimates of already carried out as well as proposed major repairs and improvements along with estimated time of completion:</u>

Historical Major Maintenance Expenses: In INR Mn

Particulars for the year/ period ended	FY 21	FY 22	FY 23	FY 24	H1 FY25	H2 FY 25
No. of Months	12	12	12	12	6	6
Major Maintenance Expenses	85.3	117.1	936.4	569.4	16.6	204

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Forecasted Major Maintenance Expenses:

Particulars for the year/ period ended	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
No. of Months	12	12	12	12		12
Major Maintenance Expenses	-	15.3	27.7	1,656.6	689.6	10.9

Particulars for the year/ period ended	FY 32	FY 33	FY 34	FY 35	FY 36
No. of Months	12	12	12	12	11
Major Maintenance Expenses	5.3	-	-	919.1	1074.8

E. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges, if any:
The Management represented that there is no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to MBEL as of September 30, 2024.

F. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to MBEL are provided in **Appendix 5 and 6.**

G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection:
Please refer to **Appendix 7.**

8.2 Sikar Bikaner Highway Limited ("SBHL")

8.2.1 Company Overview

- Sikar Bikaner Highway Limited (SBHL) is a Special Purpose Vehicle (SPV) incorporated in April 2012 to operate a two/four lane highway project with paved shoulders on Sikar Bikaner Section of NH-11 providing connectivity between Jaipur and Bikaner along with Eastern and Western region of Rajasthan on Design, Build, Finance, Operate and Transfer (DBFOT) basis. The project provides connectivity to tourist locations of Agra, Jaipur, Bikaner, and Jaisalmer which is expected to have high density of passenger traffic. The concession agreement dated June 29, 2012, was entered into between the Government of Rajasthan and SBHL.

- **Details of SBHL:**

Parameters	Details
Length of Project	~237.6 Km
Concession Period – Start	February 18, 2013
Concession Period – End	March 30, 2043 (including extension period)
Extension of concession period	~5.11 years (41 days on account of Covid 19 and 5 years for the shortfall in projected traffic, based on recommendation of independent engineer)
Concession Type	DBFOT

Source: Management information

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8.2.2 Valuation Analysis

- We have considered the Management Projections of SBHL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 10.7% has been considered for the valuation. Refer **Appendix 1**.
- Considering inter-alia, the aforementioned, Business Enterprise value and Adjusted Enterprise Value of SBHL as on September 30, 2024, is estimated at INR 9,286.6 Mn and INR 10,046.7 Mn, respectively. For details, refer to **Appendix 2**.

8.2.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. List of one-time sanctions/approvals which are obtained or pending:
The list of sanctions/ approvals obtained by SBHL till September 30, 2024, is provided in **Appendix 3.**

B. List of up to date/ overdue periodic clearances:
The Management represented that there are no up to date/overdue periodic clearances in relation to SBHL as of September 30, 2024.

C. Statement of assets included:
The statement of assets of SBHL as of September 30, 2024, is provided in **Appendix 4.**

D. Estimates of already carried out as well as proposed major repairs and improvements along with estimated time of completion:

Historical Major Maintenance Expenses: In INR Mn

Particulars for the year / period ended	FY 21	FY 22	FY 23	FY 24	H1 FY25
No. of Months	12	12	12	12	6
Major Maintenance Expenses	-	-	97.6	106.9	55.5

Forecasted Major Maintenance Expenses:

Particulars for the year / period ended	H2 FY25	FY 26	FY 27	FY 28	FY 29
No. of Months	6	12	12	12	12
Major Maintenance Expenses	629.5	476.1	30.6	-	-

Particulars for the year ended	FY 30	FY 31	FY 32	FY 33	FY 34
No. of Months	12	12	12	12	12
Major Maintenance Expenses	557.8	409.6	492.1	-	-

Particulars for the year ended	FY 35	FY 36	FY 37	FY 38	FY 39
No. of Months	12	12	12	12	12
Major Maintenance Expenses	33.0	-	-	-	858.5

Particulars for the year ended	FY 40	FY 41	FY 42	FY 43
No. of Months	12	12	12	12
Major Maintenance Expenses	692.2	919.0	-	-

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E. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to SBHL are provided in **Appendix 5 and 6.**

F. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges if any:
The Management represented that there are no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to SBHL as of September 30, 2024.

G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection:
Please refer to **Appendix 7.**

8.3 Hazaribagh Ranchi Expressway Limited ("HREL")

8.3.1 Company Overview

- HREL road project involved four-laning of the road which is a ~73.5 Km road stretch from Hazaribagh to Ranchi section of NH-33 in Jharkhand on BOT basis, under the National Highways Development Program of NHAI. The expressway has improved the connectivity between the two cities and has also boosted economic activity in the region. The concession agreement dated October 8, 2009, was entered into between NHAI and HREL.

- **Details of HREL:**

Parameters	Details
Length of Project	~73.5 Km
Concession Period – Start	August 1, 2010
Concession Period – End	August 1, 2028
Extension of concession period	NA
Concession Type	Annuity

Source: Management information

8.3.2 Valuation Analysis

- We have considered the Management Projections of HREL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 9.4% has been considered for the valuation. **Refer Appendix 1**
- Considering inter-alia, the aforementioned, Business Enterprise value and Adjusted Enterprise Value of HREL as on September 30, 2024, is estimated at INR 2,676.1 Mn and INR 4,187.8 Mn respectively. For details, refer to **Appendix 2**.

8.3.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. List of one-time sanctions/approvals which are obtained or pending:
The list of sanctions/ approvals obtained by HREL till September 30, 2024, is provided in **Appendix 3.**

B. List of up to date/ overdue periodic clearances:
The Management represented that there are no up to date/overdue periodic clearances in relation to HREL as of September 30, 2024.

C. Estimates of already carried out as well as proposed major repairs and improvements along with estimated time of completion:

Historical Major Maintenance Expenses: In INR Mn

Particulars for the year/ period ended	FY 21	FY 22	FY 23	FY 24	H1 FY25
No. of Months	12	12	12	12	6
Major Maintenance Expenses	208.1	72.9	181.6	186.5	-

Forecasted Major Maintenance Expenses: In INR Mn

Particulars for the year/ period ended	H2 FY25	FY 26	FY 27	FY 28	FY 29
No. of Months	6	12	12	12	4
Major Maintenance Expenses	37.9	-	-	428.3	442.6

D. Statement of assets included:
The statement of assets of HREL as of September 30, 2024, is provided in **Appendix 4.**

E. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to HREL are provided in **Appendix 5 and 6.**

F. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges if any:
The Management represented that there are no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to HREL as of September 30, 2024.

G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection
Please refer to **Appendix 7.**

8.4 Thiruvananthapuram Road Development Company Ltd ("TRDCL")

8.4.1 Company Overview

TRDCL was set up as a joint venture between IL&FS Transportation Networks Limited (ITNL) and Punj Lloyd Limited for implementation of First City Roads Improvement Project (TCRIP) on Build-Operate-Maintain-and Transfer (Annuity) Model. The scope of the project includes improvement of 43 km of city roads in Thiruvananthapuram. The project has four phases of which term of Phase I has expired. The concession agreement dated March 16, 2004, was entered into between Kerela Road Fund Board into between and TRDCL.

- **Details of TRDCL:**

Parameters	Details
Length of Project	~ 28.1 Km
Concession Period – Start	Phase I: May 2004 Phase II: June 2009 Phase III & IV: February 2015
Concession Period – End	Phase I: July 2022 Phase II: February 2027 Phase III: February 2030 Phase IV: May 2031
Extension of concession period	NA
Concession Type	Annuity

Source: Management information

8.4.2 Valuation Analysis

- We have considered the Management Projections of TRDCL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 10.7% has been considered for the valuation. Refer **Appendix 1**
- Considering inter-alia, the aforementioned, Business Enterprise value and Adjusted Enterprise Value of TRDCL as on September 30, 2024, is estimated at INR 383.3 Mn and INR 686.5 Mn, respectively. For details, refer to **Appendix 2**.

8.4.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. List of one-time sanctions/approvals which are obtained or pending:
The list of sanctions/ approvals obtained by TRDCL till September 30, 2024, is provided in **Appendix 3.**

B. List of up to date/ overdue periodic clearances:
The Management represented that there are no up to date/overdue periodic clearances in relation to TRDCL as of September 30, 2024.

C. Estimates of proposed major repairs and improvements along with estimated time of completion:

Historical Major Maintenance Expenses: **In INR Mn**

Particulars for the year/ period ended	FY 21	FY 22	FY 23	FY 24	H1FY25
No. of Months	12	12	12	12	6
Major Maintenance Expenses	58.4	61.4	88.6	21.7	10.7

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Particulars for the year/ period ended	H2FY25	FY 26	FY 27	FY 28	FY 29
No. of Months	6	12	12	12	12
Major Maintenance Expenses	58.8	-	173.7	21.4	-

Particulars for the year/ period ended	FY 30	FY 31	FY 32
No. of Months	12	12	2
Major Maintenance Expenses	67.6	60.8	-

D. Statement of assets included:
The statement of assets of TRDCL as of September 30, 2024, is provided in **Appendix 4.**

E. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to TRDCL are provided in **Appendix 5 and 6.**

F. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges if any:
The Management represented that there are no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to TRDCL as of September 30, 2024.

G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection
Please refer to **Appendix 7.**

8.5 Pune Sholapur Road Development Company Limited ("PSRDCL")

8.5.1 Company Overview

- Pune Sholapur Road Development Company Limited (PSRDCL) is a special purpose vehicle (SPV) incorporated in August 2009. PSRDCL has been set up with the main object of design engineering construction development operation & maintenance of four laning of Pune-Sholapur Section of National Highway 9 from 144.4 km to 249.0 Km in the state of Maharashtra under NHDP phase III on Design Build Finance Operate Transfer (DBFOT) basis. The Company entered into a concession agreement on September 30, 2009, with NHAI.

- **Details of PSRDCL:**

Parameters	Details
Length of Project	~102.1 Km
Concession Period – Start	September 28, 2011
Concession Period – End	September 11, 2035 (including extension period)
Extension of concession period	~4.2 years (90 days on account of Covid 19 and ~ 4.0 years for shortfall in Projected Traffic)
Concession Type	DBFOT

Source: Management information

8.5.2 Valuation Analysis

- We have considered the Management Projections of PSRDCL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 10.8% has been considered for the valuation. **Refer Appendix 1**
- Considering inter-alia, the aforementioned, Business Enterprise Value and Adjusted Enterprise Value of PSRDCL as on September 30, 2024, is estimated at INR 17,771.8 Mn and INR 19,098.9 Mn respectively. For details, **refer Appendix 2**.

8.5.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. List of one-time sanctions/approvals which are obtained or pending:
The list of sanctions/ approvals obtained by PSRDCL till September 30, 2024, is provided in **Appendix 3.**

B. List of up to date/ overdue periodic clearances:
The Management represented that there are no up to date/overdue periodic clearances in relation to PSRDCL as of September 30, 2024.

C. Statement of assets included:
The statement of assets of PSRDCL as of September 30, 2024, is provided in **Appendix 4**.

D. Estimates of already carried out as well as proposed major repairs and improvements along with estimated time of completion:

Historical Major Maintenance Expenses: In INR Mn

Particulars for the year/ period ended	FY 21	FY 22	FY 23	FY 24	H1 FY25
No. of Months	12	12	12	12	6
Major Maintenance Expenses	120.4	582.4	551.7	26.7	78.8

Forecasted Major Maintenance Expenses:

Particulars for the year/ period ended	H2 FY25	FY 26	FY 27	FY 28	FY 29	FY 30
No. of Months	6	12	12	12	12	12
Major Maintenance Expenses	429.5	495.2	-	-	342.5	655.0

Particulars for the year/ period ended	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
No. of Months	12	12	12	12	12	6
Major Maintenance Expenses	-	770.7	-	-	1,365.6	769.0

E. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges, if any:
The Management represented that there are no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to PSRDCL as of September 30, 2024.

F. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to PSRDCL are provided in **Appendix 5 and 6.**

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G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection:
Please refer to **Appendix 7.**

8.6 Barwa Adda Expressway Limited ("BAEL")

8.6.1 Company Overview

- Barwa Adda Expressway Limited (BAEL) is a special purpose vehicle (SPV) incorporated in April 2013. BAEL was engaged for the construction of six lane highway in Barwa Adda-Panagarh Section of National Highway 2 from 398.24 km to 521.12 km in the state of Jharkhand and West Bengal under NHDP Phase V to be executed as BOT (toll) on DBFOT pattern. A concession agreement dated May 8, 2013, was entered between the NHAI and BAEL. The project commenced tolling on April 5, 2014.

- **Details of BAEL:**

Parameters	Details
Length of Project	~122.88 Km
Concession Period – Start	April 1, 2014
Concession Period – End	June 30, 2038 (including extension period)
Extension of concession period	~4.25 years (90 days on account of Covid 19 and 4 years for shortfall in Projected Traffic)
Concession Type	DBFOT

Source: Management information

8.6.2 Valuation Analysis

- We have considered the Management Projections of BAEL (including projected income statement, working capital requirement and MMR) for the period from October 1, 2024, till the end of the concession period and other information as mentioned in Section 4.
- WACC of 11.10% has been considered for the valuation. **Refer Appendix 1**
- Considering inter-alia, the aforementioned, Business Enterprise Value and Adjusted Enterprise Value of BAEL as on September 30, 2024, is estimated at INR 11,841.5 Mn and INR 21,353.6 Mn respectively. For details, **refer Appendix 2.**

8.6.3 Additional Procedures to be complied with in accordance with SEBI InvIT Regulations

A. List of one-time sanctions/approvals which are obtained or pending:
The list of sanctions/ approvals obtained by BAEL till September 30, 2024, is provided in **Appendix 3.**

B. List of up to date/ overdue periodic clearances:
The Management represented that there are no up to date/overdue periodic clearances in relation to BAEL as of September 30, 2024.

C. Statement of assets included:
The statement of assets of BAEL as of September 30, 2024, is provided in **Appendix 4.**

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D. Estimates of already carried out as well as proposed major repairs and improvements along with estimated time of completion:

Historical Major Maintenance Expenses: In INR Mn

Particulars for the year/ period ended	FY 21	FY 22	FY 23	FY 24	H1 FY25
No. of Months	12	12	12	12	6
Major Maintenance Expenses	450.7	86.1	460.1	127.1	21.6

Historical Major Maintenance Expenses:

Particulars for the year/ period ended	H2 FY25	FY 26	FY 27	FY 28	FY 29	FY 30
No. of Months	6	12	12	12	12	12
Major Maintenance Expenses	103.0	572.9	428.4	1,080.0	472.3	-

Particulars for the year/ period ended	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
No. of Months	12	12	12	12	12	12
Major Maintenance Expenses	-	584	1,386.5	643.9	-	908.3

Particulars for the year/ period ended	FY 37	FY 38	FY 39
No. of Months	12	12	3
Major Maintenance Expenses	953.7	2,356.7	-

E. Revenue pendency including local authority taxes associated with InvIT asset and compounding charges, if any:
The Management represented that there are no revenue pendency including local authority taxes associated with InvIT asset and compounding charges in relation to BAEL as of September 30, 2024.

F. On-going material litigations including tax disputes and claims in relation to the assets, if any;
The list of on-going material litigations including tax disputes and claims in relation to BAEL are provided in **Appendix 5 and 6.**

G. Vulnerability to natural or induced hazards that may not have been covered in town planning building control:
Management has confirmed that there are no such natural or induced hazards which have not been considered in town planning/ building control.

H. Latest Pictures of the project along with date of physical inspection:
Please refer to **Appendix 7.**

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9. Valuation Conclusion

Enterprise Valuation of the Specified Companies as of the Valuation Date has been carried out considering *inter-alia* historical performance of the Specified Companies, Traffic Study Reports and Technical Reports of independent consultants, business plan/ projected financial statements of the Specified Companies and other information provided by/ on behalf of the Management, industry analysis and other relevant factors.

The valuation summary of the Specified Companies as of September 30, 2024, is as follows:

In INR Mn

Name of the Company	WACC	Business Enterprise Value #	Adjusted Enterprise Value *
MBEL	10.8%	29,830.0	30,548.4
SBHL	10.7%	9,286.6	10,046.7
HREL	9.4%	2,676.1	4,187.8
TRDCL	10.7%	383.3	686.5
PSRDCL	10.8%	17,771.8	19,098.9
BAEL @	11.1%	11,841.5	21,353.6
Total		**71,789.3**	**85,921.9**

 # Comprising present value of free cash flow to firm for the explicit period and release of net working capital at the end of explicit period. Excludes Contingent Claims.
** After considering adjustments, as appropriate, for cash and cash equivalent, advance tax, and contingent liabilities, etc.*
@ Read in conjunction with Note 2 on Page 43.

Appendix

Appendix 1 - WACC

The cost of equity and debt are weighted in terms of a typical industry capital structure to arrive at an estimated WACC.

Particulars	MBEL	SBHL	HREL	TRDCL	PSRDCL	BAEL
Cost of Equity (Ke)						
Risk Free Rate (Rfr)	6.7%	6.7%	6.6%	6.7%	6.7%	6.7%
Market Risk Premium (Rm)	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Levered Beta	0.96	0.96	0.96	0.96	0.96	0.96
Additional Risk Premium	0.5%	0.5%	-2.0%	-1.0%	0.5%	0.5%
Cost of Equity (Ke)	**13.9%**	**13.9%**	**11.3%**	**12.4%**	**13.9%**	**13.9%**
Cost of Debt (Kd)						
Pre-Tax - Cost of Debt (Kd)	9.0%	9.0%	7.5%	9.0%	9.0%	9.0%
Effective tax rate	14.7%	16.9%	0.0%	0.0%	15.6%	9.1%
Post Tax - Cost of Debt (Kd)	**7.7%**	**7.5%**	**7.5%**	**9.0%**	**7.6%**	**8.2%**
Debt / Equity	1.0	1.0	1.0	1.0	1.0	1.0
Rounded off WACC	**10.8%**	**10.7%**	**9.4%**	**10.7%**	**10.8%**	**11.1%**

Basis of calculation of each parameter of WACC:

Particulars	Remarks
Risk Free Rate (Rfr)	Risk free rate for the Specified Companies is estimated based on 10-year/ Balance life, Zero coupon yield curve ("ZCYC") for Government of India securities as of September 30, 2024. (Source: The Clearing Corporation of India Limited)
Beta (ß)	Beta is a measure of the risk of the shares of a company. ß is the co-variance between the return on sample stock and the return on the market. In order to determine the appropriate beta factor for the Company, consideration must be given either to the market beta of the Company or betas of comparable quoted companies. The unlevered beta has been worked out considering *inter-alia* 5-year monthly beta of comparable companies and long-term debt equity ratio (Market weights). The following companies were considered relevant to Specified Companies - IRB Infrastructure Developers Limited, Bharat Road Network Limited, and Ashoka Buildcon Limited, selected on the basis of their business operations and other relevant factors. (Source: S&P Capital IQ).
Equity Risk Premium	Equity Market equity risk premium is estimated considering *inter-alia* historical equity market returns over a risk-free rate and forward-looking equity market risk premium estimates. Data sources reviewed generated a range of equity risk premium indications. However, a 7% equity market risk premium was considered reasonable representative of the equity risk premium for India based on RBSA's understanding of the market risk premium as of the Valuation Date.
Company specific risk factor	Considering the company specific risk factors, including, operational nature of the underlying projects, revenue terms (toll/ annuity), limited risk for annuity projects, annuity held back, projected performance, etc.
Pre-Tax Cost of Debt (Kd)	Considering Management inputs on terms of the borrowings and the current average borrowing cost that a market participant would pay, to obtain debt financing assuming the target capital structure of the Specified Companies.
Effective tax rate	Estimated considering *inter-alia* brought forward business losses and unabsorbed depreciation, balance tax holiday period, tax depreciation/ amortization policy followed by the Specified Companies and corporate income tax rate.
Debt-to-equity	Considering *inter-alia* typical funding pattern for road infrastructure projects, long-term debt equity ratio and permissible leverage under the SEBI InvIT Regulations and other relevant factors.

Appendix 2 - Discounted Cash Flow Method:

Appendix 2.1 - Moradabad Bareilly Expressway Limited

Cash EBITDA — In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
Period in Months	6	12	12	12	12	12	12
Average Daily Traffic - PCU	35,772	35,755	37,942	40,010	42,197	44,519	46,981
Average Toll Rate (INR)	274.4	288.8	298.1	315.8	333.4	349.7	367.3
Total Revenues	**1,786.5**	**3,769.3**	**4,127.8**	**4,612.3**	**5,135.6**	**5,682.0**	**6,298.9**
Less: O&M Cost	-139.3	-291.2	-305.7	-321.0	-351.5	-369.1	-371.6
Less: Admin Cost*	-10.9	-15.2	-15.9	-16.7	-18.1	-24.7	-34.2
Cash EBITDA	**1,636.4**	**3,463.0**	**3,806.2**	**4,274.6**	**4,766.0**	**5,288.2**	**5,893.1**

Particulars for the year/period ending	FY 32	FY 33	FY 34	FY 35	FY 36
Period in Months	12	12	12	12	11
Average Daily Traffic - PCU	49,590	52,032	54,600	57,303	59,990
Average Toll Rate (INR)	385.9	402.9	424.5	444.9	469.0
Total Revenues	**6,984.3**	**7,652.2**	**8,459.9**	**9,304.5**	**9,510.0**
Less: O&M Cost	-390.2	-409.7	-430.2	-471.1	-458.0
Less: Admin Cost*	-48.9	-69.2	-90.4	-111.3	-126.7
Cash EBITDA	**6,545.2**	**7,173.3**	**7,939.3**	**8,722.2**	**8,925.3**

**Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

Free Cash Flow to Firm (FCFF):

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
Period in Months	6	12	12	12	12	12	12
Cash EBITDA	1,636.4	3,463.0	3,806.2	4,274.6	4,766.0	5,288.2	5,893.1
Less: Taxes	-	-	-	-	-	-	-
Cash EBITDA after Taxes	**1,636.4**	**3,463.0**	**3,806.2**	**4,274.6**	**4,766.0**	**5,288.2**	**5,893.1**
Less: MMR Expenditure	-204.0	-	-15.3	-27.7	-1,656.6	-689.6	-10.9
(Increase)/Decrease in Working Capital	150.0	-192.7	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	**1,582.3**	**3,270.3**	**3,790.9**	**4,246.9**	**3,109.4**	**4,598.6**	**5,882.3**
Time to Midpoint	0.25	1.00	2.00	3.00	4.00	5.00	6.00
WACC / PV Factor	0.97	0.90	0.81	0.74	0.66	0.6	0.54
PV of FCFF	**1,542.3**	**2,951.5**	**3,087.9**	**3,122.1**	**2,063.1**	**2,753.8**	**3,179.1**

Particulars for the year/period ending	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37
Period in Months	12	12	12	12	11	3
Cash EBITDA	6,545.2	7,173.3	7,939.3	8,722.2	8,925.3	
Less: Taxes	-1,523.2	-1,747.7	-1,963.7	-2,122.3	-2,119.7	
Cash EBITDA after Taxes	**5,022.0**	**5,425.6**	**5,975.7**	**6,599.8**	**6,805.6**	
Less: MMR Expenditure	-5.3	-	-	-919.1	-1,074.8	
(Increase)/Decrease in Working Capital	-	-	-	-	-	67.1
Free Cash flows to Firm ("FCFF")	**5,016.70**	**5,425.60**	**5,975.70**	**5,680.70**	**5,730.80**	**67.1**
Time to Midpoint	7.00	8.00	9.00	10.00	10.96	11.09
WACC / PV Factor	0.49	0.44	0.40	0.36	0.32	0.32
PV of FCFF	**2,447.0**	**2,388.5**	**2,374.3**	**2,037.1**	**1,861.9**	**21.5**

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	In INR Mn
Particulars	
Enterprise Value	**29,830.0**
Add: Cash & bank balance	724.0
Add: Interest accrued	0.1
Add: Income tax asset	59.9
Less: Contingent liabilities (refer table below)	-65.6
Adjusted Enterprise Value	**30,548.4**

Contingent liabilities	Amount	Probability	Tax	Net
Income tax related demands	12.0	25.0%	-	3.0
Others	334.8	25.0%	25.17%	62.6
Total				**65.6**

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Appendix 2.2 - Sikar Bikaner Highway Limited

Cash EBITDA: In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
Period in Months	6	12	12	12	12	12	12
Average Daily Traffic - PCU	11,119	11,409	12,056	12,744	13,476	14,253	15,080
Average Toll Rate (INR)	224.7	234.0	248.4	262.6	277.1	291.6	307.0
Total Revenues	**454.7**	**974.6**	**1,093.2**	**1,221.3**	**1,362.8**	**1,517.2**	**1,690.0**
Less:							
O&M Cost	106.1	214.7	225.5	236.8	248.6	261.0	274.1
Admin Cost*	12.4	17.6	18.4	11.8	13.1	22.2	22.1
Cash EBITDA	**336.3**	**742.2**	**849.3**	**972.7**	**1,101.1**	**1,234.0**	**1,393.8**

Particulars for the year/period ending	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38
Period in Months	12	12	12	12	12	12	12
Average Daily Traffic - PCU	15,720	16,389	17,089	17,821	18,588	19,233	19,902
Average Toll Rate (INR)	321.5	339.3	356.9	374.4	394.6	414.9	437.4
Total Revenues	**1,844.4**	**2,029.7**	**2,226.2**	**2,435.3**	**2,676.9**	**2,912.3**	**3,177.7**
Less:							
O&M Cost	287.8	302.2	317.3	333.1	349.8	367.3	385.7
Admin Cost*	23.7	20.1	27.5	43.8	38.9	43.6	48.9
Cash EBITDA	**1,532.9**	**1,707.3**	**1,881.5**	**2,058.3**	**2,288.2**	**2,501.4**	**2,743.1**

Particulars for the year/period ending	FY 39	FY 40	FY 41	FY 42	FY 43
Period in Months	12	12	12	12	12
Average Daily Traffic - PCU	20,596	21,317	22,064	22,840	23,645
Average Toll Rate (INR)	460.5	485.1	511.7	538.6	567.9
Total Revenues	**3,461.5**	**3,774.6**	**4,121.0**	**4,489.8**	**4,887.4**
Less:					
O&M Cost	404.9	425.2	446.4	468.8	490.7
Admin Cost*	66.9	73.1	80.4	76.6	85.4
Cash EBITDA	**2,989.6**	**3,276.3**	**3,594.1**	**3,944.4**	**4,311.3**

**Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

Free Cash Flow to Firm (FCFF):

Particulars for the period/year ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
Period in Months	6	12	12	12	12	12	12
Cash EBITDA	336.3	742.2	849.3	972.7	1,101.1	1,234.0	1,393.8
Less: Taxes	-	-	-	-	-	-	-
Cash EBITDA after Taxes	**336.3**	**742.2**	**849.3**	**972.7**	**1,101.10**	**1,234.00**	**1,393.80**
Less: MMR Expenditure	-642.6	-476.1	-30.6	-	-	-557.8	-409.6
(Increase)/Decrease in Working Capital	-	-	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	**-306.3**	**266.2**	**818.7**	**972.7**	**1,101.1**	**676.2**	**984.2**
Time to Midpoint	0.25	1.00	2.00	3.00	4.00	5.00	6.00
WACC / PV Factor (Mid - Year convention)	0.97	0.90	0.82	0.74	0.67	0.60	0.54
PV of FCFF	**-298.6**	**240.4**	**668.1**	**717**	**733.2**	**406.8**	**534.8**

In INR Mn

Particulars for the period/year ending	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38
Period in Months	12	12	12	12	12	12	12
Cash EBITDA	1,532.9	1,707.3	1,881.5	2,058.3	2,288.2	2,501.4	2,743.
Less: Taxes	-	-	-353.0	-479.5	-548.8	-611.6	-679.7
Cash EBITDA after Taxes	**1,532.9**	**1,707.3**	**1,528.5**	**1,006.9**	**1,135.9**	**1,251.2**	**1,386.7**
Less: MMR Expenditure	-492.1	-	-	-33.0	-	-	-
(Increase)/Decrease in Working Capital	-	-	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	**1,040.8**	**1,707.3**	**1,528.5**	**1,545.7**	**1,739.4**	**1,889.8**	**2,063.4**
Time to Midpoint	7.00	8.00	9.00	10.00	11.00	12.00	13.00
WACC / PV Factor (Mid - Year convention)	0.49	0.44	0.40	0.36	0.33	0.30	0.27
PV of FCFF	**510.9**	**757.1**	**612.3**	**559.3**	**568.6**	**558.0**	**550.4**

Particulars for the period/year ending	FY 39	FY 40	FY 41	FY 42	FY 43	FY 44
Period in Months	12	12	12	12	12	3
Cash EBITDA	2,989.6	3,276.3	3,594.1	3,944.4	4,311.3	
Less: Taxes	-707.0	-747.7	-796.6	-902.4	-1022.8	
Cash EBITDA after Taxes	**1564.4**	**1870.8**	**2182.6**	**2496.1**	**2723.4**	
Less: MMR Expenditure	-858.5	-692.2	-919.0	-	-	
(Increase)/Decrease in Working Capital	-	-	-	-	-	-78.5
Free Cash flows to Firm ("FCFF")	**1,424.2**	**1,836.4**	**1,878.5**	**3,042.0**	**3,288.6**	**-78.5**
Time to Midpoint	14.00	15.00	16.00	17.00	18.00	18.63
WACC / PV Factor (Mid - Year convention)	0.24	0.22	0.20	0.18	0.16	0.15
PV of FCFF	**343.2**	**399.7**	**369.4**	**540.3**	**527.7**	**-11.8**

Particulars	
Enterprise Value	**9,286.6**
Add: Cash & Bank Balance	748.7
Add: Income Tax Asset	13.1
Less: Contingent liabilities (refer table below)	-1.7
Adjusted Enterprise Value	**10,046.7**

Contingent Liabilities	Amount	Probability	Tax	Net
Income tax demands related demands	0.3	25.0%	-	0.1
Liabilities in the nature of penalties	6.7	25.0%	-	1.7
Total	**7.0**			**1.7**

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Appendix 2.3 - Hazaribagh Ranchi Expressway Limited

Cash EBITDA: In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29
Period in Months	6	12	12	12	4
Annuity receivable	665.1	1,281.6	1,281.6	1281.6	-
Less:					
O&M Cost	61.4	125.0	131.3	142.6	49.9
Overlay Cost	37.9	-	-	428.3	442.6
Admin Cost*	5.3	18.6	19.4	20.2	-
Cash EBITDA	**560.6**	**1,137.9**	**1,130.9**	**690.5**	**-492.5**

**Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

Free Cash Flow to Firm (FCFF):

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 29
Period in Months	6	12	12	12	4	3
Cash EBITDA	560.6	1137.9	1130.9	690.5	-492.5	
Less: Taxes	-	-	-	-	-	
Cash EBITDA after taxes	**560.6**	**1137.9**	**1130.9**	**690.5**	**-492.5**	
(Increase)/Decrease in Working Capital	10.0	-	-	-	-	-29.2
Free Cash flows to Firm ("FCFF")	**550.6**	**1,137.9**	**1,130.9**	**690.5**	**-492.5**	**-43.4**
Time to Midpoint	0.25	1.00	2.00	3.00	3.67	3.96
WACC / PV Factor	0.98	0.91	0.84	0.76	0.72	0.7
PV of FCFF	**538.3**	**1,040.2**	**944.9**	**527.4**	**-354.3**	**-20.4**

Particulars	
Enterprise Value	**2,676.1**
Add: Cash & Bank Balance	1,421.8
Add: Income Tax Asset	98.5
Add: Receivable from related party	1.8
Less: Contingent liabilities (refer table below)	-10.4
Adjusted Enterprise Value	**4,187.8**

Contingent liabilities	Amount	Probability	Tax	Net
Income tax related demands	41.5	25.0%	-	10.4
Total	**41.5**			**10.4**

Appendix 2.4 - Thiruvananthapuram Road Development Company Limited

Cash EBITDA:

In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32
Period in Months	6	12	12	12	12	12	12	12
Annuity receivable	222.8	237.0	237.0	105.2	105.2	105.2	38.6	19.3
Less:								
O&M Cost	22.9	48.2	48.7	32.1	33.7	34.2	25.4	5.9
Overlay Cost	58.8	-	173.7	21.4	-	67.6	60.8	-
Admin Cost*	9.2	13.2	13.8	14.4	15.2	15.8	16.5	8.7
Labour welfare expenses	2.2	2.4	2.4	1.1	1.1	1.1	0.4	0.2
Cash EBITDA	**129.7**	**173.3**	**-1.5**	**36.3**	**55.3**	**-13.6**	**-64.5**	**4.5**

**Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

Free Cash Flow to Firm (FCFF):

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29
Period in Months	6	12	12	12	12
Cash EBITDA	129.7	173.3	-1.5	36.3	55.3
Less: Taxes	-	-	-	-	-
Cash EBITDA after taxes	**129.7**	**173.3**	**-1.5**	**36.3**	**55.3**
(Increase)/Decrease in Working Capital	95.2	-	-	-	-
Free Cash flows to Firm ("FCFF")	**224.8**	**173.3**	**-1.5**	**36.3**	**55.3**
Time to Midpoint	0.25	1.00	2.00	3.00	4.00
WACC / PV Factor	0.98	0.90	0.82	0.74	0.67
PV of FCFF	**219.2**	**156.6**	**-1.2**	**26.8**	**36.8**

Particulars for the year/period ending	FY 30	FY 31	FY 32	FY 32
Period in Months	12	12	2	3
Cash EBITDA	13.6	64.5	4.5	
Less: Taxes	-	-	-	
Cash EBITDA	**-13.6**	**-64.5**	**4.5**	
(Increase)/Decrease in Working Capital	-	-	-	-26.5
Free Cash flows to Firm ("FCFF")	**-13.6**	**-64.5**	**4.5**	**-26.5**
Time to Midpoint	5.00	6.00	6.08	6.21
WACC / PV Factor	0.60	0.54	0.54	0.53
PV of FCFF	**-8.2**	**-35.0**	**2.4**	**-14.1**

Particulars	
Enterprise Value	**383.3**
Add: Cash & Bank Balance	274.7
Add: Income Tax Asset	50.1
Less: Contingent liabilities (refer table below)	-21.6
Adjusted Enterprise Value	**686.5**

Contingent liabilities	Amount	Probability	Tax	Net
Income tax related demands	78.3	25.00%	-	19.6
Indirect tax related demands	9.8	25.00%	25.17%	1.8
Liabilities in the nature of penalties	1.0	25.00%	-	0.2
Total	**89.0**			**21.6**

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Appendix 2.5 - Pune Sholapur Road Development Company Limited

Cash EBITDA: In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Period in Months	6	12	12	12	12	12
Average Daily Traffic in PCU	45,293	46,657	48,490	50,402	52,396	54,477
Average Toll Rate (INR)	148.3	154.2	163.8	173.4	184.4	193.7
Total Revenues	**1,222.5**	**2,626.8**	**2,899.6**	**3,190.2**	**3,526.6**	**3,852.3**
Less:						
O&M Cost	72.7	192.6	202.2	212.4	223.0	234.1
Admin Cost*	5.4	17.7	15.4	16.2	20.5	21.5
Cash EBITDA	**1,144.5**	**2,416.5**	**2,681.9**	**2,961.7**	**3,283.2**	**3,596.6**

Particulars for the year/period ending	FY31	FY32	FY33	FY34	FY35	FY36
Period in Months	12	12	12	12	12	6
Average Daily Traffic in PCU	56,648	58,426	60,265	62,167	64,135	66,170
Average Toll Rate (INR)	203.7	214.4	226.5	237.9	250.7	262.9
Total Revenues	**4,210.8**	**4,571.7**	**4,981.8**	**5,397.7**	**5,869.2**	**2,852.5**
Less:						
O&M Cost	245.8	258.1	271.0	284.6	298.8	141.0
Admin Cost*	18.7	23.7	20.6	21.6	34.1	12.9
Cash EBITDA	**3,946.3**	**4,289.9**	**4,690.2**	**5,091.5**	**5,536.3**	**2,698.5**

** Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

Free Cash Flow to Firm:

Particulars for the year/period ending	FY25	FY26	FY27	FY28	FY29	FY30
Period in Months	6	12	12	12	12	12
Cash EBITDA	1,144.5	2,416.5	2,681.9	2,961.7	3,283.2	3,596.6
Less: Taxes	-246.2	-270.4	-300.7	-332.6	-363.7	-386.5
Cash EBITDA after taxes	**898.3**	**2,146.1**	**2,381.2**	**2,629.1**	**2,919.5**	**3,210.1**
Less: MMR Expenditure	-429.5	-495.2	-	-	-342.5	-655.0
(Increase)/Decrease in Working Capital	-323.0	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	145.8	1,650.9	2,381.2	2,629.1	2,577.0	2,555.1
Time to Midpoint	0.25	1.00	2.00	3.00	4.00	5.00
WACC / PV Factor	0.97	0.90	0.81	0.74	0.66	0.60
PV of FCFF	**142.1**	**1,490.0**	**1,939.6**	**1,932.8**	**1,709.8**	**1,530.1**

Particulars for the year/period ending	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
Period in Months	12	12	12	12	12	6
Cash EBITDA	3,946.3	4,289.9	4,690.2	5,091.5	5,536.3	2,698.5
Less: Taxes	-424.8	-438.8	-480.6	-522.2	-476.6	-98.1
Cash EBITDA after taxes	**3,521.5**	**3,851.1**	**4,209.6**	**4,569.3**	**5,059.7**	**2,600.5**
Less: MMR Expenditure	-	-770.7	-	-	-1,365.6	-769.0
(Increase)/Decrease in Working Capital	-	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	3,521.5	3,080.3	4,209.6	4,569.3	3,694.1	1,831.5
Time to Midpoint	6.00	7.00	8.00	9.00	10.00	10.72
WACC / PV Factor	0.54	0.49	0.44	0.40	0.36	0.33
PV of FCFF	**1,903.2**	**1,502.5**	**1,853.2**	**1,815.5**	**1,324.7**	**609.8**

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Particulars	(in INR Mn)
Enterprise Value	**17,771.8**
Add: Cash & Bank Balance	1,333.1
Add: Advance tax	49.9
Less: Contingent liabilities (refer table below)	-55.9
Adjusted Enterprise Value	**19,098.9**

Contingent liabilities	Amount	Probability	Tax	Net
Indirect tax related demands	8.5	25.0%	25.17%	1.5
Others	290.4	25.0%	25.17%	54.3
Total				**55.9**

Note: As of the Valuation Date, the Company has recorded claims receivable (award money) from NHAI of INR 4,558.1 Mn (net) in the financials, which has been pending to be received since FY18. The Delhi High Court during hearing of the appeal ordered NHAI to deposit the entire award amount with the Court. The Company had recognised interest on claim recoverable up to March 31, 2018, which has been deposited by NHAI with the Court. Since NHAI has already deposited the award amount with Court and appeal is pending disposal, the Company as a matter of prudence has not recognised any further interest on claim. An execution petition has been filed by the Company for release of the award money. Considering that the matter is sub-judice and that the ultimate realisation of the claim cannot be determined with reasonable certainty, the projected cashflows provided by the Management do not factor any inflow of aforementioned claim.

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Appendix 2.6 - Barwa Adda Expressway Limited

Cash EBITDA:

In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32
Period in Months	6	12	12	12	12	12	12	12
Average Daily Traffic in PCU	44,203	45,114	47,582	50,196	52,720	55,379	58,182	59,642
Average Toll Rate (INR)	178.1	185.4	194.2	204.1	213.9	223.6	234.5	245.3
Total Revenues	1,433.2	3,052.6	3,373.6	3,739.9	4,115.4	4,519.3	4,979.3	5,340.5
Less:								
O&M Cost	146.1	296.3	311.2	326.7	343.1	360.2	378.2	397.1
Admin Cost*	8.8	17.9	18.8	19.8	26.5	28.9	35.0	45.2
Cash EBITDA	**1,278.3**	**2,738.4**	**3,043.6**	**3,393.4**	**3,745.9**	**4,130.3**	**4,566.0**	**4,898.2**

Particulars for the year/period ending	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
Period in Months	12	12	12	12	12	12	3
Average Daily Traffic in PCU	61,132	60,819	60,351	62,078	65,116	68,312	71,485
Average Toll Rate (INR)	256.3	267.6	278.8	292.3	305.5	320.4	333.0
Total Revenues	5,719.9	5,941.5	6,140.6	6,623.0	7,260.4	7,989.1	2,142.2
Less:							
O&M Cost	417.0	437.8	459.7	482.7	506.8	532.2	137.8
Admin Cost*	53.7	64.2	70.9	29.2	30.7	34.6	10.3
Cash EBITDA	**5,249.2**	**5,439.5**	**5,610.0**	**6,111.1**	**6,722.8**	**7,422.3**	**1,994.1**

**Admin cost comprises of professional fee, auditor fee, other miscellaneous expenses, etc.*

In INR Mn

Particulars for the year/period ending	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32
Period in Months	6	12	12	12	12	12	12	12
Cash EBITDA	1,278.3	2,738.4	3,043.6	3,393.4	3,745.9	4,130.3	4,566.0	4,898.2
Less: Taxes	-	-	-	-	-	-	-	-
Cash EBITDA after Tax	**1,278.3**	**2,738.4**	**3,043.6**	**3,393.4**	**3,745.9**	**4,130.3**	**4,566.0**	**4,898.2**
Less: MMR Expenditure	-103.0	-572.9	-428.4	-1,080.0	-472.3	0.0	0.0	-584.0
Less: Other Capital expenditure	-2,236.7	822.5	-	-	-	-	-	-
Less: NHAI Premium including interest	-4,668.5[3]	-718.3	-465.6	-533.1	-1,436.0	-873.1	-916.8	-962.6
(Increase)/Decrease in Working Capital	-299.9	-	-	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	-6,029.7	2,269.6	2,149.7	1,780.3	1,837.6	3,257.1	3,649.2	3,351.5
Time to Midpoint	0.25	1.00	2.00	3.00	4.00	5.00	6.00	7.00
WACC / PV Factor	0.97	0.90	0.81	0.73	0.66	0.59	0.53	0.48
PV of FCFF	**-5,873.1**	**2,042.9**	**1,741.6**	**1,298.2**	**1,206.1**	**1,924.2**	**1,940.5**	**1,604.2**

[3] Includes a sum of INR 4,317.9 Mn, including interest of INR 961.4 Mn as payment to NHAI towards dues on account of NHAI Premium for the period from February 2019 to September 30, 2024, as part of the condition for transfer of the Company to InvIT

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In INR Mn

Particulars for the year/period ending	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39	FY 39
Period in Months	**12**	**12**	**12**	**12**	**12**	**12**	**3**	**3**
Cash EBITDA	5,249.2	5,439.5	5,610.0	6,111.1	6,722.8	7,422.3	1,994.1	-
Less: Taxes	-221.7	-901.8	-976.2	-1,075.2	-1,197.2	-1,278.6	-185.3	-
EBIT after Tax on EBIT	**5,027.5**	**4,537.7**	**4,633.8**	**5,035.9**	**5,525.6**	**6,143.7**	**1,808.8**	-
Less: MMR Expenditure	-1,386.5	-643.9	0.0	-908.3	-953.7	-2,356.7	-	-
Less: Other Capital expenditure	-	-	-	-	-	-	-	-
Less: NHAI Premium including interest	-1,010.8	-1,061.3	-1,114.4	-1,170.1	-1,228.6	-1,290.0	-334.0	-
(Increase)/Decrease in Working Capital	-	-	-	-	-	-	-	-
Free Cash flows to Firm ("FCFF")	2,630.2	2,832.5	3,519.4	2,957.5	3,343.2	2,497.0	1,474.8	1,569.9
Time to Midpoint	8.00	9.00	10.00	11.00	12.00	13.00	13.63	13.88
WACC / PV Factor	0.43	0.39	0.35	0.31	0.28	0.25	0.24	0.23
PV of FCFF	**1,133.1**	**1,098.3**	**1,228.4**	**929.1**	**945.4**	**635.5**	**351.5**	**-364.4**

Particulars	In INR Mn
Enterprise Value	**11,841.5**
Add: Cash & Bank Balance	6,014.5
Add: Advance tax (net of provision)	112.9
Add: Receivable from banks	3,385.7
Less: Contingent liabilities	(0.9)
Adjusted Enterprise Value	**21,353.6**

Contingent liabilities	Amount	Probability	Tax	Net
Indirect tax related demands	0.6	100.0%	25.17%	0.4
Liabilities in the nature of penalties	2.0	25.0%	-	0.5
				0.9

Note 1:
The National Company Law Appellate Tribunal vide its judgement dated March 12, 2020 ("NCLAT Order"), has approved a revised distribution framework for IL&FS Group entities and has accepted October 15, 2018, as cut-off date for crystallisation of claims/ liabilities of creditors. As per the financials for the period ended September 30, 2024, the amount due to operational creditors aggregating to INR 4,031.6 Mn has not been adjusted in the above workings. We understand from the Management that the said amount is proposed to be converted into interest free loan and the agreement thereof giving effect to the same is expected to be executed soon.

Note 2:
The Management has informed us that, in accordance with the terms of restructuring agreement being finalised with the lenders, interest shall accrue on Bank loans effective from April 1, 2021. Basis this interest accrued for the period April 1, 2021, to March 31, 2023, aggregating to INR 1,553.7 Mn shall be added to the outstanding loan, would be repaid as per the restructuring agreement. Interest for the period from April 1, 2023, to Sep 30, 2024, aggregating to INR 1,280.6 Mn would be payable immediately on restructuring. However, the entire interest effective April 1, 2021, has been accounted in the financials considering that the Company was transferred to RIIT Trust after balance sheet date but before the balance sheet signing date.

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WACC Sensitivities

Adjusted Enterprise Value

In INR Mn

Company Name	Change in WACC by:				
	-1.00%	-0.50%	0.00%	0.50%	1.00%
MBEL	32,035.0	31,277.7	30,548.4	29,845.9	29,168.9
SBHL	10,888.7	10,455.3	10,046.7	9,661.2	9,297.3
HREL	4,218.8	4,202.8	4,187.8	4,173.0	4,158.3
TRDCL	687.5	687.0	686.5	686.0	685.4
PSRDCL	20,024.2	19,553.0	19,098.9	18,661.2	18,239.1
BAEL	23,432.6	22,349.2	21,353.6	20,437.2	19,592.6

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Appendix 3(a) - List of one-time sanctions / approvals as of September 30, 2024

Company	Narration	Issuing Authority (Independent Engineer/Independent Consultant)	Date
MBEL	Issue of provisional certificate dated Jan 06, 2015, having reference no. 42000203/LBG/NHAI/1415	Louis Berger	Jan 6, 2015
MBEL	Issue of provisional certificate dated Nov 04, 2015, having reference no. 42000203/LBG/NHAI/1501	Louis Berger	Nov 4, 2015
MBEL	Issue of completion certificate dated Aug 02, 2019, having reference no. LASA/Highway/O&M/73614/2019/1634	LEA Associates South Asia Pvt Ltd	Jul 30, 2019
SBHL	Issue of provisional completion certificate I dated Oct 10, 2015, having reference no. ICT:685: TPV:9739	Intercontinental Consultants and Technocrats Pvt Ltd	Oct 10, 2015
SBHL	Issue of provisional completion certificate II dated Aug 16, 2016, having reference no. ICT:685: TPV:7471	Intercontinental Consultants and Technocrats Pvt Ltd	Aug 16, 2016
SBHL	Issue of provisional completion certificate III dated Apr 05, 2018, having reference no. ICT:685: TPV:2511	Intercontinental Consultants and Technocrats Pvt Ltd	Apr 05, 2018
HREL	Completion Certificate for Hazaribagh Ranchi Section of NH-33 dated April 28, 2015, having reference No: B-95/04-15/74	M/s Unihorn India Private Limited	April 01, 2015
HREL	Provisional Completion Certificate for Hazaribagh Ranchi Section of NH-33 dated April 12, 2013	M/s Unihorn India Private Limited	Sept 15, 2012
TRDCL	Completion Certificate for Thiruvananthapuram City Road Improvement project for all four phases dated May 08,2017	Kerala Road Fund Board	Phase I: Jan 2008 Phase II: Feb 2012 Phase III: Feb 2015 Phase IV: May 2016
TRDCL	Provisional Completion Certificate for Thiruvananthapuram City Road Improvement Project Phase IV dated November 15,2016 having reference No: 850/P2/KRFB/2016	Kerala Road Fund Board	May 31,2106
TRDCL	Provisional Completion Certificate for Thiruvananthapuram City Road Improvement Project Phase III dated February 21,2015 having reference No: 1339/DM2/KRFB/2013	Kerala Road Fund Board & Egis India Consulting Engineers Pvt. Ltd	Feb 20,2015

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Company	Narration	Issuing Authority (Independent Engineer/Independent Consultant)	Date
TRDCL	Provisional Completion Certificate for Thiruvananthapuram City Road Improvement Project Phase II dated November 08,2012 having reference No: KRFB/TCRIP/Annuity/2011	Kerala Road Fund Board	Feb 22,2012
TRDCL	Provisional Completion Certificate for Thiruvananthapuram City Road Improvement Project Phase I dated January 05,2008 having reference No: TCRIP/PE/1107/CC	Kerala Road Fund Board	November 15,2006
PSRDCL	Completion Certificate for Pune Solapur section of NH-09 dated Feb 03, 2016, having reference No: ICT: 620: RS: 1105	M/s Intercontinental Consultants and Technocrats Pvt. Ltd.	Feb 03, 2016
PSRDCL	Provisional Completion Certificate for Pune Solapur section of NH-09 dated August 23, 2013	M/s Intercontinental Consultants and Technocrats Pvt. Ltd.	August 23, 2013
BAEL	Supplementary Agreement for operation of 2nd Plaza	NHAI and BAEL	28th August 2017

Source: Management information

Company	Licence	Documents
BAEL	(i) Pollution Control Board and other Statutory Clearances for hot mix plant,	Acknowledgment from Jharkhand Pollution control board for Application to obtain Consent to Establish and Operation of Hot Mix plant

Source: Management information

Appendix 4 – Statement of Assets:

Statement of Assets of the Specified Companies as of September 30, 2024, is as under,

In INR Mn

Name of the Company	Net Fixed Assets	Net Intangible Assets	Other Non-Current Assets	Current Assets
MBEL	20.0	20,870.1	151.9	849.2
SBHL	-	7,629.2	612.9	724.6
HREL	-	-	1,787.9	2,456.2
TRDCL	-	-	204.1	545.1
PSRDCL	-	12,804.3	3.0	5,995.7
BAEL	0.6	16,582.0	166.2	9,471.5

Source: Audited special purpose financial statements of Specified Companies

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Appendix 5 - Pending Litigation against the Specified Companies

List of Pending Income Tax Related Litigations

In INR Mn

Company	Forum	Assessment Year	Amount in Dispute	Demand as per Order	Demand O/S as on date	Remarks
TRDCL	Mumbai High Court	2008-09	63.5	-	-	The dispute relates to the depreciation claimed by the company for plant & machinery, disallowed by the authority by granting amortisation.
TRDCL	Mumbai High Court	2010-11	112.8	-	-	
TRDCL	Mumbai High Court	2011-12	93.5	0.1	-	
TRDCL	Mumbai High Court	2015-16	191.2	48.9	48.9	Mumbai ITAT has decided the appeal in the favour of the Company vide order dated 21.09.2022 by deleting the addition made by AO/TPO. The income tax department had filed an appeal with Bombay High Court.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2012-13	77.9	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2012-13	70.9	14.3	3.5	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2013-14	195.8	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2014-15	164.6	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
			0.0			The dispute related to unreconciled interest income from bank appearing in form 26AS added as income from other sources (IFOS)

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Company	Forum	Assessment Year	Amount in Dispute	Demand as per Order	Demand O/S as on date	Remarks
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2016-17	3.7	11.4	-	The dispute relates to disallowance of corresponding depreciation on account of disallowance of project management fees and project supervision fees capitalised as assets being not at arm's length as per transfer pricing officer and later confirmed by the DRP.
			168.0			The dispute relates to the depreciation claimed by the company for plant & machinery, disallowed by the authority by granting amortisation.
			0.0			The dispute related to unreconciled interest income from bank appearing in form 26AS added as income from other sources.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2017-18	3.2	-	-	The dispute relates to disallowance of corresponding depreciation on account of disallowance of project management fees and project supervision fees capitalised as assets being not at arm's length as per transfer pricing officer and later confirmed by the DRP.
			446.8			The dispute relates to the depreciation claimed by the entity for plant & machinery, disallowed by the authority by granting amortisation.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2018-19	0.4	-	-	Interest income erroneously added to income although being offered for tax in ROI
			2.7			The dispute relates to disallowance of corresponding depreciation on account of disallowance of project management fees and project supervision fees capitalised as assets being not at arm's length as per transfer pricing officer and later confirmed by the DRP.
			374.7			The dispute relates to the depreciation claimed by the entity for plant & machinery, disallowed by the authority by granting amortisation.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2019-20	3.6	0.2	-	The dispute related to short grant of TDS credit by INR 3.6 Mn even though income corresponding to TDS credit was offered to tax in accordance with section 199 of the Income Tax Act, 1961 read with Rule 37BA of the Income Tax Rules 1962.

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Company	Forum	Assessment Year	Amount in Dispute	Demand as per Order	Demand O/S as on date	Remarks
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2021-22	1.1	-	-	The dispute related to short grant of TDS credit by INR 1.1 Mn even though income corresponding to TDS credit was offered to tax in accordance with section 199 of the Income Tax Act, 1961 read with Rule 37BA of the Income Tax Rules 1962.
TRDCL	Commissioner of income tax-Appeal -CIT(A)	2022-23	1.2	-	-	The dispute related to short grant of TDS credit by INR 1.2 Mn even though income corresponding to TDS credit was offered to tax in accordance with section 199 of the Income Tax Act, 1961 read with Rule 37BA of the Income Tax Rules 1962.
SBHL	Commissioner of income tax-Appeal -CIT(A)	2016-17	0.7	0.2	-	Interest income earned on deposit during the construction period has been considered as income from other sources instead of business income.
SBHL	Commissioner of income tax-Appeal -CIT(A)	2018-19	1,430.5	0.0	-	The dispute relates to the depreciation claimed by the entity for plant & machinery, disallowed by the authority by granting amortisation.
PSRDCL	Commissioner of income tax-Appeal -CIT(A)	2011-12	-	5.1	-	The dispute relates to penalty levied on addition made during assessment u/s 271(1)(c). The quantum appeal on issue has been favourably decided by jurisdictional ITAT.
PSRDCL	Commissioner of income tax-Appeal -CIT(A)	2014-15	3,308.7	2,406.5	2,388.9	The dispute relates to 1. Grant & utility shifting treated as Income 2. Toll revenue added to income
PSRDCL	Commissioner of income tax-Appeal -CIT(A)	2017-18	2,904.5	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery, disallowed by the authority by granting amortisation.
PSRDCL	Commissioner of income tax-Appeal -CIT(A)	2019-20	-	9.2	9.2	The Company has been treated as "Assessee in default" for deduction and non-deposit of TDS of INR 6.1 Mn for the FY 2018-19 and consequentially interest has been levied thereupon of INR 3.4 Mn under section 201(1A) of the Income tax Act. The penalty and prosecution proceedings are not initiated as of report date.

Company	Forum	Assessment Year	Amount in Dispute	Demand as per Order	Demand O/S as on date	Remarks
PSRDCL	Commissioner of income tax-Appeal -CIT(A)	2022-23	1,069.8	385.2	385.2	The dispute relates to 1. Disallowance of depreciation claim on intangible assets (road) as per ROI of INR 1,069.8 Mn. and 2. Restricting brought forward loss set off to the extent of INR 385.2 Mn
MBEL	Commissioner of income tax-Appeal -CIT(A)	2012-13	22.8	10.0	-	Interest income earned on deposit during the construction period has been considered as income from other sources instead of business income
MBEL	Commissioner of income tax-Appeal -CIT(A)	2013-14	4.0	-	-	
MBEL	Commissioner of income tax-Appeal -CIT(A)	2014-15	1.8	-	-	
MBEL	Commissioner of income tax-Appeal -CIT(A)	2017-18	4,390.9	-	-	Interest received during construction period considered as income from other sources and depreciation claimed as intangible assets disallowed by granting amortisation.
MBEL	Commissioner of income tax-Appeal -CIT(A)	2018-19	2,868.4	0.04	0.04	The dispute relates to the depreciation claimed by the Company for plant & machinery disallowed by the authority by granting amortisation.
MBEL	Commissioner of income tax-Appeal -CIT(A)	2019-20	133.5	0.001	0.001	The dispute relates to short credit of Tax Deducted at Source ('TDS') of INR 133.5 Mn and erroneous demand of INR 1,090. The AO has granted credit of TDS only to the extent of INR 140.7 Mn as against INR 274.2 Mn claimed resulting in short grant.
MBEL	Commissioner of income tax-Appeal -CIT(A)	2020-21	0.2	-	-	The dispute relates to short credit of tax deducted at source of INR 0.2 Mn. The AO has granted credit of TDS only to the extent of INR 6.5 Mn as against INR 6.6 Mn claimed resulting in short grant.
MBEL	Commissioner of income tax-Appeal -CIT(A)	2022-23	240.5	-	-	The dispute relates to- 1. Depreciation claim on intangible assets (road assets) of INR 1,461.3 Mn disallowed by allowing amortisation expense of INR 1,278.2 Mn 2. Chargeability of interest income fixed deposits under the head income from other sources of INR 27.6 Mn 3. Erroneously adding interest income twice of INR 27.6 Mn.

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Company	Forum	Assessment Year	Amount in Dispute	Demand as per Order	Demand O/S as on date	Remarks
						4. Erroneous unexplained ad hoc addition to income of INR 29.8 Mn 5. Short TDS credit of INR 23,394.
HREL	Mumbai ITAT	2013-14	862.3	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation. The CIT(A) has upheld the order of assessing officer. The Company has filed an appeal before Mumbai ITAT on 20.10.2023
HREL	Mumbai ITAT	2014-15	676.1	-	-	
HREL	Commissioner of income tax-Appeal -CIT(A)	2015-16	547.9	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
HREL	Commissioner of income tax-Appeal -CIT(A)	2017-18	830.6	-	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation.
HREL	Commissioner of income tax-Appeal -CIT(A)	2018-19	455.5	-	-	
HREL	Commissioner of income tax-Appeal -CIT(A)	2017-18	-	0.0	-	Penalty levied under section 272A(1)(d) of the Act of INR 10,000 for delay in submission during assessment proceedings.
HREL	Commissioner of income tax-Appeal -CIT(A)	2020-21	80.6	34.6	-	The dispute relates to the depreciation claimed by the entity for plant & machinery disallowed by the authority by granting amortisation. Demand of INR 30.9 Mn adjusted from refund along with interest u/s 220 of INR 3.7 Mn
BAEL	Commissioner of income tax-Appeal -CIT(A)	2022-23	223.7	-	-	The CPC erred by not giving effect of ICDS I adjustment (i.e., not reduced INR 223.7 Mn from the profit), Hence disallowed.

Source: Management information

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List of Pending Indirect Tax Related Litigations:

Name of Entity	IDT Act	Summary	State	Financial Year	Amount (INR Mn)
MBEL	GST	GST ASMT 10 issued due to ITC mismatch between GSTR 3B Vs GSTR 2A. However, the Company has replied that ITC has been availed & reversed during monthly GST compliance, hence there is no excess ITC claimed as compared to GSTR 2A.	UP	FY 2021-22	5.4
MBEL	VAT	Penalty of INR 11,69,400 was imposed in the original order due to audit observation for WCT not deposited within the timeline. However, demand has been reduced to INR 7,70,906 by Rectification Order. Refund as per order INR 29,23,863 to be received. Order giving effect to the same is pending to be received.	UP	FY 2013-14	(2.15)
MBEL	VAT	Exparte order passed, appeal filed.	UP	FY 2015-16	(9.3)
MBEL	VAT	Exparte order passed, appeal filed.	UP	FY 2016-17	(0.5)
MBEL	VAT	Exparte order passed, appeal filed.	UP	FY 2017-18	(0.2)
PSRDCL	VAT	Non recovery of tax on toll revenue.	Maharashtra	FY 2015-2016	4.4
TRDCL	ST	Notice has been issued by the service tax department due to difference in income shown in income tax return (ITR) vs income as appearing in form 26AS vs income shown in service tax return. Detailed reconciliation of income in ITR vs 26AS vs service tax return has been prepared. Awaiting next hearing date.	Maharashtra	FY 2014-2015	0.2
TRDCL	GST	GST authority has passed order towards GST applicable on annuity income. However, the Company has contested that GST is not applicable on annuity pertaining to service tax regime which was invoiced during GST period and appeal against order has been filed.	Kerala	Jul 2017 - Mar 2021	10.7
TRDCL	VAT	The demand was raised for INR 69,12,846 (Tax - 43,78,385 and Interest – 25,37,627), since VAT TDS amounting to INR 43,78,385 by Kerala Road Fund Board was not given credit in the assessment order. Rectification petition for giving the TDS credit was filed on February 2, 2017. The order has been passed and remanded	Kerala	FY 2011-12	0.0

Name of Entity	IDT Act	Summary	State	Financial Year	Amount (INR Mn)
		back to assessing authority. (If VAT TDS credit is given, there will not be any tax demand and therefore interest levy will also get cancelled)			
TRDCL	VAT	Refund will be processed only after the cancellation of the demand for the year 2011-12 is done in rectification proceedings.	Kerala	FY 2012-13	(7.6)
TRDCL	VAT	Refund will be processed only after the cancellation of the demand for the year 2011-12 is done in rectification proceedings.	Kerala	FY 2013-14	(0.1)
TRDCL	VAT	Refund will be processed only after the cancellation of the demand for the year 2011-12 is done in rectification proceedings.	Kerala	FY 2014-15	(6.8)
BAEL	GST	GST departmental audit has been conducted and the department has raised a demand on unbilled revenue and has shown the same in GST audit report (GSTR 9C) while reconciling with financials.	West Bengal	FY 2019-2020	1.0
BAEL	GST	DRC 07 Demand Order No ZD191223038682D received towards short payment of RCM liability. The company decided to contest that RCM is not applicable based on Notification issued 38/2017 – Central Tax (Rate) dated October 13, 2017.	West Bengal	FY 2017-2018	0.6
BAEL	GST	System generated DRC-01C intimation issued for ITC mismatch between GSTR-3B vs GSTR-2A for the month of March 2024.	West Bengal	FY 2023-2024	21.1
BAEL	VAT	VAT TDS refund. Appeal filed before tribunal	West Bengal	FY 2014-15	(1.1)
BAEL	VAT	The refund order was passed for a lower amount hence the Company has filed appeal for the balance amount.	West Bengal	FY 2016-17	(3.3)
BAEL	VAT	The refund order was passed for a lower amount hence the Company has filed appeal for the balance amount.	West Bengal	FY 2017-18	(0.9)
SBHL	GST	ASMT-10 assessment notice issued for difference between ITC availed in GSTR 3B vs GSTR 2A.	Rajasthan	FY 2023-2024	3.6

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List of Pending Other Litigations:

Company	Case details	Forum	Case filed by	Case filed against	Current Status	Whether money to be paid or received	Amount INR Mn
HREL	WPC 1135 of 2014(CNR No) JHHC010198112014	High Court of Jharkhand - Ranchi Bench	HREL	Mr Anjani Kumar Pandey	The Hon'ble High Court has issued notices and called for records. Proof of service is awaited, and the Company is required to list the case after the receipt of the service report on the notice issued to the respondents. The matter was listed on 12.1.2024, and the court has directed to serve a copy on the respondent within two weeks and then list the matter for further hearing. Further, the Management is in the process of filing an IA for impleading GR Infra as a party to the writ petition (out of court settlement failed as GR Infra denied settling the matter at the Labour Commissioner level). Matter was listed on 31.08.2024, The hon'ble court directed to call the record and proceeding of the lower court. Next date is not given.	To be received	1.1
MBEL	Writ C No. 41272/2024	High Court Allahabad	Moradabad Bareilly Expressway Limited	Collector of Stamp and Ors	The Collector of Stamps, Moradabad, issued an ex-parte order on August 17, 2022, directing MBEL to pay stamp duty of INR 253.4 Mn for the concession agreement with NHAI. After the	To be Paid	INR 164.7 Mn (out of which INR 150 Mn has already been deposited at the

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Company	Case details	Forum	Case filed by	Case filed against	Current Status	Whether money to be paid or received	Amount INR Mn
					dismissal of MBEL's restoration application, a writ petition was filed, and the Allahabad High Court quashed both orders on May 8, 2024, remanding the matter for reconsideration. On October 16, 2024, the Collector levied INR 164.7 Mn Cr stamp duty with 1.5% monthly interest. MBEL has filed a writ petition challenging this order.		time of interim stay in Writ Petition 150668 of 2023).
TRDCL	Arbitral Tribunal comprising of Justice M.N Krishnan, Justice T.R Ramachandran Nair and Justice N.K Balakrishnan	Kerala Road Fund Board and Anr	TRDCL	Kerala Road Fund Board	On 04.05.2024, the matter was listed for the Respondent to begin his argument. However, during this time, the Respondent filed an application for the production of additional documents. The Claimant/TRDCL then filed a reply on 11.05.2024 in preparation for the argument. The matter was heard and is reserved for award.	To be received	3,586.7
TRDCL	C.C.No.1263/2015	Kerala Lokayukta, Thiruvanantha puram	Dr. C A Mary	1. Chief Engineer, Kerala Water Authority, TVM 2. K Madhu, Executive Engineer, Sewerage Division, Kerala Water Authority, TVM 3. Assistant Executive Engineer, Sewerage Division, Kerala Water Authority, TVM	Examination of the additional witness of the complainant. The posting date will be notified prior to the hearing.	N.A.	N.A.

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Company	Case details	Forum	Case filed by	Case filed against	Current Status	Whether money to be paid or received	Amount INR Mn
				4. Chief Engineer, PWD (Roads), TVM 5. Executive Engineer, PWD (Roads), TVM 6. Chief Executive Officer, Kerala Road Fund Board, TVM 7. Project Officer, TRDCL 8. Chief Engineer, Corporation of Thiruvananthapuram, TVM			
TRDCL	W.P.(C) No.7640/2018 (D)	High Court of Kerala, Kochi	Kerala Road Fund Board	1. Kerala Lok Ayukta 2. M/s. Nikunjam Constructions (Pvt) Ltd 3. The Executive Engineer (PHE), TVM 4. AxE, KWA, TVM 5. TRDCL (5th Respondent)	The date will be notified prior to the hearing.	N.A.	N.A.
TRDCL	W.P.(C) No.26690/2012[KLHC 010687602012]	High Court of Kerala, Kochi	Mr. Sivarajendran	1. Kerala Road Fund Board 2. TRDCL	Matter is listed on January 10, 2025	To be paid	1.3
TRDCL	OP(MV) 539/ 2310/2020(KLTV0200 05462020)	Munisiff's Court, Thiruvanantha puram	TRDCL	1.Sunilkumar 2. Harikrishnan	Matter is listed on January 10, 2025		
TRDCL	OP(MV) 540/ 2311/2020 (KLTV020005472020	Munisiff's Court, Thiruvanantha puram	TRDCL	1. MD, KSRTC 2. Sajeev Driver of KSRTC 3. District Insurance Officer	Matter is listed on January 10, 2025		

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Company	Case details	Forum	Case filed by	Case filed against	Current Status	Whether money to be paid or received	Amount INR Mn
TRDCL	OS No. 148/2018[KLTV06-000172-2018]	Munisiff's Court, Thiruvanantha puram	Geethakumari & 3 others	1. Chief Secretary & 3 Others	The matter is listed on February 17, 2025, for hearing of IA for impleading additional defendants in the suit and main case is for framing issues.	N.A.	N.A.
TRDCL	OP (MV) no 1849/2020 [KLTV02002102020]	Munisiff's Court, Thiruvanantha puram	Shabana S	1.Aju A , 2. New India Assurance Co Ltd, 3.TRDCL 4.Inspector of Police Vanchiyoor	Matter is listed on January 3, 2025, for filing Written Statement.	To be paid	0.03
TRDCL	EP - 999/2021(KLTV550008232021)	Munisiff's Court, Thiruvanantha puram	TRDCL	1.KRFB, 2.EE PWD	This pertains to demanding balance amount for arbitration claims. Matter is listed on December 18, 2024	To be received	10.1
SBHL	221/2021	District Consumer Disputes Redressal Commissioner II- Jaipur-Rajasthan	Mr. Ranjit Khichad	NHAI and SBHL	The matter pertains to deficiency of services. Vakalatnama and written submission filed on 21.12.2023. Matter is listed on February 6, 2025.	To be paid	0.1
PSRDCL	Comm no 60/2019	Hon'ble High Court of Delhi	PSRDCL	NHAI	The Court has observed that since the Section 37 proceedings were pending (wherein it has been recorded that the parties are seeking to amicably resolve the disputes), the EP would be taken up after the next date in the Section 37 matter. Matter is posted on February 5, 2025, for hearing.	To be received	5,479.6

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Company	Case details	Forum	Case filed by	Case filed against	Current Status	Whether money to be paid or received	Amount INR Mn
PSRDCL	(FAO OS (Comm) No. 163 of 2019) [Appeal against the Judgement]	Delhi High Court	NHAI	PSRDCL &ITNL	The Court was appraised of the fact that the settlement process with NHAI is still ongoing. The Court encouraged both parties to resolve the matter quickly. The matter is now posted for April 1, 2025.	To be received	5,479.6
PSRDCL	Special Civil Suit No. 74/2017-MHPU010134672017	District & Sessions Court, Pune	M/s Roadway Solution India Pvt. Ltd	IL&FS Transportation Networks Limited [PSRDCL is also a party]	Matter is listed on December 18, 2024, for argument.	N.A.	N.A.
PSRDCL	PIL 174 OF 2023	Bombay High Court	Mr. Pradip Baburao Gaikwad & others	National Highway Authority of India & others	The matter has listed on November 27, 2024, and was adjourned to January 29, 2025.	N.A.	N.A.

Source: Management information

Appendix 6 – Claims filed by / against the Specified Companies

Claims filed by and against the Company and not considered in the Specified Companies Valuation: -

in INR Mn

Company	Brief of Claim	Claims by the Company	Claims against the Company
TRDCL	Claim filed by the Company against Authority for material defaults and Entitlement of the delayed and withheld annuities (Part of arbitration)	3,586.7	-
PSRDCL	Arbitration award dated 13.11.2017 in favour of company	5,697.6	-

Source: Management information

Claims filed against the Company and considered in Specified Companies Valuation,

Company	Brief of Claim	Amount INR Mn
MBEL	Income tax demands contested by the company	12.0
MBEL	Penalty recommended by IE	81.4
MBEL	Stamp duty demand order by The Collector of Stamps, Moradabad for the concession agreement dated 19.02.2010 executed between MBEL and NHAI	253.4
SBHL	Income tax demands contested by the Company	0.27
SBHL	Penalty for non-filing of work Contract Tax Returns for Financial Year 2015-16 and 2017-18	0.20
SBHL	Penalty for non-appointment of Company Secretary u/s. 203(5) of Companies Act, 2013 for FY 2018-19	5.83
SBHL	Penalty for non-appointment of Chief Financial Officer u/s. 203(5) of Companies Act, 2013 for FY 2022-23	0.50
SBHL	Not convened the Annual general Meeting for the financial year 2018-2019 within the prescribed time limit, signing of financial u/s 134(8), non-filing of INC 22, DIR-12 and DPT-3 with ROC etc	0.18
SBHL	Punch list item	13.1
PSRDCL	Claims by NHAI on deficiency of Routine and Major Maintenance	290.5
PSRDCL	Income tax demand	2,813.5
PSRDCL	VAT Demand	8.5
BAEL	GST demand for FY 2017-18 (pertaining to demand for RCM liability for the month of September 2017 including interest and penalty)	0.6

Company	Brief of Claim	Amount INR Mn
BAEL	Not convened the Annual general Meeting for the financial year 2018-2019 within the prescribed time limit, signing of financial u/s 134(8), non-filing of INC 22, DIR-12 and DPT-3 with ROC etc	2.0
HREL	Claims against the Company not acknowledged as debt for non-compliance of Income tax provisions	41.5
TRDCL	Income Tax liabilities	78.3
TRDCL	GST liability	10.7

Source: Management information

Appendix 7 – Photographs of the projects of the Specified Companies

Appendix 7.1: Moradabad Bareilly Expressway Limited

Date of site visit – December 6, 2024

Appendix 7.2: Sikar Bikaner Highway Limited

Date of site visit – December 5, 2024

Appendix 7.3: Hazaribagh Ranchi Expressway Limited

Date of site visit – December 4, 2024

Appendix 7.4: Thiruvananthapuram Road Development Company Limited

Date of site visit – December 3, 2024

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3

Appendix 7.5: Pune Sholapur Road Development Company Limited

Date of site visit – December 4, 2024

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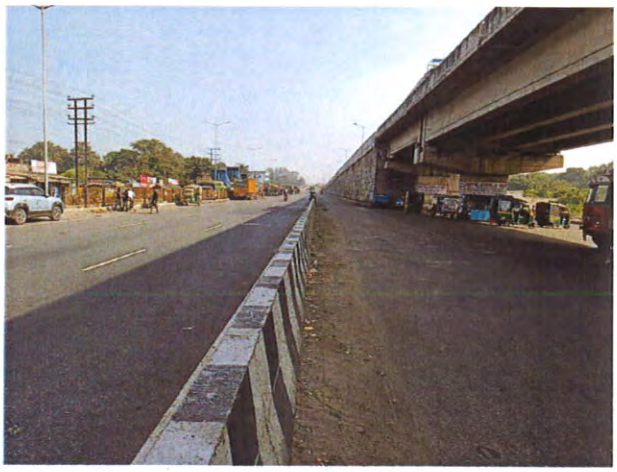
Appendix 7.6: Barwa Adda Expressway Limited

Date of site visit – December 04, 2024



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ANNEXURE B - TRAFFIC REPORTS

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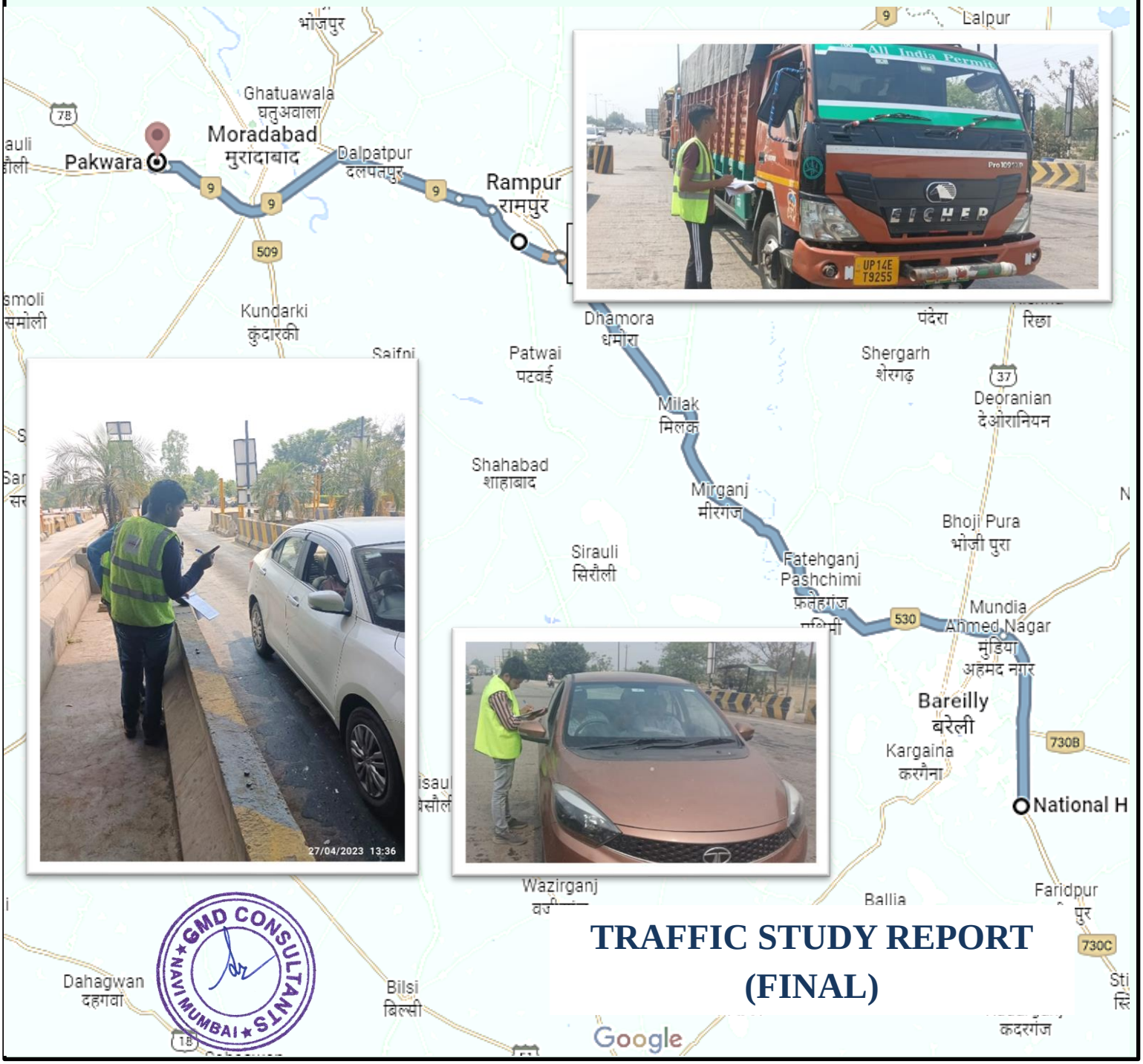
Moradabad Bareilly Expressway Limited (MBEL)

Moradabad - Bareilly Section of NH-24
from Km 148.000 to Km 262.000

Independent Assessment of Traffic Forecast and Toll Revenue Estimations



GMD CONSULTANTS ★ NAVI MUMBAI ★

TRAFFIC STUDY REPORT (FINAL)

GMD Consultants
503, Mayuresh Chambers Premises, Sector 11,Plot No 60, CBD Belapur, Navi Mumbai - 400614 ,Maharashtra, India
T: +91 22 2756 5313 / +91 22 2756 4586. M : 8898981506

OCTOBER 2024

Moradabad Bareilly Expressway Limited (MBEL)

Moradabad - Bareilly Section of NH-24

from Km 148.000 to Km 262.000

Independent Assessment of Traffic Forecast and Toll Revenue Estimations

TRAFFIC STUDY REPORT
(FINAL)

OCTOBER 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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CHAPTER 1
INTRODUCTION

1.1 General

Moradabad Bareilly Expressway Limited (MBEL) was engaged to expand the existing two-lane road to a four-lane road in the Moradabad-Bareilly section of National Highway 24 from Km. 148.000 to Km. 262.000 (design length of approximately 114 km) in the State of Uttar Pradesh under National Highway Development Program Phase III on a Design-Build Finance-Operate-Transfer (DBFOT) basis. A concession agreement dated February 19, 2010, was entered into between the NHAI and MBEL. The project commenced tolling on January 6, 2015. The concession period for this project is 25 years commencing from December 4, 2010. As per the concession agreement, MBEL is entitled to collect fees from project highway users, subject to the National Highways fee rules**.** There are 2 No of toll plazas exist on the project road.

Project corridor is section of NH-24 (Now NH-30), which starts from Km 148.000 (Pakbara, at beginning of Moradabad Bypass) and ends after Bareilly Bypass at Km 262.000 (End of Bareilly Bypass) in the state of Uttar Pradesh. Location of project road in regional context is given as below.

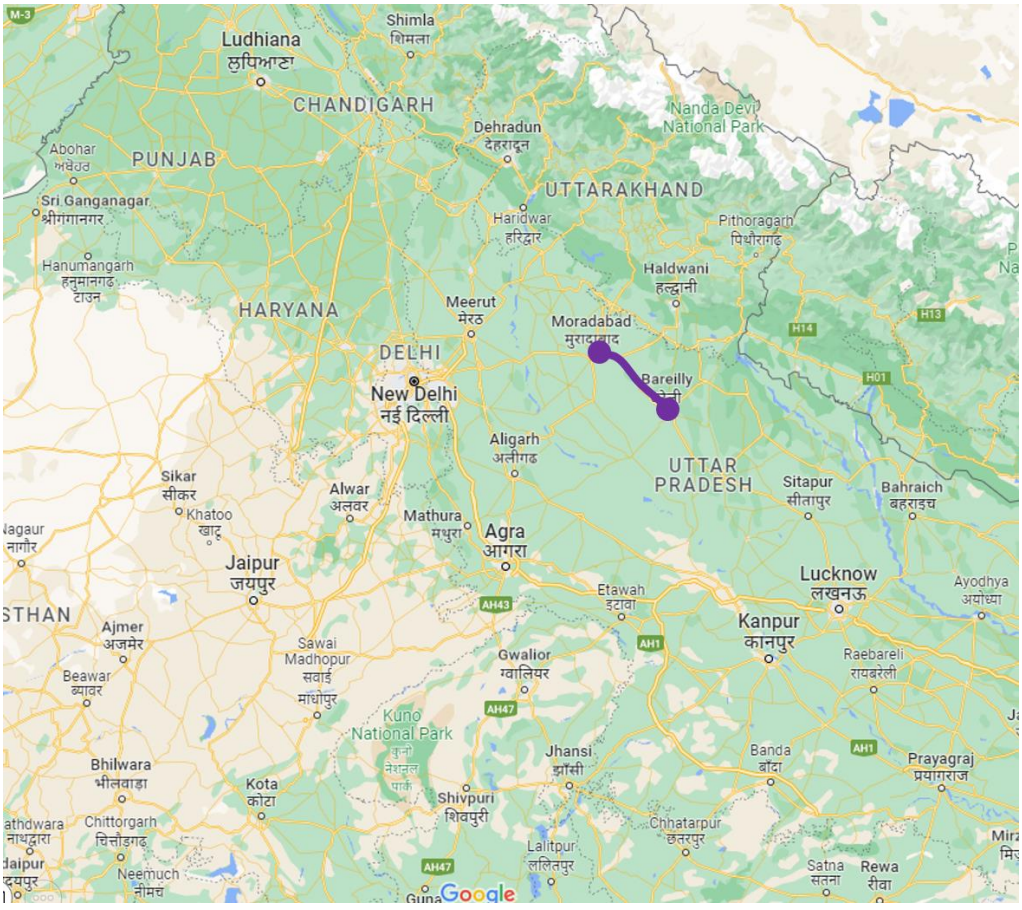

Figure 1-1 : Project Road Location in Regional Context

The area in which the project stretches from Moradabad to Bareilly falls is part of Rohilkhand region of western Uttar Pradesh. The area has witnessed a good pace of urbanization due to its proximity of NCR (National Capital Region). It is the primary link of transportation between western and eastern Uttar Pradesh and the now newly created Uttarakhand. The cities of Moradabad, Rampur and Bareilly, which are district centers as well, have major influence on traffic on project corridor.

Project corridor achieved COD in year 2015 and is in operation & maintenance phase since then.

Roadstar Infra Investment Trust (RIIT) owner of the project desires Independent Assessment of Traffic Forecast and Tol Revenue Estimation of project. This report fulfils part of the above scope.

There are Two toll plazas on this section. The following table provides details of these toll plazas.

Details of toll plaza on project stretch are given in table below.

Table 1-1: **Details of Toll Plaza on Project Stretch**

Name of the section	Location	Toll Plaza Name
Moradabad-Milak	Km. 172.00	Niyamatpur Ekrotiya Toll Plaza
Milak-Bareilly	Km. 228.00	Triyakhetal Toll Plaza

1.2 Project Location

AS mentioned previously project road section from Moradabad to Bareilly falls is western Uttar Pradesh and is major link of transportation connecting Eastern Uttar Pradesh and then Bihar and West Bengal to northern part of India.

The following figure shows the location and layout of the project stretch which is part of Delhi Lucknow Road which was called NH-24 previously. Now in the new National Nomenclature this highway is assigned as NH-30.

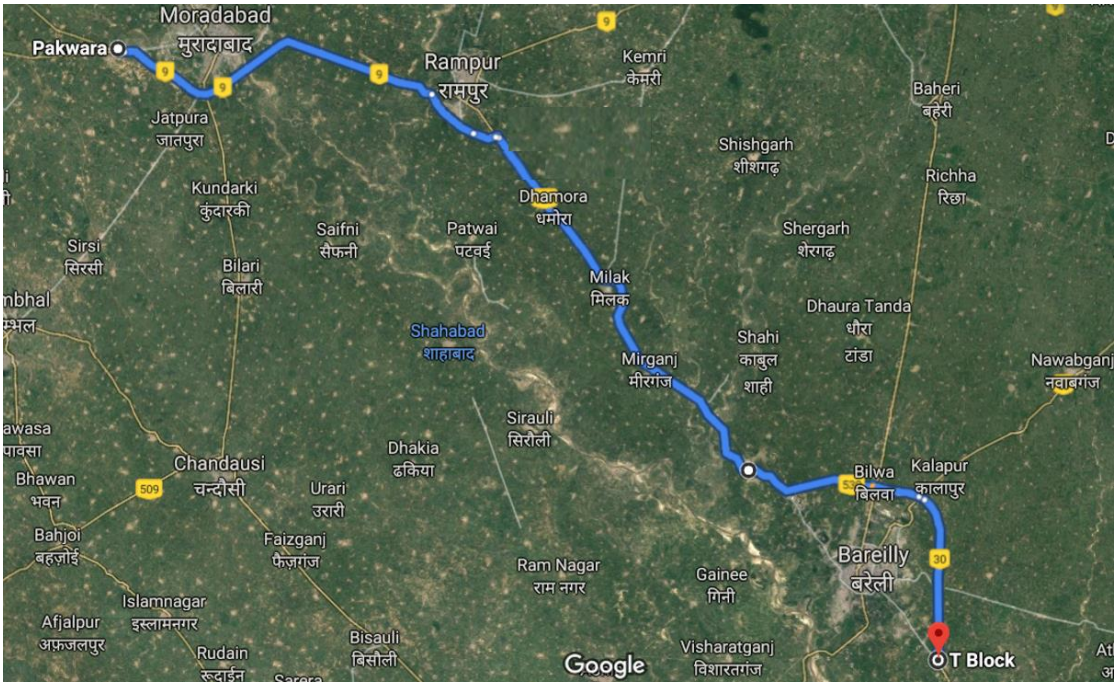

Figure 1-2 : Location of Project Stretch

1.3 Project Intent

M/s Moradabad Expressway Limited is concessionaire to project stretch NH-24 from Moradabad to Bareilly. **M/s Moradabad Expressway Limited** is a Special Purpose Vehicle (SPV) company under umbrella of **Roadstar Infra Investment Truct (RIIT).** M/s **GMD Consultants** has been assigned the work of Independent Assessment of Traffic Forecast and Toll Revenue Estimations of project stretch.

For making the proper assessment of traffic pattern and volume on project stretch, GMD Consultants have carried out necessary traffic surveys and field investigations. The base year traffic data supplied by client as fast tag data of toll plazas has been taken as the primary input for determination of base year traffic. With a view to understanding the traffic pattern and influence zones of traffic, an Origin-Destination (O-D) survey for 48 Hrs. was conducted in April 2023. Traffic study report was submitted in May 2023 taking the year 2022-23 as base year. Now concessionaire has made available additional traffic data from April 2024 to September 2024. The Traffic Study Report is now updated with additional traffic data available. The year 2024-25 has been taken as the base year for this updated report.

1.4 Scope of Work

Following is the detailed scope of this assignment as per TOR.

- Undertaking traffic survey on the highway section as per the following:
- Collection of Class wise Traffic data from the TMS System/Toll Records for the month from April 2024 to September 2024 from the operational toll plazas on the project road to derive the Average Daily Traffic (ADT)
- Two-day Origin-Destination (OD) survey at existing operational toll plaza locations to assess the existing travel pattern of vehicles playing on the

project road – origin and destination, commodity carried for freight vehicles, purpose of travel for cars.

- Establishing seasonality factors using available past traffic data and/or from using fuel sales data or using the past actual traffic data or any relevant data
- Estimation of the base year Annual Average Daily Traffic (AADT) using available toll data for the year or seasonality factors for conversion of ADT to AADT
- Reviewing past traffic studies, analysis of past traffic data and other relevant reports as may be available to determine category wise volume of traffic for past years.
- Identifying any competing route(s) and analyze network conditions, traffic characteristics & level of toll charged and the advantage/ disadvantage of the competing road(s) and their impact on project traffic – the extent of surveys to be carried out on alternate route(s), if needed, will be decided after site reconnaissance. If required, three-day volume counts and one (1) day OD at one (1) location on alternate route(s) to be carried out.
- Analyzing OD data – OD matrices, regional distribution of traffic, commodity composition, top OD pairs, identification of Project Influence Area from analysis of travel pattern
- Carrying out a study of past economic performance of influence area
- Diversion analysis, if needed – cost ratio-based diversion analysis to be carried for respective potential OD pairs
- Estimation of traffic growth rates for each category of vehicle (using the perspective growth of economic indicators and projected elasticities) under 3 scenarios – most likely, optimistic (high) and pessimistic (low) growth scenario
- Preparation of traffic projections for the concession period in three scenarios – most likely, high, and low
- Analysis of trip frequency in Daily, Return, Monthly, Local Passenger & Local Commercial vehicles as per their category/class as per applicable toll schedule - estimation of toll able traffic streams by toll category
- Estimation of toll revenue as per categories of traffic streams stipulated in the tolling schedule for the concession period.
- Identifying factors which may have a positive and / or negative impact on the traffic.
- Upcoming developments and future development potential of the region would be assessed for the induced/newly generated traffic.
- Scenario Analysis of toll revenue – Critical parameters of diversion (if applicable) and three scenarios of traffic growth (most likely, low and high).

MBEL, the concessionaire, shall provide all project related documents to the Consultant for carrying out the services including:

- Past Traffic Data and Revenue as per the toll records for last five years or COD to Till Date
- Available Past Traffic Reports if any

1.5 Organization of Report

The traffic study report covers the traffic study along the project corridor. The entire analysis, modeling and traffic and toll forecast have been covered in following three sections:

i. Traffic Surveys and Analysis
ii. Traffic Forecasting
iii. Toll Revenue Forecasting

CHAPTER 2
TRAFFIC SURVEY ANLAYSIS

2.1 Traffic Surveys

Historical traffic data including base year traffic data has been made available by the client as fast tag data. The same has been used for various analyses. Additionally, Origin – Destination surveys and competing routes surveys were conducted at the project section as per TOR scope.

The following table provides details of OD surveys conducted at the project site.

Table 2-1 : Traffic Survey Locations & Schedule

Sr. No	Survey Location	Description	Origin – Destination Survey Date
1	Toll Plaza at Km 172 (TP-1)	Niyamatpur Ekrotiya	25th April & 26th April 2023
2	Toll Plaza at Km 228 (TP-2)	Triyakhetal	27th April & 28th April 2023

These locations have been referred to as TP-1 to TP-2 respectively in the report. The following figure shows locations of Origin Destination survey done at Toll Plazas.

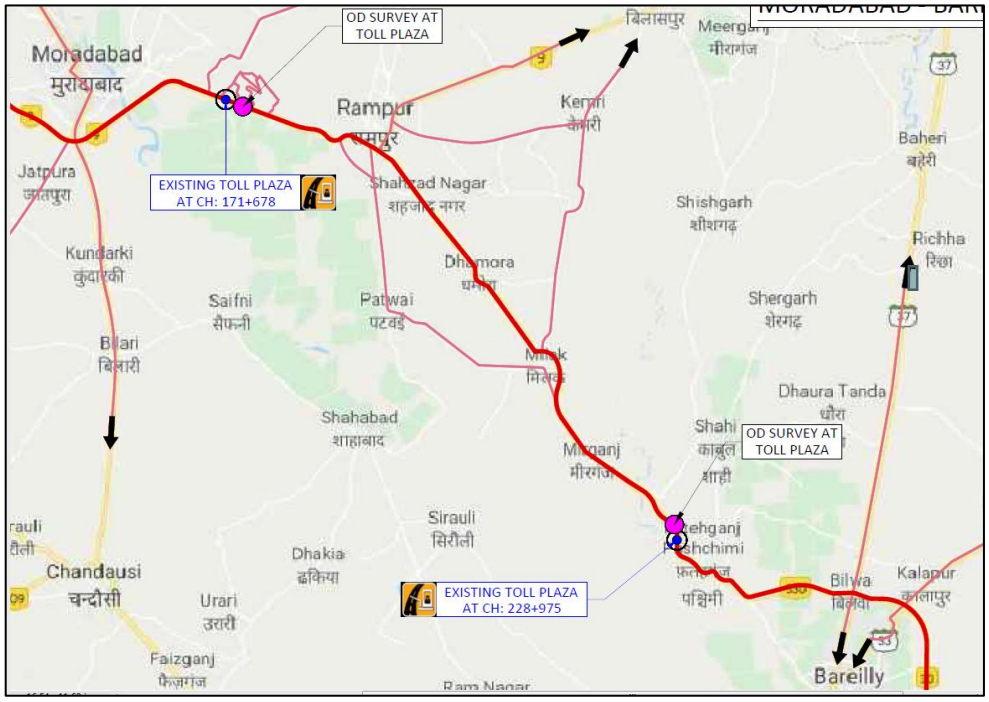

Figure 2-1 : Location of Traffic Surveys

Origin - Destination studies were conducted at the above locations with the aim to capture traffic pattern and characteristics in various segments of project road from Moradabad to Bareilly. Since Origin Destination Survey was carried on at Toll Plaza location good sample of OD survey was collected. The following photographs show traffic surveys in progress.

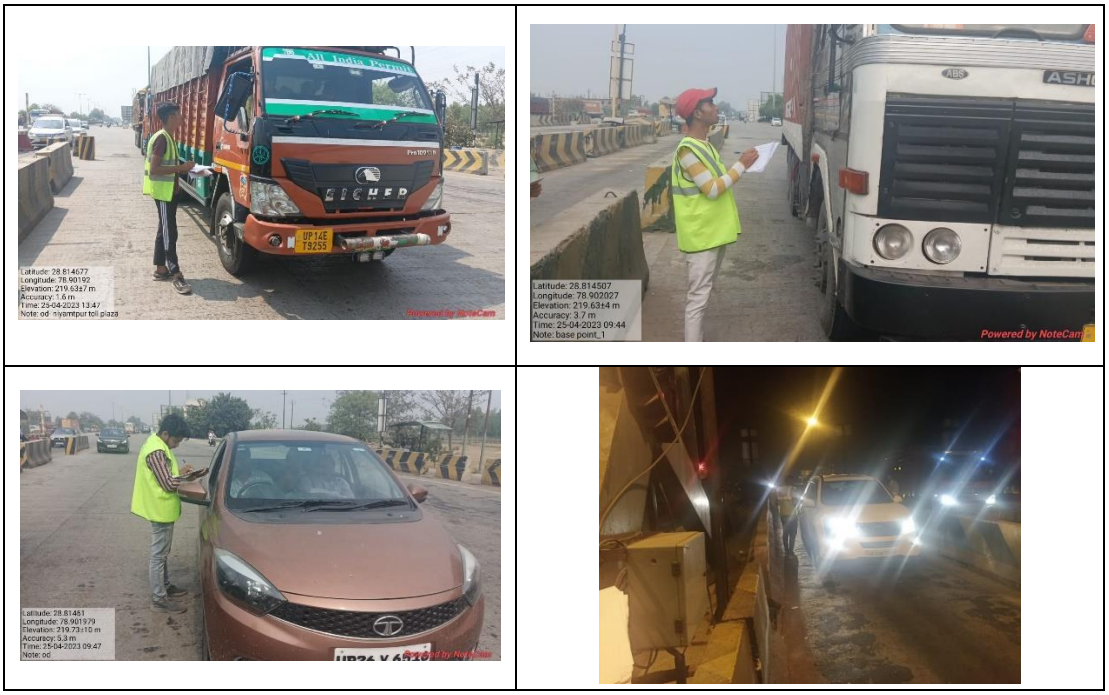

Figure 2-2 : Origin & Destination Traffic Survey @ 172.000

Figure 2-3 : Origin & Destination Traffic Survey @ 228.000

2.2 Classified Traffic Volume

The objective of conducting Classified Traffic Volume Count is to understand the traffic flow pattern and characteristics on a roadway. Fast tag data of traffic at both the toll plaza was made available by client for previous years and current year. Same has been used for traffic analysis and establishing base year traffic. The data is classified as per categories provided in IRC. Such classification is given as below.

Table 2-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer, Two-Wheeler, Three-Wheeler

Source - IRC: 64 – 1990

These were then grouped into tollable and non-tollable categories as per Fee Notification of project.

2.3 Origin Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys were carried out for two days (48 hours) at both the toll plaza locations.

The O-D survey was carried out based on the roadside interview method as described in IRC: 102-1988. Police assistance was arranged at the survey locations for successfully carrying out these surveys. Both passenger and commercial vehicles plying on the project road were stopped on a random sampling basis and interviewed.

Trained enumerators under the supervision of transport engineers collected the trip characteristics using the survey forms designed for this purpose. The O-D survey elicited characteristics like origin, destination, frequency, commodity, length of trip, etc., both for passenger and goods vehicles. The information collected during roadside interviews was analyzed to obtain the influence zone, commodity, pattern of traffic based on a zoning system suitably designed in the study.

2.3.1 Sample Size

As per normal standards and sound engineering practices, 10-15% sample in each category of vehicle is considered as good representative sample on which traffic analysis can be done to arrive at probable traffic patterns on project highway. Since the

O-D survey was done at Toll Plaza location in controlled atmosphere good sample size was achieved. The following table provides sample size.

Table 2-3 : Sample size for O-D Surveys

Survey Location	Sample Type	OD SAMPLE (48Hrs)	TOTAL ADT (48 Hrs.)	% SAMPLE
Km. 172.000	Goods	3616	11457	31.6%
	Passenger	6715	33585	20.0%
Km. 228.000	Goods	3384	10119	33.5%
	Passenger	4759	20858	22.8%

2.4 Data Analysis

2.4.1 Analysis of Traffic Volume Count

Data collected from the site checked and analyzed with predesigned excel spreadsheet. The various vehicle types having different sizes and characteristics were converted into a single unit called Passenger Car Unit (PCU) for assessing the road capacity and its usage. Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 2-4.***

Table 2-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 Axle Truck	3.0
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

2.4.2 Annual Average Daily Traffic (AADT)

Fast tag data as provided by client, has been analyzed and compiled for base year traffic data. As per the toll notification 3 Axle truck and 4-6 Axle MAVs fall in same category and hence have been provided as one category of MAV in fast tag data.

PCU factor and growth of 3 Axle truck and 4-6 Axle MAVs is not same. Hence for the purpose of PCU working and growth of traffic numbers, 3 Axle truck and 4-6 Axle MAV have been segregated in following ratio on the basis of detail provided by Concessionaire.

- For TP-1: 35% 3 Axle and 65% MAV (4-6 Axle)

- For TP-2: 33% 3 Axle and 67% MAV (4-6 Axle)

Seasonal Correction Factor (SCF)

Since only six-month traffic data (from April 2024 to September 2024) is available for the year 2024-25, a seasonal correction factor (SCF) has been applied to arrive at Annual Average Daily Traffic (AADT). It is observed that traffic remains low in this period from April to September due to monsoon. The above factors have been considered while applying seasonal correction factor for AADT.

Table 2-5 : Seasonality working from Traffic data of Previous Year 2023-24

TP-01	12-Month Traffic 2023-24	6-Month Traffic 2023-24	SCF	TP-02	12-Month Traffic 2023-24	6-Month Traffic 2023-24	SCF
Car	16376	15636	1.05	**Car**	9460	9093	1.04
LCV	863	843	1.02	**LCV**	573	572	1.00
Bus	1711	1606	1.07	**Bus**	1169	1128	1.04
Truck	1525	1482	1.03	**Truck**	1232	1243	0.99
MAV	2831	2645	1.07	**MAV**	2797	2653	1.05
OS	1	1	1.08	**OS**	1	1	1.03
Total	**23307**	**22213**	**1.05**	**Total**	**15232**	**14690**	**1.04**

Table 2-6 : Growth from Previous Year 2023-24

TP-01	6-Month Traffic 2023-24	6-Month Traffic 2024-25	Growth from previous Year	TP-02	6-Month Traffic 2023-24	6-Month Traffic 2024-25	Growth from previous Year
Car	15636	17020	8.85%	**Car**	9093	9455	3.98%
LCV	843	891	5.69%	**LCV**	572	578	1.02%
Bus	1606	1759	9.48%	**Bus**	1128	1208	7.17%
Truck	1482	1509	1.82%	**Truck**	1243	1234	-0.76%
MAV	2645	2408	-8.95%	**MAV**	2653	2369	-10.70%
OS	1	0	0%	**OS**	1	1	0.00%
Total	**22213**	**23586**		**Total**	**14690**	**14845**	

It may note that commercial traffic, especially MAV's, is reduced as compared to similar periods (April to September) of the previous year. Which could be a temporary phenomenon.

Hence a Seasonality factor of 5% is considered to arrive at Annual Average Daily Traffic (AADT) for base year 2024-25. The following table provides average daily traffic (ADT) at both the toll plazas in the base year 2024-25 is after application of seasonality as discussed above.

Table 2-7 : Total traffic (AADT) at TP-01 of Base Yr.2024-25

Vehicle Type	Tollable Vehicles	Exempt Vehicles	Total AADT (2024-25)	PCU (2024-25)
Car	16400	1471	17871	17871
Minibus/LCV	915	20	935	1403
Bus	1842	5	1847	5541
Truck-2Axle	1564	20	1584	4752
Truck-3Axle	884	1	885	2655
Multi axle (4-6 Axle)	1642	1	1643	7394
Oversized Vehicles	1	0	1	5
Total	**23248**	**1518**	**24766**	**39621**

Above base year is analyzed for modal split of traffic. The modewise distribution of tollable traffic at TP-01 Km 172.000 is illustrated in pie charts below.

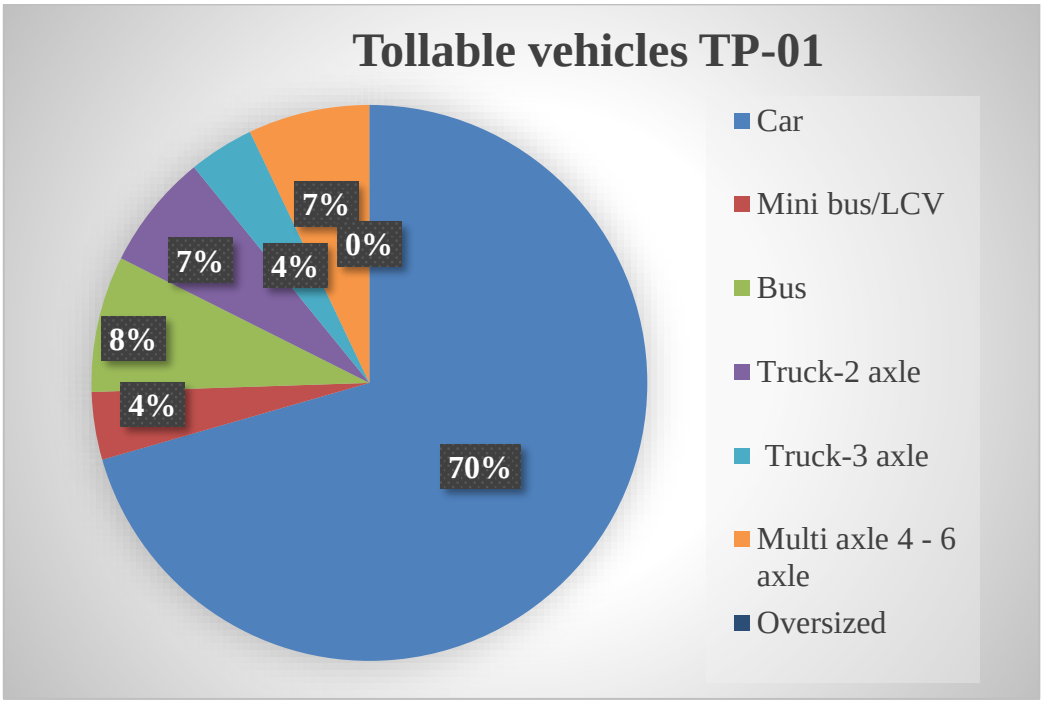

Figure 2-4 Mode wise Composition of Traffic at Km 172.000

Similarly, traffic volume at TP-2 is given as below.

Table 2-8 : Total traffic (AADT) at TP-02 of Base Yr.2024-25

Vehicle Type	Tollable Vehicles	Exempt Vehicles	Total AADT (2024-25)	PCU (2024-25)
Car	9036	891	9927	9927
Minibus/LCV	595	12	607	911

Vehicle Type	Tollable Vehicles	Exempt Vehicles	Total AADT (2024-25)	PCU (2024-25)
Bus	1266	3	1269	3807
Truck-2Axle	1280	15	1295	3885
Truck-3Axle	820	1	821	2463
Multi axle (4-6 Axle)	1666	1	1667	7502
Oversized Vehicles	1	0	1	5
Total	**14664**	**923**	**15587**	**28500**

Above base year is analyzed for modal split of traffic. The modewise distribution of tollable traffic at TP-02 Km 228.000 is illustrated in pie charts below.

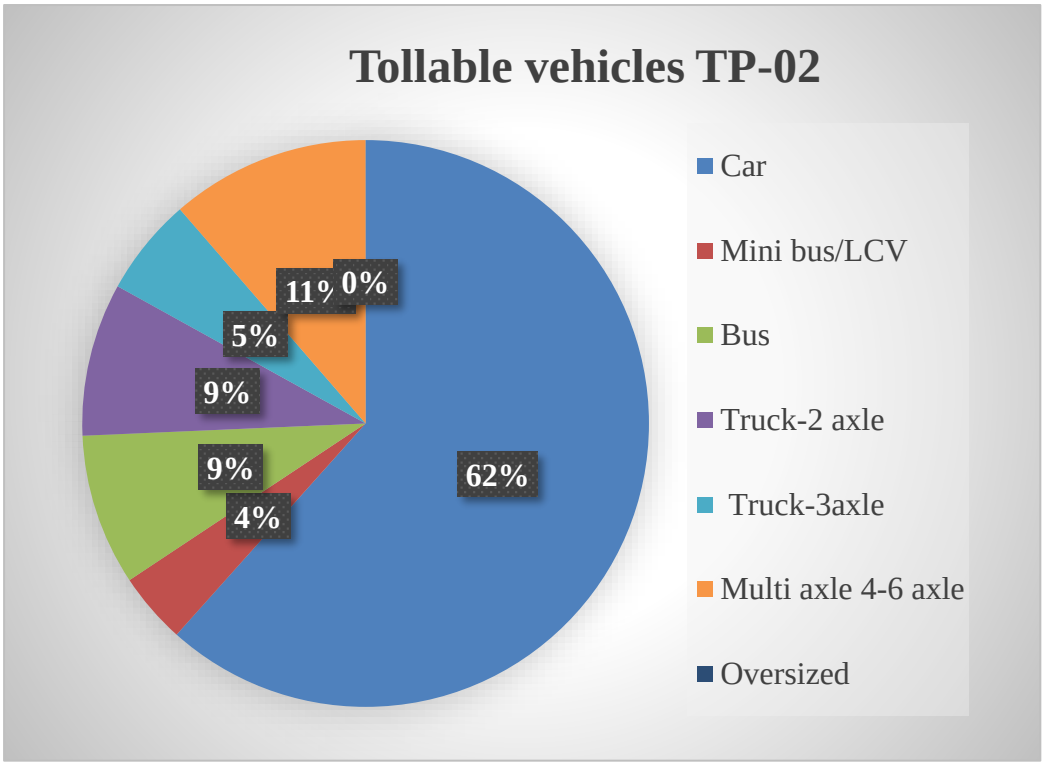

Figure 2-5 Mode wise Composition of Traffic at Km 228.000

It is observed that the share of passengers is higher at TP-1 as compared to TP-2. At TP-1 about 78% of vehicles are passengers (Car + Bus) while at TP-2 it is 71%. This is due to the fact that some traffic of Haldwani, Rudrapur and Nainital diverts after TP-1.

The following graph shows a comparison of traffic at both the toll plazas.

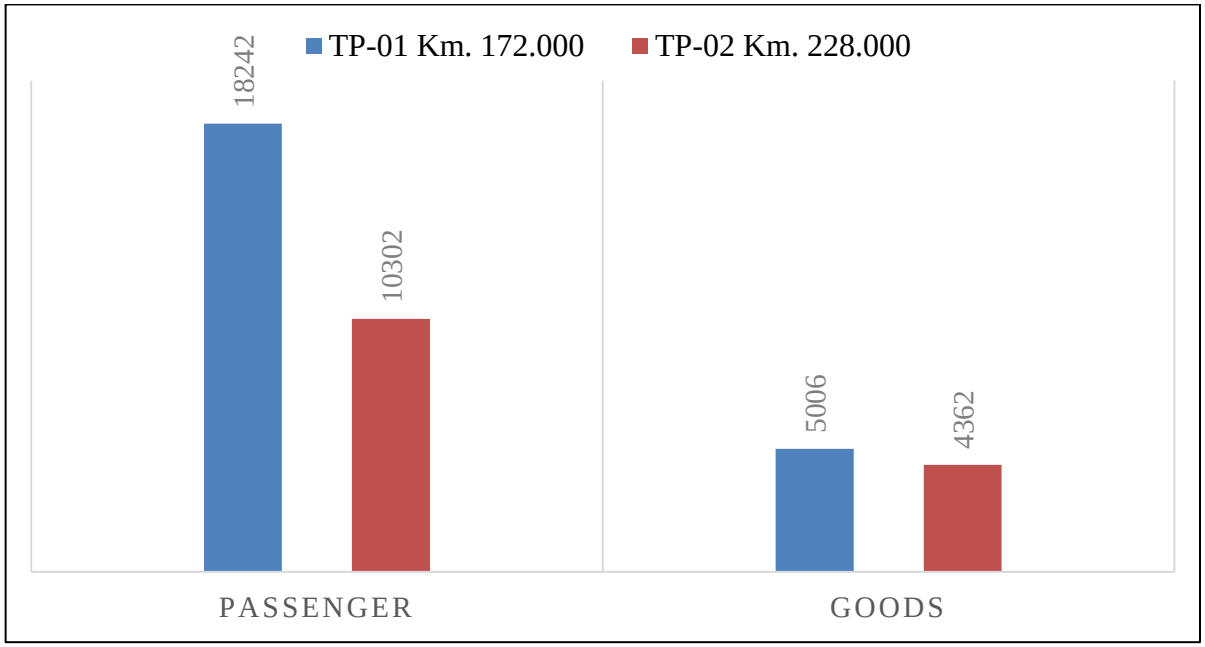

Figure 2-6 Comparison b/w Passenger & Commercial Traffic @ both Toll plazas.

It can be observed from above that traffic at first toll plaza which is just before Rampur is higher as compared to second toll plaza. This phenomenon is true for both commercial and passenger traffic. This is due to the fact that traffic going towards Rudrapur, Haldwani, Nainital, Bilaspur diverts from project highway just after Rampur.

2.4.3 PCU Index

PCU index is a good indicator of share of commercial and passenger traffic on project road. It is the ratio of total PCU and total number of vehicles on project road. PCU index in Less of 2 indicates dominating Passenger traffic share. The following table contains the comparison of PCU Index of both toll plaza locations.

Table 2-9 Comparison of PCU Index of Toll Plaza

LOCATION	AADT	PCU	PCU INDEX
Km. 172.000	24766	39620	1.60
Km. 228.000	15587	28501	1.83

PCU index at all plaza locations is between 1.6 to 2.0 which is another indication of the relative dominance of Passenger traffic on project corridor at both Toll Plazas.

2.4.4 Origin - Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys were carried out. The O-D survey was carried out at both the survey locations as shown in table given previously. At all locations, OD survey was done at existing toll plaza location. Analysis of OD data is done with the help of pivot table and same is presented in this section.

2.4.4.1 Data Validation

The data collected was entered into the computer and checked manually. Incorrect entries were corrected by cross-checking it with original field data sheets. The data was also checked for inconsistencies like OD travel pair within same zone or irrelevant journey pairs.

2.4.4.2 Zoning System

For understanding the spatial dimensions of the trip characteristics of the vehicles interviewed during the O-D survey, a scientifically derived zoning system was adopted.

While defining zone boundaries, the following were considered:

- Important towns and industrial centers along the project corridor.
- Administrative boundaries of district and state.
- Configuration of the project roads in the regional road network with respect to other National Highways.

States were assigned codes from 1 to 100. Location of toll plaza as used as water shed for local codes.

Major cities and urban locations were assigned three-digit codes while local villages along project road were given four-digit codes. Directional logic was built in while assigning the codes to cities and villages.

The following table presents the Zoning System considered in this study.

States before Moradabad	Code
New Delhi	1
Himachal Pradesh	2
Haryana	3
Punjab	4
MadhyaPradesh	5
Gujarat	6
Maharahstra	8
Rajasthan	10
Jammu and Kashmir	23
Karnatka	24
Goa	25

City before Moradabad	Code
Saharanpur	101
Shamli	102
Muzaffarnagar	103
Baghpat/Meerut	104
Bijnor	105
Amroha	106
Hapur	107
Ghaziabad	108
Bulandshaher	109
Mathura	110
Aligarh	111
Hathras	112
Firozabad	113
Chandigarh	114
Haridwar	115
Noida/Delhi	116
Roorkee	117
Ambala	118
Dehradun	119
Agra	120
Meerut	121
Sambhal	122
Gajraula	123
Garhmukteshwar	124
Chandusi	125

City/villages b/w moradabad and TP1	Code
Moradabad	200
Tajpur Mafi	201
Mustafabad	202
Laxmipur	203
Got	204
Dalpatpur	205
Chamraua	206

City/village b/w TP-1 and TP-2	Code
Rampur	301
Haldwani	302
Rudrapur	303
Mundha Pande	304
Seharia	305
Mansurpur	306
Tikatganj	307
Ajitpur	308
Dudai	309
Patti Kalyanpur	310
Shahzad Nagar	311
Dhamora	312
Dinpur	313
Jhunaiya	314
Paighemberpur	315
Loha patti bholanath	316
Milak	317
Meerganj	318
Kalyanpur	319
Dhaneta	320
Sanjarpur	321
Almora	322
Nainital	323
Kashipur	324
Bilaspur	325
Kiccha	326
Baheri,Semi khera	327
Gadharpur	328
Tanakpur	329
Ranikhet/Ramnagar	330
Pittorgarh	331

City/village b/w TP-2 and Bareilly	Code
Khirka	401
Thiriya khetal	402
Fatehganj pashchimi	403
Tiolia	404
Dhantiya,Parsikhera	405
Khan gauntia	406
Bibiyapur	407
Karampur	408
Bilwa	409
Khatola	410
Girdharipur	411
Bhoora	412
Saidpur	413
Shishbagh	414

City after Bareilly	Code
Bareilly	500
Pilibheet	501
Lakhimpur	502
Sitapur	503
Behraich	504
Barabanki	505
Raebareilly	506
Lucknow	507
Unnao	508
Kanpur	511
Fatehpur	512
Hamirpur	513
Mahoba	514
Ayodhya	515
Amethi	516
Pratapgarh	517
Kaushambi	518
Mirzapur	519
Gorakhpur	520
Varansi	521
Sonbhadra	522
Kushingar	523
Deoria	524
Ghazipur	525
Mau	526
Balia	527
Gonda	528
Siddharthnagar	529
Maharajganj	530
Allahbad	531
Shahjahanpur,Tilhar,katra	532
Hardoi	533
Faridpur	534
Badaun	535
Kannauj	536

States After Gorakhpur	Code
Bihar	11
Jharkhand	12
Odisha	13
West bengal	14
Assam	15
Manipur	16
Mizoram	17
Nagaland	18
Meghalaya	19
Tripura	20
Chattisgarh	21
Arunachal Pradesh	22
Telangana/Andhra pradesh	9
Rest of India	26

Country After Gorakhpur	Code
Nepal	1001
Bhutan	1002

Figure 2-7 : OD Coding

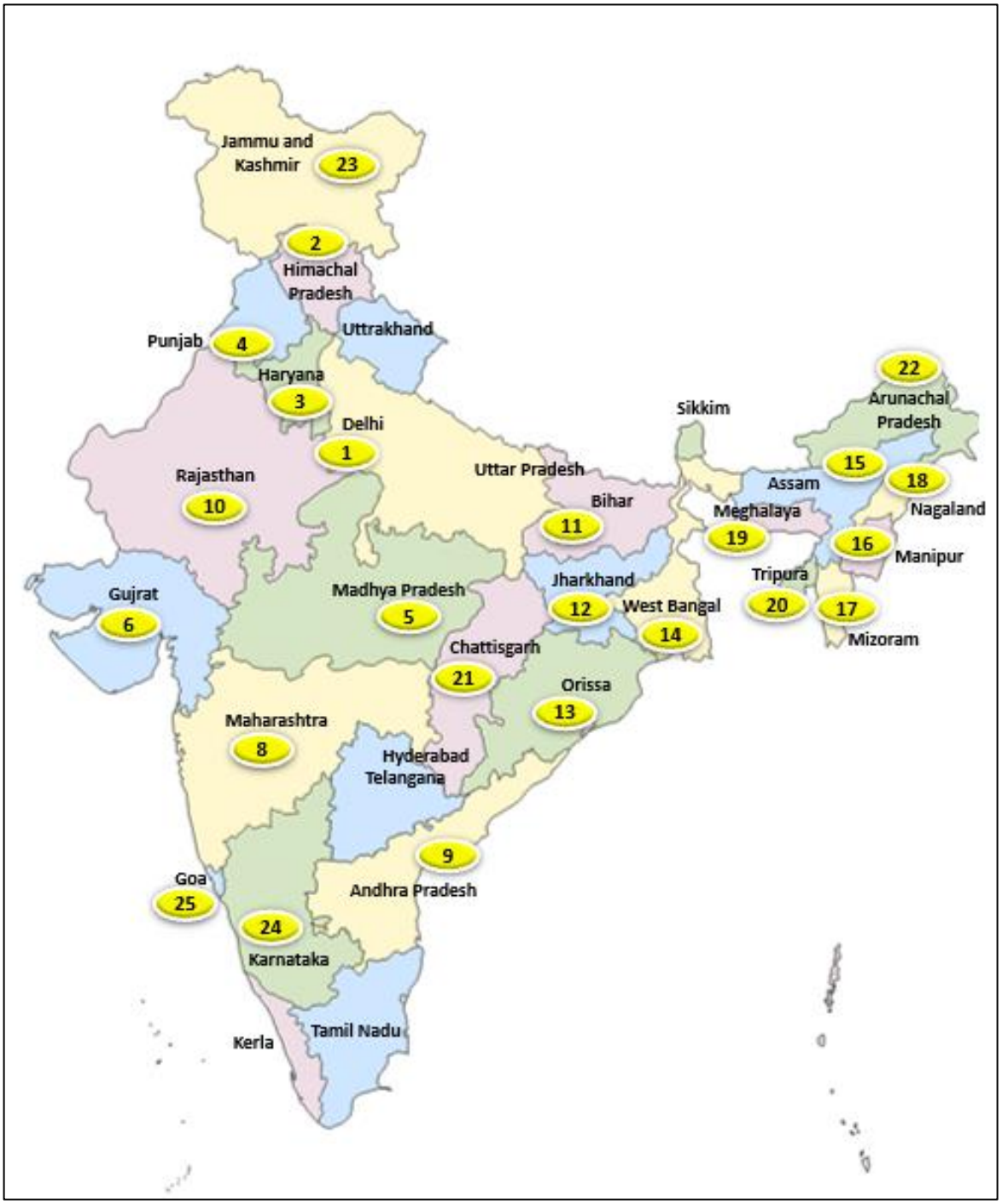

Figure 2-8 : Zoning System for India

Similarly, OD zones for state levels are presented below.

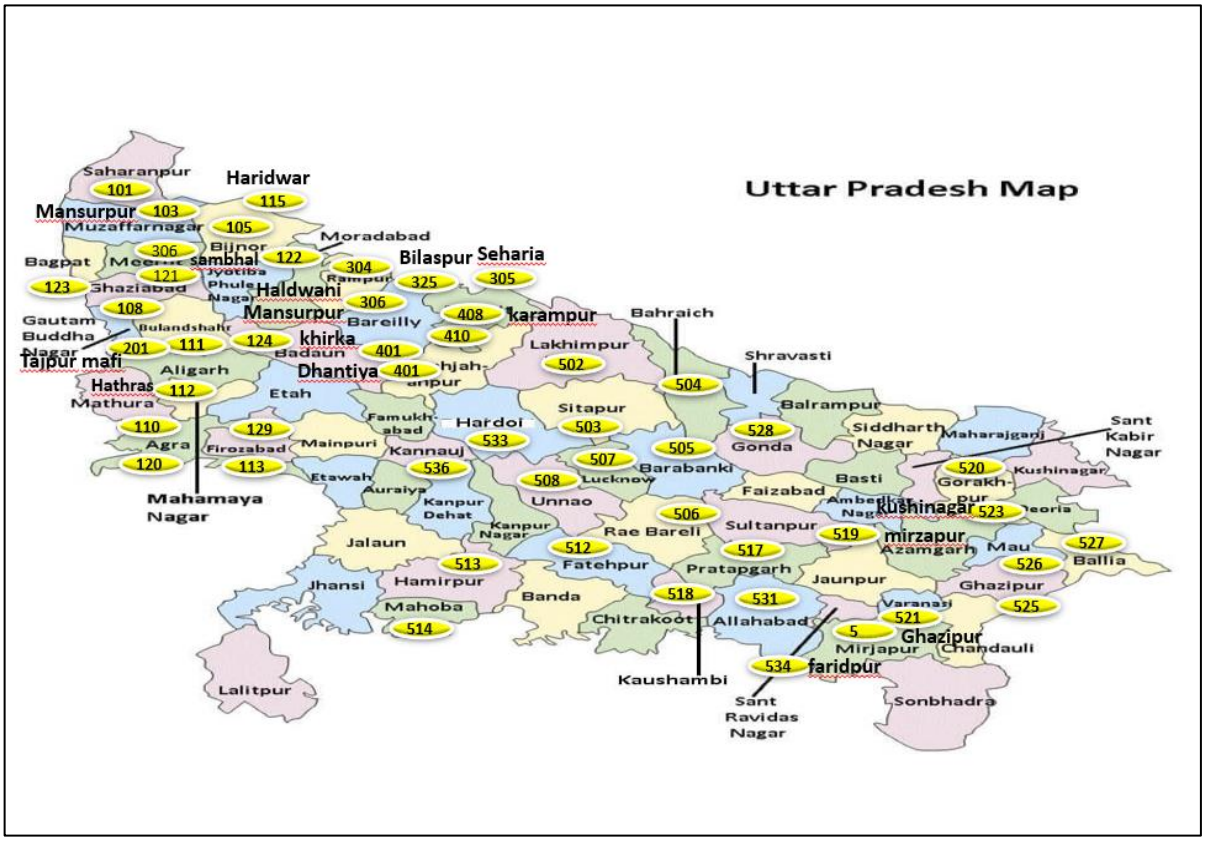

Figure 2-9 : Zoning System for Moradabad-Bareilly

After due verification and sanctity checking, OD survey data was analyzed for important patterns of influence zone share, commodity etc. The same is discussed in the following sections.

2.4.4.3 State Wise Distribution of All Stretches

Vehicles from various states use project road. The share of various states in traffic volume is an important parameter which influences the growth forecast of traffic on project.

The following table shows the state wise and mode wise distribution of vehicles. It can be appreciated that local states dominate share in volume for passenger traffic at both locations with slight variation.

Table 2-10 : State Dominance – Passenger Traffic Toll Plaza -1Km 172.000

State Code	Car	Taxi/jeep	Minibus	Bus
UP	63.46%	61.19%	67.69%	67.28%
UK	13.85%	13.98%	9.23%	17.50%
DL	12.85%	11.61%	9.23%	7.68%
HR	6.46%	9.25%	7.69%	4.41%
PB	0.94%	1.79%	4.62%	1.42%
Rest of India	2.43%	2.17%	1.54%	1.71%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 2-11 : State Dominance – Passenger Traffic Toll Plaza -2Km 228.000

State Code	Car	Taxi/jeep	Minibus	Bus
UP	79.33%	72.36%	85.11%	87.24%
UK	6.05%	6.84%	3.19%	3.50%
DL	7.95%	9.21%	7.45%	4.90%
HR	4.36%	8.02%	3.19%	2.80%
PB	1.14%	2.67%	0.00%	1.05%
Rest of India	1.17%	0.89%	1.06%	1%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

States of Uttarakhand and Uttar Pradesh put together contribute to about 75-80% in car / jeep category. Shares of Uttarakhand and other states fall at toll plaza -2 which is after Rampur from where Uttarakhand traffic goes off the project section through Bilaspur Road.

Similarly, state share of traffic in case of commercial vehicles is given in following table.

Table 2-12 : State Dominance – Commercial Traffic Toll Plaza -1 Km 172.000

State Code	LCV	2-Axle Truck	3-Axle Truck	4-6 Axle
UP	77.82%	61.34%	63.43%	47.87%
DL	6.55%	7.77%	3.17%	2.61%
HR	5.82%	13.89%	16.27%	18.64%
PB	3.27%	6.30%	6.00%	11.14%
UK	2.55%	5.26%	3.28%	4.90%
RJ	1.45%	1.90%	2.40%	5.69%
HP	1.09%	1.38%	1.09%	0.95%
NL	0.36%	0.78%	2.18%	3.32%
Rest of India	1.10%	1.38%	2.19%	4.89%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 2-13 : State Dominance – Commercial Traffic Toll Plaza -2 Km 228.000

State Code	LCV	2-Axle Truck	3-Axle Truck	4-6 Axle
UP	82.31%	68.88%	65.62%	55.39%
DL	7.44%	5.78%	4.27%	3.09%
HR	1.54%	11.23%	11.54%	16.32%
PB	2.56%	5.45%	6.52%	11.97%
UK	5.13%	5.35%	5.02%	4.20%
RJ	0.26%	0.75%	1.63%	1.98%
HP	0.26%	0.96%	1.00%	0.95%
NL	0.00%	1.18%	2.13%	2.69%
Rest of India	0.51%	0.43%	2.26%	3.41%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Uttar Pradesh is the dominating state in commercial traffic at both the toll plazas. Next important states contribution comes from Delhi, Haryana, and Uttarakhand.

2.4.4.4 Influence Zone Analysis

Intra-Regional (destination within project corridor influence zone) and Regional Traffic:

The growth of traffic on any project corridor is affected by the growth potential of its catchment areas. It is observed that the project road provides connectivity between Delhi NCR, Western Uttar Pradesh, Uttarakhand on one side and Lucknow/ Eastern Uttar Pradesh on other side. For an understandable differentiation, total catchment of project traffic is divided in to following regional areas.

Regional Catchments

1. **North-West** of Moradabad- Including Delhi NCR, West UP, Himachal, J&K, Haryana, Punjab and parts of Rajasthan etc.

2. **North-East** side of Project Road- Including Haldwani, Nainital, Rudrapur, etc

3. Eastern Zone – Lucknow, Sitapur, Varanasi, Allahabad, Gorakhpur, West Bengal, Assam and other NE states

4. Local Catchment

Areas between Garhmukteshwar on west and Shahjahanpur on east side are taken as local catchment of project road traffic or the Internal Zone.

The following maps depict these areas for better understanding.

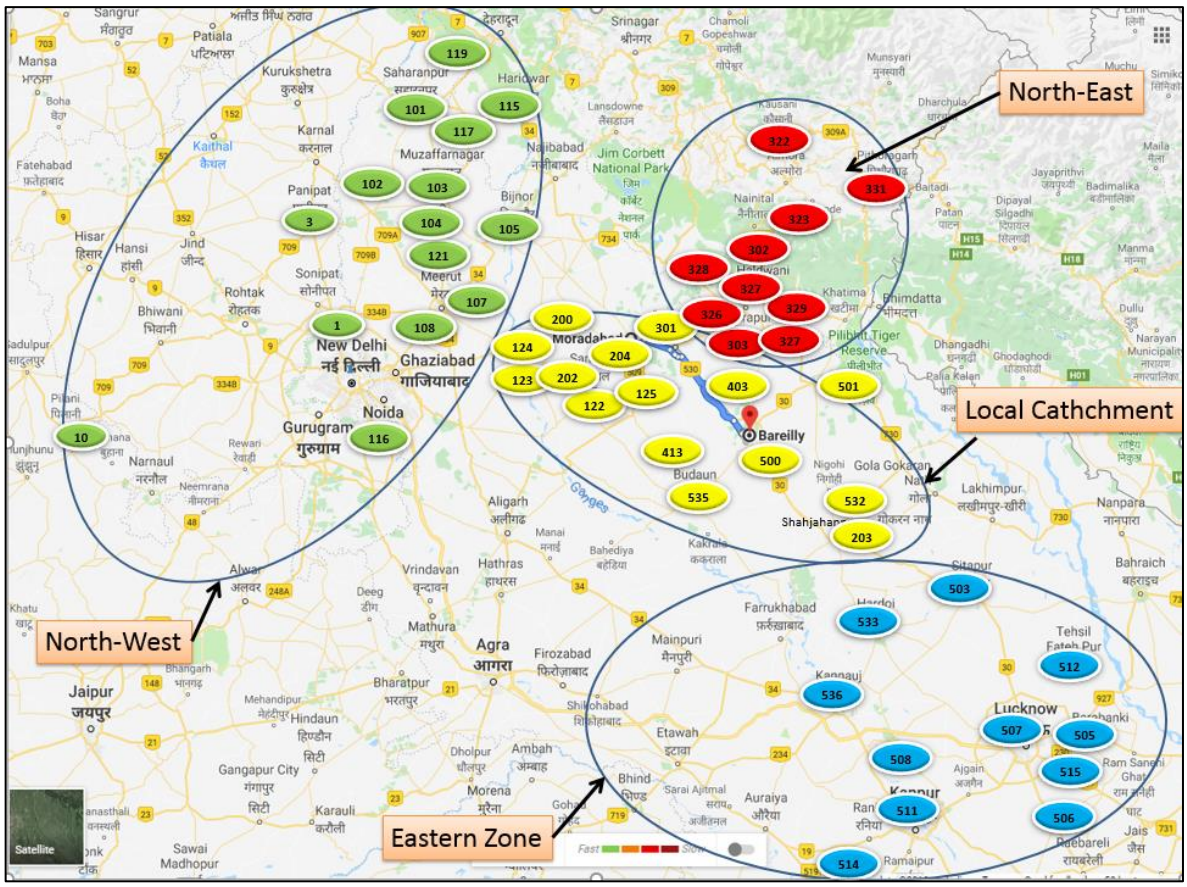

Figure 2-10 : Regional and Local catchment.

In order to understand the impact of above influence zones on project road traffic having either origin or destination in particular influence zone was extracted and compared with total sample. In this analysis some traffic would have overlapped in more than one zone. Hence sum total of such shares will be more than 100%. Thus, for ease of understanding such impact share is converted to common denominator of 100% by assigning due weightage in proportion of influence zone share.

The share of influence zone in traffic volume on particular stretch helps in understanding the contributor zones of traffic and adds value in predicting forecast of future traffic growth on corridor. In most cases passenger traffic has limited influence zone and is mostly around stretch. Hence detailed analysis of influence zone is done for commercial traffic only.

The following tables provide share of various origin / destination of commercial traffic in total traffic.

Table 2-14 : Influence zone of Commercial Traffic Toll Plaza -2 Km 228.000

Origin/ Destination	Share traffic (%)
Moradabad	16.4%
Rampur	16.3%
Bareilly	13.8%
New Delhi	8.6%
Ghaziabad	4.0%
Meerut	3.9%
Lucknow	3.5%
Haryana	3.5%
Rudrapur	3.5%
Punjab	2.4%
Amroha	2.0%
Bihar	1.6%
Hapur	1.5%
Sambhal	1.5%
Sitapur	1.5%
Lakhimpur	1.4%
Haridwar	1.4%
Pilibheet	1.3%
Bilaspur	1.0%
Haldwani	1.0%

Table 2-15 : Influence zone of Commercial Traffic Toll Plaza -2 Km 228.000

Origin Destination	Share traffic (%)
Bareilly	25.5%
Moradabad	11.1%
Rampur	8.2%
New Delhi	6.9%
Sitapur	3.8%

Origin Destination	Share traffic (%)
Shahjahanpur	3.4%
Ghaziabad	3.4%
Punjab	3.3%
Haryana	3.3%
Lucknow	3.2%
Bihar	2.8%
Milak	2.5%
Meerut	2.2%
Haridwar	2.0%
Behraich	1.2%
Hardoi	1.2%
Pilibheet	1.1%

Traffic contribution of various influence zone as defined above is compiled and same is presented in table below.

Table 2-16 : Summary Influence zone at Toll Plaza -1 Km 172.000

Sr.no	Types of Zones	% of Share
1	North-West	46.9%
2	North- East	8.0%
3	Eastern Zone	8.8%
4	Local Catchment	36.3%
	Total	**100.0%**

Table 2-17 : Summary Influence zone at Toll Plaza -2 Km 228.000

Sr.no	Types of Zones	% of Share
1	North-West	37.9%
2	North-East	4.6%
3	Eastern Zone	13.1%
4	Local Catchment	44.4%
	Total	**100.0%**

The above influence zones and their contributions are marked in the map below for better understanding.

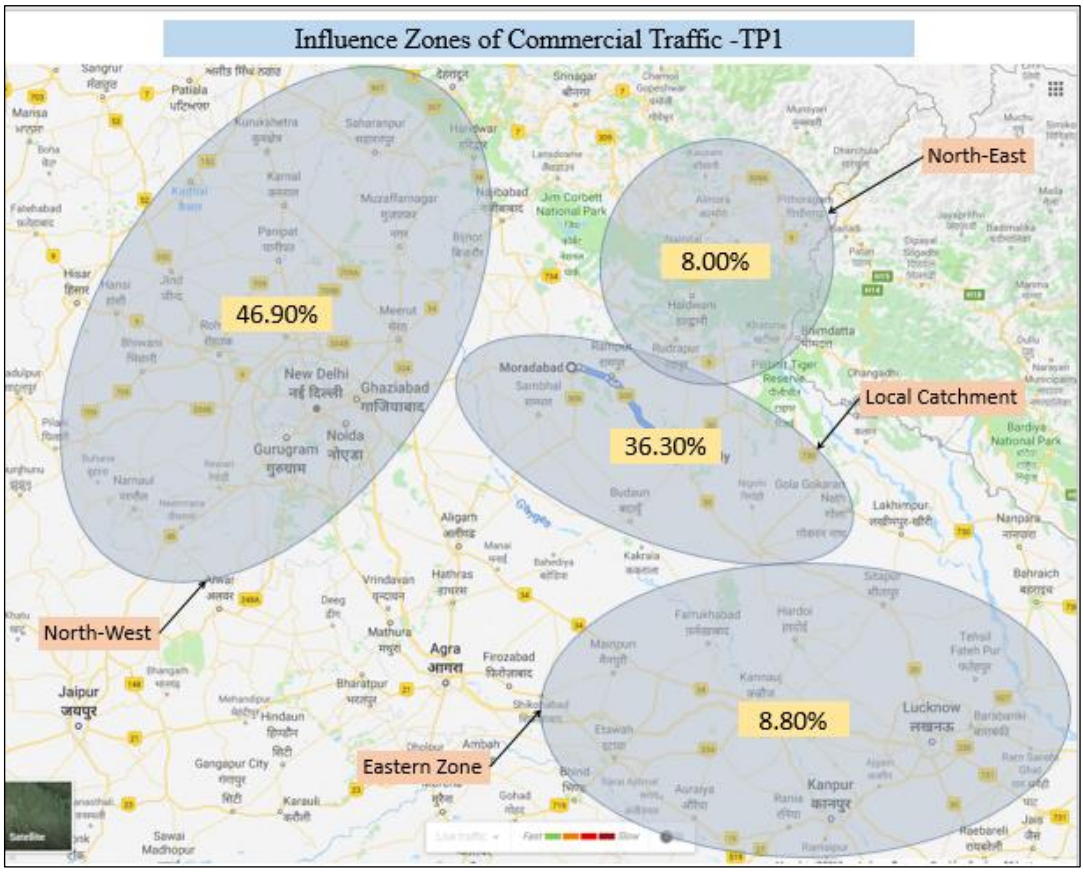

Figure 2-11 Traffic Influence Area at TP-1

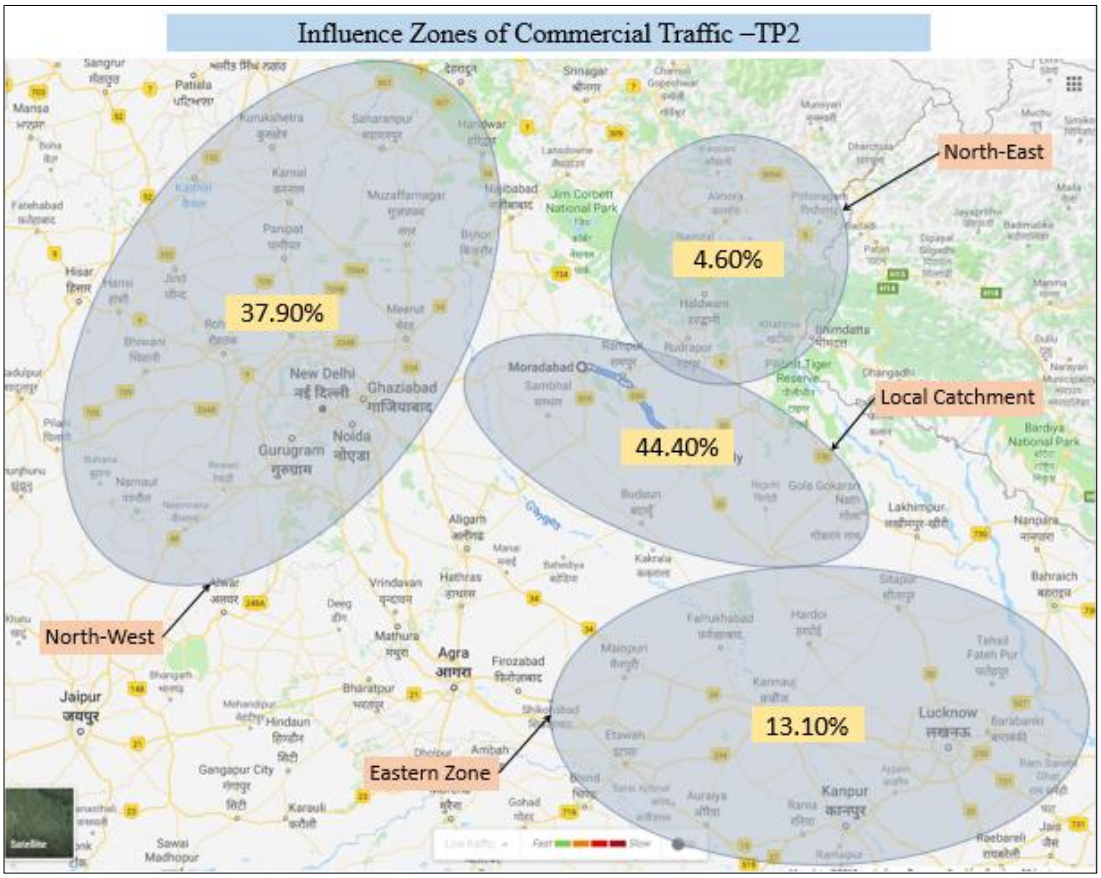

Figure 2-12 Traffic Influence Area at TP-2

It can be observed that more than 80% of traffic has the influence of North – West and Local Zone which is within boundaries of Delhi NCR and Bareilly. After that major contributions are from Uttarakhand and northeastern zone.

2.4.4.5 OD Pairs

OD pairs provide more specific information about traffic patterns on project corridors. A very high concentration of origin and destination in limited area normally is an indication of presence of major industry and plant.

Major Origin and destination pairs for goods and Passengers for both toll plazas and are given in following Tables.

Table 2-18 Major OD Pair Goods of TP-1Km 172.000

Sr.no	Origin	Destination	%
1	Rampur	Moradabad	7.28%
2	Bareilly	Moradabad	5.11%
3	Moradabad	Rampur	4.79%
4	Rampur	New Delhi	3.53%
5	Lucknow	Moradabad	3.18%
6	New Delhi	Bareilly	3.10%
7	Bareilly	New Delhi	3.00%
8	Moradabad	Bareilly	2.54%
9	Rampur	Ghaziabad	2.17%
10	Bareilly	Ghaziabad	1.50%
11	New Delhi	Rampur	1.47%
12	Punjab	Bareilly	1.45%
13	Rampur	Meerut	1.28%
14	Bareilly	Meerut	1.27%
15	Haryana	Rampur	1.27%
16	Haryana	Bareilly	1.22%
17	Meerut	Bareilly	1.20%
18	Rudrapur	New Delhi	1.17%
19	Ghaziabad	Rampur	1.14%
20	Meerut	Rampur	1.07%

Table 2-19 Major OD Pair Passengers of TP-1Km 172.000

Sr.no	Origin	Destination	%
1	Moradabad	Rampur	7.91%
2	Bareilly	New Delhi	7.64%
3	Rampur	Moradabad	7.53%
4	New Delhi	Bareilly	5.70%
5	Rampur	New Delhi	4.98%
6	Moradabad	Bareilly	4.96%
7	Bareilly	Moradabad	3.70%
8	Haldwani	New Delhi	2.96%
9	New Delhi	Rampur	2.85%
10	New Delhi	Haldwani	2.42%

Sr.no	Origin	Destination	%
11	Ghaziabad	Bareilly	1.73%
12	Meerut	Bareilly	1.66%
13	Rudrapur	New Delhi	1.48%
14	Amroha	Bareilly	1.41%
15	New Delhi	Rudrapur	1.33%
16	Meerut	Rampur	1.31%
17	Pilibheet	New Delhi	1.25%
18	Amroha	Rampur	1.25%
19	Hapur	Rampur	1.23%
20	Moradabad	Haldwani	1.11%

Table 2-20 Major OD Pair Goods of TP-2Km 228.000

Sr.no	Origin	Destination	%
1	Bareilly	New Delhi	7.13%
2	Bareilly	Moradabad	6.19%
3	Moradabad	Bareilly	3.80%
4	Bareilly	Rampur	3.46%
5	New Delhi	Bareilly	3.05%
6	Rampur	Bareilly	2.84%
7	Bareilly	Punjab	2.00%
8	Bareilly	Ghaziabad	1.88%
9	Punjab	Bareilly	1.69%
10	Bareilly	Haryana	1.68%
11	Haryana	Bareilly	1.60%
12	Lucknow	Moradabad	1.59%
13	Punjab	Gonda	1.51%
14	Bihar	Rampur	1.29%
15	Shahjahanpur	Rampur	1.27%
16	Ghaziabad	Sitapur	1.20%
17	Bareilly	Haridwar	1.19%
18	Bareilly	Meerut	1.19%
19	Ghaziabad	Bareilly	1.19%
20	Shahjahanpur	Moradabad	1.18%
21	Moradabad	Lucknow	1.13%
22	Lucknow	Rampur	1.09%

Table 2-21 Major OD Pair Passengers of TP-2Km 228.000

Sr.no	Origin	Destination	%
1	New Delhi	Bareilly	9.31%
2	Bareilly	Bareilly	5.99%
3	Rampur	Bareilly	5.98%
4	Bareilly	Moradabad	5.68%
5	Bareilly	Rampur	5.65%

Sr.no	Origin	Destination	%
6	Moradabad	Bareilly	5.24%
7	New Delhi	Lucknow	3.29%
8	Bareilly	Milak	3.16%
9	Bareilly	Mirganj	2.95%
10	Milak	Bareilly	1.95%
11	Mirganj	Bareilly	1.76%
12	Shahjahanpur	Rampur	1.14%
13	Hapur	Bareilly	1.13%
14	Pilibheet	New Delhi	1.09%
15	Moradabad	Lucknow	1.02%
16	Meerut	Bareilly	1.00%

2.4.4.6 Commodity Share

Commodity share for goods vehicle provides any indication of type of produce vehicles do carry. The following table presents distribution of commodity share in goods traffic.

Table 2-22 Commodity Share for Goods of TP-1Km 172.000.

Commodity Type	LCV	2-Axle Truck	3-Axle Truck	4-6 Axle
Empty	40.36%	37.01%	31.00%	36.65%
Vegetables/ Fruits/ Milk/ Fish	9.09%	12.17%	13.97%	13.43%
Leather	0.00%	0.35%	0.44%	0.08%
Textile Materials/Cotton	0.73%	2.16%	1.75%	1.26%
Drums/Tubes/Cables/Wire	1.82%	0.86%	1.97%	1.03%
Food Grains (Rice/ Wheat/ etc.)	2.55%	2.67%	2.73%	4.27%
Sand/Cement/Aggregate/Steel/ Brick/ Tiles	2.91%	2.42%	3.06%	2.53%
Rubber/Wood/Tyre	8.00%	6.64%	6.55%	7.35%
Paint/Dyes	0.00%	0.17%	0.00%	0.00%
Fibre	0.00%	0.00%	0.00%	0.00%
Iron Coils	7.64%	9.66%	8.84%	7.90%
Petrol/ Diesel/Gas/LPG/Sulphur	2.91%	5.95%	5.79%	8.29%
Machines	0.00%	0.26%	0.44%	0.16%
Container	0.00%	0.52%	1.20%	1.34%
Pipe/Plastic	5.82%	3.62%	4.37%	3.32%
Chemicals & Fertilisers	0.36%	1.73%	1.86%	0.87%
Finished Consumer Goods (Electronic, Bikes, Fans etc)	4.73%	5.26%	6.22%	6.32%
Industrial Goods (Alloy/Steel)	0.36%	0.86%	0.11%	0.24%
Others	12.73%	7.68%	9.72%	4.98%
Grand Total	**100%**	**100%**	**100%**	**100%**

Table 2-23 Commodity Share for Goods of TP-2Km 228.000.

Commodity Type	LCV	2-Axle Truck	3-Axle Truck	4-6 Axle
Empty	38.21%	36.58%	36.01%	27.26%
Vegetables/ Fruits/ Milk/ Fish	25.90%	20.11%	22.08%	20.68%
Leather	0.00%	0.00%	0.00%	0.00%
Textile Materials/Cotton	2.82%	3.53%	3.01%	2.38%
Drums/Tubes/Cables/Wire	0.00%	0.86%	0.50%	0.55%
Food Grains (Rice/ Wheat/ etc.)	7.69%	8.34%	7.90%	9.83%
Sand/Cement/Aggregate/Steel/ Brick/ Tiles	1.54%	4.71%	3.64%	3.65%
Rubber/Wood/Tyre	3.85%	3.96%	4.77%	7.69%
Paint/Dyes	0.00%	0.00%	0.00%	0.00%
Fibre	0.00%	0.00%	0.00%	0.16%
Iron Coils	3.59%	3.85%	4.77%	5.55%
Petrol/ Diesel/Gas/LPG/Sulphur	0.77%	0.64%	1.51%	2.77%
Machines	0.00%	0.43%	0.00%	0.00%
Container	0.00%	0.00%	0.00%	0.00%
Pipe/Plastic	1.79%	1.28%	2.38%	3.49%
Chemicals & Fertilisers	1.03%	0.75%	0.13%	0.16%
Finished Consumer Goods (Electronic, Bikes, Fans etc)	2.56%	1.50%	1.88%	1.82%
Industrial Goods (Alloy/Steel)	0.26%	0.11%	0.25%	0.08%
Others	10.00%	13.37%	11.17%	13.95%
Grand Total	**100%**	**100%**	**100%**	**100%**

About 35% - 40% percent commercial traffic is recording empty trips. This indicates dominance of local zones where results in shorter trips. Most dominant commodity is food grain and vegetables / fruits which again confirms the domination of local nature of commodity transportation.

2.4.4.7 Trip frequency distributions on project stretch

Historical trip frequency data has been made available by concessionaire. Same has been relied on for finalizing trip frequencies. OD data has also been analyzed for finding trend of trip frequency. OD data is collected through random sample basis and is heavily dependent on accuracy of information provided by driver. Being a human interface it potential of inconsistency. Since reliable historical trip frequency data is available in fast tag data, the same has been used.

The following table shows trip frequency distribution arrived on the basis of fast tag data made available by concessionaire.

Table 2-24 Trip Frequency Distribution at TP1- Km 172.000

Vehicle Type	Single	Return	Overload	Monthly Pass	Local Monthly Pass	Exempt	Total
Car	39%	39%	0.0%	0.0%	14%	8%	100%
Minibus/LCV	54%	43%	0.7%	0.0%	0%	2%	100%
Bus	14%	85%	0.0%	0.0%	0%	0%	100%
Truck-2 Axle	75%	23%	0.4%	0.0%	0%	2%	100%
Multi axle (including Truck -3Axle)	89%	10%	0.2%	0.0%	0%	0%	100%
Oversized Vehicles	87%	13%	0.0%	0.0%	0%	0%	100%

Table 2-25 Trip Frequency Distribution at TP2- Km 228.000

Vehicle Type	Single	Return	Overload	Monthly Pass	Local Monthly Pass	Exempt	Total
Car	34%	40%	0%	0%	18%	8%	100%
Minibus/LCV	59%	38%	1%	1%	0%	2%	100%
Bus	18%	82%	0%	0%	0%	0%	100%
Truck-2 Axle	80%	18%	0%	0%	0%	2%	100%
Multi axle (including Truck -3Axle)	86%	13%	0%	0%	0%	0%	100%
Oversized Vehicles	79%	21%	0%	0%	0%	0%	100%

It can be seen from above that in category of car, LCV and buses there is substantial traffic taking a return trip. This confirms the dominance of local trips in travel patterns.

The above details are used for segmentation of traffic for revenue calculations.

2.5 Competing Road Network Analysis

Project road is section of NH 24 which starts from Km 1480.000 (Pakbara, at beginning of Moradabad Bypass) and ends after Bareilly Bypass at Km 262.000 (End of Bareilly Bypass) in the state of Uttar Pradesh. A detailed site visit was done to understand the potential of competing road networks. The following figure shows the project road in regional context.

Moradabad – Bareilly section of NH-24 is the most suitable link for the traffic from west Uttar Pradesh and eastern part of Delhi NCR to east UP and then further towards Bihar and north east part of country. As can be observed from the map there is no competing road on the north side of the project road. However, there are few local village roads and state highways which can form a sort of competing road network for project corridor. Competing road networks have been discussed in two categories.

1. Competing Road – A road forming alternate alignment for considerable part of project corridor and avoiding at least one toll plaza.

2. Leakage road- A short detour of small road for avoiding toll plaza.

2.1.1.1 Local Competing Roads

The following figure shows a network of local competing roads.

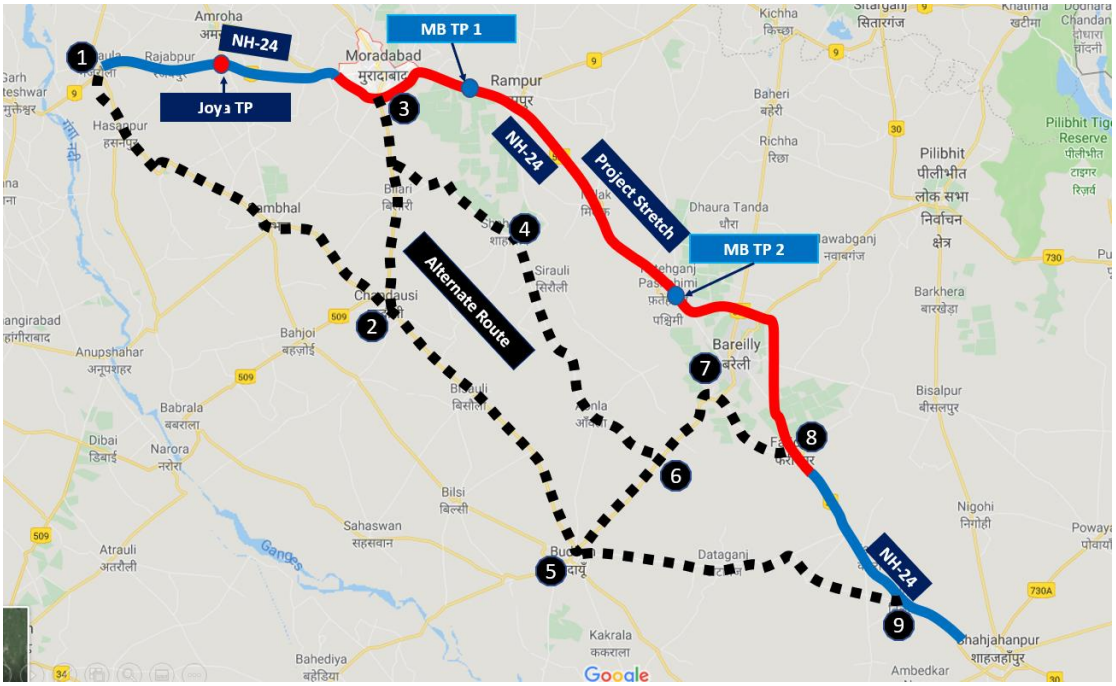

Figure 2-13Alternate routes Local Between Moradabad and Bareilly

The following three major alternate roads can thus be considered for analysis.

1. Alternate route – 1-2-5-9: This is a combination of SH-51, 69 and SH-43. The road starts from Gajraula and then joins project stretch of NH-24 at Tilhar. This becomes alternate route to project stretch and NH-24 section from Gajraula – Moradabad – Rampur- Bareilly- Tilhar.

Mostly traffic on this stretch goes to Hathras Kasganj Sikandrarao Etah which diverts from Badaun. other traffic on this stretch is local and goes to Sambhal, Chandusi, Bahjoi and Badaun.

On local inquiry with drivers and people on this stretch it was observed that traffic of Shahjahanpur to Delhi does not pass through this stretch. It is a two-lane carriageway passing through cities like Gajraula, Sambhal, Chandusi, Badaun, Dataganj. Most parts from Gajraula to Chandusi are in a very poor condition stretch is bituminous. The condition of road from Chandusi to Badaun is fair and after Badaun up to Dataganj carriageway is two lane and condition of road is good. Condition of Dataganj to Tilhar is poor and the road is of two-lane configuration.

Gajraula to Hasanpur

Hasanpur to Sambhal

Sambhal to Chandusi

Chandusi to Badaun

Figure 2-14 : Condition of Alternate Road from Gajraula to Tilhar (Shahjahanpur)

The length of this route from Gajraula to Shahjahanpur is about 235 km which is comparable to length of road via project form Gajraula to Shahjahanpur, but the time taken via alternate route is about 2.5 Hrs. more.

It was observed that this route is mostly taken by local LCV traffic which have short trips and value of commodity is not high. Other long distance commercial traffic does not take this route due to poor condition, congestion at number of locations and unsafe or no service condition on alternate route.

2. Alternate route – 3-4-6-7/9: This is combination village roads from Pakbara to Kundarki- Shahabad- Ambala. This joins Badaun Bareilly road at Bhamora. The condition of this road is poor. In most sections it is intermediate lane. This is mostly suited for local light traffic. It was observed that LCV and cars use this road for most sections. The following photographs show the condition of this road.

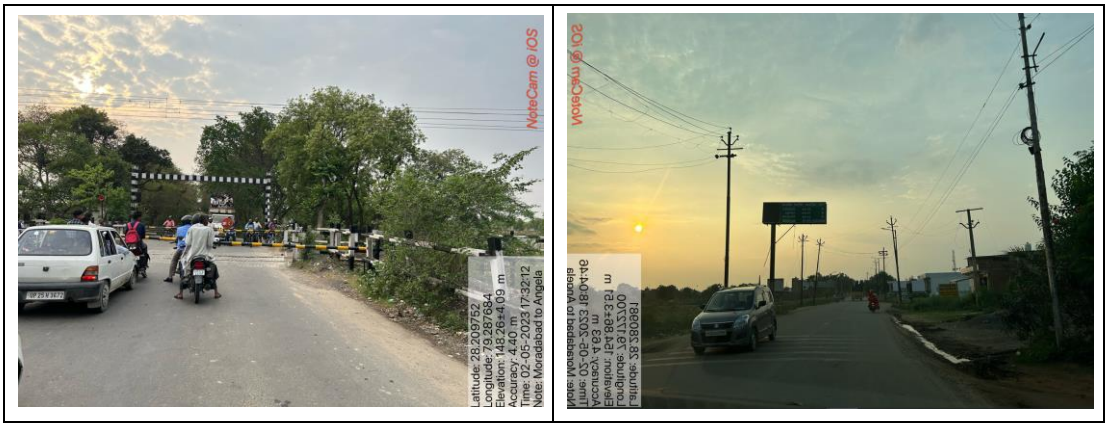

Figure 2-15 : Condition of Alternate Road from Moradabad to Bareilly

As such there is no infrastructure for traffic support and at night the road becomes deserted. There are villages on the routes through which road passes in narrow streets. Thus, commercial vehicles 2 Axle and above would not prefer this route over NH-24. However certain number of local LCV between Moradabad and Bareilly use this road to avoid toll. Length of road between Moradabad and Bareilly for both project road and alternate route is similar as 105 km approx. But due to poor condition of road, congestion on the way, absence of any traffic support infrastructure and somehow hostile conditions of rural areas, long distance commercial traffic does not use this road.

The following table summarizes comparison of length, travel time and toll on project road and alternate route.

Table 2-26 Summary of local competing road and alternate routes

Sr. No	Stretch Between	Route	Time	Distance	Lane	Condition
1	Gajraula-Shahjahanpur	Sambhal-Budaun-Tihar	6 h 39 min	234 km	Two Lane	Poor
	Gajraula-Shahjahanpur	Moradabad-Rampur Via Project Road	4 h 16 min	235 km	Four Lane	Good

Sr. No	Stretch Between	Route	Time	Distance	Lane	Condition
2	Moradabad-Bareilly	Rampur Via Project Road	1 h 46 min	104 km	Four Lane	Good
	Moradabad-Bareilly	Pakbara - shahabad-Aonla-Devchara	3 h 26 min	125 km	Two Lane	Poor

Project road has been under toll operation for last 8 years hence it is expected that the impact of these local roads, if any, must have already happened on traffic and any further impact on project traffic is not envisaged due to above local competing road.

2.5.3.1 Regional Competing Roads

Uttar Pradesh Expressways Industrial Development Authority (UPEIDA) is constructing **Ganga Expressway** which is a greenfield expressway connecting Meerut and Prayagraj. The project is awarded, and it is expected that it will be put into commercial operation in the year 2026-27.

The following Figure shows alignment of Ganga Expressway in comparison to project stretch.

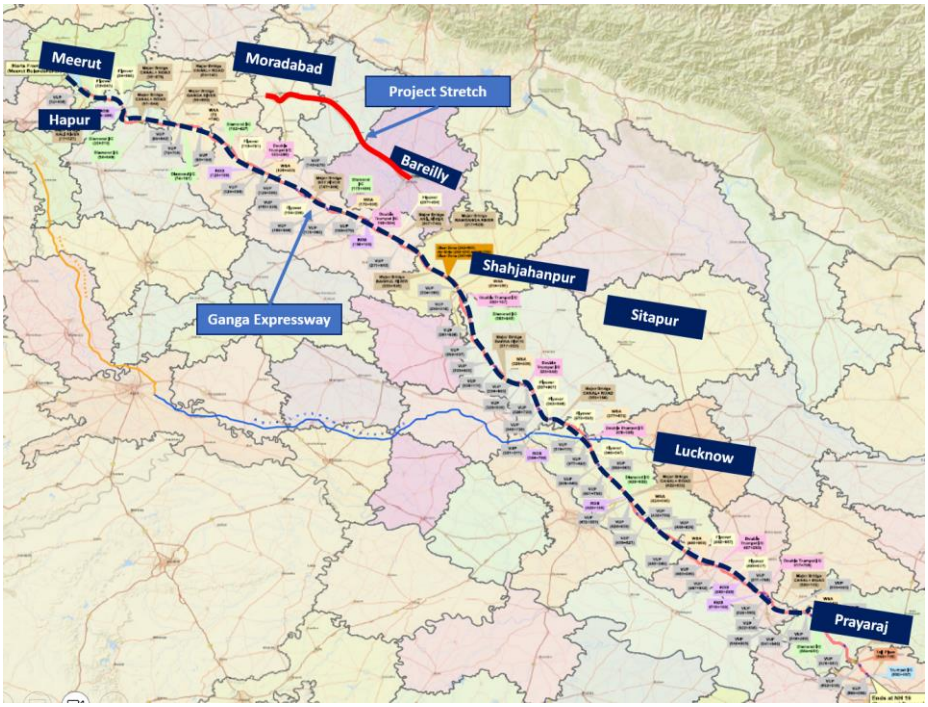

Figure 2-16 : Alignment of Ganga Expressway

It can be observed from above that Ganga Expressway can be a competing route for comercial traffic between Delhi NCR, Haryana, Punjab, Part of Uttarakhand around Haridwar on north side and Shahjahanpur, Sitapur, Lucknow, Varanasi, Prayagraj, Bihar, Bengal on east side. It has been observed in OD analysis that most of the commercial traffc on project road is local in nature however there is certain volume of traffic between these OD pairs which is potential to divert on Ganga Expressway. A cost analysis of both route is done for above pairs and same is presented in table given

below. It is noteworthy that Toll on Ganga Expressway is substantially high as compared to National Highways which is a immediate cash out component of total travel cost. Hence this diversion analysis on Vehicle Operating Cost would be slightly aggressive on diversion numbers. Folowing table shows route length and toll comparision for such pairs. It is assumed that all traffic from north would embark on Ganga Expressway from Hapur. Since only long distance vehicles would be under impact of this diversion hence analysis of 4-6 Axle vehicle is done for potential diversion. Following table shows comparison of length of various potential destinations from Hapur.

Table 2-27 Summary of Route Length of competing road

Destination from Hapur	Ganga Expressway (km)	Connector Route (km)	Total by using Competing Route (km)	Project Route (km)
Shahjahanpur	219.92	34.2	254.12	284
Sitapur	311.46	81.1	392.56	372
Hardoi	273.83	32.1	305.93	344
Lucknow	343.88	71.5	415.38	461
Banaras	566.18	130	696.18	777
Prayagraj	566.18	19.9	586.08	672

A diversion analysis for above pair is done and summary of diversion analysis is given in table below. It is expected that Ganga Expressway would be put into operation in year 2026-27, hence current divertable numbers have been excalated to relevant growth.

Table 2-28 Summary of Diversion analysis

For TP-01

Total OD Sample (4-6 Axle)	Potential Diverted Traffic (OD)	% of Diverted Traffic (OD)	Total ADT (4 - 6 axle)	No. potential vehicle diverted	% of Diversion on Competing Route	Total Divertible traffic on Competing route (Yr.22-23)	Total Divertible traffic on Competing route (Yr.26-27)
1266	47	3.71%	3102	115	95.40%	110	126

For TP-02

Total OD Sample (4-6 Axle)	Potential Diverted Traffic (OD)	% of Diverted Traffic (OD)	Total ADT (4 - 6 axle)	No. potential vehicle diverted	% of Diversion on Competing Route	Total Divertible traffic on Competing route (Yr.22-23)	Total Divertible traffic on Competing route (Yr.26-27)
1262	61	4.83%	3148	152	95.40%	145	167

Above diversion has been considered while working traffic forecast and revenue estimation for horizon years. Since impact of Ganga Expressway will be same on both the

Toll Plaza. Hence higher number of vehicles diversion (167) on Ganga Expressway has been taken.

2.5.3.2 Local Toll Plaza Leakage Road

There are few local detours around toll plazas through which light traffic can escape toll plaza. All of these pass-through the village and have very tight corners. Hence the passing of commercial vehicles is not possible through these routes. Local cars which have knowledge of these routes attempt to escape toll via these routes. These are discussed below.

There are two possible leakage roads by which one can escape toll plaza 1 at Niyamatpur.

Following map shows these leakage roads for TP-1

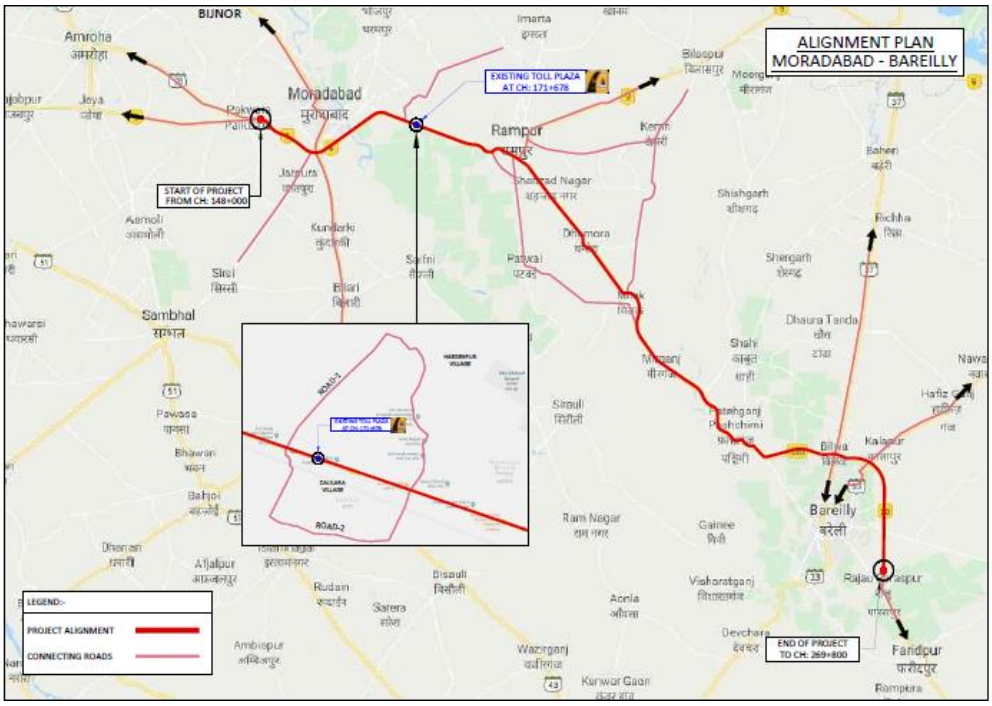

Figure 2-17 : Possible leakage roads at TP-1

The first road by which light traffic can escape Niyamatpur passes through villages. The width of carriageway is about 3.5 m. Villagers oppose passes of vehicles via these roads and only local cars which are familiar, do pass the village road. Condition of this leakage road is shown on following photographs.

Figure 2-18 : Condition of first leakage roads at TP-1

The Second leakage involves crossing of railway line through level and passes through Dalpatpur village. Only local cars and LCV used to run through this route width of road is only 3.5 m and condition of pavement is very poor. In certain parts the road is metaled only. The following photographs show the condition of this road.

Figure 2-19 : Possible second leakage roads at TP-1

Moreover, Toll operator, with the help of villagers, have posted his manpower for checking this road as escape road for non-local traffic.

Leakage roads Triya khetal toll plaza TP-2

There are three possible escape routes which can bypass toll plaza -2 at Triya Khetal.

1. Dhaneta Fatak- Shahi- Fatehganj road
2. Local village road on east side

Following figure show alignment of these roads.

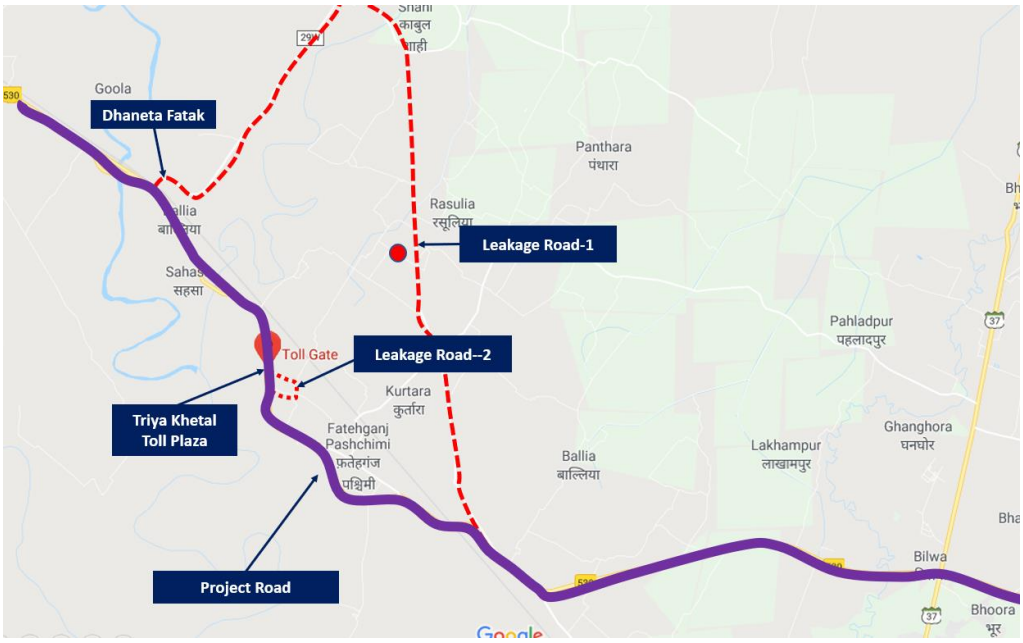

Figure 2-20 : Possible leakage roads at TP-2

1. Dhaneta Fatak- sahi road It is a two-lane road and is a bituminous road and total length of this stretch is nearly 23 km against 12.5 km length via project road. It starts with a level crossing at Dhaneta. This road passes through Shahi village. Condition of road is poor in stretches. On inquiry it was revealed that concessionaire started collecting 10-time toll from overloaded trucks then some of the trucks used this road to avoid fine. Now a days this even

overloaded trucks do not use this as concessionaire has abandoned scheme of 10 time fine. Moreover width, geometry and specification of road is not suitable for multi axle commercial vehicle. Hence the impact of this on project traffic has little potential. The following photographs show the typical condition of this road.

Figure 2-21 : Condition of Leakage Route-1 at TP-2

The second competing road of Triyakhetal toll plaza is mostly earthen and there is only 200 m bituminous road. There is only 3.5m available width of carriageway. Some part of this stretch passes through villages. This road also can be used by familiar local cars only. Commercial vehicles cannot use the road because of the poor condition of the road and tight corners through the village.

There is a stop board sign on the entrance of this road and a guard appointed by Concessionaire to stop vehicles using this road for escaping toll gate. The following photograph depicts the condition of this leakage road.

Figure 2-22 : Condition of leakage route-2 at TP-2

In light of above discussion any further diversion of project traffic on such local raods is not envisaged.

CHAPTER 3
TRAFFIC FORECAST

3.1 Introduction

Traffic growth is a result of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. Further these factors have uncertainties associated with them. Forecasts of traffic have, therefore, to be dependent on the forecasts of factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a limited degree of accuracy and hence the forecasting of future traffic levels cannot be precise.

The following section deals with methods, techniques, and considerations used in traffic forecast for the project under study.

3.3.1 Trend Analysis

Time series data of vehicle Registered in state of concerned states is taken from respective authorized websites and the same is used as the base data for analysis of growth.

Growth of vehicle traffic depends on the type of vehicle. Traffic growth on any highway typically depends on number of economic parameters like

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. Same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

The following can be pair of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

Same is used in analysis below.

3.3.2 Estimation of Traffic Demand Elasticity

The elasticity of traffic demand is defined as the rate at which traffic intensity varies due to change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish the relationship between the growth in number of given categories of vehicle with one of the economic variables considered, such as NSDP, per capita income and population growth.

As per **IRC: 108-2015** the model for estimating elasticity index for the project corridor is of the following form and is as given below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

As observed in OD analysis, the project stretch has a share of traffic from mainly two states of Uttar Pradesh and Haryana and some traffic from Punjab, Delhi and Uttarakhand. Hence regression of dependent variable and traffic has been done for these five states. The following tables and graphs present a summary of elasticity model of growth for project corridor.

Table 3-1 : Per Capita Income Vs. Car- Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of above is given in following figure.

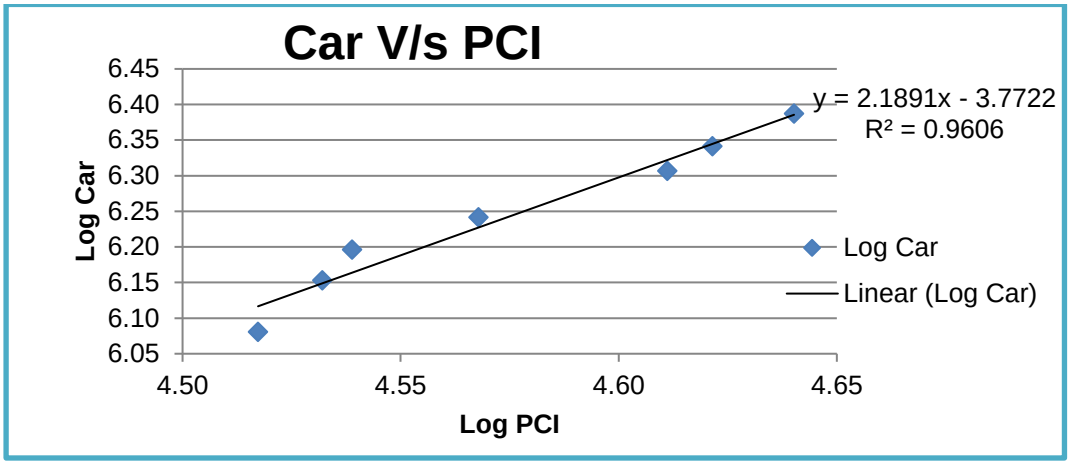

Figure 3-1 : Regression Analysis Car Vs. PCI Uttar Pradesh

Table 3-2 : Population Vs. Bus- Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

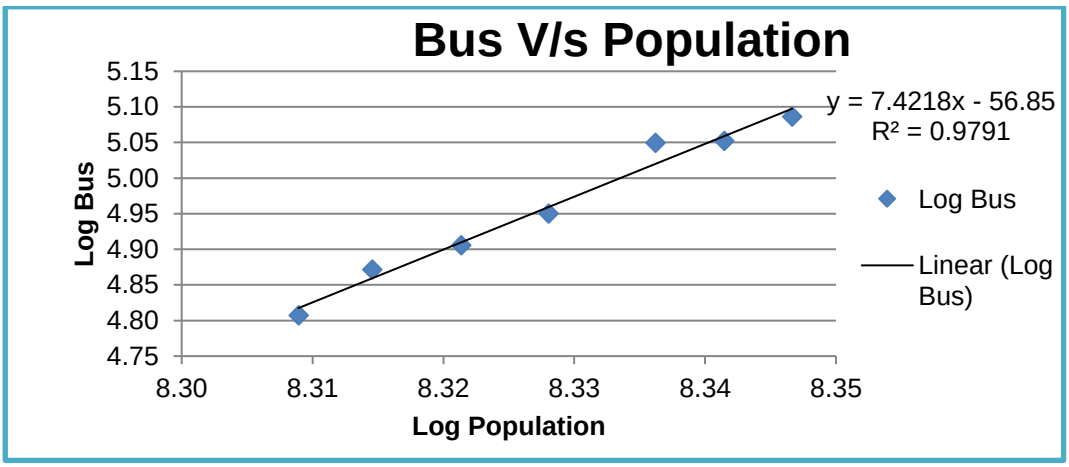

Figure 3-2 : Regression Analysis Population Vs. Bus Uttar Pradesh

Table 3-3 : NSDP Vs. Truck- Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

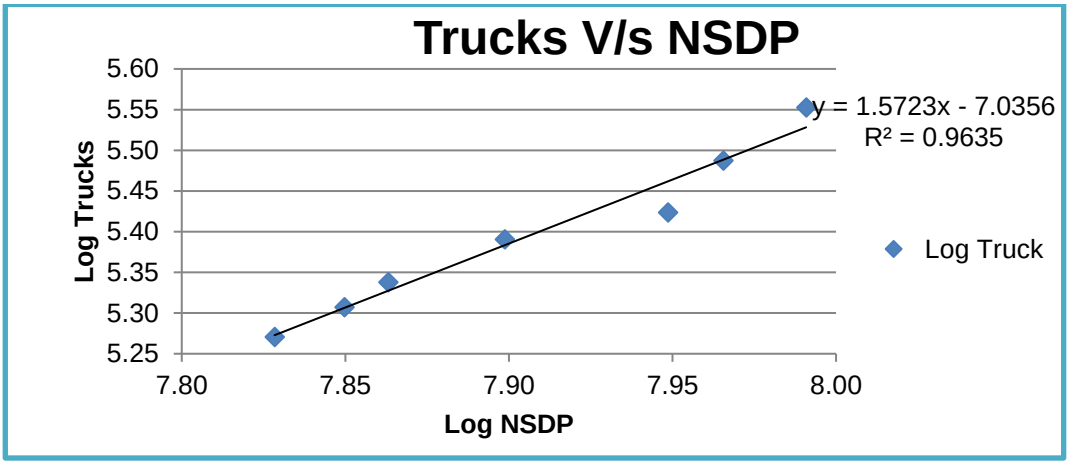

Figure 3-3 : Regression Analysis NSDP Vs. Truck Uttar Pradesh

Summary of regression analysis for elasticity and growth estimation for Uttar Pradesh are given in following table.

Table 3-4 : Summary Regression Analysis- Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	Car/Jeep	PCI	y = 2.1891x - - 3.7722	R^2 = 0.9606	2.2	5%	10.03%	Good Regression
	Bus	Population	y = 7.4218x - - 56.85	R^2 = 0.9791	7.4	2%	11.32%	Good Regression
	Truck	NSDP	y = 1.5723x - - 7.0356	R^2 = 0.9635	1.6	6%	9.72%	Good Regression

Similarly, regression tables and graphs of economic model for Haryana are given as below.

Table 3-5 : Per Capita Income Vs. Car- Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	106085	989519	5.03	6.00		
2012	111780	1134616	5.05	6.05	5%	
2013	119791	1278272	5.08	6.11	7%	
2014	125032	1420621	5.10	6.15	4%	
2015	137833	1711692	5.14	6.23	10%	
2016	150259	1851788	5.18	6.27	9%	
2017	158039	1996788	5.20	6.30	5%	
2018	164976	2141788	5.22	6.33	4%	6.5%

Regression analysis of above is given in following figure.

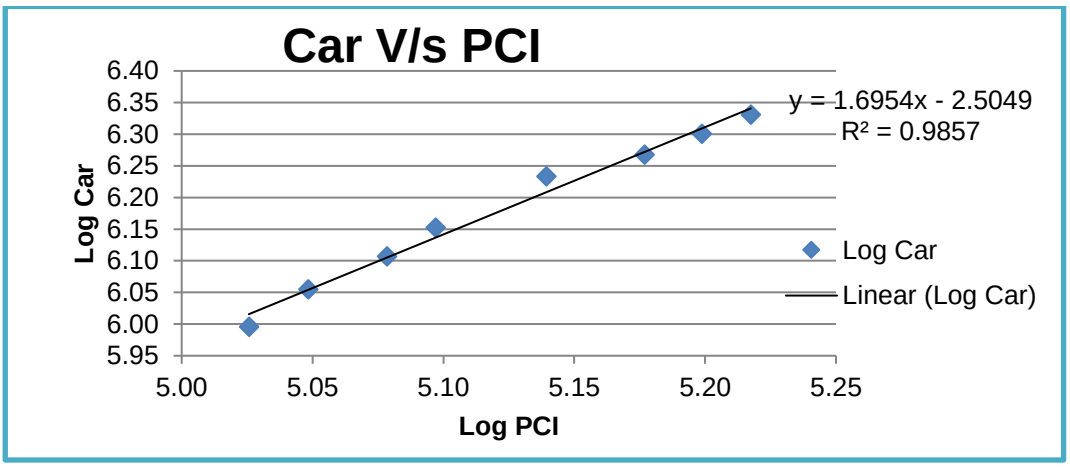

Figure 3-4 : Regression Analysis Car Vs. PCI Haryana

Table 3-6 : Population Vs. Bus- Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	25351000	39153	7.40	4.59		
2012	25772000	43456	7.41	4.64	2%	
2013	26193000	46558	7.42	4.67	2%	
2014	26614000	52640	7.43	4.72	2%	
2015	27034000	55781	7.43	4.75	2%	
2016	27455000	60129	7.44	4.78	2%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2017	27861000	59826	7.44	4.78	1%	
2018	28266000	62594	7.45	4.80	1%	1.6%

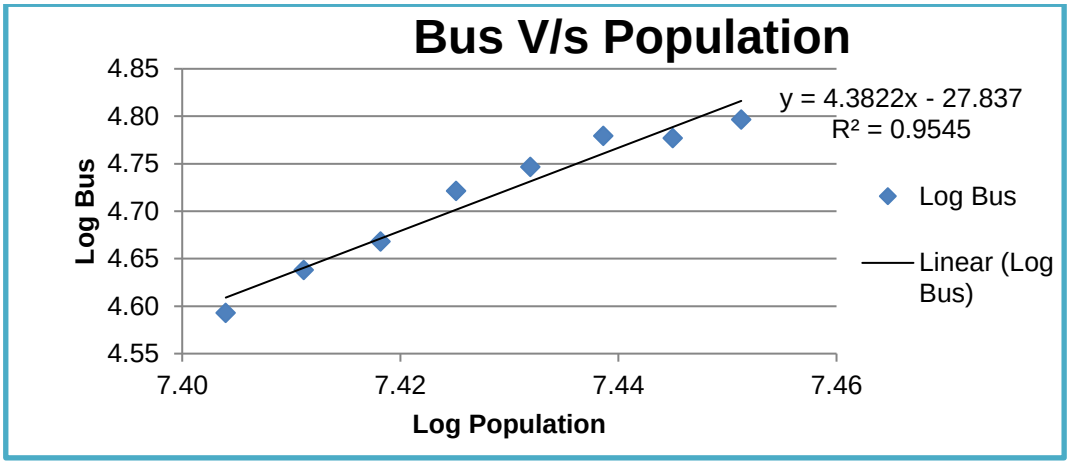

Figure 3-5 : Regression Analysis Population Vs. Bus Haryana

Table 3-7 : NSDP Vs. Truck- Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	27115248	292735	7.43	5.47		
2012	28975622	307509	7.46	5.49	7%	
2013	31493120	327882	7.50	5.52	9%	
2014	33335925	348732	7.52	5.54	6%	
2015	37270025	367730	7.57	5.57	12%	
2016	41205461	390321	7.61	5.59	11%	
2017	43952345	465321	7.64	5.67	7%	
2018	46533095	545321	7.67	5.74	6%	8.0%

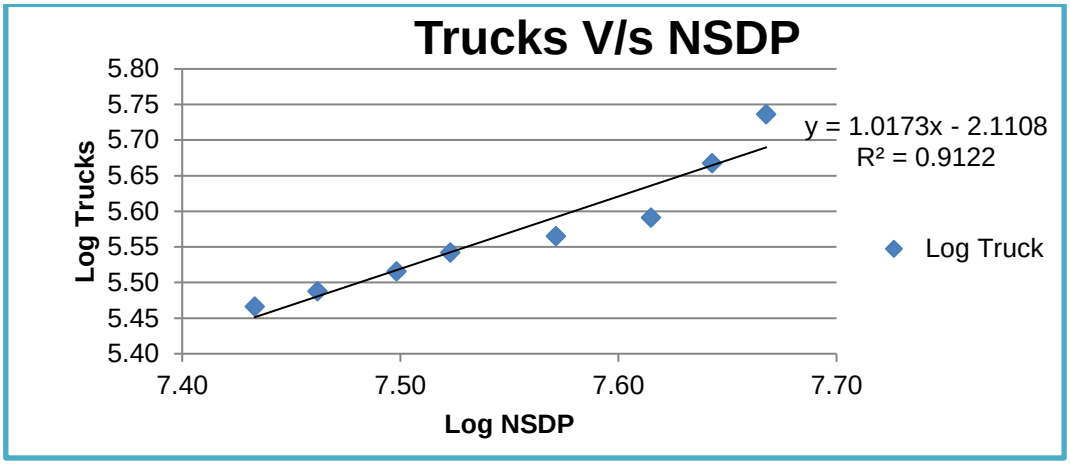

Figure 3-6 : Regression Analysis NSDP Vs. Haryana

Summary of regression analysis for elasticity and growth estimation for Haryana are given in following table.

Table 3-8 : Summary Regression Analysis- Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
HARYANA	Car/Jeep	PCI	y = 1.6954x - -2.5049	R² = 0.9857	1.6954	6.53%	11.08%	Good Regression
	Bus	Population	y = 4.3822x - -27.837	R² = 0.9545	4.3822	1.57%	6.87%	Good Regression
	Truck	NSDP	y = 1.0173x - -2.1108	R² = 0.9122	1.0173	8.04%	8.18%	Good Regression

Similarly, regression tables and graphs of economic model for Punjab are given as below.

Table 3-9 : Per Capita Income Vs. Car- Punjab

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	85577	616549	4.93	5.79		
2012	88915	641549	4.95	5.81	4%	
2013	93238	706549	4.97	5.85	5%	
2014	95807	778549	4.98	5.89	3%	
2015	100141	865549	5.00	5.94	5%	
2016	105848	964549	5.02	5.98	6%	
2017	110857	1074549	5.04	6.03	5%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2018	115784	1196549	5.06	6.08	4%	4.4%

Regression analysis of above is given in following figure.

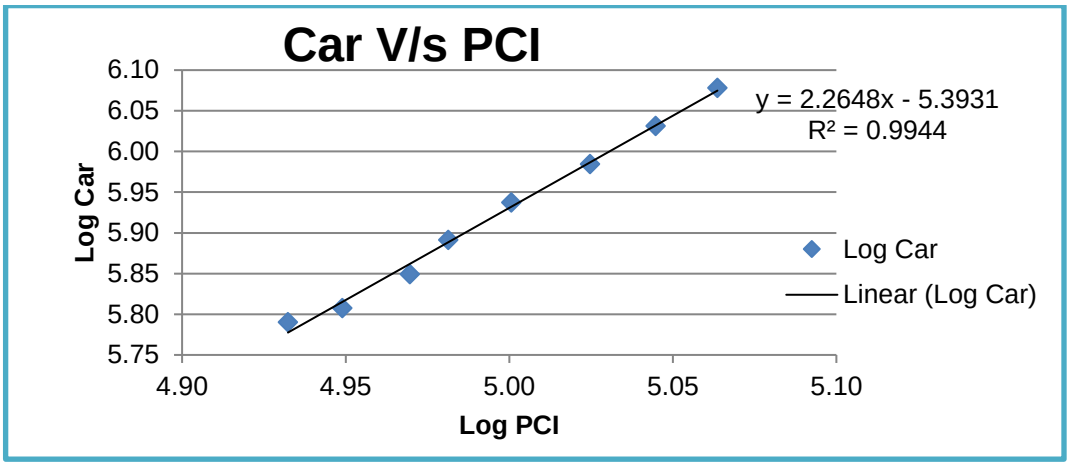

Figure 3-7 : Regression Analysis Car Vs. PCI Punjab

Table 3-10 : Population Vs. Bus- Punjab

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	27743000	30160	7.44	4.48		
2012	28023000	31360	7.45	4.50	1%	
2013	28302000	33860	7.45	4.53	1%	
2014	28581000	35660	7.46	4.55	1%	
2015	28861000	41908	7.46	4.62	1%	
2016	29140000	45378	7.46	4.66	1%	
2017	29380000	46163	7.47	4.66	1%	
2018	29619000	49271	7.47	4.69	1%	0.9%

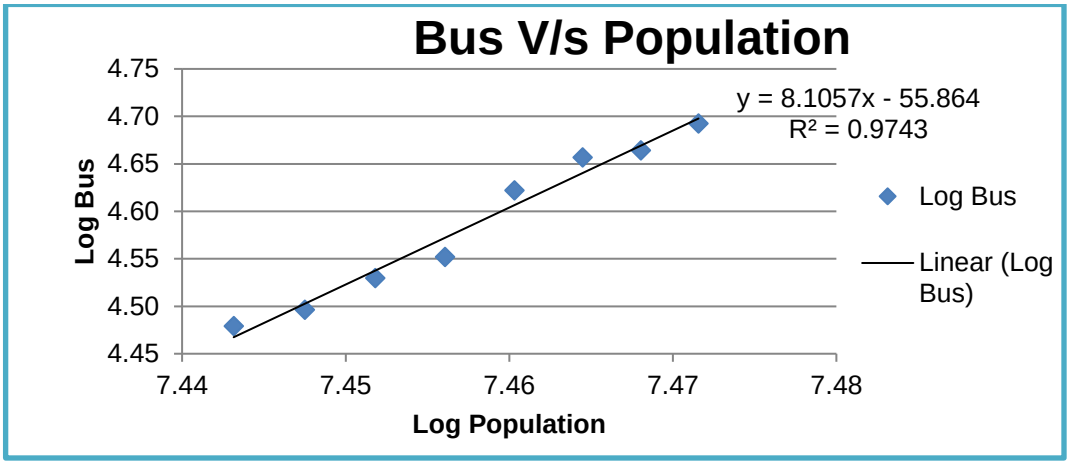

Figure 3-8 : Regression Analysis Population Vs. Bus Punjab

Table 3-11 : NSDP Vs. Truck- Punjab

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	23922695	125898	7.38	5.10		
2012	25181259	125898	7.40	5.10	5%	
2013	26751521	125898	7.43	5.10	6%	
2014	27848460	125898	7.44	5.10	4%	
2015	29489486	247087	7.47	5.39	6%	
2016	31578299	255684	7.50	5.41	7%	
2017	33505679	340244	7.53	5.53	6%	
2018	35452832	364047	7.55	5.56	6%	5.8%

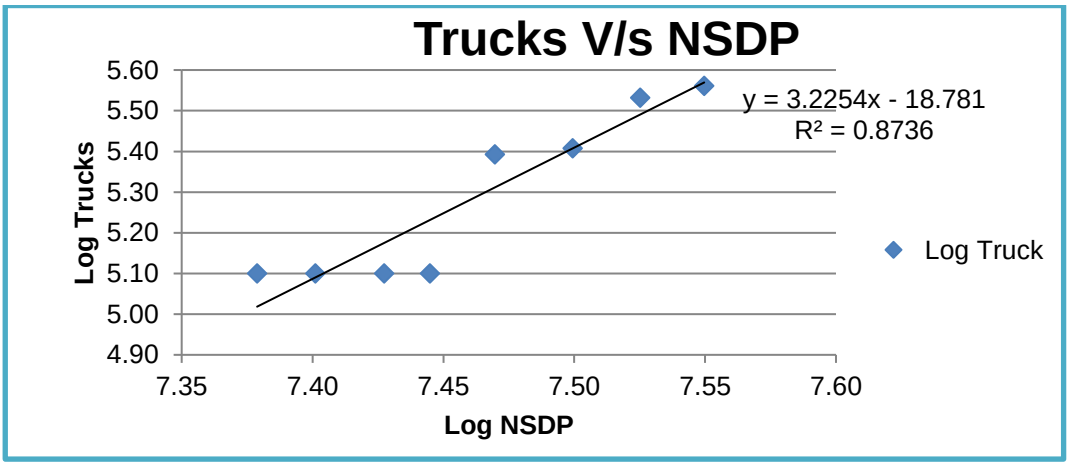

Figure 3-9 : Regression Analysis NSDP Vs. Punjab

Summary of regression analysis for elasticity and growth estimation for Punjab are given in following table.

Table 3-12 : Summary Regression Analysis- Punjab

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
PUNJAB	Car/Jeep	PCI	y = 2.2648x - - 5.3931	R^2 = 0.9944	2.2648	4.42%	10.00%	Good Regression
	Bus	Population	y = 8.1057x - - 55.8645	R^2 = 0.9743	8.1057	0.94%	7.61%	Good Regression
	Truck	NSDP	y = 3.2254x - - 18.7809	R^2 = 0.8736	3.2254	5.78%	18.66%	Good Regression

Similarly, regression tables and graphs of economic model for Delhi are given as below.

Table 3-13 : Per Capita Income Vs. Car- Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	185001	2172069	5.27	6.34		
2012	192220	2416974	5.28	6.38	4%	
2013	200702	2568380	5.30	6.41	4%	
2014	213669	2730071	5.33	6.44	6%	
2015	233115	2986579	5.37	6.48	9%	
2016	244255	3061817	5.39	6.49	5%	
2017	252960	3087309	5.40	6.49	4%	
2018	260967	3249670	5.42	6.51	3%	5.1%

Regression analysis of above is given in following figure.

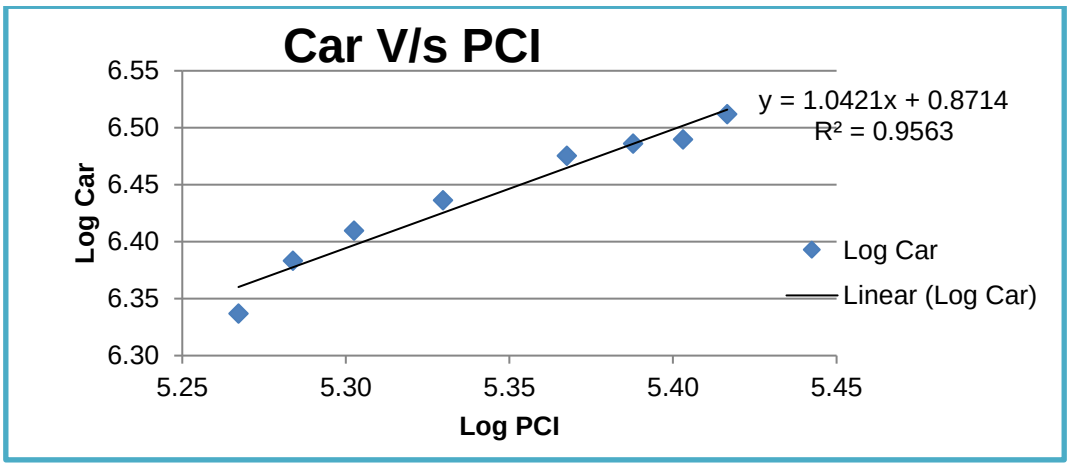

Figure 3-10 : Regression Analysis Car Vs. PCI Delhi

Table 3-14 : Population Vs. Bus- Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	16788000	20142	7.22	4.30		
2012	17166000	21142	7.23	4.33	2%	
2013	17544000	22592	7.24	4.35	2%	
2014	17921000	24292	7.25	4.39	2%	
2015	18299000	25492	7.26	4.41	2%	
2016	18677000	26912	7.27	4.43	2%	
2017	19056000	28912	7.28	4.46	2%	
2018	19435000	32112	7.29	4.51	2%	2.1%

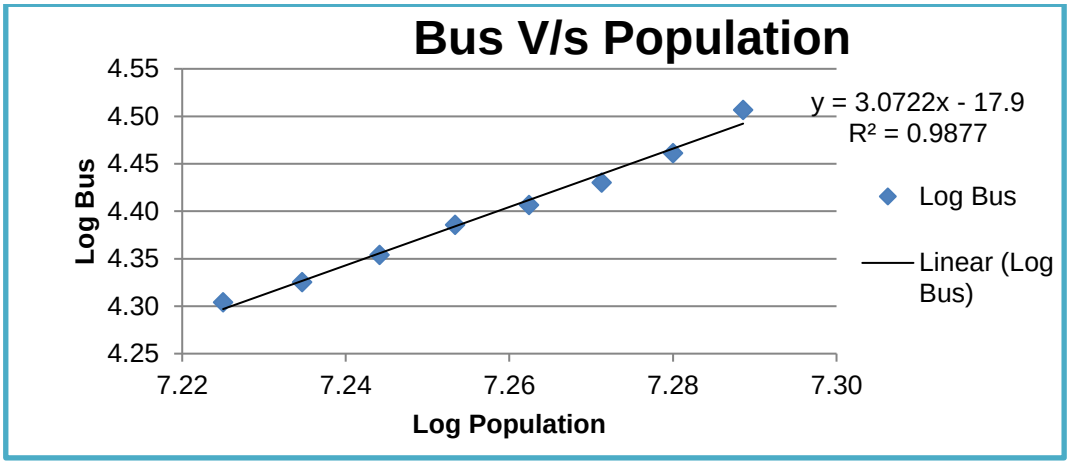

Figure 3-11 : Regression Analysis Population Vs. Bus Delhi

Table 3-15 : NSDP Vs. Truck- Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	31465002	4792	7.50	3.68		
2012	33419330	5176	7.52	3.71	6%	
2013	35652751	6093	7.55	3.78	7%	
2014	38763874	7503	7.59	3.88	9%	
2015	43172959	7803	7.64	3.89	11%	
2016	46159238	8213	7.66	3.91	7%	
2017	48763115	8593	7.69	3.93	6%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2018	51295715	9093	7.71	3.96	5%	7.2%

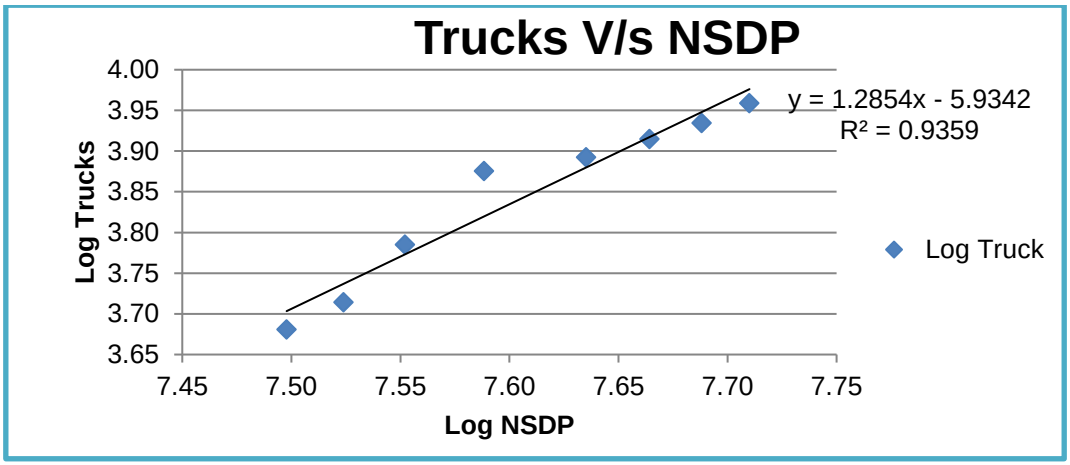

Figure 3-12 : Regression Analysis NSDP Vs. Delhi

Summary of regression analysis for elasticity and growth estimation for Delhi are given in following table.

Table 3-16 : Summary Regression Analysis- Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
DELHI	Car/Jeep	PCI	y = 1.0421x - 0.8714	R^2 = 0.9563	1.0421	5.05%	5.27%	Good Regression
	Bus	Population	y = 3.0722x - - 17.8997	R^2 = 0.9877	3.0722	2.11%	6.49%	Good Regression
	Truck	NSDP	y = 1.2854x - - 5.9342	R^2 = 0.9359	1.2854	7.25%	9.32%	Good Regression

Similarly, regression tables and graphs of economic model for Uttarakhand are given as below.

Table 3-17 : Per Capita Income Vs. Car- Uttarakhand

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	100314	188152	5.00	5.27		
2012	106359	227596	5.03	5.36	6%	
2013	112900	260649	5.05	5.42	6%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2014	118979	294481	5.08	5.47	5%	
2015	127249	295215	5.10	5.47	7%	
2016	138784	385446	5.14	5.59	9%	
2017	148090	438622	5.17	5.64	7%	
2018	154549	471374	5.19	5.67	4%	6.4%

Regression analysis of above is given in following figure.

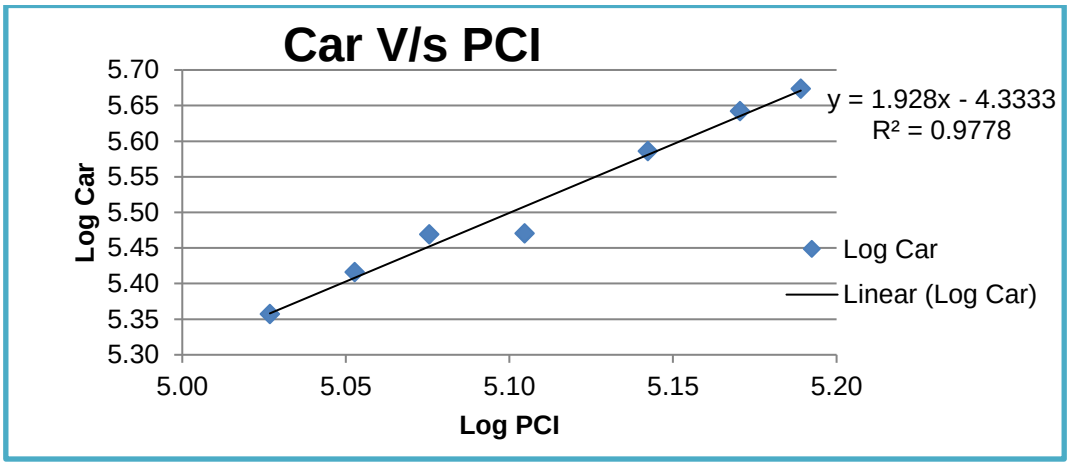

Figure 3-13 : Regression Analysis Car Vs. PCI Uttarakhand

Table 3-18 : Population Vs. Bus- Uttarakhand

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	10086000	10407	7.00	4.02		
2012	10220000	10731	7.01	4.03	1%	
2013	10354000	11639	7.02	4.07	1%	
2014	10487000	12357	7.02	4.09	1%	
2015	10621000	13107	7.03	4.12	1%	
2016	10755000	14107	7.03	4.15	1%	
2017	10884000	15207	7.04	4.18	1%	
2018	11013000	16643	7.04	4.22	1%	1.3%

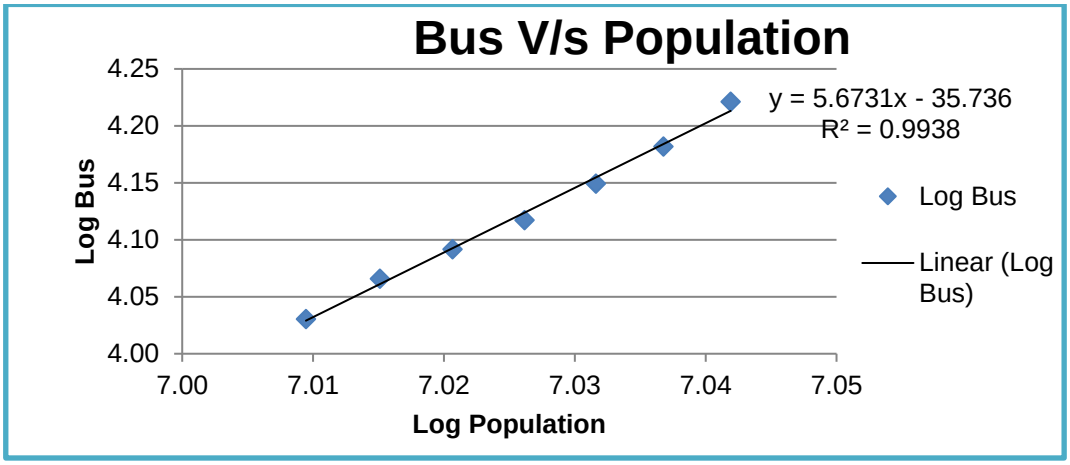

Figure 3-14 : Regression Analysis Population Vs. Bus Uttarakhand

Table 3-19 : NSDP Vs. Truck- Uttarakhand

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	10195963	23786	7.01	4.38		
2012	10952850	25174	7.04	4.40	7%	
2013	11777751	26345	7.07	4.42	8%	
2014	12570165	27831	7.10	4.44	7%	
2015	13614352	29031	7.13	4.46	8%	
2016	15030294	30381	7.18	4.48	10%	
2017	16229143	31791	7.21	4.50	8%	
2018	17136395	32791	7.23	4.52	6%	7.7%

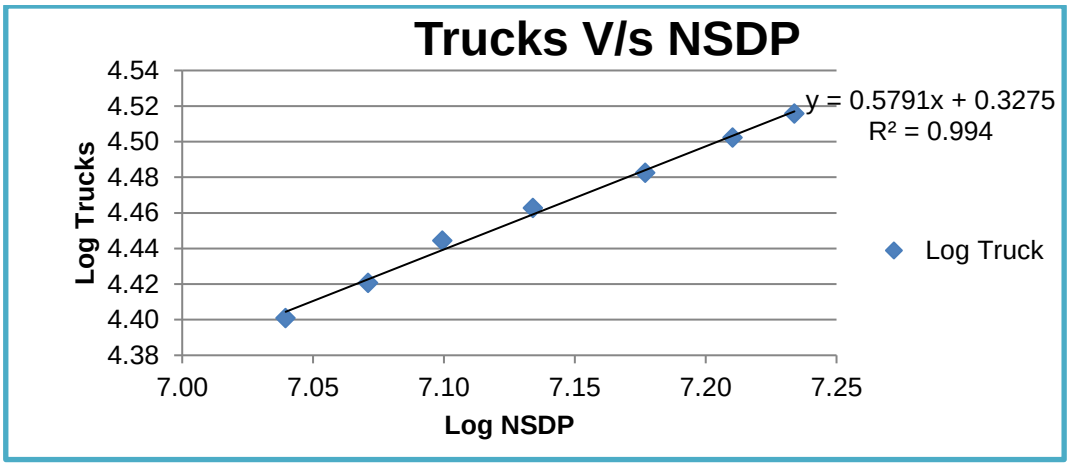

Figure 3-15 : Regression Analysis NSDP Vs. Uttarakhand

Summary of regression analysis for elasticity and growth estimation for Uttarakhand are given in following table.

Table 3-20 : Summary Regression Analysis- Uttarakhand

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
UTTARAKHAND	Car/Jeep	PCI	y = 1.928x - -4.3333	R^2 = 0.9778	1.9	6%	12.30%	Good Regression
	Bus	Population	y = 5.6731x - -35.7365	R^2 = 0.9938	5.7	1%	7.17%	Good Regression
	Truck	NSDP	y = 0.5791x - 0.3275	R^2 = 0.994	0.6	8%	4.46%	Good Regression

Most of the traffic on the project road is from Uttar Pradesh, Haryana, Delhi, Uttarakhand and Punjab. Hence growth trends of these states only have been taken for growth projections.

Elasticity Coefficient of different states is different. The elasticity of traffic demand is moderated on the basis of experience of traffic growth in various regions and trends of logistic development. The elasticity coefficient for future years has been stepped down as same growth may not be sustainable in the longer future. Finally, the adopted Elasticity of travel demand is given in the table below. Transportation and logistics infrastructure and market in India is growing at fast pace and with stable economy and political scenario it is expected that this sector will grow at good rate in near future too.

Adopted Transport Demand Elasticity Value				
Mode	**FY- 2023-2027**	**FY- 2027-2032**	**FY- 2032-2037**	**FY- 2037-2042**
Car/Jeep	1.8	1.8	1.7	1.7
Bus	4.5	4.4	4.4	4.3
Truck	1.2	1.2	1.1	1.1

Growth of different categories of vehicles is product of elasticity and growth of independent indicators Like Per Capita Income, Growth of Population and Growth of GDP / NSDP.

Since India is emerging as stable economy and stable government is taking steps towards long term growth of industrial growth and ramping up of infrastructure, it is expected that growth will be sustainable. Hence the five-year slots have been taken for growth projections.

The following table shows the growth of independent variable taken for growth projection.

Projected Growth Rate of Independent Indicators				
Indicator	**FY-2024-2027**	**FY-2027-2030**	**FY-2030-2035**	**FY-2035-2040**
PCI	4.87%	4.37%	3.87%	3.37%
Population	1.56%	1.51%	1.46%	1.41%
NSDP	6.48%	5.73%	5.23%	4.73%

3.4 Historical Trend Analysis

Growth of traffic on a corridor or in a region depends on various factors. Though the trend of economic growth is most important among these but there are certain other factors like technological advancement in logistics which also influence growth of various modes of traffic to certain extent. A review of historic trends would help in developing an understanding of the growth of traffic. Historic traffic details on project corridor are available from year 2014-15. The following table shows a summary of traffic numbers since year 2014-15.

Table 3-21 : Historic Traffic growth data -TP1

Types of Vehicles/Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	CAGR (%)
Car/LMV	7964	8569	9170	9841	10353	11021	11778	13363	15039	16376	**8.34%**
LCV/Minibus	1810	1849	1624	1417	1337	1395	1274	1062	951	863	**-7.90%**
Bus/Truck	2209	2249	2229	2400	2618	2733	2777	2951	3381	3236	**4.33%**
Truck 3 Axle	1013	1003	829	808	931	990	1060	1036	1102	991	**-0.24%**
MAV	1880	1863	1540	1501	1728	1838	1969	1924	2046	1841	**-0.24%**
Oversized	3	4	0	1	0	1	1	1	2	1	**-11.73%**
Total traffic	**14880**	**15538**	**15392**	**15968**	**16967**	**17978**	**18859**	**20338**	**22521**	**23308**	**5.11%**
Total PCU	**28821**	**29502**	**27711**	**28348**	**30783**	**32557**	**34066**	**35585**	**39130**	**38642**	3.31%

Table 3-22 : Historic Traffic growth data -TP2

Types of Vehicles/Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	CAGR (%)
Car/LMV	5005	5514	6310	6971	7296	7418	8189	8605	9220	9460	**7.33%**
LCV/Minibus	1147	1189	1014	979	975	1011	1054	704	632	573	**-7.42%**
Bus/Truck	1435	1477	1603	1751	1995	2045	2306	2301	2532	2400	**5.88%**
Truck 3 Axle	839	829	682	762	861	899	967	933	1024	923	**1.07%**
MAV	1558	1540	1266	1415	1598	1670	1796	1733	2078	1874	**2.07%**
Oversized	0	0	0	0	0	0	0	1	2	1	**12.39%**
Total traffic	**9984**	**10549**	**10876**	**11879**	**12725**	**13044**	**14312**	**14278**	**15488**	**15231**	**4.80%**
Total PCU	**20560**	**21146**	**20385**	**22348**	**24519**	**25283**	**27671**	**27169**	**30195**	**28727**	3.79%

It can be observed from the above that traffic on the project corridor has registered growth in major cars, Truck -3 Axle and MAV which are the major components of traffic. The years 2019-20 and 2020-21 were impacted by COVID-19. LCV has shown negative growth over the period. As last few years have been affected by COVOD-19 and traffic was disturbed on all highways hence historical trends cannot be assigned must weightage for future growth projection, but project traffic has shown good growth over last year when traffic on stretch was stabilized post COVID-19. Major development in Project Influence Area (PIA)

It is imperative that developments in surrounding would impact traffic growth on project corridor. Major relevant establishments and developments in project influence area are discussed as under.

Moradabad, Bareilly, and Rampur are among major cities/districts along the project corridor.

A. Developments in and around Moradabad Area

Moradabad is situated at a distance of around 167 km from New Delhi. The city is renowned for brass work and has carved a niche for itself in the handicraft industry throughout the world. The modern, attractive, and artistic brass ware, jewellery
and trophies are made here by the skilled artisans. The attractive brass wares are exported to countries like USA, Britain, Canada, Germany and Middle East Asia.

During last few years other products like Iron Sheet Metal wares, Aluminium Artworks and Glassware's have also been included as per need of the foreign Buyers. Mentha is also exported in several crores from Moradabad. These products are very popular in foreign market and are being exported in thousands of crores every year. Due to increase of exports and popularity in foreign specially in Europe, America, Italy and other countries, a large No. of exporters are establishing their units and started their export. It is one of the seven industrial corridors under the State Govt.

There exist two Special Economic Zones for handicraft products. Provision for infrastructure facilities such as: - greenbelt, boundary wall, internal development, security system, power substation, CETP, inland container depot, design and training centre, helipad, school, canteen has been made there.

These SEZ are situated in Moradabad on both sides of Pakbara - Dhingarpur road adjacent to NH-24. The government is investing lot of money to improve infrastructural facilities to promote the industrial activities at Moradabad like 24-hour uninterrupted power supply, construction of by-pass road, proposal for widening and making the four-lane Delhi-Moradabad Road. About 450 acres of land has been acquired to develop a new industrial area for export-oriented units at Pakbara to Dingarpur Road. Over 1.10 lakh people get direct employment through these SEZ.

Apart from age old identified Brass Handicraft Cluster, Mentha Cluster is rapidly taking a shape in this area. The cultivation of Menthol at Moradabad, Sambhal, Chandusi and nearby Districts are increasing day-by-day thereby coming up the No. of Industrial Units, since Menthol is being exported in several crores, there is further scope for its development. However, lot of improvement is required on the technology upgradation front to support this sector's sustainable growth.

Here there are around 21000 industrial establishments altogether including 10000 registered industrial units. The no. of registered medium & large units is 10.

Among other type of existing small & micro-Enterprises and Artisan units comprise of Agro based, Soda water, Cotton Textiles, Woollen-Silk and artificial Thread based clothes, Jute & Jute based, Readymade garments & embroidery, Wooden Furniture's, Paper & Paper products, Leather based, Chemicals based, Rubber, Plastic & Petro based, Mineral based, Metal based (Steel Fab.) etc.

There are few Large-Scale Industries / Public Sector undertaking establishments here. The important among them are National Industries Corp. Ltd. for wine, Moradabad Dugdh Utpadan Sahakari Sangh for milk, Pashupati Acrylon Ltd. For Acrylic Fibre., Deewan Sugar Ltd. for Crystal Sugar, Milk Food Pvt. Ltd. for Milk Powder & Ghee, Zeenas Papers Products Ltd for Craft Paper, Triveni Engineering & Industries Ltd., Rana Sugar Ltd, Ayodhya Sugar Works all for Crystal Sugar, A to Z waste Management for Fertilizers, Plastic Granules and Fuel.

A Metal Handicrafts Service Center is established here for up gradation of technology, improvement quality & also providing service to the small entrepreneur. Also, a Design Center has also been established to introduce new designs and to meet the requirements of the foreign buyers and providing training to local artisans.

The town forms a large centre of trade in country produce. It has a special industry in ornamental brass ware, sometimes plated with lac or tin, which is then engraved. Cotton. weaving and printing are also carried on.

The Bone & Horn Centre: The main center of this industry is in Sambhal, nearby town in adjacent to Moradabad. The attractive goods generated by this small-scale industry are in great demand in many countries. There are about 1500 families involved in the production of these items, which provide job to about 5000 people. These items include Jewellery made out of bones and horns, Kitchen ware, Combs, Wooden sticks etc.

Printing on cloths is done at many places in the district, but Thakurdwara, Kanth and Amroha which are the main centers. District administration has established a Handicraft Corporation depot in Thakurdwara. Design for printing on cloth is provided by this depot to these cloth merchants. The final prepared product in then taken over by the corporation. There are about 6000 people involved in the profession.

Apart from brass and handicraft industries, there are about 8000 other MSMES units. Prominent among these are -Mentha oil, Rice Mills, Sugar Mills, Cement and Building material, Agricultural Instruments, Animal Feed, Coal Bricks, Oil Mill, etc. These small-scale units provide jobs to about 30000 people. There are many units of Medium and Large-Scale Industries, which includes Distillery, Sugar Mills, Pulp & Paper, Pharmaceutical & Chemical Industries etc. These industrial units provide jobs to about 40000 people. Also, there are around Fifteen 100 % Export oriented units in Moradabad.

B. Developments in and around Bareilly

Bareilly is the 7th largest metropolitan city of Uttar Pradesh and 50th largest metropolitan city of India. This fast-growing city is also known as Bans-Bareilly, due

to its big bamboo market. Bareilly is also known as the counter-magnet city because it is equidistant from New Delhi and Lucknow and has a lot of potential for setting up industries to attract people to settle.

There are around 11 Industrial Area in the Bareilly. The important among them CB Ganj, Bhojipura, Faridpur, Meerganj, Ramnagar, Bithri, Majh Gaon, Bhadpura, Aonla, Shergarh, Parsakhera.

There exists around 16000 Industrial units in total. Also, there are 15 Medium and Large number of units are there. Small industrial units provide employment to 75000 people and Medium & large industrial units provide employment to 11000 people.

Due to close proximity of Uttaranchal and being a big city in nearby area, Bareilly is developed as educational hub over the period of time.

IIFCO at Aonla, Railway workshop and few sugar mills are only few PSU & Large-scale industries which are working in Bareilly.

The service enterprises mainly include repair & servicing of motor vehicles, motorcycles / scooters, household goods, workshops, restaurants and cold storage etc.

Zari, Cane & Bamboo, Mentha and Rice mill are main cluster of Bareilly. Principal Products Manufactured in the Zari Cluster are Sari, Salwar Suit. While in Cane and Bamboo sector principal products Sofas, Lawn Furniture, Gift Item, Lamp Shed etc are manufactured. In Rice Mill Cluster main products are rice and bran.

Agro based, Soda water, Cotton textile, Woollen, silk & artificial Thread based clothes, Jute & jute based, Ready-made garments & embroidery, Wood/wooden based furniture, Paper & Paper products, Leather based, Chemical/Chemical based, Rubber, Plastic & Petro based, Mineral based, Metal based (Steel Fab.), Engineering units, Electrical machinery and transport equipment, Repairing & servicing are among existing micro & small enterprises and artisan units in and around Bareilly.

Medium & large-scale industries comprise of Rama Shyama Paper Ltd. for Posters Papers, Camphor and Allied Products Ltd. for Camphor and other allied product, Distillery of Keser Enterprises Ltd. for Undinechered ethanol alcohol, Keser Enterprises Baheri, for Sugar, Vrindavan beverage Ltd. for Mineral Water, J.K. Sugar Ltd Meerganj for Refining of Sugar, Dwarikesh Sugar Industries Ltd. for White Crystal Sugar, Oswal Overseas Ltd. for Sugar molasses, Bharat Petroleum & Bottling Plants for Cooking Gas & Bottling Plants, N.E. Railway Workshop for Repairing of Wagons, IFFCO for Ammonia Urea, Vimco Ltd. for Safety Matches, Kissan Sahakari Chini Mills Ltd. for Sugar, U.P. Sahakari Katai Mills Ltd for Cotton Yarn, Superior Industries Ltd for Alcohol.

B. Developments in and around Rampur

Rampur is Situated on the national highway NH24, at 302 km from the state capital Lucknow and at 185 Km from New Delhi. Rampur district is bounded on the North by Udhamsingh Nagar district of Uttaranchal, on the South by Badaun district, on the East by Bareilly district and on the West by Moradabad district.

There are around 6 Industrial Area in and around the Rampur. Important among them are Roshanbag, Ajeetpur, Suar, Milak, Shahabad, Pattikalan.

There exists approx. 6500 small scale and 15 medium & large-scale industries in this area. This provides employment to approx. over 30000 people.

Agro based, Soda water, Cotton textile, Woollen, silk & artificial Thread based clothes, Jute & jute based, Ready-made garments & embroidery, Wood/wooden based furniture, Paper & Paper products, Leather based, Chemical/Chemical based, Rubber, Plastic & Petro based, Mineral based, Metal based (Steel Fab.), Engineering units, Electrical machinery and transport equipment, Repairing & servicing are among existing micro & small enterprises and artisan units in and around Rampur.

Among Medium & Large-Scale Industries important establishments are Indian Toners & Developers LTD, Rampur Distillery, Giex Foods (P) LTD, Swati Menthol & Allied Chemicals LTD, Chadha Papers LTD., Rudra Bilas Kishan Sahakari Chini Mills LTD, Wheels India LTD, Triveni Engineering & Industries LTD, Rana Sugar LTD

3.5 Growth of Economy and Projection of GDP in India

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

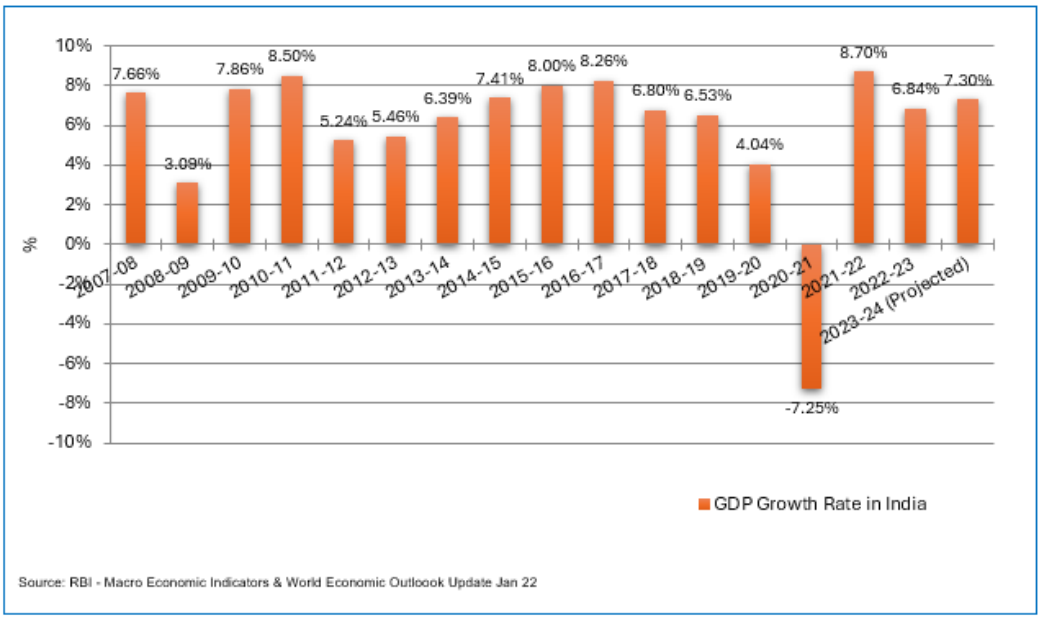

Figure 3-16 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In-India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario.

Indian economy is now on good growth path and all major institutions including IMF / ADB have estimated growth of Indian Economy to peg around 7% in coming years.

3.6 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept higher as compared to LCV, 2 Axle and 3-Axle traffic, as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage and LCV. It is also expected that as the economy moves from developing to developing, the rate of growth diminishes. Same growth rate is not sustainable for long. Hence growth rates have been suitably stepped down in future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation from Most Likely case for corridor in both states.

Table 3-23 : Recommended Growth Rates Most Likely -TP1 & TP2

Category / Year	FY-2023-2027	FY-2027-2032	FY-2032-2037	FY-2037-2042
Car/Jeep/Van	7.89%	7.06%	6.08%	5.07%
Bus	5.63%	5.36%	5.09%	4.83%
Minibus	5.63%	5.36%	5.09%	4.83%
LCV	3.11%	2.64%	2.36%	2.08%
2- Axle	2.72%	2.31%	2.06%	1.82%
3 - Axle	4.82%	4.09%	3.65%	3.23%
4 to 6 Axle	5.84%	4.95%	4.42%	3.91%
7 and Above Axle	5.84%	4.95%	4.42%	3.91%

Table 3-24 : Recommended Growth Rates Optimistic -TP1 & TP2

Category / Year	FY-2023-2027	FY-2027-2032	FY-2032-2037	FY-2037-2042
Car/Jeep/Van	8.14%	7.31%	6.33%	5.32%
Bus	5.88%	5.61%	5.34%	5.08%
Minibus	5.88%	5.61%	5.34%	5.08%
LCV	3.36%	2.89%	2.61%	2.33%
2- Axle	2.97%	2.56%	2.31%	2.07%
3 - Axle	5.07%	4.34%	3.90%	3.48%
4 to 6 Axle	6.09%	5.20%	4.67%	4.16%
7 and Above Axle	6.09%	5.20%	4.67%	4.16%

Table 3-25 : Recommended Growth Rates Pessimistic-TP1 & TP2

Category / Year	FY-2023-2027	FY-2027-2032	FY-2032-2037	FY-2037-2042
Car/Jeep/Van	7.64%	6.81%	5.83%	4.82%
Bus	5.38%	5.11%	4.84%	4.58%
Minibus	5.38%	5.11%	4.84%	4.58%
LCV	2.86%	2.39%	2.11%	1.83%
2- Axle	2.47%	2.06%	1.81%	1.57%
3 - Axle	4.57%	3.84%	3.40%	2.98%
4 to 6 Axle	5.59%	4.70%	4.17%	3.66%
7 and Above Axle	5.59%	4.70%	4.17%	3.66%

3.7 Traffic Forecast

Above growth rates are applied to base project traffic and traffic forecast is developed for all three scenarios.

The following tables present estimates of total traffic (AADT) at toll plaza under all three scenarios.

Table 3-26 : Total Traffic @ Toll Plaza 1- Km 172.000 (Most Likely)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	17871	935	1847	1584	885	1643	1	**24766**	**39620**
2025-26	19282	964	1951	1627	928	1572	1	**26325**	**41325**
2026-27	20804	994	2061	1671	973	1664	1	**28168**	**43903**
2027-28	22274	1020	2171	1710	1013	1746	1	**29935**	**46348**
2028-29	23847	1047	2287	1749	1054	1832	1	**31817**	**48936**
2029-30	25532	1075	2409	1789	1097	1923	1	**33826**	**51688**
2030-31	27336	1103	2538	1830	1142	2018	1	**35968**	**54606**
2031-32	29267	1132	2674	1872	1189	2118	1	**38253**	**57706**
2032-33	31047	1159	2810	1911	1232	2212	1	**40372**	**60603**

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2033-34	32935	1186	2953	1950	1277	2310	1	**42612**	**63654**
2034-35	34938	1214	3103	1990	1324	2412	1	**44982**	**66869**
2035-36	37063	1243	3261	2031	1372	2519	1	**47490**	**70260**
2036-37	39317	1272	3427	2073	1422	2630	1	**50142**	**73831**
2037-38	41310	1299	3593	2111	1468	2733	1	**52515**	**77078**

Table 3-27 : Total Traffic @ Toll Plaza 2- Km 228.000 (Most Likely)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	9927	607	1269	1295	821	1667	1	**15587**	**28499**
2025-26	10711	626	1340	1330	861	1764	1	**16633**	**30186**
2026-27	11556	645	1415	1366	903	1867	1	**17753**	**31982**
2027-28	12372	662	1491	1398	940	1959	1	**18823**	**33672**
2028-29	13246	679	1571	1430	978	2056	1	**19961**	**35458**
2029-30	14182	697	1655	1463	1018	2158	1	**21174**	**37351**
2030-31	15184	715	1744	1497	1060	2265	1	**22466**	**39357**
2031-32	16257	734	1837	1532	1103	2377	1	**23841**	**41475**
2032-33	17246	751	1931	1564	1143	2482	1	**25118**	**43460**
2033-34	18295	769	2029	1596	1185	2592	1	**26467**	**45547**
2034-35	19408	787	2132	1629	1228	2706	1	**27891**	**47737**
2035-36	20588	806	2241	1663	1273	2826	1	**29398**	**50050**
2036-37	21840	825	2355	1697	1319	2951	1	**30988**	**52475**
2037-38	22947	842	2469	1728	1362	3066	1	**32415**	**54689**

Table 3-28 : Total Traffic @ Toll Plaza 1- Km 172.000 (Pessimistic)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	17871	935	1847	1584	885	1643	1	**24766**	**39620**
2025-26	19237	962	1946	1623	925	1568	1	**26262**	**41223**
2026-27	20707	990	2051	1663	967	1656	1	**28035**	**43692**
2027-28	22118	1014	2156	1697	1004	1734	1	**29724**	**46018**
2028-29	23625	1038	2266	1732	1043	1815	1	**31520**	**48477**
2029-30	25235	1063	2382	1768	1083	1900	1	**33432**	**51083**
2030-31	26954	1088	2504	1804	1125	1989	1	**35465**	**53840**
2031-32	28791	1114	2632	1841	1168	2082	1	**37629**	**56759**
2032-33	30470	1137	2759	1874	1208	2169	1	**39618**	**59464**
2033-34	32247	1161	2893	1908	1249	2259	1	**41718**	**62309**
2034-35	34128	1185	3033	1943	1291	2353	1	**43934**	**65300**
2035-36	36118	1210	3180	1978	1335	2451	1	**46273**	**68446**
2036-37	38224	1235	3334	2014	1380	2553	1	**48741**	**71754**
2037-38	40066	1258	3487	2046	1421	2646	1	**50925**	**74727**

Table 3-29 : Total Traffic @ Toll Plaza 2- Km 228.000 (Pessimistic)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	9927	607	1269	1295	821	1667	1	**15587**	**28499**
2025-26	10686	624	1337	1327	859	1760	1	**16594**	**30116**
2026-27	11503	642	1409	1360	898	1858	1	**17671**	**31833**
2027-28	12287	657	1481	1388	932	1945	1	**18691**	**33433**
2028-29	13124	673	1557	1417	968	2036	1	**19776**	**35126**
2029-30	14018	689	1636	1446	1005	2132	1	**20927**	**36911**
2030-31	14973	705	1720	1476	1044	2232	1	**22151**	**38799**
2031-32	15993	722	1808	1506	1084	2337	1	**23451**	**40791**
2032-33	16926	737	1896	1533	1121	2434	1	**24648**	**42639**
2033-34	17913	753	1988	1561	1159	2535	1	**25910**	**44579**
2034-35	18958	769	2084	1589	1198	2641	1	**27240**	**46614**
2035-36	20064	785	2185	1618	1239	2751	1	**28643**	**48752**
2036-37	21234	802	2291	1647	1281	2866	1	**30122**	**50996**
2037-38	22257	817	2396	1673	1319	2971	1	**31434**	**53021**

Table 3-30 : Total Traffic @ Toll Plaza 1- Km 172.000 (Optimistic)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	17871	935	1847	1584	885	1643	1	**24766**	**39620**
2025-26	19326	966	1956	1631	930	1576	1	**26386**	**41423**
2026-27	20900	998	2071	1680	977	1672	1	**28299**	**44110**
2027-28	22429	1027	2187	1723	1019	1759	1	**30145**	**46677**
2028-29	24069	1057	2310	1767	1063	1850	1	**32117**	**49404**
2029-30	25829	1088	2439	1812	1109	1946	1	**34224**	**52303**
2030-31	27718	1119	2576	1858	1157	2047	1	**36476**	**55386**
2031-32	29745	1151	2720	1906	1207	2153	1	**38883**	**58664**
2032-33	31628	1181	2865	1950	1254	2253	1	**41132**	**61750**
2033-34	33631	1212	3018	1995	1303	2358	1	**43518**	**65013**
2034-35	35760	1244	3179	2041	1354	2468	1	**46047**	**68459**
2035-36	38024	1276	3349	2088	1407	2583	1	**48728**	**72098**
2036-37	40432	1309	3528	2136	1462	2704	1	**51572**	**75946**
2037-38	42583	1340	3707	2180	1513	2816	1	**54140**	**79470**

Table 3-31 : Total Traffic @ Toll Plaza 2- Km 228.000 (Optimistic)

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2024-25	9927	607	1269	1295	821	1667	1	**15587**	**28499**
2025-26	10735	627	1344	1334	863	1768	1	**16672**	**30259**
2026-27	11609	648	1423	1374	907	1876	1	**17838**	**32140**
2027-28	12458	667	1503	1409	946	1973	1	**18957**	**33916**
2028-29	13369	686	1587	1445	987	2076	1	**20151**	**35802**
2029-30	14347	706	1676	1482	1030	2184	1	**21426**	**37803**
2030-31	15396	726	1770	1520	1075	2297	1	**22785**	**39921**
2031-32	16522	747	1869	1559	1122	2416	1	**24236**	**42169**
2032-33	17568	766	1969	1595	1166	2529	1	**25594**	**44292**
2033-34	18680	786	2074	1632	1211	2647	1	**27031**	**46526**
2034-35	19863	806	2185	1670	1258	2771	1	**28554**	**48885**

Year	Car	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles	Total Traffic	PCU (Including Exempted)
2035-36	21121	827	2302	1709	1307	2900	1	**30167**	**51370**
2036-37	22458	849	2425	1748	1358	3035	1	**31874**	**53987**
2037-38	23653	869	2548	1784	1405	3161	1	**33421**	**56397**

3.8 Modification in Concession Period

Concession Agreement (CA) provides for modification in concession period if there is shortfall or excess of traffic on project road in connection with target traffic.

Target date and traffic for project road is given as under

- Target Date: 1st October 2020
- Target Traffic: 30700 PCU.

As per provisions of CA

"Subject to the provisions of Clause 29.1.2, in the event Actual Average Traffic shall have fallen short of the Target Traffic, then for every 1% (one per cent) shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5% (one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. For the avoidance of doubt, and by way of illustration, it is agreed that in the event of a shortfall of 10.6% (ten point six per cent) in Target Traffic, the Concession Period shall be increased by 15% (fifteen per cent) thereof.
Subject to the provisions of Clause 29.1.2, in the event Actual Average Traffic shall have exceeded the Target Traffic, then for every 1% (one per cent) excess as compared to the Target Traffic, the Concession Period shall be reduced by 0.75% (zero point seven five per cent) thereof; provided that such reduction in Concession Period shall not in any case exceed 10% (ten per cent) thereof. For the avoidance of doubt and by way of illustration, it is agreed that in the event of an excess of 8.7% (eight point seven per cent) in Target Traffic, the Concession Period shall be reduced by 6% (six per cent) thereof."

CA has the following provisions for traffic sampling.

As per Article-29, the Concessionaire acknowledge that the traffic as on October 1, 2020 (the Target Date) is estimated to be 30700 PCUs per day (Target Traffic) and hereby agree that for determining the modifications to the Concession Period under this Article 29, the actual traffic on the Target Date shall be derived by computing the average of the traffic as determined by traffic sampling to be undertaken, in accordance with Clause 22.3, on the date that falls one year prior to the Target Date, on the Target Date and on the first anniversary of the Target Date (the "Actual Average Traffic"). For the avoidance of doubt, it is agreed that traffic sampling shall be undertaken for a continuous period of 7 (seven) days during anytime within 15 (fifteen) days prior to the date specified herein and the average thereof shall be deemed to be the actual traffic. It is further agreed that if the Project Highway shall have two or more Toll Plazas, the average traffic thereof shall be computed for determining the Actual Average Traffic

Independent Engineer had worked out modification in concession period and recommended that concession period shall be reduced by 7.41% as actual traffic on project road has exceeded the target traffic.

Concessionaires have submitted their objections to the above calculations based on two main observations.

- PCU factor of 3 Axle Truck is considered by Independent Engineer as 4.5 whereas as per IRC 64: 1990 PCU factor is 3.0.
- Independent Engineer considered the average of last two weeks of September and first two weeks of October for arriving the actual traffic on target date which is not as per CA.

Both the above observations of Concessionaire are in confirmation with the provision of CA.

Further concessionaire has argued that in period of September 2020 traffic is very much on higher side and September 2021 traffic is less as compared to September 2020 traffic as the September 2020 is the post Covid recovery period and the traffic substantially high on the road and cannot be treated as normal. The trade-off between railways and road in both freight and passenger movement has changed drastically during the period and the drop in rail carriage has resulted in a surge on roads same can be observed among the Car, Bus and 3-axle and MAV traffic numbers.

Concessionaire submitted that traffic during September 2020 should be ignored for working out the average traffic for modification concession period. Thus, the average actual traffic and resultant modification in concession period works out as under.

Ignoring September 2020 Traffic – 29755 PCU (Target Traffic 30700 PCU) - Change in concession period = **4.6 % increase in concession Period**

Taking into account September 2020 Traffic – 31063 PCU (Target Traffic 30700 PCU) - Change in concession period = **Nil, as variation of actual traffic from target traffic is within 2.5%.**

It is expected that concession period will get an extension of 4.6% as concessionaire's submissions are in line with CA. But if COVID factor is ignored by authority then the concession period shall remain same and there is no modification in concession period due to variation in actual traffic.

CHAPTER 4
FORECAST OF TOLL REVENUE

4.1 General

This chapter presents the estimates of traffic forecast, tolling categories, tolling rate calculations and toll revenue of the project.

4.2 Toll Rate Guidelines

As per the Toll Notification (Schedule R) the following acts and rules have been considered:

- National Highways Fee (Determination of Rates and Collection) Rules, 2008
- National Highways Fee (Determination of Rates and Collection) Amendments as applicable

4.3 Discounts

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

- Local discount for noncommercial vehicle owner with in 20 km of toll plaza applicable
- Discount for commercial vehicles registered under same district as of Toll Plaza applicable.

4.4 Travel Passes

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

1. Monthly Pass: For frequent user's monthly pass would have not more than 50 trips per month at 2/3rd rate. The discount factor works out to about 67%.
2. Daily Pass (for Return Trip): A 25% discount will be offered on the return trip.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.

4.5 Estimation of Toll Rates

As per the recent MORTH notification dated January 12, 2011, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules, 2008.

Table 4-1 : Base Toll Rates 2007 - 08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Bus or Truck (2 Axle)	2.2
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4-6 axles) including Truck-3 Axle	3.45
Oversized Vehicle (seven or more axles)	4.2

Factors of inflation / growth have been incorporated as per Schedule R. WPI are available up to the year 2023-24.

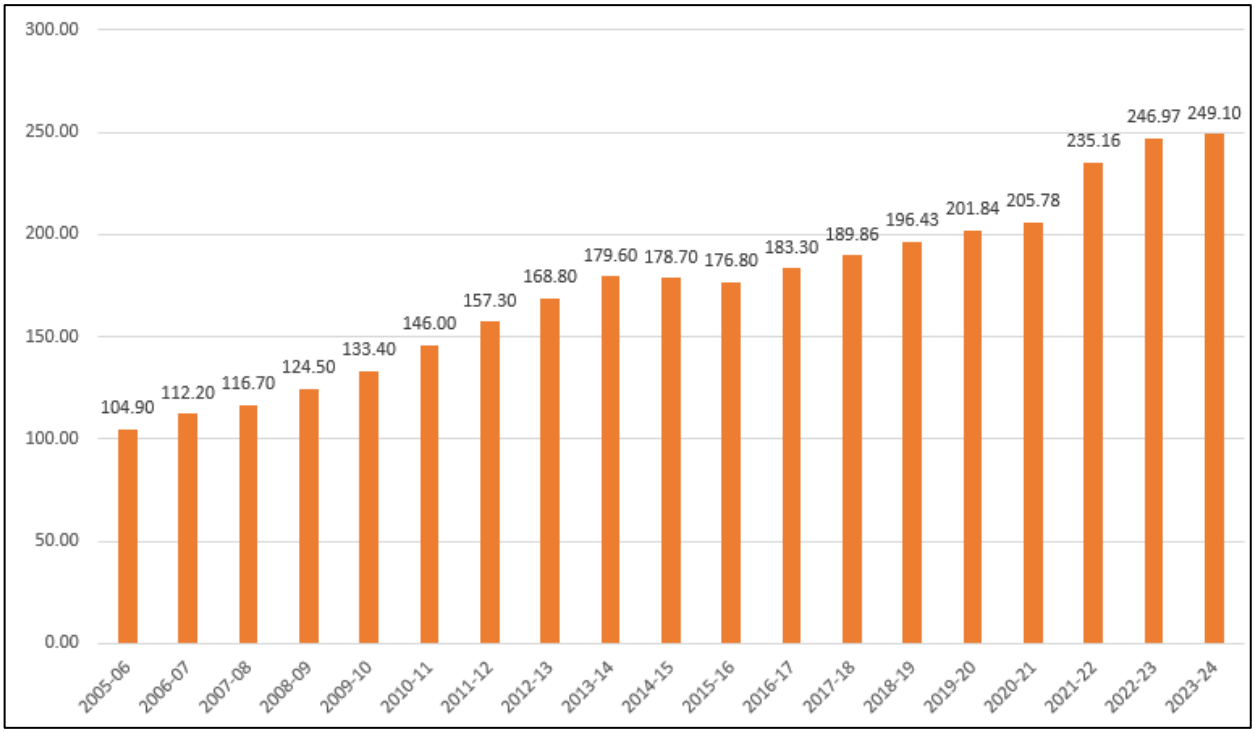

Figure 4-1 : Historical Rate of WPI Inflation in India

The historical WPI data and its respective growth from Year 2018 to up to March-2023 is summarized below.

Table 4-2 : Historical WPI value and Growth Sceneries

WPI Historical													
Month/ Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Average**
2018	116	116.1	116.3	117.3	118.3	119.1	119.9	120.1	120.9	122	121.6	119.7	118.94
2019	119.2	119.5	119.9	121.1	121.6	121.5	121.3	121.5	121.3	122	122.3	123	121.18
2020	123.4	122.2	120.4	119.2	117.5	119.3	121	122	122.9	123.6	125.1	125.4	121.83
2021	126.5	128.1	129.9	132	132.9	133.7	135	136.2	137.4	140.7	143.7	143.3	134.95
2022	143.8	145.3	148.9	152.3	155	155.4	154	153.2	151.9	152.9	152.5	150.5	151.31
2023	150.7	150.9	151	151.1	149.4	148.9	152.1	152.5	151.8	152.5	153.1	151.8	151.32
Growth Inflation													
Month/ Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Average**
2019	2.76%	2.93%	3.10%	3.24%	2.79%	2.02%	1.17%	1.17%	0.33%	0.00%	0.58%	2.76%	1.90%
2020	3.52%	2.26%	0.42%	-1.57%	-3.37%	-1.81%	-0.25%	0.41%	1.32%	1.31%	2.29%	1.95%	0.54%
2021	2.51%	4.83%	7.89%	10.74%	13.11%	12.07%	11.57%	11.64%	11.80%	13.83%	14.87%	14.27%	10.76%
2022	13.68%	13.43%	14.63%	15.38%	16.63%	16.23%	14.07%	12.48%	10.55%	8.67%	6.12%	5.02%	12.24%
2023	4.80%	3.85%	1.41%	-0.79%	-3.61%	-4.18%	-1.23%	-0.46%	-0.07%	-0.26%	0.39%	0.86%	0.06%
Average												**4.97%**	**5.10%**

In current year the inflation in Indian economy has eased out abnormally due to various factors. As per experts, this is expected to be a short phase trend, and inflation is likely to pick up again in future. It can be observed that there has been huge variation in inflation in a shorter period, but overall, historically, WPI has grown by about 5%. Hence there is a high possibility that WPI inflation next year would increase to a high figure or so to make up for this year. Hence projected WPI inflation of 3.5% in Dec.2024, 6.5% in Dec.2025 and 6.5% in Dec.2026 considered to keep about 5.75% average inflation over this period. For further future years (2028-29 onwards), as expected, normal 5% inflation in WPI is considered.

In the state of Uttar Pradesh, the last date of polling is 2nd June 2024. Revision of rates as per toll revision policy is adopted after 2nd June 2024 only.

Thus, worked out rates for various categories of vehicle and discounts are given as Under.

Table 4-3 : Year wise Toll Rates (Rs. Rupees)- TP-1 Km 172.00 - Single Journey

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	150	230	465	465	715	715	915
2024-25	150	235	480	480	730	730	940
2025-26	160	245	495	495	760	760	975
2026-27	170	260	525	525	805	805	1030
2027-28	180	275	560	560	850	850	1095
2028-29	190	295	590	590	905	905	1160
2029-30	200	310	625	625	950	950	1220
2030-31	210	325	655	655	1000	1000	1285
2031-32	220	340	690	690	1050	1050	1350
2032-33	230	360	725	725	1105	1105	1420
2033-34	245	375	765	765	1165	1165	1495

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2034-35	255	395	805	805	1225	1225	1575
2035-36	270	420	845	845	1290	1290	1660
2036-37	280	435	885	885	1350	1350	1735
2037-38	295	460	925	925	1410	1410	1815

Table 4-4 : Year wise Toll Rates (Rs. Rupees)- TP-2 Km228.00 - Single Journey

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	155	240	480	480	725	725	945
2024-25	160	245	490	490	745	745	970
2025-26	165	255	510	510	775	775	1010
2026-27	175	270	540	540	820	820	1070
2027-28	185	285	575	575	870	870	1135
2028-29	195	300	610	610	925	925	1205
2029-30	205	320	640	640	970	970	1265
2030-31	220	335	675	675	1025	1025	1330
2031-32	230	350	710	710	1075	1075	1400
2032-33	240	370	745	745	1130	1130	1475
2033-34	255	390	785	785	1190	1190	1550
2034-35	265	410	825	825	1255	1255	1635
2035-36	280	430	870	870	1320	1320	1720
2036-37	295	450	910	910	1380	1380	1800
2037-38	305	470	950	950	1445	1445	1880

Table 4-5 : Year wise Toll Rates (Rs. Rupees)- TP-1 Km 172.000- Return Journey

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	225	345	700	700	1070	1070	1375
2024-25	230	355	720	720	1100	1100	1410
2025-26	240	370	745	745	1135	1135	1460
2026-27	250	390	790	790	1205	1205	1545
2027-28	265	415	840	840	1275	1275	1640
2028-29	285	440	890	890	1355	1355	1740
2029-30	300	460	935	935	1425	1425	1830
2030-31	315	485	985	985	1500	1500	1925
2031-32	330	510	1035	1035	1575	1575	2025
2032-33	345	540	1090	1090	1660	1660	2130
2033-34	365	565	1145	1145	1745	1745	2245
2034-35	385	595	1205	1205	1840	1840	2360
2035-36	405	630	1270	1270	1935	1935	2490
2036-37	425	655	1330	1330	2025	2025	2600
2037-38	445	685	1390	1390	2115	2115	2720

Table 4-6 : Year wise Toll Rates (Rs. Rupees)- TP-2 Km 228.000 - Return Journey

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	230	355	720	720	1090	1090	1420
2024-25	240	365	735	735	1120	1120	1455
2025-26	250	380	765	765	1165	1165	1515
2026-27	265	405	815	815	1235	1235	1605
2027-28	280	430	860	860	1305	1305	1700
2028-29	295	455	915	915	1385	1385	1805
2029-30	310	475	960	960	1460	1460	1900
2030-31	325	500	1010	1010	1535	1535	1995
2031-32	345	530	1065	1065	1615	1615	2100
2032-33	360	555	1120	1120	1700	1700	2210
2033-34	380	585	1180	1180	1785	1785	2325
2034-35	400	615	1240	1240	1880	1880	2450
2035-36	420	650	1305	1305	1980	1980	2580
2036-37	440	675	1365	1365	2070	2070	2695
2037-38	460	710	1430	1430	2165	2165	2820

Table 4-7 : Year wise Toll Rates (Rs. Rupees) – TP-1 Km 172.000 - Monthly Pass

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	4950	7675	15575	15575	23785	23785	30565
2024-25	5075	7870	15975	15975	24390	24390	31350
2025-26	5285	8195	16565	16565	25250	25250	32450
2026-27	5600	8680	17555	17555	26760	26760	34390
2027-28	5935	9205	18615	18615	28375	28375	36465
2028-29	6295	9765	19750	19750	30110	30110	38690
2029-30	6620	10270	20765	20765	31665	31665	40690
2030-31	6965	10800	21845	21845	33305	33305	42800
2031-32	7325	11365	22980	22980	35040	35040	45025
2032-33	7710	11955	24180	24180	36870	36870	47380
2033-34	8115	12580	25450	25450	38810	38810	49870
2034-35	8540	13245	26795	26795	40855	40855	52500
2035-36	8990	13945	28210	28210	43020	43020	55280
2036-37	9405	14585	29505	29505	44990	44990	57810
2037-38	9835	15250	30855	30855	47050	47050	60465

Table 4-8 : Year wise Toll Rates (Rs. Rupees) – TP-2 Km 228.000 - Monthly Pass

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2024-25*	5155	7920	15960	15960	24215	24215	31525
2024-25	5290	8120	16370	16370	24835	24835	32330
2025-26	5505	8455	17045	17045	25860	25860	33665
2026-27	5835	8960	18060	18060	27400	27400	35675

Year	CAR	Minibus /LCV	Bus	Truck-2 Axle	Truck-3 Axle	Multi axle (4 to 6 Axle)	Oversized Vehicles
2027-28	6185	9500	19150	19150	29055	29055	37825
2028-29	6560	10080	20315	20315	30825	30825	40130
2029-30	6900	10600	21360	21360	32410	32410	42195
2030-31	7260	11145	22470	22470	34090	34090	44380
2031-32	7635	11725	23635	23635	35860	35860	46685
2032-33	8035	12340	24870	24870	37735	37735	49125
2033-34	8455	12985	26175	26175	39710	39710	51700
2034-35	8900	13670	27550	27550	41800	41800	54420
2035-36	9370	14390	29010	29010	44010	44010	57300
2036-37	9800	15050	30335	30335	46025	46025	59920
2037-38	10250	15740	31725	31725	48130	48130	62660

Table 4-9 : Year wise Toll Rates (Rs. Rupees) -Both Toll plazas - Local Monthly Pass

Year	CAR
2024-25*	330
2024-25	340
2025-26	350
2026-27	375
2027-28	395
2028-29	420
2029-30	440
2030-31	465
2031-32	490
2032-33	515
2033-34	540
2034-35	570
2035-36	600
2036-37	625
2037-38	655

4.6 Toll Revenue at all toll plazas

Toll revenue at all toll plazas is worked out on the basis of the above rates and traffic projection for three scenarios, i.e. Most Likely, Pessimistic and Optimistic case is given in tables below.

Table 4-10 : Toll Revenue- Most Likely Scenario (Rs. Crores)

Year	TP-1	TP2	Total
2024-25	194.17	146.95	**341.13**
2025-26	214.81	162.12	**376.93**
2026-27	236.17	176.61	**412.78**
2027-28	264.30	196.93	**461.23**
2028-29	294.88	218.68	**513.56**
2029-30	326.90	241.30	**568.20**
2030-31	362.08	267.82	**629.89**

Year	TP-1	TP2	Total
2031-32	401.61	296.82	**698.43**
2032-33	440.64	324.58	**765.22**
2033-34	487.99	358.01	**845.99**
2034-35	537.01	393.44	**930.45**
2035-36	595.27	434.51	**1029.78**
2036-37	650.32	474.63	**1124.95**
2037-38	710.04	515.67	**1225.70**

Table 4-11 : Toll Revenue - Pessimistic Scenario (Rs. Crores)

Year	TP-1	TP2	Total
2024-25	194.17	146.95	**341.13**
2025-26	214.36	161.71	**376.07**
2026-27	235.06	175.71	**410.78**
2027-28	262.44	195.50	**457.94**
2028-29	292.13	216.50	**508.63**
2029-30	323.07	238.28	**561.35**
2030-31	356.95	263.82	**620.77**
2031-32	394.97	291.59	**686.56**
2032-33	432.24	318.07	**750.31**
2033-34	477.60	349.94	**827.54**
2034-35	524.38	383.60	**907.98**
2035-36	579.80	422.59	**1002.39**
2036-37	631.83	460.55	**1092.38**
2037-38	688.29	499.12	**1187.41**

Table 4-12 : Toll Revenue - Optimistic Scenario (Rs. Crores)

Year	TP-1	TP2	Total
2024-25	194.17	146.95	**341.13**
2025-26	215.38	162.46	**377.84**
2026-27	237.40	177.38	**414.79**
2027-28	266.26	198.34	**464.60**
2028-29	297.82	220.77	**518.59**
2029-30	330.96	244.12	**575.08**
2030-31	367.46	271.62	**639.09**
2031-32	408.61	301.69	**710.30**
2032-33	449.37	330.72	**780.09**
2033-34	498.86	365.57	**864.43**
2034-35	550.35	402.68	**953.03**
2035-36	611.45	445.67	**1057.12**
2036-37	669.56	488.02	**1157.58**
2037-38	732.78	531.46	**1264.25**

CHAPTER 5
CONCLUSION & RECOMMENDATION

5.1 General

Project road from Moradabad to Bareilly is an important link for connecting Western Uttar Pradesh, NCR and other northern states to Eastern Uttar Pradesh and Bihar, Bengal. Link also connects Eastern part of Uttarakhand (Rudrapur, Haldwani, Nanital, Bilaspur) with Delhi NCR and Western Uttar Pradesh.

Conclusion & Recommendations

Project stretch has committed traffic with potential of growth. Both toll plazas have shown considerable growth in traffic volume post COVID-19 which is likely to continue in future as well.

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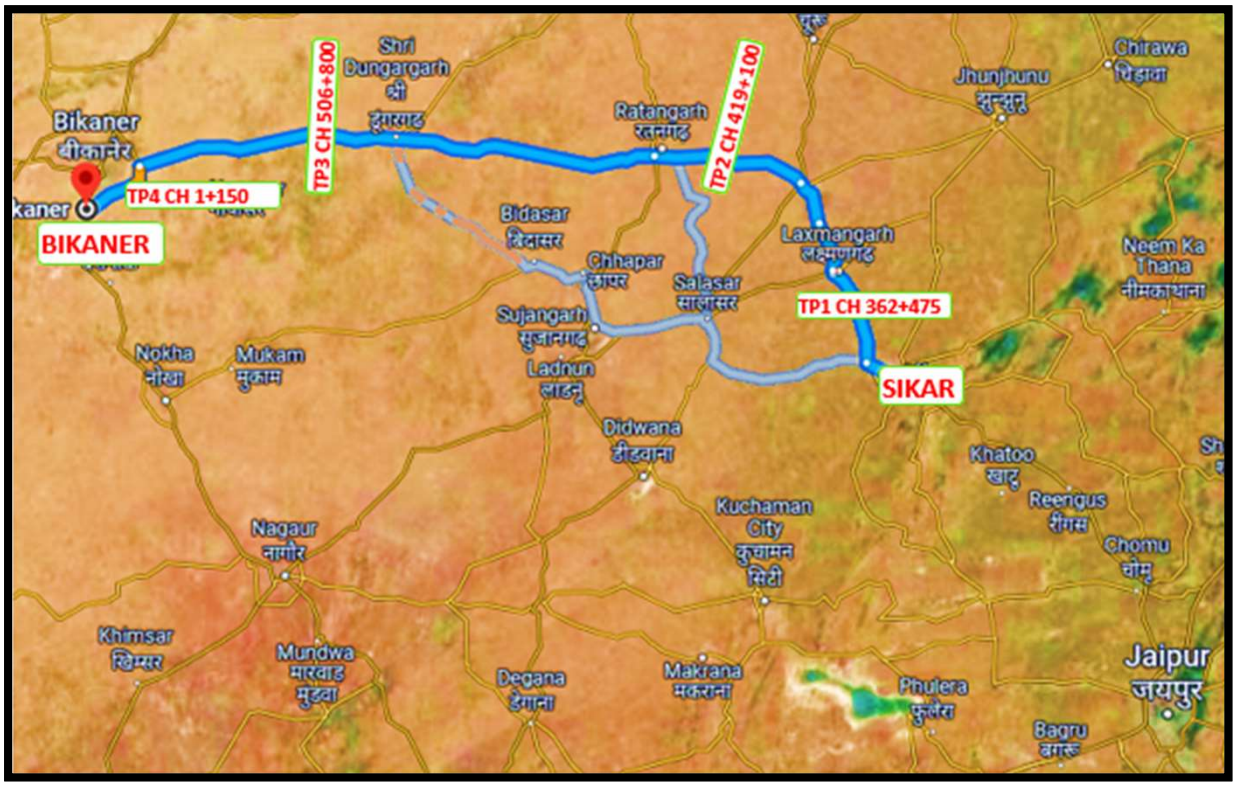
Consultancy Services For Preparation of Traffic Report for Independent assessment of Traffic Forecasting and Toll Revenue Estimations
Sikar Bikaner Highways Limited (SBHL)

Final Traffic Report



OCTOBER 2024

CLIENT

SBHL

Sikar Bikaner Highway Limited

CONSULTANT

Segmental Consulting & Infrastructure Advisory Pvt. Ltd.

Updation of Report
for
Independent Assessment of Traffic Forecasting and Toll Revenue Estimations
for
Sikar Bikaner Highways Limited (SBHL)

October-2024

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1 INTRODUCTION

1.1 Background

Sikar Bikaner Highway Limited (SBHL) has appointed Segmental Infrastructure & Management Services (SIMS) as the Traffic Consultant to assess the traffic forecasting and toll revenue estimation for the Sikar Bikaner Highway, which is a section of the National Highway 11 from Km. 340.188 to Km. 557.775 via Sikar Bypass and Bikaner Bypass (from km. 553.869 of NH-11 to km. 267.325 of NH-89 on the Sikar-Bikaner section of National Highway 11).

The project road was improved to two lane with paved shoulders (has four lane configuration for 17.78 km near Sikar) under the design-build-finance-operate-transfer basis. A concession agreement dated June 29, 2012 was entered into between Public Works Dept., Govt. of Rajasthan (on behalf of Ministry of Road Transport & Highways, Govt. of India) and SBHL. The project commenced tolling on October 10, 2015. The concession period for this project is 25 years commencing from February 2013 (till 2038-39). As per the letter submitted by SBHL to 'The Independent Engineer' of the project (vide letter no. SBHL/PRJ/TEC/ICO-581/3319, dated June 21, 2023, regarding Effect of Variations in Traffic Growth.), SBHL has requested for extension of concession period for 20% of 25 years, ie; for 5 years). According to the concession document, the actual average traffic and the impact on concession period must be computed as on April 1, 2024, after considering the traffic prevailing on first anniversary of Target Date (March 31, 2023). The Independent Engineer has verified the actual traffic details in accordance with the clause regarding the Target Traffic and recommended extension for traffic variation for five years upto 30.03.2043 (Independent Engineer letter reference: No. IE/NH-11/SIKAR-BIKANER/130/376 dated 14.09.2024). The recommended extension of concession period is presumed in the study and 2043-44 is adopted as the concession end year.

1.2 Project Road Features

Project road has a length of 237.578 km (as per the provisions of the Concession Agreement) and passes through the three districts of Rajasthan namely Sikar, Churu and Bikaner. It acts as an important connectivity for these districts as well as the north and west Rajasthan with the state capital, Jaipur. It provides better connectivity to Bikaner, a major tourist destination in Rajasthan. The important towns and settlements along the project corridor are Sikar, Laxmangarh, Fatehpur, Ratangarh, Shri Dungargarh and Bikaner. The Project Road is presented in Figure 1.1. Toll plazas are present at four locations (source: Schedule R) as presented below.

- Toll plaza 1, (Km 362.475, Rashidpura TP) in Sikar district
- Toll plaza 2, (Km 419.000, Tidiyasar TP) in Churu district
- Toll plaza 3, (Km 5076.878, Lakhasar TP) in Bikaner district
- Toll plaza 4, (Km 1.148 on Bikaner bypass, Udairamsar TP) in Bikaner district

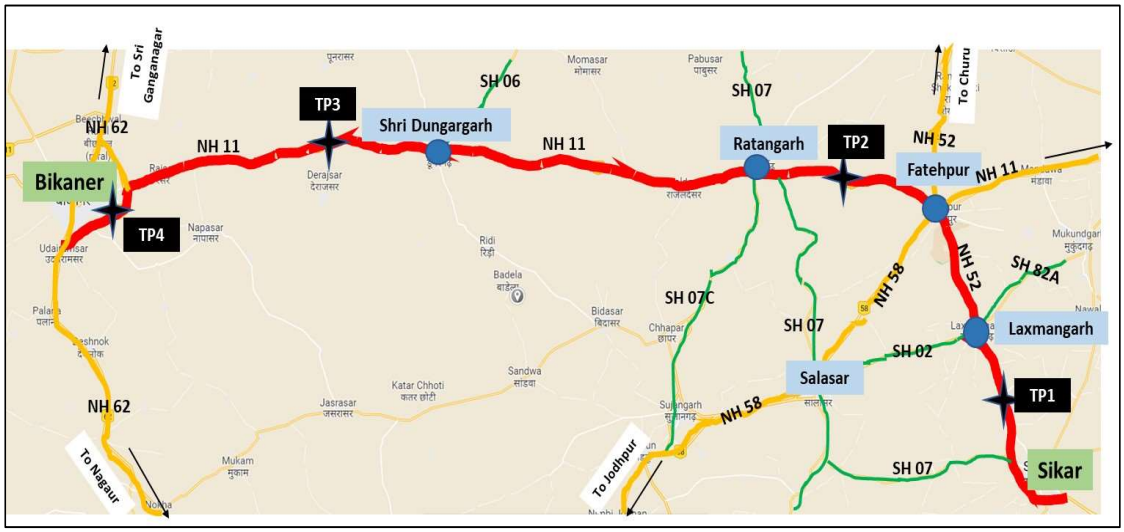


Figure 1-1: Project Road

View of Toll Plazas

Project road consists of three national highways and could be considered as three sections based on the traffic characteristics, such as;

1. Segment 1: Sikar- Fatehpur (NH 52)
2. Segment II: Fatehpur- Bikaner (NH 11)
3. Segment III: Bikaner bypass (NH 62)

The three sections are presented in Figure 1.2 details are presented below.

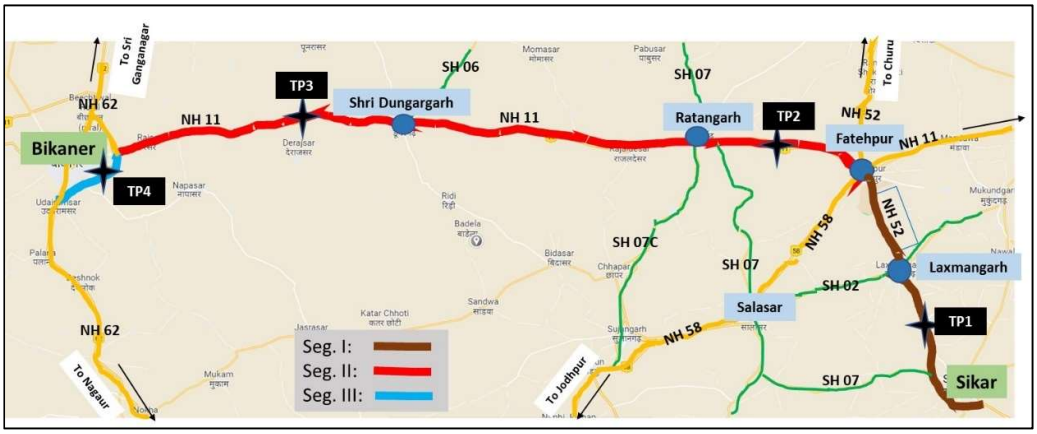
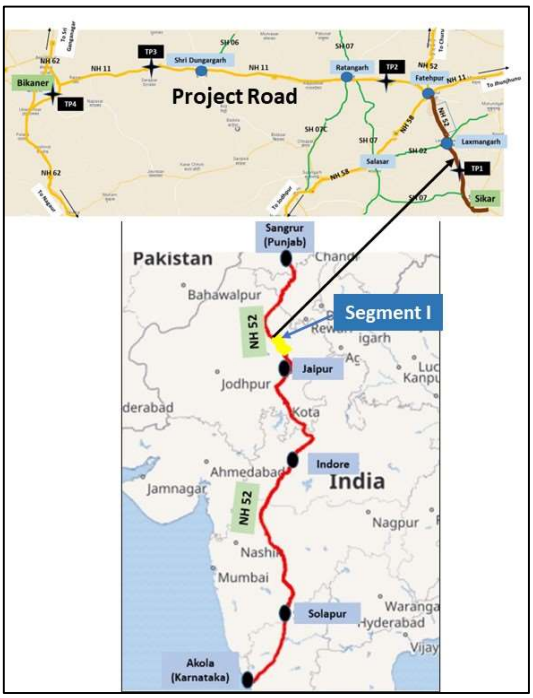


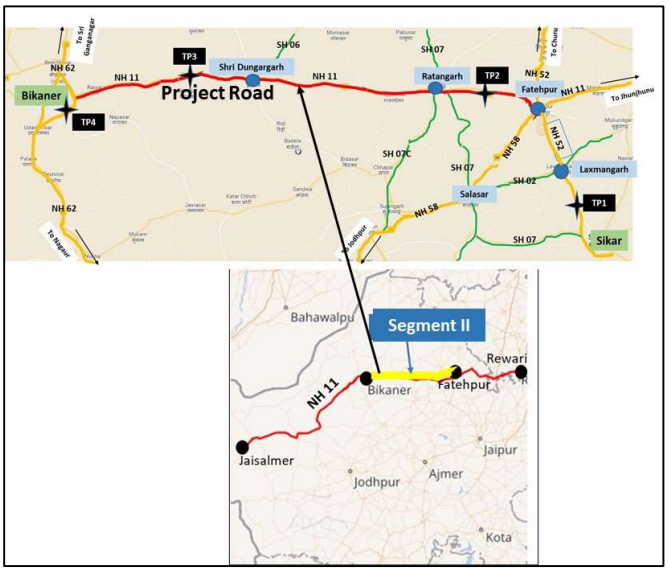
Figure 1-2: Project Road Segments

- **Traffic Segment 1: Sikar- Fatehpur (NH 52)**
  - NH 52: NH 52 runs in N-S direction, from Sangrur in Punjab and passes through Haryana (Narwana, Hisar), Rajasthan (Fatehpur, Jaipur, Tonk, Kota), Madhya Pradesh (Aklera, Biora, Dewas, Indore), Maharashtra (Dhule, Aurangabad, Osmanabad), Solapur, Bijapur, Hubballi to Ankola in Karnataka. Passes through Jaipur (capital of Rajasthan)
  - Toll plaza: TP 1, (Rashidpura TP)
  - Towns on the section: Sikar, Laxmangarh and Fatehpur
  - Other major roads crossing/bifurcating from the section are:
    - NH 58 (connecting Fatehpur and Palanpur in Gujarat) bifurcates at Fatehpur on NH 52
    - NH 11 (linking between Jaisalmer (Rajasthan) and Rewari (Haryana)) crosses NH 52 at Fatehpur
    - SH 82A (road runs from Laxmangarh to Mukundgarh)
    - SH 07 (Sikar- Ratangarh- Sardarshahar, Hanumangarh road)
  - Connectivity: Connecting to various parts of Rajasthan including Jaipur with Haryana/Punjab and Maharashtra/Karnataka, etc.

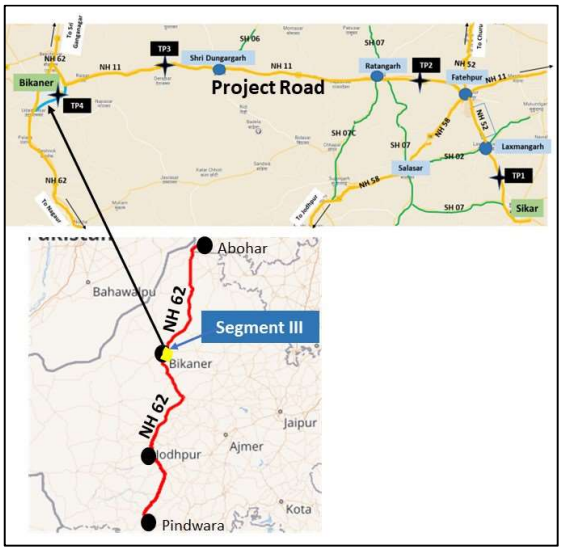


- **Segment II: Fatehpur- Bikaner (NH 11)**

- NH 11: The 848 km long NH runs in E-W direction, passes through Rajasthan (Jaisalmer, Pokran, Bikaner, Ratangarh, Fatehpur, Jhunjhunu) and Haryana (Narnaul, Ateli and Rewari)
- Toll plaza: TP 2 (Tidiyasar TP) & TP 3 (Lakhasar TP)
- Towns on the section: Bikaner, Shri Dungargarh , Ratangarh and Fatehpur
- Other NHs crossing/bifurcating from the section are:
  - NH 58 (connecting Fatehpur and Palanpur in Gujarat) bifurcates at Fatehpur on NH 52
  - NH 11 (linking between Jaisalmer (Rajasthan) and Rewari (Haryana)) crosses NH 52 at Fatehpur
  - SH 07 crosses the road near Ratangarh
- Connectivity: Connecting Rajasthan with Haryana



- **Segment III: Bikaner Bypass (NH 62)**
  - NH 62: NH running in the N-S direction, connecting Abohar in Punjab to Pindwara in Rajasthan, passing through Bikaner and Jodhpur
  - Toll plaza: TP 3 (Bikaner Bypass TP)
  - Town on the section: Bikaner,
  - Other NHs crossing/bifurcating from the section:
    - NH 11 crosses NH 62 at Bikaner
  - Connectivity: Connecting Rajasthan with Punjab and Gujarat.



The project road is mainly used for travelling within Rajasthan. The development of few roads in the vicinity had impacted the traffic, especially the interstate traffic movement through the project road. They include:

Development of New link of NH 58 (NH running between Fatehpur and Palanpur) from Fatehpur to Salasar: NHAI has developed a new link road connecting Fatehpur and Salasar as part of NH 58 development from Rajasthan/Haryana border -Churu- Fatehpur- Salasar section (refer Figure 1.3). The link is with two lane configuration and started operation in 2017 with toll. With this new link and

improvement of Salasar - Nagaur section, NH 52/58 became the prime corridor connecting Punjab/Haryana with Rajasthan/western Gujarat.

- Development of State Highways: Rajasthan Govt. has developed many state highways in the state for the inter urban movements under BOT toll. Few of them are in the neighborhood of the project road. They are:
    - SH 07: The road is from Sikar to Hanumangarh via Salasar, Ratangarh, Sardarshahar and has developed to two lanes recently (refer Figure 1.3). This road is an alternate to the section of project road from Ratangarh to Sikar (bypassing TP1 and TP2).
    - SH06: This SH starts from Sri Dungagarh (NH 11) and ends at Sadalpur on NH 52 near Rajasthan/Haryana border via; Sardarshahar and Taranagar(refer Figure 1.3). It is developed with two lanes with paved shoulders and is a toll road. It runs in the east west direction along the north of the project road and diverted traffic on the project road (TP2).
    - The stretch of newly constructed Amritsar-Jamnagar expressway (between Jakhrawali in Hanumangarh district and Khetlawas in Jalore district) crosses the project road near Norangdasar on NH 11. This section was inaugurated in July 2023 and is partly operational. It is acting as an alternate to TP4 for the traffic plying between north and south of Bikaner.

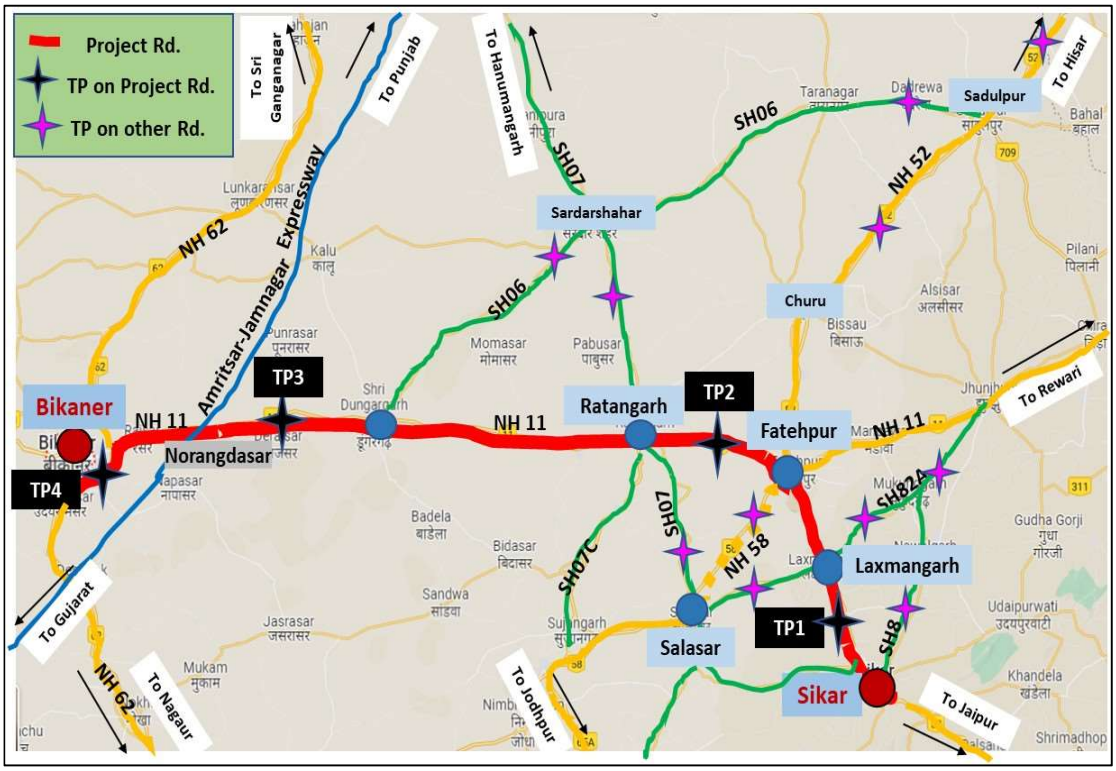


Figure 1-3: Vicinity Road Network

1.3 Objectives and Scope of Services

The prime objective of the present study is to update the traffic and toll revenue forecast based on the actual traffic scenario as of September 2024. The scope of the study is as listed below:

a) Updation of the traffic report submitted by consultant in the month of Apr. 2024
b) Collection of Class wise Traffic data from the TMS System/Toll Records from the operational toll plazas on the project road upto September 2024 to derive the Average Daily Traffic (ADT).
c) Establishing seasonality factors using available past traffic data and/or from using fuel sales data or using the past actual traffic data or any relevant data (if needed)
d) Estimation of Annual Average Daily Traffic (AADT) for financial year 2024-25 from ADT and adopting suitable seasonal factors
e) Updation of projections of traffic and revenue based on the actual traffic and revenue observed as of September 2024.

1.4 Organization of the Report

As mentioned above the present study focuses on updating the traffic report submitted in Apr. 2024 and no fresh traffic surveys are carried out. The details of the traffic surveys (OD surveys) done as part of the initial study is reproduced here. The traffic and revenue projections are made using the traffic growth rates of the previous study. The report is organized in seven chapters.

Chapter 1 Brief background of the project and scope of study

Chapter 2 Socio economic profile of the project area

Chapter 3 Toll traffic data analysis and estimation of tollable AADT (2024-25) based on the traffic data from Apr. to Sept. 2024.

Chapter 4 Traffic OD surveys and data analysis (reproduced from the earlier report)

Chapter 5 Upcoming Road Projects & Impact Assessment

Chapter 6 Traffic growth rate estimation (reproduced from the earlier report) & Traffic Projection

Chapter 7 Updated Toll revenue projection

2 STUDY AREA PROFILE

As mentioned in Chapter 1, the project road passes through the state of Rajasthan. Hence, the socio-economic profile of Rajasthan is discussed in this chapter.

2.1 Socio-Economic Profile

2.1.1 Rajasthan

Rajasthan is situated in the north-western part of the subcontinent and is the largest state by area (3,42,239 sq kms), in India. It is surrounded by Punjab on the north, north-east by Haryana and Uttar Pradesh; Gujarat to the south west and Madhya Pradesh on the south east. Pakistan is bordering the western part.

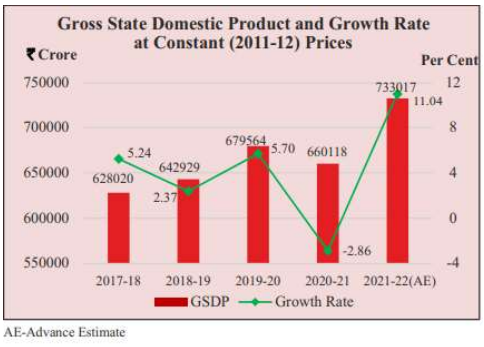
Rajasthan is a natural corridor between the wealthy northern and the prosperous western states, making it an important trade and commerce centre. Jaipur, Jaisalmer, Udaipur, Jodhpur, Ajmer, Bikaner, Alwa and Chittorgarh are some of the important cities and towns in the state. The socio economic profile of the State is summarized in Table 2-1.

Table 2-1: Socio economic profile of Rajasthan

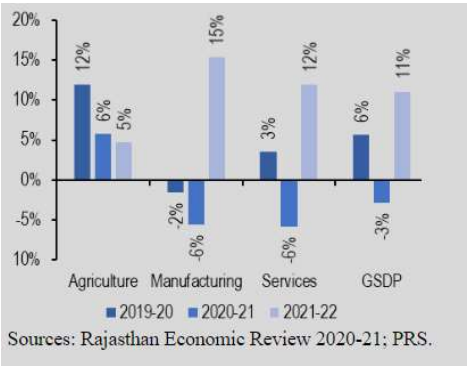
Sl No	Parameters	Values
1	Population	81.0 million (#)
2	Administrative districts	33
3	Population density (persons per sq. km)	200
4	Literacy rate	66.1
5	GSDP for 2021-22 at constant price (2011-12)	733017 crores (*)
6	Per Capita Income for 2021-22 at constant prices (2011-12)	Rs. 81,231/- (*)

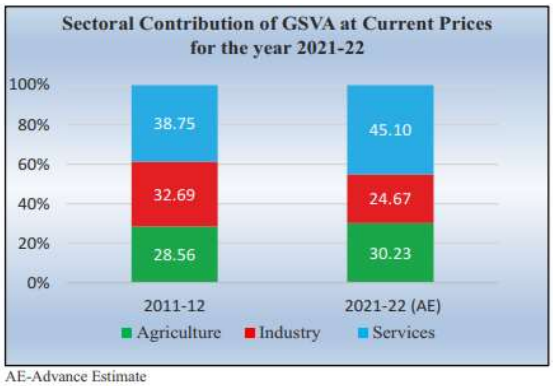
*Source: 2011 census, *Economic Review 2021-2022, #UID*

GSDP, NSDP and Per Capita income growth trend of the state is given below.

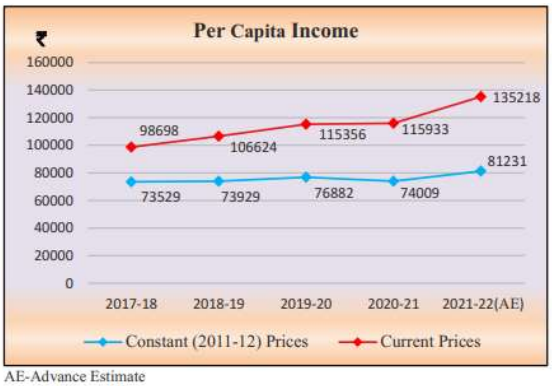


AE-Advance Estimate





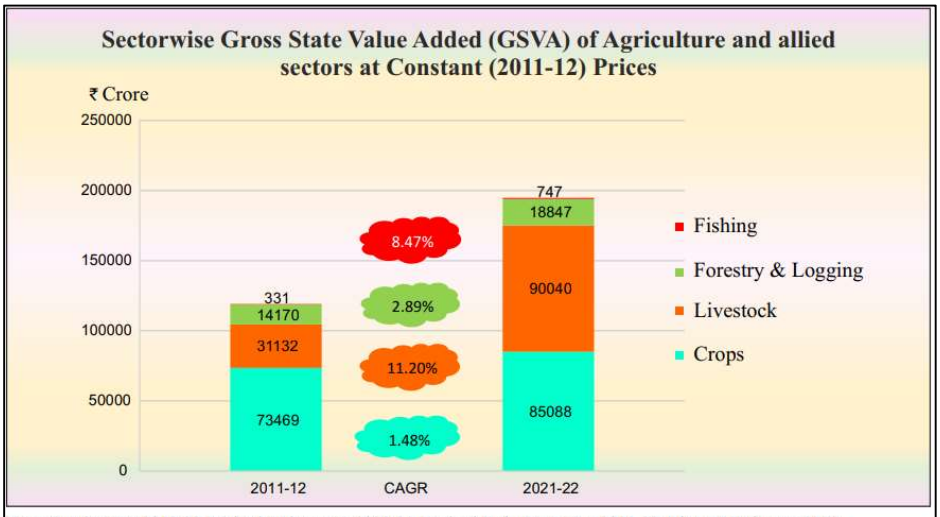
AE-Advance Estimate



AE-Advance Estimate

Agriculture: Agriculture and allied sectors continues to be an important segment of the state's economy and a large contributor to the state's GSDP. There has been a constant increase in the Gross State Value Added (GSVA) of Agriculture and allied sectors at constant as well as current price; it increased from ₹1.37 lakh crore in 2015-16 to ₹1.95 lakh crore in 2021-22, showing a compound annual growth rate 5.04 percent at constant prices. As per preliminary forecast for the year 2021-22, the total food grain production in the State is expected to be 225.20 lakh tonnes, which is a decrease of 16.31 per cent over the production of 269.09 lakh tonnes in the previous year.

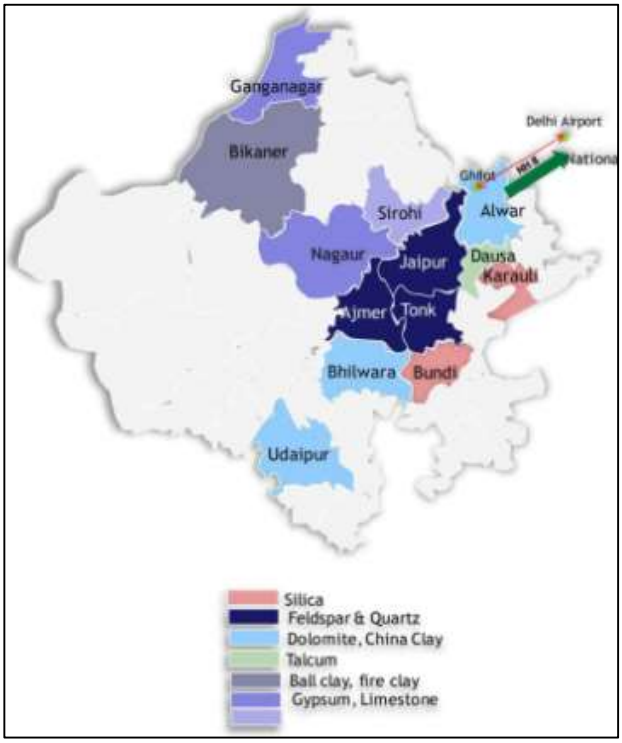
Industrial Sector: The Industry sector comprises of mining & quarrying, manufacturing, electricity, gas, water supply & other utility services and construction. The Gross State



Note: For the Year 2019-20 Revised Estimate-II, 2020-21-Revised Estimate-I, Year 2021-22 Advance Estimates (AE)

Value Added (GSVA) of Industry sector increased from ₹1.36 lakh crore in 2011-12 to ₹1.78 lakh crore in 2021-22, showing an increase of 2.69 per cent (CAGR) at constant (2011-12)

Mineral Resources: Rajasthan is the richest state in the country in terms of availability and variety of minerals. It has deposits of 81 different types of minerals, of which 57 are being currently mined. Rajasthan is the sole producer of lead & zinc ores, selenite and wollastonite. Almost entire production of silver, calcite and gypsum in the country is from Rajasthan. The state is also the leading producer of ball clay, phosphorite, ochre, steatite, felspar and fire clay in the country. It also occupies prominent position in the country in the production of dimensional and decorative stones, such as marble, sandstone, granite etc. The state is leading producer of cement grade & steel grade limestone in India. The mineral deposits of the state is presented here.



Hindustan Zinc Limited (HZL) has four mines in Rajasthan. The mine at Rampura Agucha has zinc ore production capacity of 6.15 million ton per annum (MTPA). Sindesar Khurd mine has reserves and a resource base of 85.0 million tonnes and production capacity of 2.0 MTPA. The Zawar mine has a reserves and resources base of 76.4 MT, with ore production capacity of 1.2 MTPA.

Crude oil production: Rajasthan is the 2nd largest producer of crude oil in India, The state contributes about 22-23 per cent (7 MMTPA) of total crude oil production (32 MMTPA) in India.

Petroleum producing area in the state is spread over of about 1,50,000 sq. km under 4 petroliferous basins.

i. Barmer-Sanchor Basin - (Barmer and Jalore)

ii. Jaisalmer Basin - (Jaisalmer district) Jaisalmer

iii. Bikaner-Nagaur Basin - (Bikaner, Nagaur, Hanumangarh and Churu districts)

iv. Vindhyan Basin - (Kota, Baran, Bundi, Jhalawar, part of Bhilwara and Chittorgarh district)

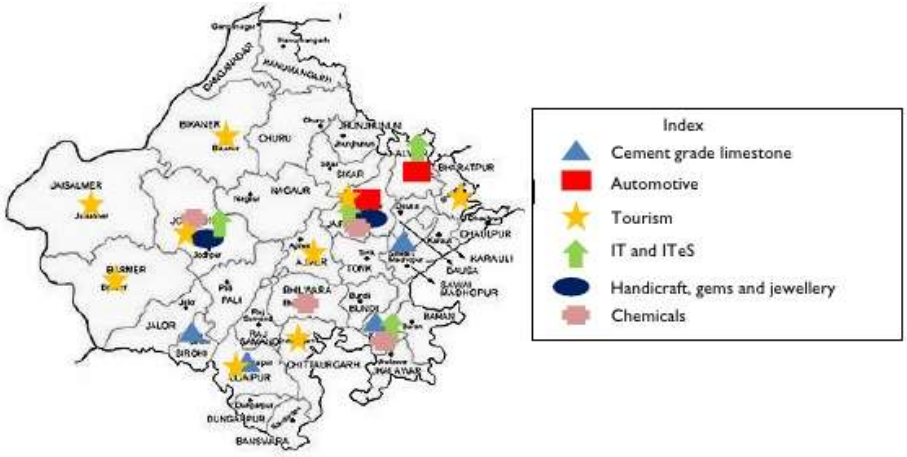
Cement Production: As mentioned earlier, the state is the leading producer of cement grade limestone in India. Production of limestone during 2017-18 reached about 54.00 million tonnes, accounting for more than 20 per cent of India's limestone production. The state has about 26 per cent share in proven limestone reserves in the country. Ultratech Cement is going to set up a 3.5 MTPA greenfield integrated cement plant in Rajasthan with an investment of US$ 287.76 million.

ACC, the largest cement producer in India; its plant is located at Lakheri (Bundi), Rajasthan, has a production capacity of 1.5 MTPA. The company has an integrated cement plant at Rabriyawas (District Pali), with a capacity of 2.8 MTPA. Other key players in cement industry of Rajasthan are, Ambuja Cements Limited, (cement plant at Rabriyawas, Pali District, has a production capacity of 2.8 MTPA), Shree Cement (has plants at Beawar, Ras, Khushkhera, Suratgarh and Jaipur) and UltraTech Cement has a capacity of 53.9 MTPA (has plants at Kotputli and Shambhupura).

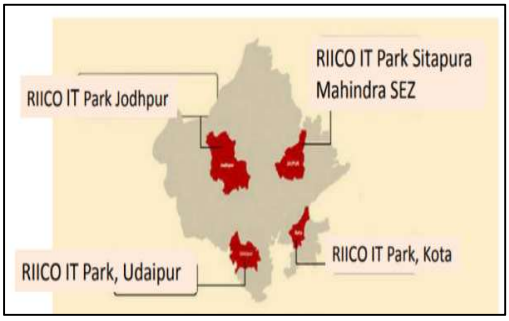
Marble: Rajasthan account for India's 90% of marble, slate and sand stone production and has monopoly in other ceramic minerals.

The industrial infrastructure of the state include; 323 Industrial areas, IT Parks, SEZs, Agro Parks, Stone Parks, Solar Park, Leather Park etc. RIICO has set up 340 industrial areas by acquiring 84,202.57 acres of land.

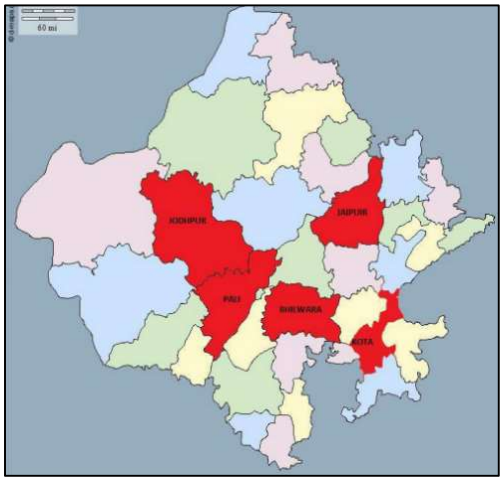
The industrial clusters in Rajasthan developed by RIICO are presented here.



IT sector: Rajasthan is emerging as a leading destination for ITES. Home to several IT players such as GENPACT, Wipro, Infosys and Deutsche Bank including home-grown companies like Data Infosys, E-Connect and Metacube. India's largest ITES SEZ — Mahindra World City- located in Jaipur with a total area of 3,000 acres has 750 acres dedicated for ITES.



Textile Industry: Textile industry in Rajasthan is present across the value chain from spinning to made-ups. The state accommodates more than 2,000 garment manufacturers. Bhilwara is the largest producer of polyester and viscose textiles in the country. Jaipur has a fashion garment hub and Jodhpur, Pali , Sanganer, Kota are known for traditional handloom, fabric and printing. Important textile clusters of Rajasthan is presented here.



Tourism: Rajasthan is one of the most popular tourist destinations in India, for both domestic and international tourists. The state attracts tourists for its historical forts, palaces, art and culture. Every third foreign tourist visiting India travels to Rajasthan as it is part of the Golden Triangle for tourists visiting India. Tourism accounts for approximately 15% of Rajasthan's economy. It is the third largest employer after agriculture and textile. The state's popular tourist attractions that include historic cities (Jaipur, Udaipur), wildlife sanctuaries (Sariska, Ranthambore) and deserts (Jodhpur, Jaisalmer). In 2019, 52.0 million domestic tourists and .61 million foreign tourists visited Rajasthan. Tourism accounts for eight percent of the state's domestic product.

2.1.2 Socio-Economic Profile of Project Influence Districts

The project road passes through three districts of Rajasthan namely Sikar, Churu and Bikaner.

Sikar District: The district is located in the north-eastern part of the state of Rajasthan. It is bounded on the north by Jhunjhunu district, in the north-west by Churu district, in the south-west by Nagaur district and in the south-east by Jaipur district. This district has a population of 26 lakhs, with a population density of 346 persons/sq km (Census 2011).

Sikar was the kingdom of royal Shekhawat rajas and many royal Shekhawat family reside in Sikar. One of the great shekhawat, Mr Bhairon Singh Shekhawat, former Vice President of India also belongs to Sikar. Three most prominent business homes of the country viz. the Bajajs, the Birlas and the

Goenkas also belong to the Sikar district. Most of the Marwari businessmen community residing in Assam, W.Bengal, Surat, Bengaluru and Hyderabad also belong to Sikar.

Huge deposit of pyrite - pyrrhotites which is mined extensively for sulphur extraction exists in the district. Other mineral deposits include Limestone, Quartz and Phelsphar.

The large scale/public sector undertakings in the district include

1. Aksh Technologies Ltd.,Sh.Khatoo Shyam ji, Industrial Complex, Reengus
2. Raj. Spinning &Weaving Mills.Sp-1,Industrial Area Ringus-332404
3. H.S.B.Agro INd.Pvt.Ld.Spl. 67 Shree Khatu Shyamji I.A. Sikar
4. Binani Cement Limited Vill.SIROHI,(Neemkathana) Sikar(Raj.)
5. Agrobiotech Industries Ltd.,SP-156 Ind.Area Ajeetgarh
6. Arsh Dairy Max Ltd. Vill. Paras ram pura sri madhopur

Major item exported from the district is synthetic blended yarn. DM Motors in the district supply motor parts to Mahindra and Mahindra industry.

Sikar is also famous in coaching institutes for Medical, Engineering entrance and competition exams. So, a large number of employments generated due to coaching institutes.

Churu District: Churu, located in the desert area of Rajasthan is considered as the entry gate to the great Thar Desert. This district has a population of 20 lakhs, with a population density of 147 persons/sq km(Census 2011). Churu is not rich in minerals, various mineral deposits are copper salt petrel, sand stone, limestone, gypsum etc. and these deposits are very small in size and not of much economic importance.

There are no large scale industries or public sector undertaking enterprises in Churu. The details of the artisan units in Churu district are given below.

CONCENTRATION OF ARTISAN UNITS

S.No.	Products	Area of concentration
1.	Handloom Cloths (Cotton & Woolen)	Bidasar, Salsar Ratangarh Churu Bardasar Rajaldesar etc.
2.	Embroidery & Hosiery	Sujangarh, Navrangpura, Rajaslesar, Sardarshahar, Ratangarh, Churu etc.
3.	Furniture Wooden &Wooden Handicraft	Sardarashar, Ratangarh, Churu etc.
4.	Leather Items Desi juti	Sujangarh, Biddasar, Rajsldesar, Rajgarh, Sardarashar, Ratangarh, Churu, Taranager etc.
5	Earthen Pots	Rajgarh, Chandgothi, Poolasar, Sujangarh, Sahawa Bynya etc.
6	Luhar (Block smith)	Poolasar, Sardarshahar, Bidasar, Sujangarh, Salasar etc.

Existing clusters of micro and small enterprise include Manufacturing Sector (1) Leather Juti Cluster (2) Wooden & Stone Cluster (3) Plaster of Paris Cluster (4) Papad Bari Cluster (5) Tie & Die Cluster (6) Handloom Cluster

Bikaner District: This district has a population of 23 lakhs, with a population density of 78 persons/sq km(census 2011).

The district is bounded by Ganganagar District to the north, Hanumangarh District to the northeast, Churu District to the east, Nagaur District to the southeast, Jodhpur District to the south, Jaisalmer District to the southwest, and Punjab Province of Pakistan to the northwest. Bikaner is an agricultural district with cereals, pulses and oilseeds being the main agricultural products of the region. The district has few registered small-scale industries. Almost the entire district is devoid of rock exposures except near Kolayat and at a few places in the southern parts of Nokha and Dulmera. The district Bikaner is thus vast sandy racks except Kolayat are covered with sand of Rock locally known as “Magra” are found is parts Kolayat tehsil.

Being almost a desert area and thus negligible forest growth, scarcity of water resources and low production of agricultural crops, the pace of industrial development in the district has remained at the lower side.

2.2 Summary

This chapter presents the socio-economic profile of the project influencing state, ie; Rajasthan, in general and the project influence districts of Sikar, Churu and Bikaner in particular. The state has strong economic growth and is predominantly industrial based. In addition to the location advantages, Rajasthan has abundant mineral resource, blooming tourism opportunities, etc.

The socio-economic profile of the region is highly correlated with the traffic characteristic on the project corridor. While the passenger traffic mainly relates to the population, service, education, health and tourism sectors in the project influence region, the commercial traffic is mainly influenced

by the industries located in the project influence districts, road/rail/port connectivity and the agricultural base of the region, in addition to the linkage the corridor provides to other regions.

3 ANALYSIS OF DATA COLLECTED THROUGH SECONDARY SOURCES

3.1 Toll Traffic Data & Analysis

The following toll traffic data has been provided by the client for the four toll plazas on the project road:

1. Monthly traffic and revenue data from Oct. 2015 (date of Commercial Operations -COD) to Sept. 2024 for the tollable vehicle types. This data is used for estimating the following;
    - The monthly toll traffic data from April to September 2024 has been used to calculate the Average Daily Traffic (ADT) for the year 2024-25 and the corresponding Annual Average Daily Traffic (AADT) has been estimated by applying seasonal factors derived from the monthly toll traffic data fof 2023-24.
    - Monthly summary traffic for the period between Oct. 2015 and Mar. 2024 which helped to understand the past growth trend of traffic on the project road.
2. The class wise traffic data received from SBHL include information on the type of tickets availed by the vehicles (ie; single, return, local pass/concession, monthly pass and exempted) and considered to estimate the toll ticket categorisation of the vehicles.

The toll categories as per the data includes:

- Car/Taxi/LGV (Light Goods Vehicles)
- LCV (Light Commercial Vehicles) /Mini Bus
- Bus
- 2 Axle Truck (2 AT),
- 3 Axle Truck (3 AT),
- MAVs (4 to 6 Axles) and Over Sized Vehicles (OSV)

3.1.1 Average Daily Traffic using Apr. to Sept. 2024 Toll Traffic Data

Using the tollable traffic data from April to September 2024, the ADT has bee derived for the four toll plazas and summary is presented in Table 3.1.

Table 3-1: Average Daily Traffic (2024-25)

Veh. Type	TP1	TP2	TP3	TP4
Car/Taxi/LGV	10,004	3,593	4,423	917
LCV/Mini Bus	261	148	170	73
Bus/2AT	1,047	584	589	185
3AT	211	245	201	170
MAV	498	682	782	648
OSV	1	1	1	1
Total Veh.	**12,022**	**5,253**	**6,166**	**1,994**
Total PCU	**16,415**	**9,376**	**10,572**	**5,012**

Source: SBHL Toll Traffic Data from Apr. to Sept. 2024,

3.1.2 Comparison of ADT: 2024-25 Vs 2023-24

Comparison of ADT of 2024-25 (Apr. to Sept.) is made with that of previous year and is presented in Table 3.2. The overall traffic has increased for all the three toll plazas, except TP4. The reduction in traffic at TP is due to the traffic diversion towards the recently operational section of Amritsar-Jamnagar expressway (inaugurated in July 2023).

Table 3-2: Average Daily Traffic Comparison (2024-25 and 2023-24)

Veh. Type	TP1		TP2		TP3		TP4	
	2024-25	2023-24	2024-25	2023-24	2024-25	2023-24	2024-25	2023-24
Car/Taxi/LGV	10,004	9,387	3,593	3,533	4,423	4,116	917	1,013
LCV/Mini Bus	261	270	148	158	170	166	73	70
Bus/2AT	1,047	1,013	584	599	589	566	185	264
3AT	211	208	245	234	201	236	170	268
MAV	498	497	682	595	782	662	648	955
OSV	1	1	1	-	1	-	1	1
Total Veh.	**12,022**	**11,376**	**5,253**	**5,119**	**6,166**	**5,746**	**1,994**	**2,571**
Total PCU	**16,415**	**15,696**	**9,376**	**8,947**	**10,572**	**9,750**	**5,012**	**7,016**
Annual variation (Veh.)	**+6%**		**+3%**		**+7%**		**-22%**	

3.1.3 Estimation of Seasonal factors using Toll Traffic Data

The seasonal factors calculated using the monthly toll traffic data for the four TPs. Since the ADT for 2024-25 is derived for the period from Apr. to Sept., the seasonal factors for the same period have been estimated. The factors obtained from the toll data of 2023-24 and 2022-23 are presented in Table 3.3.

Table 3-3: Seasonal Factors (for the Period of Apr. to Sept.) Derived from Toll Traffic Data

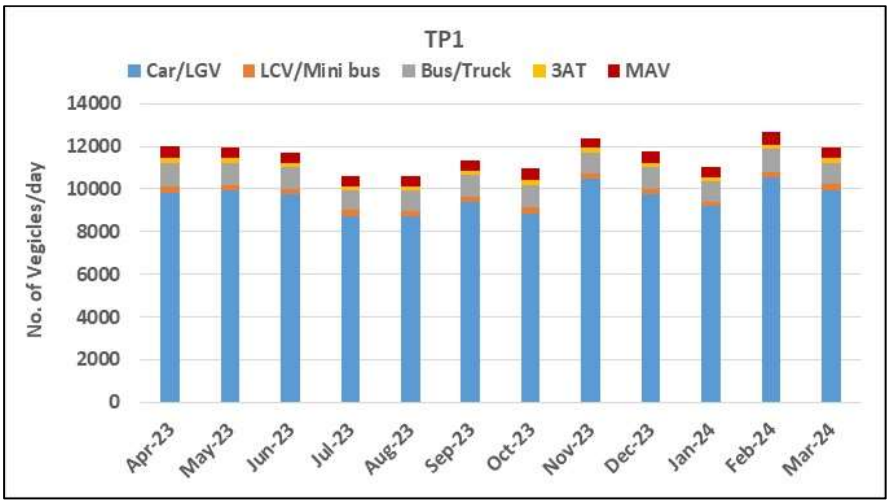
Veh. Type	TP1		TP2		TP3		TP4	
	2023-24	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24	2022-23
Car/Taxi/LGV	1.02	1.02	1.07	1.06	1.05	1.06	1.04	1.06
LCV/Mini Bus	1.00	0.97	1.02	0.99	0.99	1.03	0.99	0.97
Bus/2AT	1.00	1.00	1.01	1.00	1.02	1.00	0.89	1.01
3AT	1.00	0.94	1.02	1.06	0.96	1.04	0.91	1.05
MAV/OSV	1.02	1.02	1.08	1.08	1.05	1.06	0.92	1.05

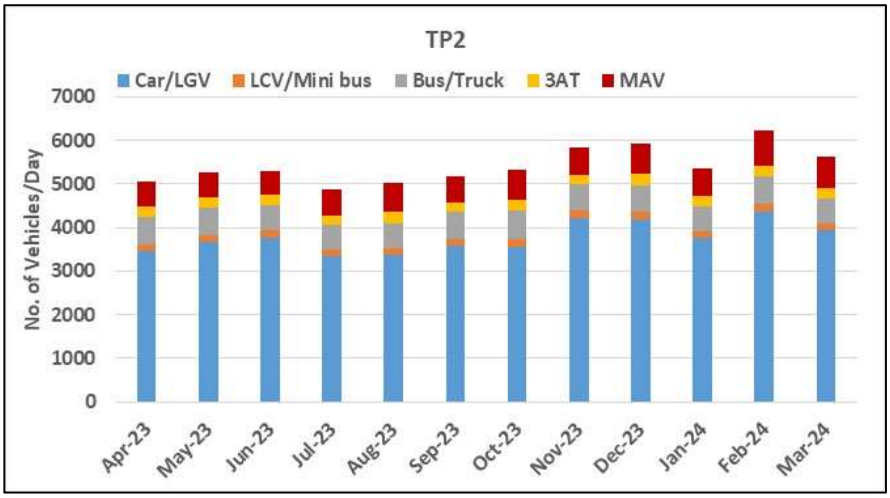
Source: SBHL Toll Traffic Data

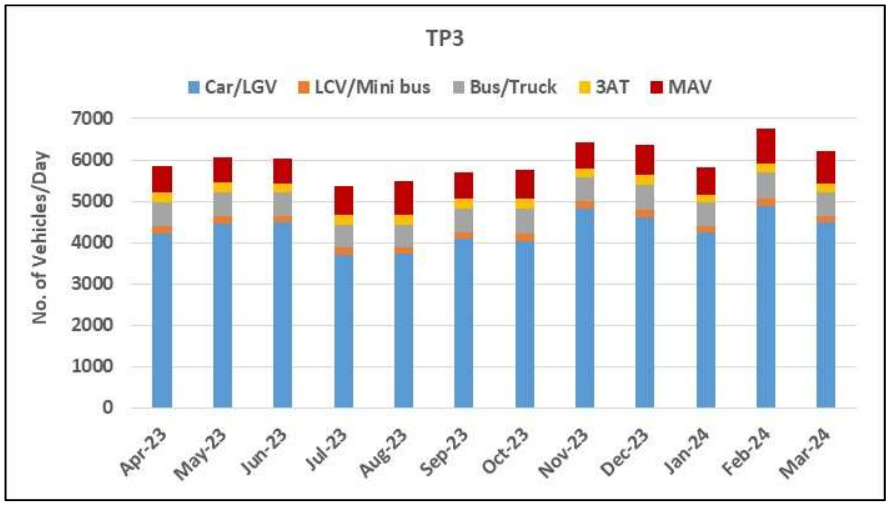
The factors derived for the past two years are found to be almost same for TP1, TP2 and TP3, while there is a difference in the case of TP4.

The monthly variation of toll traffic observed at the four TPs from Apr. '23 to Mar. '24 is presented in Figure 3.1. The first three TPs have normal traffic flow pattern over the months. Traffic is comparatively low during the monsoon period (July and August months) and no substantial variation is observed for the remaining months.

It is observed that the traffic at TP4 has a different monthly pattern, ie'; reduction in traffic is observed from July'23 to March'24. The probable reason for this continuous decrease till March could be the opening of newly constructed Amritsar- Jamnagar expressway section and a share of traffic at TP4 (ie; traffic moving between places north and south of Bikaner) is diverted to the expressway.







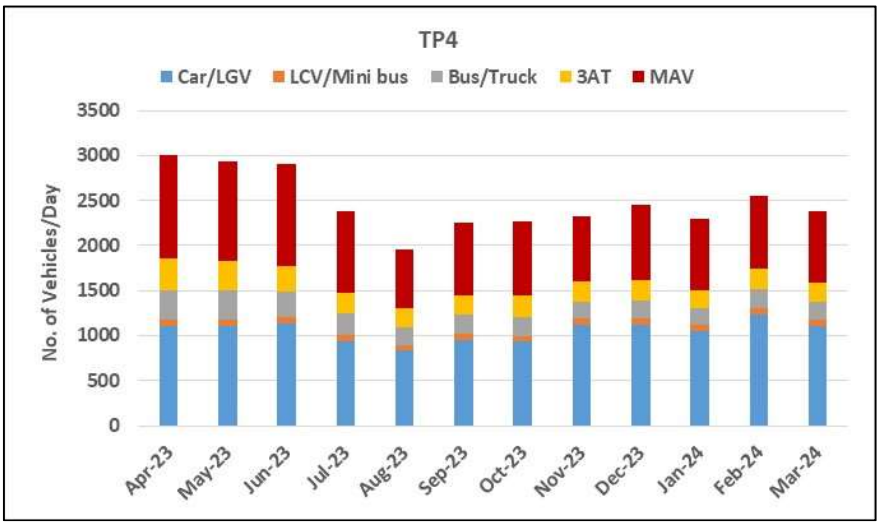


Figure 3-1: Monthly Variation of Toll Traffic on the Project Road (2023-24)

3.1.4 Adopted Seasonal factors for AADT

The factors obtained using 2023-24 traffic details has been recommended for traffic forecast except for TP4 as the traffic flow for TP 4 was not normal for the year. Hence the factors of 2022-23 have been recommended for TP4. The factors adopted for AADT estimation are presented in Table 3.4.

Table 3-4: Seasonal Factors Adopted for the Study

Veh. Category	TP1 *	TP2*	TP3*	TP4 **
Car/Taxi/LGV	1.02	1.07	1.05	1.06
LCV/Mini Bus	1.00	1.02	0.99	0.97
Bus	1.00	1.01	1.02	1.01
2AT	1.00	1.01	1.02	1.01
3AT	1.00	1.02	0.96	1.05
MAV	1.02	1.08	1.05	1.05
OSV	1.02	1.08	1.05	1.05

*- 2023-24 values, **-2022-23 values

3.1.5 Annual Average Daily Traffic (AADT 2024-25)

AADT is obtained by multiplying the ADT (2024-25) with the adopted seasonal factors. The estimated AADT for the TPs are presented in Table 3.5. It is assumed that the diversion effect due to the expressway will get normalized from next year onwards.

Table 3-5: Annual Average Daily Traffic (2024-25)

Veh. Type	TP1	TP2	TP3	TP4
Car/Taxi/LGV	10,217	3,835	4,640	973
LCV/Mini Bus	260	151	169	71
Bus*	588	328	324	8
2AT*	461	262	279	179
3AT	211	249	193	179
MAV	508	739	824	681
OSV	1	1	1	1
Total Veh.	**12,246**	**5,565**	**6,430**	**2,092**
Total PCU	**16,678**	**9,909**	**10,994**	**5,247**

*Source: SBHL Toll Traffic Data. *- Monthly traffic data was combined for bus and truck and split was done as per their share obtained from the Fastag traffic data of each toll plaza.*

3.1.6 Toll Exempted Traffic and Trip Categorisation of Tollable Traffic

Toll categorisation has been estimated using toll traffic data of 2023-24 and 2024-25 (Apr. to Sept data). The toll traffic data for the current year is available only for six months and hence not recommended. The toll traffic categorisation obtained from the data of 2023-24 (which represents one full year) is used in the revenue forecast.

The data consists of two general categories, i.e. (1) traffic paying toll (toll paying traffic) and (2) exempted or force exempted. The exempted type includes the exempted traffic as per the toll policy of the project (mainly constitute Govt. Patrol/ Police/Military/ Convoy vehicles/ post, and telegraph vehicles commuting along the road) and local vehicles allowed by the toll operator. The force exempted includes the vehicles which are not willing to pay the toll and the operator is compelled to allow them to pass the toll plazas without paying toll. The share of exempted vehicles observed at the four toll plazas (of the total traffic) are presented in Table 3.6. The forced exempted traffic, mainly car/taxi, is observed more at TP1.

Table 3-6: Share of Exempted Vehicles

	Exempted	Force Exempted	Total Exempted	Exempted	Force Exempted	Total Exempted
	TP1			**TP2**		
Car/Taxi/LGV	8.6%	15.0%	**23.6%**	9.3%	2.2%	**11.5%**
LCV/Mini Bus	7.3%	1.7%	**9.0%**	8.9%	0.0%	**8.9%**
Bus	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
2 AT	1.7%	1.2%	**3.0%**	1.9%	0.0%	**1.9%**

	Exempted	Force Exempted	Total Exempted	Exempted	Force Exempted	Total Exempted
3 AT	0.2%	0.1%	**0.3%**	0.2%	0.0%	**0.2%**
MAV	0.2%	1.1%	**1.3%**	0.2%	0.0%	**0.2%**
OSV	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
	TP3			**TP4**		
Car/Taxi/LGV	10.1%	3.5%	**13.7%**	5.6%	0.0%	**5.6%**
LCV/Mini Bus	4.3%	0.0%	**4.3%**	1.4%	0.0%	**1.4%**
Bus	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
2 AT	1.9%	0.0%	**1.9%**	1.1%	0.0%	**1.1%**
3 AT	0.1%	0.0%	**0.1%**	0.2%	0.0%	**0.2%**
MAV	0.2%	0.0%	**0.2%**	0.0%	0.0%	**0.0%**
OSV	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Source: SBHL toll data

The toll paying traffic (after excluding the exempted traffic from the total tollable traffic) is used to derive the categorisation of trips as per the prevailing toll policy (single/return/Local concession for commercial vehicles/monthly pass/ local monthly pass for cars). It is presented in Table 3.7.

Table 3-7: Trip Categorisation for Tollable Traffic

	Single	Return	Local Concession	Local monthly Pass (Cars)	Monthly pass	Total
			TP1			
Car	38.6%	50.7%	2.1%	8.6%	0.0%	100%
LCV	41.8%	40.2%	5.9%	0.0%	12.1%	100%
Bus	8.7%	83.6%	6.4%	0.0%	1.2%	100%
2 AT	54.0%	36.0%	9.7%	0.0%	0.3%	100%
3 AT	68.1%	29.6%	2.3%	0.0%	0.0%	100%
MAV	79.3%	18.6%	2.2%	0.0%	0.0%	100%
OSV	97.8%	2.2%	0.0%	0.0%	0.0%	100%
			TP2			
Car	51.2%	47.3%	0.7%	0.8%	0.0%	100.0%
LCV	54.6%	44.6%	0.8%	0.0%	0.0%	100.0%
Bus	11.1%	86.1%	2.8%	0.0%	0.0%	100.0%
2 AT	57.5%	40.3%	2.2%	0.0%	0.0%	100.0%
3 AT	62.5%	33.5%	4.0%	0.0%	0.0%	100.0%
MAV	76.8%	22.2%	0.9%	0.0%	0.0%	100.0%
OSV	82.7%	17.3%	0.0%	0.0%	0.0%	100.0%
			TP3			
Car	38.4%	57.8%	2.3%	1.5%	0.0%	100.0%
LCV	37.9%	42.2%	19.9%	0.0%	0.0%	100.0%
Bus	7.8%	56.8%	35.5%	0.0%	0.0%	100.0%
2 AT	38.8%	42.2%	19.0%	0.0%	0.0%	100.0%
3 AT	54.4%	38.8%	6.8%	0.0%	0.0%	100.0%
MAV	66.0%	30.6%	3.3%	0.0%	0.0%	100.0%
OSV	67.0%	33.0%	0.0%	0.0%	0.0%	100.0%
			TP4			
Car	54.0%	44.8%	0.1%	1.1%	0.0%	100.0%

	Single	Return	Local Concession	Local monthly Pass (Cars)	Monthly pass	Total
LCV	55.0%	42.7%	2.3%	0.0%	0.0%	100.0%
Bus	61.0%	33.7%	5.3%	0.0%	0.0%	100.0%
2 AT	62.3%	36.2%	1.5%	0.0%	0.0%	100.0%
3 AT	65.9%	32.2%	1.9%	0.0%	0.0%	100.0%
MAV	70.9%	22.2%	6.8%	0.0%	0.0%	100.0%
OSV	95.1%	4.9%	0.0%	0.0%	0.0%	100.0%

Source: SBHL toll traffic data, 2023-24

3.1.7 Tollable AADT (2024-25)

Table 3.4 provides the tollable/toll paying AADT (2024-25) for the four TPs. It is obtained by excluding the share of exempted vehicles from the total AADT (which is presented in the Table given above).

Table 3-8: AADT of Actually Tollable Vehicles

	AADT (toll paying traffic, which exclude exempted vehicles)			
	TP1	TP2	TP3	TP4
Car/Taxi/LGV	7,801	3,394	4,005	918
Bus	588	328	324	8
LCV/Mini bus	236	137	161	69
2 Axle Truck	447	257	274	176
3 Axle Truck	209	248	193	178
MAV	500	738	822	681
OSV	0	0	0	0
Total	**9,782**	**5,101**	**5,778**	**2,030**
PCU	**14,140**	**9,418**	**10,315**	**5,170**

3.1.8 Past Traffic Growth Trend

Monthly toll traffic data is available from the year 2015-16 to 2023-24 and is used in the trend analysis. The average daily traffic for all months of active toll operation in the past is considered. The average daily traffic along with the observed annual growth rates are presented in Table 3.9. The annual growth of toll revenue is presented in Table 3.10. The following observations are made from the analysis.

- The overall growth of traffic on the project road is good, which is indicated by the average annual growth of revenue (2015-16 to 2023-24) of 12%. A decline in the growth of revenue/traffic is observed at TP4 during last year is due to the diversion to the expressway.
- Car/taxi/LGV, 2AT/Bus, MAV performed better in the past with average growth of 8%, 4% and 8% per annum respectively. However, LCV/mini bus and 3AT category shown a declining trend.
- It is observed that the growth of traffic on the project road is in a random manner and not continuous over the years, which is not a normal scenario for any highway of similar nature. The reasons for the haphazard growth trend in the past may be due to;

- the development of regional network and other roads in the project road vicinity, which had provided better connectivity and diverted some traffic from the project road during the past
- The performance during the years 2020-21 and 2021-22 were not normal due to the impact of COVID and due to the prolonged farmer's agitation in Rajasthan.

- The major alternate roads of the project stretch vicinity are developed and are operational. The impact on the project road due to these road improvements is minimal and stabilized. Overall growth of traffic during the last two year period is better than the past years and this indicates that the performance of the road is improving in terms of traffic post covid.
- Decline in the traffic of TP4 (Car: -3%, Bus/2AT: -22%, 3AT: -30% and MAV: -20%) is mainly due to the shift of traffic to Amritsar- Jamnagar expressway.

Table 3-9: Observed Growth of Daily Traffic in the Past

Annual GR of Daily traffic					
	Car/Taxi /LGV	LCV/Mini Bus	Bus/ 2AT	3 AT	MAV
TP1					
2015-16 to 2016-17	31%	3%	10%	-22%	-4%
2016-17 to 2017-18	10%	1%	4%	10%	44%
2017-18 to 2018-19	5%	4%	-4%	-15%	1%
2018-19 to 2019-20	-3%	-9%	6%	-33%	-26%
2019-20 to 2020-21	-10%	32%	-29%	-7%	8%
2020-21 to 2021-22	29%	-51%	49%	51%	34%
2021-22 to 2022-23	7%	-10%	4%	-27%	-10%
2022-23 to 2023-24	8%	-3%	-2%	-15%	-4%
Average	**9%**	**-4%**	**5%**	**-7%**	**5%**
TP2					
2015-16 to 2016-17	-3%	-2%	-2%	-14%	-10%
2016-17 to 2017-18	7%	-1%	5%	27%	73%
2017-18 to 2018-19	8%	4%	6%	-14%	5%
2018-19 to 2019-20	6%	2%	-3%	-21%	0%
2019-20 to 2020-21	6%	17%	-22%	2%	12%
2020-21 to 2021-22	6%	-49%	26%	8%	16%
2021-22 to 2022-23	10%	3%	17%	9%	20%
2022-23 to 2023-24	11%	8%	3%	10%	35%
Average	**7%**	**-2%**	**4%**	**1%**	**19%**
TP3					
2015-16 to 2016-17	3%	-3%	0%	-13%	-31%
2016-17 to 2017-18	5%	3%	2%	6%	17%
2017-18 to 2018-19	5%	3%	-2%	-19%	-6%
2018-19 to 2019-20	6%	18%	-2%	-7%	5%
2019-20 to 2020-21	1%	61%	-25%	-8%	-3%
2020-21 to 2021-22	8%	-62%	23%	1%	14%
2021-22 to 2022-23	15%	7%	15%	-5%	25%
2022-23 to 2023-24	6%	-3%	2%	-10%	27%
Average	**6%**	**3%**	**2%**	**-7%**	**6%**
TP4					
2015-16 to 2016-17	21%	26%	3%	-4%	29%
2016-17 to 2017-18	22%	4%	11%	-2%	19%

Annual GR of Daily traffic					
	Car/Taxi /LGV	LCV/Mini Bus	Bus/ 2AT	3 AT	MAV
2017-18 to 2018-19	6%	5%	6%	-9%	2%
2018-19 to 2019-20	5%	0%	4%	-14%	8%
2019-20 to 2020-21	1%	41%	22%	-1%	14%
2020-21 to 2021-22	27%	-56%	15%	-1%	11%
2021-22 to 2022-23	24%	-2%	17%	-9%	8%
2022-23 to 2023-24	-3%	-18%	-22%	-30%	-20%
Average	**13%**	**0%**	**7%**	**-9%**	**9%**
All 4 TPs together					
2015-16 to 2016-17	16%	3%	4%	-13%	-3%
2016-17 to 2017-18	9%	1%	4%	7%	31%
2017-18 to 2018-19	6%	4%	-1%	-14%	0%
2018-19 to 2019-20	1%	0%	2%	-19%	-3%
2019-20 to 2020-21	-4%	37%	-22%	-3%	9%
2020-21 to 2021-22	19%	-54%	33%	12%	17%
2021-22 to 2022-23	10%	-2%	11%	-10%	9%
2022-23 to 2023-24	7%	-2%	-3%	-14%	3%
Average	**8%**	**-2%**	**4%**	**-7%**	**8%**

Source: SBHL toll traffic data

Table 3-10: Annual Growth Rate of Toll Revenue in the Past

Period	TP1	TP2	TP3	TP4	All Four TPs Together
2015-16 to 2016-17	43%	1%	-15%	14%	11%
2016-17 to 2017-18	51%	33%	13%	15%	34%
2017-18 to 2018-19	6%	8%	1%	18%	6%
2018-19 to 2019-20	-7%	3%	6%	8%	-1%
2019-20 to 2020-21	1%	9%	6%	16%	5%
2020-21 to 2021-22	22%	8%	4%	6%	13%
2021-22 to 2022-23	13%	28%	31%	20%	21%
2022-23 to 2023-24	2%	21%	14%	-16%	8%
Average	**16%**	**14%**	**8%**	**10%**	**12%**

Source: SBHL toll data

3.2 Analysis of Fuel Sales data

Seasonal factors from Fuel data: Monthly fuel sales data collected from fuel stations along the project road and used (total 3 data sets) for the estimation of seasonal factor.

The seasonal factors estimated from fuel sales is presented in Table 3.11.

Table 3-11: Seasonal factors from fuel sales data

	Petrol				Diesel			
	2021-22	2020-21	2019-20	Average	2021-22	2020-21	2019-20	Average
April	0.92	0.88	0.96	**0.92**	1.10	1.11	1.29	**1.17**
May	1.14	0.98	0.80	**0.97**	1.19	0.99	0.79	**0.99**

	Petrol				Diesel			
	2021-22	2020-21	2019-20	Average	2021-22	2020-21	2019-20	Average
June	1.76	1.03	1.60	**1.46**	1.10	0.96	0.78	**0.95**
July	0.97	0.84	1.20	**1.00**	1.06	0.95	0.91	**0.97**
August	1.02	0.93	1.09	**1.01**	1.12	1.04	1.16	**1.11**
September	0.77	1.17	1.00	**0.98**	1.32	1.16	1.10	**1.20**
October	0.88	1.26	0.86	**1.00**	1.32	1.20	1.05	**1.19**
November	0.92	1.35	0.69	**0.99**	0.82	1.05	0.84	**0.90**
December	1.02	0.93	1.09	**1.01**	0.70	0.97	0.91	**0.86**
January	0.88	0.98	1.26	**1.04**	0.85	0.91	1.03	**0.93**
February	0.97	1.03	1.14	**1.05**	0.99	0.87	1.12	**1.00**
March	1.29	0.88	0.89	**1.02**	0.86	0.89	1.45	**1.07**

4 OD SURVEYS & DATA ANALYSIS

4.1 OD Survey Methodology & Locations

Roadside Interview method, as detailed in IRC: 102-1988, is used for conducting O-D survey. The survey was carried out for tollable modes (both passenger and goods vehicles) for two days (in both directions). The information collected includes trip origin, trip destination, commodity details for goods vehicles and purpose and frequency of travel for passenger vehicles, etc. The data analysis is carried out to assess the movement pattern on the project road.

OD surveys were carried out at the four toll plaza locations on the project road. The survey locations along with the schedule are presented in Table 4.1.

Table 4-1: Schedule of Surveys

Survey Photos

Sl. No.	Type of Survey	No of Locations	Location	Schedule
1	OD survey 2days (2X24)	4	Toll plaza 1, (Rashidpura TP)	23/04/2023 & 24/04/2023
			Toll plaza 2, (Tidiyasar TP)	23/04/2023 & 24/04/2023
			Toll plaza 3, (LakhasarTP)	24/04/2023 & 25/04/2023
			Toll plaza 4, (Udairamsar TP on Bikaner bypass	25/04/2023 & 26/04/2023

Data Consistency: OD data have been checked location wise, mode wise and direction wise for the toll plaza location. The following consistency checks were done for data reliability.

- Zone coding was checked with raw data
- Illegal trips are removed from the data

4.2 Zoning System

Suitable zoning system has been developed for the study purpose. The places falling within 20 Km radius of the toll plaza locations are divided into minor zones to estimate the local traffic occurring at each toll plaza. Large zones were considered for areas outside the project road. The zoning system developed for the study is listed and presented in Table 4.2.

Table 4-2: Zone list for the study

Sr. No.	Zone	Remarks
1	Rashidpura , Bhadhadar, Kordoli, Kuhri bari, Palthana, Pratappura, Sanwaloda, Ghassu, Jasrasar, Mailasi,Jhigar Choti, Palthana, Jheegar Badi	Sikar district
2	Akwa, Kharsadu, Kudan, Ajitpura, Bhukaran, Dinarpura, Jhihar Chhoti, Patoda, Chooroli, Pardoli, Nani, Lakshmangarh, Hameerpura	
3	Sikar city	
4	Other parts of Sikar district	
5	Tidiyasar, Biramsar, Kalyan pura, Thithavata, Bachhararachota, Hardesar,	Churu district
6	Ratangarh, Bhojdesar, Malpur, Sangasar, Chhabri Meethi, Kadia, Shekhisar, Hudera, Jandwa	
7	Other parts of Churu district	
8	Lakasar, Jodhasar, Benisar, Bhojas,	Bikaner district
9	Jhanjheu, Hemasar, Pundalsar, Seruna, Derajsar,	
10	Udairamsar, Naino ka bas, Yashoda Nagar, Ambasar, Raisar, Shivbari, Gadhwala	
11	Bikaner city	
12	Other parts of Bikaner district	
13	Sri Ganaganagar	Districts of Rajasthan
14	Hanumangargh	
15	Jaisalmer	
16	Jodhpur	
17	Nagaur	
18	Barmer	
19	Jalore	
20	Pali	
21	Sirohi	
22	Jhunjunu	
23	Udaipur	
24	Dungarpur	
25	Banswara	
26	Rajsamand	
27	Chittorgargh	
28	Pratapgargh	
29	Bhilwara	
30	Ajmer	
31	Jaipur city	

Sr. No.	Zone	Remarks
32	Other parts of Jaipur district	
33	Tonk	
34	Alwar	
35	Dausa	
36	Bharatpur	
37	Karauli	
38	Dhahulpur	
39	Bundi	
40	Sawai Madhopur	
41	Kota	
42	Baran	
43	Jhalawar	
44	Haryana	Other States
45	Punjab	
46	Himachal Pradesh	
47	J & K	
48	Uttarakhand	
49	Delhi	
50	Uttar pradesh	
51	Bihar, Jharkand,West Bengal	
52	Chattisgargh, Odissa	
53	Ports in Gujarat	
54	Gujarat	
55	Madhya Pradesh	
56	Maharashtra	
57	Goa	
58	Karnataka	
59	Tamil Nadu,	
60	Kerala	
61	Telangana	
62	Andhra Pradesh	
63	Assam, Mijoram, Tripura, Manipur, Arunachalpradesh, Sikkim, Meghalaya, Nagaland	

4.3 Sample Size

The sample size covered in OD survey for various types of vehicles is given in Table 4.3.

Table 4-3: Sample Size

Vehicle Type	TP1 (Rasidpura TP)	TP2 (Tidiyasar TP)	TP3 (Lakhasar TP)	TP4 (Udairamsar TP)
Car/Taxi/LGV	29%	40%	38%	42%
LCV/Mini Bus	56%	71%	70%	69%
Bus	88%	88%	50%	23%
2 AT	37%	68%	92%	56%
3 A T	52%	66%	63%	52%
MAV	59%	72%	67%	47%

4.4 Influence Factors

The influence factors (the share of the origin or destination of the trip) indicates the importance of the area or region influencing traffic on the project road. It is estimated as given below:

$$IF = [(P_i + A_i) \times 100] / (\sum(P_i + A_i))$$

Where, *IF* = Influence Factor

P_i = Total trips produced in Zone *i*

A_i = Total trips attracted in Zone *i*

Influence factors obtained from the OD data are presented in Table 4.4 to Table 4.7 for TP1, TP2, TP3 and TP4 respectively.

Rajasthan has the highest influence on traffic on the project road. Other states (especially for goods traffic) such as Punjab and Haryana influence at TP1, TP2 and TP3. Gujarat and Maharashtra influence the traffic at TP4.

Among the districts of Rajasthan, Bikaner, Churu and Sikar districts (the districts through which the project road passes), Jaipur, etc. have more share at TP1, TP2 and TP3. Influence of Bikaner, Sri Ganaganagar, Jodhpur, Nagaur, etc. are the districts of traffic influence for TP4.

Table 4-4: Influence Factors at TP1

	Car/Taxi	Mini Bus	Bus	Mini LCV	LCV	2 AT	3AT	MAV
Bikaner district	7.3%	6.3%	18.6%	5.8%	8.9%	10.8%	13.2%	10.2%
Churu district	10.6%	14.3%	12.4%	10.7%	9.3%	12.1%	9.8%	7.8%
Sikar district	55.1%	54.0%	15.7%	60.7%	31.3%	36.1%	30.1%	26.2%
Sri Ganaganagar	1.9%	0.8%	7.9%	2.9%	4.5%	4.0%	4.9%	4.9%
Hanumangarh	1.3%	0.8%	2.1%	3.1%	4.5%	2.8%	2.4%	3.9%
Jodhpur	0.1%	0.0%	0.1%	0.6%	0.0%	0.2%	0.0%	0.5%
Nagaur	0.7%	0.8%	0.2%	1.4%	1.1%	1.1%	1.1%	1.2%
Jhunjhunu	0.5%	0.8%	0.1%	0.2%	0.0%	1.4%	0.4%	0.5%
Jaipur	14.1%	15.1%	38.0%	10.4%	20.2%	17.5%	20.3%	18.4%
Other districts	2.2%	1.6%	1.8%	3.2%	6.0%	5.4%	5.8%	7.5%
Haryana	3.4%	1.6%	1.4%	0.0%	8.7%	3.5%	5.1%	9.0%
Punjab	1.3%	2.4%	0.7%	0.0%	4.5%	2.0%	3.4%	5.1%
Gujarat	0.3%	0.8%	0.4%	0.3%	0.4%	0.2%	0.4%	0.6%
Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.2%	0.8%
Other northern States	1.0%	0.8%	0.7%	0.5%	0.5%	1.1%	1.9%	2.0%
Other Southern states	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%
Eastern states	0.2%	0.0%	0.1%	0.1%	0.0%	0.9%	0.9%	1.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-5: Influence Factors at TP2

	Car/Taxi	Mini Bus	Bus	Mini LCV	LCV	2 AT	3AT	MAV
Bikaner district	15.8%	14.8%	27.5%	10.6%	11.5%	19.2%	17.9%	20.2%
Churu district	31.8%	18.5%	10.1%	25.3%	45.9%	23.9%	29.7%	24.2%
Sikar district	17.3%	33.3%	6.9%	42.5%	16.3%	15.7%	15.6%	13.4%
Sri Ganaganagar	2.7%	3.7%	8.3%	1.3%	1.0%	3.5%	4.8%	5.7%
Hanumangarh	3.3%	1.9%	3.2%	0.9%	2.4%	3.4%	2.4%	5.0%
Jodhpur	0.1%	0.0%	0.3%	0.0%	0.0%	0.4%	0.2%	0.1%
Nagaur	0.0%	0.0%	0.0%	0.2%	0.2%	0.8%	0.3%	1.1%
Jhunjhunu	14.4%	13.0%	5.0%	11.8%	11.2%	7.8%	7.7%	6.1%
Jaipur	11.4%	11.1%	33.8%	7.0%	8.5%	18.7%	16.7%	14.7%
Other districts	0.9%	1.9%	1.7%	0.2%	1.2%	1.7%	2.0%	3.4%
Haryana	0.5%	0.0%	0.5%	0.0%	0.0%	1.2%	0.9%	1.5%
Punjab	0.4%	0.0%	0.7%	0.2%	1.0%	2.0%	1.1%	1.7%
Gujarat	0.0%	0.0%	0.2%	0.0%	0.2%	0.1%	0.0%	0.2%
Maharashtra	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%
Other northern States	1.3%	1.9%	1.7%	0.2%	0.2%	1.1%	0.5%	2.1%
Other South States	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Eastern states	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-6: Influence Factors at TP3

	Car/ Taxi	Mini Bus	Bus	Mini LCV	LCV	2 AT	3AT	MAV
Bikaner district	69.1%	78.2%	58.2%	68.1%	52.5%	57.7%	55.5%	51.2%
Churu	17.6%	14.1%	19.4%	15.0%	6.6%	18.2%	24.9%	16.0%
Sikar	1.9%	5.1%	3.4%	1.6%	4.1%	4.5%	2.8%	3.8%
Sri Ganaganagar	0.5%	0.0%	0.0%	0.6%	0.7%	0.3%	0.7%	0.2%
Hanumangarh	0.2%	0.0%	0.5%	0.4%	0.7%	1.0%	1.2%	0.7%
Jodhpur	0.7%	0.0%	0.7%	2.1%	1.1%	1.9%	2.1%	2.9%
Nagaur	0.3%	0.0%	1.2%	0.6%	0.5%	1.0%	1.2%	0.9%
Jhunjhunu	0.7%	0.0%	2.0%	1.3%	0.7%	0.9%	1.0%	1.1%
Jaipur	5.2%	2.6%	9.2%	5.7%	6.6%	4.9%	2.4%	5.7%
Other districts	0.7%	0.0%	2.0%	4.7%	3.4%	3.0%	1.6%	3.8%
Haryana	1.5%	0.0%	0.9%	0.0%	12.7%	3.4%	3.4%	6.9%
Punjab	0.1%	0.0%	0.0%	0.0%	0.5%	0.2%	0.1%	0.7%
Gujarat	0.1%	0.0%	0.0%	0.0%	0.9%	0.0%	0.4%	0.5%
Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Other northern States	1.3%	0.0%	2.6%	0.0%	6.6%	2.2%	1.8%	4.9%
Other Southern states	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%
Eastern states	0.1%	0.0%	0.0%	0.0%	2.3%	0.6%	0.4%	0.7%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-7: Influence Factors at TP4

	Car/ Taxi	Mini Bus	Bus	Mini LCV	LCV	2 AT	3AT	MAV
Bikaner district	54.8%	100.0%	100.0%	69.8%	41.9%	38.7%	33.0%	28.5%
Churu district	6.5%	0.0%	0.0%	3.4%	1.0%	1.5%	2.4%	2.8%
Sikar district	2.0%	0.0%	0.0%	0.9%	1.4%	1.2%	0.9%	1.0%
Sri Ganaganagar	5.4%	0.0%	0.0%	6.5%	9.5%	11.3%	10.6%	14.8%
Hanumangarh	3.0%	0.0%	0.0%	2.2%	2.4%	2.4%	4.8%	3.4%
Jodhpur	6.6%	0.0%	0.0%	2.2%	10.5%	10.2%	12.5%	8.1%
Nagaur	5.5%	0.0%	0.0%	7.8%	7.6%	6.5%	6.7%	8.4%
Jhunjunu	0.5%	0.0%	0.0%	0.0%	0.0%	0.6%	0.1%	0.4%
Jaipur	1.5%	0.0%	0.0%	2.6%	1.4%	2.1%	1.7%	1.8%
Other districts	7.2%	0.0%	0.0%	3.9%	4.8%	7.7%	7.9%	8.6%
Haryana	1.7%	0.0%	0.0%	0.0%	2.9%	2.0%	0.8%	1.9%
Punjab	1.9%	0.0%	0.0%	0.0%	6.7%	5.3%	7.5%	7.1%
Gujarat	3.2%	0.0%	0.0%	0.4%	5.2%	4.8%	5.1%	6.6%
Maharashtra	0.0%	0.0%	0.0%	0.4%	2.4%	3.5%	3.6%	4.3%
Other northern States	0.2%	0.0%	0.0%	0.0%	2.4%	2.4%	2.3%	2.4%
Other Southern states	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Eastern states	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

4.5 Trip Distribution

The distribution of trips observed on the project road is presented in Table 4.8 for the four TPs. Passenger as well as goods vehicles are mainly bound within Rajasthan. Trucks are also travelling between Rajasthan and areas north of Rajasthan.

Table 4-8: Trip Distribution

	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
TP1						
Within Rajasthan	87.8%	93.8%	72.0%	83.8%	77.4%	63.8%
Rajasthan-Areas north of Rajasthan	11.0%	5.2%	27.3%	13.6%	20.3%	30.8%
Rajasthan- Areas south of Rajasthan	0.8%	0.7%	0.4%	1.6%	0.8%	2.5%
Rajasthan- Areas east of Rajasthan	0.1%	0.0%	0.0%	0.6%	1.1%	1.6%
Areas east of Rajasthan - Areas south of Rajasthan	0.3%	0.3%	0.4%	0.5%	0.4%	1.4%
TP2						
Within Rajasthan	95.5%	93.7%	96.6%	90.4%	94.8%	87.9%
Rajasthan-Areas north of Rajasthan	4.3%	5.9%	2.4%	8.5%	4.2%	10.4%

	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
Rajasthan- Areas south of Rajasthan	0.1%	0.3%	1.0%	0.7%	0.3%	1.2%
Rajasthan- Areas east of Rajasthan	0.0%	0.0%	0.0%	0.2%	0.3%	0.4%
Areas east of Rajasthan - Areas south of Rajasthan	0.1%	0.0%	0.0%	0.2%	0.3%	0.1%
TP3						
Within Rajasthan	93.7%	93.2%	53.6%	86.7%	87.1%	73.0%
Rajasthan-Areas north of Rajasthan	6.0%	6.8%	40.0%	11.8%	10.8%	24.7%
Rajasthan- Areas south of Rajasthan	0.2%	0.0%	4.5%	0.4%	1.2%	1.1%
Rajasthan- Areas east of Rajasthan	0.1%	0.0%	1.8%	1.1%	0.9%	1.0%
Areas east of Rajasthan - Areas south of Rajasthan	0.0%	0.0%	0.5%	0.0%	0.0%	0.2%
TP4						
Within Rajasthan	87.0%	100.0%	66.7%	73.0%	71.0%	67.2%
Rajasthan-Areas north of Rajasthan	6.7%	0.0%	18.1%	10.5%	11.5%	11.1%
Rajasthan- Areas south of Rajasthan	5.3%	0.0%	9.5%	7.8%	7.8%	10.2%
Rajasthan- Areas east of Rajasthan	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Areas east of Rajasthan - Areas south of Rajasthan	1.0%	0.0%	5.7%	8.7%	9.7%	11.5%

The trips within Rajasthan are spread across many districts. However, the major OD pairs (districts) in this category is presented in Table 4.9.

Table 4-9: Major OD Pairs within Rajasthan

Districts	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
TP1						
Jaipur- Bikaner	7.7%	32.8%	9.1%	9.2%	14.7%	7.2%
Sikar- Bikaner	4.7%	2.6%	4.7%	6.4%	6.0%	5.1%
Jaipur- Churu	7.2%	19.2%	7.3%	7.1%	5.6%	5.8%
Sikar-Churu	12.5%	0.0%	0.0%	0.0%	0.0%	5.9%
TP2						
Jaipur- Bikaner	10.6%	37.1%	7.8%	19.7%	16.7%	15.3%
Sikar- Bikaner	10.2%	5.4%	5.4%	9.4%	6.1%	6.8%
Jaipur- Churu	7.6%	9.1%	7.3%	8.1%	10.6%	5.2%
Sikar-Churu	17.9%	6.1%	21.5%	14.5%	16.4%	12.1%
Churu- Bikaner	2.0%	0.3%	3.4%	0.9%	3.3%	5.1%
TP3						
Jaipur- Bikaner	10.0%	17.7%	12.7%	8.8%	4.2%	10.9%

Districts	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
Sikar- Bikaner	3.5%	6.5%	8.2%	8.4%	4.5%	6.2%
Jaipur- Churu	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sikar-Churu	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Churu- Bikaner	34.7%	37.8%	13.2%	34.3%	45.8%	28.7%
TP4						
Within Bikaner	31.1%	100.0%	23.8%	12.9%	14.5%	10.5%
Sri Ganaganagar-Bikaner	4.1%	0.0%	4.8%	6.6%	4.0%	6.2%
Sri Ganaganagar-Jodhpur	3.7%	0.0%	5.7%	5.7%	4.6%	3.8%
Sri Ganaganagar-Nagaur	0.9%	0.0%	4.8%	3.6%	3.8%	6.8%
Sri Ganaganagar- Pali	0.5%	0.0%	1.0%	1.8%	4.0%	4.7%

The important interstate movements observed at the four TPs are categorized below in Table 4.10.

Table 4-10: Major Interstate OD Pairs – TP1

	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
Rajasthan- Haryana	6.4%	2.3%	17.1%	6.6%	9.0%	16.5%
Rajasthan- Punjab	2.3%	1.4%	8.7%	3.8%	6.4%	9.2%
Rajasthan- Gujarat	0.5%	0.6%	0.4%	0.5%	0.4%	0.5%
Rajasthan-Maharashtra	0.0%	0.0%	0.0%	0.7%	0.0%	1.4%
Haryana- Gujarat	0.1%	0.2%	0.0%	0.0%	0.0%	0.6%
Haryana- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.4%	0.2%
Punjab-Gujarat	0.0%	0.0%	0.4%	0.0%	0.4%	0.2%
Punjab- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TP2						
Rajasthan- Haryana	1.0%	1.0%	0.0%	2.5%	1.8%	2.8%
Rajasthan- Punjab	0.8%	1.5%	2.0%	3.8%	1.8%	3.2%
Rajasthan- Gujarat	0.0%	0.3%	0.5%	0.0%	0.0%	0.5%
Rajasthan-Maharashtra	0.0%	0.0%	0.5%	0.0%	0.0%	0.1%
Haryana- Gujarat	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haryana- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Punjab-Gujarat	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
Punjab- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TP3						
Rajasthan- Haryana	3.1%	1.7%	25.5%	6.9%	6.9%	13.6%
Rajasthan- Punjab	0.2%	0.0%	0.9%	0.4%	0.3%	1.3%
Rajasthan- Gujarat	0.2%	0.0%	1.8%	0.0%	0.9%	0.7%
Rajasthan-Maharashtra	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
Haryana- Gujarat	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Haryana- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	Car/Taxi	Bus	LCV	2 AT	3AT	MAV
Punjab-Gujarat	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Punjab- Maharashtra	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TP4						
Rajasthan- Haryana	3.3%	0.0%	5.7%	3.3%	1.3%	2.8%
Rajasthan- Punjab	3.1%	0.0%	9.5%	5.4%	7.5%	5.9%
Rajasthan- Gujarat	5.3%	0.0%	7.6%	3.3%	4.8%	6.2%
Rajasthan- Maharashtra	0.0%	0.0%	1.9%	4.5%	2.9%	3.9%
Haryana- Gujarat	0.1%	0.0%	0.0%	0.3%	0.0%	0.5%
Haryana- Maharashtra	0.0%	0.0%	1.0%	0.3%	0.8%	1.4%
Punjab-Gujarat	0.7%	0.0%	1.9%	3.0%	4.0%	4.4%
Punjab- Maharashtra	0.0%	0.0%	1.0%	0.3%	0.8%	1.2%

4.6 Commodity Movement

Commodity movement along the project road was obtained from the OD surveys. The major commodities transporting through the project road are presented in Table 4.11 to Table 4.14 respectively for the four TPs. Important commodities include general items such as vegetables/fruits, food grains, petroleum Products, courier/parcels, etc.

Table 4-11: Commodity- wise Goods Movement Pattern at TP1

	Mini LCV	LCV	2 AT	3AT	MAV
Food Grains	4.3%	6.5%	3.5%	9.4%	10.0%
Minerals & Ores	0.0%	0.0%	0.0%	0.0%	0.0%
Machines / Automobiles	0.0%	0.4%	1.9%	1.5%	2.0%
Fruits/ Vegetables	17.7%	20.7%	20.0%	9.4%	12.0%
Iron & Steel	3.4%	3.3%	6.1%	2.6%	3.7%
Fertilizers / Chemicals	1.4%	3.3%	4.9%	2.6%	2.2%
Textiles & Clothing	0.0%	0.4%	0.2%	0.4%	0.5%
Wood and wood Prod.	0.8%	1.1%	0.5%	0.0%	0.6%
Cement	1.3%	1.1%	1.4%	0.0%	3.4%
Petroleum Products	0.0%	3.3%	9.2%	10.5%	8.1%
Granite/Marble	1.0%	0.0%	0.7%	0.4%	0.3%
Sand	1.6%	2.2%	3.1%	3.0%	4.5%
Bricks	0.6%	0.7%	0.2%	0.0%	1.6%
Stone/Aggregates	0.6%	0.7%	1.2%	0.8%	2.8%
House hold goods	0.7%	0.4%	0.7%	1.5%	0.2%
Courier/Parcel	6.5%	5.8%	10.1%	12.4%	4.5%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, water, plastic, rubber items, etc.)	28.9%	30.9%	22.1%	23.7%	23.8%
Empty	31.3%	19.3%	14.1%	21.8%	19.9%

Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-12: Commodity- wise Goods Movement Pattern at TP2

	Mini LCV	LCV	2 AT	3AT	MAV
Food Grains	0.4%	4.9%	3.4%	7.9%	7.3%
Minerals & Ores	0.0%	0.0%	0.0%	0.0%	0.4%
Machines / Automobiles	0.0%	1.0%	0.4%	0.0%	1.5%
Fruits/ Vegetables	35.5%	12.2%	13.0%	7.0%	0.7%
Iron & Steel	2.9%	1.5%	3.1%	0.9%	3.1%
Fertilizers / Chemicals	0.4%	0.0%	0.0%	0.6%	0.5%
Textiles & Clothing	1.1%	0.0%	0.0%	0.3%	0.4%
Wood and wood Prod.	1.8%	3.9%	1.3%	0.9%	0.9%
Cement	0.4%	0.5%	1.3%	2.4%	7.3%
Petroleum Products	0.0%	0.5%	4.7%	7.9%	3.1%
Granite/Marble	0.0%	0.5%	0.2%	0.0%	0.9%
Sand	0.0%	1.0%	4.5%	10.3%	12.5%
Bricks	0.0%	0.0%	0.0%	1.2%	1.7%
Stone/Aggregates	0.0%	1.0%	2.9%	6.4%	10.0%
House hold goods	0.4%	1.5%	0.7%	0.3%	0.1%
Courier/Parcel	6.5%	7.8%	18.0%	9.1%	3.0%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, water, plastic, rubber items, etc.)	17.6%	31.2%	24.5%	20.1%	25.9%
Empty	33.3%	32.7%	21.8%	24.6%	20.8%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-13: Commodity- wise Goods Movement Pattern at TP3

	Mini LCV	LCV	2 AT	3AT	MAV
Food Grains	10.6%	6.4%	10.7%	12.3%	11.2%
Minerals & Ores	0.0%	0.0%	0.0%	0.3%	0.1%
Machines / Automobiles	0.0%	1.8%	1.3%	0.3%	0.2%
Fruits/ Vegetables	3.9%	5.9%	3.2%	3.3%	4.2%
Iron & Steel	1.6%	2.7%	1.1%	3.6%	1.9%
Fertilizers / Chemicals	2.2%	1.4%	1.7%	0.9%	2.0%
Textiles & Clothing	1.3%	2.7%	1.7%	3.3%	1.6%
Wood and wood Prod.	0.2%	0.5%	0.6%	0.6%	0.5%
Cement	3.2%	4.1%	1.1%	2.7%	2.6%
Petroleum Products	0.0%	0.0%	0.4%	1.8%	1.7%
Granite/Marble	1.4%	1.8%	1.5%	2.4%	2.4%
Sand	4.1%	5.5%	6.2%	6.6%	6.9%
Bricks	1.7%	2.3%	0.9%	2.4%	1.7%

	Mini LCV	LCV	2 AT	3AT	MAV
Stone/Aggregates	1.4%	3.2%	2.4%	3.3%	3.6%
House hold goods	0.6%	0.0%	0.4%	0.0%	0.0%
Courier/Parcel	3.2%	5.9%	4.1%	2.4%	5.0%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, water, plastic, rubber items, etc.)	22.9%	23.6%	25.9%	19.2%	24.5%
Empty	41.7%	32.3%	36.8%	34.7%	29.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-14: Commodity- wise Goods Movement Pattern at TP4

	Mini LCV	LCV	2 AT	3AT	MAV
Food Grains	5.2%	1.9%	1.8%	4.8%	4.9%
Minerals & Ores	0.0%	0.0%	0.9%	0.5%	2.4%
Machines / Automobiles	0.0%	1.0%	1.2%	0.8%	1.8%
Fruits/ Vegetables	8.6%	5.7%	3.9%	8.0%	4.5%
Iron & Steel	4.3%	2.9%	1.5%	3.5%	2.5%
Fertilizers / Chemicals	0.9%	1.9%	1.2%	2.7%	2.7%
Textiles & Clothing	2.6%	3.8%	0.0%	0.8%	1.4%
Wood and wood Prod.	3.4%	0.0%	0.3%	0.3%	0.3%
Cement	1.7%	2.9%	3.3%	5.6%	19.8%
Petroleum Products	0.0%	10.5%	15.9%	14.2%	6.5%
Granite/Marble	0.0%	1.0%	0.0%	0.0%	0.2%
Sand	0.0%	0.0%	1.8%	5.9%	6.4%
Bricks	0.0%	1.0%	0.0%	0.0%	0.6%
Stone/Aggregates	2.6%	1.0%	1.8%	4.3%	2.8%
House hold goods	1.7%	1.0%	0.0%	0.3%	0.1%
Courier/Parcel	0.9%	2.9%	10.5%	4.8%	3.5%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, water, plastic, rubber items, etc.)	33.6%	18.1%	24.6%	20.9%	21.8%
Empty	34.5%	44.8%	31.2%	22.5%	17.7%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

5 UPCOMING ROAD PROJECTS & IMPACT ASSESSMENT

The important projects that are proposed/will be implemented in the project area include;

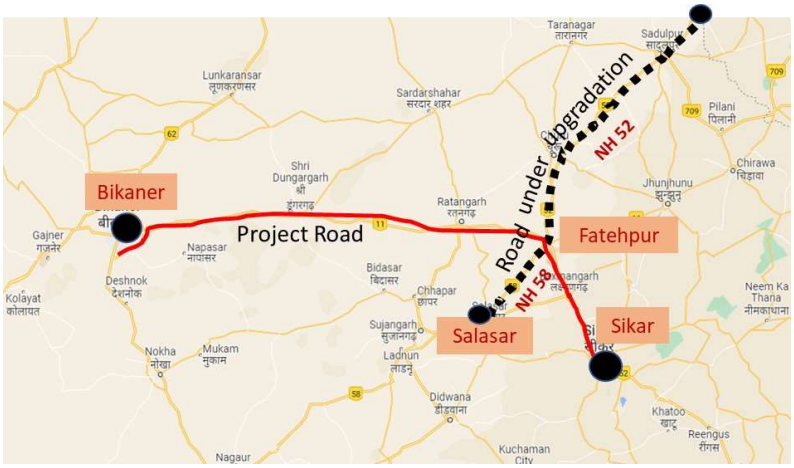
- Four laning of NH52/NH58 from Rajasthan/Haryana border to Salasar and
- Expressways proposed through Rajasthan

The impact of the above projects is presented below.

5.1 Road Projects and the impact

5.1.1 Four laning of NH52/NH58 from Rajasthan/Haryana border to Salasar

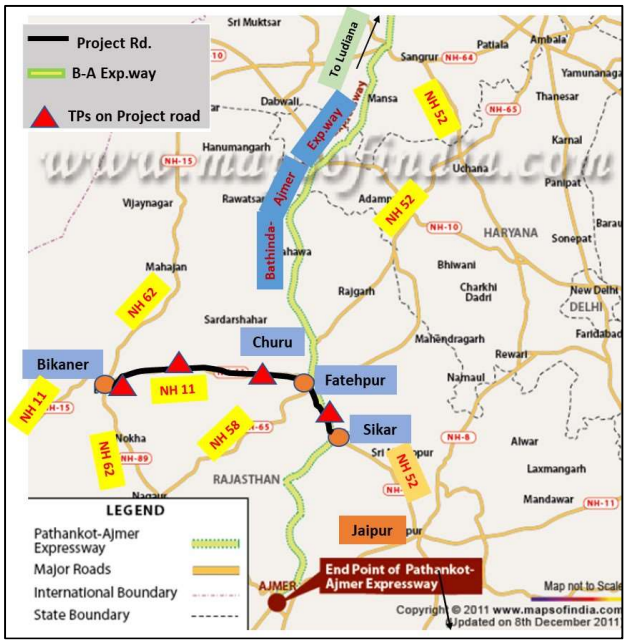
The 155 km long NH52/58 section is undergoing upgradation to four lanes. The stretch was converted to two lane standards by NHAI in 2017 under BoT (toll). The stretch of NH 52 (up to Fatehpur from Rajasthan border) is a feeder route for the project road for the traffic to/from Haryana/Punjab towards Sikar/Jaipur/Gujarat/Maharashtra side and Bikaner side and four laning of NH 52 will be advantageous for the project road. However, the section NH 58 (ie; new link constructed between Salasar and Fatehpur during two laning of NH52/58) which could have adversely affected the project road traffic by diverting the traffic between Haryana/Punjab and West Rajasthan / Gujarat / Maharashtra from the project road. Due to this, the traffic between Haryana/Punjab and West Rajasthan / Gujarat / Maharashtra on the project road is presently very minimal. The four laning of this alternate will provide a better facility for the above traffic to continue to use NH 58 instead of the project road. And hence no major impact due to the road widening is expected on the project road.



5.2 Proposed Expressway Projects in Rajasthan and its Impact

5.2.1 Proposed Bathinda- Ajmer Expressway

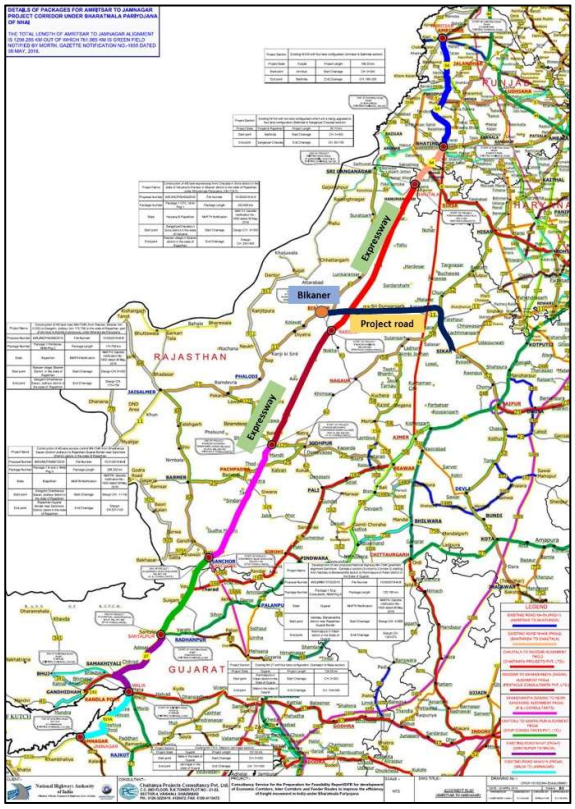
''Bhatinda-Ajmer Expressway (B-A Expressway) is one of the three segments of the "Pathankot-Ludhiana–Ajmer Economic Corridor (EC-8 under Bharatmala project)". This B-A expressway segment was approved by NHAI in May 2018 as a standalone greenfield/brownfield project, which is expected to reduce the existing distance between Bhatinda and Ajmer by 120 km. It is 6-lane (extendable to 8-lanes) access-controlled expressway and expected to be advantageous to the districts of Hanumangarh, Churu, Sikar, Nagaur, Ajmer in Rajasthan.



The expressway would cater to the traffic bound between western area of Punjab and south/west Rajasthan and Gujarat. The major routes presently available are Route 1 via; Hisar, Fatehpur and Salasar (NH 52/NH58) and Route 2, via; Hanumangarh and Ratangarh (NH 54/SH7). Since these two routes are not passing along the project road, no major impact is anticipated on the road traffic after the development of the expressway.

5.2.2 Proposed Amritsar- Jamnagar Expressway

Amritsar – Jamnagar Economic Corridor (Sangaria- Sanchore- Santhalpur Green Field Expressway) is also known as Amritsar – Jamnagar Expressway (A-J Expressway), is about 1,300 km long and is under construction by NHAI. It is proposed as a 4-6 lane partially access-controlled highway traversing through Punjab, Haryana, Rajasthan and Gujarat.



The expressway route is proposed along the western parts of Punjab, Haryana, Rajasthan and Gujarat. In Rajasthan, it will pass through the Sangaria town (in Hanumangarh district), Bikaner district, Jodhpur district and Barmer district, and exit Rajasthan at Sanchore town (in Jalore district). This Expressway is expected to meet the Pathankot-Ludhiana-Bathinda-Ajmer expressway near Bathinda.

About 900 km of its alignment is greenfield and the construction work started in 2019 with a construction period of 2 years. The section of the expressway in Rajasthan from Jakhrawali in Hanumangarh district to Khetlawas in Jalore district was completed in July 2023 and is partially operational. NHAI has revised its completion schedule for the project to Dec. 2025.

From the traffic O-D point of view, the project road mainly cater to the traffic within Rajasthan and the inter-state traffic is very less. Hence no major impact expected due to the above economic corridor and the Rajasthan bound traffic will continue to use the project road in the future even after the development of the expressway. The expressway runs in north-south direction through western Rajasthan (near Bikaner). Hence, it can impact the north-south traffic plying through TP4.

Impact of the Expressway on TP4 Traffic: The project road section comprising TP4 includes traffic plying between places north and south of Bikaner, which is observed as 2AT: 24%, 3AT: 36% and MAV: 37% (as per the OD data analysis). The 2024-25 traffic data of TP4 (Apr. to Sept.) shown a decline (overall traffic decreased by 23%) over the last year and the decrease is primarily due to the diversion towards the expressway.

Hence, a diversion analysis is performed for the north-south traffic at TP4 based on the information/details of the expressway in the public domain.

Route comparison is made between Hanumangarh and Sanchore as the north-south traffic on TP4 is mainly bound within Rajasthan.

Route Comparison	Length (Km) between (Hanumangarh and Sanchore
Existing route	800 km (NH 62)
Proposed Route	700 km (Expressway)

Travel Cost Estimation:

- Vehicle Operating Cost (VoC) and Travel Time Cost (VoT) per trip for the existing road and the Expressways as per the values specified in IRC SP 30: 2019 (Manual for Economic Analysis of Highways in India) is escalated for 2024 by adopting an annual growth of @5% per annum

- Toll amount calculation for existing NH is based on per km rate of existing toll of project road and the prevailing toll rate of the operational section of Delhi- Mumbai Expressway *(as no specific details available for the proposed expressway).*

Travel cost comparison for the two routes is presented in Table 5.1.

Table 5-1: Travel cost/trip comparison of Proposed Amritsar-Jamnagar Expressway

	Existing route (INR.)				Proposed Expressway (INR)			
	VOC	VOT	Toll	Total	VOC	VOT	Toll	Total
2 AT/3AT	33,250	1,724	3,870	38,843	27,405	754	5,624	33,784
MAV	48,480	2,715	6,081	57,276	39,935	1,188	8,085	49,208

Diversion Estimation: Diversion % calculated based on the diversion curve equations given in IRC 108-2015: Traffic forecast on Highways and the estimated diversion is presented in Table 5.2.

Table 5-2: Estimated Diversion Percentage to the Proposed Amritsar-Jamnagar Expressway

Veh.	Cost Ratio (Proposed/ existing)	% Diversion
2 AT/3AT	0.87	73
MAV	0.86	75

Note: These diversion % are based on the assumptions discussed above

Based on the above analysis, the expected traffic diversion from the project road due the expressway is given in Table 5.3.

Table 5-3: Estimated Traffic Diversion from TP 4 to Amritsar- Jamnagar Expressway

	TP4		
	2 AT	3AT	MAV

Candidate Traffic %	24.0%	36.0%	37.0%
Diversion %	73%	73%	75%
Traffic Diversion %	**18%**	**26%**	**28%**

The above analysis indicates the probable north-south traffic from TP4 has shifted to the expressway and hence it is concluded that no additional diversion is expected from TP4 due to the expressway.

5.2.3 Delhi- Mumbai Expressway

The Delhi–Mumbai Expressway is partially operational between Sohna and Dausa and other sections are under various stages of development.

The expressway alignment passes through the southern districts of Rajasthan (Dausa, Sawai Madhopur, Kota, etc.), which is about 250 km away from the project road (refer Figure presented here).

The interstate traffic that the project road carries is between Punjab/Haryana and Rajasthan and that too its share is very less and hence the Delhi-Mumbai expressway is not a competing route to the project road.

5.2.4 Conclusion

The expressways are in various stages of development. Based on the available details of the expressways, traffic pattern on the project road and our judgement, these expressways are not competitive to the project road traffic. Hence, no major impact is anticipated from these expressways, except the Amritsar- Jamnagar expressway. It is an alternate to the north-south bound traffic of TP4 and this traffic has diverted to the operational section of the expressway and no additional diversion is expected in the future.

6 GROWTH RATE ESTIMATION & TRAFFIC PROJECTION

6.1 Background

Projection of traffic along the project stretch for the horizon period requires an understanding of the key drivers to the traffic. These include demographic variables such as population, per-capita income and economic variables such as GDP/NSDP for project influence region. Projection of these drivers needs to be developed within a framework that ensures internal consistency.

Broad review of the socio-economic characteristics of the state that influences the traffic (Rajasthan) on the project road is discussed in Chapter 2. The growth trends for these socio-economic variables and assessment of traffic growth rates and forecasts that is necessary for the revenue estimation is detailed in this Chapter.

6.2 Traffic Growth Trend in the Past

The project road is operational from 2015-16 and the traffic growth trend observed in the past is presented in Chapter 3. Generally, the growth of traffic on the project road was moderate during the period between 2015-16 and 2022-23, though there were variations over the years. Car/taxi/LGV, 2AT/Bus and MAV had growth in the past and LCV/mini bus and 3AT category has a declining/no growth trend in the past.

The three road segments have almost same growth pattern in the past (refer Table 6.1 for the average growth trend for the past five years).

Table 6-1: Growth trend in the Past five years

Average Annual Growth Rate (2018-19 to 2022-23)							
	Traffic						Toll Revenue
	Car/Taxi/ LGV	LCV/Mini Bus	Bus/ 2AT	3 AT	MAV	Total	
TP1	5.5%	-9.4%	7.6%	-3.9%	1.3%	3.8%	7.3%
TP2	7.2%	-6.8%	4.4%	-0.4%	11.7%	5.7%	11.9%
TP3	7.9%	6.3%	2.9%	-4.7%	10.4%	6.0%	11.7%
TP4	14.2%	-4.0%	14.7%	-6.1%	10.1%	7.8%	12.6%
All the four TP's together	**6.6%**	**-5.0%**	**5.9%**	**-5.0%**	**7.7%**	**4.9%**	**9.5%**

The development of alternate roads in the vicinity and issues such as statewide strike by the farmers, the covid pandemic, etc. had affected the traffic growth unfavorably. The trend in the last two years indicates that the traffic on the road is out of these adverse impacts and hence a stabilized and better growth in the future can be expected in the future.

6.3 Growth Rate Estimation

Traffic growth rates to be used for forecasting toll traffic on the project road is estimated by adopting the Elasticity of Transport Demand method which is the most commonly adopted technique for traffic forecast on highways in India. This method establishes the relationship between traffic growth trend on the corridor / vehicle registration of the influencing states, with the state income (NSDP), population and per capita income (PCI) of the project road influencing states.

The steps involved in growth rate estimation are as follows:

- Identifying the Project influence area (PIA) for the project road from OD data, this has impact on the traffic growth of project road.
- Analyze the past socio-economic performance of the project influence area and assess the economic growth rates of influence area in the future.
- Estimating the base elasticity of traffic growth which provides the relationship between the traffic growth and the socio-economic growth of the influence area
- Projection of future elasticity for various modes from the base elasticity
- Estimating the traffic growth based on the future elasticity values and the respective socio-economic growth perspective of the traffic influencing regions

Rajasthan is the state having the highest influence in contributing traffic to the project corridor. Minor influence of states of Haryana, Punjab, Gujarat and Maharashtra are also observed on the project road. The influence is given in Table 6.2. All the three segments would have same travel pattern, and a single growth rate is proposed for the project road.

Table 6-2: Major Traffic Influencing Region

	Car/Taxi/ LGV	LCV/Mini Bus	Bus/2AT	3 AT	MAV
Rajasthan	97.4%	91.7%	94.0%	89.9%	84.7%
Haryana	0.9%	3.2%	1.6%	2.6%	4.8%
Punjab	0.5%	1.9%	1.4%	3.0%	3.6%
Gujarat	0.5%	0.9%	0.7%	1.5%	2.0%
Maharashtra	0.1%	0.3%	0.5%	1.0%	1.3%
Total	**99.4%**	**98.1%**	**98.2%**	**97.9%**	**96.5%**

6.3.1 Economic profile of Major Traffic Influencing Areas/States

The trend of economic growth of Rajasthan and other influencing states are summarised in Table 6.3 and in Table 6.4. Rajasthan's economy had a moderate growth in the past when compared to other influencing states/GDP. The average annual growth rates of NSDP/GDP for the period 2015-16 to 2020-21 is low due to the COVID impact in the year 2020-21.

Table 6-3: NSDP Growth Trend

	Rajasthan	Haryana	Punjab	Gujarat	Maharashtra	India
2015-16	5,01,922	3,72,700	2,94,895	7,74,775	14,52,513	1,13,69,493
2016-17	5,29,650	4,12,055	3,15,783	8,43,930	15,96,121	1,23,08,193
2017-18	5,57,618	4,34,407	3,35,057	9,46,511	16,61,065	1,31,44,582
2018-19	5,68,102	4,70,328	3,53,942	10,34,399	17,28,578	1,39,92,914
2019-20	5,98,550	5,07,776	3,67,558	11,10,179	17,82,903	1,45,15,958
2020-21	5,83,645	4,80,471	3,52,357	10,99,259	16,53,094	1,35,58,473
CAGR (2015-16 to 2019-20)	**4.5%**	**8.0%**	**5.7%**	**9.4%**	**5.3%**	**6.3%**
CAGR (2015-16 to 2020-21)	**3.1%**	**5.2%**	**3.6%**	**7.2%**	**2.6%**	**3.7%**

Source: NSDP, GDP: Directorate of Economics & Statistics of respective State Governments, RBI Unit: Rs. In Crores, At constant price and 2011-12 base

Table 6-4: PCI Growth Trend

	Rajasthan	Haryana	Punjab	Gujarat	Maharashtra
2015-16	68565	137833	100141	120683	122889
2016-17	71324	150259	105848	129738	133686
2017-18	73529	156200	110857	143604	137808
2018-19	73929	166747	115592	154887	142063
2019-20	76882	177507	118487	164060	145165
2020-21	74009	165617	112119	160321	133356
CAGR (2015-16 to 2019-20)	**2.9%**	**6.5%**	**4.3%**	**8.0%**	**4.3%**
CAGR (2015-16 to 2020-21)	**1.5%**	**3.7%**	**2.3%**	**5.8%**	**1.6%**

Source: PCI: Directorate of Economics & Statistics of respective State Governments, Unit: Rs., At constant price. 2011-12 base

6.3.2 Estimation of Base Elasticity & Projection

Elasticity is derived by developing econometric models through regressing NSDP with past traffic data for the years between 2015 and 2020 (NSDP available only up to 2020-21 for all states). Elasticity value of 2AT/Bus is not accepted due to very low goodness of fit (less R^2 values). It may be due to the haphazard growth of traffic during the analysis period. The derived elasticity values are provided in Table 6.5. Negative elasticity value is observed for 3 AT due to their declining trend.

Table 6-5: Estimated Elasticity Values

	Elasticity	R^2
2 AT/Bus	0.01	0.00
3 AT	-2.37	0.86
MAV	1.65	0.84
LCV/Mini Bus	1.15	0.54
Car/Taxi/LGV	1.61	0.95

The following time periods, till the end of concession period (30-year concession period, including the expected extension of five more years, from 2013-14).

- Base period adopted: 2015-16 to 2020-21,
- 2021-22 to 2025-26
- 2026-27 to 2030-31
- 2031-32 to 2035-36
- Beyond 2035-36

Elasticities are projected based on the above values and their growth perspective in the future.

Generally, the spread of economic development induces changes in the spatial distribution of activities and corresponding changes in transport demand elasticity. Accordingly, the elasticity, for both freight and passenger traffic would tend to decline over time, despite growth in economic parameters. Future modal shift, new vehicle technologies, etc. also will affect transport demand elasticity in the future. Hence it is necessary to moderate the elasticity and to arrive at the growth rates within realistic limits for the future years, by making reasonable assumptions on the various influencing parameters of growth.

It is assumed that 2/3 axle trucks and bus will have nominal growth in the future and elasticity is adopted accordingly. The adopted values and the projection are given in Table 6.6.

Table 6-6: Adopted Elasticity & Projections

Vehicle Type	Period (2015-16 to 2020-21)	Period (2021-22 to 2025-26)	Period (2026-27 to 2030-31)	Period (2031-32 to 2035-36)	Period (> 2035-36)
2 axle Truck	-	0.40*	0.32	0.26	0.20
3 axle Truck	-	0.20*	0.16	0.13	0.10
MAV	1.65	1.32	1.05	0.84	0.67
LCV/Mini Bus	1.15	0.92	0.73	0.59	0.47
Car/Taxi/LGV	1.61	1.29	1.03	0.83	0.66
Bus	-	0.65*	0.52	0.41	0.33

**- Assumed values*

6.3.3 Projection of Socioeconomic Variable

The socio-economic variable projections (weighted NSDP for all modes) were made based on the past performance of the influencing areas and the recent economic changes post COVID.

Due to the absence of realistic data on the future economy of the influencing states, methodology adopted is to forecast the socioeconomic growth (NSDP) of the influencing states by relating with GDP growth forecast. For this, a factor was derived considering the annual growth of GDP for the base period (2015-16 to 2020-21) and every five-year period in the future (Refer Table 7.7). This factor was multiplied with the base period combined NSDP growth rate for each vehicle type, resulting in the future growth rate of NSDP of the influence region for the subsequent time periods.

Impact of COVID in Indian Economy: The base period of growth rate analysis is 2015-16 to 2020-21. This includes the period of first wave of COVID (year 2020-21), which had a lower growth rate of

economy. The GDP growth from 2021-22 onwards will capture the regain of economy post COVID. The published GDP growth for 2021-22 is adopted and for the year 2022-23 and 2023-24 , the GDP figures are based on the latest update from govt. authorities/multilateral agencies are employed in the analysis. These figures will reflect the economic growth after the COVID period.

The GDP of India had expanded 8.7% in 2021-22 after a decline (-ve growth) of 6.6% in the previous year (due to COVID impact). As per the latest update by RBI, the overall growth of India's economy during 2022-23 recorded a growth of 7.2%. The economic survey, by Ministry of Finance, Govt. of India, projects a GDP growth of 6.5 per cent in 2023-24. It is assumed that India's growth continues to be resilient in the future and growth rates assumed accordingly. Based on the above predictions /assumptions, the GDP forecast is made and is given below in Table 6.7.

Table 6-7: Projected Growth of GDP and the Relating Factor

Period	Average Annual GR %	GDP factor for the future five-year periods w.r.t the base Period of (2015-16 to 2020-21)
2015-16 to 2020-21*	3.7%	-
2021-22*	8.7%	188%
2022-23**	6.9%	
2023-24**	6.5%	
2024-25**	6.5%	
2025-26**	6.5%	
2026-27 to 2030-31**	6.0%	161%
2031-32 to 2035-36**	5.5%	147%
>2035-36**	5.0%	134%

*Note: *-Actual values, Source: RBI, World Bank, ** Predictions/Assumptions*

Based on the above, the socioeconomic variables have been projected for the influencing areas and are presented in Table 6.8.

Table 6-8: Projection of Socio-economic variable

Vehicle Type	Period (2015-16 to 2020-21)	Period (2021-22 to 2025-26)*	Period (2026-27 to 2030-31)	Period (2031- 32 to 2035-36)	Period (> 2035-36)
2 axle Truck	3.1%	5.9%	5.1%	4.6%	4.2%
3 axle Truck	3.2%	6.0%	5.2%	4.7%	4.7%
MAV	3.3%	6.2%	5.3%	4.8%	4.8%
LCV/Mini Bus	3.2%	6.0%	5.1%	4.7%	4.7%
Car/Taxi/LGV	3.1%	5.9%	5.0%	4.6%	4.6%
Bus	3.1%	5.9%	5.1%	4.6%	4.6%

*Note: *- Start year for traffic projection (2024)*

6.3.4 Recommended Growth Rates

The projected elasticity and the corresponding socio-economic sector projection has been multiplied to estimate the growth rates for different horizon periods using the relationship given below.

Tgr = (NSDPgr) x E

Where, Tgr – Traffic growth rate for mode

NSDPgr – growth rate of NSDP, E – Elasticity value for mode

The estimated growth-rates for various modes are presented below in Table 6.9. This growth rates are recommended for the project.

Table 6-9: Recommended Growth Rates

Vehicle Type	2025-26	Period (2026-27 to 2030-31)	Period (2031- 32 to 2035-36)	Period (> 2035-36)
2 axle Truck	2.4%	2.0%	1.5%	1.1%
3 axle Truck	1.2%	1.0%	0.8%	0.6%
MAV	8.1%	7.0%	5.1%	4.1%
LCV/Mini Bus	5.5%	4.7%	3.5%	2.8%
Car/Taxi/LGV	7.6%	6.5%	4.7%	3.8%
Bus	3.8%	3.3%	2.4%	1.9%

6.3.5 Growth rates under Optimistic and Pessimistic Scenarios

Growth rates under Optimistic scenario assumes an additional one percent per annum higher growth of GDP than in Normal scenario, while pessimistic scenario consider a decline of GDP growth @ 1% per annum in the future years. The growth rates predicted under these two scenarios are given below in Table 6.10 and in Table 6.11.

Table 6-10: Growth Rates under Optimistic Scenario

Vehicle Type	2025-26	Period (2026-27 to 2030-31)	Period (2031- 32 to 2035-36)	Period (> 2035-36)
2 axle Truck	2.6%	2.4%	1.8%	1.3%
3 axle Truck	1.3%	1.2%	0.9%	0.7%
MAV	8.8%	8.1%	6.0%	4.8%
LCV/Mini Bus	6.0%	5.5%	4.1%	3.3%
Car/Taxi/LGV	8.2%	7.5%	5.6%	4.5%
Bus	4.1%	3.8%	2.8%	2.3%

Table 6-11: Growth Rates under Pessimistic Scenario

Vehicle Type	2025-26	Period (2026-27 to 2030-31)	Period (2031- 32 to 2035-36)	Period (> 2035-36)
2 axle Truck	2.2%	1.7%	1.2%	0.9%
3 axle Truck	1.1%	0.9%	0.6%	0.5%
MAV	7.4%	5.8%	4.2%	3.3%
LCV/Mini Bus	5.0%	3.9%	2.8%	2.3%
Car/Taxi/LGV	6.9%	5.4%	3.9%	3.1%
Bus	3.5%	2.7%	2.0%	1.6%

6.4 Traffic Projection

The base year tollable AADT (including exempted vehicles) has been projected according to the recommended growth rates for the remaining concession period. Traffic projection is presented in

Table 6.12 to Table 6.14 for the three scenarios. Based on Effect of Variations in Traffic Growth, an increase of concession period from 25 years to 30 years is expected and hence considered in the traffic projection (made upto 2043-44).

Table 6-12: Projected Tollable AADT (Normal Scenario)

	Car/Taxi /LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV /Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
	TP1									TP2								
2024-25	10,217	588	260	461	211	508	1	**12,246**	**16,678**	3,835	328	151	262	249	739	1	**5,565**	**9,909**
2025-26	10,993	610	274	472	214	549	1	**13,114**	**17,769**	4,126	340	159	268	252	799	1	**5,946**	**10,547**
2026-27	11,708	630	287	482	216	588	1	**13,912**	**18,771**	4,395	352	167	274	255	855	1	**6,297**	**11,136**
2027-28	12,469	651	301	491	218	629	1	**14,760**	**19,836**	4,680	363	175	279	257	915	1	**6,670**	**11,762**
2028-29	13,280	673	315	501	220	673	1	**15,662**	**20,966**	4,985	375	183	285	260	979	1	**7,067**	**12,428**
2029-30	14,143	695	330	511	222	720	1	**16,622**	**22,167**	5,309	388	191	290	262	1,047	1	**7,489**	**13,135**
2030-31	15,062	718	345	521	224	770	2	**17,642**	**23,443**	5,654	400	200	296	265	1,120	2	**7,938**	**13,888**
2031-32	15,770	735	357	529	226	809	2	**18,429**	**24,427**	5,919	410	207	301	267	1,178	2	**8,284**	**14,470**
2032-33	16,511	753	370	537	228	851	2	**19,251**	**25,455**	6,198	420	215	305	269	1,238	2	**8,646**	**15,079**
2033-34	17,287	771	383	545	230	894	2	**20,111**	**26,530**	6,489	430	222	310	271	1,301	2	**9,025**	**15,716**
2034-35	18,100	789	396	553	232	940	2	**21,012**	**27,654**	6,794	440	230	314	273	1,367	2	**9,421**	**16,383**
2035-36	18,950	808	410	561	234	988	2	**21,953**	**28,829**	7,113	451	238	319	276	1,437	2	**9,836**	**17,081**
2036-37	19,670	824	421	568	235	1,028	2	**22,748**	**29,817**	7,383	459	245	323	277	1,496	2	**10,185**	**17,668**
2037-38	20,418	839	433	574	236	1,070	2	**23,573**	**30,842**	7,664	468	252	326	279	1,557	2	**10,548**	**18,277**
2038-39	21,194	855	445	580	238	1,114	2	**24,429**	**31,905**	7,955	477	259	330	281	1,621	2	**10,924**	**18,909**
2039-40	21,999	872	458	587	239	1,160	2	**25,316**	**33,008**	8,257	486	266	333	282	1,687	2	**11,315**	**19,565**
2040-41	22,835	888	471	593	241	1,207	2	**26,237**	**34,151**	8,571	495	273	337	284	1,757	2	**11,720**	**20,246**
2041-42	23,703	905	484	600	242	1,257	2	**27,193**	**35,336**	8,897	505	281	341	286	1,829	2	**12,140**	**20,952**
2042-43	24,604	922	497	606	244	1,309	3	**28,184**	**36,565**	9,235	514	289	345	287	1,904	3	**12,576**	**21,685**
2043-44	25,539	940	511	613	245	1,362	3	**29,212**	**37,840**	9,586	524	297	348	289	1,982	3	**13,029**	**22,445**
	TP3									TP4								
	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2024-25	4,640	324	169	279	193	824	1	**6,430**	**10,994**	973	8	71	179	179	681	1	**2,092**	**5,247**
2025-26	4,993	336	178	286	195	891	1	**6,880**	**11,725**	1,047	8	75	183	181	736	1	**2,232**	**5,595**

	Car/Taxi /LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV /Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2026-27	5,317	347	187	291	197	953	1	**7,294**	**12,400**	1,115	9	78	187	183	788	1	**2,361**	**5,918**
2027-28	5,663	359	195	297	199	1,020	1	**7,735**	**13,117**	1,187	9	82	191	185	843	1	**2,498**	**6,262**
2028-29	6,031	371	205	303	201	1,091	1	**8,203**	**13,880**	1,265	9	86	195	187	902	1	**2,644**	**6,629**
2029-30	6,423	383	214	309	203	1,168	1	**8,702**	**14,691**	1,347	9	90	198	189	965	1	**2,800**	**7,020**
2030-31	6,840	396	224	315	205	1,249	2	**9,232**	**15,554**	1,434	10	94	202	190	1,033	2	**2,965**	**7,436**
2031-32	7,162	405	232	320	207	1,313	2	**9,641**	**16,222**	1,502	10	98	205	192	1,085	2	**3,093**	**7,761**
2032-33	7,498	415	240	325	209	1,380	2	**10,069**	**16,921**	1,572	10	101	208	193	1,141	2	**3,228**	**8,100**
2033-34	7,851	425	249	330	210	1,450	2	**10,517**	**17,653**	1,646	10	104	212	195	1,199	2	**3,368**	**8,456**
2034-35	8,220	435	257	335	212	1,524	2	**10,985**	**18,419**	1,724	11	108	215	197	1,260	2	**3,516**	**8,830**
2035-36	8,606	445	266	340	214	1,602	2	**11,475**	**19,220**	1,805	11	112	218	198	1,324	2	**3,670**	**9,221**
2036-37	8,933	454	274	344	215	1,668	2	**11,889**	**19,895**	1,873	11	115	220	199	1,378	2	**3,800**	**9,550**
2037-38	9,273	462	282	347	216	1,736	2	**12,319**	**20,595**	1,944	11	118	223	201	1,435	2	**3,934**	**9,893**
2038-39	9,625	471	289	351	217	1,807	2	**12,764**	**21,322**	2,018	12	122	225	202	1,494	2	**4,074**	**10,248**
2039-40	9,991	480	298	355	219	1,881	2	**13,226**	**22,076**	2,095	12	125	228	203	1,555	2	**4,220**	**10,618**
2040-41	10,370	489	306	359	220	1,959	2	**13,706**	**22,859**	2,175	12	129	230	204	1,619	2	**4,371**	**11,002**
2041-42	10,765	499	314	363	221	2,039	2	**14,203**	**23,671**	2,257	12	132	233	205	1,685	2	**4,527**	**11,401**
2042-43	11,174	508	323	367	223	2,122	3	**14,720**	**24,514**	2,343	13	136	235	207	1,754	3	**4,690**	**11,815**
2043-44	11,598	518	332	371	224	2,209	3	**15,255**	**25,390**	2,432	13	140	238	208	1,826	3	**4,859**	**12,247**

Table 6-13: Projected Tollable AADT (Optimistic Scenario)

	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
	TP1									TP2								
2024-25	10,217	588	260	461	211	508	1	**12,246**	**16,678**	3,835	328	151	262	249	739	1	**5,565**	**9,909**
2025-26	11,055	612	276	473	214	553	1	**13,183**	**17,857**	4,149	341	160	269	252	804	1	**5,977**	**10,600**
2026-27	11,884	635	291	484	216	597	1	**14,109**	**19,022**	4,461	354	169	275	255	869	1	**6,385**	**11,285**
2027-28	12,775	660	307	496	219	646	1	**15,103**	**20,271**	4,795	368	178	282	258	940	1	**6,822**	**12,020**
2028-29	13,733	685	324	508	222	698	1	**16,170**	**21,609**	5,155	382	188	289	261	1,016	1	**7,292**	**12,809**
2029-30	14,763	711	341	520	224	755	1	**17,316**	**23,043**	5,541	396	198	296	265	1,098	1	**7,796**	**13,656**
2030-31	15,871	738	360	533	227	816	2	**18,545**	**24,581**	5,957	411	209	303	268	1,187	2	**8,337**	**14,565**
2031-32	16,759	758	375	542	229	865	2	**19,530**	**25,809**	6,291	423	218	308	270	1,258	2	**8,769**	**15,290**
2032-33	17,698	779	390	552	231	917	2	**20,569**	**27,104**	6,643	435	227	314	273	1,334	2	**9,226**	**16,055**
2033-34	18,689	801	406	562	233	972	2	**21,665**	**28,468**	7,015	447	236	319	275	1,414	2	**9,708**	**16,863**
2034-35	19,736	824	423	572	235	1,030	2	**22,821**	**29,907**	7,408	459	246	325	278	1,498	2	**10,216**	**17,714**
2035-36	20,841	847	440	582	237	1,092	2	**24,041**	**31,423**	7,823	472	256	331	280	1,588	2	**10,752**	**18,613**
2036-37	21,779	866	455	590	239	1,144	2	**25,075**	**32,705**	8,175	483	264	335	282	1,665	2	**11,206**	**19,373**
2037-38	22,759	886	470	597	241	1,199	2	**26,154**	**34,043**	8,543	494	273	340	284	1,744	2	**11,680**	**20,166**
2038-39	23,783	907	485	605	242	1,257	2	**27,281**	**35,439**	8,927	506	282	344	286	1,828	2	**12,175**	**20,994**
2039-40	24,853	927	501	613	244	1,317	3	**28,458**	**36,897**	9,329	517	291	348	288	1,916	3	**12,692**	**21,860**
2040-41	25,971	949	518	621	246	1,380	3	**29,688**	**38,418**	9,748	529	301	353	290	2,008	3	**13,232**	**22,764**
2041-42	27,140	971	535	629	247	1,446	3	**30,972**	**40,006**	10,187	541	311	358	292	2,104	3	**13,796**	**23,708**
2042-43	28,361	993	553	637	249	1,516	3	**32,312**	**41,664**	10,646	554	321	362	294	2,205	3	**14,385**	**24,694**
2043-44	29,638	1,016	571	646	251	1,589	3	**33,713**	**43,394**	11,125	567	332	367	296	2,311	3	**15,000**	**25,725**
	TP3									TP4								
	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2024-25	4,640	324	169	279	193	824	1	**6,430**	**10,994**	973	8	71	179	179	681	1	**2,092**	**5,247**
2025-26	5,020	337	179	286	196	897	1	**6,916**	**11,786**	1,053	8	75	184	181	741	1	**2,243**	**5,625**

	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2026-27	5,397	350	189	293	198	969	1	**7,397**	**12,570**	1,132	9	79	188	184	801	1	**2,393**	**6,001**
2027-28	5,802	363	199	300	200	1,048	1	**7,914**	**13,412**	1,217	9	84	193	186	866	1	**2,555**	**6,406**
2028-29	6,237	377	210	307	203	1,132	1	**8,468**	**14,316**	1,308	9	88	197	188	936	1	**2,728**	**6,842**
2029-30	6,705	392	222	315	205	1,224	1	**9,064**	**15,287**	1,406	10	93	202	190	1,012	1	**2,914**	**7,311**
2030-31	7,208	406	234	322	208	1,323	2	**9,703**	**16,330**	1,511	10	98	207	192	1,094	2	**3,114**	**7,816**
2031-32	7,611	418	244	328	209	1,403	2	**10,215**	**17,163**	1,596	10	102	210	194	1,159	2	**3,275**	**8,219**
2032-33	8,037	430	254	334	211	1,487	2	**10,755**	**18,042**	1,685	11	107	214	196	1,229	2	**3,444**	**8,646**
2033-34	8,487	442	264	340	213	1,576	2	**11,324**	**18,969**	1,780	11	111	218	198	1,303	2	**3,622**	**9,097**
2034-35	8,963	454	275	346	215	1,671	2	**11,926**	**19,948**	1,879	11	116	222	199	1,381	2	**3,811**	**9,574**
2035-36	9,465	467	286	352	217	1,771	2	**12,560**	**20,981**	1,985	12	120	226	201	1,464	2	**4,010**	**10,078**
2036-37	9,891	477	296	357	219	1,856	2	**13,097**	**21,855**	2,074	12	124	229	203	1,534	2	**4,178**	**10,503**
2037-38	10,336	488	305	362	220	1,945	2	**13,659**	**22,767**	2,167	12	128	232	204	1,608	2	**4,354**	**10,949**
2038-39	10,801	500	316	366	222	2,038	2	**14,245**	**23,721**	2,265	12	133	235	206	1,685	2	**4,537**	**11,415**
2039-40	11,287	511	326	371	223	2,136	3	**14,857**	**24,716**	2,367	13	137	238	207	1,766	3	**4,730**	**11,902**
2040-41	11,795	523	337	376	225	2,239	3	**15,496**	**25,757**	2,473	13	141	241	208	1,850	3	**4,930**	**12,412**
2041-42	12,326	535	348	381	226	2,346	3	**16,164**	**26,844**	2,585	13	146	244	210	1,939	3	**5,140**	**12,945**
2042-43	12,880	547	359	386	228	2,459	3	**16,862**	**27,980**	2,701	14	151	247	211	2,032	3	**5,359**	**13,503**
2043-44	13,460	560	371	391	229	2,577	3	**17,591**	**29,166**	2,822	14	156	251	213	2,130	3	**5,589**	**14,086**

Table 6-14: Projected Tollable AADT (Pessimistic Scenario)

	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
	TP1									TP2								
2024-25	10,217	588	260	461	211	508	1	**12,246**	**16,678**	3,835	328	151	262	249	739	1	**5,565**	**9,909**
2025-26	10,922	609	273	471	213	546	1	**13,035**	**17,671**	4,100	339	159	268	252	794	1	**5,912**	**10,491**
2026-27	11,512	625	284	479	215	577	1	**13,693**	**18,498**	4,321	349	165	272	254	840	1	**6,202**	**10,977**
2027-28	12,133	642	295	487	217	611	1	**14,386**	**19,368**	4,554	358	171	277	256	888	1	**6,506**	**11,488**

	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2028-29	12,789	659	306	496	219	646	1	**15,116**	**20,283**	4,800	368	178	282	259	940	1	**6,827**	**12,026**
2029-30	13,479	677	318	504	221	684	1	**15,884**	**21,245**	5,059	378	185	286	261	994	1	**7,165**	**12,593**
2030-31	14,207	695	331	513	223	723	1	**16,693**	**22,257**	5,333	388	192	291	263	1,052	1	**7,521**	**13,189**
2031-32	14,761	709	340	519	224	754	1	**17,308**	**23,026**	5,541	396	197	295	265	1,096	1	**7,791**	**13,643**
2032-33	15,337	723	349	525	226	785	2	**17,947**	**23,824**	5,757	404	203	298	266	1,142	2	**8,072**	**14,114**
2033-34	15,935	738	359	531	227	818	2	**18,610**	**24,652**	5,981	412	209	302	268	1,190	2	**8,363**	**14,603**
2034-35	16,556	753	369	538	228	853	2	**19,299**	**25,511**	6,215	420	214	306	270	1,240	2	**8,666**	**15,110**
2035-36	17,202	768	379	544	230	888	2	**20,013**	**26,402**	6,457	428	220	309	271	1,292	2	**8,980**	**15,638**
2036-37	17,735	780	388	549	231	918	2	**20,603**	**27,136**	6,657	435	225	312	273	1,335	2	**9,239**	**16,070**
2037-38	18,285	792	397	554	232	948	2	**21,211**	**27,891**	6,863	442	231	315	274	1,379	2	**9,506**	**16,517**
2038-39	18,852	805	406	559	233	979	2	**21,837**	**28,669**	7,076	449	236	318	275	1,425	2	**9,781**	**16,976**
2039-40	19,436	818	416	564	235	1,012	2	**22,482**	**29,471**	7,296	456	241	320	277	1,472	2	**10,064**	**17,450**
2040-41	20,039	831	425	569	236	1,045	2	**23,147**	**30,296**	7,522	464	247	323	278	1,520	2	**10,356**	**17,938**
2041-42	20,660	844	435	574	237	1,080	2	**23,832**	**31,146**	7,755	471	253	326	280	1,570	2	**10,657**	**18,441**
2042-43	21,301	858	445	579	238	1,115	2	**24,538**	**32,022**	7,995	479	258	329	281	1,622	2	**10,967**	**18,959**
2043-44	21,961	872	455	585	239	1,152	2	**25,266**	**32,924**	8,243	486	264	332	282	1,676	2	**11,286**	**19,493**
	TP3									**TP4**								
	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2024-25	4,640	324	169	279	193	824	1	**6,430**	**10,994**	973	8	71	179	179	681	1	**2,092**	**5,247**
2025-26	4,960	335	177	285	195	885	1	**6,839**	**11,660**	1,040	8	75	183	181	731	1	**2,219**	**5,565**
2026-27	5,228	344	184	290	197	936	1	**7,181**	**12,217**	1,096	9	77	186	183	774	1	**2,326**	**5,831**
2027-28	5,510	354	192	295	199	991	1	**7,541**	**12,803**	1,156	9	80	189	184	819	1	**2,438**	**6,112**
2028-29	5,808	363	199	300	200	1,048	1	**7,920**	**13,419**	1,218	9	84	192	186	866	1	**2,556**	**6,409**
2029-30	6,122	373	207	305	202	1,109	1	**8,319**	**14,069**	1,284	9	87	196	188	916	1	**2,681**	**6,721**
2030-31	6,452	383	215	310	204	1,173	1	**8,739**	**14,752**	1,353	9	90	199	189	970	1	**2,812**	**7,051**
2031-32	6,704	391	221	314	205	1,222	1	**9,059**	**15,273**	1,406	10	93	201	190	1,010	1	**2,912**	**7,302**

	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi /LGV	Bus	LCV/Mini bus	2 Axle Truck	3 Axle Truck	MAV	OSV	Tot Veh.	Tot. PCU
2032-33	6,965	399	227	318	207	1,274	2	**9,390**	**15,813**	1,461	10	95	204	192	1,053	2	**3,015**	**7,564**
2033-34	7,237	407	233	322	208	1,327	2	**9,735**	**16,374**	1,518	10	98	206	193	1,097	2	**3,123**	**7,835**
2034-35	7,519	415	240	325	209	1,383	2	**10,093**	**16,957**	1,577	10	101	209	194	1,143	2	**3,235**	**8,118**
2035-36	7,812	423	247	329	210	1,441	2	**10,464**	**17,563**	1,638	10	104	211	195	1,191	2	**3,351**	**8,411**
2036-37	8,054	430	252	332	211	1,489	2	**10,771**	**18,060**	1,689	11	106	213	196	1,230	2	**3,447**	**8,652**
2037-38	8,304	437	258	335	212	1,538	2	**11,086**	**18,573**	1,741	11	108	215	197	1,271	2	**3,545**	**8,900**
2038-39	8,562	444	264	338	213	1,589	2	**11,411**	**19,101**	1,795	11	111	217	198	1,313	2	**3,647**	**9,156**
2039-40	8,827	451	270	341	214	1,641	2	**11,747**	**19,645**	1,851	11	113	219	199	1,356	2	**3,752**	**9,420**
2040-41	9,101	458	276	344	216	1,695	2	**12,092**	**20,206**	1,908	11	116	221	200	1,401	2	**3,860**	**9,693**
2041-42	9,383	465	283	347	217	1,751	2	**12,448**	**20,784**	1,968	11	119	223	201	1,447	2	**3,971**	**9,974**
2042-43	9,674	473	289	351	218	1,809	2	**12,815**	**21,380**	2,029	12	122	225	202	1,495	2	**4,086**	**10,263**
2043-44	9,973	480	296	354	219	1,869	2	**13,193**	**21,994**	2,091	12	124	227	203	1,544	2	**4,204**	**10,563**

7 TOLL REVENUE FORECAST

Toll revenue is projected for the remaining years of concession period based on the current AADT and recommended growth rates. Toll/User fee is projected for the future years as per the provisions of the Concession Agreement.

7.1 Input for Revenue Estimation

7.1.1 Base Year Tollable AADT (2024-25)

The AADT of tollable vehicles for the base year (2024-25) at the toll plaza locations is shown in Table 5.1. This AADT excludes the exempted vehicles presented in Section 3.1.3.

Table 7-1: Base Year Tollable AADT (2024-25)

	TP1 (Rasidpura TP)	TP2 (Tidiyasar TP)	TP3 (Lakhasar TP)	TP4 (Udairamsar TP)
Car/Taxi/LGV	7,801	3,394	4,006	918
Bus	588	328	324	8
LCV/Mini Bus	237	138	162	70
2AT	447	257	274	177
3AT	210	249	193	179
MAV	501	738	823	681
OSV	1	1	1	1
Total Veh.	**9,786**	**5,104**	**5,782**	**2,034**
Total PCU	**14,154**	**9,427**	**10,326**	**5,182**

Note: Toll paying traffic, which excludes the toll exempted vehicles,

7.1.2 Toll Policy

As per Schedule R of Concession agreement, the toll rates for computation of toll revenues to be adopted from the National Highways Fee (Determination of rates and collection) Rules, 2008, along with amendment rules of 2010 and 2011. Various trip categories are described below:

- **Single Entry:** Mechanical vehicle who makes use of the section of National Highway, permanent bridge, bypass or tunnel for one way journey once in 24 hrs.
- **Return trip:** Driver or person who is in charge of a mechanical vehicle who makes use of the section of National Highway, permanent bridge, bypass or tunnel for two one-way journeys within a 24 hrs. (from the time of payment) may opt for the return pass.
- **Local monthly pass (for cars):** Person who owns mechanical vehicle, registered for non-commercial purpose and resides within a distance of 20 Km from the toll plaza location is eligible for the local pass.
- **Local concession for commercial vehicles:** As per the revised toll notification, commercial vehicles registered within the district in which the toll plaza is located (excluding National Permit) are eligible for local concession, fee is 50% of single trip fee.

- **Monthly pass:** Driver, Owner or person who is in charge of a mechanical vehicle who makes use of the toll section frequently during a month, may opt to purchase a monthly pass. Monthly pass amount is fixed as two-third of the fee for 50 single journeys in a period of one month.

7.1.3 Toll Ticket/Trip Categorisation

As per Schedule R of Concession agreement, the toll rates for computation of toll revenues to be adopted from the National Highways Fee (Determination of rates and collection) Rules, 2008, along with amendment rules of 2010 and 2011 are relevant to toll fee. Trip categorization is estimated from the toll traffic (2023-24) and is adopted in the study (refer Table 7. 2).

Table 7-2: Trip categorization as per NHAI Toll Policy

	Single	Return	Local Concession	Local monthly Pass (Cars)	Monthly pass	Total
TP1						
Car	38.6%	50.7%	2.1%	8.6%	0.0%	100%
LCV	41.8%	40.2%	5.9%	0.0%	12.1%	100%
BUS	8.7%	83.6%	6.4%	0.0%	1.2%	100%
2 AT	54.0%	36.0%	9.7%	0.0%	0.3%	100%
3 AT	68.1%	29.6%	2.3%	0.0%	0.0%	100%
MAV	79.3%	18.6%	2.2%	0.0%	0.0%	100%
OSV	97.8%	2.2%	0.0%	0.0%	0.0%	100%
TP2						
Car	51.2%	47.3%	0.7%	0.8%	0.0%	100.0%
LCV	54.6%	44.6%	0.8%	0.0%	0.0%	100.0%
BUS	11.1%	86.1%	2.8%	0.0%	0.0%	100.0%
2 AT	57.5%	40.3%	2.2%	0.0%	0.0%	100.0%
3 AT	62.5%	33.5%	4.0%	0.0%	0.0%	100.0%
MAV	76.8%	22.2%	0.9%	0.0%	0.0%	100.0%
OSV	82.7%	17.3%	0.0%	0.0%	0.0%	100.0%
TP3						
Car	38.4%	57.8%	2.3%	1.5%	0.0%	100.0%
LCV	37.9%	42.2%	19.9%	0.0%	0.0%	100.0%
BUS	7.8%	56.8%	35.5%	0.0%	0.0%	100.0%
2 AT	38.8%	42.2%	19.0%	0.0%	0.0%	100.0%
3 AT	54.4%	38.8%	6.8%	0.0%	0.0%	100.0%
MAV	66.0%	30.6%	3.3%	0.0%	0.0%	100.0%
OSV	67.0%	33.0%	0.0%	0.0%	0.0%	100.0%
TP4						
Car	54.0%	44.8%	0.1%	1.1%	0.0%	100.0%
LCV	55.0%	42.7%	2.3%	0.0%	0.0%	100.0%
BUS	61.0%	33.7%	5.3%	0.0%	0.0%	100.0%
2 AT	62.3%	36.2%	1.5%	0.0%	0.0%	100.0%
3 AT	65.9%	32.2%	1.9%	0.0%	0.0%	100.0%
MAV	70.9%	22.2%	6.8%	0.0%	0.0%	100.0%
OSV	95.1%	4.9%	0.0%	0.0%	0.0%	100.0%

Source: SBHL toll traffic data

7.1.4 Growth Rates

Summary of recommended growth rates are given in Table 7.3.

Table 7-3: Recommended Growth Rates

Vehicle Type	2025-26	Period (2026-27 to 2030-31)	Period (2031- 32 to 2035-36)	Period (> 2035-36)
2 axle Truck	2.4%	2.0%	1.5%	1.1%
3 axle Truck	1.2%	1.0%	0.8%	0.6%
MAV	8.1%	7.0%	5.1%	4.1%
LCV/Mini Bus	5.5%	4.7%	3.5%	2.8%
Car/Taxi/LGV	7.6%	6.5%	4.7%	3.8%
Bus	3.8%	3.3%	2.4%	1.9%

7.1.5 Toll Fee Rates

As per Schedule R of SBHL, the Concessionaire was authorised to collect the fees from the users of the project highway from the date of Commercial Operations of the Project Highway pursuant to the National Highways Fee (Determination of Rates and Collection) Rules, 2008, along with the amendment rules 2010 & 2011. The applicable toll rates are:

- **Base rate of fee for highway with four lane or more lanes:** The rate of fee for use of a section of national highway of four or more lanes shall, for the base year 2007-2008 be the product of the length of such section multiplied by the following rates namely:

Type of Vehicle	Base Rate of fee per km (in rupees) (2007-08 rate)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Trucks	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (four to six axles)	3.45
Oversized vehicles (seven or more axles)	4.20

- Rate for two lane highway: The rate of fee for a two-lane section of the national highway, on which an average investment for upgradation has exceeded Rs. 1.0 crores/km (applicable to the two -lane section of the project road) shall be 60% of the above rate.
- The rate of fee for using a bypass forming part of the national highway, constructed with a cost above Rs. 10 crores or above, for the base year of 2007-08 shall be one and half times the rate of the fee mentioned above.

These rates are applicable for one-way (single) journey.

- **Daily/Return Pass & Monthly Pass Rate:**

Amount Payable	Maximum number of one way journeys allowed	Period of Validity
One and half times of the fee for one way journey	Two	Twenty four hours from the time of payment
Two-third of amount of the fee payable for fifty single journeys	Fifty	One month from date of payment

- **Monthly pass for Local Car Traffic:** The monthly fee for local car traffic (residing within 20 km radius of the toll plaza), at the base rate for the year 2007-2008 is of rupees One hundred and Fifty per calendar month.
- **Concession for Commercial Vehicles**: Fee for commercial vehicles (excluding vehicles plying under National Permit) registered in the district where the toll plaza falls will be 50% of the prescribed rate for the vehicle category

The toll amount, by multiplying the above rates with the control length/tollable length of the toll plaza shall be rounded to the nearest five rupees.

7.1.6 Toll Plaza Control lengths

The tollable length/control lengths of the toll plazas as per the Schedule R of the project are presented in Table 7.4.

Table 7-4: Toll Plaza Control Length

Length of Tolling (Km)	TP1	TP2	TP3	TP4
Length of Tolling (4Lane)	17.78	0	0	0
Length of Tolling (2Lane)	36.757	69.5	73.338	0
Bypass Length (2 Lane)	19.463*	3.5**	0	17.24***
Total	**74.000**	**73.000**	**73.338**	**17.240**

*Source: Schedule R, Note: Cost: *Sikar bypass- Rs. 25.34 crores, **Realignment-Rs.20.07 crores, ***Bikaner bypass-Rs. 50.12 crores*

7.1.7 Annual Toll Revision

Annual Revision of rate of fee: The 2007-08 toll rates have been increased without compounding by three per cent each year with effect from the 1st day of April 2008 and such increased rate has been deemed to be the base rate for the subsequent years.

The applicable base rates have been revised annually with effect from April 1st, each year to reflect the increase in wholesale price index between the week ending on January 6, 2007 and the week ending on or immediately after January 1 of the year in which sub revision is undertaken but such revision shall be restricted for forty percent of the increase in wholesale price index. The past WPI

values has been adopted from Source: http://eaindustry.nic.in/default.htm/ Ministry of Commerce and Industry, Govt. of India. The formula for determining the applicable rate of fee is as follows:

$$\text{Applicable rate of fee} = \text{Base rate} + \text{base rate} \times \left\{ \frac{\text{WPIA} - \text{WPIB}}{\text{WPIB}} \right\} \times 0.4$$

The annual fluctuation of WPI in the past (refer Table given below). As per the annual growth of WPI, it is grown at an average rate of 4.9% per annum. A similar trend is considered for the future also. However, actual WPI growth observed in last three to four years data in some year muted and in some years in double digits growth. Hence, a value of 3.5% is adopted for 2025-26, 6.5% for the next three years and thereafter 5.0%.

Year	WPI Actual Index (2004-05 series)	Annual Fluctuation %
2007	112.2	-
2008	116.7	4.0
2009	124.5	6.7
2010	133.4	7.1
2011	146.0	9.4
2012	157.3	7.7
2013	168.6	7.2
2014	179.6	6.5
2015	178.7	-0.5
2016	176.8	-1.1
2017	183.3	3.7
2018	189.9	3.6
2019	196.4	3.4
2020	201.8	2.8
2021	205.8	2.0
2022	235.2	14.3
2023-24	247.0	5.02
2024-25	249.1	0.86
Average GR/Annum		**4.9**

Source: http://eaindustry.nic.in/linking_factor0405.asp,

Based on the above, the toll fee has been calculated for various type of toll category till the end of concession period. The present toll amount applicable for Apr. 2024 to Mar. 2025 (with effect from 01.04.2024) at the toll plazas are presented in Table 7.5.

Table 7-5: Toll amount in Rs. (Apr. 2024 – Mar. 2025)

Category of Vehicles	Fee for Single Journey	Fee for Return Journey within a day	Fee for Monthly Pass for 50 single journeys in a month	Fee for single journey for the commercial vehicles registered within the district of fee plaza
TP 1				
Car, Jeep, Van or Light Motor Vehicle	85	125	2,805	40
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	135	205	4,530	70
Bus or Truck (Two Axle)	285	425	9,490	140
Three-Axle Commercial Vehicle	310	465	10,350	155
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Four to Six Axle)	445	670	14,880	225
Oversized Vehicle (Seven or More Axle)	545	815	18,115	270
TP 2				
Car, Jeep, Van or Light Motor Vehicle	65	100	2,195	35
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	105	160	3,540	55
Bus or Truck (Two Axle)	225	335	7,420	110
Three-Axle Commercial Vehicle	245	365	8,095	120
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Four to Six Axle)	350	525	11,635	175
Oversized Vehicle (Seven or More Axle)	425	640	14,165	215
TP 3				
Car, Jeep, Van or Light Motor Vehicle	65	95	2,150	30
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	105	155	3,475	50
Bus or Truck (Two Axle)	220	330	7,280	110
Three-Axle Commercial Vehicle	240	355	7,945	120
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Four to Six Axle)	345	515	11,420	170
Oversized Vehicle (Seven or More Axle)	415	625	13,900	210
TP 4				
Car, Jeep, Van or Light Motor Vehicles	25	35	760	10
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	35	55	1,225	20
Bus or Truck (Two Axles)	75	115	2,565	40
Three-axle commercial vehicles	85	125	2,800	40
HCM or EME or MAV (four to six)	120	180	4,025	60

Category of Vehicles	Fee for Single Journey	Fee for Return Journey within a day	Fee for Monthly Pass for 50 single journeys in a month	Fee for single journey for the commercial vehicles registered within the district of fee plaza
Oversized Vehicles (Seven or more axles)	145	220	4,900	75

Note: The rates for monthly pass applicable for local cars (personal non-commercial vehicles (cars) residing with in a distance of 20 Km from the toll plaza) is Rs.340/-

7.2 Annual Toll Revenue

The annual toll revenue is computed assuming toll collection for 365 days in a year. As per SBHL's letter no. SBHL/PRJ/TEC/ICO-581/3319, dated June 21, 2023, regarding Effect of Variations in Traffic Growth, an increase of concession period from 25 years to 30 years is expected and hence considered in the revenue projection. As per the concession document, the Actual Average Traffic and the impact on Concession Period has to be computed as on April 1, 2024, after considering the traffic prevailing on first anniversary of Target Date (March 31, 2023). This report provides the revenue for the full year of 2043-44. However, the revenue for 2043-44 may change depending on the Govt. approved end date of the concession period.

The annual revenue forecast is summarised in the Table 7.6 for the four TPs under normal scenario. The revenue summary for Optimistic and Pessimistic scenarios are presented in Table 7.7 and in Table 7.8 respectively.

Table 7-6: Projected Annual Toll Revenue Summary (Rs. in crores) under Normal Scenario

Year	TP1	TP2	TP3	TP4	Total
2024-25	38.31	22.37	22.65	4.49	87.81
2025-26	42.62	24.95	24.93	4.96	97.46
2026-27	47.80	27.89	28.03	5.61	109.32
2027-28	53.46	30.85	31.65	6.17	122.13
2028-29	59.32	34.50	35.45	7.02	136.28
2029-30	65.93	38.52	39.42	7.86	151.72
2030-31	73.30	42.88	44.21	8.61	169.00
2031-32	79.56	46.87	48.43	9.58	184.44
2032-33	87.99	51.51	52.99	10.48	202.97
2033-34	96.00	56.68	58.41	11.52	222.62
2034-35	104.73	61.96	64.15	12.69	243.53
2035-36	115.81	67.95	70.05	13.89	267.69
2036-37	125.24	74.42	76.49	15.08	291.23
2037-38	137.14	80.89	83.34	16.39	317.77
2038-39	148.99	88.02	91.21	17.94	346.15
2039-40	162.55	96.11	99.03	19.77	377.46
2040-41	177.10	104.51	108.98	21.51	412.10
2041-42	192.78	114.31	118.28	23.60	448.98
2042-43	210.55	124.66	129.12	25.76	490.08

Year	TP1	TP2	TP3	TP4	Total
2043-44	228.68	135.54	141.42	27.95	533.58

Table 7-7: Projected Annual Toll Revenue Summary (Rs. in crores) under Optimistic Scenario

Year	TP1	TP2	TP3	TP4*	Total
2024-25	38.31	22.37	22.65	4.49	87.81
2025-26	42.83	25.08	25.06	4.98	97.94
2026-27	48.42	28.26	28.41	5.69	110.78
2027-28	54.60	31.52	32.37	6.31	124.80
2028-29	61.09	35.56	36.57	7.24	140.46
2029-30	68.47	40.04	41.03	8.18	157.72
2030-31	76.77	44.97	46.43	9.05	177.22
2031-32	83.95	49.53	51.25	10.15	194.87
2032-33	93.54	54.84	56.51	11.19	216.08
2033-34	102.83	60.81	62.79	12.39	238.82
2034-35	113.03	66.98	69.49	13.76	263.27
2035-36	125.96	74.03	76.48	15.18	291.64
2036-37	137.05	81.58	84.05	16.58	319.26
2037-38	151.01	89.23	92.15	18.14	350.53
2038-39	165.06	97.70	101.50	19.97	384.24
2039-40	181.22	107.36	110.91	22.15	421.64
2040-41	198.68	117.48	122.84	24.26	463.26
2041-42	217.63	129.32	134.17	26.80	507.91
2042-43	239.20	141.92	147.40	29.43	557.96
2043-44	261.44	155.29	162.51	32.13	611.38

Table 7-8: Projected Annual Toll Revenue Summary (Rs. in crores) under Pessimistic Scenario

Year	TP1	TP2	TP3	TP4	Total
2024-25	38.31	22.37	22.65	4.49	87.81
2025-26	42.40	24.82	24.79	4.93	96.94
2026-27	47.13	27.49	27.61	5.53	107.76
2027-28	52.25	30.13	30.89	6.02	119.30
2028-29	57.45	33.39	34.27	6.78	131.90
2029-30	63.27	36.93	37.75	7.52	145.47
2030-31	69.70	40.73	41.93	8.17	160.52
2031-32	75.13	44.20	45.59	9.02	173.93
2032-33	82.50	48.22	49.50	9.79	190.01
2033-34	89.38	52.67	54.16	10.68	206.89
2034-35	96.82	57.15	59.03	11.67	224.67
2035-36	106.28	62.20	63.97	12.67	245.12
2036-37	114.23	67.68	69.40	13.66	264.97
2037-38	124.30	73.09	75.11	14.75	287.24
2038-39	134.19	79.01	81.64	16.03	310.87
2039-40	145.47	85.70	88.06	17.54	336.77
2040-41	157.49	92.58	96.24	18.95	365.25
2041-42	170.35	100.58	103.75	20.65	395.33
2042-43	184.85	108.95	112.49	22.37	428.66
2043-44	199.48	117.66	122.36	24.10	463.60

Consultancy Services For Preparation of Traffic Report for Independent assessment of Traffic Forecasting and Toll Revenue Estimations
Pune Sholapur Road Development Company Limited (PSRDCL)

Final Traffic Report

OCTOBER-2024

CLIENT

PSRDCL

Pune Sholapur Road Development Company Limited

CONSULTANT

Segmental Consulting & Infrastructure Advisory Private Limited

Updating of Report for Independent Assessment of Traffic Forecasting and Toll Revenue Estimations for Pune Sholapur Road Development Company Limited (PSRDCL)

October 2024

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1 INTRODUCTION

1.1 Background

Pune Sholapur Road Development Company Limited (PSRDCL) has appointed Segmental Infrastructure & Management Services as the Traffic Consultant to assess the traffic forecasting and toll revenue estimation for the Pune Sholapur Highway, which is a section of the National Highway 65 (Old NH 9) from Km. 144.9 to Km. 249.0.

The project road was upgraded to four lanes with paved shoulders in 2011-12 under the design-build-finance-operate-transfer basis under NHDP Phase III program. A concession agreement dated September 30, 2009 was entered into between the National Highway Authority of India (NHAI) and PSRDCL. The project commenced tolling in August 23, 2013. The concession period for this project is 19 years and 295 days commencing from appointed date i.e September 28, 2011 and as per the concession agreement, PSRDCL is entitled to collect fees from project highway users, subject to the National Highways fee rules. PSRDCL has submitted for the extension of concession period for 3 years and 351 days (letter no. PSRDCL/PRJ/TEC/CLO-579/4513 dated 23rd June 2021). Hence the traffic and revenue projections are made upto the year 2036-37.

1.2 Project Road Features

NH 65 runs in the east- west direction through the states of Maharashtra, Karnataka, Telangana, and Andhra Pradesh (total length: 926 km). It starts from Pune (Maharashtra) and ends at Machilipatnam (in Andhra Pradesh). Other cities through which the highway passes are Solapur, Hyderabad, Vijayawada and Machilipatnam. This is made a four-lane road throughout the length with bypasses at major cities like Indapur, Solapur, Hyderabad, Suryapet, etc. It is the prime corridor between Mumbai/ Pune region in the west and Hyderabad/Vijayawada region in the east.

Project road starts from Km. 144.9 (near Indapur in Pune district) and ends at Km. 249.0 near Solapur with a length of 101.30 Kms. The project road falls under two districts of Maharashtra namely Pune and Solapur. The important towns and settlements along the project road are Indapur, Temburni, Mohol and Solapur. In addition to the through traffic (interstate traffic), the project stretch provides seamless connectivity between Pune and Solapur.

NH 52 (running from Sangrur in Punjab and passing through Haryana, Rajasthan, Madhya Pradesh, Maharashtra and end at Akola in Karnataka) crosses the project road at Solapur. The traffic towards Telangana/Andhra Pradesh/Tamil Nadu continue through NH 65 and traffic bound to/from Karnataka divert to NH 52 from the project road at Solapur.

The project road is presented in Figure 1.1. Toll plazas are present at two locations and both are located in Solapur district. Both toll plazas have equal control length of 50.65 Km each(Source: Schedule R of Concession document).

- Toll plaza 1, (Km 173.500, Warwade TP), and
- Toll plaza 2, (Km 69+000, Sawaleshwar TP)

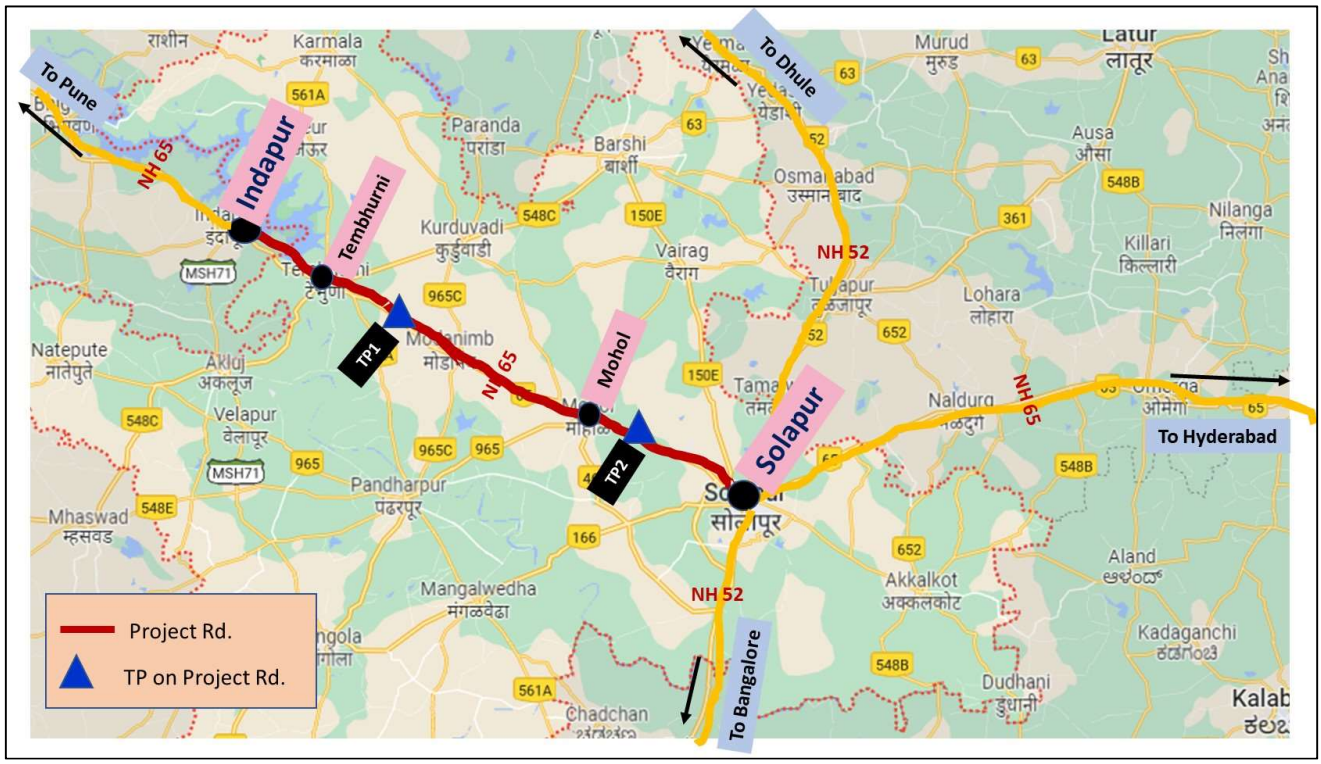


Figure 1-1: Project Road

Views of Toll Plazas

1.3 Objectives and Scope of Services

The prime objective of the present study is to update the traffic and toll revenue forecast based on the actual traffic scenario as of September 2024. The scope of the study is as listed below:

- Updation of the traffic report submitted by consultant in the month of Apr. 2024
- Collection of Class wise Traffic data from the TMS System/Toll Records from the operational toll plazas on the project road till September 2024 to derive the Average Daily Traffic (ADT)
- Establishing seasonality factors using available past traffic data and/or from using fuel sales data or using the past actual traffic data or any relevant data (if needed)
- Estimation of Annual Average Daily Traffic (AADT) for financial year 2024-25 from ADT and adopting suitable seasonal factors
- Updation of projections of traffic and revenue based on the actual traffic and revenue observed for the year 2024-25.

1.4 Organization of the Report

As mentioned above, the present study focuses on updating the traffic report submitted in Apr. 2024 and hence no fresh traffic surveys are carried out. The details of the traffic surveys (OD surveys) done as part of the previous study is reproduced here. The traffic and revenue projections are made using the traffic growth rates of the previous study. The report is organized in seven chapters as given below.

- Chapter 1 Brief background of the project and scope of study
- Chapter 2 Socio economic profile of the project area
- Chapter 3 Toll traffic data analysis and estimation of tollable AADT (2024-25) based on the traffic data from Apr. to Sept. 2024.
- Chapter 4 Traffic OD surveys and data analysis (reproduced from earlier report)
- Chapter 5 Upcoming Road Projects & Impact Assessment
- Chapter 6 Traffic growth rate estimation (reproduced from earlier report) & Traffic Projection
- Chapter 7 Updated Toll revenue projection

2 STUDY AREA PROFILE

As mentioned in Chapter 1, the project road passes through the state of Maharashtra. Hence, the socio-economic profile of Maharashtra is discussed in this chapter.

2.1 Socio-Economic Profile of Maharashtra

Maharashtra occupies the western & central part of India and has 720 km long coastline. The State is surrounded by Gujarat to the north west, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the south east, Karnataka to the south and Goa to the south west. For administrative convenience, the State has been divided into 36 districts and 6 revenue divisions. It has a population of 11.24 crore (2011 census) and a geographical area of about 3.08 lakh sq. km and the state ranks 2nd by population and 3rd in terms of geographical area. Maharashtra is one of the highly urbanised states in India.

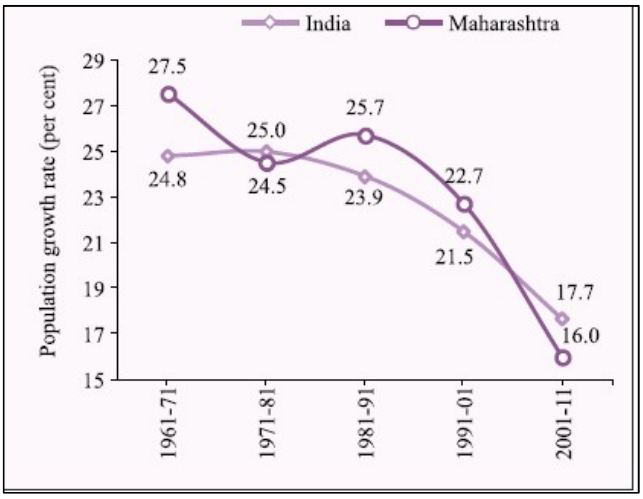
Socioeconomic profile of Maharashtra is presented in **Table 2-1**.

Table 2-1: General Socioeconomic Profile of Maharashtra

Sl. No	Parameters	Values
1	Population	112.37 million
2	Administrative districts	36
3	Population density (persons per sq km)	365
4	Literacy rate	82.3
5	NSDP (for 2021-22 at constant price, 2011 base) Rs. In Crores	1731189
6	Per Capita Income (Rs.)	2,15,233 (2021-22)

Source: Maharashtra Economic Survey 2022-23, Census 2011, RBI

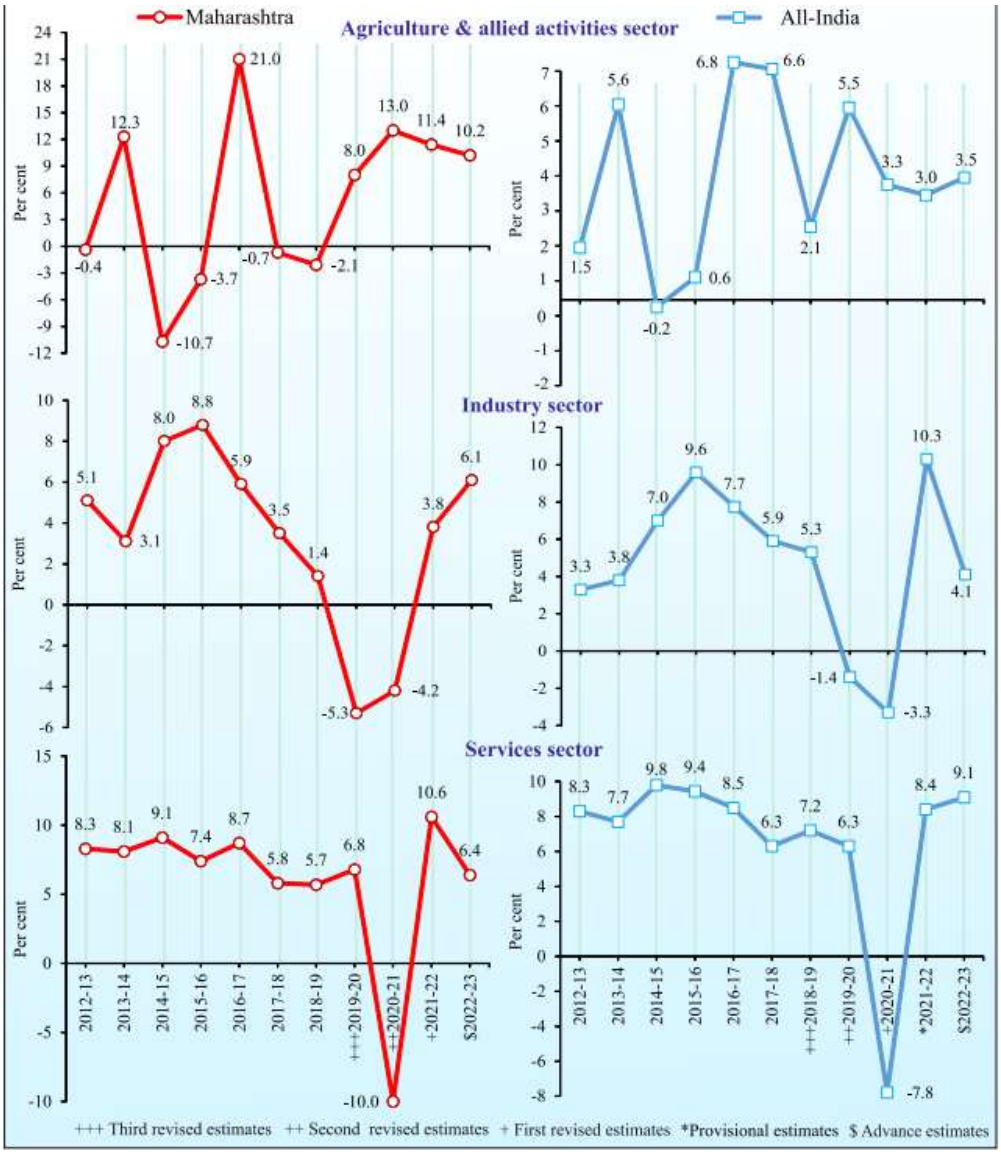
Population Growth: The percentage decadal growth rate of the State population during 2001-2011 has registered sharp decline from 22.7 per cent in 2001 to 16.0 per cent in 2011, a decrease of 6.7 percentage points.



State Income: As per the first revised estimates, the real State Income i.e. NSDP (at constant 2011-12 prices) in 2021-22 is estimated at 17,31,189 crore, showing an increase of 9.1 per cent over

the previous year. The Per Capita State Income is estimated at 2,15,233 during 2021-22 whereas it was 1,83,704 during 2020-21.

In the current (base year 2011-12) series from 2011-12 to 2021-22, the average share of 'Agriculture & allied activities', 'Industry' and 'Services' sector in nominal GVA is 18.4 per cent, 29.6 per cent and 52.0 per cent respectively.



Growth trend in different sectors of the economy (Gross Value Added/Gross State Value Added)

Industry: The State is an industrial hub and has been contributing majorly to the growth of the national economy. The six important industries in the state are cotton textiles, chemicals, machinery, electricals, transport, and metallurgy. The economy of Maharashtra is mainly driven by manufacturing, finance, international trade, mass media, technology, petroleum, fashion, apparel, gems & Jewellery, IT & ITES and tourism. The State has well developed industrial ecosystem for industries viz. automobile (Pune and Aurangabad region), Electronic Systems Design & Manufacturing (Pune region), Pharmaceuticals & Chemicals (Mumbai-Thane, Aurangabad & Pune region), Engineering (Ahmednagar-Nashik, Pune & Aurangabad region), Textile (Solapur-Pune, Nagpur & Amravati region), Food Processing (Solapur-Pune, Ahmednagar-Nashik, Nagpur & Amravati region), Logistics (Mumbai-Thane and Nagpur & Amravati region), Cement & Steel industry (Vidarbha- Marathwada region) and IT & ITES (Mumbai-Thane, Pune, Nagpur & Amravati region). The State has the largest number of large and mega projects in the country.

Exports from the State cover a wide range of products such as gems & jewellery, petrochemicals, readymade garments, cotton yarn, metal & metal products, agro-based products, engineering items, drugs & pharmaceuticals and plastic & plastic items.

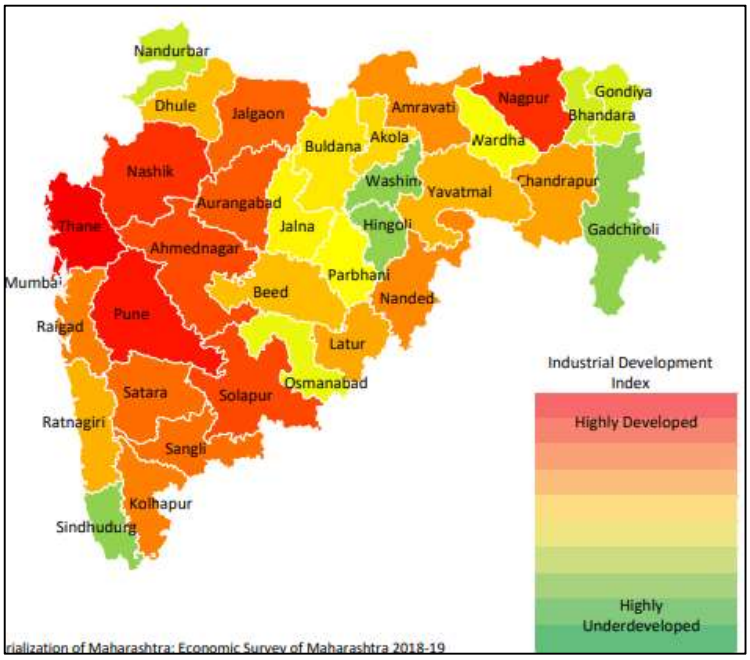
Table 8.5 Exports from Maharashtra and All-India

(₹ Crore)

Year	Maharashtra	All-India
2018-19	5,08,975	23,07,726
2019-20	4,59,637	22,19,845
2020-21+	1,72,262	9,39,924

Source : Directorate of Industries, GoM +upto September

Mining: Around 58 thousand sq km (19 per cent of the State's total geographical area) has been identified as the total potential mineral area in the State. Bhandara, Chandrapur, Gadchiroli, Nagpur, Gondiya & Yavatmal districts in Vidarbha region, Kolhapur in Western Maharashtra and Raigad, Ratnagiri & Sindhudurg districts in Konkan region have deposits of major minerals like coal, limestone, manganese ore, bauxite, iron ore, kyanite, fluorite (graded), chromite, etc.



Textiles: The State produces ample quantity of cotton & silk and fairly good quantity of wool. It also produces large quantity of non-conventional yarn from bamboo, banana, ghaypat, ambadi and coir. The State has set an objective of achieving 100 percent processing of all the cotton grown. Textile parks provides a platform to many small and medium industries to flourish their businesses. There are 13 Textile Parks in the State at Hinghanghat (Wardha), Basmat (Hingoli), Latur (Latur), Shirpur, Dhule & Degaon (Dhule), Bhivandi (Thane), Baramati (Pune), Islampur (Sangli) and Ichalkaranji (Kolhapur). In all there are 631 units functioning in these13 textile parks with total employment of 25,576.

The relative industrialization of the project influence region is given in Figure given below. The project stretch passes through Pune Solapur regions, in which both regions are highly industrialized.

Key industrial clusters in Maharashtra are given below.

The thrust sectors are given below.

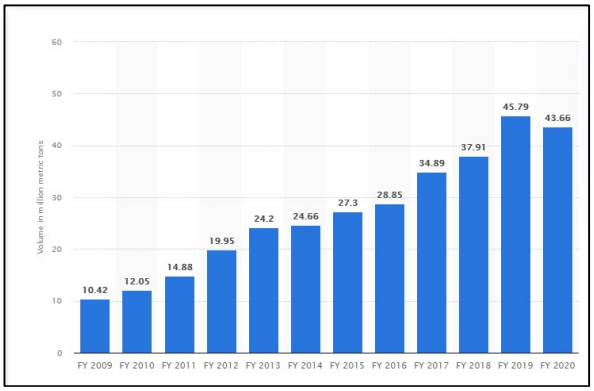
- Industry 4.0 (AI, 3D Printing, Internet of Things, Robotics and Nanotechnology, among others)
- Electronic Systems Design & Manufacturing (ESDM) & Semiconductor Fabrication (FAB
- Electric Vehicles (Manufacturing, Infrastructure & Servicing)
- Promotion of Integrated Data Centre Parks (IDCP)
- Aerospace and Defence Manufacturing
- Information Technology (IT) & IT enabled Services (ITeS)
- Biotechnology, Medical & Diagnostic Devices
- Agro & Food Processing (secondary & tertiary processing units)
- Logistics & Warehousing
- Textile Machinery Manufacturing
- Sports and Gym Equipment Manufacturing
- Nuclear Power plant equipment manufacturing
- Mineral / Forest based Industries
- Green Energy/ Bio Fuel Production

2.1.1 Port Sector

Maharashtra has the second-largest coastline among all maritime states in India. The state has two major ports, Mumbai Port and Jawaharlal Nehru Port (JNP) both located in Mumbai harbour. While Mumbai port has been acting as one of the major gateways for more than a century, JNP since its establishment in 1990s has emerged as a premier container handling port, accounting for almost 55% of the container traffic movement amongst the major ports in India.

The operational minor (non-major) ports under Maharashtra Maritime Board(MMB) handling cargo include the ports at Dahanu, Tarapur, Dharamtar, Ulwa-Belapur, Trombay, Revdanda,

Dighi, Dabhol, Bankot, Kelshi, Ratnagiri, Jaigad, Vijaydurg and Redi. The cargo commodities handled at the minor ports are bulk cargo and include coal, clinker, iron ore, limestone, cement, bauxite, sand, LPG, molasses etc.



Mumbai port has recorded 12.1 per cent decline in cargo movement at 53 million tonnes, while JNPT has moved 64 million tonnes of cargo during 2020-2021, thereby recording a decline of 5.32 per cent over the previous year 2019-2020. Covid-induced lockdowns disrupted the import and export activities in 2020-2021.

2.1.2 Socio Economic Features of Project Influence Districts

As the project corridor directly connects the districts, Pune and Sholapur, the socio economic parameters of these districts are analysed here.

Districts	Population (2011)	Area (sq. km.)	Density of Population (persons/sq km)
Pune	9,429,408	15,643	603
Solapur	4,317,756	14,895	290

The decadal growth in population of Pune and Solapur districts are 30.34% and 12.16% respectively. Gross district domestic product for the project influence districts are given below

Real Gross district domestic product at Constant (2011-12) prices

GDDP (Rs. in crores)	2018-19	2019-20	2020-21	2021-22	CAGR (2018-19 to 2021-22)
Pune	2,28,102	2,34,898	2,13,158	2,32,369	0.6%
Solapur	65,321	67,744	65,239	71,332	3.0%

Pune: Pune district is one of the districts in Maharashtra with seventh largest metropolitan economy and sixth highest per capita income in the country. Major revenue of the district comes from IT and manufacturing industries.

Agriculture: Wheat, rice , gram, bajra, sugarcane, groundnuts, chillies, pulses, vegetables, fruits and flowers are the major crops. Both rabi and kharif crops are grown in several parts of the district.
Industries: Pune is one of the most industrialized district in Maharashtra. The important large scale industries include sugar, automobile, packaging, pharmaceutical, engineering goods etc. The small-scale industries include Agricultural tools, pumps, plastic, electronics etc. The district has some defence factories as well.

Maharashtra Industrial Development Corporation (MIDC) has a large presence in the district with large industrial estates at Chakan, Bhosari, Ranjangaon, Hadapsar and Chinchwad.

The Pune region has become the top industrial belt among all the Maharashtra Industrial Development Corporation (MIDC) zones, housing the largest number of industrial units, according to recent reports. The Pune region, which includes Pune, Pimpri-Chinchwad, Talegaon, and Chakan, has been able to attract the greatest number of industrial units due to its favorable location, skilled workforce, and availability of land. As per the latest data, the Pune region has over 8,000 registered industrial units, the highest among all the MIDC zones in Maharashtra. These units provide employment to a large number of people and contribute significantly to the state's economy.

The Pune region's success in the industrial sector can be attributed to its strategic location, availability of resources, and supportive policies. The region's growth in this sector is expected to have a positive impact on the state's economy and provide employment opportunities to many people.

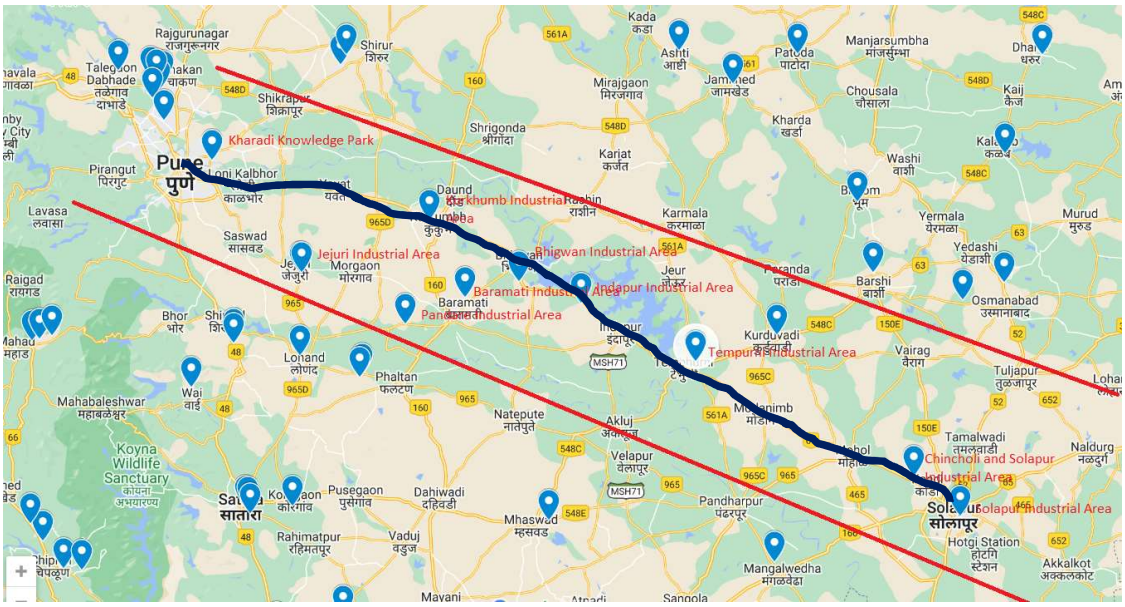
The MIDC is taking steps to develop the infrastructure in the region and attract more industries, leading to further growth in the future. The growth of industrial units in the Pune region is expected to continue, with many companies showing interest in investing in the area.

Solapur District: According to the 2011 census Solapur District has a population of 4,317,756, the 43rd largest district in India by population (out of 640). The district has a population density of 290 inhabitants per square kilometre (750/sq mi). Its population growth rate over the decade 2001-2011 was 12.1%.

The economy of the district is mainly based on agriculture. Major agricultural crops include Jowar, wheat, sugarcane, chana, tur and groundnut. Sugarcane is the majorly grown crop in Solapur. The district is called the Granary of Sorghum.

The district is also famous for its Chadder, handloom and powerloom and beedi industries. Solapur also homes many fruit processing industries.

Industrial Areas in Proximity to Project Corridor



2.2 Proposed/Ongoing projects which will have an impact on the economic growth of Maharashtra

Development of Satara Industrial Area under BMIC Project: Government of India has envisaged the development of Bengaluru Mumbai Industrial Corridor (BMIC) between Karnataka and Maharashtra with an objective to achieve accelerated development and regional industry agglomeration in the states of Karnataka and Maharashtra. An area is earmarked in Satara as investment region, which are proposed to be self-sustained nodes with world class infrastructure, road and rail connectivity for freight movement to and from ports and logistics hubs, served by reliable power, quality social infrastructure, and provide a globally competitive environment conducive for setting up businesses. National Industrial Corridor Development Corporation Limited (NICDC) is responsible for the implementation of this project. The project is in the planning stage.

Delhi Mumbai Industrial Corridor (DMIC): Futuristic industrial cities are planned along this corridor with strong economic base, which can compete with the best manufacturing and industrial destinations in the world and will activate local commerce. This will be developed along the Dedicated Freight Corridor (DFC), and 150 km on either side of DFC forms part of DMIC.

This corridor covers two industrial areas viz. Shendra-Bidkin (84 sq. kms) and Dighi port (253 sq. kms) in the Maharashtra State. The Shendra-Bidkin Industrial Area is envisioned as a very large-scale industrial cluster and the Dighi Port Industrial Area is intended to be a port as well as trade and industrial hub that will augment the port of Mumbai.

Aurangabad Industrial City (AURIC), a well-planned and Greenfield smart industrial city based on the concept of Walk to Work, is being developed across an area of 10,000 acres in the State as part of DMIC. State-of-the art smart technology along with infrastructure with focus on clean, reusable and recycling methodologies are being adopted.
A feeder rail links Nagpur to the DMIC corridor is also planned.

Prosperity Corridor: The Maharashtra Prosperity Corridor is a flagship project of the state government. It has two phases. The first phase relates to the Nagpur-Mumbai eight-lane 701-km road. The second phase relates to development of the 24 nodes (townships) along the road. The total land required for the project is 8,604 hectares and the project is under implementation.

Japanese Industrial Parks (JIT): SUPA JIT park is located near Pune, with 500 acre development in Phase I. It is developed and marketed by Maharashtra Industrial Development Corporation (MIDC).

2.3 Summary

This chapter presents the socio-economic profile of the project influencing state, ie; Maharashtra in general. Maharashtra is the most industrialized state and has maintained the leading position in the industrial sector in India. The state's per-capita income is 40% higher than the all-India average. Maharashtra contributes about 25% of the country's industrial output. Industrial activities in the state is concentrated in seven districts: Mumbai city, Mumbai suburban, Thane, Aurangabad, Pune, Nagpur and Nashik. Industries in Maharashtra include chemical and chemical products (18%), food and food products (16%), refined petroleum products (13%), machinery and equipment (8%), textiles (7%), basic metals (6%), motor vehicles (5%) and furniture (4%). The growth in the economy of the state will have a direct bearing on the expected future traffic.

3 ANALYSIS OF DATA COLLECTED THROUGH SECONDARY SOURCES

3.1 Toll Traffic Data & Analysis

The following toll traffic data has been provided by PSRDCL for the two toll plazas on the project road:

- Monthly traffic and revenue data from Apr. 2014 to Sept. 2024. The toll data of Apr. to Sept. 2024 has been used to derive the annual average daily traffic (AADT) for the financial year 2024-25. The past data has been analysed to understand the growth trend of traffic on the project road in the past.
- The monthly traffic data is also used to estimate trip categorisation/ type of tickets availed by the vehicles (ie; single, return, local pass, monthly pass and exempted) in paying toll and adopted to estimate the toll ticket categorisation of the vehicles in the revenue estimation.

Various vehicle types as per the data includes:

- Car/Taxi/Mini LGV
- LCV/Mini Bus
- Bus
- 2 Axle Truck (2 AT)
- MAVs (3 AT and above) and
- Over Sized Vehicles (OSV)

3.1.1 Analysis of Monthly Toll Traffic Data (Apr. to Sept. 2024)

The variation of average daily traffic during the months from Apr. to Sept. 2024 is presented in Figure 3.1 to Figure 3.2 for the two toll plazas respectively. Both the TPs have normal traffic flow pattern during the period.

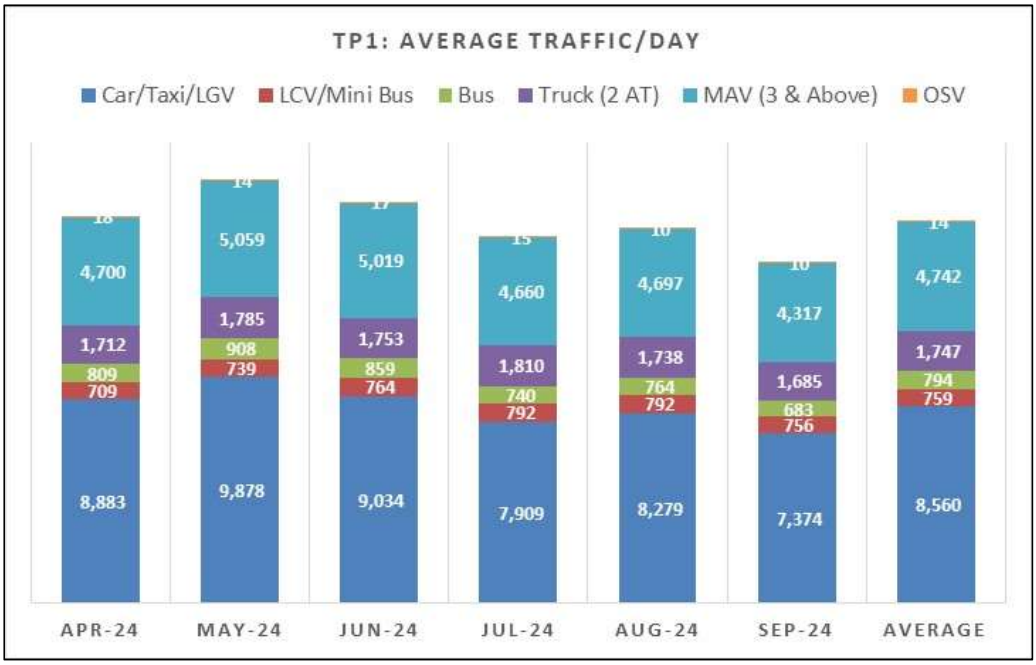


Figure 3-1: Average Daily Toll Traffic observed at TP1 from Apr. to Sept. 2024

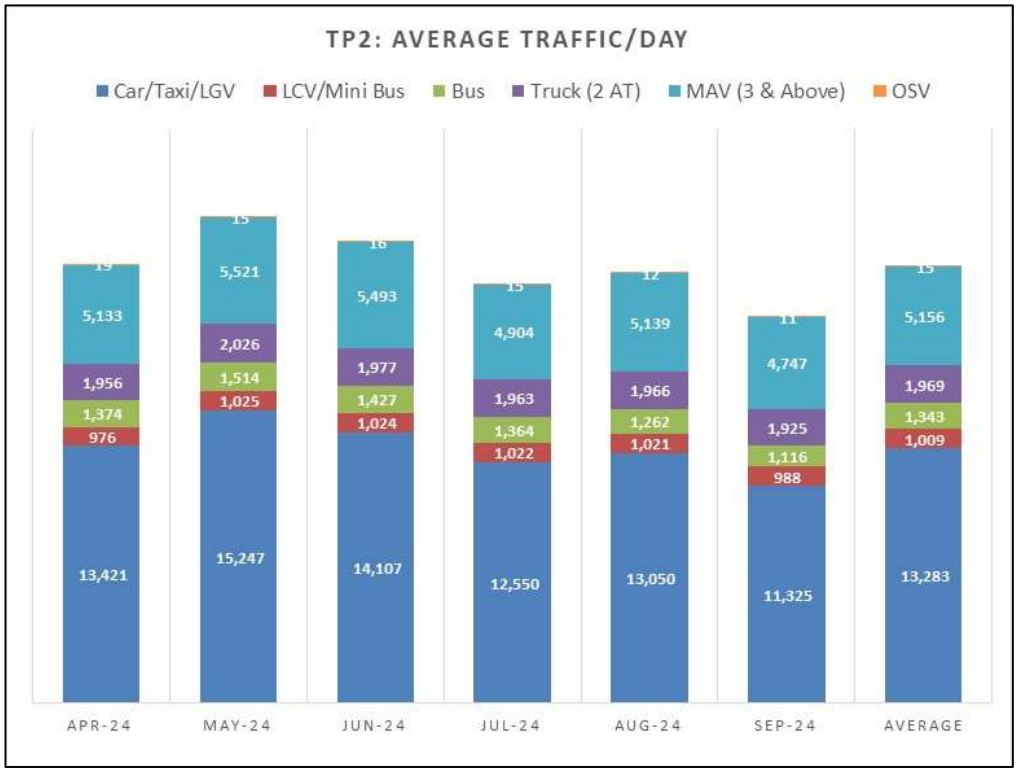


Figure 3-2: Average Daily Toll Traffic observed at TP2 from Apr. to Sept. 2024

3.1.2 Average Daily Traffic (2024-25)

Toll traffic data of the six months (Apr. to Mar.2024) is used to calculate the Average Daily Traffic (ADT) for 2024-25. The estimated AADT for the TPs are presented in Table 3.1. Traffic is higher at TP2, as it is located close to Solapur city. Car/Taxi/Mini LGV category forms the major component of the tollable traffic at both TPs (>50%) , followed by MAVs (3 & above axles).

Table 3-1: Average Daily Traffic (2024-25)

	Nos.		%	
Veh. Type	**TP1**	**TP2**	**TP1**	**TP2**
Car/Taxi/Mini LGV	8,560	13,283	51.5%	58.3%
LCV/Mini Bus	759	1,009	4.6%	4.4%
Bus	794	1,343	4.8%	5.9%
Truck (2 AT)	1,747	1,969	10.5%	8.6%
3 AT+ MAV	4,742	5,156	28.5%	22.6%
OSV	14	15	0.1%	0.1%
Total Veh.	**16,615**	**22,775**	**100.0%**	**100.0%**
Total PCU	**38,744**	**48,024**		

Source: PSRDCL Toll Traffic data. This traffic includes exempted vehicles

3.1.3 Comparison of Traffic (2023-24 and 2024-25)

The comparison of traffic observed between April to September of 2023-24 and 2024-25 are provided in Table 3.2. During this one-year period, the overall traffic has grown at 6% at TP1 and 7% at TP2.

Table 3-2: Comparison Average Daily Traffic between Apr. and Sept. (2024-25 Vs 2023-24)

Veh. Category	**TP1**		**TP2**	
	2024-25	**2023-24**	**2024-25**	**2023-24**
Car/Taxi/LGV	8,560	8,295	13,283	12,883
LCV/Mini Bus	759	692	1,009	902
Bus	794	752	1,343	1,247
Truck (2 AT)	1,747	1,515	1,969	1,667
MAV (3 & above)	4,742	4,431	5,156	4,672
OSV	14	11	15	11
Total	**16,615**	**15,696**	**22,775**	**21,382**
PCU	**38,744**	**36,140**	**48,024**	**44,067**
Annual Variation (Total veh.)	**6%**		**7%**	

3.1.4 Estimation of Seasonal Factors

The factors estimated from the monthly past traffic data from PSRDCL (2014-15 to 2023-24). ADT considered in this report is for the period from April to September and seasonal factors are also estimated for the same period.

The traffic data for the years 2020-21 and 2021-22 excluded from the analysis due to irregularities in the data caused by COVID impact. The derived factors are presented in Table 3.3. The average values for all the years, excluding the two years of COVID impact, is recommended as seasonal factors for toll revenue forecast.

Table 3-3: Estimated Seasonal Factors Derived from Toll Data for the period between Apr. and Sept.

	TP1						TP2				
	Car/Taxi / Mini LGV	LCV/ Mini Bus	Bus	Truck (2 AT)	(3 AT + MAV) /OSV		Car/Taxi / Mini LGV	LCV/ Mini Bus	Bus	Truck (2 AT)	(3 AT + MAV) /OSV
2014-15	1.04	0.99	0.94	0.97	1.04		1.01	0.99	0.94	1.02	1.07
2015-16	1.04	1.05	1.00	1.09	1.08		1.02	1.02	0.99	1.03	1.02
2016-17	1.05	0.95	1.00	1.01	0.98		1.05	0.96	0.98	1.00	0.99
2017-18	1.05	1.03	1.03	0.94	0.98		1.04	1.09	1.01	1.03	1.10
2018-19	0.99	0.94	0.91	1.05	1.00		0.99	0.98	0.96	1.05	1.05
2019-20	1.02	0.97	1.00	0.97	0.98		1.01	0.95	1.01	1.02	1.02
2022-23	1.05	1.00	1.04	1.00	0.97		1.03	1.03	1.03	1.04	1.07
2023-24	1.02	0.99	1.00	1.04	1.01		1.01	1.02	0.99	1.05	1.03
Average*	**1.03**	**0.99**	**0.99**	**1.01**	**1.00**		**1.02**	**1.01**	**0.99**	**1.03**	**1.04**

**- Excluding the values for the years 2020-21 and 2021-22*

3.1.5 Annual Average Daily Traffic (2024-25)

Toll traffic is directly linked to the road traffic, seasonal factors estimated from the toll traffic data has been recommended in the present study. AADT is obtained by multiplying ADT with the recommended seasonal factors. Traffic is higher on TP2, when compared to TP1 as TP2 is located close to Solapur city. Car/Taxi/Mini LGV category forms the major component of the tollable traffic at both TPs, followed by MAVs (3 & above axles). The estimated AADT for the TPs are presented in Table 3.4.

Table 3-4: Annual Average Daily Traffic (2024-25)

	Nos.	
Veh. Type	**TP1**	**TP2**
Car/Taxi/Mini LGV	8,839	13,544
LCV/Mini Bus	751	1,015
Bus	784	1,329
Truck (2 AT)	1,763	2,026
3 AT+ MAV	4,762	5,380
OSV	14	15
Total Veh.	**16,913**	**23,309**
Total PCU	**39,120**	**49,432**

Source: PSRDCL Toll Traffic data. This traffic includes exempted vehicles

3.1.6 Categorisation of Toll Traffic

The toll traffic data consists of two general categories, i.e. (1) traffic paying toll (captive toll traffic) and (2) exempted. The exempted type includes the exempted traffic as per the toll policy of the project (mainly constitute Govt. Patrol/ Police/Military/ Convoy vehicles/ post, and telegraph vehicles commuting along the road) and local vehicles exempted from toll.

Toll traffic categorisation has been developed using the monthly data of 2024-25 (Apr.- Sep.) and using the whole year data of 2023-24. Since the 2023-24 data represents the full year traffic flow, it is adopted in the report.

The share of exempted vehicles observed at the toll plazas (of the total traffic) using the traffic data of 2023-24 are presented in Table 3.5.

Table 3-5: Share of Exempted Vehicles

Veh Type	TP1	TP2
Car/Taxi/Mini LGV	9.74%	8.91%
LCV/Mini Bus	5.66%	9.77%
Bus	0.39%	1.13%
Truck (2 AT)	1.68%	2.10%
3AT+ MAV	1.88%	0.88%
OSV	0.06%	0.10%
Total	**19.41%**	**22.88%**

Source: PSRDCL Toll Traffic data (2023-24)

The above share of traffic has been excluded and toll categorisation is made for the remaining traffic, which is the captive toll traffic. Trip categorisation (single trips, return trips, monthly pass and local pass for car) for the captive toll traffic is presented in Table 3.6.

Table 3-6: Trip Categorisation derived from Toll Data

Veh Type	Single	Return	Local Monthly Pass	Monthly Pass	Total
TP1					
Car/Taxi/Mini LGV	58.32%	40.22%	1.46%	0.00%	100.00%
LCV/Mini Bus	70.14%	29.85%	0.00%	0.01%	100.00%
Bus	18.48%	81.52%	0.00%	0.00%	100.00%
Truck (2 AT)	83.78%	16.22%	0.00%	0.00%	100.00%
3AT+ MAV	89.35%	10.65%	0.00%	0.00%	100.00%
OSV	99.16%	0.84%	0.00%	0.00%	100.00%
TP2					
Car/Taxi/Mini LGV	46.33%	48.94%	4.73%	0.01%	100.00%
LCV/Mini Bus	59.41%	37.73%	0.00%	2.86%	100.00%
Bus	14.90%	85.10%	0.00%	0.00%	100.00%
Truck (2 AT)	77.30%	22.70%	0.00%	0.00%	100.00%
3AT+ MAV	83.51%	16.49%	0.00%	0.00%	100.00%
OSV	96.63%	3.37%	0.00%	0.00%	100.00%

Source: PSRDCL Toll Traffic data (2023-24)

3.1.7 Past Growth Trend of Toll Traffic

Monthly toll traffic data is available from Apr.'14 to Mar.'24 and is used to assess the growth trend of the traffic. To obtain a general traffic growth scenario, the average daily traffic for all months of toll operation for the last ten years (2014-25 to 2023-24) is considered and the summary along with

the observed growth rates are presented in Table 3.7. All vehicle types had a growth trend in the past. The decline in the number of LCV/min bus traffic over the years may be due to the following reason. The Fast-Tag operation started on the project road in May 2016. As per the Fast-Tag manual, the toll amount for goods vehicles is decided based on the gross weight of the vehicle and LCV (3 axle) is clubbed along with 2 AT/Bus category. The Fast-Tag penetration increased over the years and the toll data of LCV/mini bus category excluded partially LCV (3 Axle) and added with 2AT. Hence the decrease in the LCV/Mini bus numbers. As it is added with 2Axle truck/Bus category and hence this vehicle category has higher growth.

The past traffic trend indicate that the project road has a potential to attract more traffic in the future.

Table 3-7: Observed Growth of Daily Traffic in the Past - TP1

Year	Car/Taxi /Mini LGV	LCV/Mini Bus	Bus	2 AT	3AT+ MAV	Total
TP1						
2014-15	2,292	734	262	728	3,573	7,589
2015-16	2,815	811	242	740	4,108	8,717
2016-17	2,980	830	236	898	4,560	9,503
2017-18	5,090	1,171	663	1,009	4,858	12,791
2018-19	5,220	1,153	652	924	4,521	12,470
2019-20	5,238	966	582	1,101	4,473	12,360
2020-21	5,079	804	343	1,093	4,024	11,343
2021-22	6,355	773	453	1,354	4,552	13,487
2022-23	8,066	751	695	1,468	4,358	15,338
2023-24	8,403	687	746	1,578	4,477	15,891
TP2						
2014-15	3,615	800	541	627	2,155	7,737
2015-16	4,170	859	513	641	2,334	8,517
2016-17	4,392	817	475	629	2,221	8,533
2017-18	8,137	1,237	1,103	794	2,736	14,007
2018-19	8,622	1,323	1,104	799	3,243	15,090
2019-20	8,774	1,162	1,144	913	3,314	15,308
2020-21	7,537	991	547	1,016	2,882	12,972
2021-22	9,748	910	639	1,282	3,258	15,837
2022-23	12,202	905	1,153	1,541	4,124	19,925
2023-24	12,972	915	1,236	1,745	4,780	21,648
TP 1+ TP2						
2014-15	5,907	1,534	803	1,355	5,727	15,327
2015-16	6,986	1,670	755	1,381	6,442	17,234
2016-17	7,372	1,647	711	1,527	6,780	18,036
2017-18	13,227	2,409	1,766	1,802	7,594	26,798
2018-19	13,842	2,475	1,756	1,723	7,764	27,560
2019-20	14,012	2,129	1,726	2,014	7,787	27,668
2020-21	12,615	1,795	890	2,109	6,906	24,315
2021-22	16,103	1,684	1,092	2,636	7,810	29,324

Year	Car/Taxi /Mini LGV	LCV/Mini Bus	Bus	2 AT	3AT+ MAV	Total
2022-23	20,267	1,656	1,848	3,009	8,483	35,263
2023-24	21,375	1,602	1,982	3,323	9,257	37,539
CAGR (2014-15 to 2023-24)	**15.4%**	**0.5%**	**10.6%**	**10.5%**	**5.5%**	**10.5%**
CAGR (2018-19 to 2023-24)	**11.3%**	**-8.9%**	**1.1%**	**13.7%**	**2.8%**	**7.1%**

3.2 Analysis of Fuel Sales data

Seasonal factors from Fuel data: Monthly fuel sales data collected from fuel stations along the project road and received three data sets. This data has been used for the estimation of seasonal factors. The derived monthly factors presented in Table 3.8.

Table 3-8: Seasonal factors from fuel sales data

	Petrol				Diesel			
	2017-18	2018-19	2019-20	Average	2017-18	2018-19	2019-20	Average
April	1.20	1.33	1.38	**1.30**	1.10	0.90	0.82	**0.94**
May	1.00	1.10	1.14	**1.08**	1.02	1.02	0.91	**0.98**
June	0.97	1.45	1.04	**1.15**	0.78	1.03	0.99	**0.93**
July	1.03	0.91	0.95	**0.96**	0.85	0.83	0.82	**0.83**
August	1.20	1.03	0.79	**1.01**	1.15	0.94	1.14	**1.07**
September	0.88	1.28	1.28	**1.15**	0.91	1.26	0.92	**1.03**
October	1.15	0.76	0.95	**0.95**	1.02	1.15	1.22	**1.13**
November	1.36	0.89	1.07	**1.11**	0.85	1.21	1.24	**1.10**
December	1.03	0.86	0.85	**0.92**	1.51	0.94	1.03	**1.16**
January	0.85	1.10	0.79	**0.92**	1.15	1.08	0.99	**1.07**
February	0.93	1.00	1.28	**1.07**	1.23	0.83	0.97	**1.01**
March	0.73	0.76	0.90	**0.80**	0.85	1.02	1.15	**1.01**

4 TRAFFIC OD SURVEYS & DATA ANALYSIS

4.1 OD Survey Methodology & Locations

Roadside Interview method, as detailed in IRC: 102-1988, is used for conducting O-D survey. The survey was carried out for tollable modes (both passenger and goods vehicles) for two days (in both directions). The information collected includes trip origin, trip destination, commodity details for goods vehicles and purpose and frequency of travel for passenger vehicles, etc. The data analysis is carried out to assess the movement pattern on the project road.

OD surveys were carried out at the toll plaza locations on the project road. The survey locations along with the schedule are presented in Table 4.1.

Table 4-1: Schedule of Surveys

Sl. No.	Type of Survey	No. of Locations	Location	Schedule
1	OD survey 2days (2X24)	2	TP1	25/04/2023 & 26/04/2023
			TP2	27/04/2023 & 28/04/2023

Survey Photos

Data Consistency: OD data have been checked location wise, mode wise and direction wise for the toll plaza location. The following consistency checks were done for data reliability.

- Zone coding was checked with raw data
- Illegal trips are removed from the data

4.2 Zoning System

Suitable zoning system has been developed for the study purpose. The zoning system developed for the study is listed and presented in Table 4.2.

Table 4-2: Zone list for the study

No.	Zone	Remarks
1	Varwade, Akumbe, Bhend, Aran, Modanimb,	Solapur district
2	Solankarwadi, Shetphal, Telangwadi, Kuranwadi, Ashti, Karkamb, Vyavahare Wasti	
3	Sawaleshar, Lamboti, Arjunsoand, Pakani, Chincholikati, Somanath nagar, Shirapur, Wadwal, Gotewadi ,ophali	
4	Darfal, Mohitewadi,Morvanchi, Ashte, Kolegaon, Virwade, Kondi, Kegaon, Hiraj, Parite, Tulshi, Jadhavwadi	
5	Solapur city	
6	Remaining areas of Solapur district	
7	Pune	Pune district
8	Mumbai	Districts of Maharashtra
9	Satara	
10	Sangli	
11	Kolhapur	
12	Sindurdurg	
13	Ratnagiri	
14	Raigad	
15	Ahmed nagar	
16	Nashik	
17	Dhule	
18	Nandurbar	
19	Jalgaon	
20	Usmanabad	
21	Latur	
22	Beed	
23	Nanded	
24	Aurangabad	
25	Jalna,	
26	Parbhani,	
27	Hingoli,	
28	Washim,	
29	Yawatmal,	
30	Buldhana	
31	Akola	

No.	Zone	Remarks
32	Amaravati	
33	Nagpur	
34	Wardha,	
35	Chandrapur	
36	Bhandara,	
37	Gondia	
38	Gadchiroli	
39	Gujarat	
40	Ports in Gujarat	
41	Rajasthan	
42	Haryana	
43	Punjab	
44	Himachal Pradesh	Other States
45	J & K	
46	Uttarakhand	
47	Delhi	
48	Uttar Pradesh	
49	Madhya Pradesh	
50	Goa	
51	Karnataka	
52	Tamil Nadu,	
53	Kerala	
54	Telangana	
55	Andhra Pradesh	
56	Chhattisgarh,	
57	Odissa	
58	Bihar,	
59	Jharkhand,	
60	West Bengal	
61	Assam, Mizoram, Tripura, Manipur, Arunachal Pradesh, Sikkim, Meghalaya, Nagaland	

4.3 Sample Size

The sample size covered in OD survey for various types of vehicles is given in Table 4.3.

Table 4-3: Sample Size

Vehicle Type	TP1	TP2
Car/Taxi/Mini LGV	17%	13%
LCV/Mini Bus	37%	32%
Bus	37%	17%
2 AT	22%	27%
3 A T + MAV	34%	35%

4.4 Influence Factors

The influence factors (the share of the origin or destination of the trip) indicates the importance of the area or region influencing traffic on the project road. It is estimated as given below:

$$IF = [(P_i + A_i) \text{ x } 100] / (\sum(P_i + A_i))$$

Where, IF = Influence Factor

P_i = Total trips produced in Zone i

A_i = Total trips attracted in Zone i

Influence factors obtained from the OD data are presented in Table 4.4 and Table 4.5 for the two TPs. The two toll plazas have same travel pattern and project road carries both intercity (within the Maharashtra state) interstate traffic. Since the second TP is located close to Solapur city, its influence is more when compared to the first TP. In Maharashtra, the districts of Solapur (the project road falls), Pune and Mumbai are the districts influencing the traffic more. Impact of other districts are not significant in the case of goods vehicles. The interstate traffic is generated mainly to/from Gujarat in the north and Karnataka, Tamandu and Andhra Pradesh in the south.

Table 4-4: Influence Factors at TP1

	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
Solapur district	35.1%	50.0%	32.4%	50.0%	28.1%	24.1%	16.8%	15.5%
Pune	35.3%	48.6%	34.7%	42.6%	28.3%	27.1%	29.4%	24.0%
Mumbai	6.7%	0.0%	11.4%	1.3%	12.6%	13.1%	12.9%	15.2%
Other districts	15.1%	1.4%	13.3%	6.1%	5.1%	3.9%	2.5%	4.5%
Maharashtra (Total)	**92.1%**	**100.0%**	**91.8%**	**100.0%**	**74.1%**	**68.2%**	**61.6%**	**59.2%**
Gujarat	0.7%	0.0%	0.0%	0.0%	2.8%	3.5%	3.4%	5.3%
Karnataka	3.0%	0.0%	6.5%	0.0%	7.2%	7.9%	8.4%	12.8%
Tamil Nadu	0.3%	0.0%	0.0%	0.0%	3.1%	3.3%	6.8%	4.8%
Telangana	3.0%	0.0%	1.5%	0.0%	10.1%	11.9%	14.6%	13.4%
Remaining areas	0.9%	0.0%	0.3%	0.0%	2.7%	5.2%	5.1%	4.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-5: Influence Factors at TP2

	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
Solapur district	59.1%	40.2%	46.9%	80.5%	28.1%	33.5%	32.1%	41.8%
Pune	18.7%	20.1%	16.8%	9.5%	28.3%	18.4%	17.9%	17.0%
Mumbai	4.3%	10.9%	8.2%	2.5%	12.6%	12.2%	14.3%	9.2%
Other districts	10.3%	7.1%	18.8%	7.4%	5.1%	10.0%	8.5%	10.1%
Maharashtra (Total)	**92.4%**	**78.3%**	**90.8%**	**100.0%**	**74.1%**	**74.0%**	**72.9%**	**78.1%**
Gujarat	0.2%	0.0%	0.0%	0.0%	2.8%	1.6%	2.0%	3.5%
Karnataka	4.1%	10.9%	4.0%	0.0%	7.2%	5.1%	4.8%	5.8%

	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
Tamil Nadu,	0.4%	1.1%	0.0%	0.0%	3.1%	6.5%	6.3%	4.5%
Telangana	2.5%	9.2%	4.5%	0.0%	10.1%	9.2%	10.4%	5.9%
Remaining areas	0.4%	0.5%	0.7%	0.0%	2.7%	3.6%	3.6%	2.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

4.5 Trip Distribution

The trip distribution observed in OD surveys on the project road is presented in Table 4.6 and in Table 4.7 for the two TPs. Passenger vehicles are confined in Maharashtra, while goods vehicles make both intercity (within Maharashtra) and interstate trips. Both the toll plazas have same travel pattern.

Table 4-6: Trip Distribution observed at TP1

Region	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
Within Maharashtra	85.3%	100%	83.5%	100%	51.3%	43.8%	31.3%	29.6%
Maharashtra- North (GJ, RJ, PB, HR, DL, HP, J& K & UP states)	1.7%	0%	0.2%	0%	4.7%	3.6%	2.8%	3.2%
Maharashtra-South (KA, TS, TN, AP & GA states)	11.8%	0%	16.3%	0%	41.0%	43.1%	57.0%	55.5%
North-South	1.0%	0%	0.0%	0%	2.9%	7.2%	7.7%	10.6%
Remaining Areas	0.2%	0%	0.0%	0%	0.2%	2.2%	1.2%	1.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-7: Trip Distribution observed at TP2

Region	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
Within Maharashtra	85.3%	58%	81.9%	100%	51.3%	52.5%	50.6%	54.0%
Maharashtra- North (GJ, RJ, PB, HR, DL, HP, J& K & UP states)	0.2%	0%	0.2%	0%	4.7%	0.8%	1.3%	3.8%
Maharashtra-South (KA, TS, TN, AP & GA states)	13.9%	41%	17.2%	0%	41.0%	41.8%	43.1%	35.7%
North-South	0.5%	1%	0.0%	0%	2.9%	4.5%	4.8%	5.6%
Remaining Areas	0.1%	0%	0.7%	0%	0.2%	0.5%	0.2%	0.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

As discussed earlier, the major intercity trips within Maharashtra are mainly bound between Pune/ Mumbai and Solapur. The major OD pairs (districts) in this category is presented in Table 4.8.

Table 4-8: Major OD Pairs within Maharashtra

Districts	Car/Taxi	Mini Bus	Bus	Mini LGV	LCV	2 AT	3AT	MAV
TP1								
Within Solapur	29.8%	77%	21.5%	64%	17.5%	15.4%	4.9%	8.9%
Solapur- Pune	26.0%	14%	29.1%	23%	25.0%	20.8%	20.9%	13.3%
Solapur-Mumbai	3.3%	0%	8.1%	2%	1.4%	3.0%	3.0%	3.1%
Total	**59%**	**91%**	**59%**	**89%**	**44%**	**39%**	**29%**	**25%**
TP2								
Within Solapur	35.9%	22%	23.3%	65.2%	0.8%	13.6%	11.8%	21.0%
Solapur- Pune	25.5%	18%	18.8%	16.4%	34.4%	18.1%	17.9%	17.4%
Solapur-Mumbai	5.9%	7%	10.6%	4.5%	8.9%	7.1%	10.0%	8.5%
Total	**67%**	**47%**	**53%**	**86.0%**	**44%**	**39%**	**40%**	**47%**

The important interstate OD pairs observed on the project road are presented in Table 4.9.

Table 4-9: Major Interstate OD Pairs on the Project Road

Interstate OD Pairs	Car/Taxi	LCV	2 AT	3AT	MAV
Pune- Karnataka	3.0%	7.0%	5.5%	7.1%	8.4%
Pune- Tamil nadu	0.3%	4.1%	4.1%	6.0%	4.4%
Pune- Telangana	2.5%	9.7%	7.4%	10.3%	7.2%
Mumbai- Karnataka	1.0%	4.9%	3.0%	2.3%	3.7%
Mumbai- Tamil nadu	0.2%	1.7%	2.9%	3.2%	1.9%
Mumbai- Telangana	1.3%	7.8%	9.9%	11.7%	8.3%
Gujarat- Karnataka	0.3%	2.7%	6.4%	8.1%	4.8%
Gujarat- Tamil nadu	0.1%	0.2%	0.8%	2.0%	1.4%
Gujarat- Telangana	0.2%	1.0%	1.1%	0.9%	1.9%
Total	**8.9%**	**39.0%**	**41.1%**	**51.5%**	**42.0%**

Note: Average values of ODs at TP1 and TP2

4.6 Commodity Movement

Commodity movement along the project road was obtained from the OD surveys. Table 4.10 and Table 4.11 provides the major commodities transporting through the project road for the two TPs. Important commodities include general items such as vegetables/fruits, food grains, petroleum Products, courier/parcels, machines/automobiles, etc.

Table 4-10: Commodity- wise Goods Movement Pattern at TP1

Commodity	Mini LGV	LCV	2 AT	3AT	MAV
Food Grains	0.0%	2.1%	1.9%	3.3%	3.3%
Minerals & Ores	0.0%	0.2%	0.2%	0.6%	1.0%
Machines / Automobiles	0.0%	3.9%	3.8%	6.1%	6.5%
Fruits/ Vegetables	44.1%	11.5%	7.9%	7.3%	8.8%

Commodity	Mini LGV	LCV	2 AT	3AT	MAV
Iron & Steel	1.8%	5.4%	5.8%	5.0%	7.5%
Fertilizers / Chemicals	0.0%	1.0%	1.6%	1.6%	1.0%
Textiles & Clothing	2.7%	1.0%	2.2%	2.8%	2.2%
Wood and wood Prod.	0.9%	1.2%	2.0%	1.2%	2.7%
Cement	0.9%	1.0%	3.9%	4.7%	9.9%
Petroleum Products	0.0%	3.5%	5.0%	7.4%	7.5%
Granite/Marble	0.9%	0.2%	0.8%	0.3%	1.0%
Sand	0.0%	0.0%	1.3%	1.9%	0.7%
Bricks	0.0%	0.0%	0.0%	0.0%	0.0%
Stone/Aggregates	0.0%	1.0%	1.9%	0.7%	0.5%
House hold goods	0.0%	0.4%	0.6%	0.9%	0.1%
Courier/Parcel	9.9%	27.4%	16.7%	9.6%	7.1%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, water, plastic, rubber items, etc.)	14.4%	20.8%	20.6%	24.7%	20.7%
Empty	24.3%	19.6%	23.8%	21.8%	19.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4-11: Commodity- wise Goods Movement Pattern at TP2

Commodity	Mini LGV	LCV	2 AT	3AT	MAV
Food Grains	0.3%	2.0%	1.2%	1.1%	1.4%
Minerals & Ores	0.3%	1.3%	0.3%	1.0%	0.7%
Machines / Automobiles	0.0%	5.4%	14.2%	13.7%	16.8%
Fruits/ Vegetables	16.7%	4.4%	4.3%	4.0%	6.2%
Iron & Steel	2.1%	2.6%	2.4%	2.7%	3.2%
Fertilizers / Chemicals	3.0%	5.5%	1.5%	2.3%	3.1%
Textiles & Clothing	1.5%	3.8%	1.1%	2.5%	0.9%
Wood and wood Prod.	0.0%	1.1%	0.9%	1.0%	0.6%
Cement	5.4%	6.5%	5.7%	9.6%	9.1%
Petroleum Products	0.0%	5.7%	11.6%	13.1%	8.0%
Granite/Marble	0.0%	0.2%	0.0%	0.1%	0.1%
Sand	0.3%	0.3%	0.1%	0.2%	0.2%
Bricks	0.0%	0.0%	0.0%	0.0%	0.0%
Stone/Aggregates	0.3%	1.0%	0.1%	0.2%	0.9%
House hold goods	0.6%	0.5%	0.2%	0.0%	0.0%
Courier/Parcel	5.1%	8.6%	11.8%	10.8%	8.0%
Misc. (Gypsum, animal food, other perishable goods, parchune, medicines, etc.)	14.9%	17.1%	18.6%	14.7%	10.5%
Empty	49.7%	33.9%	25.9%	23.1%	30.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

5 UPCOMING ROAD PROJECTS & IMPACT ASSESSMENT

5.1 Proposed Expressway Projects and their Impact

As presented earlier, the project road is part of a highway (NH 65) connecting in the east-west direction and hence comprises of interstate traffic significantly between Maharashtra/Gujarat and Karnataka/Tamil Nadu and Telangana (Refer Table presented below for the share of traffic/day).

	LCV	2 AT	3AT/MAV
Pune- Karnataka	7.0%	5.5%	8.0%
Pune- Tamil nadu	4.1%	4.1%	4.7%
Pune- Telangana	9.7%	7.4%	8.1%
Mumbai- Karnataka	4.9%	3.0%	3.4%
Mumbai- Tamil nadu	1.7%	2.9%	2.4%
Mumbai- Telangana	7.8%	9.9%	9.6%
Gujarat- Karnataka	2.7%	6.4%	5.9%
Gujarat- Tamil nadu	0.2%	0.8%	1.6%
Gujarat- Telangana	1.0%	1.1%	1.6%
Total	**39.0%**	**41.1%**	**45.3%**

Note: This traffic represents the candidate traffic for the expressway diversion

There are several expressways/economic corridors proposed through Maharashtra and may be beneficial/harmful to the project road traffic after their development. These expressways are under various stages of development and reliable details including alignment, length, route, completion schedule, etc. are not available. A detailed/accurate analysis on their travel cost is not possible due to the limited data source. However, an attempt is made to assess their bearing on the project road traffic using available information in the secondary domain.

Diversion Analysis: Diversion analysis is carried out using relevant IRC Codes as presented below:

- Vehicle Operating Cost (VoC) and Travel Time Cost (VoT) per trip for NH 44 and the Expressway as per the values specified in IRC SP 30: 2019 (Manual for Economic Analysis of Highways in India) for 2023-24
- Toll amount calculation for NHs is based on per km rate of the project stretch and the prevailing toll rate of the operational section of Delhi- Mumbai Expressway is adopted (as no specific details available for other expressways) for expressways
- Diversion % calculated based on the diversion curve equations given in IRC 108-2015: Traffic forecast on Highways

5.1.1 Diversion Analysis due to proposed Pune- Bangalore Expressway

Candidate Traffic: It is expected that the expressway would be advantageous to Mumbai/Pune – Bangalore regional traffic. Additionally, this expressway together with the Bangalore- Chennai expressway (which is in the developmental stage and expected completion in 2025) would be advantageous for Chennai bound traffic from Mumbai/Pune region. Candidate traffic was derived for respective toll plazas. The OD surveys were done on sample basis and on different days at TP1 and TP2 and the average for both TPs is adopted as the through (long distance) traffic plying on the two TPs to be same.

Candidate traffic as % of AADT	TP1			TP2		
	LCV	2 AT	3AT+MAV	LCV	2AT	3AT+ MAV
Pune- Karnataka/TN & Mumbai- Karnataka/TN	20.0%	16.3%	19.4%	15.8%	14.7%	17.2%

Source: OD Survey data analysis

Diversion Analysis: The expressway proposal is in the initial stage of land acquisition. Its route and alignment details are not published yet and hence only a broad impact assessment is possible.

Route comparison between Mumbai and Bangalore

1. Existing route: Mumbai to Pune (via. Existing Mumbai Pune Expressway) and Pune to Bangalore through NH65 (Pune- Solapur) and NH 52 (Solapur- Bangalore)
2. Proposed Route: Mumbai to Pune (via. Existing Mumbai Pune Expressway) and Pune to Bangalore through the proposed expressway.

Route Comparison	Length (Km)
Existing route	Total: 1,000 (Mumbai- Pune: 100 km, Pune- Blore: 900 km)
Proposed Route	Total: 850 (Mumbai- Pune: 100 km, Pune- Blore proposed exp.way:750 km)*

**- Assumption*

Travel Cost Estimation:

- Vehicle Operating Cost (VoC) and Travel Time Cost (VoT) per trip for NH 65 and the Expressways as per the values specified in IRC SP 30: 2019 (Manual for Economic Analysis of Highways in India) is escalated for 2023 by adopting an annual growth of @5% per annum

- Toll amount calculation for existing NH is based on per km rate of existing toll of project road (NH 65) and the prevailing toll rate of the operational section of Delhi- Mumbai

Expressway is adopted *(as no specific details available for the proposed Pune- Bangalore expressway).* The current amount of Mumbai- Pune expressway has used for the stretch.

Travel cost comparison of the two routes is presented in Table 5.1.

Table 5-1: Travel cost/trip comparison of Proposed Pune- Bangalore Expressway

	Existing route (NH) in INR				Proposed Route in INR			
	VOC	VOT	Toll	Total	VOC	VOT	Toll	Total
2 AT	39,668	1,593	5,038	**46,300**	31,946	879	6,711	**39,537**
MAV	57,835	2,508	9,006	**69,350**	46,553	1,384	10,828	**58,765**
LCV	36,547	1,593	2,538	**40,678**	31,118	879	3,131	**35,129**

Diversion Estimation: Diversion % calculated based on the diversion curve equations given in IRC 108-2015: Traffic forecast on Highways and the estimated diversion is presented in Table 5.2.

Table 5-2: Estimated Diversion Percentage to the Proposed Pune- Bangalore Expressway

Veh.	Cost Ratio (Proposed/ existing)	% Diversion
2 AT	0.85	76
MAV	0.85	77
LCV	0.86	75

Note: These diversion % are based on the assumptions discussed above

Based on the above analysis, the expected traffic diversion from the project road due the expressway is given in Table 5.3.

Table 5-3: Estimated Traffic Diversion %

	TP1			TP2		
	LCV	2 AT	3AT+MAV	LCV	2AT	3AT+ MAV
Candidate Traffic %	20.0%	16.3%	19.4%	15.8%	14.7%	17.2%
Diversion %	75%	76%	77%	75%	76%	77%
Traffic Diversion %	**15.0%**	**12.4%**	**15.0%**	**11.9%**	**11.2%**	**13.3%**

Status of LA and award of the various packages of express highway: As per the available secondary sources, the expressway project is making progress in terms of land acquisition. The total land required for the project spans 7,689 hectares, with the Maharashtra and Karnataka governments acquiring 2,233 hectares and 5,456 hectares, respectively.

The Maharashtra State Road Development Corporation (MSRDC) has committed to expediting the land acquisition process and appointed Nodal officers by district collectors to oversee and streamline the land acquisition procedure.

As per the recent update, the two state governments are awaiting for the Centre's approval to begin the land acquisition process, and the clearance is expected by September 2023, and once obtained, NHAI will collaborate with MSRDC to expedite land acquisition. The project does not pass through protected areas. Project packaging information is not available.

As per the latest updation in Oct. '24, land acquisition for the expressway is underway. NHAI's target year for the expressway completion is 2028. Considering the longer development period for expressways in India, especially the land acquisition stage, it may not be appropriate to adopt its operational year as 2028. Hence, two options were analyzed, i.e. (1) Expressway would be operational in the concession period of PSRDCL and (2) Expressway development would be delayed and operational beyond the concession period of PSRDCL (no impact on PSRDCL traffic). In option (1), it is assumed that the Expressway would be operational by 2030-31 and the diversion from the project road will commence from the same year.

5.1.2 Impact assessment of Other Proposed Expressways in the Region

Impact assessment of other proposed expressways is summarized in Table 5.4.

Table 5-4: Impact Assessment of Other Proposed Expressways on Project Road Traffic

No.	Proposed Expressway	Impact Assessment
1.	**Surat – Nashik- Solapur-Chennai Expressway**: It is of 1,220 km length and will be the second longest expressway in India. The Expressway will pass through Gujarat, Maharashtra, Karnataka, Telangana, Andhra Pradesh, and Tamil Nadu, connecting Surat in Gujarat with Chennai in Tamil nadu and is expected to reduce the road distance between Surat and Chennai around 330 km. The Surat – Solapur part (via Nashik – Ahmednagar) will be 564 km long, the Solapur - Chennai part (via Kurnool) is of 707 km length. The project is envisioned as a combination of two partially access-controlled economic corridors i.e Chennai to Solapur and Solapur to Surat. • Surat – Solapur Economic Corridor (513 km): This greenfield section is being developed under Bharatmala Pariyojana Phase-2	The expressway would be a shorter route for the interstate traffic plying Gujarat and Tamil nadu. Since the share of this traffic is very less on the project road (LCV- 0.2%, 2AT-0.8% and 3AT/MAV-1.6%), no major impact is anticipated on the project road due to the expressway.

No.	Proposed Expressway	Impact Assessment
	program with a December 2026 deadline. It forms the northern section of the expressway and consists of two sub sections: Surat – Ahmednagar (288 km) and Ahmednagar – Solapur – Akkalkot – MH/KN Border (225.25 km) Solapur – Chennai Economic Corridor (707 km): It forms the southern section of the expressway and is a mix of brownfield-upgrade & greenfield segments, being developed under Bharatmala Pariyojana Phase-2 program with a December 2025 deadline.	
2.	**Pune – Nashik Industrial Expressway**: It is an expressway proposed by MSRDC with a length of 180 km and with 6 lane access-controlled highway with a route alignment in western Maharashtra. The expressway will connect MSRDC's proposed Pune Ring Road project (near Chimbali) and Shinde (on NH-60). It will be connected to the proposed Samruddhi Mahamarg (Mumbai – Nagpur Expressway). The expressway is expected to reduce travel time between Nashik and Pune to 2 hours from the current 4-5 hour journey. In October 2022, MSRDC invited tenders for the preparation of a Feasibility Study Report, Detailed Project Report (DPR) and assistance in land acquisition. But the report is not finallysed yet.	It will act as a feeder road to the project road from the northern region of Maharashtra and hence a positive impact is expected. Since the project is in preliminary stage, its completion may happen during the end stage of the concession period. Hence not considered in this study.
3.	**Mumbai – Nagpur Expressway:** The 701 km expressway also known as Samruddhi Mahamarg, is being developed by MSRDC is under construction 6 lane access-controlled road connecting Nagpur to Thane District. This greenfield project was first announced in 2015 and land acquisition began in July 2017. The first phase (502 km) connecting Nagpur – Shirdi, was opened and inaugurated on December 11, 2022.	The expressway connects the districts in North Maharashtra and no major impact is expected on the project road traffic.

No.	Proposed Expressway	Impact Assessment
4.	**Delhi–Mumbai Expressway**: The 1,350 km Expressway is an 8 lane access-controlled road with a route connecting DND in Delhi with JNPT in Mumbai. The expressway is partially operational between Sohna and Dausa (246 km) and other sections are under development. The entire expressway is expected to be opened by 2024.	This expressway along with Mumbai- Pune expressway and Pune- Solapur (NH 65) and Solapur- Karnataka (NH 52) would be economic for the North (Delhi and northern states) and Karnataka traffic plying currently through NH 44 (Srinagar- Kanyakumari highway, via; Nagpur). Hence, it is possible that some traffic on NH 44 may use the project road in the future and is advantageous.

Conclusion: There are several expressways proposed/under development through Maharashtra, having positive/negative impact on the project road. The proposed Pune- Bangalore Expressway is expected to have significant negative impact, if it is operational during the concession period of PSRDCL (till 2036-37). NHAI's target year for its completion is 2028. Considering the longer development period for expressways in India, especially the land acquisition stage, it is assumed that the Expressway would be operational only by 2030-31 (estimated diversion percentage is LCV- 15.0% & 11.9%, 2AT- 12.4% &11.2% and 3AT+MAV- 15.0% &13.3% respectively for TP1 and TP2). In case, the expressway development is delayed and is operational beyond the concession period of PSRDCL, no impact is expected in this project.

6 GROWTH RATE ESTIMATION & TRAFFIC PROJECTION

6.1 Background

Projection of traffic along the project stretch for the horizon period requires an understanding of the key drivers to the traffic. These include demographic variables such as population, per-capita income and economic variables such as GDP/NSDP for project influence region. Projection of these drivers needs to be developed within a framework that ensures internal consistency.

Maharashtra is the main influencing state of traffic on the project road. Broad review of the socio-economic characteristics of this state is discussed in Chapter 2. The growth trends for these socio-economic variables and assessment of traffic growth rates and forecasts that is necessary for the revenue estimation is detailed in this Chapter.

6.2 Traffic Growth Trend in the Past

The project road (four lane) is operational from 2014 and the traffic growth trend observed in the past for the two TPs, based on the toll traffic data, is discussed in Chapter 3. The summary of average daily traffic growth on the project road is provided in Table 6.1. Car/Taxi/Mini LGV had the highest growth in all vehicle groups, followed by bus and 2 ATs. The growth potential of MAV is high in the region, but the MAV showed a moderate growth as the group includes 3 axle trucks also, which generally has a moderate growth when compared to MAVs with higher axles. 2 ATs have very high growth when compared to roads with similar nature, may be due the clubbing of LCV-3 Axle (which has high growth potential in the region) in Fast-Tag vehicle categorisation.

Table 6-1: Traffic Growth trend in the Past

	Car/Taxi/ Mini LGV	LCV/Mini Bus	Bus	2 AT	3 AT+ MAV	Total
2014-15	2954	767	402	678	2864	7663
2015-16	3493	835	378	691	3221	8617
2016-17	3686	824	356	764	3391	9018
2017-18	6614	1204	883	902	3797	13399
2018-19	6921	1238	878	862	3882	13780
2019-20	7006	1064	863	1007	3894	13834
2020-21	6308	898	445	1055	3453	12158
2021-22	8052	842	546	1318	3905	14662
2022-23	10134	828	924	1505	4241	17632
CAGR (2014-15 to 2022-23)	**17%**	**1%**	**11%**	**10%**	**5%**	**11%**
CAGR (2018-19 to 2022-23)	**10%**	**-10%**	**1%**	**15%**	**2%**	**6%**

It could be concluded that the project road will perform better in the future also due to its geographical location and regional connectivity.

6.3 Growth Rate Estimation

Traffic growth rates to be used for forecasting toll traffic on the project road is estimated by adopting the Elasticity of Transport Demand method which is the most commonly adopted technique for traffic forecast on highways in India. This method establishes the relationship between traffic growth trend on the corridor / vehicle registration of the influencing states, with the state income (NSDP), population and per capita income (PCI) of the project road influencing states.

The steps involved in growth rate estimation are as follows:

- Identifying the Project influence area (PIA) for the project road from OD data, this has impact on the traffic growth of project road.
- Analyze the past socio-economic performance of the project influence area and assess the economic growth rates of influence area in the future.
- Estimating the base elasticity of traffic growth which provides the relationship between the traffic growth and the socio-economic growth of the influence area
- Projection of future elasticity for various modes from the base elasticity
- Estimating the traffic growth based on the future elasticity values and the respective socio-economic growth perspective of the traffic influencing regions

Single growth rate is recommended for both TPs as they are part of the same corridor and continuous in nature.

6.3.1 Economic Profile of Major Traffic Influencing Areas/States

The two toll plazas are located on a continuous stretch of the highway and with same growth potential. Hence common growth rates are recommended for both TPs.

The major influencing states on the traffic on the project road are Maharashtra, Gujarat, Karnataka, Telangana and Tamil Nadu. The influence is given in Table 6.2.

Table 6-2: Major Traffic Influencing States

	Car/Taxi/ Mini LGV	LCV/Mini Bus	Bus	2 AT	3 AT+ MAV
Maharashtra	96.1%	81.6%	91.3%	71.1%	67.9%
Gujarat	0.2%	1.4%	0.0%	2.6%	3.5%
Karnataka	1.8%	6.3%	5.2%	6.5%	8.0%
Tamil Nadu,	0.2%	1.8%	0.0%	4.9%	5.6%
Telangana	1.4%	7.4%	3.0%	10.5%	11.1%
Total	**99.7%**	**98.5%**	**99.5%**	**95.6%**	**96.1%**

Note: Combined influence of TP1 and TP2

One of the advantages of the project corridor is that its influencing states are the main contributors of India economy. The trend of economic growth of the influencing states are summarised in Table 6.3. The economic performance of these states are stable and comparable with India GDP. The average annual growth of NSDP/GDP for the period 2015-2020 is low due to the COVID impact in the year 2020-21.

Table 6-3: NSDP Growth Trend

	Maharashtra	Gujarat	Karnataka	Tamil Nadu	Telangana	India
2015-16	14,52,513	7,74,775	7,49,952	8,62,437	4,16,892	1,13,69,493
2016-17	15,96,121	8,43,930	8,51,394	9,22,084	4,55,731	1,23,08,193
2017-18	16,61,065	9,46,511	9,15,642	10,00,308	4,98,145	1,31,44,582
2018-19	17,28,578	10,34,399	9,74,815	10,71,602	5,44,441	1,39,92,914
2019-20	17,82,903	11,10,179	10,30,357	10,99,402	5,72,736	1,45,15,958
2020-21	16,53,094	10,99,259	10,26,875	10,94,471	5,37,753	1,35,58,473
CAGR (2015-16 to 2020-21)	**2.6%**	**7.2%**	**6.5%**	**4.9%**	**5.2%**	**3.7%**
CAGR (2015-16 to 2019-20)	**5.3%**	**9.4%**	**8.3%**	**6.3%**	**8.3%**	**6.3%**

Source: NSDP: Directorate of Economics & Statistics of respective State Governments, RBI Unit: Rs. In Crores, At constant price and 2011-12 base

6.3.2 Estimation of Base Elasticity & Projection

Elasticity is derived by developing econometric models through regressing NSDP with past traffic data for the years between 2015-16 and 2020-21 (NSDP available up to 2020-21 for all states). The elasticity values are provided in Table 6.4.

Table 6-4: Estimated Elasticity Values

	Elasticity	R^2
2 AT	1.75	0.82
3 AT+MAV	0.94	0.89
LCV/Mini Bus	1.62	0.68
Car/Taxi/Mini LGV	3.98	0.88
Bus	9.71	0.88

The following time periods, till the end of concession period (up to 2036-37).

- Base period adopted: 2015 -16 to 2020-21
- 2021-22 to 2025-26
- 2026-27 to 2030-31
- Beyond 2030-31

Elasticities are projected based on the above values and their growth perspective with respect to the project road.

Generally, the spread of economic development induces changes in the spatial distribution of activities and corresponding changes in transport demand elasticity. Accordingly, the elasticity, for both freight and passenger traffic would tend to decline over time, despite growth in economic parameters. Future modal shift, new vehicle technologies, etc. also will affect transport demand elasticity in the future. Hence it is necessary to moderate the elasticity and to arrive at the growth rates within realistic limits for the future years, by making reasonable assumptions on the various influencing parameters of growth.

It is assumed that LCV/Mini bus category will have nominal growth in the future and bus traffic growth depend on other factors also (such as political, regional, etc.), lower elasticity is adopted accordingly. The adopted values and the projection are given in Table 6.5.

Table 6-5: Adopted Elasticity & Projections

Vehicle Type	Period (2015-16 to 2020-21)	Period (2021-22 to 2025-26)	Period (2026-27 to 2030-31)	Period Beyond 2030-31
2 AT	1.75	1.49	1.27	1.08
3AT+ MAV	0.94	0.80	0.68	0.58
LCV/Mini Bus	0.50*	0.43	0.36	0.31
Car/Taxi/Mini LGV	1.50*	1.28	1.08	0.92
Bus	0.50*	0.43	0.36	0.31

**- Adopted values*

6.3.3 Projection of Socioeconomic Variable

The socio-economic variable projections (weighted NSDP for all modes) were made based on the past performance of the influencing areas and the recent economic changes post COVID.

Due to the absence of realistic data on the future economy of the influencing states, methodology adopted is to forecast the socioeconomic growth (NSDP) of the influencing states by relating with GDP growth forecast. For this, a factor was derived considering the annual growth of GDP for the base period (2015-16 to 2020-21) and every five-year period in the future (Refer Table 7.7). This factor was multiplied with the base period combined NSDP growth rate for each vehicle type, resulting in the future growth rate of NSDP of the influence region for the subsequent time periods.

Impact of COVID in Indian Economy: The base period of growth rate analysis is 2015-2020. This includes the period of first wave of COVID (year 2020-21), which had a lower growth rate of economy. The GDP growth from 2021-22 onwards will capture the regain of economy post COVID. The published GDP growth for 2021-22 to 2022-23 is adopted and for the year 2022-23 and 2023-24 , the GDP figures are based on the latest update from govt. authorities/multilateral agencies are employed in the analysis. These figures will reflect the economic growth after the COVID period.

The GDP of India had expanded 8.7% in 2021-22 after a decline (-ve growth) of 6.6% in the previous year (due to COVID impact). As per the latest update by World Bank, the overall growth of India's economy during 2022-23 is estimated to be 6.9%. The economic survey, by Ministry of Finance, Govt. of India, projects a GDP growth of 6.5 per cent in 2023-24. It is assumed that India's growth continues to be resilient in the future and growth rates assumed accordingly. Based on the above predictions /assumptions, the GDP forecast is made and is given below in Table 6.6.

Table 6-6: Projected Growth of GDP and the Relating Factor

Period	Average Annual GR %	GDP factor for the future five-year periods w.r.t the base Period of (2015-16 to 2020-21)
2015-16 to 2020-21*	3.7%	-
2021-22*	8.7%	188%
2022-23**	6.9%	
2023-24**	6.5%	
2024-25**	6.5%	
2025-26**	6.5%	
2026-27 to 2030-31**	6.0%	161%
>2030-31**	5.5%	147%

*Note: *-Actual values, Source: RBI, World Bank, ** Predictions/Assumptions*

Based on the above, the socioeconomic variables have been projected for the influencing areas and are presented in Table 6.7.

Table 6-7: Projection of Socio-economic Variable for various Vehicle Types

Vehicle Type	Period (2015-16 to 2020-21)	Period (2021-22 to 2025-26)	Period (2026-27 to 2030-31)	Period (beyond 2030-31)
2 axle Truck	3.1%	5.8%	4.9%	4.5%
3 AT+ MAV	3.2%	5.9%	5.1%	4.7%
LCV/Mini Bus	2.9%	5.5%	4.7%	4.3%
Car/Taxi/Mini LGV	2.7%	5.0%	4.3%	4.0%
Bus	2.8%	5.2%	4.4%	4.1%

Note: First year for traffic projection: 2024-25

6.3.4 Recommended Growth Rates

The projected elasticity and the corresponding socio-economic sector projection has been multiplied to estimate the growth rates for different horizon periods using the relationship given below.

Tgr = (NSDPgr) x E

Where, Tgr – Traffic growth rate for mode

NSDPgr – growth rate of NSDP

E – Elasticity value for mode

The recommended growth-rates for the project road are presented below in Table 6.8.

Table 6-8: Recommended Growth Rates

Vehicle Type	Period (2024-25 to 2025-26)	Period (2026-27 to 2030-31)	Period (beyond 2030-31)
2 AT	8.6%	6.2%	4.9%
3 AT + MAV	4.7%	3.4%	2.7%
LCV/Mini Bus	2.3%	1.7%	1.3%
Car/Taxi/Mini LGV	6.4%	4.7%	3.6%
Bus	2.2%	1.6%	1.3%

6.3.5 Growth rates under Optimistic and Pessimistic Scenarios

Growth rates under Optimistic scenario assumes an additional one percent per annum higher growth of GDP than in Normal scenario, while pessimistic scenario consider a decline of GDP growth @ 1% per annum. The growth rates predicted under these two scenarios are given below in Table 6.9 and in Table 6.10.

Table 6-9: Growth Rates under Optimistic Scenario

Vehicle Type	Period (2024-25 to 2025-26)	Period (2026-27 to 2030-31)	Period (beyond 2030-31)
2 AT	9.3%	7.3%	5.7%
3 AT+ MAV	5.1%	4.0%	3.2%
LCV/Mini Bus	2.5%	2.0%	1.6%
Car/Taxi/Mini LGV	7.0%	5.5%	4.3%
Bus	2.4%	1.9%	1.5%

Table 6-10: Growth Rates under Pessimistic Scenario

Vehicle Type	Period (2024-25 to 2025-26)	Period (2026-27 to 2030-31)	Period (beyond 2030-31)
2 AT	7.8%	5.2%	4.0%
3 AT+ MAV	4.3%	2.9%	2.2%
LCV/Mini Bus	2.1%	1.4%	1.1%
Car/Taxi/Mini LGV	5.9%	3.9%	3.0%
Bus	2.0%	1.3%	1.0%

6.4 Traffic Projection

The base year AADT (including the exempted vehicles) has been projected according to the recommended growth rates for the remaining concession period. The estimated traffic diversion due to the proposed Pune- Bangalore expressway is considered from 2030-31.

	TP1			TP2		
	LCV	2 AT	3AT+MAV	LCV	2AT	3AT+ MAV
Traffic Diversion %	15.0%	12.4%	15.0%	11.9%	11.2%	13.3%

Traffic projection is presented from Table 6.11 to Table 6.16 for the two options of the expressway operational during the concession period and the expressway construction delayed respectively under Normal, Optimistic and Pessimistic Scenarios.

Table 6-11: Projected AADT-Normal Scenario (Pune Bangalore Expressway Operational during the Concession Period)

	Normal Scenario															
Year	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	16,913	39,120	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,405	801	768	1,915	4,986	15	17,889	41,229	14,411	1,358	1,038	2,200	5,633	16	**24,656**	**52,086**
2026-27	9,847	814	781	2,033	5,155	15	18,646	42,851	15,088	1,380	1,056	2,337	5,824	16	**25,701**	**54,129**
2027-28	10,310	827	795	2,159	5,331	16	19,437	44,543	15,797	1,402	1,074	2,482	6,022	17	**26,794**	**56,260**
2028-29	10,794	840	808	2,293	5,512	16	20,264	46,308	16,540	1,424	1,092	2,635	6,227	17	**27,936**	**58,484**
2029-30	11,301	854	822	2,435	5,699	17	21,128	48,149	17,317	1,447	1,111	2,799	6,439	18	**29,131**	**60,804**
2030-31*	11,833	867	710	2,266	5,009	17	20,703	44,943	18,131	1,470	995	2,639	5,772	19	**29,027**	**58,040**
2031-32	12,259	879	720	2,377	5,144	18	21,396	46,361	18,784	1,490	1,008	2,769	5,928	19	**29,997**	**59,862**
2032-33	12,700	890	729	2,493	5,283	18	22,114	47,828	19,460	1,509	1,021	2,904	6,088	20	**31,002**	**61,746**
2033-34	13,157	902	739	2,615	5,426	19	22,857	49,345	20,160	1,529	1,035	3,047	6,253	20	**32,043**	**63,695**
2034-35	13,631	913	748	2,744	5,572	19	23,627	50,915	20,886	1,548	1,048	3,196	6,421	21	**33,121**	**65,712**
2035-36	14,121	925	758	2,878	5,723	20	24,425	52,539	21,638	1,569	1,062	3,353	6,595	21	**34,237**	**67,798**
2036-37	14,630	937	768	3,019	5,877	20	25,251	54,220	22,417	1,589	1,075	3,517	6,773	22	**35,393**	**69,956**

**- Start year of Pune- Bangalore expressway operation*

Table 6-12: Projected AADT-Optimistic Scenario (Pune Bangalore Expressway Operational during the Concession Period)

Year	Optimistic Scenario															
	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	**16,913**	**39,120**	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,458	803	770	1,927	5,005	15	**17,977**	**41,412**	14,492	1,361	1,040	2,214	5,654	16	**24,778**	**52,318**
2026-27	9,978	818	785	2,068	5,205	15	**18,869**	**43,327**	15,289	1,387	1,061	2,376	5,881	16	**26,010**	**54,730**
2027-28	10,527	834	801	2,219	5,413	16	**19,809**	**45,340**	16,130	1,413	1,082	2,550	6,116	17	**27,308**	**57,265**
2028-29	11,106	849	817	2,381	5,630	17	**20,799**	**47,454**	17,017	1,440	1,104	2,736	6,360	18	**28,675**	**59,928**
2029-30	11,716	866	833	2,554	5,855	17	**21,842**	**49,677**	17,953	1,467	1,126	2,935	6,615	18	**30,115**	**62,728**
2030-31*	12,361	882	722	2,401	5,176	18	**21,560**	**46,692**	18,941	1,495	1,012	2,797	5,964	19	**30,228**	**60,290**
2031-32	12,892	895	734	2,538	5,341	18	**22,419**	**48,440**	19,755	1,518	1,028	2,956	6,155	20	**31,432**	**62,537**
2032-33	13,447	909	746	2,682	5,512	19	**23,315**	**50,259**	20,604	1,540	1,045	3,125	6,352	20	**32,687**	**64,875**
2033-34	14,025	922	758	2,835	5,689	20	**24,249**	**52,152**	21,490	1,563	1,061	3,303	6,556	21	**33,995**	**67,308**
2034-35	14,628	936	770	2,997	5,871	20	**25,222**	**54,122**	22,415	1,587	1,078	3,491	6,765	22	**35,358**	**69,841**
2035-36	15,257	950	782	3,168	6,059	21	**26,237**	**56,174**	23,378	1,611	1,096	3,690	6,982	22	**36,779**	**72,477**
2036-37	15,913	964	795	3,348	6,253	22	**27,295**	**58,309**	24,384	1,635	1,113	3,901	7,205	23	**38,261**	**75,222**

**- Start year of Pune- Bangalore expressway operation*

Table 6-13: Projected AADT-Pessimistic Scenario (Pune Bangalore Expressway Operational during the Concession Period)

Year	Pessimistic Scenario															
	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	**16,913**	**39,120**	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,361	800	767	1,901	4,967	15	**17,809**	**41,049**	14,343	1,356	1,036	2,184	5,611	16	**24,546**	**51,861**
2026-27	9,726	810	778	1,999	5,111	15	**18,438**	**42,409**	14,902	1,373	1,051	2,298	5,774	16	**25,414**	**53,571**
2027-28	10,105	821	788	2,103	5,259	15	**19,092**	**43,818**	15,484	1,391	1,066	2,417	5,942	17	**26,315**	**55,343**
2028-29	10,499	831	799	2,213	5,412	16	**19,770**	**45,277**	16,088	1,409	1,080	2,543	6,114	17	**27,251**	**57,178**
2029-30	10,908	842	811	2,328	5,568	16	**20,474**	**46,790**	16,715	1,427	1,096	2,675	6,291	18	**28,222**	**59,081**
2030-31*	11,334	853	699	2,145	4,870	17	**19,918**	**43,394**	17,367	1,446	979	2,499	5,613	18	**27,921**	**56,035**
2031-32	11,674	862	706	2,231	4,978	17	**20,468**	**44,513**	17,888	1,460	989	2,599	5,736	18	**28,691**	**57,473**
2032-33	12,024	870	714	2,320	5,087	18	**21,033**	**45,664**	18,424	1,475	1,000	2,703	5,862	19	**29,484**	**58,952**
2033-34	12,385	879	722	2,413	5,199	18	**21,616**	**46,847**	18,977	1,490	1,011	2,811	5,991	19	**30,300**	**60,473**
2034-35	12,756	888	730	2,510	5,313	18	**22,215**	**48,063**	19,547	1,505	1,022	2,923	6,123	20	**31,140**	**62,036**
2035-36	13,139	897	738	2,610	5,430	19	**22,832**	**49,314**	20,133	1,520	1,034	3,040	6,258	20	**32,005**	**63,644**
2036-37	13,533	906	746	2,714	5,550	19	**23,468**	**50,601**	20,737	1,535	1,045	3,162	6,395	21	**32,895**	**65,298**

**- Start year of Pune- Bangalore expressway operation*

Table 6-14: Projected AADT-Normal Scenario (Pune Bangalore Expressway Operational Beyond the Concession Period)

	Normal Scenario															
Year	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	**16,913**	**39,120**	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,405	801	768	1,915	4,986	15	**17,889**	**41,229**	14,411	1,358	1,038	2,200	5,633	16	**24,656**	**52,086**
2026-27	9,847	814	781	2,033	5,155	15	**18,646**	**42,851**	15,088	1,380	1,056	2,337	5,824	16	**25,701**	**54,129**
2027-28	10,310	827	795	2,159	5,331	16	**19,437**	**44,543**	15,797	1,402	1,074	2,482	6,022	17	**26,794**	**56,260**
2028-29	10,794	840	808	2,293	5,512	16	**20,264**	**46,308**	16,540	1,424	1,092	2,635	6,227	17	**27,936**	**58,484**
2029-30	11,301	854	822	2,435	5,699	17	**21,128**	**48,149**	17,317	1,447	1,111	2,799	6,439	18	**29,131**	**60,804**
2030-31	11,833	867	836	2,586	5,893	17	**22,033**	**50,071**	18,131	1,470	1,130	2,972	6,658	19	**30,380**	**63,225**
2031-32	12,259	879	847	2,713	6,052	18	**22,767**	**51,646**	18,784	1,490	1,144	3,118	6,838	19	**31,392**	**65,206**
2032-33	12,700	890	858	2,846	6,216	18	**23,528**	**53,275**	19,460	1,509	1,159	3,271	7,022	20	**32,441**	**67,255**
2033-34	13,157	902	869	2,986	6,383	19	**24,315**	**54,960**	20,160	1,529	1,174	3,431	7,212	20	**33,526**	**69,374**
2034-35	13,631	913	880	3,132	6,556	19	**25,131**	**56,703**	20,886	1,548	1,190	3,599	7,407	21	**34,650**	**71,566**
2035-36	14,121	925	892	3,285	6,733	20	**25,976**	**58,507**	21,638	1,569	1,205	3,775	7,606	21	**35,815**	**73,834**
2036-37	14,630	937	903	3,446	6,915	20	**26,851**	**60,373**	22,417	1,589	1,221	3,960	7,812	22	**37,021**	**76,180**

Table 6-15: Projected AADT-Optimistic Scenario (Pune Bangalore Expressway Operational beyond the Concession Period)

Year	Optimistic Scenario															
	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	**16,913**	**39,120**	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,458	803	770	1,927	5,005	15	**17,977**	**41,412**	14,492	1,361	1,040	2,214	5,654	16	**24,778**	**52,318**
2026-27	9,978	818	785	2,068	5,205	15	**18,869**	**43,327**	15,289	1,387	1,061	2,376	5,881	16	**26,010**	**54,730**
2027-28	10,527	834	801	2,219	5,413	16	**19,809**	**45,340**	16,130	1,413	1,082	2,550	6,116	17	**27,308**	**57,265**
2028-29	11,106	849	817	2,381	5,630	17	**20,799**	**47,454**	17,017	1,440	1,104	2,736	6,360	18	**28,675**	**59,928**
2029-30	11,716	866	833	2,554	5,855	17	**21,842**	**49,677**	17,953	1,467	1,126	2,935	6,615	18	**30,115**	**62,728**
2030-31	12,361	882	850	2,741	6,089	18	**22,941**	**52,013**	18,941	1,495	1,149	3,150	6,879	19	**31,633**	**65,670**
2031-32	12,892	895	863	2,897	6,284	18	**23,851**	**53,953**	19,755	1,518	1,167	3,329	7,100	20	**32,888**	**68,113**
2032-33	13,447	909	877	3,062	6,485	19	**24,799**	**55,973**	20,604	1,540	1,186	3,519	7,327	20	**34,197**	**70,654**
2033-34	14,025	922	891	3,237	6,693	20	**25,788**	**58,074**	21,490	1,563	1,205	3,719	7,561	21	**35,560**	**73,298**
2034-35	14,628	936	906	3,421	6,907	20	**26,818**	**60,261**	22,415	1,587	1,224	3,931	7,803	22	**36,982**	**76,051**
2035-36	15,257	950	920	3,616	7,128	21	**27,892**	**62,537**	23,378	1,611	1,244	4,156	8,053	22	**38,464**	**78,915**
2036-37	15,913	964	935	3,822	7,356	22	**29,012**	**64,907**	24,384	1,635	1,263	4,392	8,311	23	**40,008**	**81,897**

Table 6-16: Projected AADT-Pessimistic Scenario (Pune Bangalore Expressway Operational Beyond the Concession Period)

	Pessimistic Scenario															
Year	TP1								TP2							
	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU	Car/Taxi/ Mini LGV	Bus	LCV/ Mini bus	2 Axle Truck	3 AT+ MAV	OSV	Tot Veh.	Tot. PCU
2024-25	8,839	784	751	1,763	4,762	14	**16,913**	**39,120**	13,544	1,329	1,015	2,026	5,380	15	**23,309**	**49,432**
2025-26	9,361	800	767	1,901	4,967	15	**17,809**	**41,049**	14,343	1,356	1,036	2,184	5,611	16	**24,546**	**51,861**
2026-27	9,726	810	778	1,999	5,111	15	**18,438**	**42,409**	14,902	1,373	1,051	2,298	5,774	16	**25,414**	**53,571**
2027-28	10,105	821	788	2,103	5,259	15	**19,092**	**43,818**	15,484	1,391	1,066	2,417	5,942	17	**26,315**	**55,343**
2028-29	10,499	831	799	2,213	5,412	16	**19,770**	**45,277**	16,088	1,409	1,080	2,543	6,114	17	**27,251**	**57,178**
2029-30	10,908	842	811	2,328	5,568	16	**20,474**	**46,790**	16,715	1,427	1,096	2,675	6,291	18	**28,222**	**59,081**
2030-31	11,334	853	822	2,449	5,730	17	**21,204**	**48,358**	17,367	1,446	1,111	2,814	6,474	18	**29,229**	**61,053**
2031-32	11,674	862	831	2,547	5,856	17	**21,786**	**49,601**	17,888	1,460	1,123	2,927	6,616	18	**30,033**	**62,617**
2032-33	12,024	870	840	2,649	5,985	18	**22,385**	**50,878**	18,424	1,475	1,135	3,044	6,762	19	**30,859**	**64,224**
2033-34	12,385	879	849	2,755	6,117	18	**23,002**	**52,191**	18,977	1,490	1,148	3,165	6,910	19	**31,710**	**65,877**
2034-35	12,756	888	859	2,865	6,251	18	**23,637**	**53,542**	19,547	1,505	1,161	3,292	7,062	20	**32,586**	**67,576**
2035-36	13,139	897	868	2,979	6,389	19	**24,290**	**54,930**	20,133	1,520	1,173	3,424	7,218	20	**33,488**	**69,324**
2036-37	13,533	906	878	3,098	6,529	19	**24,963**	**56,358**	20,737	1,535	1,186	3,561	7,376	21	**34,416**	**71,121**

7 TOLL REVENUE FORECAST

Toll revenue is projected for the remaining years of concession period (upto 2036-37) based on the base year AADT and recommended growth rates. Toll/User fee is projected for the future years as per the provisions of the Concession Agreement.

7.1 Input for Toll Revenue Estimation

7.1.1 Base Year AADT

The AADT of tollable vehicles (toll paying traffic) for the base year (2024-25), estimated from the toll traffic, at the toll plaza locations is shown in Table 7.1. This AADT excludes the share of exempted vehicles as provided in Section 3.1.6.

Table 7-1: Base Year Tollable AADT (2024-25)

	TP1	TP2
Car/Taxi/Mini LGV	7,978	12,337
LCV/Mini bus	708	916
Bus	781	1,314
2 AT	1,733	1,983
3 AT+ MAV	4,672	5,333
OSV	14	15
Total Veh.	**15,887**	**21,899**
Total PCU.	**37,693**	**47,691**

Note: Toll paying traffic, excluding toll exempted vehicles

7.1.2 Toll Policy

As per Schedule R of Concession agreement, the toll rates for computation of toll revenues to be adopted from the National Highways Fee (Determination of rates and collection) Rules, 2008. Various trip categories are described below:

- **Single Entry:** Mechanical vehicle who makes use of the section of National Highway, permanent bridge, bypass or tunnel for one way journey once in 24 hrs.
- **Return trip:** Driver or person who is in charge of a mechanical vehicle who makes use of the section of National Highway, permanent bridge, bypass or tunnel for two one-way journeys within a 24 hrs. (from the time of payment) may opt for the return pass.
- **Monthly Local pass for cars:** Person who owns mechanical vehicle, registered for non-commercial purpose and resides within a distance of 20 Km from the toll plaza location is eligible for the local monthly pass.
- **Monthly pass:** Driver, Owner or person who is in charge of a mechanical vehicle who makes use of the toll section frequently during a month, may opt to purchase a monthly pass. Monthly pass amount is fixed as two-third of the fee for 50 single journeys in a period of one month.

7.1.3 Toll Ticket Categorisation

Trip categorization adopted in the study is presented in Table 7. 2.

Table 7-2: Trip categorization as per NHAI Toll Policy

Veh Type	Single	Return	Local Monthly Pass/Local Concession	Monthly Pass	Total
TP1					
Car/Taxi/Mini LGV	58.32%	40.22%	1.46%	0.00%	100.00%
LCV/Mini Bus	70.14%	29.85%	0.00%	0.01%	100.00%
Bus	18.48%	81.52%	0.00%	0.00%	100.00%
Truck (2 AT)	83.78%	16.22%	0.00%	0.00%	100.00%
3AT+ MAV	89.35%	10.65%	0.00%	0.00%	100.00%
OSV	99.16%	0.84%	0.00%	0.00%	100.00%
TP2					
Car/Taxi/Mini LGV	46.33%	48.94%	4.73%	0.01%	100.00%
LCV/Mini Bus	59.41%	37.73%	0.00%	2.86%	100.00%
Bus	14.90%	85.10%	0.00%	0.00%	100.00%
Truck (2 AT)	77.30%	22.70%	0.00%	0.00%	100.00%
3AT+ MAV	83.51%	16.49%	0.00%	0.00%	100.00%
OSV	96.63%	3.37%	0.00%	0.00%	100.00%

Source: PSRCL Toll traffic data (2023-24)

7.1.4 Toll Fee Rates

The applicable toll rates are:

Base rate of fee for highway with four lane or more lanes: The rate of fee for use of a section of national highway of four or more lanes shall, for the base year 2007-08 be the product of the length of such section multiplied by the following rates namely:

Type of Vehicle	Base Rate of fee per km (in rupees) (2007-08 rate)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Trucks	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (four to six axles)	3.45
Oversized vehicles (seven or more axles)	4.20

These rates are applicable for one way (single) journey.

- **Daily/Return Pass & Monthly Pass Rate:**

Amount Payable	Maximum number of one-way journeys allowed	Period of Validity
One and half times of the fee for one way journey	Two	Twenty-four hours from the time of payment
Two-third of amount of the fee payable for fifty single journeys	Fifty	One month from date of payment

- **Monthly pass for Local Car Traffic:** The monthly fee for local car traffic (residing within 20 km radius of the toll plaza), at the base rate for the year 2007-2008 is of rupees One hundred and Fifty per calendar month.

The toll amount, by multiplying the above rates with the control length/tollable length of the toll plaza shall be rounded to the nearest five rupees.

7.1.5 Toll Plaza Control lengths

The tollable length/control lengths of the toll plazas as per the Schedule R of the project are presented in Table 7.3.

Table 7-3: Toll Plaza Control Length

Length of Tolling (Km)	TP1	TP2
Length of Tolling (4Lane)	50.65	50.65

Source: Schedule R

7.1.6 Toll Fee Forecasts

Annual Revision of rate of fee: The 2007-08 toll rates have been increased without compounding by three per cent each year with effect from the 1st day of April 2008 and such increased rate has been deemed to be the base rate for the subsequent years.

The applicable base rates have been revised annually with effect from April 1st, each year to reflect the increase in wholesale price index between the week ending on January 6, 2007 and the week ending on or immediately after January 1 of the year in which sub revision is undertaken but such revision shall be restricted for forty percent of the increase in wholesale price index. The past WPI values has been adopted from Source: http://eaindustry.nic.in/default.htm/ Ministry of Commerce and Industry, Govt. of India. The formula for determining the applicable rate of fee is as follows:

$$\text{Applicable rate of fee} = \text{Base rate} + \text{base rate X} \left\{ \frac{\text{WPIA - WPIB}}{\text{WPIB}} \right\} \text{X } 0.4$$

The annual fluctuation of WPI in the past (refer Table given below). The average annual growth observed in the past is about 5%. Hence, a similar trend is considered for the future also. However, actual WPI growth observed last three to four years data in some year muted and in some years in

double digits growth. The value recommended for 2025 is 3.5%, for 2026/ 2027/2028 is 6.5% and thereafter 5%.

Applicable Year	WPI Actual Index (2004-05 series)	Annual Inflation %
2007-08	112.2	-
2008-09	116.7	4.0
2009-10	124.5	6.7
2010-11	133.4	7.1
2011-12	146.0	9.4
2012-13	157.3	7.7
2013-14	168.6	7.2
2014-15	179.6	6.5
2015-16	178.7	-0.5
2016-17	176.8	-1.1
2017-18	183.3	3.7
2018-19	189.9	3.6
2019-20	196.4	3.4
2020-21	201.8	2.8
2021-22	205.8	2.0
2022-23	235.2	14.3
2023-24	247.0	5.02
2024-25	249.1	0.86
Average (2007- 2024)		**4.9**

Source: http://eaindustry.nic.in/linking_factor0405.asp,

7.1.7 Toll Fee Projection

Based on the above, the toll fee has been projected for various type of toll category till the end of concession period. The toll amount applicable for 2023-24 (with effect from 01.04.2023) at the toll plazas are presented in Table 7.4. The revision in toll rate for the year 2024-25 is implemented after completion of last phase of Lok Sabha election (2024) and the toll rate revision is made effective from 3rd June 2024.

Table 7-4: Toll amount applicable from 01.04.2023 to 21.05.2024 (In INR)

Category of Vehicles	Fee for Single Journey	Fee for Return Journey within a day	Fee for Monthly Pass for 50 single journeys in a month
TP 1			
Car, Jeep, Van or Light Motor Vehicle	70	110	2,415
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	115	175	3,900
Bus or Truck (Two Axle)	245	370	8,170
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Three to Six Axle)	385	575	12,815
Oversized Vehicle (Seven or More Axle)	470	700	15,600
TP 2			
Car, Jeep, Van or Light Motor Vehicle	70	110	2,415
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	115	175	3,900

Category of Vehicles	Fee for Single Journey	Fee for Return Journey within a day	Fee for Monthly Pass for 50 single journeys in a month
Bus or Truck (Two Axle)	245	370	8,170
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Three to Six Axle)	385	575	12,815
Oversized Vehicle (Seven or More Axle)	470	700	15,600

Note: The rates for monthly local pass applicable for local personal non-commercial vehicle (car) resides with in a distance of 20 Km from the toll plaza shall be Rs.330/-

Table 7.5 provides the applicable toll amount from 22.05 2024 to 31.03.3025.

Table 7-5: Toll Amount applicable for 2024-25 from 22.05 2024 to 31.03.3025 (in INR)

Category of Vehicles	Fee for Single Journey	Fee for Return Journey within a day	Fee for Monthly Pass for 50 single journeys in a month
TP 1			
Car, Jeep, Van or Light Motor Vehicle	75	110	2,475
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	120	180	4,000
Bus or Truck (Two Axle)	250	375	8,380
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Three to Six Axle)	395	590	13,140
Oversized Vehicle (Seven or More Axle)	480	720	16,000
TP 2			
Car, Jeep, Van or Light Motor Vehicle	75	110	2,475
Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	120	180	4,000
Bus or Truck (Two Axle)	250	375	8,380
Heavy Construction Machinery or Earth Moving Equipment or Multi Axle Vehicle (Three to Six Axle)	395	590	13,140
Oversized Vehicle (Seven or More Axle)	480	720	16,000

Note: The rates for monthly local pass applicable for local personal non-commercial vehicle (car) resides with in a distance of 20 Km from the toll plaza shall be Rs.340/-

7.1.8 Growth Rates

Summary of recommended growth rates/normal scenario are given in Table 7.6.

Table 7-6: Recommended Growth Rates

Vehicle Type	Period (2024-25 to 2025-26)	Period (2026-27 to 2030-31)	Period (beyond 2030-31)
2 AT	8.6%	6.2%	4.9%
3 AT + MAV	4.7%	3.4%	2.7%
LCV/Mini Bus	2.3%	1.7%	1.3%
Car/Taxi/Mini LGV	6.4%	4.7%	3.6%
Bus	2.2%	1.6%	1.3%

7.2 Projected Toll Revenue

7.2.1 Annual Toll Revenue

The toll revenue is computed for the remaining years of the concession period. Toll collection is assumed for 365 days in a year. The revision in toll rate for the year 2024-25 is applied from 3rd June 2024 due to the Lok Sabha election (2024). The estimated traffic diversion due to the proposed Pune-Bangalore expressway is assumed from 2030-31 and the total revenue summary is presented in the Table 7.7 for the two TPs.

	TP1			TP2		
	LCV	2 AT	3AT+MAV	LCV	2AT	3AT+ MAV
Traffic Diversion %	15.0%	12.4%	15.0%	11.9%	11.2%	13.3%

Table 7.8 present the toll revenue summary in case the expressway development is delayed (expressway completion beyond the concession period).

Table 7-7: Projected Annual Toll Revenue Summary (Pune Bangalore Expressway Operational during the Concession Period)

	Normal Scenario (Rs. In Crores)			Optimistic Scenario (Rs. In Crores)			Pessimistic Scenario (Rs. In Crores)		
Year	TP1	TP2	Total	TP1	TP2	Total	TP1	TP2	Total
2024-25	108.23	131.44	239.67	108.23	131.44	239.67	108.23	131.44	239.67
2025-26	118.61	144.07	262.68	119.13	144.70	263.83	118.09	143.45	261.54
2026-27	130.88	159.08	289.96	132.32	160.82	293.14	129.55	157.46	287.00
2027-28	144.08	174.94	319.02	146.64	178.03	324.67	141.76	172.13	313.89
2028-29	159.23	193.43	352.66	163.14	198.16	361.30	155.74	189.18	344.93
2029-30	174.04	211.18	385.23	179.53	217.80	397.33	169.20	205.30	374.50
2030-31*	171.05	212.88	383.93	177.66	221.05	398.71	165.25	205.66	370.91
2031-32	185.79	230.94	416.73	194.05	241.15	435.21	178.49	221.88	400.37
2032-33	202.56	251.87	454.43	212.77	264.51	477.27	193.50	240.63	434.13
2033-34	219.47	272.93	492.40	231.84	288.25	520.09	208.47	259.29	467.76
2034-35	238.66	296.66	535.32	253.56	315.10	568.66	225.41	280.25	505.66
2035-36	258.22	320.67	578.88	275.90	342.53	618.43	242.51	301.24	543.75
2036-37	281.55	349.88	631.43	302.59	375.92	678.52	262.89	326.79	589.68

*Note: This revenue excludes the penalty for non-Fast-Tag payment and overloading *-Assumed start year of Pune- Bangalore expressway operation*

Table 7-8: Projected Annual Toll Revenue Summary (Pune Bangalore Expressway Operational beyond the Concession Period)

	Normal Scenario (Rs. In Crores)			Optimistic Scenario (Rs. In Crores)			Pessimistic Scenario (Rs. In Crores)		
Year	TP1	TP2	Total	TP1	TP2	Total	TP1	TP2	Total
2024-25	108.23	131.44	239.67	108.23	131.44	239.67	108.23	131.44	239.67
2025-26	118.61	144.07	262.68	119.13	144.70	263.83	118.09	143.45	261.54
2026-27	130.88	159.08	289.96	132.32	160.82	293.14	129.55	157.46	287.00
2027-28	144.08	174.94	319.02	146.64	178.03	324.67	141.76	172.13	313.89
2028-29	159.23	193.43	352.66	163.14	198.16	361.30	155.74	189.18	344.93
2029-30	174.04	211.18	385.23	179.53	217.80	397.33	169.20	205.30	374.50
2030-31	190.15	230.93	421.08	197.48	239.78	437.26	183.74	223.14	406.88
2031-32	206.58	250.59	457.17	215.74	261.65	477.39	198.50	240.80	439.30
2032-33	225.05	273.14	498.18	236.35	286.81	523.16	215.04	260.99	476.03
2033-34	243.82	295.95	539.77	257.52	312.53	570.05	231.66	281.21	512.87
2034-35	265.19	321.74	586.92	281.69	341.69	623.38	250.53	303.99	554.52
2035-36	286.98	347.87	634.85	306.56	371.53	678.09	269.60	326.85	596.44
2036-37	312.72	379.35	692.07	336.00	407.52	743.52	292.07	354.38	646.45

Note: This revenue excludes the penalty for non-Fast-Tag payment and overloading

7.2.2 Additional Revenue from Overloading

Share of overloading vehicles (additional to actual tollable traffic) for the year 2024-25 (as per Apr. to Sept. data) as per the toll data is provided in Table 7.10.

Table 7-9: Share of Overloading vehicles

Veh. Type	TP1	TP2
LCV	1.3%	0.7%
2 AT	1.1%	0.6%
3AT+MAV	0.9%	0.9%
OSV	0.0%	0.0%

Source: PSRDCL toll data for 2024-25 (Apr. -Sept.)

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ROADSTAR INFRA INVESTMENT TRUST

INDEPENDENT ASSESSMENT OF TRAFFIC FORECASTING AND TOLL REVENUE ESTIMATION FOR SIX-LANING OF BARWA-ADDA-PANAGARH SECTION OF NH-2 FROM KM 398.240 TO KM 521.120 INCLUDING PANAGARH BYPASS IN THE STATES OF JHARKHAND AND WEST BENGAL UNDER NHDP PHASE V ON TOLL ON DBFOT PATTERN.

TRAFFIC FORECASTING AND TOLL REVENUE ESTIMATION- FINAL REPORT

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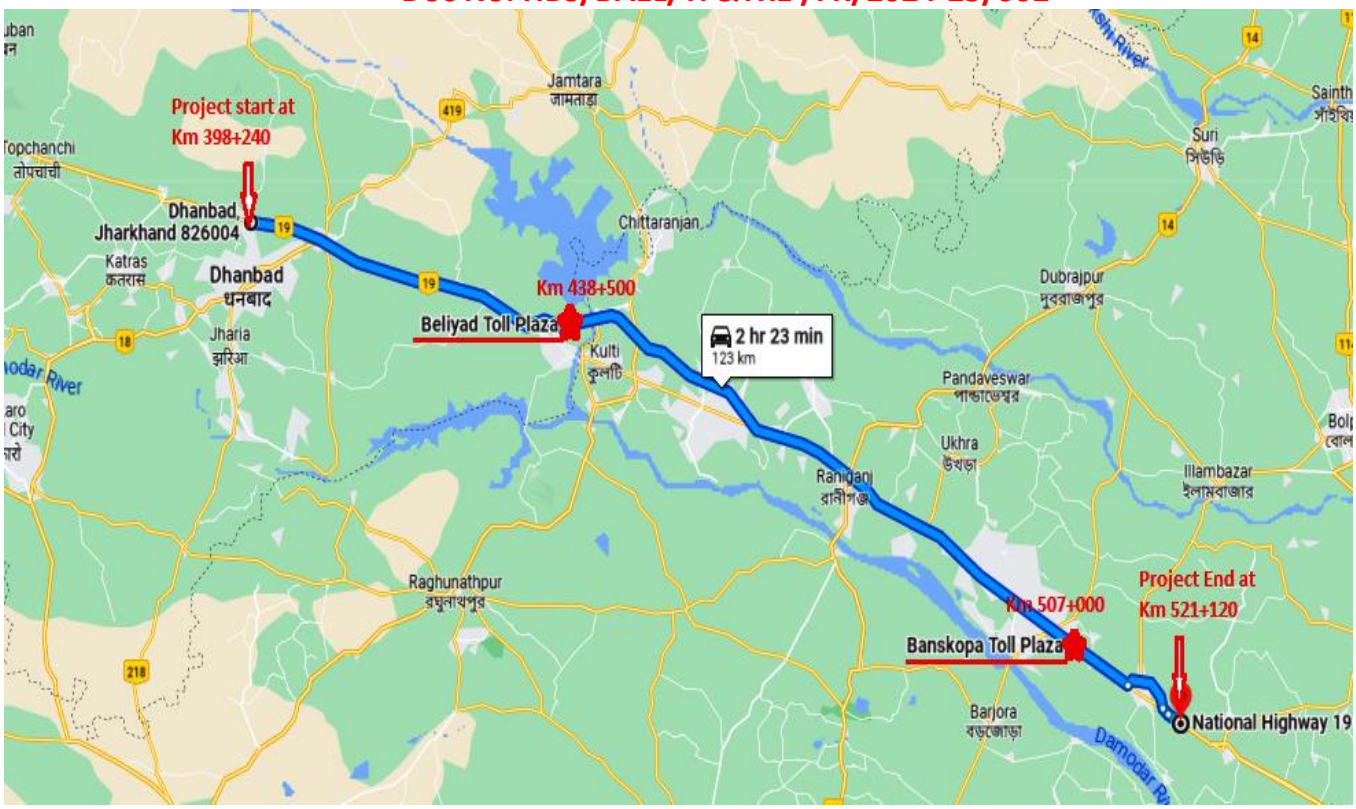

CONCESSIONAIRE: **BARWA ADDA EXPRESSWAY LIMITED.**

CONSULTANT: **HBS INFRA ENGINEERS INDIA PVT. LTD.**

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CHAPTER 1. EXECUTIVE SUMMARY

1.1 PROJECT BACKGROUND

The Barwa-Adda-Panagarah section of NH-2, which includes the Panagarh bypass, was awarded to IL&FS on a Design-Build-Finance-Operate-Transfer (DBFOT) basis. Table 1-1 presents the important milestones achieved during the project.

Table 1.1: Project Milestones

S.No	Particulars	Description
1	Date of Signing of Concession agreement	08/05/2013
2	Concession period start	01/04/2014
3	Concession Period	20 years
4	Concession period End	31/03/2034
5	Scheduled date of transfer of	31/03/2034
6	Extension period	4.3years (4years due to short fall in target traffic + 90days due to Covid19)

The Project is presently undergoing maintenance by Concessionaire Barwa Adda Expressway Limited. The Concessionaire has appointed M/s. HBS Infra Engineers India Pvt Ltd to carry out an independent assessment of traffic forecasting and toll revenue estimation for the project.

National Highway 19 (NH 19) in India was previously known as the Delhi-Kolkata Road and is one of the busiest national highways in the country. Following the renumbering of national highways, the Delhi to Agra route is now designated as National Highway 44, while the Agra to Kolkata route is numbered as National Highway 19 (old NH-2). NH 19 forms a significant portion of the historic Grand Trunk Road.

NH 19 begins in Agra, at its junction with NH-44, and connects Kanpur, Allahabad, and Varanasi in Uttar Pradesh, as well as Mohania, Sasaram, and Aurangabad in Bihar. It also passes through Barhi, Bagodar, and Gobindpur in Jharkhand, and Asansol and Palsit in West Bengal before terminating at its junction with NH-16 near Kolkata.

1.2 PROJECT DESCRIPTION

- Project Start: Starting at Km 398+240 near kisan chowk Barwadda
- Project End: Ending at Km 521+120 near Panagarh
- Project road passes through major towns of Gobindpur, Dhanbad, Asansol, Durgapur and Panagarah
- Project road passes through Jharkhand and West Bengal state.
- NH-Crossings the project road:NH-18, NH-419 near Gobindpur, NH-419 near Kulti, NH-14 near Raniganj.

  Toll plazas: 2 Nos -Beliyad Toll plaza at Km 438+500 and Banskopa Toll plaza at Km 507+000.

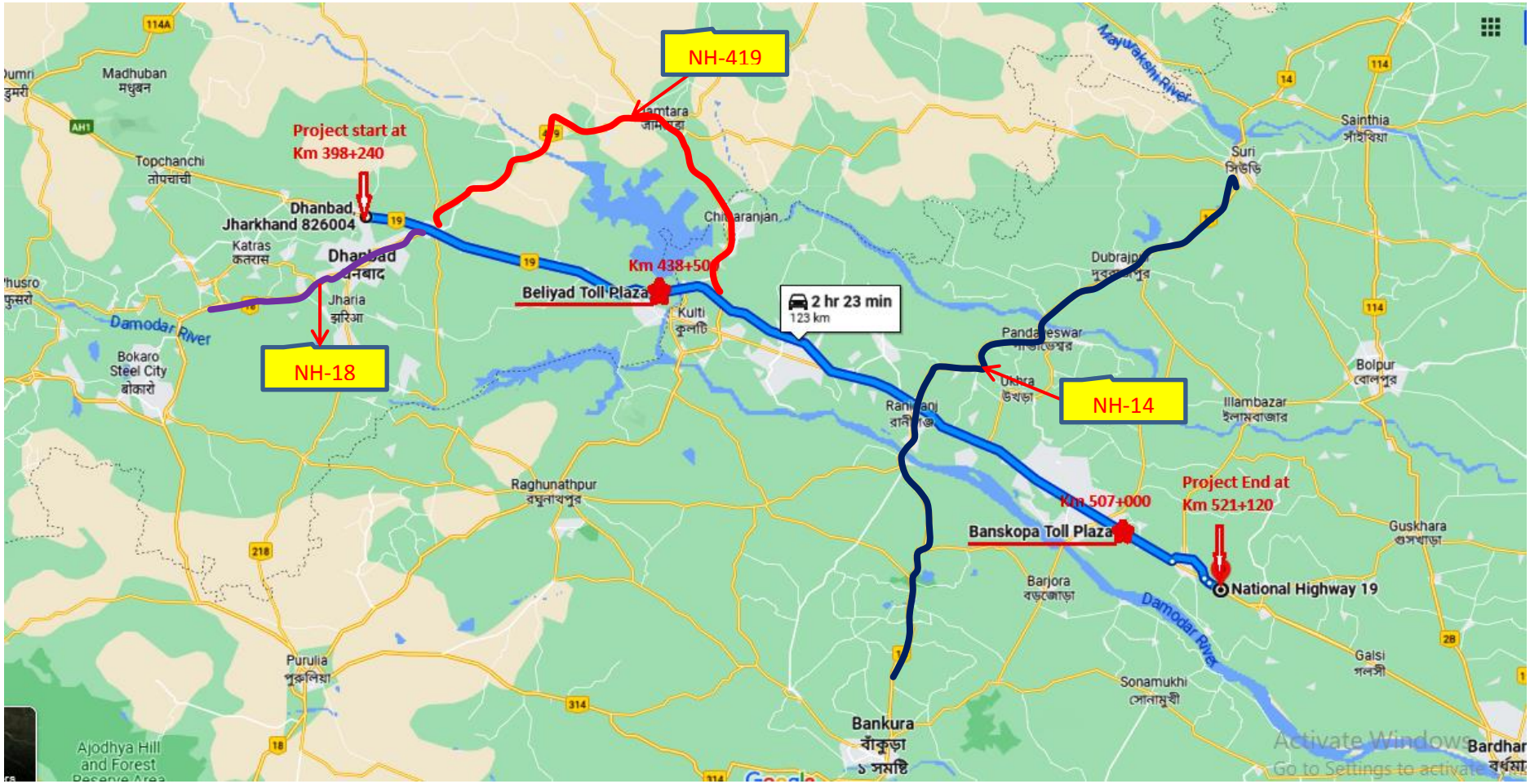


Figure 1.1: Index Map showing Proposed alignment and National Highways crossing along the project

1.3 DATA COLLECTION

1.3.1. Data Collection from the Client

Past data about the project corridor was sourced from the client. This includes historic toll traffic and revenue data for the two toll plazas on the project road to study the past traffic and revenue trends, seasonal variations in traffic, and other observations related to the data. Past traffic trends in year-on-year growth, month-on-month growth, etc., were derived, which will also help understand the travel pattern for passenger and goods vehicles. The given traffic data includes the toll categories like single (through) journey, local pass, monthly pass, and exempted traffic. Exempt category traffic falls under the list of vehicles where these vehicles are exempted from paying the user fee.

1.3.2. Data Collection from the field

Origin – Destination Surveys using Roadside Interviews method was conducted for 48 hrs. (both directions) at two toll plazas locations on random sampling basis covering reasonably adequate sample for each tollable vehicle category. Origin-Destination (OD) surveys studies were carried out to find the

a) Possible traffic diversion on the proposed road
b) To assess the future growth rates of traffic based on traffic influence areas and social economic characteristics.
c) OD Matrices, commodity composition, regional distribution of traffic, lead distribution of vehicles and trip contribution

1.4 TRAFFIC AND REVENUE FORECAST ASSUMPTIONS

1.4.1. Traffic

Traffic forecasting for a project road was conducted by considering the past trend in growth and analyzing the prospects of the project influence area. The elasticity approach for growth rate estimation was used for long-term traffic forecasting. The methodology used for the study included the following steps:

- The influencing factors obtained from OD (origin-destination) surveys were utilized to derive the key socio-economic parameters of the Project Influence Area (PIA) for the historical trend.
- Regression analysis was conducted for various combinations of the dependent and independent parameters to test the significance of their relation.
- Future traffic forecasting was done using elasticity approach, which considers the elasticity of transport demand and probable pattern of future growth of the economy.
- Elasticity values for each mode is estimated using the past vehicle registration data, past traffic trend and AADT-tonnage with the growth of PCI, GSDP and Moderated elasticity values chosen for the analysis based on previous trends in socioeconomic variables.

1.4.2. Revenue

- Toll revenue projections or forecasting will be calculated based on the projected traffic and projected toll rates.
- Toll rates by vehicle and toll category depends on the tollable length and structure cost(length), wholesale price index (WPI) and the base rates which are applicable by vehicle category are according to the NH fee notification for the project.

- Toll fee shall be computed based on the base rate fixed by NHAI and is revised annually as per the formula provided by NHAI in Schedule R of the Concession agreement which is according to the National highway fee rules 2008.
- Fee applicable shall be the rate multiplied by the length of the highway section and structure cost for which toll is to be collected.
- The amount of fee and the revision thereof effective from 1st April every year shall be calculated as follows

$$\text{Applicable rate of fee} = \text{Base Rate} + \text{Base Rate X} \left\{\frac{\text{WPI A} - \text{WPIB}}{\text{WPI A}}\right\} * 0.4$$

where

WPI-A means the Wholesale Price Index of the week ending on or after 1st January immediately Preceding the date of revision under these rules.

WPI-B means the Wholesale Price Index of the week ending on 6th January 2007 i.e., 208.7

The actual fees to be charged shall be rounded off to the nearest Five rupees.

- CSO (Central statistical organization) provided linking factors for both the 2004-05 and 2011-12 series to arrive at the WPI values for the 1993-94 series to reach the year of toll fee.
- Ministry of Statistics and Programme Implementation (MoSPI) reported the linking factor as 1.561, but the recent communication on fee revision mentions the linking factors can be adopted as 1.641.

1.5 Traffic and Toll revenue projections

The Tables 1.2 and 1.3 show the forecasted traffic at both Toll plazas for each base year. These projections consider the impact of any road network improvements and land developments that may take until the end of the Concession period, including any possible extension periods as outlined in the concession agreement.

Toll revenue projections are based on the projected future traffic, toll fees by vehicle and toll category, and trip rates. Traffic numbers are estimated by financial years, such as FY24-25, FY25-26, etc. Toll rates are revised annually **on April 1st**. Toll revenues are projected by the financial year until the end of the concession period, considering any possible extensions that relate to the targeted traffic PCU **until March 2039** (FY38-39). The toll revenue projections are based on the effective case, considering all network improvements and land developments. Table 1.4 summarize the projected toll revenue.

Table 1.2: Traffic forecast (AADT) at Beliyad Toll plaza

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Mini bus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	4,474	282	305	1,140	917	3,705	**10,821**	**28,616**
2025-2026	4,795	291	314	1,179	942	3,934	**11,454**	**30,202**

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Mini bus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2026-2027	5,139	300	324	1,219	968	4,177	**12,127**	**31,882**
2027-2028	5,508	310	334	1,261	995	4,435	**12,842**	**33,662**
2028-2029	5,871	318	343	1,300	1,019	4,684	**13,536**	**35,376**
2029-2030	6,257	328	353	1,341	1,045	4,946	**14,269**	**37,184**
2030-2031	6,669	337	362	1,383	1,071	5,224	**15,045**	**39,089**
2031-2032	6,930	336	354	1,370	1,056	5,307	**15,352**	**39,627**
2032-2033	7,197	335	344	1,355	1,039	5,383	**15,654**	**40,126**
2033-2034	7,239	322	314	1,277	977	5,194	**15,324**	**38,814**
2034-2035	7,267	308	281	1,193	911	4,977	**14,937**	**37,323**
2035-2036	7,570	309	275	1,186	902	5,063	**15,304**	**37,956**
2036-2037	8,046	317	282	1,221	923	5,330	**16,119**	**39,836**
2037-2038	8,553	325	289	1,257	945	5,611	**16,979**	**41,815**
2038-2039	9,071	333	296	1,291	965	5,886	**17,843**	**43,770**

Table 1.3: Traffic forecast (AADT) at Banskopa Toll plaza

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Mini bus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	10,305	848	755	2,204	1,753	6,910	**22,775**	**56,947**
2025-2026	11,028	875	778	2,278	1,800	7,327	**24,086**	**60,025**
2026-2027	11,802	902	801	2,354	1,849	7,770	**25,477**	**63,283**
2027-2028	12,629	930	825	2,433	1,898	8,240	**26,956**	**66,730**
2028-2029	13,441	956	848	2,508	1,945	8,694	**28,392**	**70,063**
2029-2030	14,305	983	872	2,585	1,993	9,173	**29,911**	**73,574**
2030-2031	15,225	1,011	896	2,664	2,041	9,679	**31,516**	**77,274**
2031-2032	16,025	1,029	904	2,693	2,054	9,989	**32,694**	**79,658**
2032-2033	16,866	1,047	912	2,719	2,066	10,313	**33,923**	**82,139**
2033-2034	17,524	1,053	900	2,687	2,032	10,363	**34,560**	**82,824**
2034-2035	18,180	1,058	889	2,648	1,999	10,389	**35,163**	**83,380**
2035-2036	19,160	1,079	900	2,688	2,017	10,742	**36,586**	**86,201**
2036-2037	20,345	1,108	923	2,765	2,064	11,301	**38,506**	**90,396**
2037-2038	21,603	1,137	947	2,845	2,112	11,890	**40,534**	**94,809**
2038-2039	22,910	1,164	970	2,922	2,157	12,468	**42,591**	**99,200**

Table 1.4: Estimated Toll revenue for 2 Toll plazas

Financial year	Beliyad Tollplaza	Banskopa Toll plaza	Total Revenue in Crores	Remarks
2024-2025	106.4	171.8	278.2	134.7 Cr-(Actual Revenue till Apr-Sep 2024)
2025-2026	116.9	188.4	305.3	
2026-2027	129.7	207.6	337.4	
2027-2028	143.7	230.3	374.0	
2028-2029	158.3	253.2	411.5	
2029-2030	174.2	277.7	451.9	
2030-2031	191.6	306.3	497.9	
2031-2032	203.4	330.6	534.1	
2032-2033	215.4	356.6	572.0	
2033-2034	218.0	376.2	594.2	
2034-2035	219.1	394.9	614.1	
2035-2036	233.4	428.9	662.3	
2036-2037	256.0	470.0	726.0	
2037-2038	281.9	517.0	798.9	
2038-2039	306.8	562.0	868.8	
Total	**2954.8**	**5071.7**	**8026.5**	

CHAPTER 2. TRAFFIC SURVEYS AND ANALYSIS

2.1 PREAMBLE

The traffic volume data was collected through TMS system/Toll records at two toll plazas - Beliyad and Banskopa - and was received from the client for analysis. Additionally, to assess the future growth rates of traffic and possible diversions due to alternative roads, Origin-Destination (OD) surveys were conducted in the month of November, 2023 and same was utilized.

2.2 OD SURVEY LOCATIONS

Origin Destination (OD) surveys were conducted at two plaza locations. The location and schedule of traffic surveys are presented in **Table 2.1.**

Table 2.1: OD Surveys Schedule

S. No.	Type of Survey	Location (Km)	Description	Dates of Survey
1	2 days - Origin-Destination Survey	438+500	Beliyad Toll plaza	15.11.2023 to 16.11.2023
2	2 days - Origin-Destination Survey	507+000	Banskopa Toll plaza	15.11.2023 to 16.11.2023

The Index map of the project road and survey's location is presented in the Figure 2.1 and few photographs OD surveys at survey location is shown in Photo 2.1.

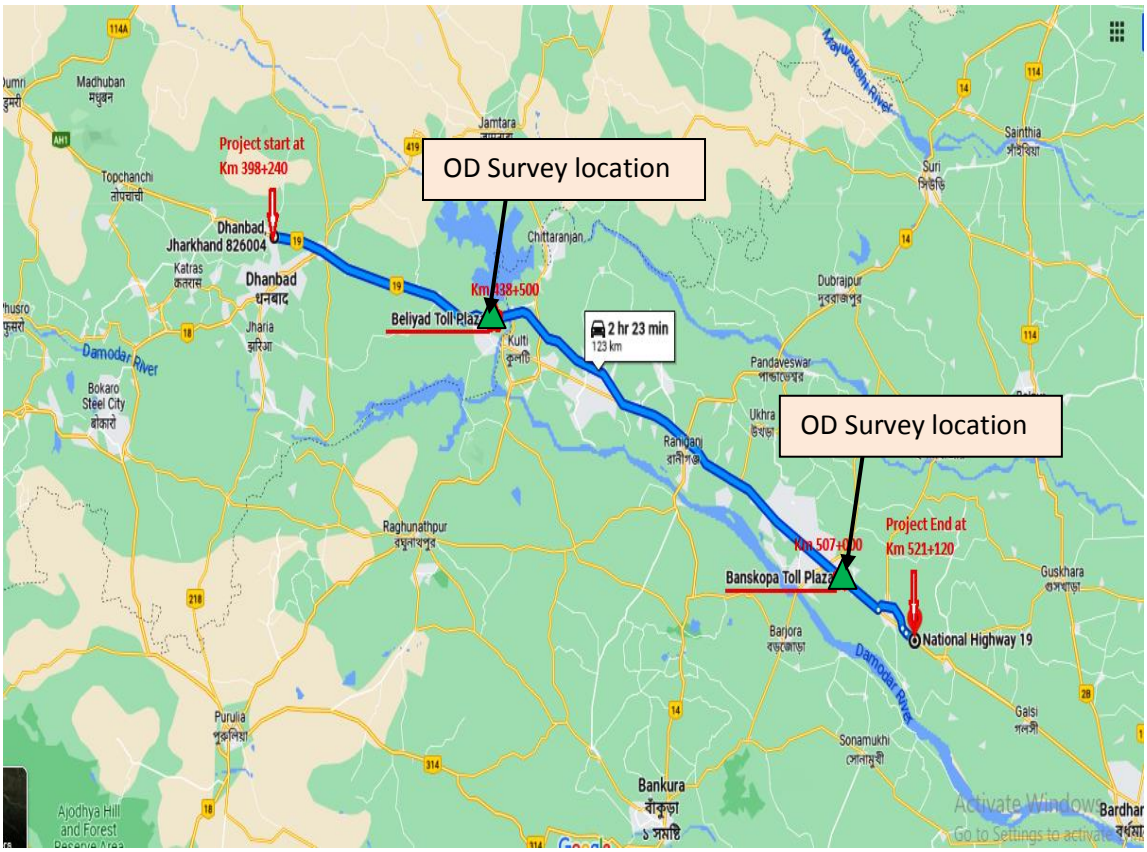
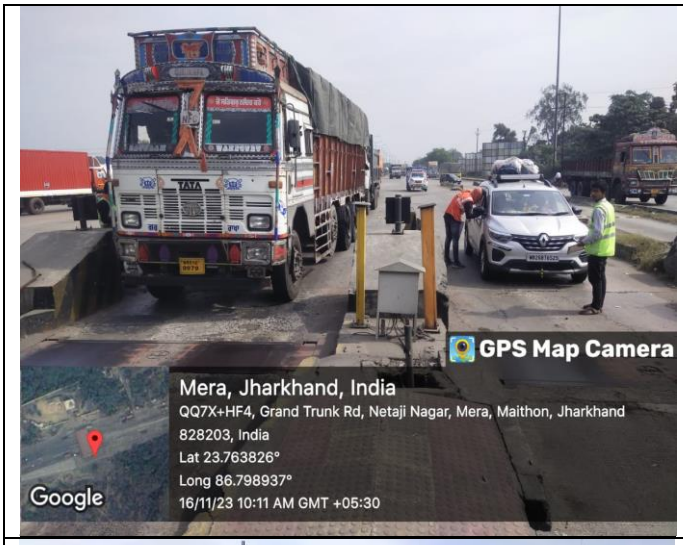
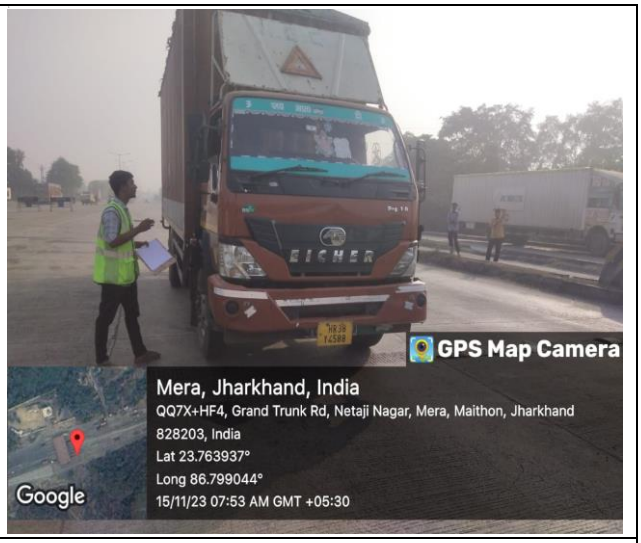
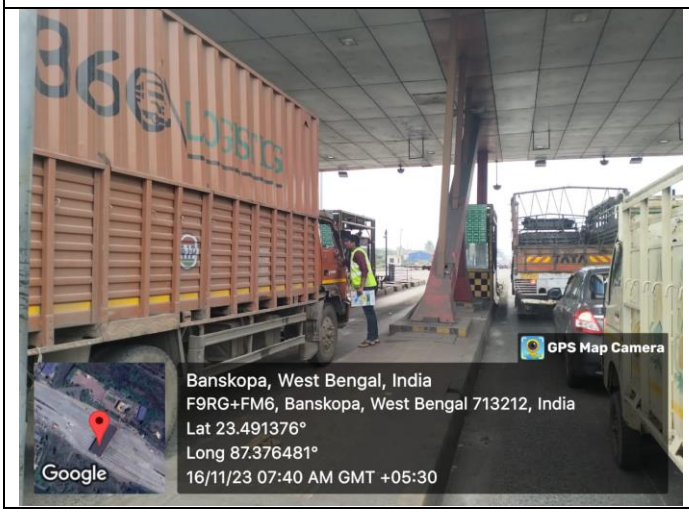


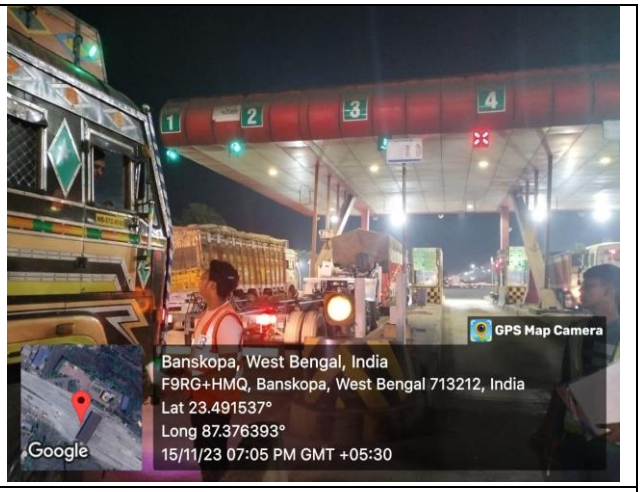
Figure 2.1: Index Map showing Proposed alignment and traffic survey locations





Origin-Destination (OD) survey at Beliyad Toll plaza





Origin-Destination (OD) survey at Banskopa Toll plaza

Photo 2.1: Few Photographs of OD survey at survey locations

2.3 VEHICLE CLASSIFICATION SYSTEM

The vehicle classification used in the survey along with their Passenger Car Units (PCU) values, as suggested in **IRC: 64 -1990**, are presented in **Table 2.2**. The PCU factor given in Table 2.2 is used to convert all tollable vehicles into number of PCU's.

Table 2.2: Vehicle Classification and PCU Factors

Vehicle type	PCU factor
Car/Light Motor Vehicle (LMV)	1
Light Commercial Vehicle (LCV)/Mini bus	1.5
Bus	3
Truck 2 Axle (2-AT)	3
Truck 3 Axle (3-AT)	3
Multi Axle Vehicle (MAV)	4.5
Heavy Construction Machinery (HCM)	4.5
Oversized	4.5

2.3.1. Annual Average Daily Traffic (AADT) for FY 2024-2025 (First 6 months)

Using sourced data, the AADT was calculated for first six months of FY 2024-25, that is from April 2024 to September 2024.The ADT and PCU values at two toll plaza locations is presented in **Table 2.3.**

Table 2.3: Summary of Annual Average Daily Traffic (AADT) for FY 2024-2025 (First 6 months) at two Toll Plaza locations

Vehicle type	Beliyad Toll plaza		Banskopa Toll plaza	
	Vehicles	PCU	Vehicles	PCU
Car/LMV	4309	4309	9926	9926
LCV/Mini bus	308	462	764	1146
Bus	271	814	817	2450
Truck 2 Axle	1139	3416	2202	6606

Vehicle type	Beliyad Toll plaza		Banskopa Toll plaza	
	Vehicles	PCU	Vehicles	PCU
Truck 3 Axle	947	2841	1811	5433
MAV	3513	15808	6554	29493
HCM	0	1	1	5
Oversized	2	8	1	5
Total	**10489**	**27660**	**22075**	**55062**

2.3.2. Annual Average Daily Traffic (AADT) for FY 2024-2025

The traffic on any road usually varies throughout the year, depending on the socio-economic activities in the areas it passes through. Therefore, to obtain a more realistic picture of the traffic on a project road, it is essential to assess the seasonal variations and estimate the Annual Average Daily Traffic (AADT).

Using sourced data, the AADT was calculated for first six months of FY 2024-25, that is from April 2024 to September 2024. The seasonal factor was applied to arrive at the AADT for the next six months in the FY 2024-25. The seasonal correction was obtained by dividing the average traffic of each vehicle mode in the last six months of the FY with the average traffic of each vehicle in the first six months of traffic data in the same FY. This exercise was carried out based on the data availability, and average values were obtained. Table 2.4 and Table 2.5 presents the seasonal correction factors obtained at 2 toll plazas in last two FYs.

Table 2.4: Seasonal Correction factors at Beliyad Toll plaza

FY	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized
2022-2023	1.08	0.91	1.10	0.97	0.97	1.12	1.19	1.15
2023-2024	1.11	1.04	1.10	1.04	0.98	1.09	1.53	0.84
Average	**1.10**	**0.97**	**1.10**	**1.00**	**0.98**	**1.11**	**1.36**	**0.99**

Table 2.5: Seasonal Correction factors at Banskopa Toll plaza

FY	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized
2022-2023	1.03	0.92	1.03	0.95	0.83	1.14	0.95	1.04
2023-2024	1.06	1.02	1.06	1.02	0.94	1.05	1.05	1.19
Average	**1.05**	**0.97**	**1.05**	**0.99**	**0.89**	**1.10**	**1.00**	**1.11**

The average value of 2 toll plazas was considered for calculating the traffic in the last six months of FY 2024-25. Table 2.6 shows the adopted seasonal correction factors. Table 2.7 shows the AADT for the base year (FY 2024-2025) at two toll plaza locations.

Table 2.6: Adopted Seasonal Correction factors at two toll plazas

FY	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized
Beliyad Toll plaza	1.10	0.97	1.10	1.00	0.98	1.11	1.36	0.99
Banskopa Tollplaza	1.05	0.97	1.05	0.99	0.89	1.10	1.00	1.11
Average	**1.07**	**0.97**	**1.07**	**1.00**	**0.93**	**1.10**	**1.18**	**1.05**

Table 2.7: Summary of Annual Average Daily Traffic (AADT) for FY 2024-2025 at two Toll Plaza locations

Vehicle type	Beliyad Toll plaza		Banskopa Toll plaza	
	Vehicles	PCU	Vehicles	PCU
Car/LMV	4474	4474	10305	10305
LCV/Mini bus	305	457	755	1132
Bus	282	846	848	2545
Truck 2 Axle	1140	3419	2204	6611
Truck 3 Axle	917	2751	1753	5260
MAV	3702	16661	6907	31083
HCM	0	2	1	5
Oversized	2	9	1	5
Total	**10821**	**28616**	**22775**	**56947**

Traffic composition in terms of vehicles at two toll plaza locations is shown in **Figure 2.2 to Figure 2.3.**

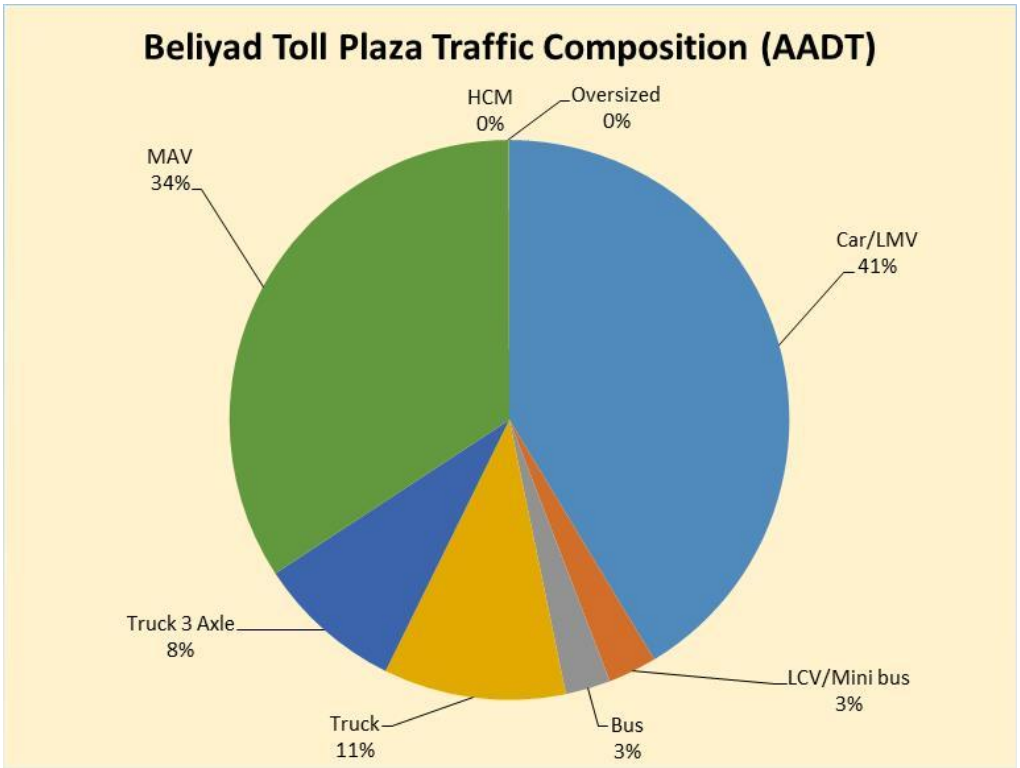


Figure 2.2: Traffic Composition at Beliyad Toll plaza

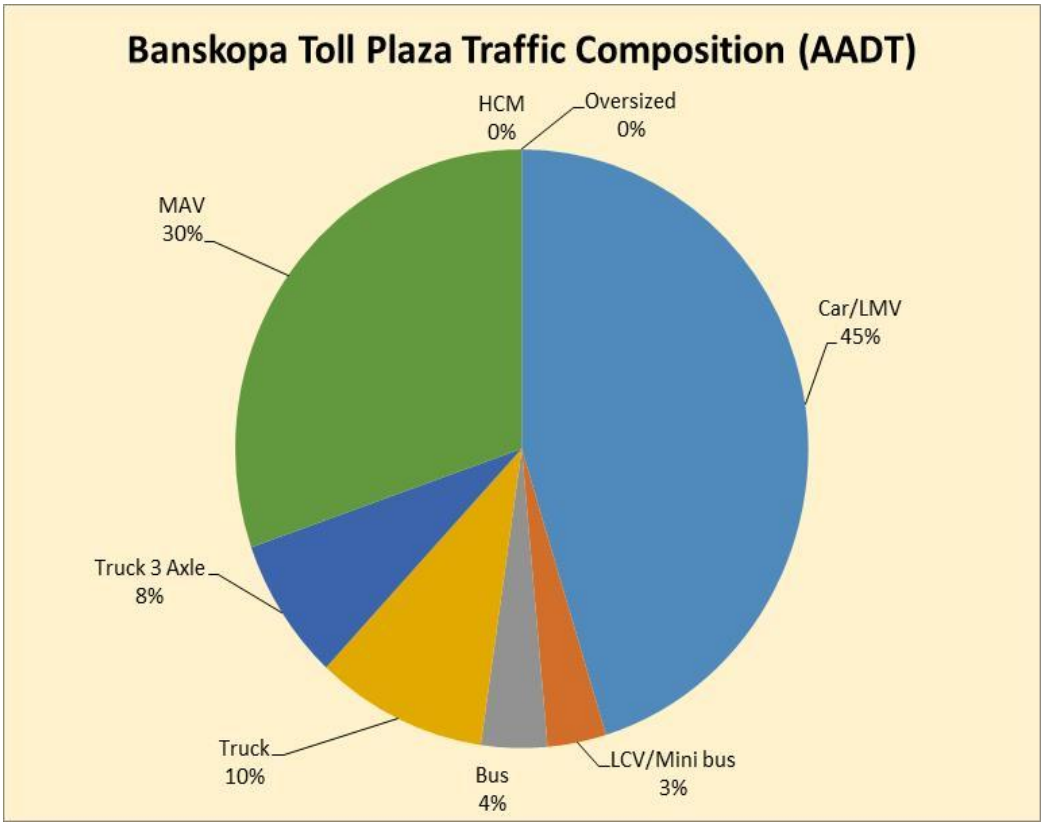


Figure 2.3: Traffic Composition at Banskopa Toll plaza

2.4 TRAFFIC GROWTH RATES

Traffic growth rates were calculated using two different methodologies. The first method was based on past traffic trends data of the toll plaza, while the second method was based on OD surveys, influence factors, socio-economic indicators, and growth elasticity as per IRC:108.

2.5 METHODOLOGY 1 -GROWTH RATES AS PER PAST TRAFFIC TRENDS

The traffic trends were analyzed using data obtained from toll operations for passenger and goods traffic. Toll collection started at Beliyad Toll Plaza in 2014 and Banskopa Toll Plaza in 2017. The available data at each plaza was compiled, and annualized traffic growth rates were calculated for each mode. These growth rates are presented in **Tables 2.8 and 2.9.**

Table 2.8: Compounded Annual Growth Rate (CAGR) growth rates at Beliyad Toll plaza

Year	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	AADT	Considered Toll operation days for calculation of AADT as per data
2014-2015	1951	656	428	573	2510	957	7075	361
2015-2016	2231	667	219	429	2283	1690	7519	366
2016-2017	2055	499	221	606	1774	1985	7140	342
2017-2018	2352	451	256	673	1794	2554	8080	365
2018-2019	2952	398	242	784	1892	3044	9312	365
2019-2020	3101	401	250	773	1743	2959	9227	360
2020-2021	3749	326	216	703	1594	3075	9663	346

Year	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	AADT	Considered Toll operation days for calculation of AADT as per data
2021-2022	3751	280	239	847	1421	3612	10150	365
2022-2023	4158	288	302	954	1077	3451	10230	365
2023-2024	4302	265	294	1035	973	3548	10417	366
2024-2025	4309	308	271	1139	947	3513	10487	183
CAGR (%)	**8.24**	**-7.27**	**-4.45**	**7.10**	**-9.29**	**13.89**	**4.01**	

According to Table 2.8, the growth rates of LCVs, buses, and 3A trucks at Beliyad Toll Plaza were negative, while cars, 2A trucks, and MAVs reported positive growth. However, the AADT showed a positive growth rate of 4.01%.

Table 2.9: Compounded Annual Growth Rate (CAGR) growth rates at Banskopa Tollplaza

Year	Car/LMV	LCV/Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	AADT	Considered Toll operation days for calculation of AADT as per data
2017-2018	8057	1315	568	2459	3399	3242	19040	155
2018-2019	7383	1228	895	2110	3112	3480	18208	365
2019-2020	6925	1158	858	1879	2761	3667	17248	360
2020-2021	7656	956	642	1974	3242	4146	18616	346
2021-2022	9633	838	813	2028	2434	4810	20556	365
2022-2023	9974	830	927	2103	2361	5749	21944	365
2023-2024	10007	748	883	2099	2029	6288	22054	366
2024-2025	9926	764	817	2202	1811	6554	22073	183
CAGR (%)	**3.03**	**-7.47**	**5.33**	**-1.57**	**-8.60**	**10.58**	**2.13**	

According to Table 2.9, the growth rates of LCVs, 2A trucks, and 3A trucks at Banskopa Toll Plaza were negative, while cars, buses, and MAVs reported positive growth. However, the AADT showed a positive growth rate of 2.13%.

2.6 METHODOLOGY 2 - GROWTH RATES AS PER OD SURVEYS

2.6.1. Travel Pattern (Origin – Destination Surveys)

In order to understand the travel demand pattern in the region, Origin and Destination (O-D) Surveys were carried out for two days in both Toll Plaza locations as mentioned in Table 2.1. The OD surveys were carried out by roadside interview method as described in IRC: 102-1988. Both passenger and commercial vehicles plying on the project road were stopped on a random sampling basis and interviewed. Trained enumerators under the supervision of senior engineers of M/s. HBS Infra Engineers India Pvt. Ltd., have collected the trip characteristics using the survey forms designed for this purpose. The OD survey elicited characteristics like origin, destination, frequency, purpose and commodity etc. both for passenger and goods vehicles. The information collected during roadside interviews was analysed to obtain the trip distribution based on a zoning system suitably designed in the study.

2.6.2. Sample Size and Expansion Factors

The vehicles during the OD surveys were interviewed on a random sample basis. Based on the sample size of different categories of vehicles interviewed during the OD survey, expansion factors were calculated for the expansion of OD matrices generated from the sample data to make the assessment of the travel patterns of the vehicles plying on the project road. **Table 2.10 and Table 2.11** show the ADT for two days, sample size (both in absolute numbers and in percentage terms) and expansion factors at two toll plaza locations.

Table 2.10: Sample Size and Expansion Factors at Beliyad Toll plaza

Vehicle Type	Sample Size (Nos)	ADT for two days	Sample Size (%)	Expansion Factor
Car/Jeep	1943	8902	21.83	4.58
Bus	74	616	12.01	8.32
LCV	164	618	26.54	3.77
2-AT	337	2336	14.43	6.93
3-AT	391	2028	19.28	5.19
MAV	1703	7446	22.87	4.37

Table 2.11: Sample Size and Expansion Factors at Banskopa Toll plaza

Vehicle Type	Sample Size (Nos)	ADT for two days	Sample Size (%)	Expansion Factor
Car/Jeep	2385	20726	11.51	8.69
Bus	289	1744	16.57	6.03
LCV	157	1560	10.06	9.94
2-AT	510	4604	11.08	9.03
3-AT	766	4068	18.83	5.31
MAV	1621	13706	11.83	8.46

2.6.3. Zoning System

The zoning system considered for the present study is given in **Table 2.12.**

Table 2.12: List of Zones for the Project

Zone No	Name of the Zone	
1	Barwadda	Project circle
2	Gobindpur	
3	Ratanpur	
4	Ramchandrapur	
5	Nirsa,Mugma	
6	Mera,Maithan, Beliyad	
7	Borira	
8	Asansol	
9	Raniganj	
10	Kajora	

Zone No	Name of the Zone	
11	Durgapur	
12	Banskopa	
13	Rajbandh	
14	Birudiha	
15	Panagarh	
16	Kolkatta	West Bengal
17	Paschim Bardhaman district	
18	Purba Bardhaman district	
19	Bankura district	
20	Malda, Uttar Dinajpur, Dakshin Dinajpur and Murshidabad- Districts	
21	Birbhum and Hooghly-Districts	
22	Alipurduar, Cooch Behar, Darjeeling, Jalpaiguri and Kalimpong - Districts	
23	Howrah, Kolkata, Nadia, North 24 Parganas (Uttar 24 Parganas) and South 24 Parganas (Dakshin 24 Parganas) - Districts	
24	Jhargram, Purulia, Purba Medinipur and Paschim Medinipur - Districts	
25	Ranchi	Jharkhand
26	Hazaribagh - District	
27	Bokaro - District	
28	Dhanbad - District	
29	Palamu, Garhwa and Latehar - Districts	
30	Chatra, Hazaribagh, Koderma, Giridih and Ramgarh - Districts	
31	Lohardaga, Gumla, Simdega, Ranchi and Khunti - Districts	
32	West Singhbhum, Saraikela-Kharsawan and East Singhbhum - Districts	
33	Jamtara, Deoghar, Dumka, Pakur, Godda and Sahebganj - Districts	
34	Aurangabad	Bihar
35	Bihar	
36	Varanasi	Uttar Pradesh
37	Uttar Pradesh	
38	Uttarakhand	
39	Delhi, Haryana	
40	Odisha	
41	Chhattisgarh	
42	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura	North Eastern states
43	Maharashtra, Madhya Pradesh, Gujarat, Rajasthan, Himachal Pradesh and Punjab	North India
44	Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Kerala and Goa	South India
45	Jammu and Kashmir	
46	Rest of India	

2.6.4. Influence Factors

Different vehicles interact in different degrees with the different zones depending on their purpose, commodity transported, frequency of travel etc. Vehicle category-wise zone-wise influence factors are established for interpretation of OD patterns at the surveyed location by using the following formula:

$$IF = [(P_i + A_i) \times 100] / (\sum (P_i + A_i))$$

Where,

IF = Influence Factor

P_i = Total trips produced in Zone i

A_i = Total trips attracted to Zone i

Mode wise traffic influence at survey location is given in the **Table 2.13 and Table 2.14.**

Table 2.13: Mode wise Traffic Influence areas based on data collected at Beliyad Toll plaza

Regions / Zones	Car (%)	Bus (%)	LCV (%)	2-AT (%)	3-AT (%)	MAV (%)
Project Circle	29.77	27.03	24.70	19.58	19.44	12.65
Jharkhand state	33.53	34.46	25.30	19.88	19.82	15.09
West Bengal state	23.62	22.30	26.22	34.42	32.99	38.17
Bihar State	5.64	9.46	5.79	5.49	6.01	7.40
Uttar Pradesh state	2.93	2.03	6.71	5.04	5.24	9.04
North India	4.14	4.73	10.67	14.54	13.55	15.12
Rest of India	0.36	0.00	0.61	1.04	2.94	2.52
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Table 2.14: Mode wise Traffic Influence areas based on data collected at Banskopa Toll plaza

Regions / Zones	Car (%)	Bus (%)	LCV (%)	2-AT (%)	3-AT (%)	MAV (%)
Project Circle	31.59	32.70	26.75	24.51	23.83	21.47
Jharkhand state	6.58	5.36	5.73	6.08	5.22	5.71
West Bengal state	57.02	56.75	56.05	58.04	60.51	59.75
Bihar State	1.43	0.35	3.50	4.71	4.63	5.68
Uttar Pradesh state	1.68	2.77	5.41	4.51	4.05	4.87
North India	1.61	1.90	2.55	2.16	1.76	2.53
Rest of India	0.08	0.17	0.00	0.00	0.00	0.00
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Detailed O – D analysis to arrive the Mode – wise influence areas at survey location is presented in ***Annexure 2.1.***

2.7 COMMODITY GROUPS AND ANALYSIS

The different commodities recorded during the O - D survey have been classified into 20 categories as presented in **Table 2.15**. Due consideration has been given to include a possible commodity and to categorize them into homogeneous groups.

Table 2.15: Classification of commodities

Code	Commodity type
1	Automobiles/Spare parts
2	Chemical/Medicines

Code	Commodity type
3	Parcels/Couriers
4	Construction materials
5	Fruits/Vegetables
6	Groceries/Perishable products
7	Food grains/Agricultural products
8	Gas
9	Electrical/Electronics
10	Petroleum products
11	Plastic/Plastic products
12	Marbles/Tiles
13	Iron/Iron products
14	Textile/products
15	Aqua products
16	Animals/Birds
17	Animal feeding
18	Wood/Wood products
19	Coal
19	Other
20	Empty

The commodity movement pattern is analyzed and commodity movement pattern have been presented in **Table 2.16** and **Table 2.17** at two toll plaza locations.

Table 2.16: Commodity movement pattern (%) at Beliyad Toll plaza

Commodity type	Commodity code	LCV	2-AT	3-AT	MAV
Automobiles/Spare parts	1	4.3%	9.2%	6.1%	8.3%
Chemical/Medicines	2	0.6%	2.1%	1.8%	1.9%
Parcels/Couriers	3	20.1%	24.3%	22.8%	9.0%
Construction materials	4	4.3%	3.6%	5.1%	5.8%
Fruits/Vegetables	5	16.5%	4.5%	5.4%	12.0%
Groceries/Perishable products	6	11.6%	15.4%	15.3%	10.2%
Food grains/Agricultural products	7	0.0%	2.4%	0.8%	0.8%
Gas	8	3.0%	4.5%	1.8%	15.9%
Electrical/Electronics	9	1.2%	1.2%	1.5%	0.6%
Petroleum products	10	1.2%	3.6%	2.6%	3.3%
Plastic/Plastic products	11	3.7%	1.8%	1.0%	0.9%
Marbles/Tiles	12	0.6%	0.9%	1.5%	1.5%
Iron/Iron products	13	4.3%	7.1%	9.2%	4.9%
Textile/products	14	2.4%	1.5%	3.3%	2.1%
Aqua products	15	0.0%	2.4%	1.8%	0.6%
Animals/Birds	16	0.0%	0.6%	2.6%	0.5%
Animal feeding	17	1.2%	0.6%	0.0%	0.7%
Wood/Wood products	18	1.2%	1.5%	1.5%	0.4%
Coal	19	0.0%	0.9%	3.8%	5.5%

Commodity type	Commodity code	LCV	2-AT	3-AT	MAV
Other	20	0.6%	7.4%	6.4%	4.1%
Empty	21	23.2%	4.7%	5.6%	11.0%
Grand Total		**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 2.17: Commodity movement pattern (%) at Banskopa Toll plaza

Commodity type	Commodity code	LCV	2-AT	3-AT	MAV
Automobiles/Spare parts	1	1.3%	2.0%	1.6%	2.2%
Chemical/Medicines	2	1.3%	0.8%	1.0%	0.6%
Parcels/Couriers	3	19.1%	11.8%	7.3%	5.1%
Construction materials	4	9.6%	8.2%	12.8%	14.1%
Fruits/Vegetables	5	1.9%	5.3%	5.6%	5.3%
Groceries/Perishable products	6	12.7%	14.5%	15.3%	15.1%
Food grains/Agricultural products	7	1.3%	0.2%	0.1%	0.0%
Gas	8	3.8%	10.8%	13.2%	16.8%
Electrical/Electronics	9	1.3%	0.8%	1.6%	0.9%
Petroleum products	10	3.2%	1.8%	1.3%	0.9%
Plastic/Plastic products	11	2.5%	0.6%	0.7%	1.0%
Marbles/Tiles	12	1.3%	0.0%	0.1%	0.1%
Iron/Iron products	13	2.5%	4.5%	3.8%	5.4%
Textiles/Products	14	3.8%	3.7%	1.6%	2.2%
Aqua products	15	0.6%	2.2%	0.7%	0.4%
Animals	16	0.6%	0.8%	0.3%	0.3%
Animal feeding	17	0.0%	0.0%	0.0%	0.0%
Wood/Wood products	18	0.0%	0.0%	0.1%	0.0%
Coal	19	0.0%	0.6%	1.8%	2.0%
Other	20	1.9%	2.0%	0.7%	0.8%
Empty	21	31.2%	29.6%	30.5%	26.7%
Grand Total		**100.0%**	**100.0%**	**100.0%**	**100.0%**

2.7.1. Lead Distribution

Lead distribution of Passenger and Goods vehicles at two toll plaza locations in percentages are presented in **Table 2.18** to **Table 2.21**.

Table 2.18: Lead Distribution of Passenger Vehicles (%) at Beliyad Toll plaza

Trip Length (Km)		Car	Bus
0	50	8.0%	1.4%
50	100	26.2%	23.0%
100	200	15.2%	18.9%
200	500	32.2%	32.4%
500	1000	10.6%	16.2%
1000	3500	7.9%	8.1%
Total		**100.0%**	**100.0%**

Table 2.19: Lead Distribution of Goods Vehicles (%) at Beliyad Toll plaza

Trip Length (Km)		LCV	2-AT	3-AT	MAV
0	50	0.0%	5.3%	4.9%	1.7%
50	100	15.2%	13.9%	13.0%	6.3%
100	200	11.0%	9.5%	9.5%	7.5%
200	500	32.9%	24.0%	24.3%	20.3%
500	1000	10.4%	13.6%	13.0%	22.0%
1000	3500	30.5%	33.5%	35.3%	42.2%
Total		**100%**	**100%**	**100%**	**100%**

Table 2.20: Lead Distribution of Passenger Vehicles (%) at Banskopa Toll plaza

Trip Length (Km)		Car	Bus
0	50	13.8%	16.6%
50	100	21.4%	17.0%
100	200	30.4%	29.8%
200	500	25.8%	27.3%
500	1000	4.5%	4.5%
1000	3500	4.0%	4.8%
Total		**100.0%**	**100.0%**

Table 2.21: Lead Distribution of Goods Vehicles (%) at Banskopa Toll plaza

Trip Length (Km)		LCV	2-AT	3-AT	MAV
0	50	11.5%	13.3%	15.0%	11.8%
50	100	13.4%	18.2%	17.8%	17.0%
100	200	31.2%	27.5%	27.4%	26.2%
200	500	21.7%	21.4%	23.4%	23.4%
500	1000	14.6%	13.5%	10.3%	13.4%
1000	3500	7.6%	6.1%	6.1%	8.1%
Total		**100%**	**100%**	**100%**	**100%**

2.7.2. Purpose of Passenger Vehicles

The purpose of passenger vehicles at two toll plaza locations is given in **Table 2.22**.

Table 2.22: Purpose of Passenger Vehicles in %

Location	Work	Business	Education	Social	Shopping	Religious	others
At Beliyad Toll plaza	31.3%	27.3%	9.4%	1.1%	0.3%	13.8%	16.8%
At Banskopa Toll Plaza	36.9%	16.9%	13.4%	9.2%	5.9%	6.2%	11.4%

It is observed from the above that work and business trips constitute highest.

2.8 TRAFFIC GROWTH RATES

Traffic growth rates for the study, to be used subsequently for forecasting traffic on the project road, have been estimated by adopting the "Elasticity of Transport Demand" method which is a proven technique worldwide and is the preferred technique in India. The method relies on the correlation between past trends in traffic growth on the project road / vehicle registration in the state & time series data on population, state income (NSDP) and per capita income (PCI) of project influence area. Regression analysis has been done (using past trends on traffic/vehicle registration and socio-economic indicators for the period 2009-2019), to estimate elasticities for each vehicle type. The elasticity values estimated in this study are then compared with those suggested in "Road Development Plan: 2021" (Indian Road Congress, for Ministry of Road Transport and Highways, GoI) and specific elasticities are recommended for deriving traffic growth rates and traffic forecasts. The projected growth rates worked out for major vehicle groups, namely, car, bus and trucks were moderated based on future economic prospects of the project influence area and the likely future shift among the vehicle categories, like, the probable shift of vehicle ownership from 2-axle trucks to 3-axle trucks and MAVs and 2/3-wheeler market to car, etc., have been taken into account while moderating the elasticity values. This is considered necessary because as the purchasing power increases there will be a shift from low-cost vehicles to high speed, more expensive and more comfortable vehicles. Further, with the road improvement and realization of economics of scale, goods operators will tend to transfer from 2-axle trucks to 3-Axle/Multi-axle vehicles. These market driven forces have been realistically considered in the traffic forecast.

2.8.1. Project Influence Area

Outlining the project influence area is essential for the estimation of traffic growth rates; because the socio-economic indicators of the project influence area influence the traffic growth on the project road. The project influence area has been assessed based on the O-D data. From the O-D analysis results, it is seen that mainly the trips by different modes are being generated from Jharkhand and West Bengal. Trip contribution of various vehicles at two toll plaza locations is presented in **Table 2.23 and Table 2.24.**

Table 2.23: Trip Contribution Observed during the O-D Survey based on data collected at Beliyad Toll plaza

State	Car (%)	Bus (%)	LCV (%)	Trucks (%)
Jharkhand and West Bengal	86.93	83.78	76.22	70.68
Bihar and Uttar Pradesh	8.57	11.49	12.50	12.74
North India (Madhya Pradesh, Maharashtra ,Rajasthan, Gujarat, Delhi, Haryana, Himachal Pradesh and Punjab)	4.14	4.73	10.67	14.41
Rest of India	0.36	0.00	0.61	2.17
Total	**100.00**	**100.00**	**100.00**	**100.00**

Table 2.24: Trip Contribution Observed during the O-D Survey based on data collected at Banskopa Toll plaza

State	Car (%)	Bus (%)	LCV (%)	Trucks (%)
Jharkhand and West Bengal	95.20	94.81	88.54	88.37
Bihar and Uttar Pradesh	3.10	3.11	8.92	9.48
North India (Madhya Pradesh, Maharashtra ,Rajasthan, Gujarat, Delhi, Haryana, Himachal Pradesh and Punjab)	1.61	1.90	2.55	2.15
Rest of India	0.08	0.17	0.00	0.00
Total	**100.00**	**100.00**	**100.00**	**100.00**

2.8.2. Socio-Economic Indicators and Vehicle Registration

The socio-economic indicators (Net State Domestic Product (NSDP), Population, Per Capita Income (PCI) and vehicle registration by vehicle type (**Table 2.25**) for West Bengal, Jharkhand, Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra , Rajasthan, Gujarat, Delhi, Haryana, Himachal Pradesh, Punjab and Rest of India have been collected from various secondary sources. These variables were further combined and a weighted average of socio-economic indicators and number of vehicles was derived based on the regional influence obtained from O-D surveys.

Table 2.25: Vehicle Registration Data and Socio-Economic Indicators

West Bengal, Jharkhand							
Year	Total No. of Registered Vehicles				NSDP (Rs. Crores)	Population ('000)	Per Capita Income (Rs.)
	Car/Taxi/Jeep	Bus	LCV	Trucks & MAV			
2009	911513	46722	195355	285998	329695	118450	27834
2010	784213	44252	220591	263060	355325	119709	29682
2011	879965	47031	245826	294586	576784	120971	47680
2012	983683	49164	271062	333271	607470	122224	49701
2013	1351560	65989	295596	367182	619857	123477	50200
2014	1449906	68996	322935	402288	653155	124686	52384
2015	1567817	72743	346067	437384	665457	125928	52844
2016	1471243	61404	372004	480369	719799	127202	56587
2017	1529399	64364	397239	518096	773310	128403	60225
2018	1571671	65132	422475	557137	827339	129592	63842
2019	1653943	65900	447710	596178	870109	130762	66541
AACGR (%)	**6.14**	**3.50**	**8.65**	**7.62**	**10.19**	**0.99**	**9.11**
UP and Bihar							
Year	Total No. of Registered Vehicles				NSDP (Rs. Crores)	Population ('000)	Per Capita Income (Rs.)
	Car/Taxi/Jeep	Bus	LCV	Trucks & MAV			
2009	1290125	45985	180489	180532	422927	288789	14645
2010	1457081	49333	202059	203921	464124	293660	15805
2011	1651396	54625	235341	224142	826028	298484	27674
2012	1875892	58525	264009	246004	863378	303270	28469
2013	2089316	66493	309925	276158	897657	308024	29142
2014	2407760	73245	369716	288989	921865	312742	29477
2015	2860746	81250	407136	309432	994183	317403	31322

2016	3195215	89014	438352	344700	1106675	321996	34369
2017	3234208	97373	506392	372923	1163477	326533	35631
2018	3485690	105063	569911	423579	1243680	331021	37571
2019	3859579	112954	648154	485495	1296651	335445	38655
AACGR (%)	**11.58**	**9.40**	**13.64**	**10.40**	**11.86**	**1.51**	**10.19**
MP, MH, RJ, GJ, DL, HR, HP, PB							
Year	**Total No. of Registered Vehicles**				**NSDP (Rs. Crores)**	**Population ('000)**	**Per Capita Income (Rs.)**
	Car/Taxi/Jeep	**Bus**	**LCV**	**Trucks & MAV**			
2009	8370807	339882	1350168	1330126	1374968	378278	36348
2010	9239999	361831	1472883	1399722	1488171	384201	38734
2011	10298810	381609	1632314	1496408	2007529	390071	51466
2012	11846277	419887	1752975	1593998	2692070	395894	68000
2013	13029201	445910	1942087	1668275	2849954	401680	70951
2014	14071310	472512	2106758	1805219	3006066	407414	73784
2015	15261267	491343	2277212	1902140	3210695	413089	77724
2016	16784163	525360	2433922	1954657	3461107	418693	82665
2017	16217453	556980	2152257	2058184	3737478	424216	88103
2018	17302297	585922	2346430	2185251	3940397	429681	91705
2019	18430183	614217	2532178	2319557	4158905	435068	95592
AACGR (%)	**8.21**	**6.10**	**6.49**	**5.72**	**11.70**	**1.41**	**10.15**
Rest of India							
Year	**Total No. of Registered Vehicles**				**NSDP (Rs. Crores)**	**Population ('000)**	**Per Capita Income (Rs.)**
	Car/Taxi/Jeep	**Bus**	**LCV**	**Trucks & MAV**			
2009	4740141	409244	967354	1550902	1636199	375296	43598
2010	5628117	721226	1031902	1637788	1826010	379172	48158
2011	6341408	712907	1055961	1661917	3691855	382980	96398
2012	3753353	678217	405320	1174285	3299395	386728	85316
2013	4254420	598250	379828	1192877	3506475	390400	89817
2014	5319055	623492	504222	1264368	3731496	394045	94697
2015	6120804	651428	571092	1407930	4098443	397599	103080
2016	8120786	742985	1202714	1370044	4470896	401070	111474
2017	9655069	749293	1408365	1284087	4729212	404448	116930
2018	11279990	771279	1544589	1295092	5049194	407747	123832
2019	12689993	791669	984745	2502140	5333706	410965	129785
AACGR (%)	**10.35**	**6.82**	**0.18**	**4.90**	**12.54**	**0.91**	**11.53**

Source: NSDP & PCI: Data Book for DC; 5th Dec 2012, Vehicle Data: www. Indiastat.com

From the above, it can be seen that the vehicle registration in the state has a steady growth across and this data has been considered for further examination to estimate travel demand elasticities.

2.8.3. Elasticity of Growth

Passenger traffic demand is a function of growth of population, per capita income and growth of the state. Similarly, state income growth and industrial, mining and agriculture production mostly governs the freight traffic growth. In line with this philosophy, the elasticity of traffic demand has been estimated for car, bus and truck with respect to the past traffic growth. The resultant elasticity values are presented in **Table 2.26** to **Table 2.27.**

Table 2.26: Regression Analysis Results - Elasticity Values at Beliyad Toll plaza

Dependent Variable	Independent Variable	Period	Elasticity Value	R^2	T - Stat.
log of Car	log of PCI	2009-2019	0.858	0.793	5.869
log of Bus	log of NSDP	2009-2019	0.511	0.797	4.550
	log of Population	2009-2019	4.683	0.865	7.584
	log of PCI	2009-2019	0.572	0.755	5.262
log of LCV	log of NSDP	2009-2019	0.727	0.901	9.065
log of Trucks	log of NSDP	2009-2019	0.618	0.826	6.538

Table 2.27: Regression Analysis Results - Elasticity Values at Banskopa Toll plaza

Dependent Variable	Independent Variable	Period	Elasticity Value	R^2	T - Stat.
log of Car	log of PCI	2009-2019	0.836	0.741	5.073
log of Bus	log of NSDP	2009-2019	0.471	0.698	3.458
	log of Population	2009-2019	4.455	0.750	5.194
	log of PCI	2009-2019	0.518	0.669	4.268
log of LCV	log of NSDP	2009-2019	0.812	0.892	8.616
log of Trucks	log of NSDP	2009-2019	0.769	0.812	6.244

The elasticity values shown in the above table reflect a substantial co-relation between economic indicators and traffic growth rates as reflected in their R^2, elasticity and t-stat values. Hence, it is appropriate to consider the growth pattern that has emerged out of the economic model which related the economic growth with the growth in registration of vehicles. In the next stage, considering the various factors such as likely future orientation of the economy, modal shift, user preference, developments in vehicle technology, market driven forces and finally the past performance, the elasticity values are projected for the analysis period.

2.8.4. Moderated Transport Demand Elasticity

The above discussion indicates that the estimated 'e' values, as presented in the above table could not be considered to represent the future growth pattern since they are based on state level data. Also, the future traffic growth pattern is likely to be affected by the following factors:

- Recent economic changes taking place in the project influence region.
- Future modal shift among vehicle types, as well as between various modes.
- Development in vehicle technology.
- Elasticity values considered in the recent road projects in the study region or recommended by multilateral funding institutions for Indian Road/Highway Projects.

With this background, it is necessary to moderate the elasticity values to accommodate the above factors discussed as well as to reflect the PIA development initiatives. The moderated elasticity values considered for future projection is given in **Table 2.28.**

Table 2.28: Recommended Elasticity at Beliyad and Banskopa Tollplaza

Vehicle Type	Recommended Elasticity			
	2023-2027	2028-2032	2033-2037	Beyond 2037
Cars	1.250	1.188	1.128	1.072
Bus	0.800	0.760	0.722	0.686
LCV	0.450	0.428	0.406	0.386
2-AT	0.500	0.475	0.451	0.429
3-AT	0.400	0.380	0.361	0.343
MAV	0.900	0.855	0.812	0.772

2.8.5. Future Economy Prospects

On-going economic liberalization measures, introduced in the nineties, were oriented to make the national economy with a strong competitive base, leading to an open economy system. With the strengths and weakness of the present system, equipped with adequate safeguards, Indian economy has performed fairly well during the liberalization period, as well as before, though the targets were mostly never achieved. The final growth rates have been derived by establishing a relation between the time series data available for Gross Domestic Product (GDP) of the country and Net State Domestic Product (NSDP). The GDP growth rate for the future years is based on the growth rates suggested in *"BRICs and Beyond", Goldman Sachs Publication.*

Considering the following factors such as past performance of the economy against their set targets, recent developments in economic liberalization measures, shift in between sectors, opportunities available in local and global markets etc., future economic growth scenario is formulated for the following time periods.

- 2023 – 2027;
- 2028 – 2032;
- 2033 – 2037;
- Beyond 2037

It was felt that any projection beyond 15 years will have little relevance in current context mainly because there are certain policy variables that could change in long run which cannot be predicted based on the past performance. Hence, the entire period beyond 2037 has been kept as one slab. Future NSDP growth rates are provided in **Table 2.29.**

Table 2.29: Future NSDP Growth Rates (Weighted)

Period	NSDP Growth Rate	
	Beliyad Toll plaza	Banskopa Toll plaza
2023 – 2027	6.869%	6.715%
2028 – 2032	6.557%	6.450%
2033 – 2037	6.487%	6.410%
Beyond 2037	6.357%	6.301%

2.8.6. Population Projections

Though, population projections for the future are available from different sources, however, the state wise population projections prepared by Register General of India (RGI), Census Department, GoI are found to be more appropriate as a result of the scientific methodology followed. Population projections prepared by RGI have been adopted for the present study. The resultant future population growth rates are given in **Table 2.30.**

Table 2.30: Future Population Projections (Weighted)

Period	Future Population	
	Beliyad Toll plaza	Banskopa Toll plaza
2023 – 2027	1.062%	1.045%
2028 – 2032	0.963%	0.984%
2033 – 2037	0.858%	0.880%
Beyond 2037	0.661%	0.623%

2.8.7. Future per Capita Income (PCI)

Based on the data from the above two tables the future growth rate of PCI is summarized as given in **Table 2.31.**

Table 2.31: Future per Capita Income (Weighted)

Period	Future Per capita Income	
	Beliyad Toll plaza	Banskopa Toll plaza
2023 – 2027	5.746%	5.612%
2028 – 2032	5.541%	5.413%
2033 – 2037	5.581%	5.482%
Beyond 2037	5.658%	5.643%

2.8.8. Traffic Growth Rates

Based on the moderated elasticity values and the projected economic/demographic indicators, the future average annual compound traffic growth rates by each vehicle type have been estimated for the present project by using the following formulae and presented in the **Table 2.32** to **Table 2.33.**

For Cars : $T_{gr} = (PCI_{gr}) \times E$

For Bus : T_{gr} = Average of $(NSDP_{gr})$, and $(POP_{gr}) \times E$

For Trucks : $T_{gr} = (NSDP_{gr}) \times E$

Where,

T_{gr} - Traffic Growth Rate
POP_{gr} - Population Growth Rate
PCI_{gr} - Per-Capita Income Growth Rate
$NSDP_{gr}$ - Net State Domestic Product Growth Rate
E - Elasticity Value

Table 2.32: Traffic Growth Rates at Beliyad Toll plaza

Normal Growth rates				
Vehicle Type	Projected Annual Traffic Growth Rate (%)			
	2024-2027	2028-2032	2033-2037	Beyond 2037
Cars	7.18%	6.58%	6.30%	6.06%
Bus	3.17%	2.86%	2.65%	2.41%
LCV	3.09%	2.80%	2.63%	2.45%
2-AT	3.43%	3.11%	2.93%	2.73%
3-AT	2.75%	2.49%	2.34%	2.18%
MAV	6.18%	5.61%	5.27%	4.91%
Optimistic Growth rates				
Cars	7.90%	7.24%	6.93%	6.67%
Bus	3.49%	3.14%	2.92%	2.65%
LCV	3.40%	3.08%	2.90%	2.70%
2-AT	3.78%	3.43%	3.22%	3.00%
3-AT	3.02%	2.74%	2.58%	2.40%
MAV	6.80%	6.17%	5.80%	5.40%
Pessimistic Growth rates				
Cars	6.46%	5.92%	5.67%	5.46%
Bus	2.86%	2.57%	2.39%	2.17%
LCV	2.78%	2.52%	2.37%	2.21%
2-AT	3.09%	2.80%	2.63%	2.45%
3-AT	2.47%	2.24%	2.11%	1.96%
MAV	5.56%	5.05%	4.74%	4.41%

Table 2.33: Traffic Growth Rates at Banskopa Toll plaza

Normal Growth rates				
Vehicle Type	Projected Annual Traffic Growth Rate (%)			
	2024-2027	2028-2032	2033-2037	Beyond 2037
Cars	7.01%	6.43%	6.18%	6.05%
Bus	3.10%	2.83%	2.63%	2.37%
LCV	3.02%	2.76%	2.60%	2.43%
2-AT	3.36%	3.06%	2.89%	2.70%
3-AT	2.69%	2.45%	2.31%	2.16%
MAV	6.04%	5.52%	5.21%	4.86%
Optimistic Growth rates				
Cars	7.72%	7.07%	6.80%	6.65%
Bus	3.41%	3.11%	2.89%	2.61%
LCV	3.32%	3.03%	2.86%	2.67%
2-AT	3.69%	3.37%	3.18%	2.97%
3-AT	2.95%	2.70%	2.55%	2.38%
MAV	6.65%	6.07%	5.73%	5.35%
Pessimistic Growth rates				
Cars	6.31%	5.79%	5.57%	5.44%
Bus	2.79%	2.54%	2.37%	2.14%
LCV	2.72%	2.48%	2.34%	2.19%
2-AT	3.02%	2.76%	2.60%	2.43%
3-AT	2.42%	2.21%	2.08%	1.94%
MAV	5.44%	4.96%	4.69%	4.38%

CHAPTER 3. DIVERSION TRAFFIC IMPACT

3.1 GENERAL

Diversion traffic represents the proportion of traffic attracted to the improved project road or lost to alternative routes when the improvements are completed. After conducting a thorough reconnaissance study of the project road and the surrounding areas, it has been found that no alternate routes are currently available for traffic to divert from the project road. However, it should be noted that the proposed Varanasi – Ranchi – Kolkata expressway could potentially impact the existing road traffic once it becomes operational.

3.2 VARANASI-RANCHI-KOLKATA EXPRESSWAY

The National Highways Authority of India is currently developing a six-lane greenfield access-controlled expressway that will connect Varanasi and Kolkata, providing fast and direct connectivity between the two cities. The expressway will pass through the states of Uttar Pradesh, Bihar, Jharkhand, and West Bengal, totaling 610.0 km. The project has been divided into 13 civil works contract packages up to the state of Jharkhand, while the remaining stretch up to Kolkata is still in the planning stage. The details of the packages given in Table 3.1.

Table 3.1: List of packages in Varanasi-Ranchi-Kolkata Expressway project

State	Packages	Project details	Length
Uttar Pradesh/ Bihar	Package-1	Junction with NH-19 and Varanasi Ring Road near Rewasa village (Chandauli district) to junction with Chandauli-Chainpur road near Khainti village (Kaimur district, Bihar) (0.000 km-27.000 km)	27.0 Km
Bihar	Package-2	Junction with Chandauli-Chainpur Road near Khainti village to junction with Bhabhua-Adhaura road near Palka village, Kaimur district (27.000 km-54.000 km)	27.0 Km
	Package-3	Junction with Bhabhua-Adhaura road in Bhairopur village to Konki village (Rohtas district) (54.000 km-90.000 km)	36.0 Km
	Package-4	Konki village (Rohtas district) to Junction with NH-119 in Malpura village (90.000 Km-105.300 Km)	15.3 Km
	Package-5	Junction with NH-119 in Malpura village to Lerua village (Aurangabad district), including a 4-lane spur to NH-19 from NH-119 (spur length-6.6 km) (105.300 km to 116.000 km)	10.7 Km
	Package-6	Pachmon village to Anarbansalea village, Aurangabad district (116.000 km to 151.200	35.2 Km
	Package-7	Anarbansalea village to Sagrampur village (Gaya district) (151.200 km to 184.700 km)	33.5 Km
Jharkhand	Package-8	Sonepurbigha village to junction with NH-22 near Chatra, Chatra district (184.700 km to 222.000 km)	37.3 Km
	Package-9	Chatra to junction with NH-100 in Deoria village (Hazaribagh district) (222.000 km to 253.000 km)	31.0 Km
	Package-10	Deoria village to Donoreshan village (Ramgarh district) (253.000 km to 288.600 km)	35.6 Km
	Package-11	Donoreshan village to junction with NH-20 in Bongabar village, Ramgarh district (288.600 km to 325.500 km)	36.9 Km
	Package-12	Junction with NH-20 in Bongabar village to Junction with NH-320 in Lepo village (Bokaro district) (325.500 km to 358.500 km)	33.0 Km
	Package-13	Junction with NH-320 in Lepo village to Kamlapur village (Jharkhand-West Bengal border) (358.500 km to 387.200 km)	28.7 Km
WB	DPR preparation under progress		

The map showing the Varanasi-Ranchi-Kolkata (VRK) expressway till Jharkhand and Barwa Adda Expressway Ltd is shown in Figure 3.1 below.

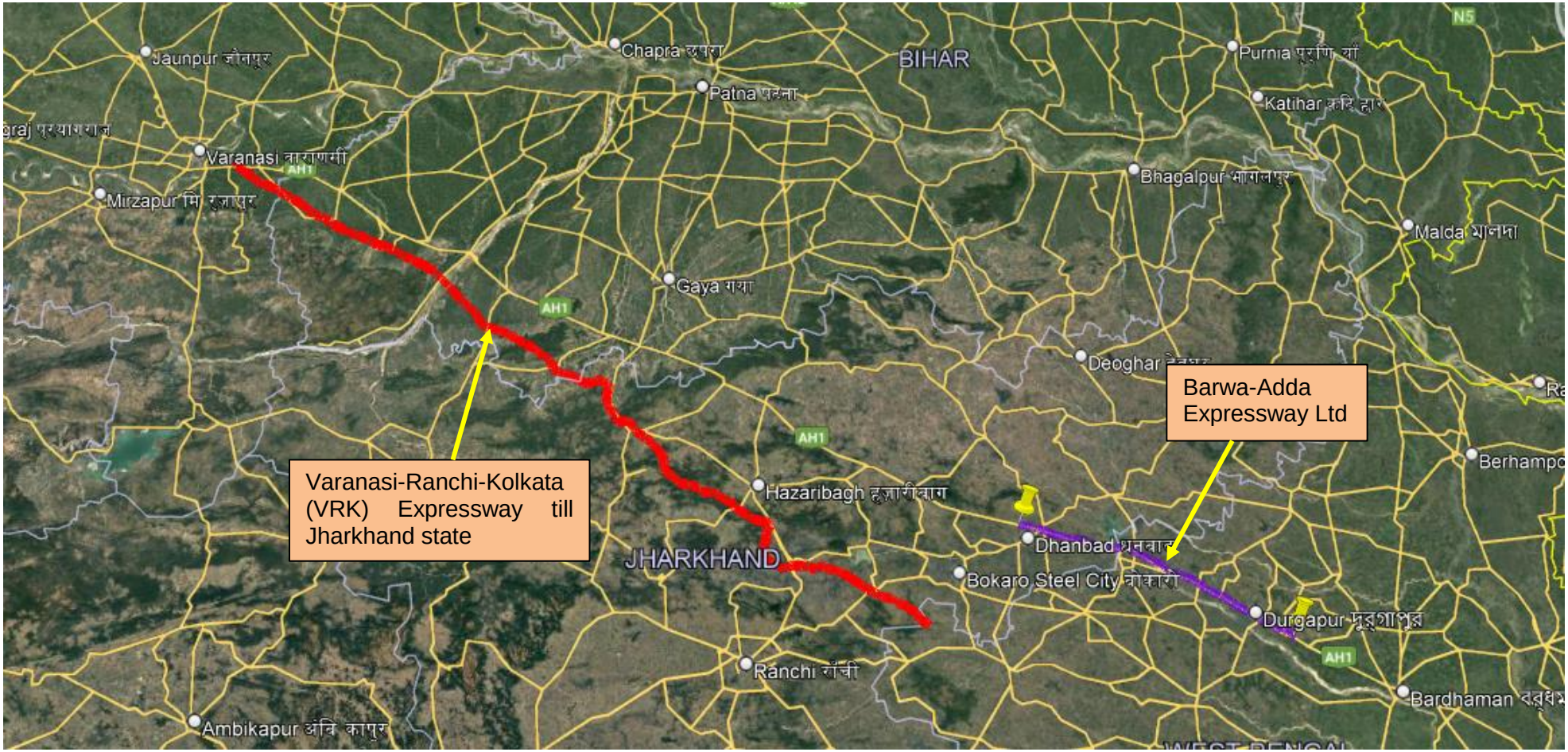


Figure 3.1: Map showing the Varanasi-Ranchi-Kolkata (VRK) expressway till Jharkhand and Barwa Adda Expressway Ltd

3.2.1. DPR Traffic

To conduct traffic surveys on the expressway connecting Varanasi, Ranchi, and Kolkata, the DPR consultant has divided the road into homogeneous sections based on the interchanges provided on National Highways and state highway crossings. These sections are indicated in Table 3.2 and shown in Figure 3.2.

Table 3.2: Homogenous sections for Traffic surveys

Homogeneous Section	Section Name	From (Km)	To (Km)	Length (Km)
Section-1	Varanasi-Mohania	0+000	53+000	53
Section-2	Mohania - Sasaram	53+000	92+000	39
Section-3	Sasaram - Aurangabad	92+000	136+000	44
Section-4	Aurangabad - Sherghati	136+000	172+000	36
Section-5	Sherghati - Chatra	172+000	214+000	42
Section-6	Chatra - Hazaribagh	214+000	253+000	39
Section-7	Hazarribagh – Mandu/Ranchi (NH-	253+000	294+000	41
Section-8	Mandu/Ranchi (NH-20) -	294+000	334+000	40
Section-9	Gola - Bokaro	334+000	380+000	46
Section-10	Bokaro - Purulia	380+000	403+000	23
Section-11	Purulia - Bankura	403+000	450+000	47
Section-12	Bankura – Medinipur	450+000	513+000	63
Section-13	Medinipur (NH-14) - Burdhman Rd	513+000	536+000	23
Section-14	Burdhman Rd - Bagnan	536+000	593+167	57

Sections 11 and 12 running close to the project highway Barwa Adda Expressway Limited.

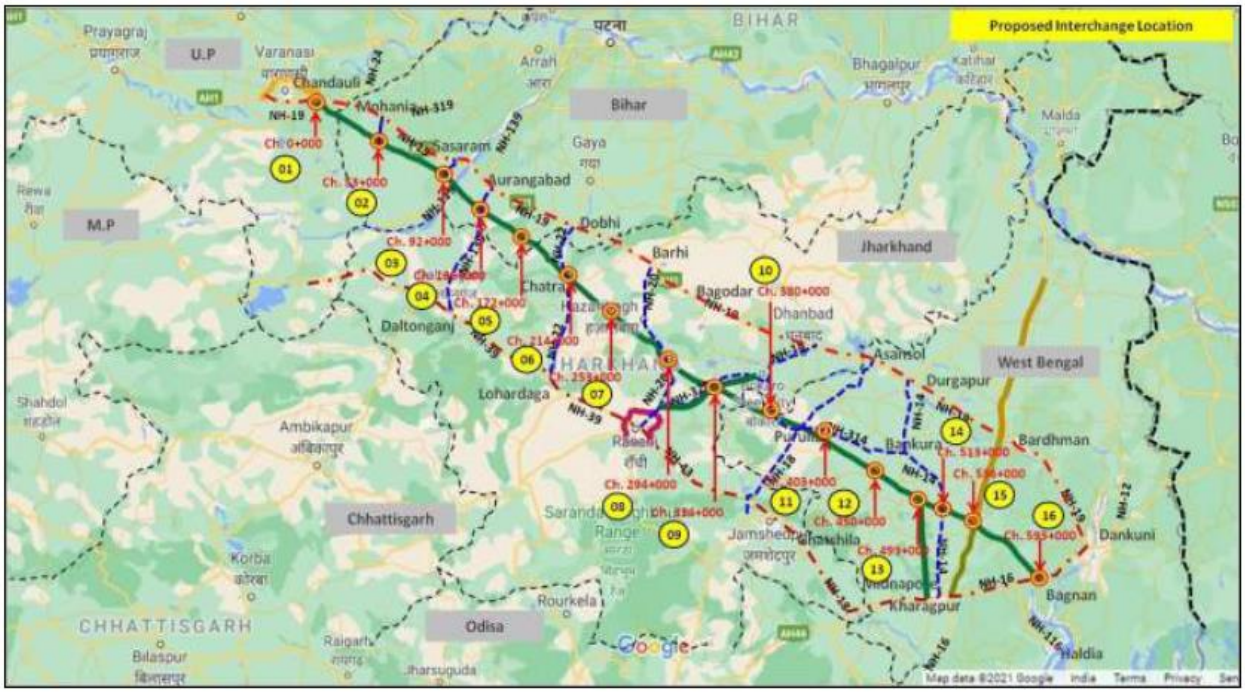


Figure 3.2: Homogeneous sections considered in the DPR

3.2.2. Beliyad Toll plaza traffic

In January 2021, traffic surveys were conducted by DPR consultants at the Beliyad Toll Plaza location to determine the ADT and AADT, which are presented in Table 3.3. Following this, the consultants conducted a network analysis using the total length of the expressway as a unit to forecast future traffic.

Table 3.3: DPR traffic ADT and AADT of Beliyad toll plaza in 2021

Location	Beliyad(NH- 19)	
	ADT	AADT
2 Axle SCV	1357	1411
2Axle LMV	7644	7491
2-Axle LCV	1001	1041
2-Axle Truck or Bus	3283	3415
3-Axle Truck or Bus	2927	3044
MAV	2416	2512
Oversized Vehicle (OSV)	0	0
Cycle Rickshaw	10	10
Earth Moving Equipment	13	13
Bicycle	482	482
2 Wheeler	6200	6076
3 Wheeler	448	466
Tractor	4	5
Tractor with Trailer	55	57
Vehicles	**25840**	**26023**
PCU	**44126**	**45234**

3.2.3. Beliyad Toll plaza diverted traffic

According to the executive summary of the Feasibility Report of VRK Expressway, the DPR consultants have made projections for the expected traffic on each expressway section, considering diverted, developed, and induced traffic. The report provides the final diverted traffic for all homogenous sections, including sections 11 and 12, which pass close to the current project road. Table 3.4 gives the diverted traffic estimated by DPR consultants on sections 11 and 12 based at the Beliyad Toll Plaza for 2021.

Table 3.4: Diverted traffic of section-11 and section-12

Diverted Traffic (Year 2021)									
Year	Cars	Bus	Mini Bus	LCV	2 Axle Trucks	3 Axle Trucks	MAV	Total Vehicles	Total PCUs
Section-11	1891	118	15	813	806	1076	980	5699	13544
Section-12	2087	178	19	895	823	1188	1031	6220	14664

3.2.4. Percentage of traffic diversion at section-11 and section-12 based on Beliyad toll plaza.

The percentage of traffic diversion to the section-11 and section-12 based on traffic collected at Beliyad toll plaza is presented in the Tables 3.5 and 3.6.

Table 3.5: Percentage of Traffic diversion at Section-11 based on Beliyad Toll plaza

Vehicle type	AADT	Diverted Traffic	% of Diversion
Cars/LMV	8902	1891	21.2%
2-Axle LCV	1041	813	78.1%
2-Axle Truck or Bus	3415	924	27.1%
3-Axle Truck or Bus	3044	1076	35.3%
MAV	2512	980	39.0%
Average % of Diversion			**40.2%**

Table 3.6: Percentage of Traffic diversion at Section-12 based on Beliyad Toll plaza

Vehicle type	AADT	Diverted Traffic	% of Diversion
Cars/LMV	8902	2087	23.4%
2-Axle LCV	1041	895	86.0%
2-Axle Truck or Bus	3415	1001	29.3%
3-Axle Truck or Bus	3044	1188	39.0%
MAV	2512	1031	41.0%
Average % of Diversion			**43.8%**

Based on the data presented in Tables 3.5 and 3.6, it can be observed that the average percentage of traffic diversions in two sections is 40.2% and 43.8%, respectively.

3.3 DIVERSION ANALYSIS AS PER OD SURVEYS

3.3.1. Diverted Traffic

Cost ratio diversion curves (Figure 3.3) were used to estimate the diverted traffic from/to the project road. In this approach, traffic likely to be diverted from the project road to the alternate route is estimated using diversion curves, which compute the ratio of perceived costs on the competitive/alternative facilities. The vehicle will shift, if the perceived cost on the alternative road is lower than the project road. The diversion rate is also calculated using the equations, which are presented in the Table 3.7. The proposed and the current project roads are shown in the Figure 3.4.

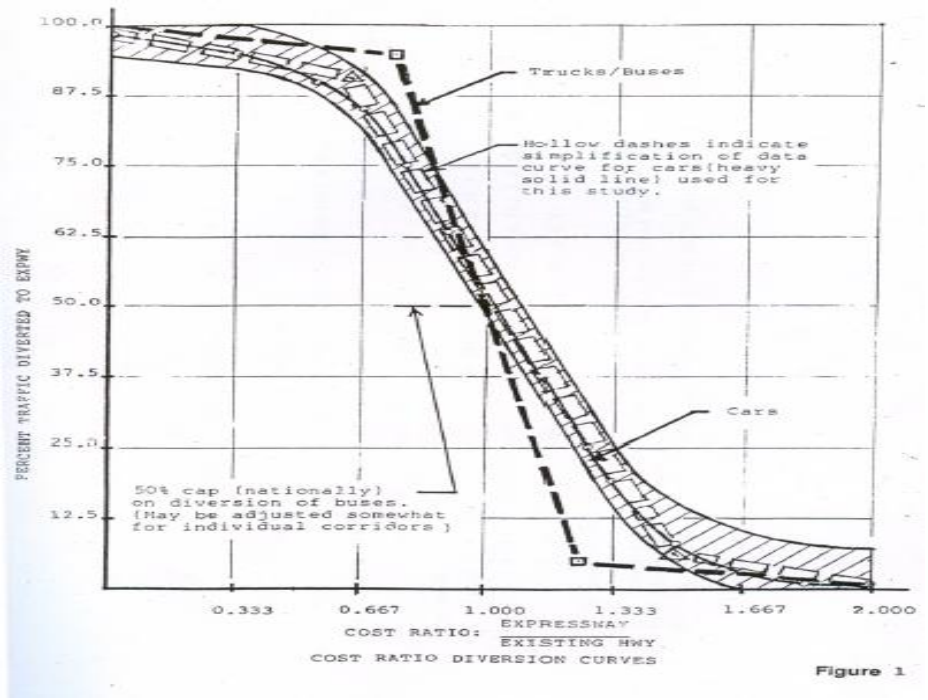


Figure 3.3:Tolling Strategy and Toll Revenue Diversion Curves

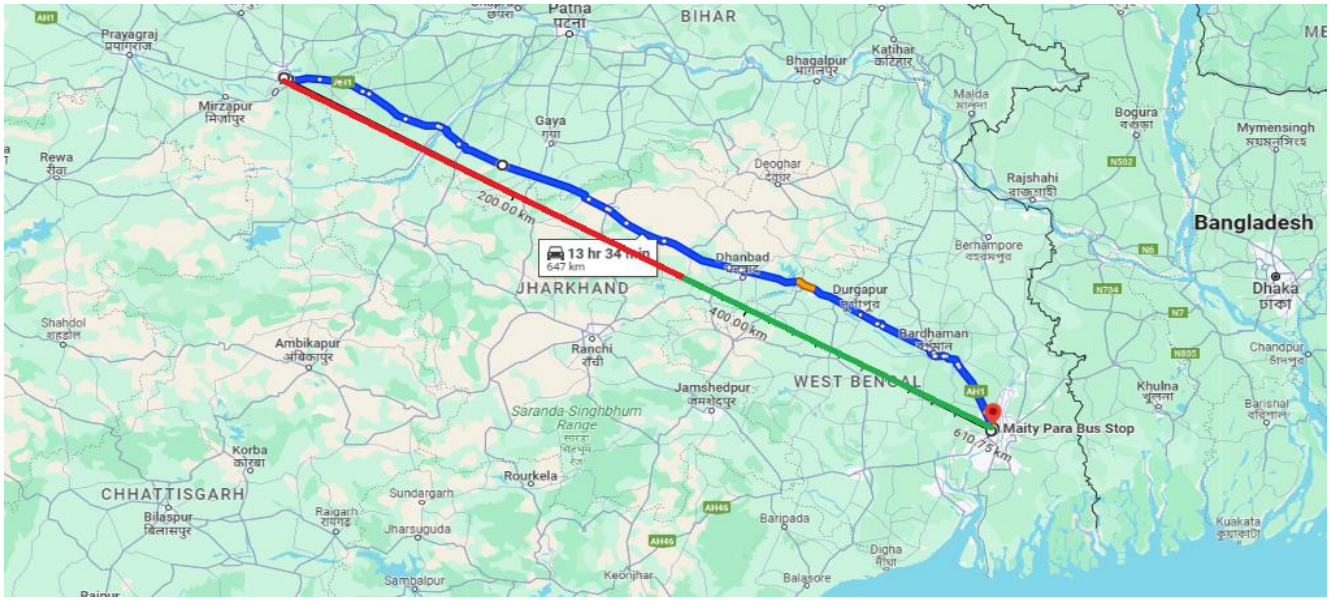


Figure 3.4: Map showing the VRK express way in west Bengal (green line) extended Varanasi (redline) –647 km Vs Existing Road Barwa Adda Expressway extended to Varnanasi and Kolkata (Blue line) – 647 km

Table 3.7: Tolling Strategy and Toll Revenue Diversion Curve Equation

Vehicle	Cost Ratio Interval	Relationship
Car	<0.634 0.64 = CR <1.465 1.465 <=CR <= 2.00	% Div = 98.75 – ((CR/0.634)* 8.125) % Div= 90.625-((CR-0.634)/0.831)*84.375 %Div = 6.25-((CR-1.465)/0.535))*5.25
Truck & Buses	<= 0.75 0.75 <= CR <=1.25	% Div=100-(CR/0.75)*5 % Div= 95-((CR-0.75)/.5)*90

Vehicle	Cost Ratio Interval	Relationship
	1.25<=CR <=2.00	% Div= ((2-CR)/0.75)*5

For calculating the cost ratio, the generalized cost is considered on the project road and alternative road. The generalized cost consists of three components vehicle operating cost (VOC), value of time (VOT) and toll cost. VOC was calculated based on the observed speed, traffic, road characteristics as per IRC-SP-30-2019. From the observed speed travel times are calculated and VOT thereby.

- **Toll Fee on Proposed Project Road**

Clause 30.4 of the concession agreement outlines that if a new road is proposed adjacent to the current highway and an anticipated diversion of traffic from the existing route, a supplementary tollway fee is required. This additional tollway fee must be at least 25% higher than the toll levied on the existing highway to discourage traffic diversion from the established route. In line with this provision, an assumption was made that the toll on the proposed road would be increased by 25%. Subsequently, a diversion analysis was conducted based on this assumption.

3.3.2. Diverted traffic as per VOC, VOT and Toll

It is obvious that the possible usage of proposed road depends on the condition of the road, travel cost and Value for time. Considering these parameters, detailed diversion analysis has been carried out and Presented in the **Annexure 3.1.** Summary of the Diverted traffic to proposed road (VRK expressway) is provided in the **Table 3.8.**

Table 3.8: Diverted Traffic (%) as per VOC, VOT and Toll

Vehicle type	% Diversion
Car	**52**
Bus	**44**
LCV	**46**
2Axle	**44**
3Axle	**43**
MAV	**43**

3.3.3. Potential Diverted Traffic based on the OD data

In addition to diverted traffic worked out as the procedure described in the above sections, it was also calculated based on the OD zonings and the data obtained through OD surveys conducted for a period of 48 hrs at two toll plaza locations as discussed in Chapter 2.

The OD Zoning codes are given in Table 2.9 of Chapter 2. In the OD zones, Zones 16,19,21,23 are towards Kolkatta. The Zones 25,26,27,30,31,32,34-39,42,43 and 45 towards Varanasi and 8,9,17,18 zones are considered based on trip length on both sides. An OD Pair is said to be a potential OD pair when the traffic from OD zones of Kolkatta direction travels to the OD zones in Varanasi direction and vice versa. These OD pairs from OD Zoning are carefully chosen for all the vehicle classes to obtain the potential diverted traffic.

Potential Diverted traffic

In the present case, as it is a green field alignment which is a new facility being created to with access controlled to reduce the congestions on existing road network and to facilitate the speed movement of goods and people, there is no any existing traffic. However, from the OD analysis, it is found that

there is a potential traffic which would be diverted onto the new expressway. This assigned traffic is known as the potential diverted traffic and the same is presented in the Table 3.9.

Table 3.9: Potential Diverted Traffic (%)

Vehicle type	TP -1 Beliyad Toll plaza			TP-2 Banskopa Toll plaza		
	Diverted traffic	Surveyed vehicles	% of diversion	Diverted traffic	Surveyed vehicles	% of diversion
Car	828	1943	43%	219	2385	9%
Bus	42	74	57%	28	289	10%
LCV	104	164	63%	49	157	31%
2-AT	188	337	56%	159	510	31%
3-AT	231	391	59%	211	766	28%
MAV	1018	1703	60%	550	1621	34%
Total Vehicles	**2411**	**4612**	**52%**	**1216**	**5728**	**21%**
Total PCUs	**7041**	**12394**	**57%**	**3993**	**14412**	**28%**

3.3.4. Actual Diverted traffic

The actual diverted traffic was calculated by multiplying the percentage of diverted traffic derived from the origin-destination survey with the percentage of potential diverted traffic obtained from the zoning. Actual Diverted traffic % at two locations is given in Table 3.10.

Table 3.10: Actual Diverted Traffic (%)

Vehicle type	TP -1 Beliyad Toll plaza	TP-2 Banskopa Toll plaza
Car/LMV	17%	7%
LCV/Mini bus	34%	12%
Bus	20%	7%
Truck	26%	13%
Truck 3 Axle	25%	12%
MAV	25%	14%

The Varanasi-Ranchi-Kolkata (VRK) expressway is anticipated to be inaugurated in the West Bengal region starting from 2031 onwards. A gradual traffic diversion ranging from 15% to 100% has been assumed, with specific percentages allocated for each year from 2031-2032 to 2035-2036. These percentages are as follows: 15% for 2031-32, 30% for 2032-33, 60% for 2033-34, 90% for 2034-35, and 100% for 2035-36. These percentages were applied for all the vehicles individually. It is important to emphasize that these figures are preliminary estimations, and close monitoring of the traffic situation will be essential once the expressway becomes operational to obtain a more accurate assessment of traffic flow.

3.3.5. Traffic Forecasting

The traffic forecast of vehicles and PCUs in 3 scenarios (Normal, Optimistic and Pessimistic) at two toll plaza locations in AADT is given in **Table 3.11** to **Table 3.16.**

Table 3.11: Traffic Forecast at Beliyad Toll plaza based on Normal Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Mini bus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	4,474	282	305	1,140	917	3,705	**10,821**	**28,616**
2025-2026	4,795	291	314	1,179	942	3,934	**11,454**	**30,202**
2026-2027	5,139	300	324	1,219	968	4,177	**12,127**	**31,882**
2027-2028	5,508	310	334	1,261	995	4,435	**12,842**	**33,662**
2028-2029	5,871	318	343	1,300	1,019	4,684	**13,536**	**35,376**
2029-2030	6,257	328	353	1,341	1,045	4,946	**14,269**	**37,184**
2030-2031	6,669	337	362	1,383	1,071	5,224	**15,045**	**39,089**
2031-2032	6,930	336	354	1,370	1,056	5,307	**15,352**	**39,627**
2032-2033	7,197	335	344	1,355	1,039	5,383	**15,654**	**40,126**
2033-2034	7,239	322	314	1,277	977	5,194	**15,324**	**38,814**
2034-2035	7,267	308	281	1,193	911	4,977	**14,937**	**37,323**
2035-2036	7,570	309	275	1,186	902	5,063	**15,304**	**37,956**
2036-2037	8,046	317	282	1,221	923	5,330	**16,119**	**39,836**
2037-2038	8,553	325	289	1,257	945	5,611	**16,979**	**41,815**
2038-2039	9,071	333	296	1,291	965	5,886	**17,843**	**43,770**

Table 3.12: Traffic Forecast at Beliyad Toll plaza based on Optimistic Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Mini bus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	4,474	282	305	1,140	917	3,705	**10,821**	**28,616**
2025-2026	4,827	292	315	1,183	945	3,957	**11,517**	**30,361**
2026-2027	5,208	302	326	1,227	973	4,226	**12,262**	**32,219**
2027-2028	5,620	312	337	1,274	1,003	4,513	**13,058**	**34,199**
2028-2029	6,027	322	347	1,317	1,030	4,791	**13,835**	**36,117**
2029-2030	6,463	332	358	1,362	1,058	5,087	**14,660**	**38,149**
2030-2031	6,931	343	369	1,409	1,087	5,400	**15,539**	**40,303**
2031-2032	7,246	343	361	1,400	1,075	5,516	**15,941**	**41,062**
2032-2033	7,572	343	352	1,390	1,061	5,624	**16,341**	**41,789**
2033-2034	7,661	331	322	1,313	1,000	5,455	**16,081**	**40,620**
2034-2035	7,736	317	289	1,230	934	5,253	**15,759**	**39,251**
2035-2036	8,107	318	283	1,227	927	5,370	**16,231**	**40,111**
2036-2037	8,668	328	291	1,266	950	5,681	**17,185**	**42,304**
2037-2038	9,268	337	300	1,307	975	6,011	**18,198**	**44,623**
2038-2039	9,887	346	308	1,346	998	6,305	**19,190**	**46,794**

Table 3.13: Traffic Forecast at Beliyad Toll plaza based on Pessimistic Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Minibus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	4,474	282	305	1,140	917	3,705	**10,821**	**28,616**
2025-2026	4,763	290	313	1,175	940	3,911	**11,391**	**30,044**
2026-2027	5,071	298	322	1,211	963	4,128	**11,993**	**31,547**
2027-2028	5,398	307	331	1,248	987	4,358	**12,629**	**33,131**
2028-2029	5,718	315	339	1,283	1,009	4,578	**13,242**	**34,648**
2029-2030	6,057	323	348	1,319	1,031	4,809	**13,887**	**36,239**
2030-2031	6,415	331	356	1,356	1,055	5,052	**14,565**	**37,908**
2031-2032	6,625	329	347	1,340	1,037	5,105	**14,783**	**38,237**
2032-2033	6,838	327	337	1,322	1,019	5,151	**14,993**	**38,523**
2033-2034	6,837	314	306	1,242	956	4,945	**14,600**	**37,085**
2034-2035	6,823	300	274	1,157	888	4,715	**14,156**	**35,485**
2035-2036	7,065	299	266	1,147	878	4,772	**14,428**	**35,911**
2036-2037	7,466	307	273	1,177	896	4,998	**15,117**	**37,507**
2037-2038	7,889	314	279	1,208	915	5,235	**15,840**	**39,178**
2038-2039	8,319	321	285	1,238	933	5,492	**16,588**	**40,937**

Table 3.14: Traffic Forecast at Banskopa Toll plaza based on Normal Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Minibus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	10,305	848	755	2,204	1,753	6,910	**22,775**	**56,947**
2025-2026	11,028	875	778	2,278	1,800	7,327	**24,086**	**60,025**
2026-2027	11,802	902	801	2,354	1,849	7,770	**25,477**	**63,283**
2027-2028	12,629	930	825	2,433	1,898	8,240	**26,956**	**66,730**
2028-2029	13,441	956	848	2,508	1,945	8,694	**28,392**	**70,063**
2029-2030	14,305	983	872	2,585	1,993	9,173	**29,911**	**73,574**
2030-2031	15,225	1,011	896	2,664	2,041	9,679	**31,516**	**77,274**
2031-2032	16,025	1,029	904	2,693	2,054	9,989	**32,694**	**79,658**
2032-2033	16,866	1,047	912	2,719	2,066	10,313	**33,923**	**82,139**
2033-2034	17,524	1,053	900	2,687	2,032	10,363	**34,560**	**82,824**
2034-2035	18,180	1,058	889	2,648	1,999	10,389	**35,163**	**83,380**
2035-2036	19,160	1,079	900	2,688	2,017	10,742	**36,586**	**86,201**
2036-2037	20,345	1,108	923	2,765	2,064	11,301	**38,506**	**90,396**
2037-2038	21,603	1,137	947	2,845	2,112	11,890	**40,534**	**94,809**
2038-2039	22,910	1,164	970	2,922	2,157	12,468	**42,591**	**99,200**

Table 3.15: Traffic Forecast at Banskopa Toll plaza based on Optimistic Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Minibus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	10,305	848	755	2,204	1,753	6,910	**22,775**	**56,947**
2025-2026	11,100	877	780	2,285	1,805	7,369	**24,217**	**60,333**
2026-2027	11,957	907	806	2,369	1,858	7,859	**25,757**	**63,936**
2027-2028	12,879	938	833	2,457	1,913	8,381	**27,402**	**67,770**
2028-2029	13,790	967	858	2,540	1,965	8,890	**29,010**	**71,497**
2029-2030	14,765	998	884	2,625	2,018	9,429	**30,719**	**75,444**
2030-2031	15,809	1,029	911	2,714	2,072	10,001	**32,536**	**79,624**
2031-2032	16,741	1,050	921	2,752	2,090	10,374	**33,928**	**82,483**
2032-2033	17,725	1,072	932	2,787	2,107	10,767	**35,390**	**85,473**
2033-2034	18,525	1,080	923	2,762	2,078	10,873	**36,240**	**86,594**
2034-2035	19,330	1,088	914	2,729	2,048	10,955	**37,063**	**87,591**
2035-2036	20,490	1,113	927	2,778	2,072	11,382	**38,762**	**90,988**
2036-2037	21,884	1,145	954	2,866	2,124	12,034	**41,008**	**95,875**
2037-2038	23,373	1,178	981	2,957	2,178	12,724	**43,392**	**1,01,042**
2038-2039	24,928	1,209	1,007	3,045	2,230	13,404	**45,824**	**1,06,210**

Table 3.16: Traffic Forecast at Banskopa Toll plaza based on Pessimistic Growth rates

FY	Car/Light Motor Vehicle (LMV)	Bus	Light Commercial Vehicle (LCV)/Minibus	Truck 2 Axle (2-AT)	Truck 3 Axle (3-AT)	Multi Axle Vehicle (MAV)	Total Vehicles	Total PCUs
2024-2025	10,305	848	755	2,204	1,753	6,910	**22,775**	**56,947**
2025-2026	10,956	872	775	2,270	1,796	7,285	**23,955**	**59,717**
2026-2027	11,647	896	796	2,339	1,839	7,682	**25,200**	**62,633**
2027-2028	12,383	922	818	2,410	1,884	8,100	**26,515**	**65,701**
2028-2029	13,099	945	838	2,476	1,925	8,502	**27,785**	**68,652**
2029-2030	13,857	969	859	2,544	1,968	8,924	**29,120**	**71,744**
2030-2031	14,659	994	881	2,614	2,011	9,366	**30,524**	**74,985**
2031-2032	15,336	1,009	886	2,635	2,018	9,615	**31,500**	**76,920**
2032-2033	16,043	1,024	892	2,653	2,025	9,876	**32,512**	**78,926**
2033-2034	16,572	1,027	878	2,614	1,988	9,874	**32,953**	**79,209**
2034-2035	17,092	1,029	865	2,569	1,950	9,850	**33,356**	**79,362**
2035-2036	17,909	1,047	873	2,600	1,964	10,134	**34,528**	**81,656**
2036-2037	18,906	1,072	894	2,668	2,005	10,609	**36,153**	**85,221**
2037-2038	19,958	1,097	915	2,737	2,047	11,106	**37,860**	**88,952**
2038-2039	21,044	1,120	935	2,804	2,087	11,592	**39,582**	**92,645**

CHAPTER 4. TOLL REVENUE FORECAST

4.1 GENERAL

This chapter discusses the estimated toll revenues of two toll plaza locations - Beliyad and Banskopa. The toll fee rates are calculated based on the entire corridor length between Barwa Adda and Panagarh, including the Panagarh Bypass. It's worth noting that fee rates differ at each toll plaza location, corresponding to the varying Tollable lengths and Bypass sections. The Toll revenue estimates were based on the traffic projections discussed in the previous chapter, covering the entire concession period.

4.2 TOLL REVENUE FORECASTING

As outlined in the previous sections, toll revenue projections were estimated using a combination of projected traffic and toll rates. In terms of toll rates, the rates for each vehicle category and tolling length were determined based on the wholesale price index (WPI) and the base rates set by the NH fee notification for the project.

4.2.1. Length of the Project Road

According to the toll fee notification, the length of the Project Road is 122.88 kms. The applicable length of the project road under the toll plazas is mentioned in **Table 4.1.**

Table 4.1: Length of the road under Toll Plazas Jurisdiction

Toll Plaza	Control length (Km.)	Bypass Length (Km.)	Total length (Km.)
Beliyad	66.76	-	66.76
Banskopa	48.0	8.12	56.12

4.2.2. Toll revenue estimation

4.2.2.1 Toll Fee Revision Methodology

Toll fee calculation is based on the NHAI's fixed base rate, which is subject to annual revision in accordance with the formula prescribed by NHAI under the toll rules of 2008.

a) **Base Rate**: As per the NHAI toll fee Rules, 2008, the fee rate for using a section of Barwa Adda–Panagarh is determined by considering the expenditure involved in building, maintenance, management, and operation of the said stretch for the base year applicable. The applicable rates are given in **Table 4.2.**

Table 4.2: Base Rate for Vehicle Category for Payable Length

Type of Vehicle	Base Rate fee per Km. length
Car, Van, Jeep	0.65
LCV	1.05
Bus or Truck	2.20
3-AT	2.40
MAV/HCM/EME	3.45
OSV	4.2

b) **Annual revision of rate of fee as NHAI Toll Rule 2008:** Under rule 4, the specified rates shall be subject to an annual increase of three percent, effective April 1, 2008. The increased rate will be

considered as the base rate for subsequent years. The applicable base rates will also be revised annually **on April 1** to reflect the wholesale price index increase. However, the revision will be limited to 40% of the rise in the wholesale price index. The formula used to determine the applicable fee rate shall be as follows.

$$\text{Applicable rate of fee} = \text{Base Rate} + \text{Base Rate X} \left\{\frac{\text{WPI A} - \text{WPIB}}{\text{WPI A}}\right\} * 0.4$$

Where, Applicable rate of fee shall be the rate payable by the user;

Base rate shall be the rate specified in the previous financial year;

WPI A means the wholesale price index of the week ending-on or subsequent to 1st January immediately preceding the date of revision under these rules; and

WPI B means the wholesale price index of the week ending on 6" January, 2007 i.e. 208.7.

4.2.2.2 WPI Forecasts

a) Wholesale Price Index

The Wholesale Price Index (WPI) is a measure that tracks the price movement of critical commodities of national relevance, which are grouped under three main categories: Primary Articles, Fuel and power, and Manufactured Products. The WPI is determined through the averaging principle based on the movement of individual commodities within these categories.

Until 2010, the WPI was computed with a base year of 1993-94 for about 435 commodities grouped as mentioned above. The Office of Economic Advisor, Prime Minister's Office, published the weekly index. In recent years, the base series of WPI has been changed from 1993-94 to 2004-05 and from 2004-05 to 2011-12. To ensure continuity in the wholesale price index, the Central Statistical Organization (CSO) provided linking factors for the 2004-05 and 2011-12 series to arrive at the WPI values for the 1993-94 series. According to the NHAI policy number 18.30 dated March 20th, 2018, the linking factor for 2004-05, considering the base of 1993-94, is 1.873, and that of 2011-12, regarding the base of 2004-05, is 1.641.

b) Past trends of the Wholesale Price Index

The trends of WPI for the calendar year 2012 and financial year 2011-12 were collected and analyzed to identify any patterns. Table 4.3 displays the WPI trends for all commodities categories over a decade.

Table 4.3: Past trends of the WPI

Calendar Year			Financial Year		
Year	WPI	Inflation Rate	Year	WPI	Inflation Rate
2012	100		2011-12	100	
2013	111.1	11.10	2012-13	106.9	6.90
2014	114.8	3.33	2013-14	112.5	5.24
2015	110.3	-3.92	2014-15	113.9	1.24
2016	110.3	0.00	2015-16	109.7	-3.69

Calendar Year			Financial Year		
Year	WPI	Inflation Rate	Year	WPI	Inflation Rate
2017	114.1	3.45	2016-17	111.6	1.73
2018	118.9	4.21	2017-18	114.9	2.96
2019	121.2	1.93	2018-19	119.8	4.26
2020	121.8	0.50	2019-20	121.8	1.67
2021	135	10.84	2020-21	123.4	1.31
2022	151.3	12.07	2021-22	139.4	12.97
2023	151.8	0.33	2022-23	152.5	9.40
			2023-24	153.0	0.32
		4.35			**3.69**

Based on the data from the table, it can be seen that the average inflation rate has grown by 4.35% when calculated based on the calendar year since 2012, while it has grown by 3.69% when calculated based on the financial year. Over the last eleven years, the inflation rate has fluctuated upwards and downward. Therefore, considering this, an inflation factor of 3.5% is considered for FY 2025-2026, 5% for FY2026-2028 and 4.5% has been chosen for the remaining concession period for estimation of WPI, which is close to the average of the last eleven years.

4.2.3. Toll fee Projections

The toll rates released by NHAI for FY 2024-2025 for two plaza locations presented in Table 4.4 and Table 4.5.Based on the NHAI approved rates, the estimated toll fee for FY 2025-26 has been calculated and is presented in Tables 4.6 and 4.7 for Toll Plazas 1 and 2, respectively. The toll fee projected for the entire concession period submitted in separate excel file.

Table 4.4: Projected Toll Rates (Rs.) for the FY 2024-25 for Toll Plaza 1

Vehicle	Single Journey	Return Journey	Monthly pass	Local Registered	Local Monthly pass
Car	100	145	3,265	50	340
Mini Bus/LCV	160	235	5,270	80	
Bus	330	495	11,045	165	
2-AT	330	495	11,045	165	
3-AT	360	540	12,050	180	
MAV	520	780	17,325	260	

Table 4.5: Projected Toll Rates (Rs.) for the FY 2024-25 for Toll Plaza 2

Vehicle	Single Journey	Return Journey	Monthly pass	Local Registered	Local Monthly pass
Car	90	130	2,940	45	340
Mini Bus/LCV	145	215	4,750	70	
Bus	300	450	9,960	150	
2-AT	300	450	9,960	150	
3-AT	325	490	10,865	165	
MAV	470	705	15,615	235	

Table 4.6: Projected Toll Rates (Rs.) for the FY 2025-26 for Toll Plaza 1

Vehicle	Single Journey	Return Journey	Monthly pass	Local Registered	Local Monthly pass
Car	100	155	3,400	50	350
Mini Bus/LCV	165	245	5,490	80	
Bus	345	520	11,500	175	
2-AT	345	520	11,500	175	
3-AT	375	565	12,545	190	
MAV	540	810	18,035	270	

Table 4.7: Projected Toll Rates (Rs.) for the FY 2025-26 for Toll Plaza 2

Vehicle	Single Journey	Return Journey	Monthly pass	Local Registered	Local Monthly pass
Car	90	140	3,065	45	350
Mini Bus/LCV	150	225	4,950	75	
Bus	310	465	10,370	155	
2-AT	310	465	10,370	155	
3-AT	340	510	11,310	170	
MAV	490	730	16,260	245	

4.2.4. Vehicle wise trip categories

The toll revenue calculation is based on the concessions provided to road users, which differ based on the type of vehicle and the number of eligible trips allowed for each toll category. The number of eligible trips varies based on the toll fee category, like Single (Full fare), Return, Local passenger, and Monthly Pass, for both passenger and commercial vehicles. Tables 4.8 and 4.9 showcase the number of eligible trips for each toll category. The estimation of individual toll vehicles by the type of toll ticket category is based on the recent toll traffic data from April 2024 to September 2024.

Table 4.8: Vehicle wise Trip Categories at TP 1

Vehicle Type	Single	Return	Monthly Pass	Local Registered	Local Monthly Pass	Exempt and Others	Total
Car	34.1%	47.7%	0.0%	1.5%	10.1%	6.6%	100.0%
LCV	64.6%	28.9%	0.0%	1.5%	0.0%	4.9%	100.0%
Bus	32.1%	63.9%	0.0%	3.5%	0.0%	0.5%	100.0%
2-Axle Truck	85.0%	13.4%	0.0%	0.6%	0.0%	1.0%	100.0%
3-Axle Truck	84.2%	9.6%	0.0%	5.9%	0.0%	0.4%	100.0%
MAV	83.3%	10.4%	0.0%	6.1%	0.0%	0.1%	100.0%
HCM	66.7%	0.0%	0.0%	33.3%	0.0%	0.0%	100.0%
OS	71.9%	0.0%	0.0%	28.1%	0.0%	0.0%	100.0%

Table 4.9: Vehicle wise Trip Categories at TP 2

Vehicle Type	Single	Return	Monthly Pass	Local Registered	Local Monthly Pass	Exempt and Others	Total
Car	23.4%	48.7%	0.0%	3.4%	17.0%	7.5%	100.0%
LCV	34.8%	39.1%	4.0%	14.7%	0.0%	7.4%	100.0%
Bus	13.3%	44.1%	10.1%	29.2%	0.0%	3.4%	100.0%
2-Axle Truck	56.7%	33.6%	0.0%	8.6%	0.0%	1.1%	100.0%
3-Axle Truck	62.4%	25.3%	0.0%	12.2%	0.0%	0.1%	100.0%
MAV	55.7%	35.4%	0.0%	8.8%	0.0%	0.1%	100.0%
HCM	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
OS	92.8%	0.0%	0.0%	7.2%	0.0%	0.0%	100.0%

4.2.5. Effect of Variation in Growth Rates and Extension of concession period

For determination of the effect of variation of traffic growth on the concession period, clause 29.1.1 of the Concession Agreement reads as: "The Authority and the Concessionaire acknowledge that the traffic as of 1st October 2023 (the "Target Date") is estimated to be 71,077 PCUs per day (the "Target Traffic"), and hereby agree that for determining the modifications to the Concession Period under this Article 29, the actual traffic on the Target Date shall be derived by computing the average of the traffic as determined by traffic sampling to be undertaken, by Clause 22.3, on the date that falls one year before the Target Date, on the Target Date and the first anniversary of the Target Date (the "Actual Average Traffic"). To avoid doubt, it is agreed that traffic sampling shall be undertaken for a continuous period of 7 (seven) days at any time within 15 (fifteen) days before the date specified herein, and the average thereof shall be deemed the actual traffic. It is further agreed that if the Project Highway shall have two or more Toll Plazas in the same direction of travel, the average traffic shall be computed to determine the Actual Average Traffic hereunder".

If the Actual Average Traffic has fallen short of the Target Traffic by more than 2.5% or exceeded the Target Traffic by more than 2.5%, the concession period shall be deemed to be modified by Clause 29.2.

According to clause 29.2.1, In the event Actual Average Traffic shall have fallen short of the Target Traffic, then for every 1% (one percent) shortfall as compared to the Target Traffic, the remaining Concession Period shall, subject to payment of Concession Fee and Additional Concession Fee by this Agreement, be increased by 1.5% (one point five per cent) thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period. For the avoidance of doubt, and by way of illustration, it is agreed that in the event of a shortfall of 10.6% in Target Traffic, the concession period shall be increased by 15% there off.

According to clause 29.2.2, In the event Actual Average Traffic shall have exceeded the Target Traffic, then for every 1% (one percent) excess as compared to the Target Traffic, the Concession Period shall be reduced by 0.75% (zero point seven five) thereof; provided that such increase in Concession

Period shall not, in any case, exceed 10% (twenty percent) of the Concession Period. To avoid doubt, and by way of illustration, it is agreed that in the event of an excess of 8.7% in Target Traffic, the concession period shall be reduced by 6% there off.

The client concluded traffic on target date as follows
The highest average daily traffic (7 days continuous period) observed from 21st Sept to 27th Sept hence same period was considered for all three while arriving the actual traffic on target date. The actual average traffic (Average of continuous 7 days from 21st Sept to 27th Sep) across all three years is.

- 2022: 42,645 PCUs (Traffic on one year before the Target Date)
- 2023: 40,159 PCUs (Traffic on Target Date)
- 2024: 43,534 PCUs (Traffic on First Anniversary of Target Date)

The findings revealed that the average for the three years works out to be 42,113 PCU, 40.75% lower than the targeted traffic of 71,077 PCU. Consequently, as Article 29.2 of the concession agreement specifies, the client is eligible for a concession period extension of 61.13%.

However, as stipulated in Article 29.1, the maximum permissible extension is 20% of the concession period of 20 years, equivalent to 4 years. Additionally, due to the impact of the COVID-19 pandemic, India underwent nationwide lockdowns during April and May 2020, as well as April and May 2021. Severe restrictions, including intra-state and inter-state movements, were imposed throughout both lockdown periods. Toll operations were halted for a total of 90 days during these lockdowns. As a result, it is assumed that the concession period may be further extended to compensate for the operational downtime caused by these lockdowns. Therefore, toll revenues were estimated to be an additional 5 years above the concession period assuming future extensions.

4.2.6. Effect of Revenue as per notification of Election Commission of India (ECI)

In light of the General Elections 2024, the Ministry of Road Transport and Highways (MoRTH) issued a letter, No. NHAI/13013/547/CO/Rate Revision (E-236507) dated 30.03.2024, requesting clarification on whether the revision of fee rates is permissible with effect from 01.04.2024 or if it should await the completion of the election process.

In response to that, the Election Commission of India (ECI) clarified via letter no: 437/6/CG-HP/ECI/LET/FUNCT/MCC/2024 dated 1.04.2024 that the collection of revised fees, effective from 01.04.2024, shall only be implemented upon the completion of polling in the relevant State, i.e., after the polling date/dates in that State.

The project "Barwa Adda Expressway Limited" traverses through the states of Jharkhand and West Bengal. The elections in both states, spanning all phases, will conclude on 01.06.2024, with toll collection based on revised toll fees expected to commence on 03.06.2024. Consequently, the Concessionaire will experience reduced toll revenue for 63 days (from 01.04.2024 to 02.06.2024). The

comparison of the toll revenue impact, based on the rates of 2023-2024 and 2024-2025, for a 63-day period at two toll plazas, is presented in **Table 4.10.**

Table 4.10: Comparison of Toll Revenue Impact based on Revised and old rates

Toll Plaza	Toll Revenue as per 2024-2025 rates	Toll Revenue as per 2023-2024 rates	Reduced Revenue
Beliyad Toll plaza	17.871 Cr	17.432 Cr	0.439 Cr
Banskopa Toll plaza	29.518 Cr	28.703 Cr	0.815 Cr
Total	**47.389 Cr**	**46.135 Cr**	**1.254 Cr**

The NHAI needs to compensate **1.254 crores** to Concessionaire.

4.2.7. Toll revenue projections

To estimate toll revenue, projections are made based on future traffic, toll fees, and trip rates. Traffic numbers are projected by financial year, with toll rates revised annually on April 1st. Toll revenue projections are made for each financial year until the end of the concession period. Toll will be collected every day of the year, and from FY 2024-25 to FY 2038-39. **Table 4.11 to 4.13** summarizes the projected annual toll revenue of Toll Plazas 1 and 2 in Normal, Optimistic and Pessimistic growth rates.

There is no significant difference in toll revenue when comparing the previous projection based on data until March 2024 with the current projection based on data until September 2024, for FY 2024-2025.The difference is only 1%. However, revenue was slightly reduced due to toll collection at previous rates for a 63-day period (1st April 2024 to 2nd June 2024), following an Election Commission of India (ECI) notification due to general elections in Jharkhand and West Bengal.

Table 4.11: Estimated Toll revenue for 2 Toll plazas-Normal Growth rates

Financial year	Beliyad Tollplaza	Banskopa Toll plaza	Total Revenue in Crores	Remarks
2024-2025	106.4	171.8	278.2	134.7 Cr-(Actual Revenue till Apr-Sep 2024)
2025-2026	116.9	188.4	305.3	
2026-2027	129.7	207.6	337.4	
2027-2028	143.7	230.3	374.0	
2028-2029	158.3	253.2	411.5	
2029-2030	174.2	277.7	451.9	
2030-2031	191.6	306.3	497.9	
2031-2032	203.4	330.6	534.1	
2032-2033	215.4	356.6	572.0	
2033-2034	218.0	376.2	594.2	
2034-2035	219.1	394.9	614.1	
2035-2036	233.4	428.9	662.3	
2036-2037	256.0	470.0	726.0	
2037-2038	281.9	517.0	798.9	
2038-2039	306.8	562.0	868.8	
Total	**2954.8**	**5071.7**	**8026.5**	

Table 4.12: Estimated Toll revenue for 2 Toll plazas-Optimistic Growth rates

Financial year	Beliyad Tollplaza	Banskopa Toll plaza	Total Revenue in Crores	Remarks
2024-2025	106.4	171.8	278.2	134.7 Cr-(Actual Revenue till Apr-Sep 2024)
2025-2026	117.5	189.3	306.8	
2026-2027	131.1	209.7	340.8	
2027-2028	146.0	233.8	379.8	
2028-2029	161.6	258.4	419.9	
2029-2030	178.7	284.6	463.4	
2030-2031	197.5	315.5	513.0	
2031-2032	210.7	342.2	552.9	
2032-2033	224.2	370.9	595.1	
2033-2034	227.9	393.1	621.0	
2034-2035	230.3	414.6	644.8	
2035-2036	246.4	452.4	698.8	
2036-2037	271.6	498.0	769.7	
2037-2038	300.5	550.5	851.0	
2038-2039	327.5	601.1	928.6	
Total	**3077.8**	**5285.9**	**8363.7**	

Table 4.13: Estimated Toll revenue for 2 Toll plazas-Pessimistic Growth rates

Financial year	Beliyad Tollplaza	Banskopa Toll plaza	Total Revenue in Crores	
2024-2025	106.4	171.8	278.2	134.7 Cr-(Actual Revenue till Apr-Sep 2024)
2025-2026	116.3	187.4	303.7	
2026-2027	128.4	205.5	333.9	
2027-2028	141.5	226.8	368.2	
2028-2029	155.1	248.2	403.3	
2029-2030	169.9	270.9	440.8	
2030-2031	185.9	297.3	483.3	
2031-2032	196.4	319.4	515.8	
2032-2033	206.9	342.9	549.8	
2033-2034	208.4	360.0	568.4	
2034-2035	208.5	376.2	584.7	
2035-2036	221.0	406.7	627.7	
2036-2037	241.3	443.5	684.8	
2037-2038	264.4	485.6	750.0	
2038-2039	287.3	525.4	812.7	
Total	**2837.6**	**4867.6**	**7705.2**	

Annexure – 2.1 A

- OD Matrices at Beliyad Toll plaza

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: Car **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	14	0	0	5	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
2	0	0	0	0	0	9	0	73	9	0	23	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	128
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	5	0	325	41	0	0	0	0	0	0	69	27	0	0	5	0	0	9	14	0	0	0	0	0	0	0	0	9	0	5	0	0	0	0	0	0	0	0	0	0	0	509
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	14	92	1173	14	41	9	0	0	0	87	0	23	0	0	5	9	0	14	0	0	0	1512
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	5	55	142	0	18	0	14	0	0	23	0	9	0	0	0	0	0	0	0	0	0	279
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	41	183	0	5	5	9	0	0	18	0	0	0	0	0	0	0	27	0	0	0	307
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	115	27	105	224	14	50	9	5	0	0	348	46	37	0	64	0	0	0	37	0	0	0	1081
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	14	37	238	0	41	0	5	0	0	46	0	9	0	5	0	5	0	0	0	0	0	408
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	5	14	110	0	14	0	14	0	0	14	0	5	0	0	0	0	0	0	0	0	0	192
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	23	0	14	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	50
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	5	23	32	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	14	101	5	23	0	0	0	0	9	5	18	0	5	0	0	0	0	0	0	0	197
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	9	37	211	9	60	0	0	0	0	55	0	46	0	18	0	9	0	5	0	0	0	472
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	18	0	5	0	0	5	0	23	5	0	0	5	0	0	0	0	0	0	0	64
25	0	0	0	0	0	5	0	147	27	0	27	0	0	0	0	55	0	220	0	0	0	0	14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	504
26	0	0	0	0	0	0	0	0	9	0	18	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
27	0	0	0	0	0	0	0	55	23	0	32	0	0	0	0	14	14	5	0	5	0	0	18	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	170
28	0	0	0	0	0	5	0	651	92	0	293	0	0	0	0	220	92	37	5	9	0	0	73	5	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1489
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	9	0	0	5	0	0	0	0	14	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
33	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
34	0	0	0	0	0	0	0	14	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
35	0	0	0	0	0	0	0	46	27	0	37	0	0	0	5	179	5	9	0	0	0	0	27	14	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	357
36	0	0	0	0	0	0	0	5	0	0	14	0	0	0	0	5	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
37	0	0	0	0	0	0	0	60	14	0	64	0	0	0	0	87	14	5	0	9	5	0	18	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	284
38	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
39	0	0	0	0	0	0	0	14	0	0	27	0	0	0	0	115	5	0	9	0	0	0	9	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	128	50	0	64	0	0	0	0	64	14	5	0	0	0	0	23	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**1567**	**298**	**0**	**619**	**0**	**0**	**0**	**5**	**857**	**188**	**279**	**14**	**27**	**14**	**0**	**197**	**82**	**252**	**92**	**422**	**2497**	**41**	**279**	**23**	**46**	**32**	**0**	**628**	**55**	**151**	**0**	**96**	**5**	**23**	**0**	**82**	**0**	**0**	**9**	**8902**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: Bus **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	25
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	25
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	8	17	0	8	0	0	0	0	33	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108
26	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
27	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
28	0	0	0	0	0	0	0	75	0	0	42	0	0	0	0	0	8	0	8	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
34	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
35	0	0	0	0	0	0	0	0	8	0	25	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**125**	**33**	**0**	**83**	**0**	**0**	**0**	**0**	**158**	**8**	**50**	**8**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**92**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**616**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: LCV **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	8	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	4	49	0	0	0	0	0	0	4	4	4	0	0	0	0	0	0	0	0	0	75
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	4	8	19	0	4	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	68
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	4	0	23	0	0	0	0	0	0	8	8	11	0	26	0	0	0	11	0	0	0	121
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	8
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	11	0	4	4	0	0	0	0	4	0	0	0	26
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4	0	0	8	0	0	0	0	0	0	0	19
25	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
28	0	0	0	0	0	0	0	30	0	0	23	0	0	0	0	11	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	4	0	0	8	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
35	0	0	0	0	0	0	0	8	0	0	4	0	0	0	0	11	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	4	4	0	8	0	0	0	0	38	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	19
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	0	0	0	79	4	0	57	0	0	0	0	106	4	0	0	0	0	0	11	15	79	8	15	98	0	8	0	0	0	0	26	15	30	4	38	0	0	0	15	0	0	4	618

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: 2-AT **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	14	0	0	42	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	97	0	0	0	0	0	0	49	0	21	0	0	0	7	0	7	7	0	0	270
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	49	0	0	0	0	0	0	7	7	14	0	0	0	7	0	7	0	0	0	111
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
16	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	28	21	69	0	0	0	0	0	0	69	7	21	7	146	0	7	0	49	0	0	0	471
17	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	14	104	0	0	7	0	14	0	28	0	21	7	0	0	0	0	7	0	0	0	229
18	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	14	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	35
19	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	21
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	21	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	0	0	0	42
24	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	7	21	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	83
25	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
27	0	0	0	0	0	0	0	14	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
28	0	0	0	0	0	0	0	139	0	0	42	0	0	0	0	42	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	14	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
32	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	35	7	0	0	0	7	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	69	14	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	21	14	0	7	0	0	0	0	201	14	0	0	0	0	0	28	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	305
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	69	7	0	0	14	7	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**35**	**0**	**0**	**111**	**28**	**0**	**208**	**14**	**0**	**104**	**0**	**0**	**0**	**0**	**478**	**55**	**0**	**0**	**14**	**21**	**0**	**55**	**90**	**62**	**35**	**55**	**388**	**0**	**0**	**7**	**0**	**21**	**0**	**180**	**14**	**83**	**14**	**152**	**0**	**21**	**0**	**83**	**7**	**0**	**0**	**2336**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: 3-AT **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	5	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	10	119	0	0	5	0	0	0	21	0	10	5	10	0	5	0	0	0	0	0	249
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12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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17	0	0	0	0	16	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	10	16	0	73	5	0	21	0	5	0	41	0	16	0	10	0	5	0	16	0	0	5	254
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
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22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	21
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26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	5	0	0	10	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
28	0	0	0	0	0	0	0	57	0	0	31	0	0	0	0	21	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
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37	0	0	0	0	0	0	0	10	0	0	16	0	0	0	0	114	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	156
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	5	5	0	5	0	0	0	0	109	5	0	0	0	5	0	5	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	16
43	0	0	0	0	0	0	0	21	0	0	10	0	0	0	0	99	0	0	0	0	5	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	36
Total	0	16	0	0	99	5	0	119	10	0	114	0	0	0	0	415	16	5	5	5	16	0	21	67	62	57	62	332	10	36	31	0	10	0	171	0	57	10	156	5	21	0	83	0	0	10	2028

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: MAV **Location:** Beliyad Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	17	0	0	9	0	0	0	0	4	17	0	0	0	0	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	17	0	0	35	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	4	13	210	0	13	9	0	4	0	31	4	9	0	22	0	0	0	17	4	0	0	442
9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	4	26	0	4	0	0	0	0	13	0	4	0	0	0	0	0	4	0	0	0	83
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	9	13	214	0	9	0	9	0	0	35	0	13	0	13	0	4	0	17	0	0	0	442
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	13	0	0	0	0	0	4	0	0	0	31
16	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	22	13	136	0	4	0	0	9	0	192	48	205	9	249	4	13	0	114	0	0	0	1146
17	0	0	0	0	13	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	9	74	0	4	9	0	0	0	39	0	9	0	4	0	0	0	13	0	0	0	201
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	22	0	0	0	0	0	0	9	0	4	0	0	0	0	0	4	0	0	0	44
19	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	22
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	4	0	0	9	0	4	0	0	0	0	0	4	0	0	0	31
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22	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	0	0	22
23	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	22	0	0	0	0	4	0	35	4	39	0	9	0	0	0	9	0	0	0	131
24	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	39	4	13	17	0	13	4	0	4	0	70	13	144	0	70	0	0	0	66	0	13	0	485
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26	0	0	0	0	0	0	0	4	0	0	9	0	0	0	0	9	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
27	0	0	0	0	0	0	0	31	4	0	26	0	0	0	0	35	0	0	0	0	0	0	26	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	136
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31	0	0	0	0	0	0	0	0	4	0	9	0	0	0	0	22	9	0	4	0	4	0	9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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35	0	0	0	0	0	0	0	17	0	0	48	0	0	0	0	227	13	0	17	0	9	0	52	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	568
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
37	0	0	0	0	0	0	0	22	0	0	66	0	0	0	0	363	70	4	4	0	9	0	44	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	778
38	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
39	0	0	0	0	0	0	0	17	0	0	26	0	0	0	0	512	4	0	0	0	0	0	31	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	717
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	17
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	13
43	0	0	0	0	0	0	0	17	4	0	39	0	0	0	0	568	31	9	0	0	4	0	92	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	17	848
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	0	0	0	0	0	0	0	0	4	0	0	9	0	4	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	109
Total	0	31	0	0	96	22	0	249	52	0	354	0	0	0	0	2121	240	13	26	13	26	0	297	721	328	57	70	770	0	52	26	13	31	0	485	83	481	9	389	9	22	26	297	4	13	17	7446

Annexure – 2.1 B

- OD Matrices at Banskopa Toll plaza

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: Car **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	521	61	626	0	0	87	0	269	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1834**
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	78	0	139	0	0	17	0	9	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**322**
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	313	799	104	1112	35	17	174	0	261	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	**2937**
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	9	43	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**113**
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**26**
15	0	122	0	0	9	0	0	191	104	0	391	0	0	0	0	0	365	0	9	0	0	0	0	0	0	0	9	9	0	9	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	**1243**
16	0	0	0	0	35	9	0	539	87	0	669	0	0	0	0	0	478	0	0	0	0	0	0	0	0	0	0	78	0	182	0	0	9	0	52	17	87	0	0	0	0	0	0	0	0	0	**2242**
17	0	130	0	0	78	52	0	652	200	0	1347	0	0	0	130	417	617	565	43	9	96	0	156	130	0	52	43	52	0	200	0	0	26	0	9	0	43	0	0	9	0	0	9	0	0	0	**5066**
18	0	26	0	0	0	0	0	122	26	0	96	0	0	0	35	356	139	339	9	0	113	0	104	17	0	0	17	0	0	26	0	0	0	0	17	0	17	0	0	0	0	0	0	0	0	0	**1460**
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	9	104	0	0	26	0	26	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**278**
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
21	0	9	0	0	0	43	0	78	35	0	43	0	0	0	9	0	35	43	9	0	0	0	17	70	0	9	0	26	0	17	0	0	43	0	9	17	0	0	0	0	0	0	0	0	0	0	**513**
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
23	0	96	0	0	9	17	0	122	17	0	495	0	0	0	0	9	200	0	17	0	0	0	0	61	0	26	17	17	0	26	0	0	9	0	17	0	0	0	0	0	0	0	0	0	0	0	**1156**
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**70**
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	130	17	191	0	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**417**
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	87	0	0	0	0	26	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**148**
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	139	0	261	0	0	9	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**487**
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	52	0	35	0	0	0	0	43	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	**209**
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182	9	191	9	26	17	0	87	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**547**
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96	70	200	0	0	17	0	61	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**487**
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	9	130	0	0	35	0	78	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**469**
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	0	182	0	0	26	0	17	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**408**
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	96	0	0	0	0	26	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**252**
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**382**	**0**	**0**	**130**	**122**	**0**	**1729**	**469**	**0**	**3042**	**0**	**0**	**0**	**730**	**3433**	**2120**	**4397**	**130**	**52**	**643**	**0**	**1330**	**747**	**0**	**87**	**87**	**182**	**0**	**461**	**0**	**0**	**96**	**0**	**104**	**35**	**174**	**0**	**0**	**17**	**0**	**0**	**9**	**17**	**0**	**0**	**20726**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: Bus **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	84	6	66	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	91	18	91	0	0	24	0	18	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	272
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	12	0	0	0	0	0	6	6	0	72	0	0	0	0	0	18	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	121
16	0	0	0	0	6	6	0	18	0	0	48	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	181
17	0	0	0	0	6	6	0	48	6	0	97	0	0	0	0	6	42	36	24	0	12	0	6	12	0	12	0	0	0	12	0	0	0	0	6	6	6	0	0	0	0	0	0	0	0	0	344
18	0	6	0	0	0	0	0	0	0	0	24	0	0	0	0	42	18	42	0	0	0	0	6	6	0	0	6	0	0	12	0	0	0	0	0	0	12	0	6	0	0	0	0	0	0	0	181
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	12	0	24	6	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	60
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	12	0	0	6	24	0	0	6	0	54	0	0	0	0	0	30	0	0	0	0	0	0	12	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	6	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**30**	**0**	**0**	**18**	**48**	**0**	**97**	**24**	**0**	**296**	**0**	**0**	**0**	**36**	**302**	**187**	**356**	**30**	**0**	**60**	**0**	**42**	**54**	**0**	**12**	**6**	**6**	**0**	**48**	**0**	**0**	**0**	**0**	**6**	**12**	**60**	**0**	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1744**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: LCV **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	60	10	50	0	0	20	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	0	0	20	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	149	30	109	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	358
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
16	0	0	0	0	0	10	0	30	0	0	40	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	79	10	79	0	0	10	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	219
18	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	40
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	10	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	10	10	0	0	20	0	10	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**30**	**10**	**0**	**79**	**0**	**0**	**0**	**89**	**666**	**99**	**318**	**0**	**0**	**129**	**0**	**79**	**20**	**0**	**0**	**0**	**10**	**0**	**0**	**10**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1560**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: 2-AT **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	108	0	81	0	0	27	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**298**
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	45	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**108**
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	298	36	135	0	0	45	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**569**
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
15	0	0	0	0	0	0	0	18	0	0	63	0	0	0	0	0	90	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**181**
16	0	0	0	0	0	0	0	90	0	0	99	0	0	0	0	0	81	0	0	0	9	0	0	0	0	9	0	0	0	9	0	0	0	36	9	9	0	0	0	0	0	0	0	0	0	0	**352**
17	0	18	0	0	0	9	0	63	9	0	45	0	0	0	54	81	253	81	36	0	18	0	18	9	0	18	0	18	0	18	0	0	9	0	36	0	90	0	0	0	0	0	0	0	0	0	**885**
18	0	0	0	0	0	0	0	90	36	0	144	0	0	0	0	18	208	27	0	0	0	0	0	72	0	9	0	18	0	0	0	0	0	0	54	0	9	0	0	0	0	0	0	0	0	0	**686**
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	9	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
20	0	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	**63**
21	0	0	0	0	0	0	0	0	9	0	18	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	0	0	0	0	0	0	0	0	0	0	**108**
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
23	0	0	0	0	0	0	0	9	27	0	18	0	0	0	0	0	36	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	9	0	18	0	9	0	0	0	0	0	0	0	**153**
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	108	27	63	0	0	9	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**244**
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	27	0	27	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**81**
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	18	0	9	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**54**
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117	0	108	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**235**
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**54**
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	135	0	45	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**226**
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	108	0	27	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**162**
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**18**	**0**	**0**	**0**	**9**	**0**	**271**	**90**	**0**	**406**	**0**	**0**	**0**	**271**	**1128**	**803**	**695**	**36**	**0**	**190**	**0**	**108**	**90**	**0**	**54**	**0**	**54**	**0**	**18**	**9**	**0**	**9**	**0**	**199**	**9**	**126**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4604**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: 3-AT **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	53	5	53	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**143**
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	5	21	0	0	16	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**69**
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	85	48	127	0	0	32	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**361**
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
15	0	0	0	0	0	0	0	42	5	0	64	0	0	0	0	0	85	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**202**
16	0	0	0	0	0	0	0	90	16	0	170	0	0	0	0	0	186	0	0	0	21	0	0	0	0	0	0	16	0	0	11	0	0	0	53	11	21	0	5	0	0	0	0	0	0	0	**600**
17	0	0	0	0	5	16	0	32	11	0	69	0	0	0	16	32	255	42	16	0	27	0	5	32	0	21	0	27	5	11	0	0	16	0	106	0	32	0	0	0	0	0	5	0	0	0	**781**
18	0	0	0	0	0	0	0	122	42	0	175	0	0	0	0	5	159	37	0	0	0	0	5	106	0	21	0	16	0	11	0	0	0	0	85	0	58	0	16	0	0	0	0	0	0	0	**860**
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	11	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
20	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**64**
21	0	0	0	0	0	0	0	5	32	0	27	0	0	0	0	0	21	5	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	21	0	21	0	0	0	0	0	0	0	0	0	**143**
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
23	0	0	0	0	0	0	0	27	21	0	42	0	0	0	0	0	64	0	0	0	5	0	0	0	0	27	5	0	0	0	0	0	0	0	27	0	16	0	11	0	0	0	0	0	0	0	**244**
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	5	27	0	0	5	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**106**
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	53	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**69**
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	58	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**80**
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**64**
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	42	0	21	0	0	5	0	16	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**106**
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	64	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
43	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**0**	**0**	**0**	**5**	**16**	**0**	**324**	**133**	**0**	**547**	**5**	**0**	**0**	**122**	**515**	**876**	**420**	**16**	**0**	**117**	**0**	**112**	**149**	**0**	**69**	**5**	**74**	**5**	**37**	**11**	**0**	**16**	**0**	**297**	**11**	**149**	**0**	**32**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**4068**

Project: Six-Laning of Barwa-Adda-Panagarh Section of NH-2 from km 398.240 to km 521.120 including Panagarh Bypass in the States of Jharkhand and West Bengal under NHDP Phase V on Toll on DBFOT Pattern.

Origin-Destination Matrix

Mode: MAV **Location:** Banskopa Toll plaza

O\D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**51**
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**42**
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	194	85	178	0	0	25	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**617**
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	127	0	51	0	0	8	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**254**
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	626	42	626	0	0	135	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1640**
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
15	0	0	0	0	0	0	0	59	42	0	93	0	0	0	0	0	118	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**321**
16	0	0	0	0	0	8	0	203	51	0	271	0	0	0	0	0	330	0	0	0	8	0	0	0	0	0	0	42	0	0	17	0	25	0	118	17	0	0	17	0	0	0	0	0	0	0	**1108**
17	0	25	0	0	34	34	0	85	17	0	144	0	0	0	127	304	617	355	17	0	127	0	51	110	8	59	0	17	0	51	0	0	59	0	313	0	127	0	0	0	0	0	0	0	0	0	**2680**
18	0	0	0	0	0	0	0	228	101	0	448	0	0	0	8	34	600	17	17	0	25	0	42	304	0	59	0	59	0	42	0	0	17	0	254	0	93	0	8	0	0	0	17	0	0	0	**2376**
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	0	34	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**68**
20	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	110	0	0	0	0	0	0	0	0	8	0	8	0	51	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	**220**
21	0	8	0	0	0	8	0	25	76	0	85	0	0	0	0	0	51	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	101	0	17	0	0	0	0	0	0	0	0	0	**397**
22	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
23	0	0	0	0	0	25	0	59	76	0	110	0	0	0	0	17	110	0	17	0	25	0	0	0	0	51	51	0	0	0	0	0	8	0	34	0	135	0	8	0	0	0	0	0	0	0	**727**
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	169	17	118	0	0	127	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**499**
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	8	42	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**93**
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	0	51	0	0	17	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**245**
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**59**
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	406	0	127	0	0	25	0	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**710**
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	152	8	17	0	0	34	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**220**
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	465	17	68	0	0	17	0	59	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**727**
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	330	0	85	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**473**
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	110	0	25	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**169**
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**34**	**0**	**0**	**42**	**76**	**0**	**660**	**380**	**0**	**1175**	**0**	**0**	**0**	**592**	**3205**	**2139**	**1826**	**51**	**0**	**609**	**0**	**482**	**482**	**8**	**178**	**51**	**161**	**0**	**144**	**17**	**0**	**110**	**0**	**846**	**17**	**372**	**0**	**34**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**13706**

Annexure – 3.1

- Diversion Analysis

	Length (km)		
	Existing	Proposed	Year
0	647	647	2023

WPI	Value
Base Year March 2019	119.9
Analysis Year March 2023	152.50
WPI analysis Year	152.5

2021 2019
Analys 2023

Linking Factor	1.27
Linking Factor	1.21

Mode	Speed (in kmph)	
	Existing	Proposed
Car	80	90
Bus	60	80
63.3 LCV	60	75
2Axle	60	75
3Axle	60	75
MAV	60	75

78

Mode	VOC (Rs.)	
	Existing	Proposed
Car	6435	6452
Bus	13841	13841
LCV	16343	16343
2Axle	16244	16244
3Axle	16244	16244
MAV	21330	21338

2019

As Per IRC SP 30 2019	Economic Cost(Rs/km)	
	6 Lane divided existing road	6 Lane divided expressway proposed
Mode	VOC for 2000mm IRI and 5 RF	VOC for 2000mm IRI and 5 RF
	Existing	Proposed
Car	7.82	7.84
Bus	16.82	16.82
LCV	19.86	19.86
2Axle	19.74	19.74
3Axle	19.74	19.74
MAV	25.92	25.93

2023

Adjusted values	Financial Cost(Rs/km)	
	6 Lane divided existing road	6 Lane divided expressway proposed
Mode	VOC for 2000mm IRI and 5 RF	VOC for 2000mm IRI and 5 RF
	Existing	Proposed
Car	9.9	10.0
Bus	21.4	21.4
LCV	25.3	25.3
2Axle	25.1	25.1
3Axle	25.1	25.1
MAV	33.0	33.0

Mode	Travel Time (in hours)	
	Existing	Proposed
Car	8.09	7.19
Bus	10.78	8.09
LCV	10.78	8.63
2Axle	10.78	8.63
3Axle	10.78	8.63
MAV	10.78	8.63

Mode	VOT (Rs.)	
	Existing	Proposed
Car	8106	8023
Bus	8583	8583
LCV	881	881
2Axle	3259	3259
3Axle	3259	3259
MAV	3695	3703

2019

Value of Time in (Rs/km)		
Vehicle Type	6 Lane divided existing road	6 Lane divided expressway proposed
Car	9.85	9.75
Bus	10.43	10.43
LCV	1.07	1.07
2Axle	3.96	3.96
3Axle	3.96	3.96
MAV	4.49	4.50

2025

Value of Time in (Rs/km)		
Vehicle Type	4 Lane divided existing road	6 Lane divided expressway proposed
Car	12.5	12.4
Bus	13.3	13.3
LCV	1.4	1.4
2Axle	5.0	5.0
3Axle	5.0	5.0
MAV	5.7	5.7

	Toll Cost (in Rs.)		
	Vehicle Type	Existing	Proposed
1.43	Car	925	1157
4.84	Bus	3131	3914
2.31	LCV	1495	1868
4.84	2Axle	3131	3914
5.28	3Axle	3416	4270
7.59	MAV	4911	6138

Cost Ratio		
Vehicle Type	Existing	Proposed
Car	0.497	0.503
Bus	0.492	0.508
LCV	0.495	0.505
2Axle	0.492	0.508
3Axle	0.491	0.509
MAV	0.490	0.510

Generalized Cost (in Rs.)		
Vehicle Type	Existing	Proposed
Car	15466	15632
Bus	25556	26339
LCV	18718	19092
2Axle	22635	23417
3Axle	22919	23773
MAV	29936	31180

	CR	%Div
Car	1.011	52
Bus	1.031	44
LCV	1.020	46
2Axle	1.035	44
3Axle	1.037	43
MAV	1.042	43

	Potential Diverted traffic							
	Vehicle type	Beliyad Toll plaza			Vehicle type	Banskopa Toll plaza		
		Diverted traffic	Surveyed vehicles	% of diversion		Diverted traffic	Surveyed vehicles	% of diversion
1	Car	828	1943	43%	Car	219	2385	9%
1.5	Bus	42	74	57%	Bus	28	289	10%
3	LCV	104	164	63%	LCV	49	157	31%
3	2-AT	188	337	56%	2-AT	159	510	31%
3	3-AT	231	391	59%	3-AT	211	766	28%
4.5	MAV	1018	1703	60%	MAV	550	1621	34%
	Total Vehicles	**2411**	**4612**	**52%**	**Total Vehicles**	**1216**	**5728**	**21%**
	Total PCUs	**7041**	**12394**	**57%**	**Total PCUs**	**3993**	**14412**	**28%**

AADT Apr -2023 to Mar-2024 (P		AADT			AADT	
Vehicle type	Beliyad	Vehicles	PCU	Banskopa	Vehicles	PCU
Car/LMV	1574535	4302	4302	3663145	10009	10009
LCV/Mini bus	97012	265	398	273800	748	1122
Bus	107758	294	883	323141	883	2649
Truck	378855	1035	3105	768008	2098	6295
Truck 3 Axle	355761	972	2916	742432	2029	6086
MAV	1297950	3546	15958	2299901	6284	28277
HCM	114	0	1	345	1	4
Oversized	1573	4	19	870	2	11
Total	**3813558**	**10420**	**27583**	**8071642**	**22054**	**54452**

Potential Divertable Traffic

Plaza I	Plaza II
43%	9%
63%	31%
57%	10%
56%	31%
59%	28%
60%	34%
60%	34%
60%	34%

Plaza I	Plaza II	Average	Diversion based on VOC VOT and Toll
1833	919	**1376**	52%
168	233	**201**	44%
167	86	**126**	46%
577	654	**616**	44%
574	559	**567**	43%
2120	2132	**2126**	43%
0	0	**0**	43%
3	1	**2**	43%

Divertable Trafic	
721	
89	
59	
270	
245	
904	
0	
1	
2288	
PCUs **6647**	

% age of Diversion

	With Refrence to Plaza I	With Refrence to Plaza I
Car/LMV	17%	7%
LCV/Mini bus	34%	12%
Bus	20%	7%
Truck	26%	13%
Truck 3 Axle	25%	12%
MAV	25%	14%
HCM	25%	14%
Oversized	25%	14%

Plaza-I

	Considered % of Div	Car	LCV/Mini bus	Bus	Truck	Truck 3 Axle	MAV
2031-2032	15%	2.5%	5.1%	3.0%	3.9%	3.8%	3.8%
2032-2033	30%	5.0%	10.1%	6.0%	7.8%	7.6%	7.6%
2033-2034	60%	10.1%	20.2%	11.9%	15.6%	15.1%	15.3%
2034-2035	90%	15.1%	30.3%	17.9%	23.4%	22.7%	22.9%
2035-2036	100%	16.8%	33.7%	19.9%	26.0%	25.2%	25.5%
2036-2037	100%	16.8%	33.7%	19.9%	26.0%	25.2%	25.5%
2037-2038	100%	16.8%	33.7%	19.9%	26.0%	25.2%	25.5%
2038-2039	100%	16.8%	33.7%	19.9%	26.0%	25.2%	25.5%

Plaza-II

	Considered % of Div	Car	LCV/Mini bus	Bus	Truck	Truck 3 Axle	MAV
2031-2032	15%	1.1%	1.8%	1.0%	1.9%	1.8%	2.2%
2032-2033	30%	2.2%	3.6%	2.0%	3.9%	3.6%	4.3%
2033-2034	60%	4.3%	7.2%	4.0%	7.7%	7.3%	8.6%
2034-2035	90%	6.5%	10.7%	6.0%	11.6%	10.9%	12.9%
2035-2036	100%	7.2%	11.9%	6.6%	12.8%	12.1%	14.4%
2036-2037	100%	7.2%	11.9%	6.6%	12.8%	12.1%	14.4%
2037-2038	100%	7.2%	11.9%	6.6%	12.8%	12.1%	14.4%
2038-2039	100%	7.2%	11.9%	6.6%	12.8%	12.1%	14.4%

ANNEXURE C - TECHNICAL REPORTS

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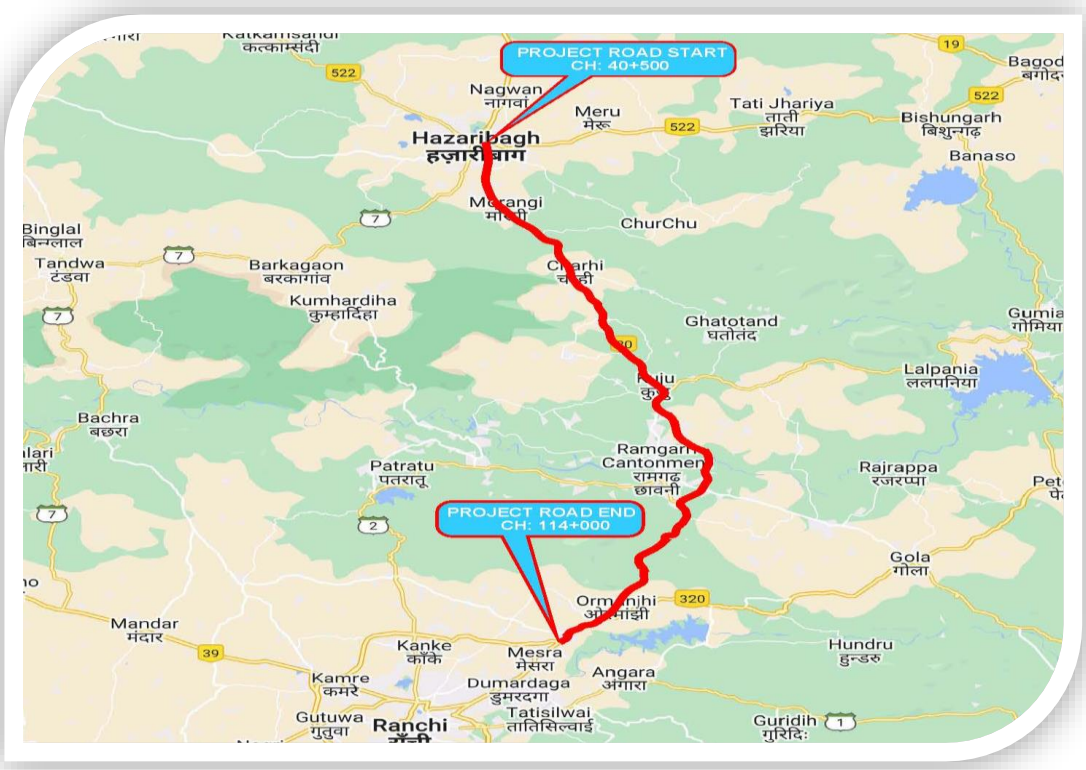
November - 2023

ROADSTAR INFRA INVESTMENT TRUST

INCREMENTAL STUDY OF INDEPENDENT ASSESSMENT OF OPERATING AND MAINTENANCE REQUIREMENTS AND MAJOR MAINTENANCE – HAZARIBAGH RANCHI EXPRESSWAY LIMITED (HREL) SECTION OF NH-33 FROM KM 40.500 TO KM 114.000 IN THE STATE OF JHARKHAND" -

FINAL DUE DILIGENCE REPORT

Doc No HBS/TDD/HREL/FDDR/2023-24/001



CONCESSIONAIRE: **HAZARIBAGH RANCHIEXPRESSWAY LIMITED.**

CONSULTANT: **HBS INFRA ENGINEERS INDIA PVT. LTD.**

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CHAPTER 1. INTRODUCTION

1.1 GENERAL

Hazaribagh Ranchi Expressway Limited (HREL) was engaged to design, construct, finance, develop, operate, and maintain four laning of Hazaribagh Ranchi section of NH-33 from Km 40.500 to Km 114.000 in the State of Jharkhand on a BOT Annuity basis. Important Milestones for the Project are presented in Table 1-1.

Table 1-1:Project Milestones

S.No	Particulars	Description
1	Date of Signing of Concession agreement	08/10/2009
2	Provisional Completion Issued	15/09/2012
3	Final Completion Issued	01/04/2015
4	Concession Period	18 Years including Construction Period
5	Scheduled date of transfer of Project to NHAI	31/07/2028

The Project is presently under maintenance by Concessionaire Hazaribagh Ranchi Expressway Ltd. Concessionaire has engaged M/s. HBS Infra Engineers India Pvt Ltd to undertake a technical due diligence study for the said project. This report presents the work methodology for the study and initial observation of the Project.

1.2 SCOPE OF WORK

The study's main objective is to critically review the current status of the Project corridor, including details pertaining to its construction and maintenance and to provide requisite technical information. The objective of the study can be broadly defined as follow:

1.2.1. Operations Phase

- Undertake detailed reconnaissance to appreciate the Project corridor characteristics.
- Collection of relevant records and documents and critical review of same.
- Undertake field investigations visual as well as test mentioned under asset condition assessment and to collect first-hand information on the present condition of Project Road and establish the requirements for rehabilitation and up-gradation
- Review of Safety Aspects.
- Undertake preliminary designs for immediate rehabilitation requirements based on condition assessment and concession agreement specifications
- Prepare a maintenance schedule for the entire duration of the concession period based on technical analysis.
- Review and Preparation major maintenance cost schedule for the concession period.

- Study and highlight other relevant details like penalties, claims, petition, deviations, etc. which may have an impact on future maintenance and cost of the project.

1.2.2. Asset Condition Assessment

- Assessment of road assets in conformance with specifications, standards, and codes stipulated in the Concession Agreement and O&M manual, etc.
- A detailed inventory survey of road assets including main carriageway, structures, service roads, lightings, drains, road furniture including signage, MBCB, guard rails, etc. other safety measures, toll collection infrastructure, buildings, plantation, vehicles, and other objects. Comparison between requirement and actual availability at the site on sampling basis on the insurance of assets.
- Assessment of the condition of the structures including but not limited to visual inspections of bearings, expansion joints, superstructures, foundations, associated components, pre-stress anchorages (if any)
- Conducting the following tests
    - Trial pits for crust verification at every 15 kms
    - Falling Weight Deflectometer (FWD) test of the stretch to ascertain the existing strength of the pavement. The frequency of the FWD will be as specified in the IRC 115 guidelines
- Assessment of the condition of the road pavement including but not limited to visual inspection of the pavement, review as as-built design and assess design assumptions and provide a detailed report thereon
- Reviewing of test certificates & outcomes of the past few years along with visual road condition
- Assessment of the physical dimensions condition of the infrastructure to determine useful lives of the materials and equipment requiring rehabilitation and/or replacement.
- Critical review of the Pavement Condition Survey to suggest the pavement condition and probable rehabilitation treatment.
- Preparation of detailed Pavement inspection report and analysis with chainages wise pavement condition and rectification strategies.
- Pavement inspection report & rectification strategies to be provided in 100mtr interval for both MCW & SR (LHS & RHS side).
- In continuation to the above point the existing Pavement need to be categorized as Good, Average, and Poor based on their estimated life span. For 5 years or more (Good), 2-5 years (Average), and less than 2 years (Poor).
- Recommendations for any major repair, rehabilitation, and strengthening based on the condition survey and design reports.
- To provide a detailed photographic report of the infrastructure assets and their condition to withstand till the end of the concession period. Suggestion and cost evaluation for any additional repair/rectification /modification required.

- Determine the appropriate level and frequency of routine and major maintenance activities required to keep the road assets in good condition and to meet the performance and O&M standards, specifications, and requirements.
- Review the major maintenance work undertaken if any, and prepare projections for the future.
- Major maintenance expenses (incl. any hand-back requirements), so as to ensure compliance with the terms of the Concession Agreement
    - Review of condition of SPV assets including ails equipment and vehicles etc.
    - Review of past accident reports, identification of black spots, deficiency of safety requirements if any, and preparation of a proposal to curb accidents and safety hazards to road users.
    - Detailed major maintenance cost forecast along with estimation of costs towards handover requirements.
    - Review the availability of labour, material and machinery at the project site and provide an assessment of operational challenges involved, if any as well as estimated costs for these.

1.3 APPROACH

The Consultant with its wide experience has categorised the scope of work in following activities:

- General Review
- Assessment of Asset Condition
- Investigations
- O & M Assessment

The Consultant with its wide experience has categorised the approach of work in number of activities as presented in Table 1-2.

Table 1-2: Approach of Work

S No	Task	Sub-Task	Remarks
1	General Review	• Agreements • Project Clearances • Change of Scope • Land Acquisition • Project Completion • O&M Manual & Maintenance Issues • DPR/As-built Drawings • Possibility of Widening • Hydrological Condition of Adjoining Water Bodies • SPV Assets • Past Accident Records	A detailed list of issues that can impact the investment to be provided including (a) any operational challenges that can be faced by the Project; and (b) any costs to be incurred to address those issues

2	Assessment of Road Condition	• Road Assets ▪ Road Pavement ▪ Traffic Signage ▪ Bus Bays with Bus Shelters ▪ Truck Lay Bye ▪ Median/CW Edge Kerb Stone ▪ Km Stones ▪ Drain ▪ Toll Plaza ▪ Crash Barriers • Structure Condition • Assessment of Pavement	A detailed list of assets that can impact the investment to be provided will be assessed and monetized
3	Investigations	• Road Inventories • Visual Pavement Condition • Visual Condition of Structures • FWD Survey for Project Length • Test Pits @ 15 Km Intervals	Traffic details shall be provided by the Concessionaire. Each detail to be utilized for assessment of road condition so as to estimate the pending O & M issues.
4	O & M Assessment	• Review, comment and propose optimization strategy • Review accident data and suggest safety requirements • Review of existing O&M Contractor's contract • Review historical O&M costs • Develop details O&M cost forecast ▪ Routine Maintenance Cost ▪ Periodic Maintenance Cost ▪ Immediate repair Cost ▪ Balance Punch List • Review Availability of Labour, Material and Machinery at the Project Site	Estimate of overall O & M Costing

CHAPTER 2. PROJECT DESCRIPTION

2.1 GENERAL

This project stretch in the state of Jharkhand starts from Km 40.500 and ends at Km 114.000 having a four-lane configuration and mode of construction is BOT Annuity. Hazaribagh Ranchi Expressway Limited (HREL), a special purpose vehicle (SPV) created for design, construct, finance, develop, operate and maintain the project stretch. The Location Map of the Project is shown in **Fig 2.1.**

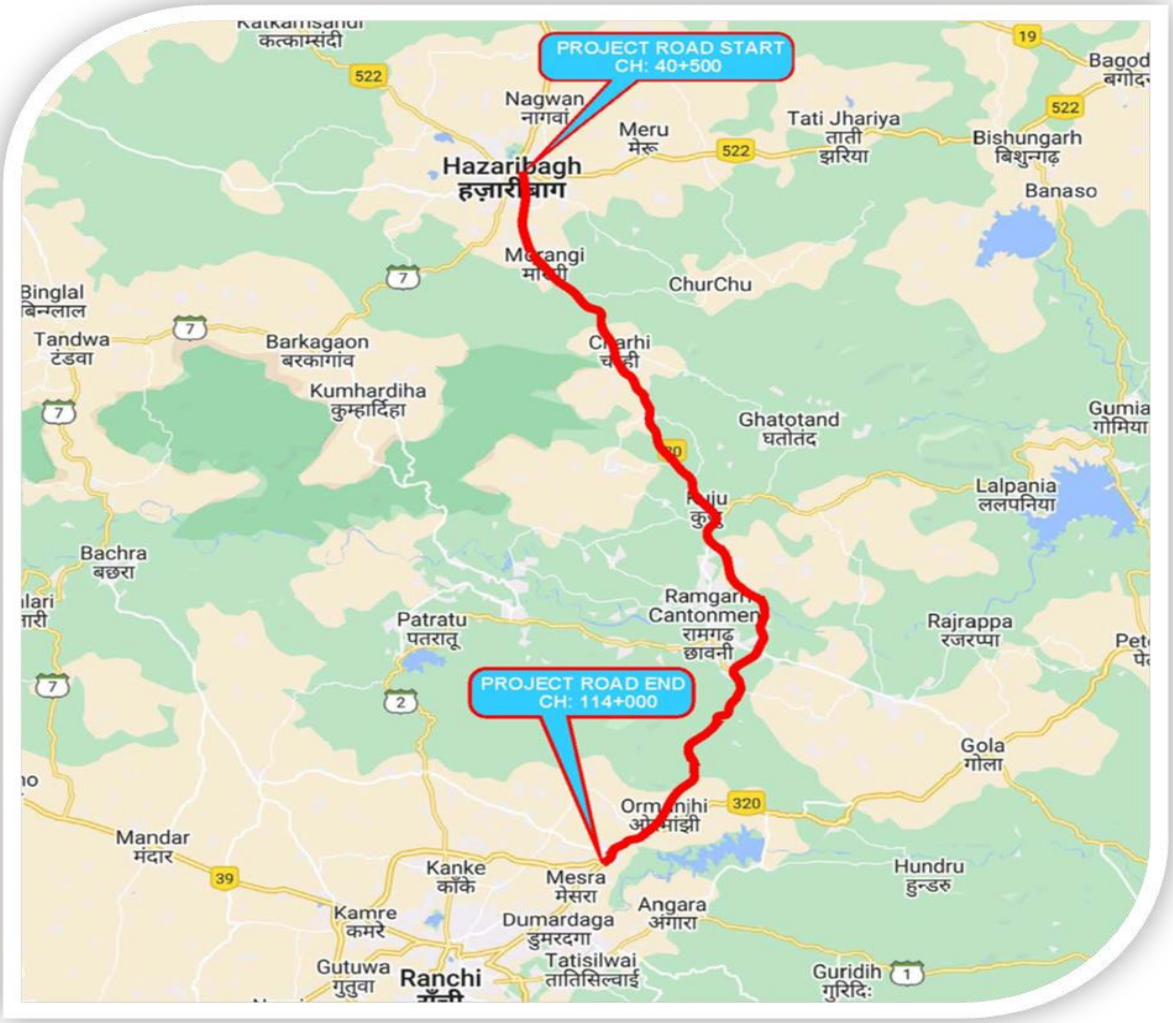


Figure 2-1: Project Location Map

2.2 PROJECT SALIENT FEATURES

Project milestones are summarised and presented in the Table 2-1.

Table 2-1: Project Milestones

S.No	Particulars	Description
1	Name of the Project	4 Laning of Hazaribagh Ranchi Expressway Limited
2	Name of Concessionaire	M/s Hazaribagh Ranchi Expressway
3	Date of Signing of Concession	08/09/2009
4	Scheduled Project Completion	27/01/2013
5	Scheduled end of Concession	31/07/2028

Salient Features of the Project in line with Technical Schedules are presented in Table 2-2.

Table 2-2: Salient features of the project

S.No	Project Features	Description	Remarks
1	Start of the Project Road	Km 40.500	
2	End of the Project Road	Km 114.000	
3	Total Length of The Project Road	73.5 Km	
4	Design Speed	80 KMPH	
5	Right of Way	60/45 m	
6	Lane Configuration	4-Lane	
7	Paved Carriageway Width	17.5 m	
8	Width of Median	1.5 to 4.5 m	
9	Length of Service Road	Total length Km 15.21 on Both sides of MCW	
10	Type of Pavement	Flexible Pavement	
11	Design MSA	100 MSA for MCW and 20 MSA for SR	
12	No of Toll Plazas	01	
13	No of Interchanges	00	
14	No of Vehicular Underpasses	05	
15	No of ROBS	02	
16	No of PUP's	02	
17	No Interchange Structures	00	
18	No of Major Bridges	01	
19	No of Minor Bridges	09	
20	No of Box Culverts	44	
21	No of Pipe Culverts	106	
22	No of Bus bays	23	
23	No of Bus Shelter	23	

2.3 RECONNAISSANCE SURVEY PHOTOGRAPHS

Some representative photos taken during the Reconnaissance Survey are presented in Photo 2-1.

START OF THE PROJECT

MEDIAN PLANTATION

MEDIAN DRAIN

MEDIAN CUTS

MAJOR JUNCTION

MINOR BRIDGE

HILL CUTTING LOCATION	RIGID PAVEMENT & BREAST WALL
SERVICE ROAD AT RE WALL APPROACH	UNDERPASS STRUCTURE
SERVICE ROAD WITH RCC DRAIN	ROB LOCATION
EHT LINE CROSSING	KM STONE AT CURVE LOCATION

OPEN LINED DRAIN	CHUTE DRAIN AT HIGH EMBANKMENT
METAL BEAM CRASH BARRIER	BUS BAY WITH SHELTER
TOLL PLAZA LOCATION	END OF PROJECT LOCATION

Photo 2-1: Sample photographs collected during reconnaissance survey

CHAPTER 3. GENERAL REVIEW

3.1 AGREEMENTS

An agreement between NHAI and Hazaribagh Ranchi Expressway Limited (HREL) was signed on 08th October 2009 for a Concession Period of 18 years from the start of the Commencement Date. Project milestones are summarised and given in the Table 3-1.

Table 3-1: Project Milestones

S.No	Particulars	Description
1	Date of Signing of Concession agreement	08/10/2009
2	Provisional Completion Issued	15/09/2012
3	Final Completion Issued	01/04/2015
4	Concession Period	18 Years including Construction Period
5	Scheduled date of transfer of Project to NHAI	31/07/2028

A provisional Completion Certificate (COD) was issued on 01st April 2013. There are no pending Punch List Items to be completed.

3.2 LAND ACQUISITION / ENCROACHMENTS / UTILITIES

There are no land acquisition / encroachment issues in the Project. There are no pending works on account of land acquisition / encroachments. There is no major utility within ROW. Utilities are restricted within the space provided for the utilities.

3.3 CHANGE OF SCOPE

There has been some change of scope during the stage of Construction:

3.3.1. Cost of Negative COS

There has been certain descoping from project scope. Table 3.2 provides detail of the negative Chage of Scope as recommended by IE. However, Concessionaire has disputed the same on the method of arriving at the revised value of scope.

Table 3-2: Negative Change of Scope

SI.NO	Item	Qty.	Revised Value (Rs.) as per SOR 2012	Remarks
1	VUP at 114.620(112.300, lrba)	1 NO.	-96443314	Ref: 1. NHAI/PIU/PD/RNC/NH-33/HEL/COS/99, Dated 19th April 2017, M/s Feedback infra IE letter no. FIPL/17-18/Ranchi/IE/O&M-341, Dt. 10-10-2017
2	VUP at 57.00	1 No.	-96443314	
3	PUP at 106.158	1 No.	-3973754.577	
4	PUP at 64.993	1 NO.	3973754.577	
5	PUP at Km 68.250	1 NO.	3973754.577	

SI.NO	Item	Qty.	Revised Value (Rs.) as per SOR 2012	Remarks
6	Kujju Fire Zone	1.2 Km	-52162123	Ref: 2-August 2019 -ve +ve COS NHAI Letter 574
7	Service Road in VUP/PUP (Slip Ramps)	0	0	
8	Median Width		-7795700	
9	Bus Bays & Lay Byes	2 Nos.	-3000000	
10	Ramgarh Bypass	1 No.	0	
11	Service Road	1494 Mtr	-19779593	
12	Covered Drain	3868 Mtr	-18567687	
13	Lined Drain	90473 Mtr	-163919434	
14	Highway 303 Mtr Lesser Constructed	303 Mtr	-12373149	
Total			**-46.65**	**Cr**

3.3.1. Cost of Positive COS

Some scope has been added at the project stage. Some of these Change of Scope (COS) are still in the approval stage. A summary of such positive change of scope, including those waiting for final approval, are given in Table 3-3.

Table 3-3: Positive Change of Scope

Sl. No.	Summary of work	Proposal submitted by SPV (INR) Cr	Amount recommended by IE (INR) Cr	Amount approved by NHAI (INR) Cr
1	Curves widening in Ghat	21.8	21.37 / 7.63	7.63
2	Construction of Toilet Block	0.401	0.401	0.401
3	Mini Nest	0.123	0.123	0.123

3.4 DPR / TECHNICAL SCHEDULE / AS-BUILT DRAWINGS

A review of as-built drawings is carried out and generally they are found in order.

3.5 O & M MANUAL AND MAINTENANCE ISSUES

O & M Manual has been prepared as per the requirements of the Concession Agreement.

3.6 PROGRESS REPORTS

Progress Reports of IE has been studied for insight into projects regarding quality, scope, variations, and conflicts type concerns. For project road Hazaribagh - Ranchi construction is complete, and the project is in the operation phase hence no critical balance items are pending. IE reports do not mention and major concern. Some of the concerns and observation in IE's latest report is given in the Table 3.4.

Table 3-4: Progress Report Review

Sr. No	Description	Impact / Concern	Reference
1	Weigh in Motion & Static Bridge.	Calibration and Stamping is in Progress.	Site Visit & IE Report Feb 2023
2	External Electrification e.g. Street Light, VMS and High Mast.	Repair work needs to be done at some locations.	Site Visit & IE Report Feb 2023
3	Road Furniture: Solar Blinker, Delineator, OHM, PGR, Road Marking etc.	Installation/Maintenance of road furniture work in progress.	Site Visit & IE Report Feb 2023
4	One Jeep or similar Vehicle for patrolling.	One Jeep or similar vehicle in good working condition along with chauffeurs shall be provided to the State Police Department or a substitute thereof for round the-clock patrolling.	Site Visit & IE Report Feb 2023

3.7 PAST ACCIDENT RECORDS

Past accident records shared by Concessionaire for a period of 2021-2023 were reviewed and the following inferences are drawn. Accident data are submitted in **Annexure 3.1**.

- Most of the accidents on the project road took place between Km 94.000 to Km 95.000.
- Accidents happened 81% in straight portions, 10% in slight curves, and 9% in sharp curve locations.
- Almost 13% of the total accidents are fatal in nature.
- Almost 83% of accidents are on account of over speeding and fault of the driver.

3.8 ROAD SAFETY OBSERVATIONS

It was observed during the operation phase of the project that at Ch. 51+800 to Ch. 52+300 (Photo 3.1) there is a sharp curve of Radius around 100m due to which several accidents have been observed. Realignment at this location is required as a safety improvement measure and decision regarding the same is to be taken by authority. Another location from Ch. 95+050 to Ch. 95+550 (Photo 3.2) has accidents history which can be rectified by short term measures such as Signage (Speed limit) and TBM Marking.

Photo 3-1: Road view at Ch. 51+800 to Ch. 52+300

Photo 3-2: Road view at Ch. 95+050 to Ch. 95+550

3.9 SPV ASSETS

The list of Men and Machinery employed by O & M Contractor is annexed in **Annexure 3.2**. Some of the Machinery are owned by the O & M Contractor. However, in the routine maintenance cost, the hire charges for this equipment are being considered.

3.10 NON- CONFORMANCE

The project is complete, and COD is achieved. Hence there is no pending NCR for the construction period.

CHAPTER 4. ASSESSMENT OF ASSETS

4.1 OVERVIEW OF ROAD ASSETS

On receipt of the letter of engagement from Road star Infra Investment trust, the consultant mobilized their team of experts comprising of Senior Highway Engineer, Bridge Engineer & Pavement experts at the site, along with support staff.

The consultant mobilized its team for a review of road assets. A team of engineers along with the lead visited the site for the preparation of inventories and to assess the condition of road assets.

Following surveys and investigations have been done on the project stretch to capture the condition of project assets and for the purpose of preliminary designs to assess maintenance and major maintenance requirements.

- Road Inventory and Asset inventory by NSV (Network Survey Vehicle)
- Roughness Index Test by NSV
    - Pavement Condition Assessment – by NSV
    - Structural soundness of pavement – FWD (Falling Weight Deflectometer)
    - Trial Pits
    - Structural Condition – Visual Inventory
    - Incremental Pavement condition - Visual Inventory.

All surveys and investigations were done as per standard guidelines and scope of the assignment. Table 4-1 provides schedule of survey and investigations.

Table 4-1 : Schedule of Investigations

Sr. No	Type of Survey	Specification	Date
1	Network surveying vehicle survey	Entire Length all lanes	26-04-2023
2	Falling Weight Deflectometer (FWD) Test	Entire Length	29-04-2023
3	Trial Pit	At each 15 Km	27-04-2023
4	Structure Inventory	Entire Length	25-04-2023 to 27-04-2023
5	Incremental Structure Inventory	Entire Length	03-11-2023 to 05-11-2023
6	Incremental Pavement Condition visual survey.	Entire Length	03-11-2023 to 05-11-2023

4.2 NETWORK SURVEYING VEHICLE

The Network Survey Vehicle is based on the latest survey techniques utilizing Laser, Global Positioning System and Video image processing tools etc. The Survey Vehicle is used for automatic collection of road inventory and pavement condition related data required for Road Asset Management, Pavement Maintenance Management System and Road Safety Audit Related Studies. In this system, all outputs are linked via a highly accurate distance measuring instrument and DGPS system. It allows all the data to be collected in a single pass consequently minimizing both the cost and the time needed to complete the data collection. Photo 4.1

Photo 4.1: NSV Survey in progress on the project road

The minimum parameter which has to be recorded using a survey with NSV in each lane, is not limited to the following:

(i) Inventory of Road; GPS coordinates, Pavement Type, Pavement Width, Terrain, Land use, Shoulder type and width, Drain Type and Width, Median Type, and Width, Wayside Amenities, Crash barrier, Signage, etc. (Note-All inventory items shall be recorded both sides of the road and Geo-tagged with images)

(ii) Condition of Road; Roughness, Rutting, Distresses (Cracking, Potholes, Bleeding, Surface failure etc.); (Note –All inventory items shall be recorded for each lane and Geo-tagged)

In addition, separate team comprising two engineers for visual inspection of pavement condition has been mobilized under the guidance and supervision of a pavement expert. Comprehensive studies and analysis were carried out to ascertain conformance of project road to standards laid down in Concession Agreement.

An Incremental study was carried out from 3rd November 2023 to 6th November 2023 through out the project length by our team to assess the condition of road assets, pavement condition and condition of structures.

Inventory and condition of Road Assets with Photographs are given in the subsequent sections.

4.3 OBSERVATIONS PERTAINING ROAD ASSETS

4.3.1. Carriage way Details:

The Main Carriage way width of total Project length is 4-Lane while the Service Road is from 3.5m to 7.5 m. The summary of Main Carriage way widths is given below in Table 4.2, Table 4.3 and service road widths is provided in Table 4.4. Detailed Inventory is given in **Annexure 4.1**.A few photographs of MCW and service road captured during the site visit are presented in the Photo 4.2.

Table 4.2 Summary of LHS Main Carriage way width

S.No.	Chainage (Km)		Length (Km)	Paved Width (m)
	From	To		
1	41.600	46.400	4.900	8.7
2	46.400	54.350	7.950	8.2
3	54.350	54.800	0.450	8.6
4	54.800	55.550	0.750	10.3
5	55.550	56.300	0.750	9.0
6	56.300	58.500	2.200	8.7
7	58.500	64.755	6.255	8.8
8	64.755	65.279	0.524	11.3
9	65.279	71.350	6.071	8.7
10	71.350	72.109	0.759	8.1
11	72.109	73.359	1.250	8.6
12	73.359	80.954	7.595	9.1
13	80.954	91.979	11.025	8.8
14	91.979	92.714	0.735	11.4
15	92.714	93.259	0.545	8.3
16	93.259	96.690	3.431	8.1
17	96.690	97.300	0.610	11.7
18	97.300	97.750	0.450	8.2
19	97.750	107.350	9.600	8.8
20	107.350	115.000	7.650	9.0

Table 4.3 Summary of RHS Main Carriage way width

S.No.	Chainage (Km)		Length (Km)	Paved Width (m)
	From	To		
1	41.600	45.569	4.069	8.7
2	45.569	46.294	0.725	8.2
3	46.294	54.255	7.961	8.6
4	54.255	54.819	0.564	10.3
5	54.819	55.559	0.740	9.0
6	55.559	56.309	0.750	8.7
7	56.309	64.334	8.025	8.8
8	64.334	64.755	0.421	11.3
9	64.755	67.869	3.114	8.6
10	67.869	71.350	3.481	8.1
11	71.350	72.109	0.759	8.6
12	72.109	75.399	3.290	9.1
13	75.399	82.709	7.310	8.7
14	82.709	90.234	7.525	8.9
15	90.234	91.979	1.745	11.4
16	91.979	92.714	0.735	8.3
17	92.714	95.814	3.100	8.1
18	95.814	96.690	0.876	11.7
19	96.690	97.299	0.609	8.2
20	97.299	106.749	9.450	8.8
21	106.749	115.000	8.251	9.0

Table 4.4 Summary of Service Road details

S.No	Chainage(km)		Direction	Length (m)	Pavement Type	Width(m)
	From	To				
1	45+705	46+050	LHS	345	Flexible	5.5
2	46+390	46+740	LHS	350	Flexible	5.5
3	55+100	56+370	LHS	1270	Flexible	5.5
4	64+400	65+320	LHS	920	Flexible	5.5
5	67+080	67+250	LHS	170	Flexible	7
6	68+070	68+290	LHS	220	Flexible	5.5
7	73+700	74+220	LHS	520	Flexible	5.5
8	89+090	89+690	LHS	600	Flexible	7
9	92+110	92+875	LHS	765	Flexible	7
10	106+570	107+460	LHS	890	Flexible	5.5
11	108+070	108+600	LHS	530	Flexible	5.5
12	113+030	113+480	LHS	450	Flexible	3.5
13	114+000	113+000	RHS	1000	Flexible	3.5
14	108+550	107+810	RHS	740	Flexible	5.5

15	107+460	106+570	RHS	890	Flexible	5.5
16	92+875	92+110	RHS	765	Flexible	7
17	89+690	89+090	RHS	600	Flexible	7
18	74+520	73+700	RHS	820	Flexible	5.5
19	65+320	64+780	RHS	540	Flexible	5.5
20	64+650	64+400	RHS	250	Flexible	5.5
21	56+370	55+100	RHS	1270	Flexible	5.5
22	46+250	45+800	RHS	450	Flexible	5.5
Total Length(m)				**14355**		

Main Carriage way Photographs

Service road Photographs

End of service road at Ch.92+110 on RHS

End of service road on Ch.65+320 on LHS

Start of service road at Ch.64+400 on LHS

Start of service road at ch.55+100

Photo 4.2 Typical Road configuration Photographs

4.3.2. Pavement Marking

The Pavement Marking was observed as "Good" in the Main Carriageway, and "Fair to poor" on Service roads. The summary is given below in Table 4.5 and Table 4.6. Detailed Inventory is given in **Annexure 4.2**.

Table 4.5 Summary of LHS Pavement Marking on Main carriage way

S.No.	Chainage (Km)		Length (Km)	Paved Shoulder Edge	Centre Line	Median Edge
	From	To				
1	41.600	41.700	0.100	Good	Good	No Marking
2	41.700	43.840	2.140	Good	Good	Good
3	43.840	43.995	0.155	Good	Good	No Marking
4	43.995	46.040	2.045	Good	Good	Good
5	46.040	46.430	0.390	No Marking	Good	Good
6	46.430	46.625	0.195	Good	Good	Good
7	46.625	46.665	0.040	No Marking	Good	Good
8	46.665	47.160	0.495	Good	Good	Good
9	47.160	47.285	0.125	No Marking	Good	No Marking
10	47.285	47.375	0.090	No Marking	Good	Good
11	47.375	56.950	9.575	Good	Good	Good
12	56.950	57.285	0.335	No Marking	Good	No Marking
13	57.285	57.950	0.665	Good	Good	Good
14	57.950	58.030	0.080	Good	No Marking	Good
15	58.030	58.435	0.405	Good	Good	Good
16	58.435	58.515	0.080	No Marking	Good	Good
17	58.515	65.940	7.425	Good	Good	Good
18	65.940	65.975	0.035	Good	Good	No Marking
19	65.975	71.105	5.130	Good	Good	Good
20	71.105	71.170	0.065	No Marking	No Marking	Good
21	71.170	71.715	0.545	Good	Good	Good

S.No.	Chainage (Km)		Length (Km)	Paved Shoulder Edge	Centre Line	Median Edge
	From	To				
22	71.715	71.870	0.155	No Marking	No Marking	No Marking
23	71.870	71.930	0.060	Good	Good	Good
24	71.930	71.965	0.035	No Marking	No Marking	No Marking
25	71.965	73.510	1.545	Good	Good	Good
26	73.510	73.590	0.080	Good	Good	No Marking
27	73.590	74.130	0.540	Good	Good	Good
28	74.130	74.256	0.126	Good	Good	No Marking
29	74.256	75.880	1.624	Good	Good	Good
30	75.880	76.070	0.190	Good	Good	No Marking
31	76.070	79.500	3.430	Good	Good	Good
32	79.500	79.535	0.035	No Marking	Good	Good
33	79.535	89.990	10.455	Good	Good	Good
34	89.990	93.990	4.000	Good	Good	No Marking
35	93.990	94.685	0.695	Good	Good	Good
36	94.685	94.810	0.125	Good	Good	No Marking
37	94.810	95.360	0.550	Good	Good	Good
38	95.360	95.485	0.125	Good	Good	No Marking
39	95.485	109.255	13.770	Good	Good	Good
40	109.255	110.365	1.110	No Marking	No Marking	No Marking
41	110.365	115.000	4.635	Good	Good	Good

Table 4.6 Summary of RHS Pavement Marking on Main carriage way

S.No.	Chainage (Km)		Length (Km)	Paved Shoulder Edge	Centre Line	Median Edge
	From	To				
1	41.600	41.740	0.140	No Marking	Good	Good
2	41.740	43.705	1.965	Good	Good	Good
3	43.705	44.020	0.315	Good	Good	No Marking
4	44.020	44.315	0.295	Good	Good	Good
5	44.315	44.445	0.130	No Marking	Good	No Marking
6	44.445	44.640	0.195	Good	Good	Good
7	44.640	45.155	0.515	No Marking	Good	Good
8	45.155	45.440	0.285	Good	Good	Good
9	45.440	45.815	0.375	No Marking	Good	Good
10	45.815	45.930	0.115	Good	Good	Good
11	45.930	46.335	0.405	No Marking	Good	Good
12	46.335	48.365	2.030	Good	Good	Good
13	48.365	48.585	0.220	No Marking	Good	Good
14	48.585	48.690	0.105	Good	Good	Good
15	48.585	50.925	2.340	No Marking	Good	Good
16	50.925	51.960	1.035	Good	Good	Good
17	51.960	52.010	0.050	Good	Good	No Marking

S.No.	Chainage (Km)		Length (Km)	Paved Shoulder Edge	Centre Line	Median Edge
	From	To				
18	52.010	56.209	4.199	Good	Good	Good
19	56.209	56.998	0.789	No Marking	Good	Good
20	56.998	57.330	0.332	Good	Good	Good
21	57.330	57.990	0.660	No Marking	Good	Good
22	57.990	58.070	0.080	No Marking	Good	No Marking
23	58.070	58.125	0.055	No Marking	Good	Good
24	58.125	58.965	0.840	Good	Good	Good
25	58.965	59.085	0.120	No Marking	Good	Good
26	59.085	61.125	2.040	Good	Good	Good
27	61.125	63.535	2.410	No Marking	Good	Good
28	63.535	64.580	1.045	Good	Good	Good
29	64.580	64.715	0.135	No Marking	Good	Good
30	64.715	64.755	0.040	Good	No Marking	Good
31	64.975	67.280	2.305	Good	Good	Good
32	67.280	67.320	0.040	Good	Good	No Marking
33	67.320	77.005	9.685	Good	Good	Good
34	77.005	77.625	0.620	Good	Good	No Marking
35	77.625	80.785	3.160	Good	Good	Good
36	80.785	80.920	0.135	Good	No Marking	No Marking
37	80.920	82.330	1.410	Good	Good	Good
38	82.330	82.670	0.340	Good	No Marking	No Marking
39	82.670	82.900	0.230	Good	Good	Good
40	82.900	83.140	0.240	Good	No Marking	No Marking
41	83.140	83.255	0.115	Good	Good	Good
42	83.255	85.120	1.865	No Marking	No Marking	No Marking
43	85.120	85.500	0.380	Good	No Marking	No Marking
44	85.500	85.930	0.430	No Marking	No Marking	No Marking
45	85.930	86.465	0.535	Good	No Marking	No Marking
46	86.465	87.475	1.010	No Marking	No Marking	No Marking
47	87.475	88.165	0.690	Good	No Marking	No Marking
48	88.165	88.970	0.805	No Marking	No Marking	No Marking
49	88.970	91.205	2.235	Good	Good	Good
50	91.205	91.965	0.760	Good	Good	No Marking
51	91.965	98.610	6.645	Good	Good	Good
52	98.610	99.015	0.405	No Marking	No Marking	Good
53	99.015	99.570	0.555	Good	Good	Good
54	99.570	99.855	0.285	No Marking	Good	Good
55	99.855	100.270	0.415	Good	Good	Good
56	100.270	100.945	0.675	No Marking	No Marking	No Marking
57	100.945	101.525	0.580	Good	Good	Good

S.No.	Chainage (Km)		Length (Km)	Paved Shoulder Edge	Centre Line	Median Edge
	From	To				
58	101.525	101.730	0.205	No Marking	Good	Good
59	101.730	102.085	0.355	Good	Good	Good
60	102.085	102.250	0.165	No Marking	Good	Good
61	102.250	109.285	7.035	Good	Good	Good
62	109.285	109.690	0.405	No Marking	Good	Good
63	109.690	109.865	0.175	Good	Good	Good
64	109.865	110.000	0.135	No Marking	Good	Good
65	110.000	110.420	0.420	Good	Good	Good
66	110.420	110.690	0.270	No Marking	Good	Good
67	110.690	114.185	3.495	Good	Good	Good
68	114.185	114.240	0.055	No Marking	Good	Good
69	114.240	114.920	0.680	Good	Good	Good
70	114.920	115.000	0.080	No Marking	No Marking	No Marking

4.3.3. Median/CW Edge Kerb Stones

The Median width of the total Project stretch of Main Carriageway is 5.0m. The Summary of Median width, Median Kerb, median plantation and median openings are given in the Tables 4.7 to 4.9. Detailed Inventory is given in **Annexure 4.3**. Photographs showing the median opening is Photo 4.3.

Table 4.7 Summary of Median Kerb details

S.No.	Side	Total Length (Km)	Condition
1	LHS	9.707	Good
2	LHS	2.260	Bad
3	RHS	9.489	Good
4	RHS	0.420	Fair
5	RHS	3.915	Bad

Table 4.8 Summary of Median plantation

S.No.	Total Length (Km)	Condition
1	45.564	Good
2	20.501	Fair
3	3.360	Bad

Table 4.9 Summary of Median openings

S.No.	Location	No of Median Openings	Presence of Storage Lane
1	Main Carriageway	24	Yes
2	Main Carriageway	22	No

Median opening at Ch.65+330

Median opening at Ch.57+085

Photo 4.3 Photographs of Median openings

4.3.4. Kilometer stone

The RCC type Kilometer stones are there on the project road. The Summary of Kilometer Stones and condition are given in Table 4.10 and a detailed Inventory is given in **Annexure 4.4**.

Table 4.10 Summary of Kilometer stone (Nos)

S.No.	Location	Type	Good	Fair	Poor	Condition
1	Main Carriageway (LHS)	RCC Pillar	58	1	0	Good
2	Main Carriageway (RHS)	RCC Pillar	59	0	1	Good

4.3.5. Traffic Signage

The Traffic Signage along the Project Stretch is found to be in good condition. The Summary of Various Sign Boards is given in Table 4.11. Detailed Inventory is given in **Annexure 4.5**.

Table 4.11 Summary of Traffic Signage (Nos)

Location	Mandatory /Regulatory Signs	Cautionary /Warning Signs	Informatory /Guide Signs	Chevrons	Delineators	Total
Main Carriageway (LHS)	12	37	69	90	2	**210**
Main Carriageway (RHS)	18	42	76	118	0	**254**
Median	7	42	1	178	62	**290**

4.3.6. Crash Barrier

The Crash Barriers along the Project Highway are found to be W-Beam Metal Crash Barriers and Concrete Crash Barriers in Structure locations. The Summary of Crash Barrier length and condition is given in Table 4.12. Detailed Inventory is given in **Annexure 4.6**.

Table 4.12 Summary of Crash Barrier Condition on Main Carriage way

S.No.	Location	Type	Condition		
			Good (Km)	Fair (Km)	Damaged (Km)
1	LHS Carriageway	W Beam Crash Barrier	9.504	-	0.140
2	RHS Carriageway	W Beam Crash Barrier	9.956	-	0.152
3	LHS Carriageway	Concrete Crash Barrier	2.595	-	-
4	RHS Carriageway	Concrete Crash Barrier	2.419	-	-

Concrete crash barrier at Ch.57+950

Concrete crash barrier at Ch.68+290

W-beam crash barrier at Ch.112+500

W-beam crash barrier at Ch.53+470

Photo 4.4 Photographs of Crash Barrier

4.3.7. Highway Lighting

The Light poles of the Highway Lighting of Project Road consist of Single arm and Double arm poles on the Main carriageway and Service Road are summarized and provided in Table 4.13. Detailed Inventory is given in **Annexure 4.7**.

Table 4.13 Summary of Highway Lighting (Nos)

S.No.	Location	Single Arm	Double Arm	High mast Light
1	MCW	77	572	8

4.3.8. Drainage

Open lined drain is observed in a major portion of the project length. A summary of Drainage is given below in Table 4.14. Detailed Inventory is given in **Annexure 4.8**.

Table 4.14 Summary of Drains

S.No.	Type of Drain	Side	Length (Km)
1	Median Drain		2.445
2	Shoulder drain	LHS	9.769
3	Shoulder drain	RHS	15.729

4.3.9. Foot path condition

A cement concrete type of footpath is present on the project road. The summary of foot path condition is given below in Table 4.15. Detailed Inventory is given in **Annexure 4.9**.

Table 4.15 Summary of Foot path condition

S.No.	Location	Type of Footpath	Condition		
			Good (Km)	Fair (Km)	Poor (Km)
1	LHS Carriageway	Cement Concrete	0.095	0.355	0.040
2	RHS Carriageway	Cement Concrete	-	0.145	-

4.3.10. Guard posts

The Summary of Guard posts numbers with the condition is given in Table 4.16 and a detailed inventory is given in **Annexure 4.10**.

Table 4.16 Summary of condition of Guard posts

S.No.	Location	Type of Guard Post	Condition			Total (No's)
			Good	Fair	Poor	
1	LHS Carriageway	Cement Concrete	145	-	8	153
2	RHS Carriageway	Cement Concrete	394	-	7	401

4.3.1. Pedestrian crossing and Pedestrian railings

The summary of pedestrian crossing and pedestrian railings details are given in Table 4.17 and Table 4.18 and a detailed inventory is given in **Annexure 4.11.**

Table 4.17 summary of Pedestrian crossings

S.No.	Location	Total (No's)
1	LHS Carriageway	13
2	RHS Carriageway	13

Table 4.18 summary of Pedestrian railings

S.No.	Location	Condition		Total Length
		Good	Damaged	
1	LHS Carriageway	4.316	0.062	4.378
2	RHS Carriageway	5.1	0.021	5.121

4.3.2. Solar LED blinkers

The summary of solar LED blinkers is given in Table 4.19 and a detailed inventory is given in **Annexure 4.12.**

Table 4.19 summary of Solar LED blinkers

S.No.	Location	Condition			Total (No's)
		Good	Fair	Poor	
1	LHS Carriageway	64	-	-	64
2	RHS Carriageway	55	-	1	56

4.3.3. Major and Minor Junctions

The summary of Major and Minor junctions in the project road is given in Table 4.20. The details are given in **Annexure 4.13**. Photographs showing junctions are given in Photo 4.5.

Table 4.20 Summary of Junctions

S.No.	Junction type	Nos
1	Major junctions	**4**
2	Minor junctions	**43**

Junction at Ch.51+150 on LHS

Junction at Ch. 93+600 on LHS

Photo 4.5 Photographs of Junctions

4.3.4. Bus bays/Bus Shelters

List of the bus bays / bus shelters is given in Table 4.21 and their sample photographs are provided in Photo 4.6.

Table 4.21 Bus bays/Bus shelters Details

S.no	Chainage (Km)	Side	Type
1	47+550	LHS	Bus bay with shelter
2	51+210	LHS	Bus bay with shelter
3	59+270	RHS	Bus bay with shelter
4	63+270	LHS	Bus shelter
5	70+670	RHS	Bus bay with shelter
6	74+510	LHS	Bus shelter
7	82+065	LHS	Bus bay with shelter
8	87+560	LHS	Bus bay with shelter
9	93+050	RHS	Bus shelter
10	93+235	RHS	Bus bay with shelter
11	94+820	LHS	Bus shelter
12	95+030	LHS	Bus bay with shelter
13	97+725	RHS	Bus bay with shelter
14	100+120	RHS	Bus bay with shelter
15	101+785	RHS	Bus bay with shelter
16	105+245	LHS	Bus bay with shelter
17	106+045	LHS	Bus bay with shelter
18	110+650	RHS	Bus bay with shelter
19	111+090	LHS	Bus bay with shelter
20	112+610	RHS	Bus bay with shelter
21	108+375	LHS	Bus shelter
22	114+350	LHS	Bus shelter

Bus bay at Ch. 47+550

Bus bay at Ch.95+050

Bus Bay at Ch. 112+610

Bus bay at Ch. 51+210

Photo 4.6 Photographs of Busbays

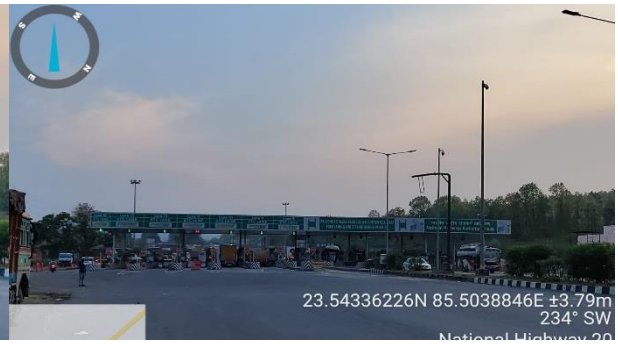
4.3.5. Toll plaza

There is one toll plaza in the project stretch at Km 100.600 near Pundag village. Toll plazas was constructed at the time of COD and is in operational. Since project is on an annuity basis, toll plaza operation is not in scope of the concessionaire.

Table 4.22 Toll plaza Details

S.No.	Chainage (Km)	Side	Pavement Type	No. of Toll Lanes	No.of Emergency Lanes	Highmast Lights
1	100+600	BHS	CC	7	1	1

Toll plaza at Ch- 100+600



Toll Plaza at Ch-100+600

Photo 4.7 Photographs of Toll Plaza

4.3.6. Truck lay-bye

There are 3 truck lay byes on the project road. Details of the truck lay bye locations are given in the Table 4.23.

Table 4.23 Truck-lay bye details

S.no	Chainage (Km)	Side
1	60+310	BHS
2	74+980	BHS
3	103+950	BHS

4.4 STRUCTURE INVENTORY AND CONDITION

Detailed inventory and visual condition surveys have been done for all the Land structures, Bridges. The details of existing structures are as follows.

4.4.1. Cross Drainage Structures

There are one number of major bridge and 9 minor bridges on project road besides the culverts. Construction of all the bridges completed and they are in sound condition. Photographs shown in Photo 4.8 gives the typical condition of these bridges.

Minor Bridge at Ch. 61+720

Minor Bridge at Ch. 71+020

Major Bridge at Ch. 85+817

Major Bridge at Ch. 109+200

Photo 4.8 Photographs of Bridges on the project road

4.4.2. Grade Separators

At built up sections and locations of important cross traffic roads VUPs are provided. There are 6 VUPs and 2 PUPs to facilitate cross traffic and safety. Additionally, there are 3 ROBs on the project road over railway line crossings.

ROB at km Ch. 67+570

ROB at km Ch. 80+892

VUP at km Ch. 89+644

VUP at km Ch. 82+050

Photo 4.9 Photographs of Grade Separator structures on the project road

Table 4.24 List of Structures

S.No.	Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Vertical Clearance	Deck Width(m)
1	55+398	Vehicular Underpass	MCW	1 x 6.00	5.00	23.90
2	57+794	Minor Bridge	LHS	3 x 13.15	4.00	8.50
			RHS	3 x 13.15	4.00	11.00
3	61+720	Minor Bridge	LHS	2 x 16.8	4.80	8.50
			RHS	2 x 18.9	4.80	11.00
4	64+993	Pedestrian Underpass	MCW	1 x 3.50	2.50	23.90
5	67+570	Road Over Bridge	MCW	1 x 8.00	6.60	27.650
6	68+250	Pedestrian Underpass	MCW	1 x 3.50	2.50	24.50
7	71+020	Minor Bridge	LHS	2 x 18.90	4.50	11.00
			RHS	4 x 10.00	2.50	8.50
8	74+213	Vehicular Underpass	MCW	1 x 6.00	5.50	30.50
9	76+150	Vehicular Underpass	MCW	1 x 6.00	5.50	27.00
10	78+615	Vehicular	MCW	1 x 6.00	5.50	27.00

S.No.	Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Vertical Clearance	Deck Width(m)
		Underpass				
11	79+114	Vehicular Underpass	MCW	1 x 6.00	5.50	24.50
12	80+892	Road Over Bridge	LHS	1x19.566	6.50	11.00
			RHS	1x19.566	6.50	11.00
13	82+050	Vehicular Underpass	MCW	1 x 6.00	5.50	27.00
14	84+450	Minor Bridge	MCW	3 x 6.00	3.80	27.50
15	85+817	Major Bridge	LHS	12x20.5	17.00	10.20
			RHS	12x20.5	17.00	10.20
16	89+644	Vehicular Underpass	MCW	2 x 11.00	5.50	27.50
17	90+432	Road Over Bridge	LHS	2x10.61+1x20.8	7.50	11.50
			RHS	2x10.61+1x20.8	7.50	11.50
18	103+420	Minor Bridge	LHS	2 x 12.50	3.50	8.50
			RHS	2 x 13.150	3.50	11.00
19	107+580	Minor Bridge	LHS	3 x 6.50	3.00	8.50
			RHS	1 x 18.90	3.00	11.00
20	109+200	Minor Bridge	LHS	2 x 12.00	4.50	8.50
			RHS	2 x 13.15	4.50	11.00
21	112+460	Minor Bridge	LHS	2 x 19.00	4.00	8.50
			RHS	2 x 19.00	4.00	11.00
22	115+000	Minor Bridge	LHS	3 x 8.70	2.50	8.50
			RHS	3 x 8.70	2.50	11.00

The type, span, condition and proposed repair works of Structures is given below in Table 4.25.

Table 4.25 Condition & Proposed Repair works of Structures

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
55+398	Vehicular Underpass	MCW	1 x 6.00	1. Growth of vegetation on superstructure. 2. Drain spouts are not provided.	1 Remove vegetation by chemicals itching from root. 2. drainage spouts shall be rectified.	
57+794	Minor Bridge	LHS	3 x 13.15	1. Cracks are observed on wearing coat. 2. Expansion joint P1 and P2 completely damaged. 3. Growth of vegetation on approaches. 4. Minor Cracks are observed on substructure.	1.Patch repairs to wearing coat to be carried out. 2.All expansion joints & drainage spouts shall be rectified. 3.Remove vegetation by chemicals itching from root. 4.Cracks portion shall be made good by epoxy mortar.	
		RHS	3 x 13.15	1. Growth vegetation on side slopes. 2. Drain spouts are clogged. 3. Expansion joints are filled with debris. 2. Erosion at the foundation level was observed	1.Remove vegetation by chemicals itching from root. 2.All expansion joints & drainage spouts shall be rectified. 3. Protection wall need to be construction around the piers to control from erosion.	
61+720	Minor Bridge	LHS	2 x 16.8	1. Growth of vegetation on side slopes. 2. Cracks are observed on wearing coat. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints shall be rectified.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
		RHS	2 x 18.9	1. Growth of vegetation on side slopes. 2. Cracks are observed on wearing coat. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints shall be rectified.	
64+993	Pedestrian Underpass	MCW	1 x 3.50	1.Minor Cracks are observed on top slab and side walls. 2. Crash barrier RCC casting not done.	1.Cracks portion shall be made good by epoxy mortar. 2.Crash Barrier to be completed.	
67+570	Road Over Bridge	MCW	1 x 8.00	1. Structure it is in fair condition.	1. No repairs required.	
68+250	Pedestrian Underpass	MCW	1 x 3.50	1. Minor Cracks are observed on top slab.	1.Cracks portion shall be made good by epoxy mortar.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
71+020	Minor Bridge	LHS	2 x 18.90	1. Expansion joints are filled with debris. 2. Growth of vegetation on side slopes. 3. Drainage spouts are partially clogged.	1.All expansion joints & drainage spouts shall be rectified. 2.Remove vegetation by chemicals itching from root.	
		RHS	4 x 10.00	1. Honey combing and sapling is observed on superstructure. 2. Reinforcement is exposed on superstructure. 3. Growth of vegetation on superstructure.	1.Epoxy Grouting shall be applied. 2.Remove vegetation by chemicals itching from root.	
74+213	Vehicular Underpass	MCW	1 x 6.00	1. Structure it is in fair condition.	1. No repairs required.	
76+150	Vehicular Underpass	MCW	1 x 6.00	1. Structure it is in fair condition.	1. No repairs required.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
79+114	Vehicular Underpass	MCW	1 x 6.00	1. Structure it is in fair condition.	1. No repairs required.	
80+892	Road Over Bridge	LHS	1x19.566	1. Expansion joints are filled with debris. 2. Growth of vegetation on side slopes. 3. Drainage spouts are partially clogged.	1.All expansion joints & drainage spouts shall be rectified. 2. Remove vegetation by chemicals itching from root.	
		RHS	1x19.566	1. Expansion joints are filled with debris. 2. Growth of vegetation on side slopes.	1.All expansion joints & drainage spouts shall be rectified. 2.Remove vegetation by chemicals itching from root.	
82+050	Vehicular Underpass	MCW	1 x 6.00	1. Structure it is in fair condition.	1. No repairs required.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
84+450	Minor Bridge	MCW	3 x 6.00	1. Growth of vegetation on side slopes. 2. Silt and debris are accumulated in vent ways.	1.Remove vegetation by chemicals itching from root. 2.debris shall be removed.	
85+817	Major Bridge	LHS	12x20.5	1. Growth of vegetation on side slopes. 2. Cracks are observed on wearing coat. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints spouts shall be rectified.	
		RHS	12x20.5	1. Growth of vegetation on side slopes. 2. Cracks are observed on wearing coat. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints spouts shall be rectified.	
89+644	Vehicular Underpass	MCW	2 x 11.00	1. Structure it is in fair condition.	1. No repairs required.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
90+432	Road Over Bridge	LHS	2x10.61+1x20.8	1. Growth of vegetation on side slopes. 2. Drainage spouts are partially clogged. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.All expansion joints and drainage spouts shall be rectified.	
		RHS	2x10.61+1x20.8	1. Growth of vegetation on side slopes. 2. Drainage spouts are partially clogged. 3. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.All expansion joints & drainage spouts shall be rectified.	
103+420	Minor Bridge	LHS	2 x 12.50	1. Expansion joint A2 damaged. 2. Growth of vegetation on side slopes and superstructure. 3. Expansion joints are filled with debris.	1.All expansion joints shall be rectified. 2.Remove vegetation by chemicals itching from root.	
		RHS	2 x 13.150	1. Growth of vegetation on side slopes and superstructure. 2. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.All expansion joints spouts shall be rectified.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
107+580	Minor Bridge	LHS	3 x 6.50	1. Growth of vegetation on side slopes and superstructure. 2. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.All expansion joints shall be rectified.	
		RHS	1 x 18.90	1. Growth of vegetation on side slopes and superstructure. 2. Expansion joints are filled with debris.	1.Remove vegetation by chemicals itching from root. 2.All expansion joints shall be rectified.	
109+200	Minor Bridge	LHS	2 x 12.00	1. Growth of vegetation on side slopes. 2. Silt and debris are accumulated in vent ways. 3. Cracks are observed on wearing coat.	1.Remove vegetation by chemicals itching from root. 2.debris shall be removed. 3.Patch repairs to wearing coat to be carried out.	
		RHS	2 x 13.15	1. Growth of vegetation on side slopes. 2. Minor Cracks are observed on substructure and wearing coat. 3. Expansion joints are filled with debris. 4. Drainage spouts are partially clogged.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. Cracks portion shall be made good by epoxy mortar. 3.All expansion joints & drainage spouts shall be rectified.	

Chainage (Km)	Type of Structure	Side	Span arrangement(m)	Observation	Proposed repair and Rehabilitation work	Photos
112+460	Minor Bridge	LHS	2 x 19.00	1. Growth of vegetation on side slopes. 2. Cracks are observed wearing coat. 3. Expansion joints are filled with debris. 4. Drainage spouts are partially clogged.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints & drainage spouts shall be rectified.	
		RHS	2 x 19.00	1. Growth of vegetation on side slopes. 2. Cracks are observed on wearing coat. 3. Expansion joints are filled with debris. 4. Drainage spouts are partially clogged.	1.Remove vegetation by chemicals itching from root. 2.Patch repairs to wearing coat to be carried out. 3.All expansion joints & drainage spouts shall be rectified.	
115+000	Minor Bridge	LHS	3 x 8.70	1. Growth of vegetation. 2. Water staged in vent ways.	Remove vegetation by chemicals itching from root.	
		RHS	3 x 8.70	1. Growth of vegetation. 2. Water staged in vent ways.	Remove vegetation by chemicals itching from root.	

CHAPTER 5. SOIL AND MATERIAL INVESTIGATIONS

5.1 GENERAL

As part of soil and materials investigations report preparation, the consultants have conducted subgrade soil investigations along the project corridor.

5.2 FIELD INVESTIGATION – SAMPLING AND TESTING

Field tests were conducted on the subgrade soils and required pavement materials were collected for needful testing. Table 5.1 presents the sampling criteria, tests, and testing procedures adopted for various field and laboratory tests.

Table 5.1 Site Sampling and Testing Criteria

S.No..	Type of Soil Sample	Sampling Criteria	Testing Criteria	
			Description of Test	Standard Code Applicable
Existing Subgrade and Pavement Materials				
i)	Subgrade Strength Test Pits	Minimum of one subgrade soil sample is obtained at an interval directed by the client & Material Engineer based on site condition	In-situ Density	IS 2720 (Part- 29)
			In-situ Moisture Content	IS 2720 (Part- 2)
			Soil Classification	IS 1498
			Sieve Analysis	IS 2720 (Part – 4)
			Atterberg Limits	IS 2720 (Part – 5)
			Laboratory Compaction Test	IS 2720 (Part – 8)
			4-day soaked CBR	IS 2720(Part – 16)
			Free swell Index	IS 2720 (Part-40)

5.3 INVESTIGATIONS ON SUBGRADE SOILS

The Subgrade investigations were carried out to know the strength properties of the existing soil. Visual inspection of the existing pavement condition was carried out prior to commencement of sub-grade investigation work. It was ensured to dig the test pits at an interval of 15km as per ToR. Various in-situ and laboratory tests were conducted on subgrade soils as per the project requirements as summarised in Table 5.1. The pavement composition details (pavement course, material type, and thickness) are also recorded at every test pit.

Discussion on the tests conducted and results obtained are carried out in the following sections.

Field tests were conducted as per the project requirement to determine the subgrade characteristics and strength. The field testing for subgrade soil includes:

- In-situ density determination at each test pit
- Field moisture content determination at each test pit

In-situ density (field density) and moisture content were determined as per the standards enlisted in Table 5.1. Field density is used to evaluate the degree of compaction and existing subgrade CBR at field density state. 40kg of samples were collected in damp proof bags for determining physical properties through laboratory testing. Required laboratory testing as specified in Table 5.1 were conducted the details of field dry density and field moisture content test results are furnished. Table 5.2 presents a summary of the test results for the entire project section. The field investigation Photographs are shown in Photo 5.1.

Photo 5.1: Photographs showing Field Investigations

Observations and Conclusions

(i) Soil Classification and Distribution

Table 5.2 shows the summary of subgrade test results. It is evident that the sub-grade soils are Clayey sand. Because of this soil type, Liquid Limit (LL) is ranging between 28-33%, and these values are within the limit as per MoRTH specifications (<50%). It is observed that the soils are non-plastic in nature and the maximum degree of free swell is observed as 20.0%. All the measured PI and FSI values are within the acceptable limits as per MoRTH guidelines, of 25% and 50% respectively.

(ii) Strength Parameters

Variance between MDD and FDD is converted in-terms of degree of compaction. The degree of compaction along the project corridor is ranging between 85.2%-91.0%. The 4-day soaked CBR is obtained along the project corridor is ranging from 10.5% to 12.4% with an average value of 11.3%.

Table 5.2 Summary of Subgrade Test Results

S:No	Location (Km.)	Side (LHS/ RHS)	Soil Classification as per IS: 1498	Gradation: Percent by weight passing through the Sieve (IS:2720-IV)			Atterberg Limits [IS :2720-Pt-V]			Modified Proctor Test (IS:2720-Pt-VIII)		In-situ Density		4-Days Soaked CBR (%)	Free Swell Index (%)	Degree of Compaction (%)
				Gravel (%)	Sand (%)	Clay & silt content %	Liquid Limit (LL) %	Plastic Limit (PL) %	Plasticity Index (PI)	Max. dry density gm/cc.	OMC (%)	FDD (gm/cc)	FMC (%)			
1	114.800	RHS	SC	7.4	58.5	34.1	33	25	8	2.01	10.2	1.76	9	12.4	10.0	95.0
2	100.020	LHS	SC	7.2	58.9	33.9	28	15	13	1.98	9.5	1.85	10	11.6	20.0	96.2
3	85.000	RHS	SC	12.4	54.6	33.0	29	18	11	2.02	10.2	1.84	8	10.5	10.0	95.2
4	70.030	LHS	SC	8.5	52.4	39.1	31	18	13	1.98	9.2	1.73	9	11.2	20.0	98.5
5	54.960	RHS	SC	15.2	49.6	35.2	30	21	9	1.96	8.3	1.72	10	10.8	20.0	97.4

5.4 EXISTING PAVEMENT COMPOSITION AND ANALYSIS

Existing pavement composition (pavement course, material type, and thickness) was recorded at each subgrade test pit.

The summary of existing pavement crust thickness is presented in Table 5.3.

Table 5.3 Summary Pavement Crust Details along the project corridor

S.No.	Chainage (km)	Side (RHS/LHS)	Bituminous Thickness (mm)	Granular Thickness (mm)	Total thickness (mm)
1	54+960	RHS	180	430	610
2	70+030	LHS	200	450	650
3	85+000	RHS	200	400	600
4	100+020	LHS	200	450	650
5	114+800	RHS	200	420	620

Observations and Conclusions:

- The existing pavement along the project corridor is flexible in nature. The pavement composition comprises of bituminous layer, granular base/sub-base on the subgrade.
- Throughout the project road it possesses consistent bituminous/ granular layer thickness with an average of 200mm bituminous layer over 430 mm of granular layer.

CHAPTER 6. PAVEMENT EVALUATION STUDIES

6.1 PAVEMENT CONDITION SURVEY

6.1.1. Pavement Condition Survey using Network Survey Vehicle (NSV)

Network Survey Vehicle (NSV) was carried out by the Company for the assessment of detailed condition survey of existing pavement. Both extent and severity of different pavement distresses such as cracks, rutting, potholes, ravelling, edge break, delamination, patching, shoving, bleeding, etc. were recorded at 10m intervals for each lane by the NSV. The pavement distresses were categorized into three levels of severity: Low, Medium, and High. The following types of pavement distress and details were captured using NSV.

6.1.1.1. Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile, and cross slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dipstick profiler, profile graphs, response type road roughness meters, and profiling devices. Table 6-1gives details of surface riding quality evaluation criteria as per standard codal provisions.

Table 6-1 : Roughness Index Criteria

Condition	Roughness Range BI (in mm/km) for Bituminous Concrete Surface
Good	<2000
Average	2000-2400
Poor	More than 2400

However, as per schedule K of contract stretches reporting roughness value of more than 2500 mm/km are to be improved for riding quality with suitable overlay. The same criteria is used for developing improvement proposal for stretch.

A summary of length falling under various categories of roughness as per standard code is given in Table 6-2. As per the Table, 70.5Km on LHS and 73.5 on RHS, the roughness is less than 1800 mm/km, which shows mostly the pavement is functionally in good condition. Over 5Kms length the roughness is in between 1800 to 2400mm/km, that is in average condition. On the whole, the functional condition of the pavement is good and it does not require immediate overlay. A detailed roughness survey results is given in **Annexure 6.1.**

Table 6-2 :Direction-wise Roughness Distribution

Condition	Roughness	LHS (km)	RHS (km)
Good	<1800	70.5	73.5
Average	1800-2400	4	1
Poor	More than 2400	0	0

6.1.1.2. Rutting

Rutting is one of the important factors which determine the functional performance of the pavement. Rutting is characterized by permanent deformation of the pavement in the wheel path either due to failure of asphalt concrete mix or any of the pavement layer. Rutting is expressed in mm. Criteria for rutting is given in the Table 6.3.

Table 6-3 : Rut Depth Criteria

Condition	Rut Depth (mm)
Good	<5
Average	5 to 10
Poor	>10

The rut depths observed on LHS and RHS are presented in Table 6-4 As per Table, the rutting is less than 5mm on most of the length on both LHS and RHS (Total 129 Kms) and rutting is average on 5Kms length. Over entire length of the pavement, rutting is less than 10mm, which comes under low severity. The rectification consists of filling of ruts with premix (open-graded or dense-graded) patching materials and compacting to the desired levels.

Table 6-4 :Direction-wise Rutting Distribution

Condition	Rut Depth (mm)	LHS (km)	RHS (km)
Good	<5	68.5	68.5
Average	5 to 10	5	5
Poor	>10	0	0

6.1.1.3. Cracking

Cracking of bituminous surfacing is a common distress seen on majority of roads with the passage of time. Cracks in bituminous surface are classified into various types depending upon severity. Immediate attention must be given for sealing of cracks, and prevention of their further widening as ingress of water through cracks is detrimental to pavement structure and performance of bituminous surfacing. The cracking is represented in terms percentage of area and its trigger values are given in the Table 6-5.

Table 6-5 : Cracking Criteria

Condition	cracking
Good	<5%
Average	5% to 10%
Poor	>10%

The area of cracking observed on LHS and RHS are presented in the Table 6-6. As per the Table, pavement classified as good in terms of cracking. It was observed low severity hairline cracking on the pavement surface at isolated locations which need to be rectified by crack sealing.

Table 6-6 :Direction-wise Cracking Distribution

Condition	cracking	LHS (km)	RHS (km)
Good	<5%	74.5	74.5
Average	5% to 10%	0	0
Poor	>10%	0	0

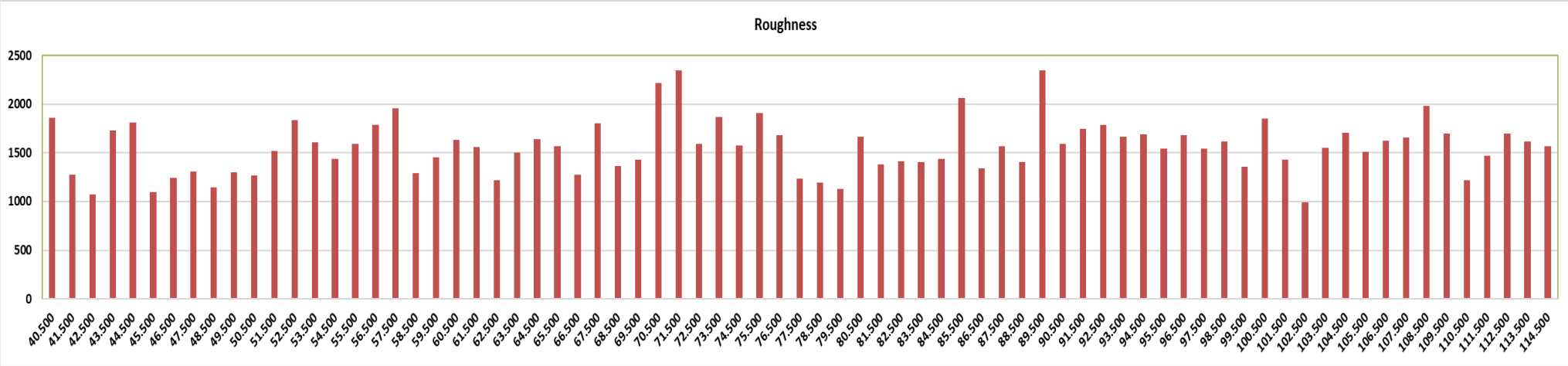


Figure 6-1 : Roughness Index for Hazaribagh – Ranchi Section of NH-33- LHS

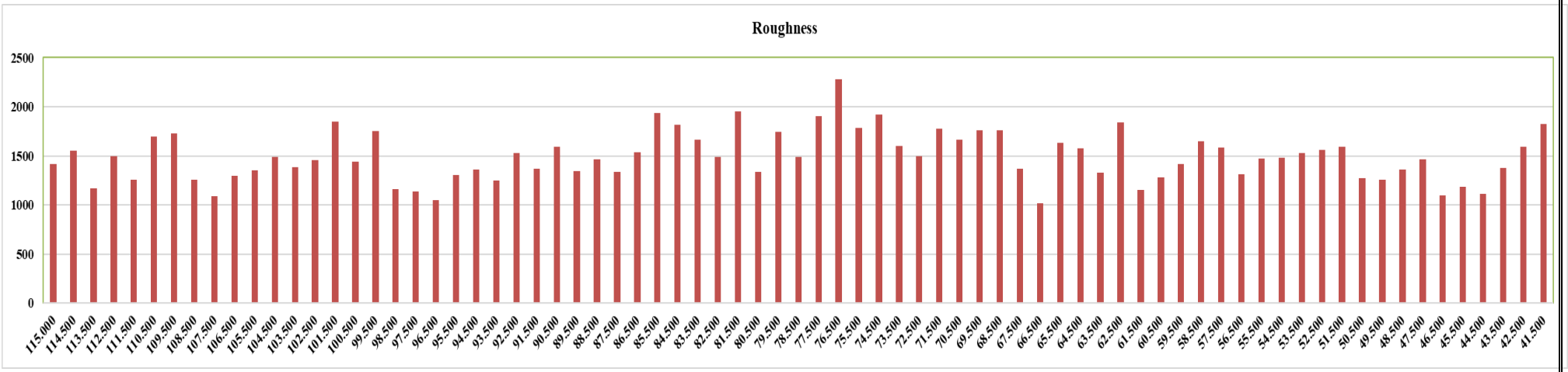


Figure 6-2 : Roughness Index for Hazaribagh – Ranchi Section of NH-33- RHS

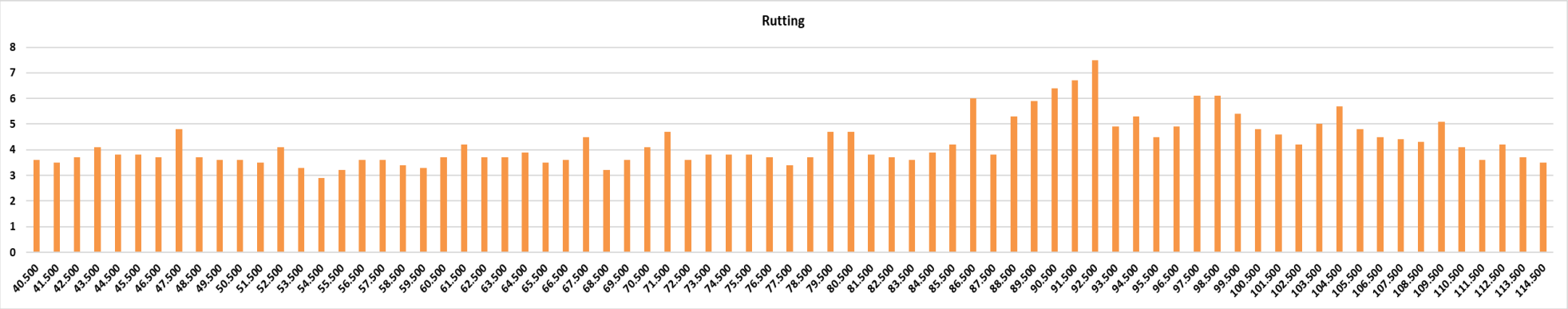


Figure 6-3 : Rutting Index for Hazaribagh – Ranchi Section of NH-33- LHS

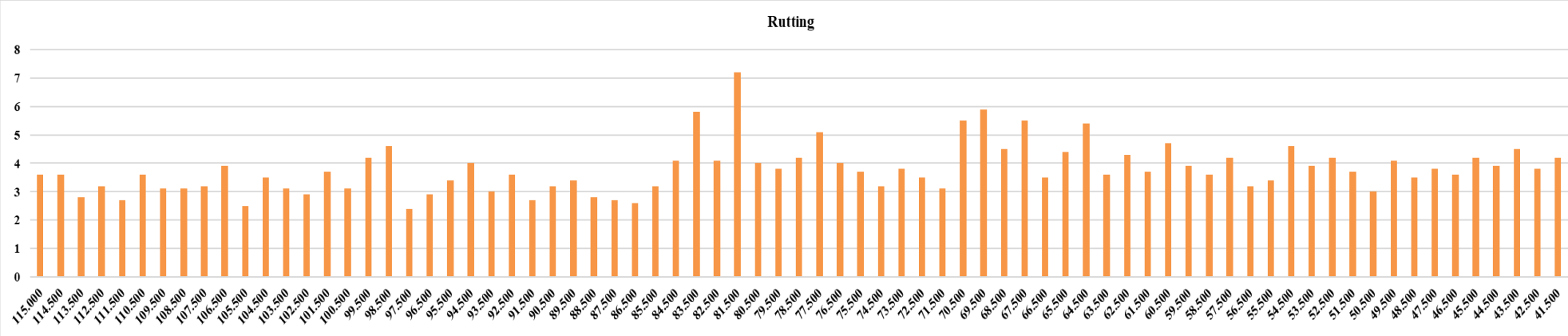


Figure 6-4 : Rutting Index for Hazaribagh – Ranchi Section of NH-33- RHS

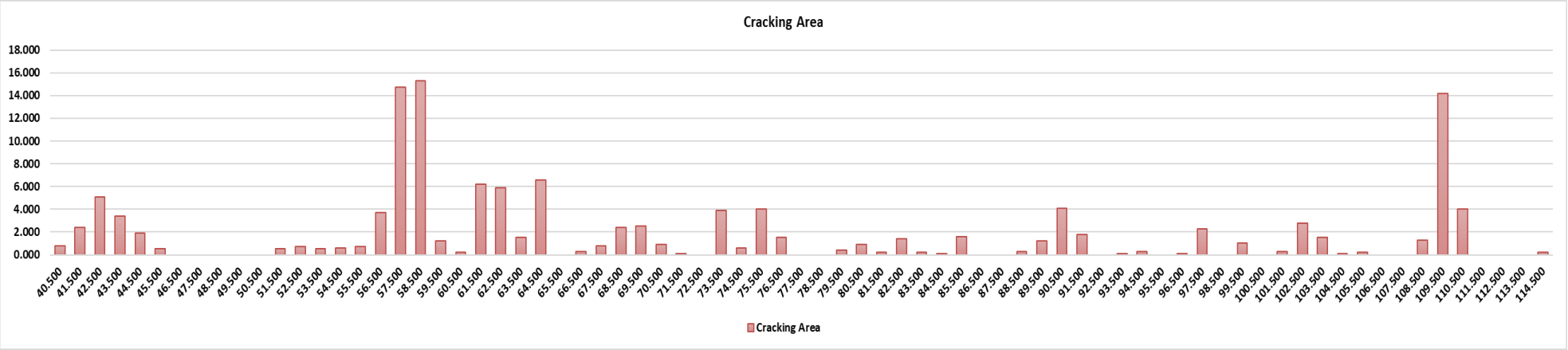


Figure 6-5 : Cracking Index for Hazaribagh – Ranchi Section of NH-33- LHS

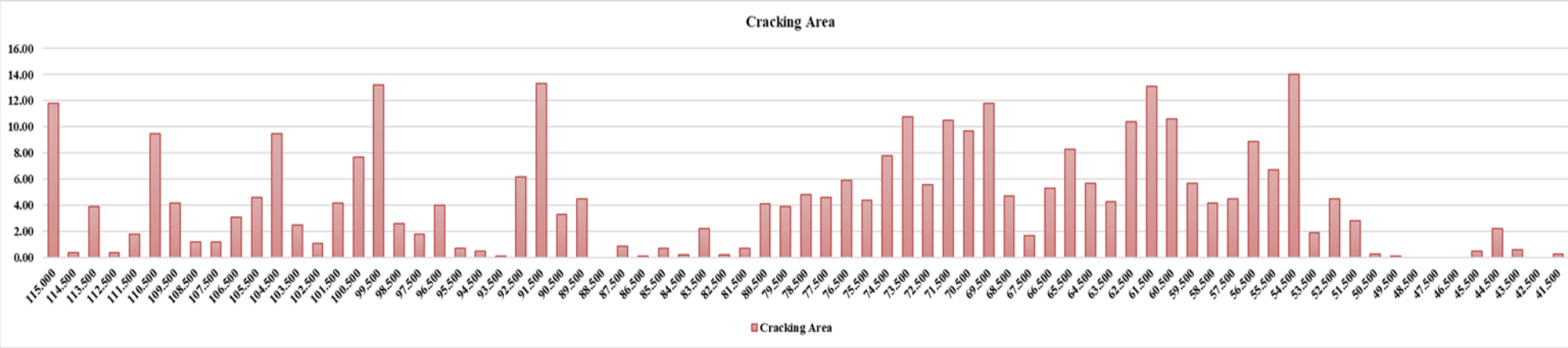


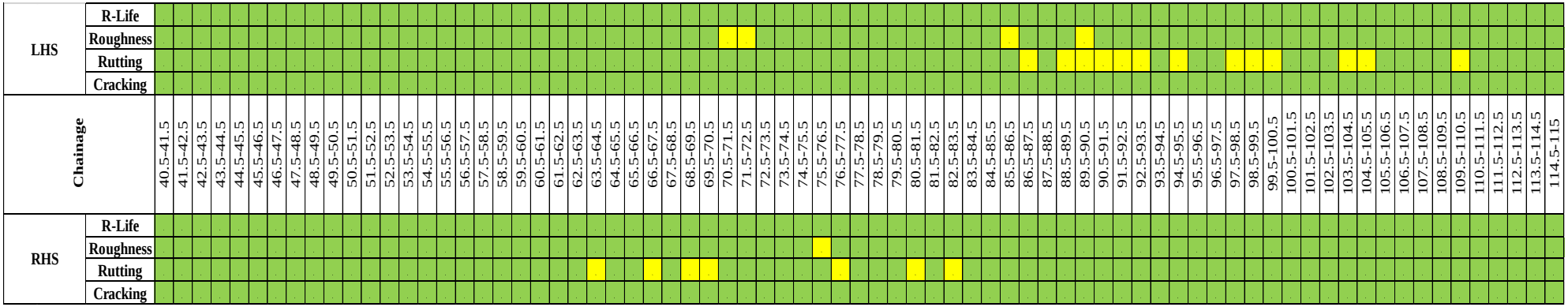
Figure 6-6 : Cracking Index for Hazaribagh – Ranchi Section of NH-33- RHS

6.2 PAVEMENT CONDITION VISUAL SURVEY

Our team have visited the site in the month of November for incremental study and done a visual survey of pavement condition and found the pavement to be in Good condition for most of the project length as the overlay has been completed recently, except for 3-4 kms of length where the pavement is Fair with some cracking and rutting. No immediate repairs are required for the pavement.

6.3 PAVEMENT CONDITION MAPPING

Based on the pavement investigation survey results (NSV Survey and FWD Survey and Visual Survey), the section along the Project Stretch were classified as Good, Fair and Poor with appropriate colour as below:



Condition	Colour Adopted
Good	
Fair	
Poor	

6.3.1. Distress Identification for Immediate Repair

The main carriageway is recently overlaid, and no major distresses were observed on the project stretch on both LHS and RHS. However, at a few locations minor distresses, which are discussed above are identified and they require treatment to avoid further progress. The detailed inventory of Pavement distresses by NSV is given in **Annexure 6.2.** Photographs of surface pavement condition were shown in Photo 6.1.

Good pavement at Ch. 61+600 on LHS	Good Pavement at Ch.84+000 on RHS
Good pavement at Ch.101+000 on LHS	Good pavement at Ch.108+500 on LHS

Photo 6.1: Representative Photos of Pavement Condition and Surface Distress

6.3.2. Estimated Design Traffic

The design traffic is considered in terms of the cumulative number of standard axles in both directions of the carriageway during the design life of the road. This can be computed using the following equation:

$$N = \frac{365 \times [(1+r)^n - 1]}{r} \times A \times D \times F$$

where N is the cumulative number of standard axles to be catered for the design in terms of Million Standards Axle (MSA), A is the initial traffic in terms of the number of commercial vehicles per day, D is the lane distribution factors, F is the vehicle damage factor, n is the design life in years, and r is the annual growth rate of commercial vehicles. The traffic in the year of completion is estimated using the following formula:

$$A = P (1 + r) x$$

Where P is the number of commercial vehicles as per the last count, and x is the number of years between the last count and the year of completion between the last count and the year of completion of the project.

Consultant enquired about the VDF values for the projection of Design Traffic. However, in the absence of data, we have assumed VDF based on the axle load spectrum.

Table 6-7 : Adopted VDF at Km 100.600

Particulars	Adopted VDF
Bus	1.00
LCV	0.5
2Axle	2.25
3Axle	3.50
MAV	6.50

Base traffic for MSA calculation has been adopted from traffic report of independent engineer. The projected traffic is furnished in the Table 6-8. As per table, design traffic at the end of the concession period is 12 MSA and after 10 years, that is the overlay period is 24 MSA.

Table 6-8 : MSA at Km 100.600

Year	LCV	Bus	2-Axle	3-Axle	>3-Axle	VDF x ADT	MSA	Cumulative MSA
2022	512	1146	289	1198	789	11374	2	
2023	538	1203	303	1258	828	11939	2	2
2024	565	1263	318	1321	869	12533	2	4
2025	593	1326	334	1387	912	13157	2	6
2026	623	1392	351	1456	958	13816	2	8
2027	654	1462	369	1529	1006	14510	2	10
2028	687	1535	387	1605	1056	15231	2	12
2029	721	1612	406	1685	1109	15992	2	14
2030	757	1693	426	1769	1164	16788	2	16
2031	795	1778	447	1857	1222	17624	2	18
2032	835	1867	469	1950	1283	18504	3	21
2033	877	1960	492	2048	1347	19429	3	24
2034	921	2058	517	2150	1414	20398	3	27

Year	LCV	Bus	2-Axle	3-Axle	>3-Axle	VDF x ADT	MSA	Cumulative MSA
2035	967	2161	543	2258	1485	21422	3	30
2036	1015	2269	570	2371	1559	22491	3	33
2037	1066	2382	599	2490	1637	23618	3	36
2038	1119	2501	629	2615	1719	24802	3	39
2039	1175	2626	660	2746	1805	26042	4	43
2040	1234	2757	693	2883	1895	27341	4	47
2041	1296	2895	728	3027	1990	28711	4	51
2040	1361	3040	764	3178	2090	30148	4	55

6.4 STRUCTURAL EVALUATION OF PAVEMENT BY USING FWD

The structural evaluation and analysis of remaining life of project was carried out in conformity with IRC: 115-2014, "Guidelines for Structural Evaluation and Strengthening of Flexible Road Pavements Using **Falling Weight Deflectometer (FWD)** Technique".

6.4.1. Principle of Pavement Evaluation Using FWD

Performance of flexible pavements can be evaluated by applying loads on the pavements that simulate the traffic loading, recording the response to such loading by measuring the elastic deflection under such loads, and analysing these data duly considering the factors influencing the performance such as subgrade strength, thickness and quality of each of the pavement layers, drainage conditions, pavement surface temperature etc.

Among the equipment available for structural evaluation of pavements, the Falling Weight Deflectometer (FWD) is extensively used world-wide because it simulates, to a large extent, the actual loading conditions of the pavement. When a moving wheel load passes over the pavement it produces load pulses. Normal stresses (vertical as well as horizontal) at a location in the pavement will increase in magnitude from zero to a peak value as the moving wheel load approaches the location. The time taken for the stress pulse to vary from zero to peak value is termed as 'rise time of the pulse'. As the wheel moves away from the location, magnitude of stress reduces from peak value to zero. The time period during which the magnitude of stress pulse varies from 'zero-to-peak-to-zero' is the pulse duration. Peak load and the corresponding pavement responses are of interest for pavement evaluation.

The resulting load-deflection data can be interpreted through appropriate analytical techniques, such as back calculation technique, to estimate the elastic moduli of the pavement layers. The computed moduli are, in turn, used for (i) the strength evaluation of different layers of in-service pavements (ii) the estimation of the remaining life of in-service pavement (iii) determination of strengthening requirement, if any and (iv) evaluation of different rehabilitation alternatives (overlay, recycling, partial reconstruction, etc).

6.4.2. Methodology of Falling Weight Deflectometer

Falling Weight Deflectometer is a non-destructive pavement testing device which provides relatively accurate data on the response of the pavement (specifically the surface deflection bowl) to dynamic loads by simulating actual wheel loads in both response and duration. This allows more accurate and rapid measurement of pavement deflection under load than traditional methods like BBD.

A dynamic load is generated by the dropping of a mass from a pre-set height onto a 300 mm diameter plate. The magnitude of the load and the pavement response are measured by a load cell and nine geophones. One geophone is located immediately under the load, whilst the others are located at variable offsets from the centre of the load. The test load is varied between 7 and 150 KN to meet the requirements of the particular task and the pavement response for up to four different magnitudes of load are measured during any test sequence. The offsets of the geophones can be set to any distance up to 1800 mm from the centre of the load and a typical sequence is completed in approximately one minute. Highly accurate deflection bowl measurements are therefore obtained; therefore, it is very useful for carrying out large-scale pavement surveys.

The FWD is integrally mounted on a Trailer which is towed by a dedicated vehicle. All testing is controlled by a personal computer which is located in the vehicle towing the FWD. As a result, only one operator is required to conduct a survey on most occasions making it less labour/ equipment intensive than traditional methods. Following is the typical process of FWD survey and investigation.

Photo 6.2: Photographs showing FWD test under progress

Also, during survey, pavement temperature of bituminous layer has been recorded as per the procedure specified in section 5.4.7 of IRC: 115-2014.FWD data collected and analysis is presented in **Annexure 6.3**. Photographs of FWD test under progress at some locations were shown in Photo 6.2

6.4.3. Working Principle

- A set of weights is dropped onto a platform with springs (rubber buffers) and the impact load is transferred to the pavement through a loading plate.
- The load simulates the dynamic load from a truck.

- Normally, the load applied on road pavements is 40 kN.
- When subjected to a load, the pavement will bend, and a deflection bowl is created. The deflections at various distances from the loading centre are recorded by the sensors (geophones) and stored in a data file.

6.4.4. Survey & Data Collection

Survey and data collection using FWD includes typically the following.

- Preparing the FWD unit for deflection testing
- Bringing the FWD to a stopped position at the beginning of the test section, centered on the outside wheel path (or specific position), and take a measurement by applying load using following sequence:
- One settling drop to ensure proper contact.
- Three drops with an applied load of 40 KN ± 10% (or Specified Load).
- Deflections are recorded from the sensors located at the center of the loading plate for each drop except the settling drop.
- Along with these deflection data, the parameter like Chainage, Temperature, Date and Time and position of Sensors will also be recorded.
- After each measurement, drive the FWD forward to next measurement point.

Analysis Stages:

Analysis including back calculation of layer moduli and remaining life analysis is done on the basis of standard procedure and guidelines as give in IRC - 115 and KGPBACK and presented below.

6.4.5. Determination of Structural Strength of Pavement using FWD and Remaining Life Analysis

Pavement structure is typically composed of several layers of different material, each of which receives the loads from the above layer, spreads the load, and then passes the load to the layer below. Material layers are usually arranged with in a pavement structure in order of descending load bearing capacity with the highest load bearing capacity material on the top and the lowest load bearing capacity material on the bottom. In general pavements should be designed to perform satisfactorily without developing unacceptable levels of distresses during the design life period. The structural adequacy of the existing pavement is demonstrated based on the study of structural performance of the pavement. If a pavement shows load associated distress like fracture, permanent deformation etc., then it is considered to have failed structurally. To ensure that unacceptable levels of distresses do not occur during design period, the critical strains developed under the load should be less than the limiting strain values corresponding to the design traffic selected. Structural evaluation of pavements involves application of a standard load to the pavement

and measuring its response in terms of stress, strain or deflection. Among the equipment available for structural evaluation of pavements, the Falling Weight Deflectometer (FWD) is extensively used world-wide because it stimulates, to a large extent, the actual loading conditions of the pavement. The resulting load-deflection data can be interpreted through appropriate analytical techniques, such as back calculation technique, to estimate the elastic module of the pavement layers. The computed module is, in turn, used for

i. The strength evaluation of different layers of in-service pavements
ii. the estimation of the remaining life of in-service pavement
iii. determination of strengthening requirement, if any and
iv. Evaluation of different rehabilitation alternatives (overlay, recycling, partial reconstruction, etc.).

The guidelines for the test and evaluation of structural condition of in-service pavements are detailed in IRC- 115:2014. The test was carried out using 300mm diameter plate and standard load of 40KN (+/-4KN). The deflections were measured at 7 points, each at a radial distance of 0, 300, 600, 900, 1200, 1500, and 1800 (all mm). The pavement layer thicknesses of Bituminous and Granular layers were obtained from the test pits as given above.

6.4.6. Analysis Methodology

This section provides detailed procedure for the evaluation of structural condition of in-service pavements using deflection data from Falling Weight Deflectometer as well as other pavement data as inputs to a back-calculation model for determining the elastic module of pavement layers, and, thereafter, using these modules as inputs to a pavement design model for estimating the overlay requirement.

Accordingly, the sequence of analysis steps as per the IRC: 115-2014 is as follows

1.The recorded data will be normalized to a standard load of 40 KN.

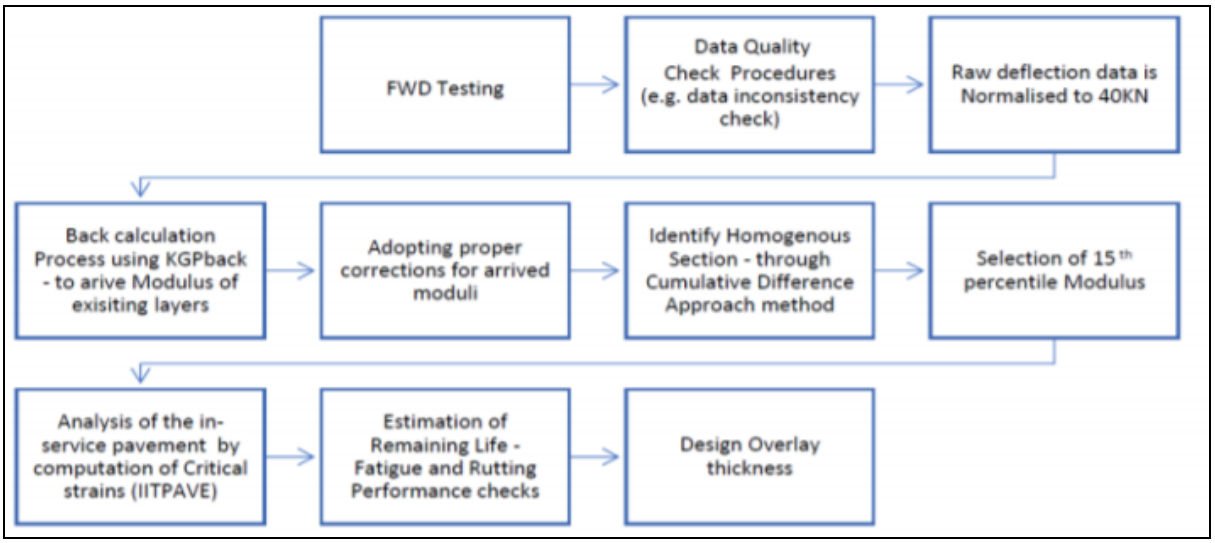
2.The normalized deflections will be then processed and back calculated using KGPBACK to obtain Elastic Modulus values of Bituminous, Granular layer and Sub-grade.

3.The corrections factors for temperature correction sand seasonal variations will be applied to all layers as suggested in IRC: 115-2014.

4.Preparation of Homogenous sections and selecting 15^{th} percentile Module values for the purpose of design.

5.Checking the in-service ability of the Pavement layers through Performance criteria-analysing the Remaining life. Sequence of FWD data analysis and snapshot of applications used for analysis are presented in figures below.

Sequence of FWD data analysis and snapshot of applications used for analysis are presented in figures below.




```
#######################################################
#         !!!  THANKS FOR USING KGPBACK  !!!         #
#              THE RESULTS ARE GIVEN BELOW            #
#######################################################

################
#  INPUT DATA  #
################
No.of Layers                          =  3
FWD Load (N)                          = 40000.00
Contact Pressure (MPa)                =  .56
No.of Deflection points               =  7
Deflections measured using FWD (mm)   =  .32100   .26100   .20600   .15300   .11800   .07300   .04900
Radial distances from centre of load(mm) =    .0  200.0  300.0  450.0   600.0   900.0  1200.0
Layer thickness (mm)                  = 170.00 700.00
Poisson ratio values                  = .50 .40 .40
Layer Modulus (MPa) Ranges Selected :-
(a) Bituminous Surfacing              =  400.0   1500.0
(b) Granular Base                     =  100.0   500.0
(c) Subgrade                          =   50.0   100.0


################
# OUTPUT DATA  #
################

Backcalculated Layer Moduli are:
Surface (MPa)  =    1403.2
Base (MPa)     =     412.4
Subgrade (MPa) =     100.0
```

Figure 6-7 : Typical KGPBACK Output

6.4.7. Procedure

The FWD measurements have been carried out at slow lane and fast lane respectively in the provided stretches.

Deflections measured by the FWD equipment are influenced by pavement temperature. Measurements made when the pavement temperature is different than standard temperature has be corrected. The deflection measurements, pavement temperature, subgrade soil & deflection, and other information collected during the deflection study have been recorded.

Following procedure has been followed for measurement of FWD:

- The test location is marked on the field.
- The loading plate along with the deflection sensors have been lowered at the test location

- The target load has been applied and the deflections have been measured for 3 times.
- The first load is considered as a seating load and the values are not considered for analysis.

Temperature Measurement & Correction

The standard temperature for doing the experiment is 350C. Since it is always not possible to conduct the test at the standard temperature, a correction factor has to be applied for the deflection. The correction factor is determined by knowing the temperature at the time of the survey. The pavement temperature during the survey has been measured at every one-hour interval by drilling a hole of 40mm in the pavement and filling it with glycerol and measuring the temperature using digital thermometer. The temperature correction factor applied on bituminous back calculated moduli is calculated as

$$ET1 = \prod ET2$$

Where,

$\prod$, temperature correction factor, is given as

$$\prod = 1\text{-}0.238 \ln T1 / 1\text{-}0.238 \ln T2$$

Where,

ET1 = back calculated modulus (MPa) at temperature T1 (°C)

ET2 = back calculated modulus (MPa) at temperature T2 (°C)

Correction for Seasonal Variation

Moisture content affects the strength of subgrade and granular subbase/base layers. The extent to which the strength is affected will depend on the nature of subgrade soil, gradation and nature of fines in the granular layers, etc. For the purpose of applying these guidelines, it is intended that the pavement layer moduli values should pertain to the period when the subgrade is at its weakest condition. In India, this period occurs during the recession of monsoon. It is, therefore, desirable to conduct deflection measurements during this period. Where the same is not feasible, a correction procedure should be adopted. The correction factor for subgrade and base is as

- **Correction factor for subgrade**

  E sub_mon = 3.351* (E sub_win) ^ (0-7688)-28.9

  E sub_mon = 0.8554*(E sub_sum) - 8.461

  where,

  E sub_mon = subgrade modulus in monsoon (MPa)

  E sub_win = subgrade modulus in winter (MPa)

  E sub_sum = subgrade modulus in summer (MPa)

- **Correction factor for granular layers**

  E gran_mon = - 0.0003 *(E gran_sum) ^ 2 + 0.9584* (E gran_sum) - 32.989

  E gran_mon = 10.5523 *(E gran_win) ^ 0.624 – 113.857

  where, E gran_mon = granular layer modulus in monsoon (MPa)

E gran_win = granular layer modulus in winter (MPa)

E gran_sum = granular layer modulus in summer (MPa)

6.4.8. Back Calculation to Obtain Resilient Modulus of Existing Layers

Software used:

KGPBACK – Genetic Algorithm based software for back calculating the layer moduli. Works on three-layer system (Bituminous, Granular & Subgrade).

Data required:

- Deflections at various radial distances.
- Existing layer thickness – the existing layer thicknesses of various stretches have been obtained from the test pit.
- Layer moduli range – the layer moduli adopted for the analysis is shown in next section
- Poisson's ratio: BT-0.35, Granular-0.35, Subgrade-0.35 (For Back calculation).

Table 6-9 : Range of module (MPa)

Type of Layer	Lower and Upper Limit (Mpa)
Subgrade	75 to 100
Granular	250 to 500
Bituminous	1250 to 2500

6.4.9. Data Analysis

Resilient Moduli of each layer are calculated using KGPBACK for each test point. The summary of back calculated and corrected modulus of the all the three layers are presented in the following table for LHS (Hazaribagh to Ranchi) pavement.

Table 6-10 : L.H.S 15th percentile corrected Back Calculated Module (MPa)

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
40.517	2765.0	367.1	77.1
41.506	2352.2	334.5	77.1
42.500	3144.6	369.5	77.0
43.501	3160.3	369.1	77.0
44.548	3084.0	369.4	77.1
45.500	2748.4	368.4	77.1
46.526	3149.2	366.6	77.0
47.502	3163.3	369.7	77.1
48.523	3162.5	366.6	77.0
49.500	3112.7	369.6	77.1

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
50.518	3164.8	369.9	76.8
51.524	3146.9	369.4	77.1
52.513	1610.4	188.4	77.1
53.501	2794.6	350.2	77.1
54.513	2863.9	348.2	77.0
55.523	2870.9	369.6	77.1
56.507	3092.8	369.4	77.0
57.538	1619.6	188.8	77.0
58.516	1983.0	303.5	77.0
59.514	2860.6	369.7	77.1
60.509	3024.4	367.9	77.0
61.507	3023.9	367.7	77.1
62.510	1638.6	232.1	77.1
63.508	2191.1	324.6	77.1
64.504	1622.5	188.5	75.5
65.517	1617.3	188.4	75.9
66.253	1627.7	188.6	77.1
67.496	1572.0	243.0	77.1
68.508	2447.6	324.4	77.1
69.512	1474.1	189.1	75.5
70.527	1480.6	188.6	72.3
71.501	2407.2	318.7	77.1
72.510	1480.9	188.6	77.0
73.503	1473.0	188.0	64.5
74.516	1481.3	191.4	77.1
75.521	1472.6	188.0	76.6
76.507	1472.6	189.1	77.0
77.510	1570.9	189.3	76.7
78.509	1480.9	216.1	77.1
79.509	1569.3	188.7	76.9
80.505	1489.8	188.6	77.1
81.532	1495.2	196.4	77.0
82.513	1471.9	188.0	73.3
83.514	1468.3	187.9	61.4
84.505	1451.8	197.2	76.9
85.753	1399.0	188.7	74.8
86.757	1395.3	188.3	71.7
87.773	1393.9	187.9	55.9
88.772	1426.0	188.0	74.7
89.767	1553.5	304.9	77.1
90.764	1511.9	199.4	77.1

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
91.754	1396.0	188.4	66.8
92.771	2323.2	323.3	77.0
93.764	1523.9	232.6	77.1
94.778	2752.9	368.8	77.1
95.768	2757.3	368.3	77.1
96.757	2659.9	369.6	77.1
97.753	2706.5	369.9	77.0
98.756	2410.1	369.9	77.1
99.762	2386.7	367.9	77.1
100.762	2429.4	368.6	77.1
101.779	2421.0	368.4	77.1
102.768	2228.4	368.6	77.0
103.757	2445.1	368.0	77.0
104.753	2131.9	321.4	77.0
105.751	1824.9	339.7	77.1
106.760	2016.1	355.8	77.1
107.775	2443.0	369.1	77.0
108.757	2451.5	369.9	77.0
109.759	2421.6	368.3	76.9
110.767	2351.4	370.0	77.1
111.739	2218.1	368.5	77.1
112.760	2058.4	327.3	77.0
113.770	2395.0	368.9	77.0

Similar values of modulus of various layers for RHS (Ranchi to Hazaribagh) is given in table below.

Table 6-11 : R.H.S 15th percentile corrected Back Calculated Module (MPa)

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
115.000	2182.9	365.4	77.1
114.000	2195.7	368.7	77.0
113.009	2190.0	366.1	77.0
112.014	2166.4	369.7	77.1
111.005	1974.4	367.8	77.0
110.037	1897.9	189.8	77.0
109.023	2183.2	367.7	77.0
108.020	2166.7	369.3	77.1
107.016	1328.2	319.0	77.1
106.057	1315.7	197.5	77.1
105.000	1345.8	189.1	77.1
104.030	2190.2	369.2	77.0

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
103.029	2196.4	367.8	77.0
101.999	1960.9	328.5	77.0
101.013	2620.5	369.3	77.0
100.022	2308.5	326.5	77.1
99.003	2320.8	340.4	77.0
98.013	2234.2	347.7	77.1
97.013	2458.1	344.0	77.0
96.016	2659.8	369.3	77.1
95.025	2378.8	366.0	77.1
94.013	2649.3	368.9	77.1
93.010	1392.1	187.9	64.8
92.009	1687.9	327.8	77.0
91.009	2319.8	322.9	77.1
90.008	1478.5	272.4	76.8
89.007	1801.2	322.1	77.0
88.017	1361.8	194.9	76.6
87.025	2653.0	369.3	77.1
86.023	2002.8	269.4	77.0
85.038	1476.6	191.7	77.1
84.031	1493.5	193.9	75.6
83.031	2207.2	359.7	77.1
82.028	1433.6	188.5	77.0
81.026	1488.1	210.8	77.0
80.025	1544.7	302.3	77.1
79.037	2685.4	369.3	77.1
78.066	1418.1	225.9	73.2
77.016	2445.6	322.8	77.0
76.018	2446.9	365.2	77.1
75.010	1594.9	293.3	77.1
74.027	1520.9	189.0	77.0
73.031	2480.9	322.9	77.0
72.020	2872.7	369.1	77.0
71.016	1472.7	337.9	77.1
69.997	1525.3	188.3	76.3
69.005	1546.7	188.2	73.3
68.040	2563.3	324.3	77.1
67.000	1542.9	188.7	77.0
66.031	2573.2	330.2	77.1
65.009	1495.9	189.4	77.0
64.023	2847.9	368.7	77.0
63.033	2638.3	323.5	77.0

Chainage (km)	15th Percentile E Value (Mpa)		
	Bituminous Layer	Granular Layer	Subgrade
62.033	1725.2	296.3	77.1
61.030	2649.7	322.5	77.1
60.037	1997.6	324.0	77.1
59.021	2716.2	367.0	77.1
58.041	1696.9	307.0	77.1
57.042	1586.0	192.1	77.1
56.024	3042.5	369.1	77.1
55.018	2676.5	322.8	77.1
54.017	1617.3	253.4	77.1
53.027	2741.7	324.1	74.9
52.040	1707.8	296.6	77.1
51.025	1697.6	269.5	77.1
50.026	1561.5	272.4	77.1
49.023	1690.9	305.4	77.1
48.041	3053.8	369.5	77.1
47.030	2818.0	366.3	77.0
46.022	2743.3	324.2	77.0

6.4.10. REMAINING LIFE AND OVERLAY ESTIMATION

The in-service three-layer pavement system has been analysed with the 15th percentile back-calculated corrected layer moduli and layer thicknesses. The critical strains have been calculated using IITPAVE program. From the performance criteria equations, the residual/remaining rutting and fatigue life has been estimated.

6.4.11. PERFORMANCE CRITERIA

The layer moduli of in-service pavement back calculated from FWD deflection data are used to analyse the pavement for critical strains which are indicators of pavement performance in terms of rutting and fatigue cracking. The remaining life of pavement can be obtained using the Fatigue and Rutting criteria mentioned in IRC – 115:2014 and in IRC-37:2018, the same approach can be used for design of bituminous overlays for existing flexible pavements. The performance models are as follows.

Fatigue in Bituminous layer:

As specified in IRC-115, the fatigue model for 90 percent reliability is given below

$$Nf = 0.711 * 10^{-04} \times [1/\varepsilon t]^{3.89} * [1/MR]^{0.854}$$

Where, Nf = fatigue life in number of standard axles,

εt = Maximum Tensile strain at the bottom of the bituminous layer

MR= resilient modulus of the bituminous layer.

Rutting in Subgrade:

Rutting model for 90 percent reliability level as specified in IRC: 115-2014 was used as below;

$$N = 1.41 \times 10\text{-}08 \, [1/\varepsilon v] \, 4.5337$$

Where, N= Number of cumulative standard axles,

εv= Vertical strain in the subgrade.

Table 6-12 : Remaining Life of Existing Pavement-LHS

Chainage (km)	Obtained Strains (through IITPAVE)		Remaining Life of Existing Pavement (msa)		
	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life
40.517	0.0001091	0.0001798	211.6	1345.5	211.6
41.506	0.0001238	0.0001925	148.6	987.4	148.6
42.500	0.0001015	0.0001739	251.1	1565.2	251.1
43.501	0.0001013	0.0001737	251.9	1573.4	251.9
44.548	0.0001026	0.0001746	244.8	1537.0	244.8
45.500	0.0001093	0.0001798	211.2	1345.5	211.2
46.526	0.0001018	0.0001742	247.9	1553.0	247.9
47.502	0.0001012	0.0001735	252.7	1581.6	252.7
48.523	0.0001015	0.0001740	249.9	1561.1	249.9
49.500	0.0001021	0.0001742	247.5	1553.0	247.5
50.518	0.0001011	0.0001737	253.6	1573.4	253.6
51.524	0.0001015	0.0001737	250.9	1573.4	250.9
52.513	0.0001939	0.0002455	35.8	327.8	35.8
53.501	0.0001107	0.0001820	198.1	1273.3	198.1
54.513	0.0001095	0.0001813	202.4	1295.7	202.4
55.523	0.0001066	0.0001777	224.3	1419.1	224.3
56.507	0.0001025	0.0001746	245.1	1537.0	245.1
57.538	0.0001931	0.0002452	36.3	329.6	36.3
58.516	0.0001415	0.0002066	102.2	716.7	102.2
59.514	0.0001068	0.0001779	223.3	1411.9	223.3
60.509	0.0001039	0.0001758	237.0	1490.0	237.0
61.507	0.0001039	0.0001758	237.0	1490.0	237.0
62.510	0.0001762	0.0002329	51.3	416.3	51.3
63.508	0.0001303	0.0001976	129.4	877.0	129.4
64.504	0.0001931	0.0002478	36.2	314.3	36.2
65.517	0.0001935	0.0002473	36.0	317.1	36.0
66.253	0.0001926	0.0002448	36.5	332.1	36.5
67.496	0.0001766	0.0002323	52.6	421.2	52.6
68.508	0.0001229	0.0001925	147.8	987.4	147.8
69.512	0.0002037	0.0002536	31.9	283.0	31.9
70.527	0.0002037	0.0002594	31.8	255.4	31.8

Chainage (km)	Obtained Strains (through IITPAVE)		Remaining Life of Existing Pavement (msa)		
	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life
71.501	0.0001249	0.0001943	140.7	946.6	140.7
72.510	0.0002032	0.0002508	32.1	297.6	32.1
73.503	0.0002053	0.0002759	31.0	193.1	31.0
74.516	0.0002020	0.0002498	32.8	303.0	32.8
75.521	0.0002042	0.0002520	31.6	291.2	31.6
76.507	0.0002037	0.0002510	31.9	296.5	31.9
77.510	0.0001963	0.0002475	34.9	316.0	34.9
78.509	0.0001919	0.0002429	40.1	344.0	40.1
79.509	0.0001966	0.0002474	34.7	316.6	34.7
80.505	0.0002025	0.0002503	32.4	300.3	32.4
81.532	0.0001988	0.0002480	34.7	313.1	34.7
82.513	0.0002045	0.0002581	31.5	261.3	31.5
83.514	0.0002060	0.0002831	30.7	171.8	30.7
84.505	0.0002018	0.0002497	33.5	303.6	33.5
85.753	0.0002099	0.0002583	29.7	260.4	29.7
86.757	0.0002107	0.0002644	29.3	234.2	29.3
87.773	0.0002125	0.0003003	28.4	131.5	28.4
88.772	0.0002080	0.0002575	30.3	264.0	30.3
89.767	0.0001595	0.0002175	79.0	567.6	79.0
90.764	0.0001964	0.0002463	36.0	323.0	36.0
91.754	0.0002110	0.0002744	29.2	197.9	29.2
92.771	0.0001266	0.0001953	137.6	924.8	137.6
93.764	0.0001830	0.0002367	47.1	386.8	47.1
94.778	0.0001092	0.0001797	211.6	1348.9	211.6
95.768	0.0001091	0.0001797	212.1	1348.9	212.1
96.757	0.0001111	0.0001810	203.8	1305.5	203.8
97.753	0.0001100	0.0001803	208.7	1328.7	208.7
98.756	0.0001168	0.0001852	182.5	1176.6	182.5
99.762	0.0001177	0.0001860	178.6	1153.8	178.6
100.762	0.0001166	0.0001851	182.5	1179.4	182.5
101.779	0.0001168	0.0001853	181.8	1173.7	181.8
102.768	0.0001218	0.0001889	165.8	1075.6	165.8
103.757	0.0001163	0.0001850	183.3	1182.3	183.3
104.753	0.0001327	0.0001996	123.3	837.9	123.3
105.751	0.0001398	0.0002028	115.0	779.6	115.0
106.760	0.0001302	0.0001953	139.3	924.8	139.3
107.775	0.0001162	0.0001849	184.0	1185.2	184.0
108.757	0.0001158	0.0001846	186.0	1194.0	186.0
109.759	0.0001168	0.0001855	181.8	1168.0	181.8
110.767	0.0001183	0.0001862	177.4	1148.2	177.4

Chainage (km)	Obtained Strains (through IITPAVE)		Remaining Life of Existing Pavement (msa)		
	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life
111.739	0.0001221	0.0001890	164.8	1073.1	164.8
112.760	0.0001340	0.0002000	122.4	830.3	122.4
113.770	0.0001174	0.0001858	179.9	1159.4	179.9

Table 6-13 : Remaining Life of Existing Pavement-RHS

Chainage (km)	Obtained Strains (through IITPAVE)		Remaining Life of Existing Pavement (msa)		
	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life
115.000	0.0001245	0.0002032	154.9	772.7	154.9
114.000	0.0001242	0.0002117	155.6	641.7	155.6
113.009	0.0001241	0.0002030	156.4	776.1	156.4
112.014	0.0001242	0.0002028	157.4	779.6	157.4
111.005	0.0001303	0.0002076	141.4	701.1	141.4
110.037	0.0001765	0.0002493	44.9	305.8	44.9
109.023	0.0001241	0.0002029	156.9	777.8	156.9
108.020	0.0001243	0.0002028	156.9	779.6	156.9
107.016	0.0001685	0.0002370	73.0	384.6	73.0
106.057	0.0002136	0.0002719	29.2	206.3	29.2
105.000	0.0002150	0.0002730	28.0	202.6	28.0
104.030	0.0001236	0.0002024	158.9	786.6	158.9
103.029	0.0001237	0.0002026	158.0	783.1	158.0
101.999	0.0001381	0.0002157	113.4	589.4	113.4
101.013	0.0001129	0.0001939	193.9	955.5	193.9
100.022	0.0001273	0.0002077	135.5	699.6	135.5
99.003	0.0001247	0.0002049	146.1	744.0	146.1
98.013	0.0001259	0.0002053	145.4	737.5	145.4
97.013	0.0001204	0.0002014	159.5	804.5	159.5
96.016	0.0001120	0.0001930	197.5	975.9	197.5
95.025	0.0001191	0.0001990	171.1	849.4	171.1
94.013	0.0001123	0.0001933	196.1	969.0	196.1
93.010	0.0002129	0.0002971	28.2	138.0	28.2
92.009	0.0001487	0.0002234	96.7	502.8	96.7
91.009	0.0001276	0.0002081	133.7	693.5	133.7
90.008	0.0001737	0.0002439	59.2	337.7	59.2
89.007	0.0001454	0.0002214	99.8	523.7	99.8
88.017	0.0002109	0.0002713	29.8	208.4	29.8
87.025	0.0001121	0.0001932	197.3	971.3	197.3
86.023	0.0001492	0.0002273	82.5	464.8	82.5

Chainage (km)	Obtained Strains (through IITPAVE)		Remaining Life of Existing Pavement (msa)		
	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life
85.038	0.0002034	0.0002715	32.1	207.7	32.1
84.031	0.0002017	0.0002788	32.8	184.2	32.8
83.031	0.0001254	0.0002130	149.2	624.1	149.2
82.028	0.0002085	0.0002806	29.9	178.9	29.9
81.026	0.0001951	0.0002715	37.4	207.7	37.4
80.025	0.0001623	0.0002446	74.2	333.3	74.2
79.037	0.0001121	0.0002011	195.2	809.9	195.2
78.066	0.0001946	0.0002775	39.4	188.1	39.4
77.016	0.0001248	0.0002145	139.3	604.5	139.3
76.018	0.0001182	0.0002066	172.0	716.7	172.0
75.010	0.0001622	0.0002450	72.4	330.9	72.4
74.027	0.0002016	0.0002761	32.4	192.5	32.4
73.031	0.0001238	0.0002136	142.0	616.2	142.0
72.020	0.0001082	0.0001977	211.5	875.0	211.5
71.016	0.0001567	0.0002386	88.6	373.1	88.6
69.997	0.0002016	0.0002775	32.3	188.1	32.3
69.005	0.0002004	0.0002825	32.6	173.5	32.6
68.040	0.0001214	0.0002114	149.0	645.8	149.0
67.000	0.0002001	0.0002751	32.9	195.7	32.9
66.031	0.0001203	0.0002101	153.8	664.1	153.8
65.009	0.0002033	0.0002772	31.8	189.0	31.8
64.023	0.0001087	0.0001982	209.3	865.0	209.3
63.033	0.0001197	0.0002100	153.6	665.5	153.6
62.033	0.0001552	0.0002398	80.4	364.7	80.4
61.030	0.0001195	0.0002099	154.0	667.0	154.0
60.037	0.0001384	0.0002254	110.7	482.9	110.7
59.021	0.0001117	0.0002009	196.0	813.6	196.0
58.041	0.0001539	0.0002382	84.2	375.9	84.2
57.042	0.0001956	0.0002720	35.1	206.0	35.1
56.024	0.0001049	0.0001946	227.2	940.0	227.2
55.018	0.0001182	0.0002006	159.3	819.1	159.3
54.017	0.0001713	0.0002381	57.8	376.6	57.8
53.027	0.0001163	0.0001976	166.2	877.0	166.2
52.040	0.0001549	0.0002247	81.7	489.7	81.7
51.025	0.0001760	0.0002412	50.0	355.2	50.0
50.026	0.0001687	0.0002352	63.3	398.1	63.3
49.023	0.0001535	0.0002232	85.3	504.8	85.3
48.041	0.0001037	0.0001824	236.8	1260.7	236.8
47.030	0.0001087	0.0001868	211.2	1131.6	211.2
46.022	0.0001161	0.0001951	167.3	929.1	167.3

The calculated remaining life presented in the Tables 6-13 and 6-14 vary over the length of the project road in spite of the same traffic and pavement composition. It differs from 28.4 to 253.6 MSA and 28 to 236.8 MSA along LHS and RHS respectively. It is due to higher deflection value at isolated locations over one Km length, which gives lower modulus values. Since the IRC 115 guidelines suggest considering the 15th percentile modulus value for estimating the remaining life, generally lower modulus value shall be used, which gives less remaining life. The design traffic estimated at the end of the concessionaire period 2028 is 12MSA and after 10 years (period considered for an overlay) of life is 24 MSA and this value is compared with the remaining life of the pavement. As the remaining life is more than design MSA, the pavement is structurally adequate and does not require immediate overlay.

Table 6-14 Structural Overlay Requirement -LHS

Chainage (km)	Remaining Life of Existing Pavement (MSA)	Design Traffic (MSA)	Overlay Required or Not
40.517	211.6	24	NO
41.506	148.6	24	NO
42.500	251.1	24	NO
43.501	251.9	24	NO
44.548	244.8	24	NO
45.500	211.2	24	NO
46.526	247.9	24	NO
47.502	252.7	24	NO
48.523	249.9	24	NO
49.500	247.5	24	NO
50.518	253.6	24	NO
51.524	250.9	24	NO
52.513	35.8	24	NO
53.501	198.1	24	NO
54.513	202.4	24	NO
55.523	224.3	24	NO
56.507	245.1	24	NO
57.538	36.3	24	NO
58.516	102.2	24	NO
59.514	223.3	24	NO
60.509	237.0	24	NO
61.507	237.0	24	NO
62.510	51.3	24	NO
63.508	129.4	24	NO
64.504	36.2	24	NO
65.517	36.0	24	NO
66.253	36.5	24	NO
67.496	52.6	24	NO
68.508	147.8	24	NO

Chainage (km)	Remaining Life of Existing Pavement (MSA)	Design Traffic (MSA)	Overlay Required or Not
69.512	31.9	24	NO
70.527	31.8	24	NO
71.501	140.7	24	NO
72.510	32.1	24	NO
73.503	31.0	24	NO
74.516	32.8	24	NO
75.521	31.6	24	NO
76.507	31.9	24	NO
77.510	34.9	24	NO
78.509	40.1	24	NO
79.509	34.7	24	NO
80.505	32.4	24	NO
81.532	34.7	24	NO
82.513	31.5	24	NO
83.514	30.7	24	NO
84.505	33.5	24	NO
85.753	29.7	24	NO
86.757	29.3	24	NO
87.773	28.4	24	NO
88.772	30.3	24	NO
89.767	79.0	24	NO
90.764	36.0	24	NO
91.754	29.2	24	NO
92.771	137.6	24	NO
93.764	47.1	24	NO
94.778	211.6	24	NO
95.768	212.1	24	NO
96.757	203.8	24	NO
97.753	208.7	24	NO
98.756	182.5	24	NO
99.762	178.6	24	NO
100.762	182.5	24	NO
101.779	181.8	24	NO
102.768	165.8	24	NO
103.757	183.3	24	NO
104.753	123.3	24	NO
105.751	115.0	24	NO
106.760	139.3	24	NO
107.775	184.0	24	NO
108.757	186.0	24	NO
109.759	181.8	24	NO
110.767	177.4	24	NO

Chainage (km)	Remaining Life of Existing Pavement (MSA)	Design Traffic (MSA)	Overlay Required or Not
111.739	164.8	24	NO
112.760	122.4	24	NO
113.770	179.9	24	NO

Table 6-15 Structural Overlay Requirement -RHS

Chainage (km)	Remaining Life of Exisitng Pavement (MSA)	Design Traffic (MSA)	Overlay Required or Not
115.000	154.9	24	NO
114.000	155.6	24	NO
113.009	156.4	24	NO
112.014	157.4	24	NO
111.005	141.4	24	NO
110.037	44.9	24	NO
109.023	156.9	24	NO
108.020	156.9	24	NO
107.016	73.0	24	NO
106.057	29.2	24	NO
105.000	28.0	24	NO
104.030	158.9	24	NO
103.029	158.0	24	NO
101.999	113.4	24	NO
101.013	193.9	24	NO
100.022	135.5	24	NO
99.003	146.1	24	NO
98.013	145.4	24	NO
97.013	159.5	24	NO
96.016	197.5	24	NO
95.025	171.1	24	NO
94.013	196.1	24	NO
93.010	28.2	24	NO
92.009	96.7	24	NO
91.009	133.7	24	NO
90.008	59.2	24	NO
89.007	99.8	24	NO
88.017	29.8	24	NO
87.025	197.3	24	NO
86.023	82.5	24	NO
85.038	32.1	24	NO
84.031	32.8	24	NO
83.031	149.2	24	NO

Chainage (km)	Remaining Life of Exisitng Pavement (MSA)	Design Traffic (MSA)	Overlay Required or Not
82.028	29.9	24	NO
81.026	37.4	24	NO
80.025	74.2	24	NO
79.037	195.2	24	NO
78.066	39.4	24	NO
77.016	139.3	24	NO
76.018	172.0	24	NO
75.010	72.4	24	NO
74.027	32.4	24	NO
73.031	142.0	24	NO
72.020	211.5	24	NO
71.016	88.6	24	NO
69.997	32.3	24	NO
69.005	32.6	24	NO
68.040	149.0	24	NO
67.000	32.9	24	NO
66.031	153.8	24	NO
65.009	31.8	24	NO
64.023	209.3	24	NO
63.033	153.6	24	NO
62.033	80.4	24	NO
61.030	154.0	24	NO
60.037	110.7	24	NO
59.021	196.0	24	NO
58.041	84.2	24	NO
57.042	35.1	24	NO
56.024	227.2	24	NO
55.018	159.3	24	NO
54.017	57.8	24	NO
53.027	166.2	24	NO
52.040	81.7	24	NO
51.025	50.0	24	NO
50.026	63.3	24	NO
49.023	85.3	24	NO
48.041	236.8	24	NO
47.030	211.2	24	NO
46.022	167.3	24	NO

CHAPTER 7. PAVEMENT DESIGN AND O&M STRATEGY

7.1 PAVEMENT DESIGN

Flexible pavement is adopted in entire stretch of road except locations where existing pavement was concrete pavement. Pavement design of project is done in accordance with provision of IRC-37 (Flexible Pavement). Details of pavement design are discussed in separate chapter dedicated to subject.

Pavement design is basically interplay between ground strata strength and traffic loading on pavement. Pavement design has been reviewed in light of above.

A. Soil Strata

Various tests were conducted to determine the physical and strength properties of the subgrade soils and based on that the soils are classified as clayey sand, which is good material for the subgrade. The CBR value of subgrade soil was found more than 10%.

B. Traffic Loading

As per the manual of Four Laning (IRC: SP-84- "IRC-SP-84-2009_Manual of Specification and Standards for Four Laning of Highways", flexible pavement is to be designed for the minimum design period of 15 years or an operation period whichever is more.

The date of Signing of the Concession Agreement is 08th October 2009 and the concession period is 18 years. Hence project operation would continue up to 2028-2029.
It is reported that the following pavement (widening and reconstruction) has been adopted for the project stretch.

- GSB-250 mm
- WMM- 250 mm
- DBM-120 mm
- BC-50 mm

From above it can be observed that pavement provisions are for about 110 MSA on 10% CBR for entire design life as per IRC:37 2001. Hence can be taken as adequate.

Structure Design –

The ground strata of area are good and good bearing capacity is available at variable depth. There are 1 Major bridge, 3 ROBs and 9 Minor bridges. Design of all structure were approved by IE before awarding COD.

7.2 PAVEMENT REPAIR AND REHABILITATION

The work of pavement overlay is almost near completion and milling has also been considered at various locations and the details of BC and DBM overlay are as under:

Table 7-1 : BC Overlay Locations

Sr. No.	Side	Type of Road	Chainage		Length (Mtr)	Width (Mtr)	Thickness (Mtr)
			From	To			
1	RHS	Waiting lane	051+074	051+186	112	2.67	0.03
2	Median	MCW	051+044	051+074	30	4.5	0.03
3	LHS	Waiting lane	050+932	051+044	112	2.67	0.03
4	RHS	Waiting lane	049+117	049+159	42	2.66	0.03
5	RHS	Waiting lane	049+044	049+117	73	2.66	0.03
6	Median	MCW	049+014	049+044	30	4.5	0.03
7	LHS	Waiting lane	048+899	049+014	115	2.66	0.03
8	RHS	Waiting lane	047+351	047+381	30	2.65	0.03
9	RHS	Waiting lane	047+266	047+351	85	2.65	0.03
10	Median	MCW	047+236	047+266	30	4.5	0.03
11	LHS	Waiting lane	047+121	047+236	115	2.65	0.03
12	LHS	MCW	082+080	082+770	690	8.75	0.04
13	LHS	MCW	082+770	083+340	570	8.75	0.04
14	LHS	MCW	083+340	083+586	246	8.75	0.04
15	LHS	MCW	084+811	084+973	162	8.75	0.04
16	LHS	MCW	084+424	084+811	387	8.75	0.04
17	LHS	MCW	085+576	085+600	24	8.75	0.04
18	LHS	MCW	086+667	087+000	333	8.75	0.04
19	LHS	MCW	087+160	087+363	203	8.75	0.04
20	LHS	MCW	087+363	087+593	230	8.75	0.04
21	LHS	MCW	087+647	087+768	121	8.75	0.04
22	LHS	MCW	087+768	088+061	293	8.75	0.04
23	LHS	MCW	088+150	088+254	104	5	0.04
24	LHS	MCW	088+271	088+381	110	5	0.04
25	LHS	MCW	088+254	088+271	17	8.75	0.04
26	LHS	MCW	088+381	088+421	40	5	0.04
27	LHS	MCW	088+421	088+842	421	8.75	0.04
28	LHS	MCW	088+421	088+681	260	1.3	0.02
29	LHS	MCW	089+045	089+505	460	7	0.03
30	LHS	MCW	089+505	089+626	121	7	0.03
31	LHS	MCW	088+842	088+874	32	8.75	0.04
32	RHS	MCW	089+364	089+683	319	7	0.03
33	RHS	MCW	089+043	089+364	321	7	0.03

Sr. No.	Side	Type of Road	Chainage		Length (Mtr)	Width (Mtr)	Thickness (Mtr)
			From	To			
34	Span-01	Under VUP	089+685		32	7.5	0.04
35	Span-02	Under VUP	089+695		36	7.5	0.04
36	LHS	MCW	098+248	098+265	17	8.2	0.04
37	LHS	MCW	098+557	098+655	98	8.75	0.04
38	LHS	MCW	104+200	104+545	345	8.75	0.04
39	LHS	MCW	104+046	104+144	98	8.75	0.04
40	LHS	MCW	104+545	104+643	98	8.75	0.04
41	LHS	MCW	104+715	104+900	185	8.75	0.04
42	LHS	MCW	105+800	105+850	50	8.75	0.04
43	LHS	MCW	105+914	106+000	86	8.75	0.04
44	LHS	MCW	106+070	106+125	55	8.75	0.04
45	LHS	MCW	106+125	106+256	131	8.75	0.04
46	LHS	MCW	106+355	106+371	16	8.75	0.04
47	LHS	MCW	106+371	106+390	19	8.75	0.04
48	LHS	MCW	106+466	106+696	230	8.75	0.04
49	LHS	MCW	106+950	106+994	44	8.75	0.04
50	LHS	MCW	106+994	107+040	46	8.75	0.04
51	LHS	MCW	107+225	107+482	257	8.75	0.04
52	LHS	MCW	107+600	107+670	70	8.75	0.04
53	LHS	MCW	107+860	107+890	30	8.10	0.04
54	LHS	MCW	107+890	107+910	20	8.10	0.04
55	LHS	MCW	107+910	108+043	133	8.75	0.04
56	LHS	MCW	108+185	108+349	164	8.75	0.04
57	LHS	MCW	108+617	108+677	60	8.75	0.04
58	LHS	MCW	108+785	109+042	257	8.75	0.04
59	LHS	MCW	110+950	111+054	104	8.75	0.04
60	LHS	MCW	111+320	111+472	152	8.75	0.04
61	LHS	MCW	111+685	111+780	95	8.75	0.04
62	LHS	MCW	112+140	112+244	104	8.75	0.04
63	LHS	MCW	112+590	112+630	40	8.75	0.04
64	LHS	MCW	112+630	113+103	473	8.75	0.04
65	LHS	MCW	113+103	113+571	468	8.75	0.04
66	LHS	MCW	113+571	113+865	294	8.75	0.04
67	LHS	MCW	113+865	113+922	57	8.10	0.04
68	LHS	MCW	113+922	114+158	236	8.75	0.04
69	LHS	MCW	114+420	114+482	62	8.50	0.04
70	RHS	MCW	114+094	114+609	515	4.00	0.04
71	RHS	MCW	114+000	114+094	94	4.00	0.04

Sr. No.	Side	Type of Road	Chainage		Length (Mtr)	Width (Mtr)	Thickness (Mtr)
			From	To			
72	RHS	MCW	113+420	113+540	120	4.00	0.04
73	RHS	MCW	112+945	113+249	304	4.00	0.04
74	RHS	MCW	112+857	112+945	88	4.00	0.04
75	RHS	MCW	112+030	112+394	364	4.80	0.04
76	RHS	MCW	111+850	112+030	180	4.00	0.04
77	RHS	MCW	111+648	111+803	155	3.80	0.04
78	RHS	MCW	110+630	111+018	388	3.90	0.04
79	Median cut		114+280	114+337	57	1.50	0.03
80	Median cut		113+840	113+868	28	1.50	0.03
81	Median cut		111+870	111+900	30	1.50	0.03
82	RHS	MCW	108+846	109+098	252	4.00	0.04
83	RHS	MCW	108+699	108+846	147	3.90	0.04
84	RHS	MCW	105+972	106+390	418	3.90	0.04
85	RHS	MCW	105+688	105+817	129	3.90	0.04
86	RHS	MCW	106+390	107+292	902	3.90	0.04
87	RHS	MCW	105+092	105+196	104	3.90	0.04
88	RHS	MCW	104+790	104+902	112	3.90	0.04
89	RHS	MCW	102+000	102+090	90	4.00	0.04
90	RHS	MCW	101+860	101+941	81	3.90	0.04
91	RHS	MCW	101+150	101+180	30	8.75	0.04
92	RHS	MCW	101+114	101+150	36	4.00	0.04
93	Median cut		100+700	100+720	20	5.00	0.03
94	Median cut		104+900	104+934	34	5.00	0.03
95	Median cut		107+760	107+790	30	1.30	0.03
96	Median cut		108+750	108+780	30	1.20	0.03
97	RHS	MCW	087+930	089+000	1070	4.00	0.04

Table 7-2 : DBM Overlay Locations

Sr. No.	Side	Type of Road	Chainage		Length (Mtr)	Width (Mtr)	Thickness (Mtr)
			From	To			
1	LHS	MCW	084+464	084+683	219	3.5	0.06
2	LHS	MCW	087+160	087+304	144	4	0.06
3	LHS	MCW	113+630	113+658	28	4.0	0.06

Road Marking is also considered for the above-mentioned locations.

7.3 IMMEDIATE REPAIR/ REHABILITATION WORK

As it's specified in chapter6, the present condition of the pavement is good and no distresses were observed. Hence, no immediate repair/ rehabilitation work is required for Main carriage way.

Since there is no overlay laid on the service road, the structural overlay of 30mm thick BC has been proposed in the year 2024.

7.4 MAJOR MAINTENANCE SCHEDULES

7.4.1. Major Maintenance (Structural Overlay)

As it is explained in the earlier sections, the pavement is designed for the full concession period. The remaining life of pavement was evaluated by using FWD technique in April 2023 and the same is presented in Table 6.12 & Table 6.13 of Chapter-6 for both the carriageways.

Table 7.3 The remaining life of pavement as per April 2023 is summarized below

Direction	Remaining Life (MSA)		
	Minimum	Maximum	
LHS direction	**28.4**	**253.6**	
RHS direction	**28.0**	**236.8**	

Future periodic intervention is planned on the basis of projected MSA and remaining life of pavement taking original crust design and major repair into consideration. Following table summarize location wise periodic interventions during concession period of project.

Table 7.4 Major Maintenance requirement

Overlay	Year		Remarks
Periodic overlay	**2024**	Service Road (SR)	Bituminous Concrete (BC) -30mm thick
Periodic overlay	**50% of work in financial year 2027-2028** **50% of work in financial year 2028-2029**	Main Carriageway and intersections, truck lay bye, bus bays -	Bituminous Concrete (BC) -30mm thick. Bituminous Concrete (BC) -40mm thick.*****
		Service Road (SR)	Bituminous Concrete (BC) -30mm thick.

* 40mm thick BC proposed at the locations where the remaining life of existing pavement (MSA) less than 40 MSA. As per the Table 6.14 and Table 6.15 of chapter -6 the no of locations where existing pavement (MSA) less than 40 MSA were given below.

Direction	Length	Length considered
LHS	Around 25 Km	Overlay work is in the progress and after completion of that the length will be less. However, length considered 15 Km same as like RHS.
RHS	Around 15 Km	15 Km

CHAPTER 8. COST OF MAJOR REPAIR AND BALANCE WORK

8.1 GENERAL

The project road, Hazaribagh to Ranchi section of NH-33 from km 40.500 to Km 114.000 is under traffic operation and four laning had been completed. Road pavement and other elements have deteriorated in some parts of the stretch and repair of the same is in progress. There are a few minor items that are still to be completed. The cost of such balance works and the cost of major repairs required to bring the project to specification is given in this chapter. The cost has been worked out / verified in the following heads.

8.2 COST OF MAJOR REPAIR WORKS

Design of major repair works has been presented in chapter 4 of this report. As per the analysis major repair of pavement is required on account of following.

- Structural deficiency in pavement (FWD analysis)
- Surface distresses (Visual Inventory)
- Riding Quality (Roughness Index by NSV)

The project stretch is in Good Condition and there is no requirement of major repair for pavement on the project stretch as overlay is already in progress.
Cost of improvement of structures is nominal. Same is given in table as under.

Table 8-1 : Summary of cost for Structure Routine Maintenance

Item	Amount (Rs.)
ROB	4,64,298
Major Bridges	9,54,159
Minor Bridges	13,94,459
Vehicular Underpass	14,400
Pedestrian Underpass	2,343
Structures O&M	**28,29,659**

CHAPTER 9. OPERATION & MAINTENANCE REQUIREMENT

9.1 GENERAL

Operation & Maintenance requirement of project stretch is assessed in the following heads

A. Routine Operation and Maintenance

B. Periodic Operation and Maintenance

Regular maintenance consists of primarily highway maintenance, which covers correcting pavement surface distresses, shoulders, traffic amenities and systems, structures, median, plantation, maintenance Highway patrolling and surveillance, accident management etc. Toll operation is not in Concessionaire scope this being an Annuity based contract.

At certain periods, elements like pavement, structures, etc require major maintenance in the form of overlays, replacement, etc. These come under periodic maintenance.

The cost of such regular and periodic maintenance is worked out and has been given in subsequent sections of this chapter.

9.2 ROUTINE OPERATION & MAINTENANCE

Cost of Operation and Maintenance of project is worked out based on information gathered from site visits, document study and good industry practice in area. Details of same is given as under

9.2.1. Toll Operation

Project road has one toll plazas at km 100+600 at Pundag.

The project is on a hybrid annuity basis hence Toll Plaza operation is not in the concessioner's scope. However other operations and maintenance related to highways are in the concessionaire's scope and same is given in subsequent sections.

9.2.2. Route Maintenance

Route maintenance covers maintenance items like cleaning, watering of plans, repair of shoulders, cutting of grass/shrubs, and patrolling the project for any untoward accidents/issues. Resources for this would consist of basically manpower, vehicles, and tools. It does not include any major damage repair. The estimated cost of annual route maintenance is given as under separately for machine and manpower. Repair& maintenance covers repairs of markings, signage, safety items, potholes, damages, structure maintenance, etc. The items and quantum of work can vary on a year-to-year basis depending on the nature of damage and repair required. Besides regular maintenance of roads, there will be periodic repairs in the form of major overlays and strengthening of pavement.

9.2.3. Projected Routine Operation and Maintenance

Routine Maintenance will consist of primarily following cost

- Road Property Management
- Highway Maintenance

- Routine maintenance
- Incident management
- Miscellaneous
- Structure Routine Maintenance
- IE Fee

Summary cost of routine maintenance is shown in table below.

Table 9-1 : Routine Maintenance cost summary

DESCRIPTION	AMOUNT IN RS.
Highway Maintenance	2,19,08,464
Road Property Management	82,27,537
Routine Maintenance	55,45,015
Incident Management	2,34,96,000
Miscellaneous	94,76,400
Structure Routine Maintenance	28,29,659
Total Cost of Project routine maintenance for the year 2023- 2024 in Rs	**7,14,83,075**

While working above costs, expenses have been taken judiciously to optimize the cost. Break up of above cost is provided in excel sheet provided along with the report in soft copy.

9.3 PERIODIC OPERATION AND MAINTENANCE

Periodic operation and maintenance cost mainly consist of structural overlays on pavements, major repairs and replacements of expansion joints and bearing of structures and some other minor costs like replacements of toll plaza tools and equipment's.

While assessing the major repair cost of pavement with the help of FWD data analysis repair intervention was designed on the basis of remaining life of pavement.

Future periodic intervention is planned on the basis of projected MSA and remaining life of pavement taking original crust design and major repair into consideration. Following table summarises location wise periodic interventions during concession period of project.

Cost of Periodic Maintenance is given as below.

Table 9-2 : Cost of Periodic Maintenance at price escalation

Year	Periodic Maintenance Cost (Rs.)
Oct 2023 - March 2024	1,86,04,539
2024-2025	3,71,15,783
2025-2026	Nil
2026-2027	Nil
2027-2028	41,98,93,627
April 2028 - July 2028	43,39,11,228

9.4 TOTAL COST OF OPERATION AND MAINTENANCE

Total cost of operation and maintenance consist of both regular and periodic maintenance. Combined Operation and Maintenance Expense with escalations and GST is given in Table 9-3.

Table 9-3 : Summary of Project Operation and Maintenance cost [inclusive of GST 18%]

Year	Routine Maintenance	Insurance	LIE fee	Electricity cost	Periodic Maintenance	IE Fee	Total O&M Cost
Oct 2023- Mar 2024	4.22	0.31	0.28	0.60	1.86	0.46	7.73
2024-2025	8.86	0.64	0.59	1.26	3.71	0.97	16.03
2025-2026	9.30	0.67	0.20	1.32		1.01	12.50
2026-2027	9.76	0.71	0.20	1.39		1.06	13.13
2027-2028	10.25	0.74	0.69	1.46	41.99	1.12	56.25
Apr 2028-2028 July	3.59	0.26	0.24	0.51	43.39	0.39	48.38
						O&M Cost =	**154.02 Cr**

Note: The client will pay 2% of Major/Periodic maintenance cost for supervision or PMC fee.

Annexure – 3.1

- Accident Data

SECTION IV
ACCIDENT REPORT

HAZARIBAGH RANCHI EXPRESSWAY LTD
ACCIDENT DATA

Sl No.	MONTH	TOTAL ACCIDENTS	FATAL	INJURY	CUMMULATIVE		
					TOTAL	FATAL	INJURY
1	Nov'12	1	0	1	1	0	1
2	Dec'12	12	0	10	13	0	11
3	Jan'13'	7	0	13	20	0	24
4	Feb'13'	8	1	13	28	1	37
5	Mar'13'	9	3	14	37	4	51
6	April'13'	16	1	17	53	5	68
7	May'13'	21	2	34	74	7	102
8	Jun'13	31	4	69	105	11	171
9	Jul'13	30	4	45	135	15	216
10	Aug'13	38	0	95	173	15	311
11	Sep'13	37	1	47	210	16	358
12	Oct'13	23	2	73	233	18	431
13	Nov'13	16	3	18	249	21	449
14	Dec'13	17	0	9	266	21	458
15	Jan'14	13	0	7	279	21	465
16	Feb'14	13	0	14	292	21	479
17	Mar'14	15	0	11	307	21	490
18	Apr'14	15	1	11	322	22	501
19	May'14	10	1	3	332	23	504
20	June'14	9	0	12	341	23	516
21	July'14	11	1	11	352	24	527
22	Aug'14	7	0	13	359	24	540
23	Sep'14	24	2	44	383	26	584
24	Oct'14	30	1	40	413	27	624
25	Nov'14	25	3	38	438	30	662
26	Dec'14	18	2	28	456	32	690
27	Jan'15	25	0	42	481	32	732
28	Feb'15	19	0	25	500	32	757
29	Mar'15	29	2	36	529	34	793
30	Apr'15	20	0	17	549	34	810
31	May'15	21	7	36	570	41	846
32	Jun'15	23	1	23	593	42	869
33	Jul'15	22	1	24	615	43	893
34	Aug'15	20	4	30	635	47	923
35	Sep'15	17	3	7	652	50	930
36	Oct'15	13	1	8	665	51	938

37	Nov'15	17	3	17	682	54	955
38	Dec'15	18	1	21	700	55	976
39	Jan'16	33	3	46	733	58	1022
40	Feb'16	46	6	73	779	64	1095
41	Mar'16	50	6	65	829	70	1160
42	Apr'16	58	2	84	887	72	1244
43	May'16	45	3	44	932	75	1288
44	Jun'16	41	4	47	973	79	1335
45	Jul'16	36	1	107	1009	80	1442
46	Aug'16	42	4	37	1051	84	1479
47	Sep'16	22	1	26	1073	85	1505
48	Oct'16	18	6	47	1091	91	1552
49	Nov'16	33	7	39	1124	98	1591
50	Dec'16	31	2	53	1155	100	1644
51	Jan'17	40	3	61	1195	103	1705
52	Feb'17	26	5	28	1221	108	1733
53	Mar'17	24	3	56	1245	111	1789
54	Apr'17	35	6	43	1280	117	1832
55	May'17	33	3	44	1313	120	1876
56	Jun'17	40	4	67	1353	124	1943
57	Jul'17	44	3	57	1397	127	2000
58	Aug'17	39	3	65	1436	130	2065
59	Sep'17	38	3	105	1474	133	2170
60	Oct'17	30	1	35	1504	134	2205
61	Nov'17	29	3	48	1533	137	2253
62	Dec'17	28	2	44	1561	139	2297
63	Jan'18	26	1	30	1587	140	2327
64	Feb'18	25	4	30	1612	144	2357
65	Mar'18	30	3	35	1642	147	2392
66	Apr'18	34	3	52	1676	150	2444
67	May'18	19	2	21	1695	152	2465
67	Jun'18	13	0	17	1708	152	2482
68	Jul'18	12	0	17	1720	152	2499
69	Aug'18	15	2	26	1735	154	2525
70	Sep'18	17	4	34	1752	158	2559
71	Oct'18	15	0	33	1767	158	2592
72	Nov'18	10	3	44	1777	161	2636
73	Dec'18	6	2	10	1783	163	2646
74	Jan'19	4	1	5	1787	164	2651
75	Feb'19	6	1	15	1793	165	2666
76	Mar'19	12	18	35	1805	183	2701
77	Apr'19	13	4	16	1818	187	2717
78	May'19	9	3	14	1827	190	2731

79	Jun'19	15	6	28	1842	196	2759
80	Jul'19	13	3	28	1855	199	2787
81	Aug'19	6	5	15	1861	204	2802
82	Sep'19	4	7	21	1865	211	2823
83	Oct'19	7	3	35	1872	214	2858
84	Nov'19	8	1	8	1880	215	2866
85	Dec'19	12	8	12	1892	223	2878
86	Jan'20	11	1	24	1903	224	2902
87	Feb'20	11	2	17	1914	226	2919
88	Mar'20	17	4	38	1931	230	2957
89	Apr'20	6	0	7	1937	230	2964
90	May'20	12	8	32	1949	238	2996
91	June'20	11	4	24	1960	242	3020
92	July'20	18	5	37	1978	247	3057
93	Aug'20	15	5	19	1993	252	3076
94	Sep'20	12	1	13	2005	253	3089
95	Oct'20	23	2	32	2028	255	3121
96	Nov'20	34	3	42	2062	258	3163
97	Dec'20	23	5	32	2085	263	3195
98	Jan'21	34	3	61	2119	266	3256
99	Feb'21	32	2	60	2151	268	3316
100	Mar'21	23	4	34	2174	272	3350
101	April'21	23	3	38	2197	275	3388
102	May'21	25	1	32	2222	276	3420
103	June'21	21	3	42	2243	279	3462
104	July'21	20	4	33	2263	283	3495
105	Aug'21	26	6	37	2289	289	3532
106	Sep'21	24	7	51	2313	296	3583

107	Oct'21	26	4	40	2339	300	3623
108	Nov'21	23	0	33	2362	300	3656
109	Dec'21	50	6	92	2412	306	3748
110	Jan'22	46	11	71	2458	317	3819
111	Feb'22	32	8	45	2490	325	3864
112	March'22	26	0	42	2516	325	3906
113	April'22	26	5	34	2542	330	3940
114	May'22	34	2	75	2576	332	4015
115	June'22	32	11	75	2608	343	4090
116	July'22	30	1	55	2638	344	4145
117	Aug'22	21	4	35	2659	348	4180
118	Sep'22	29	2	49	2688	350	4229
119	Oct'22	29	5	38	2717	355	4267
120	Nov'22	22	3	38	2739	358	4305
121	Dec'22	20	3	28	2759	361	4333
122	Jan'23	31	5	46	2790	366	4379

HREL Accident Report (01 April 2021 April 2023)

Please record accident data for all months in table given below and accident data for current month should be maintained first and thereafter for subsequent months

Legends

A : Urban/Rural and Details of Surrounding Land use

B : 1-Overturning, 2-Head on collision, 3-Rear End Collision, 4-Collision Brush/Side Wipe, 5-Right Turn Collision, 6-Skidding, 7-Right Turn Collision, 8-Others

C : 1-Fatal, 2-Grievous Injury, 3-Minor Injured, 4-Non Injury

D : 1-Drunken, 2-Overspeeding, 3-Vehicle out of control, 4-Fault of driver of motor vehicle/driver of other vehicle/cyclist/pedestrian/passenger, 5-Defect in mechanical condition of motor vehicle/road condition,7 - Unknow

E : 1-Single lane, 2-Two lanes, 3-Three lanes or more without central divider (median), 4-Four lanes or more with central divide

F : 1-Straight Road, 2-Slight Curve, 3-Sharp Curve, 4-Flat Road, 5-Gentle incline, 6-Steep incline, 7-Hump, 8-Dip

G : 1-T Junction, 2-Y Junction, 3-Four arm junction, 4-Staggered junction, 5-Junction with more than 4 arms, 6-Roundabout junction, 7-Manned Rail crossing, 8-Unmanned Rail crossing, 0-Not Applicabl

H : 1-Fine, 2-Mist/Fog, 3-Cloud, 4-Light rain, 5-Heavy rain, 6-Hail/sleet, 7-Snow, 8-Strong Wind, 9-Dust Storm, 10-Very Hot, 11-Very Cold, 12-Other extraordinary weather conditio

Road Accident Report																								
Sl. No.	Date	Time of Acc. (am/pm)	Time of arrival at Acc. location(am/pm)	Time of first aid done (am/pm)	Time of dropping injured at hospital (am/pm)	Chainage	Side	A Accident Location	B Nature of Accident	C Classification of Accident	D Causes	E Road Feature	F Road Condition	G Intersection Type and Control	H Weather Condition	Vehicle Responsible	No. of affected persons					No. of animals killed if any	Help provided by Ambulance/Patrol	Remarks
																	Fatal	Grievous	Minor	Non Injured	Major Injuries turned to Fatal			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	02.04.2021	3:59 PM	4:02 PM	4:03 PM	4:23 PM	98+400	RHS	Urban	1	2	1	4	1	0	1	**Bike (JH-02Y-8528)**	0	1	1	0	0	0	Yes	An over speed Bike (JH-02Y-8528) lost his control due to drunk & drive and fell down on MCW at Ch.98+400 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 4:23 PM, Accident occurred on dt.02.04.2021 at 3:59 PM, Inormation given thorugh Mobile No.7004354879.
2	06.04.2021	8:20 AM	8:24 AM	8:26 AM	8:32 AM	98+950	RHS	Urban	4	2	2	4	1	0	1	**Bike (JH-01CV-6849) & Car (JH-01BL-4516)**	0	1	0	0	0	0	Yes	An over speed Bike (JH-01CV-6849) hit the Car (JH-01BL-4516) from side collision and bike fell down on MCW at Ch.98+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 8:32 AM, Accident occurred on 06.04.2021 at 8:20 AM, Information given through Mobile No.8987790662.
3	07.04.2021	7:10 AM	7:18 AM	7:20 AM	7:40 AM	93+520	RHS	Urban	3	2	2	4	1	0	1	Truck (GJ-06XX-9527)& Car (JH-01DW-5172)	0	1	0	0	0	0	Yes	An over speed Truck (GJ-06XX-9527) hit the Car (JH-01DW-5172) from rear end at Ch.93+520 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 7:40 AM, Accident occurred on 07.04.2021 at 7:10 AM, Information given through Mobile No.8102655716.
4	07.04.2021	11:57 AM	12:01 AM	12:04 AM	N/A	96+600	RHS	Urban	3	3	5	4	1	0	1	turbo (JH-02L-6133) & unknown vehicle	0	0	1	0	0	0	Yes	An over speed turbo (JH-02L-6133) lost his control due to mechanical failure and hit the unknown vehicle from rear end at Ch.96+600 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 07.04.2021 at 11:57 AM, Information given through Mobile No.6203799730.
5	07.04.2021	1:55 PM	1:56 PM	1:57 PM	2:08 PM	100+450	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-02X-0258) & unknown vehicle	0	1	0	0	0	0	Yes	A Bike (JH-02X-0258) lost his control due to over speed and hit the unknown vehicle from rear end and fell down on MCW at Ch.100+450 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 2:08 PM, Accident occurred on 07.04.2021 at 1:55 PM, Information given through local Public.
6	07.04.2021	5:07 PM	5:15 PM	5:16 PM	5:47 PM	52+200	RHS	Urban	1	2	2	4	1	0	1	Bike(JH-02BB-8271)	0	1	0	0	0	0	Yes	An over speed Bike(JH-02BB-8271) hit the median kerb and fell down on MCW at Ch.52+200 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 5:47 PM, Accident occurred on 07.04.2021 at 5:07 PM, Information given through Mobile No.8210182513.
7	09.04.2021	2:11 PM	2:15 PM	N/A	N/A	104+700	RHS	Urban	3	1	2	4	1	0	1	Auto (JH-01BG-2591) & unknown vehicle	2	4	0	0	0	0	Yes	An over speed Auto (JH-01BG-2591) hit the unknown vehicle from rear end and overturned on MCW at Ch.104+700 (RHS) in HREL Project, 2 Person died on the spot & 4 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through 108 Ambulance, Accident occurred on 09.04.2021 at 2:11 PM, Information given through Mobile no.7667892628.

8	10.04.2021	12:45 PM	12:50 PM	12:52 PM	12:55 PM	103+900	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01EB-3976)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01EB-3976) from rear end and ran away at Ch.103+900 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Paula Hospital Ormanjhi at 12:55 PM, Accident occurred on 10.04.2021 at 12:45 PM.
9	12.04.2021	1:30 PM	1:35 PM	1:36 PM	1:40 PM	62+600	LHS	Urban	2	2	2	4	1	0	1	tempo (JH-02AJ-5790)& Bike(JH-02AJ-4351)	0	1	0	0	0	0	Yes	An over speed tempo (JH-02AJ-5790) hit the Bike(JH-02AJ-4351) from head on collision at Ch.62+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 1:40 PM, Accident occurred on 12.04.2021 at 1:30 PM, Information given through Mobile No.8709545184.
10	12.04.2021	1:35 PM	1:49 PM	N/A	N/A	82+300	RHS	Urban	3	2	2	4	1	0	1	Car (JH-01DC-8783) & truck (JH-02K-4065)	0	4	0	0	0	0	Yes	An over speed Car (JH-01DC-8783) hit the truck (JH-02K-4065) from rear end at Ch.82+300 (RHS) in HREL Project, 4 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through local public, Accident occurred on 12.04.2021 at 1:35 PM.
11	12.04.2021	2:41 PM	2:50 PM	N/A	N/A	81+100	LHS	Urban	4	2	2	4	1	0	1	Savari Van (JH-02U9641)	0	2	0	0	0	0	Yes	A Savari Van (JH-02U9641) lost his control due to tire burst and overturned on MCW at Ch.81+100 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured Persons shifted to the Hospital through PCR Van, Accident occurred on 12.04.2021 at 2:41 Pm, Information given through mobile no.9106648691.
12	13.04.2021	6:02 PM	6:05 PM	6:06 PM	6:13 PM	99+200	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-02W-0337)	0	1	1	0	0	0	Yes	An over speed Bike (JH-02W-0337) hit the dog and skidded on MCW at Ch.99+200 (RHS) in HREL Project, 1 Persons grievous & 1 Person minor inured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 6:13 PM, Accident occurred on 12.04.2021 at 6:02 PM, Information given through Mobile No.6202956771.
13	13.04.2021	2:45 PM	2:53 PM	N/A	N/A	93+300	RHS	Urban	3	2	2	4	1	0	1	truck (JH-02V-4690) & Bike (JH-24C-5309)	0	1	1	0	0	0	Yes	An over speed truck (JH-02V-4690) hit the Bike (JH-24C-5309) from rear end and overturned on MCW at Ch.93+300 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, grievously injured Person shifted to the Hospital Through Local Public, Accident occurred on 13.04.2021 at 2:45 PM, Information given through mobile no.6203799730.
14	15.04.2021	12:22 PM	12:30 PM	12:32 PM	12:45 PM	78+900	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-01DK-3964)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01DK-3964) from rear end and Bike fell down on MCW at Ch.78+900 (RHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Manorama Hospital Kujju at 12:45 PM, Accident occurred on 15.04.2021 at 12:22 PM, Information given through mobile no.8252098806.
15	15.04.2021	4:40 PM	4:42 PM	4:43 PM	4:47 PM	59+080	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02AF-6010)	0	1	1	0	0	0	Yes	A Bike (JH-02AF-6010) lost his control due to over speed and skidded at Ch.59+080 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:47 PM, Accident occurred on 15.04.2021 at 4:40 PM, Information given through mobile no.8789154033.
16	16.04.2021	9:10 PM	9:20 PM	9:22 PM	9:58 PM	92+600	RHS	Urban	1	2	2	4	1	0	1	Trailor (HR-38K-0376) , Car (JH-02W-0330) & Mini truck (MH-45T-8717)	0	1	0	0	0	0	Yes	An over speed Trailor (HR-38K-0376) lost his control due to mechanical failure (Break Fail) and first hit the Car (JH-02W-0330) and mini truck (MH-45T-8717) and overturned on MCW at Ch.92+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 11:58 PM, Accident occurred on 16.04.2021 at 9:10 PM, Information given through mobile No.6203799730.
17	18.04.2021	5:50 AM	5:52 AM	6:00 AM	N/A	58+700	RHS	Urban	1	3	1	4	1	0	1	Mini Truck (JH-01BH-5342)	0	0	1	0	0	0	Yes	An over speed Mini Truck (JH-01BH-5342) lost his control due to drunk & Drive and overturned on MCW at Ch.58+700 (RHS) in HREL Project, 1 Person minor injured in this accident, help provide by ambulance team, Accident occurred on 18.04.2021 at 5:50 AM, Information given through mobile no.8789154033.

18	18.04.2021	12:35 PM	12:40 PM	12:42 PM	N/A	64+420	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-02R-6408)	0	0	1	0	0	0	Yes	A Bike (JH-02R-6408) lost his control due to over speed and hit the median kerb and fell down on MCW at Ch.64+420 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 18.04.2021 at 12:35 PM, Information given through mobile no.7667081503.
19	18.04.2021	9:22 PM	9:25 PM	9:26 PM	9:50 PM	73+700	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Auto (JH-02AG-0134)	0	1	4	0	0	0	Yes	An Unknown vehicle hit the Auto (JH-02AG-0134) from rear end and ran away at Ch.73+700 (LHS) in HREL Project, 1 Person grievous & 4 Persons minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 9:50 PM, Accident occurred on 18.04.2021 at 9:22 PM, Information given through mobile no.6205208245.
20	25.04.2021	2:42 AM	2:53 AM	2:55 AM	2:59 AM	66+650	RHS	Urban	3	2	2	4	1	0	1	Bus (BR-02PA-1351)	0	0	1	2	0	0	Yes	An over speed Bus (BR-02PA-1351) lost his control and hit the unknown vehicle from rear end at Ch.66+650 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, first aid done by ambulance team and shifted to CHC mandu Hospital at 2:59 AM, Accident occurred on 25.04.2021 at 2:42 AM, Information given through mobile no.9304825379.
21	28.04.2021	10:30 PM	10:36 PM	10:38 PM	10:46 PM	95+200	RHS	Urban	1	2	2	4	1	0	1	(RJ-52GA-1087)	0	1	0	0	0	0	Yes	An over speed trailor (RJ-52GA-1087) lost his control due to over speed and overturned on MCW at Ch.95+200 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 10:46 PM, Accident occurred on 28.04.2021 at 10:30 PM, Information given through Mobile No.771768851.
22	29.04.2021	8:12 AM	8:18 AM	8:20 AM	8:25 AM	95+000	RHS	Urban	1	2	2	4	1	0	1	(NL-01N-0196)	0	1	0	0	0	0	Yes	An over speed trailor (NL-01N-0196) lost his control due to over speed and overturned on MCW at Ch.95+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 8:25 AM, Accident occurred on 29.04.2021 at 8:12 AM, Information given through Mobile No.6203799730.
23	30.04.02021	11:49 AM	12:00 PM	N/A	N/A	110+000	LHS	Urban	3	1	2	4	1	0	1	Unknown Vehickle	1	0	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end ran away at Ch.110+000 (LHS) in HREL Project, 1 Person died on the spot , Ambulance & Patrolling team reach there at 12:00 AM and inform to local Police, Accident occurred on 30.04.2021 at 11:49 PM, Information given through mobile no.9798533530.
24	03.05.2021	12:50 PM	12:57 PM	1:00 PM	N/A	104+780	LHS	Urban	3	3	2	4	1	0	1	**Unknown Vehicle & Car (JH-01DK-4824)**	0	0	1	0	0	0	Yes	An Unknown Vehicle hit the Car (JH-01DK-4824) from rear end and ran away at Ch.104+780 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 03.05.2021 at 12:50 PM, Information given through mobile no.7004800645.
25	04.05.2021	12:04 PM	12:08 PM	12:10 PM	12:30 PM	97+780	RHS	Urban	3	2	2	4	1	0	1	**A Mini Truck (JH-02AZ-3483) & Car (JH-05CV-4870)**	0	1	0	0	0	0	Yes	A Mini Truck (JH-02AZ-3483) lost his control due to over speed and hit the Car (JH-05CV-4870) from rear end and overturned on MCW at Ch.97+780 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 12:30 PM, Accident occurred on 04.05.2021 at 12:04 PM, Information given through mobile no.9471300000.
26	06.05.2021	1:41 AM	1:51 AM	N/A	N/A	50+500	RHS	Urban	3	1	2	4	1	0	1	truck (BR-26GA-4737) & car (JH-01CD-6352)	1	0	0	0	0	0	Yes	An over speed truck (BR-26GA-4737) hit the car (JH-01CD-6352) from rear end collision and Car Overturned on MCW at Ch.50+500 (RHS) in HREL Project, 1 Person fatal on spot , Accident occurred on 06.05.2021 at 1:41 AM, informed given through Mobile No. 7632994431

27	07.05.2021	9:30 AM	9:40 AM	9:42 AM	10:10 AM	110+000	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24G-2065)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24G-2065) from rear end and ran away at Ch.110+000 (LHS) in HREL Project, 2 Persons grievous injured in this accident,firsr aid done by ambulance team and shifted to RIMS Hospital Ranchi at 10:10 AM, Accident occurred on 07.05.2021 at 9:30 AM, Information given through mobile no.8580806173.
28	08.05.2021	7:11 PM	7:18 PM	7:20 PM	N/A	79+500	RHS	Urban	6	3	2	4	1	0	1	Bike (JH-02F-9231)	0	0	1	0	0	0	Yes	A Bike (JH-02F-9231) lost his control due to over speed and skidded at Ch.79+500 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 08.05.2021 at 7:11 PM, Information given through mobile no.7991120621.
29	09.05.2021	1:19 PM	1:22 PM	1:24 PM	1:35 PM	98+200	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-24D-4967)	0	1	0	0	0	0	Yes	A Bike (JH-24D-4967) lost his control due to over speed and skidded at Ch.98+200 (RHS) in HREL Project, 1 Person grievous injured in this accident , first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 1:35 Pm, Accident occurred on 09.05.2021 at 1:19 Pm, Information given through Mobile No.8987790662.
30	10.05.2021	11:39 PM	11:45 PM	11:47 PM	12:30 PM	96+800	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-24D-4967)	0	1	0	0	0	0	Yes	An over speed Scorpio (JH-01CS-8569) lost his control due to drunk & drive and hit the median kerb and overturned on MCW at Ch.96+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 12:30 AM, Accident occurred on 10.05.2021 at 11:39 PM, Information given through mobile no.6203799730.
31	11.05.2021	8:39 PM	8:43 PM	8:45 PM	8:56 PM	56+800	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02W-4124)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02W-4124) from rear and and ran away at Ch.56+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance and shifted to CHC Mandu at 8:56 PM, Accident occurred on 11.05.2021 at 8:39 PM, Information given through mobile no.9931564730.
32	13.05.2021	11:26 AM	11:32 AM	11:34 AM	11:40 AM	56+700	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike(N/A)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike(N/A) from rear end , and ran away at Ch.56+700 (LHS) in HREL Project, 1 Person grievous injured in this accident first aid done by ambulance team and shifted to CHC Mandu at 11:40 AM, Accident occurred on 13.05.2021 at 11:26 AM, Information given through mobile no.8789154033.
33	14.05.2021	2:12 PM	2:15 PM	2:17 PM	2:20 PM	73+500	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-01DT-3385) & unknown vehicle	0	1	0	0	0	0	Yes	A Bike (JH-01DT-3385) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.73+500 (RHS) in HREL Project, 1 Person grievous inured in this accident, first aid done by ambulance team and shifted to Manorma Nurshing Home Kujju at 2:20 PM, Accident occurred on 14.05.2021 at 2:12 PM, Information given through mobile no.9106648691.
34	14.05.2021	2:28 PM	2:31 PM	2:33 PM	N/A	77+200	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-05CJ-0608)	0	0	1	0	0	0	Yes	An over speed Bike (JH-05CJ-0608) lost his control and skidded at Ch.77+200 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 14.05.2021 at 2:28 PM, Information given through mobile no.9106648691.
35	16.05.2021	6:57 PM	7:12 PM	7:15 PM	7:35 PM	51+100	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-02B-4998) & Scooty (JH-24E-1850)	0	2	0	0	0	0	Yes	An over speed Bike (JH-02B-4998) hit the Scooty (JH-24E-1850) from rear end and both are fell down on MCW at Ch.51+100 (LHS) In HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 7:35 PM, Accident occurred on 16.05.2021 at 6:57 PM, Information given through mobile no.8789154033.
36	18.05.2021	5:15 PM	5:19 PM	5:21 PM	5:32 PM	58+640	LHS	Urban	1	2	2	4	1	0	1	Scorpio (UP-64AB-0696)	0	2	3	0	0	0	Yes	An over speed Scorpio (UP-64AB-0696) lost his control and overturned on MCW at Ch.58+640 (LHS) in HREL Project, 2 Persons grievous & 3 Persons minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:32 PM, Accident occurred on 18.05.2021 at 5:15 PM, Information given through mobile no.9608638418.

37	20.05.2021	4:37 PM	4:47 PM	4:49 PM	4:55 PM	108+900	RHS	Urban	3	2	2	4	1	0	1	Pickup Van (BR-01GH-5415) & (JH-01X-9674)	0	2	0	0	0	0	Yes	A Pickup Van (BR-01GH-5415) hit the Bike (JH-01X-9674) from rear end due to tire Burst and overturned on MCW at Ch.108+900 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Well Cure Hospital Ormanjhi at 4:55 PM, Accident occurred on 20.05.2021 at 4:37 PM, Information given through mobile no.7979844843.
38	22.05.2021	6:16 PM	6:20 PM	6:22 PM	6:35 PM	73+950	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-02F-5221)	0	1	0	0	0	0	Yes	A Bike (JH-02F-5221) lost his control due to over speed and skidded at Ch.73+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Manorana Nurshing Home Kujju at 6:35 PM, Accident occurred on 22.05.2021 at 6:16 PM, Information given through mobile no.8434232958.
39	23.05.2021	7:56 AM	8:05 AM	N/A	N/A	94+950	RHS	Urban	1	2	2	4	2	0	1	Tailor (HR-55R-5856)	0	2	0	0	0	0	Yes	A Tailor (HR-55R-5856) lost his control due to over speed and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured Persons shifted to the Hospital through PCR Van , Accident occurred on 23.05.2021 at 7:56 AM, Information given through Mobile No.6203799730.
40	23.05.2021	3:49 PM	3:58 PM	N/A	N/A	51+980	LHS	Urban	4	3	2	4	1	0	1	Innova Car (JH-05-AV-0889)	0	0	1	0	0	0	Yes	A Innova Car (JH-05-AV-0889) hit to Median Kerb due to over speed at Ch.51+980 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team , Accident occurred on 23.05.2021 at 3:49 PM, Information given through mobile no.9931564730.
41	23.05.2021	7:32 PM	7:36 PM	7:39 PM	8:15 PM	72+980	RHS	Urban	3	2	2	4	1	0	1	trailer (RJ-19GE-8421) & truck (BR-02GA-4147)	0	1	1	0	0	0	Yes	An Over speed trailer (RJ-19GE-8421) hit the truck (BR-02GA-4147) from rear end at Ch. 72+980 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 8:15 PM, Accident occurred on 23.05.2021 at 7:32 PM, Information given through mobile no.9905944278.
42	23.05.2021	10:30 PM	10:34 PM	10:36 PM	10:40 PM	60+560	RHS	Urban	1	2	1	4	1	0	1	Bike (N/A)	0	1	0	0	0	0	Yes	A Bike (N/A) lost his control due to drunk & drive and fell down on MCW at Ch.60+560 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 10:40 PM, Accident occurred on 23.05.2021 at 10:30 PM, Information given through mobile no.7992496067.
43	24.05.2021	10:05 PM	10:15 PM	10:17 PM	10:45 PM	113+000	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-01CS-4505)	0	1	0	0	0	0	Yes	A Bike (JH-01CS-4505) lost his control due to drunk & drive and fell down on MCW at Ch.113+000 (RHS) in HREL Project, 1 Person grievous injured in this accident first aid done by ambulance team and shifted to RIMS Ranchi at 10:45 PM, Accident occurred on 24.05.2021 at 10:05 PM, Information given through mobile no.7979844843.
44	25.05.2021	4:59 PM	5:03 PM	N/A	N/A	97+500	LHS	Urban	1	3	5	4	1	0	1	Car (JH-01CP-0227)	0	0	1	0	0	0	Yes	A Car (JH-01CP-0227) lost his control due to tire burst and hit the median Kerb at Ch.97+500 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 25.05.2021 at 4:59 PM, Information given through mobile no.6203799730.
45	28.05.2021	11:10 PM	11:24 PM	11:26 PM	12:33 PM	111+050	RHS	Urban	3	2	2	4	1	0	1	Trailer (NL-01N-3951) & Trailer (CG-04NB-4375)	0	1	0	0	0	0	Yes	An over speed Trailer (NL-01N-3951) hit the another Trailer (CG-04NB-4375) from rear end at Ch.111+050 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 12:33 AM, Accident occurred on 28.05.2021 at 11:10 PM, Information given through mobile no.6203799730.
46	28.05.2021	6:45 AM	6:46 AM	6:47 AM	6:48 AM	63+800	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-02Q-2134)	0	1	0	0	0	0	Yes	A Bike (JH-02Q-2134) lost his control due to over speed and skidded at Ch.63+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:48 AM, Accident occurred on 28.05.2021 at 6:45 AM, Information given through our Patrolling team.

47	29.05.2021	4:47 AM	5:02 AM	5:05 AM	N/A	49+060	LHS	Urban	1	3	2	4	1	0	1	car (JH-02V-7157)	0	0	1	0	0	0	Yes	A car (JH-02V-7157) hit the median kerb due to over speed and overturned on MCW at Ch.49+060 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 29.05.2021 at 4:47 AM, Information given through mobile no.9431794064.
48	31.05.2021	5:38 AM	5:50 AM	5:52 AM	6:22 AM	112+100	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the mentally challenge man from rear end and ran away at Ch.112+100 (RHS) in HREL Project, 1 Person grievous injured in this accident , first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 6:22 AM, Accident occurred on 31.05.2021 at 5:38 AMInformation given through mobile no.6203799730.
49	01.06.2021	4:11 PM	4:12 PM	4:14 PM	4:35 PM	100+600	LHS	Toll Plaza	1	2	1	4	1	0	1	**Bike (JH-02P-9325)**	0	1	0	0	0	0	Yes	A Bike (JH-02P-9325) lost his control due to drunk & drive and hit the median kerb and fell down on MCW at Ch.100+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 4:35 PM, Accident occurred on 01.06.2021 at 4:11 PM, Information given through Mobile No. 8825311624.
50	03.06.2021	4:38 AM	4:47 AM	4:50 AM	N/A	94+920	RHS	Urban	1	3	2	4	2	0	1	**Pickup Van (UP-67AT-5855)**	0	0	1	0	0	0	Yes	A Pickup Van (UP-67AT-5855) lost his control due to over speed and overturned on MCW at Ch.94+920 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 03.06.2021 at 4:38 AM, Information given through mobile no.6203799730.
51	04.06.2021	7:38 PM	7:48 PM	N/A	8:15 PM	92+380	RHS	Urban	1	1	5	4	1	3	1	Trailor (WB-37D-2167)	1	0	0	0	0	0	Yes	An over speed Trailor (WB-37D-2167) lost his control due to mechanical failure (Break Fail) and overturned at Ch.92+380 (RHS) in HREL Project, 1 Person died on the spot , Ambulance and patrolling team reach there at 7:48 PM and inform to local Police and body shifted to Sadar Hospital Ramgarh at 8:15 PM, Accident occurred on 04.06.2021 at 7:38 PM, Information given through Mobile No.6203799730.
52	05.06.2021	5:44 AM	5:46 AM	6:00 AM	N/A	77+500	RHS	Urban	3	3	2	4	1	0	1	Bike(JH-02X-6586) & Bike (JH-02AY-0479)	0	0	2	0	0	0	Yes	A Bike(JH-02X-6586) hit the another Bike (JH-02AY-0479) from rear end and both bikers fell down on MCW at Ch.77+500 (RHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team, Accident occurred on 05.06.2021 at 5:44 AM, Information given through Mobile No.9905944278.
53	05.06.2021	3:55 PM	4:00 PM	4:02 PM	4:09 PM	56+950	LHS	Urban	1	2	2	4	1	0	1	truck (KA-25D-7587)	0	1	0	0	0	0	Yes	An over speed truck (KA-25D-7587) lost his control and hit the median kerb and overturned on MCW at Ch.56+950 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:09 PM, Accident occurred on 05.06.2021 at 3:55 PM ,Information given through obile No.9931564730.
54	05.06.2021	10:24 PM	10:33 PM	N/A	N/A	92+500	RHS	Urban	3	2	2	4	2	3	1	unknown Trailor & XUV Car (JH-01DD-7000)	0	2	0	0	0	0	Yes	An unknown Trailor hit the XUV Car (JH-01DD-7000) from rear end and ran away at Ch.92+500 (RHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to Hospital through another vehicle, Accident occurred on 05.06.2021 at 10:24 PM, Information given through Mobile No.6203799730.
55	05.06.2021	11:30 PM	11:44 PM	11:46 PM	12:30 AM	112+200	RHS	Urban	3	1	2	4	1	0	1	Trailor (JH-01AL-9024) & (JH-05AH-0927)	1	0	2	0	0	0	Yes	An over speed Trailor (JH-01AL-9024) hit the Bolero (JH-05AH-0927) from rear end at Ch.112+200 (RHS) in HREL Project, 1 Person died on the spot and 2 Persons minor injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 12:30 AM, Accident occurred on 05.06.2021 at 11:30 PM, Information given through Mobile No.7979844843.
56	06.06.2021	3:39 PM	3:52 PM	N/A	N/A	47+960	RHS	Urban	3	2	1	4	1	0	1	Innova Car (JH-01DN-0014) & Bike (JH-13D-0522)	0	2	0	0	0	0	Yes	An over speed Innova Car (JH-01DN-0014) hit the Bike (JH-13D-0522) from rear end due to drunk & drive at Ch.47+960 (RHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through 108 Ambulance , Accident occurred on 06.06.2021 at 3:39 PM, Information given through our Patrolling team.

57	08.06.2021	2:45 PM	2:47 PM	2:50 PM	3:00 PM	75+100	RHS	Urban	3	2	2	4	1	0	1	Bike (A/F)	0	1	1	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and hit the Animal and fell down on MCW at Ch.75+100 (RHS) in HREL Project, 1 Person grievous & 1 Persons Minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 3:00 PM, Accident occurred on 08.06.2021 at 2:45 PM, Information given through Local Public.
58	08.06.2021	6:37 PM	6:43 PM	6:45 PM	6:58 PM	95+900	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-24E-7509)	0	1	1	0	0	0	Yes	A Bike (JH-24E-7509) lost his control due to over speed and skidded at Ch.95+900 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 6:58 PM, Accident occurred on 08.06.2021 at 6:37 PM, Information given through Mobile No.8102655716.
59	09.06.2021	8:26 AM	8:31 AM	8:35 AM	8:42 AM	95+530	RHS	Urban	1	2	2	4	2	0	1	truck (CG-08AB-4202)	0	2	2	0	0	0	Yes	A truck (CG-08AB-4202) lost his control due to over speed and overturned on MCW at Ch.95+530 (RHS) in HREL Project, 2 Persons grievous & 2 Persons minor injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 8:42 PM, Accident occurred on 09.06.2021 at 8:26 AM, Information given through mobile no.8102655716.
60	11.06.2021	1:50 PM	2:00 PM	2:05 PM	2:15 PM	96+800	RHS	Urban	3	2	2	4	2	0	1	Unknown Vehicle & Bike (JH-24D-6803)	0	2	1	0	0	0	Yes	An Unknown Vehicle hit the Bike (JH-24D-6803) from rear end and ran away at Ch.96+800 (RHS) in HREL Project, 2 Persons grievous & 1 Person minor inured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 2:15 PM, Accident occurred on 11.06.2021 at 1:50 PM, Information given through mobile No.9123194382.
61	16.06.2021	8:53 PM	9:09 PM	9:15 PM	9:30 PM	112+000	LHS	Urban	6	2	1	4	1	0	1	Bike (JH-01EG-9672)	0	3	0	0	0	0	Yes	A Bike (JH-01EG-9672) lost his control due to drunk & drive and fell down on MCW at Ch.112+000 (LHS) in HREL Project, 3 Persons grievous injured in this accident, first aid done by ambulance team and shifted to SM Memorial Hospital Ranchi at 9:30 PM, Accident occurred on 16.06.2021 at 8:53 PM, Information given through mobile No.7979844843.
62	17.06.2021	2:03 PM	2:05 PM	2:08 PM	2:18 PM	56+900	LHS	Urban	3	2	2	4	1	0	1	over speed Bike (JH-01DU-4309)	0	1	0	0	0	0	Yes	An over speed Bike (JH-01DU-4309) hit the Pedestrian from rear end and fell down on MCW at Ch.56+900 (LHS) in HREL Project, 1 Person grievous injured in this accident , first aid done by ambulance team and shifted to CHC Mandu at 2:18 PM, Accident occurred on 17.06.2021 at 2:03 PM, Information given through mobile No.8789154033.
63	20.06.2021	5:54 PM	6:00 PM	6:03 PM	6:22 PM	96+700	RHS	Urban	6	2	2	4	2	0	1	Bike (JH-24G-4383)	0	1	1	0	0	0	Yes	A Bike (JH-24G-4383) lost his control due to over speed and skidded at Ch.96+700 (RHS) in HREL Project, 1 Person grievous & 1 Person Minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 6:22 PM, Accident occurred on 20.06.2021 at 5:54 PM, Information given through Mobile No.9709168812.
64	20.06.2021	8:40 PM	8:44 PM	8:46 PM	8:54 PM	56+580	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02T-1958)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02T-1958) from rear end and ran away at Ch.56+580 (LHS) in HREL Project, 2 Persons grievous injured in this accident , first aid done by ambulance team and shifted to CHC Mandu at 8:54 PM, Accident occurred on 20.06.2021 at 8:40 PM, Information given through Mobile No.9955314367.
65	21.06.2021	11:50 PM	11:51 PM	11:55 PM	N/A	100+500	RHS	Urban	3	3	1	4	1	0	1	Car (JH-01BT-0913)	0	0	1	0	0	0	Yes	A Car (JH-01BT-0913) lost his control due to drunk & drive and hit the unknown vehicle from rear end at Ch.100+500 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 21.06.2021 at 11:50 PM.

66	23.06.2021	9:03 PM	9:14 PM	N/A	N/A	82+800	RHS	Urban	2	1	2	4	1	0	1	unknown Vehicle & Bike (A/F)	1	0	1	0	0	0	Yes	An unknown Vehicle hit the Bike (A/F) from head on collision and ran away bike person moving in wrong side at Ch.82+800 (RHS) in HREL Project, 1 Person died on the spot & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh , Accident occurred on 23.06.2021 at 9:03 PM, Information given through Mobile No.8083444329.
67	25.06.2021	2:32 PM	2:40 PM	2:45 PM	3:02 PM	52+220	LHS	Urban	1	2	1	4	2	0	1	Maruti omni Car (BR-06PD-8239)	0	6	2	0	0	0	Yes	A Maruti omni Car (BR-06PD-8239) lost his control due to drunk & drive and overturned at Ch.52+220 (LHS) in HREL Project, 6 Persons grievous injured & 2 Persons minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 3:02 PM, Accident occurred on 25.06.2021 at 2:32 PM, Information given through Mobile No.9931564730.
68	25.06.2021	10:34 PM	10:40 PM	10:42 PM	11:14 PM	55+140	LHS	Urban	3	2	2	4	2	0	1	truck (JH-01P-8454) & truck (MP-07HP-9625)	0	1	0	0	0	0	Yes	An over speed truck (JH-01P-8454) hit the another truck (MP-07HP-9625) from rear end at Ch.55+140 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 11:14 PM, Accident occurred on 25.06.2021 at 10:34 PM, Information given through Mobile No.6200854041.
69	27.06.2021	6:14 PM	6:25 PM	6:28 PM	6:40 PM	110+100	RHS	Urban	3	2	2	4	1	0	1	Unknown Tempo	0	1	0	0	0	0	Yes	An Unknown Tempo hit the Pedestrian from rear end and ran away at Ch.111+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 6:40 PM, Accident occurred on 27.06.2021 at 6:14 PM, Information given through mobile no.7979844843.
70	01.07.2021	8:33 PM	8:43 PM	8:45 PM	9:31 PM	110+000	RHS	Urban	3	2	2	4	1	0	1	**Unknown Vehicle**	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.110+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Gandhi Nagar Hospital Ranchi at 9:31 PM, Accident occurred on 01.07.2021 at 08:33 PM, Information given through Mobile No.9507754199.
71	02.07.2021	2:35 PM	2:41 PM	2:44 PM	N/A	104+580	RHS	Urban	2	3	2	4	1	0	1	**car (JH-01-AQ-0980) & Unknown Vehicle**	0	0	1	0	0	0	Yes	A car (JH-01-AQ-0980) lost his control due to over speed and hit the unknown vehicle from Head on Collision at Ch.104+580 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 02.07.2021 at 2:35 PM, Information given through mobile no.8987790662.
72	04.07.2021	7:57 PM	8:02 PM	8:04 PM	8:06 PM	103+700	RHS	Urban	6	2	1	4	1	0	1	Scooty (JH-01BC-4962)	0	2	0	0	0	0	Yes	An over speed Scooty (JH-01BC-4962) lost his control due to drunk & drive and overturned on MCW at Ch.103+700 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Piska Hospital Ormanjhi at 8:06 PM, Accident occurred on 04.07.2021 at 7:57 PM, Information given through mobile no.797984484.
73	05.07.2021	12:33 PM	12:36 PM	12:38 PM	12:52 PM	77+520	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01BA-2809)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01BA-2809) from rear end and ran away at Ch.77+520 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 12:52 PM, Accident occurred on 05.07.2021 at 12:33 PM, Information given through mobile no.8989154033.
74	05.07.2021	4:55 PM	4:57 PM	4:58 PM	5:02 PM	61+000	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AC-2927)	0	2	0	0	0	0	Yes	A Bike (JH-02AC-2927) hit the another Bike (JH-09R-9377) from rear end and both bike are fell down on MCW at Ch.61+000 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:02 PM, Accident occurred on 05.07.2021 at 4:55 PM, Information given through mobile no.8210182513.

75	06.07.2021	10:12 AM	10:19 AM	10:20 AM	N/A	94+800	RHS	Urban	1	1	2	4	3	0	1	Trailor (JH-01AQ-1201)	1	2	0	0	0	0	Yes	A Trailor (JH-01AQ-1201) lost his control due to over speed and overturned on MCW at Ch.94+880 (RHS) in HREL Project, 1 Person died on the spot and 2 Persons grievous injured in this accident, grievously injured Persons shifted to the Hospital through 108 Ambulance, Accident occurred on 06.07.2021 at 10:12 AM, Information given through mobile no.6200854041.
76	12.07.2021	11:37 PM	11:50 PM	11:51 PM	12:30 AM	112+000	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.112+000 (RHS) in HREL Project, 1 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 12:30 AM, Accident occurred on 12.07.2021 at 11:37 PM, Information given through Mobile No.8709636917.
77	13.07.2021	2:50 PM	3:00 PM	3:01 PM	3:15 PM	52+050	LHS	Urban	6	2	1	4	1	0	1	Bike (JH-01CG-8061)	0	4	0	0	0	0	Yes	A Bike (JH-01CG-8061) lost his control due to drunk & drive and hit the median kerb and fell down on MCW at Ch.52+050 (LHS) in HREL Project, 4 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 3:15 PM, Accident occurred on 13.07.2021 at 2:50 PM, Information given through PCR Team.
78	16.07.2021	9:15 AM	9:20 AM	N/A	N/A	96+700	RHS	Urban	1	2	2	4	2	0	1	Bike (JH-03V-3141)	0	1	0	0	0	0	Yes	A Bike (JH-03V-3141) lost his control due to over speed and fell down on MCW at Ch.96+700 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured Person shifted to the Hospital through 108 Ambulance, Accident occurred on 16.07.2021 at 9:15 AM, Information given through Mobile No.6203799730.
79	18.07.2021	3:24 PM	3:31 PM	3:33 PM	4:00 PM	94+880	RHS	Urban	1	1	2	4	3	0	1	Truck (AP-05TU-9651)	1	1	0	0	0	0	Yes	A Truck (AP-05TU-9651) lost his control due to over speed and overturned on MCW at Ch.94+880 (RHS) in HREL Project, 1 Person died on the spot & 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 4:00 PM, Accident occurred on 18.07.2021 at 3:24 PM, Information given through mobile no.6203799730.
80	19.07.2021	11:30 AM	11:35 AM	N/A	N/A	49+600	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	3	1	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.49+600 (LHS) in HREL Project, 3 Persons grievous injured & 1 Person Minor Injured in this accident, grievously injured Persons shifted to the Hospital through 108 Ambulance, Accident occurred on 19.07.2021 at 11:30 AM, Information given through Mobile No.6200854041.
81	20.07.2021	8:52 AM	8:53 AM	8:54 AM	8:55 AM	74+800	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle it the Pedestrian from rear end and ran away at Ch.74+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Manorma Hospital Kujju at 8:55 AM, Accident occurred on 20.07.2021 at 8:52 AM, Information given through our Patrolling team.
82	21.07.2021	11:10 AM	11:13 AM	11:14 AM	11:35 AM	72+800	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.72+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 11:35 AM, Accident occurred on 21.07.2021 at 11:10 AM, Information given through mobile no.8595325199
83	22.07.20221	3:05 AM	3:08 AM	N/A	3:20 AM	80+300	RHS	Urban	3	1	2	4	1	0	5	unknown vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.80+300 (RHS) in HREL Project, 1 Person died on the spot in this accident, Ambulance reach there and body shifted to Sadar Hospital Ramgarh at 3:20 AM, Accident occurred on 22.07.2021 at 3:05 AM, Information given through mobile no.8709636917.

84	23.07.2021	6:02 PM	6:06 PM	6:10 PM	N/A	75+500	LHS	Urban	3	3	2	4	1	0	1	unknown vehicle & Bike (JH-24E-2395)	0	0	2	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24E-2395) from rear end and ran away at Ch.75+500 (LHS) in HREL Project, 2 Persons minor injured in this accident, Help Provided by ambulance team , Accident occurred on 23.07.2021 at 6:02 PM, Information given through mobile no.6206191003.
85	25.07.2021	10:27 PM	10:35 PM	10:40 PM	N/A	75+900	LHS	Urban	1	3	2	4	1	0	1	Car (JH-02BC-4651)	0	0	3	0	0	0	Yes	A Car (JH-02BC-4651) hit the median kerb due to over speed and overturned on MCW at Ch.75+900 (LHS) in HREL Project, 3 Persons minor injured in this accident, Help provided by ambulance team, Accident occurred on 25.07.2021 at 10:27 PM, Information given through Mobile No.6299080176.
86	26.07.2021	6:25 PM	6:31 PM	6:33 PM	6:47 PM	94+800	RHS	Urban	6	2	1	4	3	0	3	Bike (JH-24F-3310)	0	2	1	0	0	0	Yes	A Bike (JH-24F-3310) lost his control due to drunk & drive and fell down on MCW at Ch.94+800 (RHS) in HREL Project, 2 Persons grievous injured & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 6:47 PM, Accident occurred on 26.07.2021 at 6:25 PM, Information given through Mobile No. 9771421931.
87	29.07.2021	4:55 AM	5:02 AM	5:04 AM	5:30 AM	95+500	LHS	Urban	6	2	2	4	2	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost is control due to over speed and fell down on MCW at Ch.95+500 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and Shifted to Sadar Hospital Ramgarh at 5:30 AM, Accident occurred on 29.07.2021 at 4:55 AM, Information given through mobile no.8709636917.
88	29.07.2021	8:30 AM	8:39 AM	N/A	9:10 AM	92+950	RHS	Urban	3	1	2	4	1	5	1	unknown vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.92+950 (RHS) in HREL Project, 1 Person died on the spot , shifted to Sadar Hospital Ramgarh at 9:10 AM,Accident occurred on 29.07.2021 at 8:30 AM, Information given through mobile no.8825191800.
89	31.07.2021	2:20 PM	2:20 PM	2:21 PM	2:30 PM	60+400	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear and ran away at Ch.60+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 2:30 PM, Accident occurred on 31.07.2021 at 2:20 PM, Information given through our patrolling team.
90	01.08.2021	3:47 AM	3:52 AM	3:53 AM	3:62 AM	77+500	RHS	Urban	3	3	2	4	1	0	1	**PCR Van & unknown vehicle**	0	0	3	0	0	0	Yes	PCR Van hit the unknown vehicle from rear end at Ch.77+500 (RHS) in HREL Project, 3 Persons minor injured in this accident, Help provided by ambulance team, Accident occurred on 01.08.2021 at 3:47 AM, Information given through mobile no.6205208245.
91	03.08.2021	8:28 AM	9:43 AM	9:44 AM	10:29 AM	112+850	LHS	Urban	3	2	2	4	1	0	1	**Unknown Vehicle**	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.112+850 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 10:29 AM, Accident occurred on 03.08.2021 at 9:28 AM, Information given through mobile no.7004800645.
92	04.08.2021	7:56 AM	8:00 AM	8:02 AM	8:20 AM	73+940	LHS	Urban	3	2	2	4	2	0	1	Unknown Vehicle hit the Bike (JH-01DA-0475)	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Bike (JH-01DA-0475) from rear end and ran away at Ch.73+940 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 8:20 AM, Accident Ocuured on 04.08.2021 at 7:56 AM,Information given through mobile no.9835724922.
93	04.08.2021	3:52 PM	4:00 PM	4:02 PM	4:17 PM	52+040	LHS	Urban	1	2	2	4	1	0	1	Car (BR-01EV-1172)	0	1	3	0	0	0	Yes	A Car (BR-01EV-1172) lost his control due to over speed and overturned on MCW at Ch.52+040 (LHS) in HREL Project, 1 Person grievous injured & 3 Persons minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:17 PM, Accident occurred on 04.08.2021 at 3:52 PM, Information given through mobile no.9931564730.

94	04.08.2021	4:13 PM	4:20 PM	N/A	4:35 PM	84+200	LHS	Urban	3	1	2	4	1	0	1	Hywa (NL-02N-7253)	1	0	0	0	0	0	Yes	An over speed Hywa (NL-02N-7253) hit the Bike (JH-02AG-7303) from rear end and ran away at Ch.84+200 (LHS) in HREL Project, 1 Person died on the spot, Accident occurred on 04.08.2021 at 4:13 PM, Information given through our Patrolling team.
95	05.08.2021	1:29 AM	1:44 AM	N/A	2:05 AM	84+380	LHS	Urban	3	1	2	4	1	0	1	truck (JH-10AG-2756) & Hywa (JH-10 AG-2756)	1	0	0	0	0	0	Yes	An over speed truck (JH-10AG-2756) hit the Hywa (JH-10 AG-2756) from rear end at Ch.84+380 (LHS) in HREL Project, 1 Person died on the spot , Shifted to Sadar Hospital Ramgarh , Accident occurred on 05.08.2021 at 1:29 AM, Information given through mobile no.8102655716.
96	05.08.2021	5:16 AM	5:24 AM	5:25 AM	6:38 AM	94+880	RHS	Urban	1	1	2	4	2	0	1	Trailer (HR-46D-7127)	1	0	0	0	0	0	Yes	A Trailer (HR-46D-7127) lost his control due to over speed and overturned on MCW at Ch.94+880 (RHS) in HREL Project, 1 Person died on the spot, shifted to Sadar Hospital Ramgarh at 6:38 AM, Accident occurred on 05.08.2021 at 5:16 AM, Information given through mobile no.8709046260.
97	05.08.2021	3:03 PM	3:15 PM	3:16 PM	3:17 PM	110+800	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01R-0774) from rear end and ran away at Ch.110+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Well Cure Hospital Ormanjhi at 3:17 PM, Accident occurred on 05.08.2021 at 3:03 PM, Information given through mobile no.7979844843.
98	05.08.2021	6:57 PM	6:59 PM	7:00 PM	7:05 PM	99+200	LHS	Urban	6	2	1	4	1	0	1	Bike (JH-01N-9584)	0	1	2	0	0	0	Yes	An over speed Bike (JH-01N-9584) lost his control due to drunk & drive and fell down on MCW at Ch.99+200 (LHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, first aid done by ambulance team and shifted to Piska Hospital Ormanjhi at 7:05 PM, Accident occurred on 05.08.2021 at 6:57 PM, Information given through mobile no.8225181900.
99	05.08.2021	11:28 PM	11:40 PM	11:42 PM	11:52 PM	54+100	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.54+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 11:52 PM, Accident occurred on 05.08.2021 at 11:28 PM, Information given through mobile no.9162597172.
100	07.08.2021	6:17 AM	6:23 AM	6:24 AM	6:30 AM	64+400	LHS	Urban	6	2	2	4	1	0	1	Scooty (JH-24C-2670)	0	1	0	0	0	0	Yes	A Scooty (JH-24C-2670) lost his control due to over speed and skidded at Ch.64+400 (LHS) in HREL Project , 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:30 AM, Accident occurred on 07.08.2021 at 6:17 AM, Information given through our Patrolling team.
101	07.08.2021	12:38 PM	12:44 PM	12:45 PM	12:50 PM	69+100	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.69+100 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 12:50 PM, Accident occurred on 07.08.2021 at 12:38 PM, Information given through Mobile No.8789154033.
102	07.08.2021	7:45 PM	7:48 PM	7:50 PM	7:55 PM	99+300	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-01DK-4886)	0	1	1	0	0	0	Yes	An over speed Bike (JH-01DK-4886) hit the animal and fell down on MCW at Ch.99+300 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 7:55 PM, Accident occurred on 07.08.2021 at 7:45 PM, Information given through mobile no.8102655716.
103	09.08.2021	10:43 AM	10:48 AM	10:50 AM	N/A	94+850	RHS	Urban	1	3	2	4	3	0	1	Container (HR-55U-0921)	0	0	2	0	0	0	Yes	A Container (HR-55U-0921) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team, Accident occurred on 09.08.2021 at 10:43 AM, Information given through mobile no.8825191800.

104	09.08.2021	12:21 PM	12:28 PM	12:29 PM	12:34 PM	68+800	RHS	Urban	6	2	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.68+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 12:34 PM, Accident occurred on 09.08.2021 at 12:21 PM, Information given through mobile no.7979913430.
105	10.08.2021	11:09 AM	11:17 AM	11:20 AM	N/A	108+480	RHS	Urban	1	3	2	4	1	0	1	Mini Truck (JH-02K-1750)	0	0	1	0	0	0	Yes	A Mini Truck (JH-02K-1750) lost his control due to over speed and overturned on MCW at Ch.108+480 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 10.08.2021 at 11:09 Am, Information given through mobile no.8825191800.
106	11.08.2021	12:01 AM	12:04 AM	12:05 AM	1:34 AM	97+800	LHS	Urban	5	2	2	4	2	0	1	omni car (JH-09W-2548)	0	1	0	0	0	0	Yes	A maruti omni car (JH-09W-2548) lost his control due mechanical failure and stop on MCW at Ch.97+800 (LHS) 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to Medanta Hospital Irba at 1:34 Am, Accident occurred on 11.08.2021 at 12:01 AM, Information given through mobile no.8102655716.
107	15.08.2021	6:01 AM	6:08 AM	6:09 AM	6:29 AM	94+960	RHS	Urban	3	2	2	4	2	0	1	Container (NL-02N-4372)	0	1	0	0	0	0	Yes	A Container (NL-02N-4372) lost his control due to over speed and hit Street light Pole from rear end at Ch.94+960 (RHS) in HREL Project, 1 Person grievous injured & 1 Nos. Street Light Pole damaged in this accident, first aid done by ambulance team and shifted to Sadar hospital Ramgarh at 6:29 AM, Accident occurred on 15.08.2021 at 6:01 AM, Information given through PCR Van.
108	15.08.2021	1:39 PM	1:42 PM	1:43 PM	1:49 PM	61+810	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-01CD-8016)	0	1	0	0	0	0	Yes	A Bike (JH-01CD-8016) lost his control due to over speed and fell down on MCW at Ch.61+810 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 1:49 PM, Accident occurred on 15.08.2021 at 1:39 PM, Information given through mobile no.9955314667.
109	16.08.2021	11:30 PM	11:45 PM	11:47 PM	12:20 AM	111+380	LHS	Urban	3	2	2	4	1	0	1	Car (MH-43D-7357) & Car (JH-01CF-3026)	0	1	0	0	0	0	Yes	An over speed Car (MH-43D-7357) hit the another Car (JH-01CF-3026) from rear end at Ch.111+380 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Ranchi at 12:20 AM, Accident occurred on 16.08.2021 at 11:30 PM, Information given through mobile no.8102655716.
110	17.08.2021	9:54 AM	9:57 AM	10:00 AM	N/A	73+600	RHS	Urban	3	3	2	4	1	0	1	Bike (JH-02AF-0575) & Bike (JH-02W-5402)	0	0	3	0	0	0	Yes	An over speed Bike (JH-02AF-0575) hit the another Bike (JH-02W-5402) from rear end and fell down on MCW at Ch.73+600 (RHS) in HREL Project, 3 Persons minor injured in this accident, help provided by ambulance team , Accident occurred on 17.08.2021 at 9:54 AM, Information given through mobile no.8789154033.
111	20.08.2021	2:41 AM	2:45 AM	2:47 AM	3:22 AM	98+100	RHS	Urban	3	1	2	4	2	0	1	Car (JH-05CC-3324) & unknown vehicle	1	2	0	0	0	0	Yes	A Car (JH-05CC-3324) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.98+100 (RHS) in HREL Project, 1 Person died on the spot & 2 persons grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 3:22 AM, Accident occurred on 20.08.2021 at 2:41 AM, Information given through mobile no.6203799730.
112	20.08.2021	8:05 AM	8:12 AM	8:13 AM	8:33 AM	95+640	RHS	Urban	1	2	2	4	2	0	1	Container (UK-06CA-7361)	0	1	0	0	0	0	Yes	A Container (UK-06CA-7361) lost his control due to over speed and hit the drain kerb and overturned at Ch.95+640 (RHS) in HREL Project, 1 Person grievous injured in this Accident, first aid done by ambulance team and shifted to Sadar Hospiral Ramgarh at 8:33 AM, Accident occurred on 20.08.2021 at 8:05 AM, Information given through mobile no.6203799730.

113	21.08.2021	7:45 PM	7:50 PM	7:52 PM	8:15 PM	94+900	RHS	Urban	1	1	2	4	3	0	1	Trailer (RJ-02GB-4755)	2	1	0	0	0	0	Yes	A Trailer (RJ-02GB-4755) lost his control due to over speed and overturned on MCW at Ch.94+900 (RHS) in HREL Project, 2 Persons died on the spot and 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:15 PM, Accident occurred on 21.08.2021 at 7:45 PM, Information given through mobile no.6203799730.
114	25.08.2021	10:59 AM	11:12 AM	11:13 AM	12:15 PM	112+800	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.112+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 12:15 PM, Accident occurred on 25.08.2021 at 10:59 AM, Information given through mobile no.6203799730.
115	28.08.2021	3:41 PM	3:43 PM	3:46 PM	3:52 PM	57+900	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-24D-3114)	0	3	0	0	0	0	Yes	A Bike (JH-24D-3114) lost his control due to over speed and hit the bicycle from rear end and both are fell down on MCW at Ch.57+900 (LHS) in HREL Project, 3 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 3:52 PM, Accident occurred on 28.08.2021 at 3:41 PM, Information given through mobile no.8210182513.
116	03.09.2021	10:10 PM	10:15 PM	10:16 PM	11:45 PM	96+700	RHS	Urban	1	1	2	4	3	0	1	**Truck (AP-05TX-5128)**	1	0	0	0	0	0	Yes	A Truck (AP-05TX-5128) lost his control due to over speed and hit the Median Barrier and overturned on MCW at Ch.96+700 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team , patient dead during Hospital Sifting "RIMS Ranchi at 11:45 PM, Accident occurred on 03.09.2021 at 10:10 PM, Information given through mobile no.8102655716.
117	04.09.2021	10:15 AM	10:17 AM	10:18 AM	10:27 AM	98+500	LHS	Urban	1	2	2	4	1	0	1	**Bike (JH-01CC-7150)**	0	1	1	0	0	0	Yes	An over speed Bike (JH-01CC-7150) hit the unknown vehicle from rear end and fell down on MCW at Ch.98+500 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 10:27 AM, Accident occurred on 04.09.2021 at 10:15 AM, Information given through mobile no.7050453134.
118	06.09.2021	2:36 AM	2:42 AM	2:43 AM	3:15 AM	105+300	RHS	Urban	6	2	1	4	1	0	1	Bike (JH-01BE-6402)	0	1	0	0	0	0	Yes	A Bike (JH-01BE-6402) lost his control due to drunk & drive and fell down on MCW at Ch.105+300 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 3:15 AM, Accident occurred on 06.09.2021 at 2:36 AM, Information given through mobile no.8987790662.
119	06.09.2021	10:19 AM	10:23 AM	10:24 AM	11:52 AM	78+100	LHS	Urban	3	1	2	4	1	0	1	Truck (NL-01N-3343) & Bike (JH-12L-1910)	1	2	0	0	0	0	Yes	An over speed Truck (NL-01N-3343) hit the Bike (JH-12L-1910) from rear end at Ch.78+100 (LHS) in HREL Project, 1 Person dead on the spot & 2 Persons grievous injured it this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:52 AM, Accident occurred on 06.09.2021 at 10:19 AM, Information give through mobile no.6299080176.
120	07.09.2021	12:45 PM	12:47 PM	12:48 PM	1:30 PM	74+380	RHS	Urban	3	2	2	4	1	0	1	Bus (JH-02AE-3687)	0	1	0	0	0	0	Yes	A Bus (JH-02AE-3687) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.74+380 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 1:30 PM, Accident occurred on 07.09.2021 at 12:45 PM, Information given through our Patrolling team.
121	07.09.2021	8:03 PM	8:10 PM	N/A	N/A	80+500	LHS	Urban	1	2	2	4	1	0	1	Bike (BR-27Q-8442)	0	2	0	0	0	0	Yes	A Bike (BR-27Q-8442) lost his control due to over speed and hit the median kerb and fell down on MCW at Ch.80+500 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through 108 Ambulance, Accident occurred on 07.09.2021 at 8:03 PM, Information given through mobile no.8709806554.

122	07.09.2021	7:28 PM	7:40 PM	N/A	9:08 PM	92+050	RHS	Urban	5	1	2	4	1	3	1	Hywa (JH-01DC-8115)& Bike (JH-02G-9578)	2	0	0	0	0	0	Yes	A Hywa (JH-01DC-8115) lost his control due to over speed and hit the Bike (JH-02G-9578) from right turn collision at Ch.92+050 (RHS) in HREL Project, 2 Persons fatal on the spot in this accident, Ambulance and Patrolling team reach there at 7:40 PM and inform to local Police, dead Persons shifted to Sadar Hospital Ramgarh at 9:08 PM, Accident occurred on 07.09.2021 at 7:28 PM, Information given through mobile no.6203799730.
123	09.09.2021	6:59 PM	7:07 PM	7:10 PM	7:19 PM	94+850	RHS	Urban	1	2	2	4	3	0	1	truck (AP-16TX-6334)	0	2	0	0	0	0	Yes	A truck (AP-16TX-6334) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 7:19 AM, Accident occurred on 09.09.2021 at 6:59 AM, Information given through mobile no.6203799730.
124	10.09.2021	12:32 AM	12:35 PM	12:36 PM	1:24 PM	58+550	LHS	Urban	3	2	2	4	1	0	1	Hywa (JH-02AK-6625) Truck (CG-04LH-5592)	0	1	0	0	0	0	Yes	An over speed Hywa (JH-02AK-6625) hit the Truck (CG-04LH-5592) from rear end at Ch.58+550 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 1:24 AM, Accident occurred on 10.09.2021 at 12:32 AM, Information given through PCR VAN.
125	10.09.2021	11:34 AM	11:41 AM	11:45 AM	11:50 AM	92+760	RHS	Urban	3	2	2	4	1	3	1	Gas Tanker (NL-01K-7164), container (UP-21BN-2192) Gas tanker (NL-01K-7114) , Auto (JH-24C-1257) and Nano Car (JH-01AQ-6427)	0	4	4	0	0	0	Yes	An over speed Gas Tanker (NL-01K-7164) hit the container (UP-21BN-2192) after that an another tanker hit the Auto (JH-24C-1257) and Nano Car (JH-01AQ-6427) from rear end at Ch.92+760 (RHS) in HREL Project, 4 Persons grievous & 4 Persons minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:50 AM, Accident occurred on 10.09.2021 at 11:34 AM ,Information given through mobile no.8709154532.
126	11.09.2021	6:08 AM	6:17 AM	6:18 AM	6:37 AM	51+880	LHS	Urban	3	2	2	4	1	0	1	truck (UP-17AT-7215) & auto (A/F)	0	1	0	0	0	0	Yes	An over speed truck (UP-17AT-7215) hit the auto (A/F) from rear end at Ch.51+880 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Hazaribagh at 6:37 AM, Accident occurred on 11.09.2021 at 6:08 AM, Information given through mobile no. 9931564730
127	12.09.2021	11:30 PM	11:31 PM	11:32 PM	11:35 PM	100+200	LHS	Urban	3	2	1	4	1	0	1	Car (JH-01BA-2784)	0	1	0	0	0	0	Yes	A Car (JH-01BA-2784) lost his control due to drunk & drive and hit the unknown vehicle from rear end at Ch.100+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Piska Ormanjhi at 11:35 PM, Accident occurred on 12.09.2021 at 11:30 PM, Information given through our Patrolling team.
128	13.09.2021	11:20 AM	11:28 AM	11:30 AM	N/A	51+920	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-02AZ-9857)	0	0	1	0	0	0	Yes	A Bike (JH-02AZ-9857) lost his control due to over speed and fell down on MCW at Ch.51+920 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team , Accident occurred on 13.09.2021 at 11:20 AM, Information given through PCR Van.
129	13.09.2021	1:55 PM	2:00 PM	2:02 PM	2:08 PM	62+400	RHS	Urban	3	2	2	4	1	0	1	Bike(JH-02M-1564)	0	1	1	0	0	0	Yes	A Bike(JH-02M-1564) hit an unknown vehicle from rear end and fell down on MCW at Ch.62+400 (RHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident first aid done by ambulance team and shifte to CHC Mandu at 2:08 PM, Accident occurred on 13.09.2021 at 1:55 PM, Information given through mobile no.7903607247.
130	14.09.2021	9:54 PM	10:05 PM	10:10 PM	N/A	51+080	LHS	Urban	4	3	2	4	2	0	1	Innova (JH-01AP-5691)	0	0	2	0	0	0	Yes	A Innova (JH-01AP-5691) lost his control due to over speed and hit the median kerb at Ch.51+080 (LHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team, Accident occurred on 14.09.2021 at 9:54 PM, Information given through mobile no.9113444976.

131	15.09.2021	7:22 AM	7:27 AM	7:30 AM	7:50 AM	78+300	LHS	Urban	1	1	2	4	2	0	1	Car (JH-05BN-0892)	1	4	0	0	0	0	Yes	An over speed Car (JH-05BN-0892) hit the median kerb and overturned on MCW at Ch.78+300 (LHS) in HREL Project, 1 Person died on the spot and 4 Persons grievous injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:50 AM, Accident occurred on 15.09.2021 at 7:22 AM, Information given through mobile no.8709806554.
132	16.09.2021	3:31 PM	3:35 PM	N/A	N/A	63+900	RHS	Urban	6	2	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.63+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the Hospital through PCR Van , Accident occurred on 16.09.2021 at 3:31 PM, Information given through mobile no.9693434933.
133	16.09.2021	6:43 PM	6:58 PM	7:00 PM	7:45 PM	111+050	RHS	Urban	3	2	2	4	1	0	1	Bike (A/F) & Bike (A/F)	0	1	1	0	0	0	Yes	An over speed Bike (A/F) hit the another Bike (A/F) from rear end and both bike are fell down on MCW at Ch.111+050 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ramgarh at 7:45 PM, Accident occurred on 16.09.2021 at 6:43 PM, Information given through mobile no.7004800645.
134	17.09.2021	1:34 PM	1:43 PM	1:45 PM	2:08 PM	92+700	RHS	Urban	3	2	2	4	1	3	1	unknown vehicle & (JH-01EF-6897)	0	2	0	0	0	0	Yes	An unknown vehicle hit the scooty (JH-01EF-6897) from rear end and ran away at Ch.92+700 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 2:08 PM, Accident occurred on 17.09.2021 at 1:34 PM, Information given through mobile no.9199255474.
135	18.09.2021	11:20 PM	11:25 PM	12:50 PM	1:13 PM	94+900	RHS	Urban	1	1	2	4	3	0	1	Truck (RJ-19GD-5357)	2	0	0	0	0	0	Yes	A Truck (RJ-19GD-5357) lost his control due to over speed and overturned on MCW at Ch.94+900 (RHS) in HREL Project, 1 Person died on the spot & 1 Person died during shifted to the hospital, help provided by ambulance team, Accident occurred on 18.09.2021 at 11:20 PM, Information given through mobile no.8102655716.
136	19.09.2021	6:31 AM	6:42 AM	6:43 AM	6:49 AM	66+360	RHS	Rural	6	2	2	4	1	0	1	Bike (JH-02V-5974)	0	1	0	0	0	0	Yes	An over speed bike (JH-02V-5974) hit the dog and fell down on MCW at Ch.66+360 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:49 AM, Accident occurred on 19.09.2021 at 6:31 AM, Information given through mobile no.8789154033.
137	21.09.2021	12:56 PM	12:59 PM	1:05 PM	1:08 PM	58+800	RHS	Urban	1	2	2	4	1	0	1	Van (N/A)	0	9	3	0	0	0	Yes	An over speed Van (N/A) lost his control due to over speed and overturned on MCW at Ch.58+800 (RHS) in HREL Project, 9 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 1:08 PM, Accident occurred on 21.09.2021 at 12:56 PM, Information given through mobile no.8789154033.
138	27.09.2021	6:07 PM	6:08 PM	6:10 PM	6:13 PM	60+500	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-01DL-7027)	0	1	1	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01DL-7027) from rear end and ran away at Ch.60+500 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:13 PM, Accident occurred on 27.09.2021 at 6:07 PM, Information given through mobile no.7992496067.
139	30.09.2021	7:00 PM	7:07 PM	7:08 PM	7:24 PM	53+400	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.53+400 (LHS) In HREL Project, 1 person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 7:24 PM, Accident occurred on 30.09.2021 at 7:00 PM, Information given through mobile no.8002839693.

140	01.10.2021	6:45 PM	6:50 PM	6:52 PM	6:45 PM	59+400	RHS	Urban	6	2	2	4	1	0	1	**Bike (A/F)**	0	1	0	0	0	0	Yes	Our paramedical officer Ashish ranjan coming on duty lose his control & fell down on road at Ch.59+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and CHC Mandu at 7:30 PM, Accident occurred on 01.10.2021 at 6:45 PM, Information given through mobile no 9835185484.
141	06.10.2021	8:45 PM	8:52 PM	8:53 PM	8:52 PM	93+100	RHS	Urban	3	2	2	4	1	0	1	**Unknown vehicle & scooty (JH-01DD-0561)**	0	1	0	0	0	0	Yes	An Unknown vehicle hit the scooty (JH-01DD-0561) from rear end at Ch.93+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through 108 Ambulance, Accident occurred on 06.10.2021 at 8:45 PM, Information given through mobile no.6203799730.
142	07.10.2021	1:10 PM	1:25 PM	1:26 PM	1:35 PM	114+400	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-01DK-3861)	0	1	0	0	0	0	Yes	A Bike (JH-01DK-3861) lost his control due to over speed and hit our Labour (Runiya Devi) from rear end while work at road side at Ch.114+400 (RHS), Runiya was grievous injured in this accident, help provided by ambulance team and shifted to well cure Hospital Ormanjhi at 1:35 PM, Accident occurred on 07.10.2021 at 1:10 PM, Information given through mobile no.8825191800.
143	09.10.2021	9:33 PM	9:35 PM	9:38 PM	N/A	98+900	RHS	Urban	3	3	2	4	2	0	1	Unknown vehicle & Pick up Van (BR-03GA-2744)	0	0	1	0	0	0	Yes	An Unknown vehicle hit the Pick up Van (BR-03GA-2744) from rear end and ran away at Ch.98+900 (RHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 09.10.2021 at 9:33 PM, Information given through mobile no.9835147629.
144	11.10.2021	5:18 AM	5:20 AM	N/A	N/A	57+780	LHS	Urban	3	1	2	4	1	0	1	unknown vehicle & Tata 407 (BR-01GH-5915)	1	0	0	0	0	0	Yes	An unknown vehicle hit the Tata 407 (BR-01GH-5915) from rear end and ran away at Ch.57+780 (LHS) in HREL Project, 1 Person died on the spot in this accident, Ambulance reach there at 5:20 AM and inform to local Police, Accident occurred on 11.10.2021 at 5:18 AM, Information given through mobile no.9931564730.
145	13.10.2021	2:35 PM	2:40 PM	N/A	4:15 PM	75+300	LHS	Urban	3	1	2	4	1	0	1	Car (JH-09AK-7125) & scooty (RJ-20FS-3776)	1	0	0	0	0	0	Yes	An over speed Car (JH-09AK-7125) hit the scooty (RJ-20FS-3776) from rear end at Ch.75+300 (LHS) in HREL Project, Scooty Person died on the spot , Body shifted to Sadar Hospital Ramgarh at 4:15 PM, Accident occurred on 13.10.2021 at 2:35 PM, Information given through mobile no.9431794210.
146	14.10.2021	10:22 AM	10:23 AM	10:24 AM	10:30 AM	60+000	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike(A/F)	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike(A/F) from rear end and ran away at Ch.60+000 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 10:30 AM, Accident occurred on 14.10.2021 at 10:22 AM.
147	15.10.2021	7:03 PM	7:08 PM	7:12 PM	7:18 PM	58+100	LHS	Urban	6	2	1	4	1	0	1	Bike (A/F)	0	3	0	0	0	0	Yes	A Bike (A/F) lost his control due to drunk and drive and skidded at Ch.58+100 (LHS) in HREL Project, 3 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 7:18 PM, Accident occurred on 15.10.2021 at 7:03 PM, Information given through mobile no.6206482186.
148	16.10.2021	1:31 PM	1:33 PM	1:34 PM	1:40 PM	61+800	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike(JH-02G-4195)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike(JH-02G-4195) from rear end and ran away at Ch.61+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 1:40 PM, Accident occurred on 16.10.2021 at 1:31 PM, Information given through mobile no.7870636517.
149	16.10.2021	4:36 PM	4:41 PM	4:43 PM	5:03 PM	94+900	RHS	Urban	1	2	1	4	2	0	1	Bike (JH-01CG-4860)	0	2	0	0	0	0	Yes	A Bike (JH-01CG-4860) lost his control due to drunk & drive and fell down on MCW at Ch.94+900 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 5:03 PM, Accident occurred on 16.10.2021 at 4:36 PM, Information given through mobile no.7979789659.

150	17.10.2021	7:30 AM	7:34 AM	N/A	N/A	70+200	RHS	Urban	1	2	2	4	1	0	1	nnova Car (CG-13AP-3241)	0	1	0	0	0	0	Yes	An Innova Car (CG-13AP-3241) lost his control due to over speed and hit the median kerb and overturned on MCW at Ch.70+200 (RHS) in HREL Project, 1 Person grievous injured in this accident, injured person shifted to the hospital through PCR Van , Accident occurred on 17.10.2021 at 7:30 AM.
151	17.10.2021	12:21 PM	12:25 PM	12:26 PM	12:55 PM	56+900	RHS	Urban	3	2	2	4	1	0	1	Pickup Van (JH-01DN-7214) & bicycle	0	1	0	0	0	0	Yes	An over speed Pickup Van (JH-01DN-7214) hit the bicycle from rear at Ch.56+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 12:55 PM, Accident occurred on 17.10.2021 at 12:21 PM, Information given through mobile no.9955314367.
152	17.10.2021	4:42 PM	4:54 PM	4:55 PM	5:08 PM	52+050	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02BC-0159)	0	1	0	0	0	0	Yes	A Bike (JH-02BC-0159) lost his control due to drunk & drive and fell down on MCW at Ch.52+050 (LHS) in HREL Project, 1 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:08 PM, Accident occurred on 17.10.2021 at 4:42 PM, Information given through mobile no.8789154033
153	18.10.2021	7:23 AM	7:26 AM	7:28 AM	7:47 PM	77+560	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AM-9897) & bicycle	0	1	0	0	0	0	Yes	An over speed Bike (JH-02AM-9897) hit the bicycle from rear end and fell down on MCW at Ch.77+560 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 7:47 AM, Accident occurred on 18.10.2021 at 7:23 AM, Information given through mobile no.9113316670.
154	19.10.2021	7:58 PM	8:05 PM	8:07 PM	8:20 PM	55+040	LHS	Urban	3	2	2	4	1	0	1	lorry (HR-47C-7615) & lorry (NL-01AB-8112)	0	1	0	0	0	0	Yes	A lorry (HR-47C-7615) hit another lorry (NL-01AB-8112) from rear end due to over speed at Ch.55+040 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 8:20 PM, Accident occurred on 19.10.2021 at 7:58 PM, Information given through mobile no.6200854041.
155	20.10.2021	2:45 AM	2:50 AM	2:51 AM	3:50 AM	101+700	RHS	Urban	3	1	2	4	1	0	1	Car (JH-01DT-5066) & Bike (BR-44M-0971)	1	0	0	0	0	0	Yes	An over speed Car (JH-01DT-5066) hit the Bike (BR-44M-0971) from rear end and Bike fell down on MCW at Ch.101+700 (RHS) in HREL Project, 1 Person died on the spot , body shifted to RIMS Ranchi at 3:50 AM, Accident occurred on 20.10.2021 at 2:45 AM, Information given through mobile no.8434419262.
156	20.10.2021	12:55 PM	1:01 PM	1:05 PM	N/A	93+000	RHS	Urban	3	2	2	4	1	0	1	Auto (JH-24F-7120) & unknown vehicle	0	3	2	0	0	0	Yes	An auto (JH-24F-7120) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.93+000 (LHS) in HREL Project, 3 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team, grievously injured Persons shifted to Sadar Hospital Ramgarh through another vehicle, Accident occurred on 20.10.2021 at 12:55 PM, Information given through mobile no.6203799730.
157	21.10.2021	1:49 PM	1:58 PM	2:00 PM	2:12 PM	93+850	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-01Y-8244) & Bike (JH-24C-6505)	0	2	0	0	0	0	Yes	An over speed Bike (JH-01Y-8244) hit the another Bike (JH-24C-6505) from rear end and fell down on MCW at Ch.98+850 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 2:12 PM, Accident occurred on 21.10.2021 at 1:49 PM, Information given through mobile no.6203799730.
158	21.10.2021	3:28 PM	3:29 PM	3:30 PM	3:33 PM	60+560	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02AR-8864)	0	1	0	0	0	0	Yes	A Bike (JH-02AR-8864) lost his control due to drunk & drive and fell down on MCW at Ch.60+560 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 3:33 PM, Accident occurred on 21.10.2021 at 3:28 PM.
159	21.10.2021	3:56 PM	4:00 PM	4:05 PM	N/A	74+400	RHS	Urban	1	3	2	4	2	0	1	Car (JH-02AJ-1040)	0	0	1	2	0	0	Yes	A Car (JH-02AJ-1040) lost his conrol due to over speed and hit the Median Kerb and overturned on MCW at Ch.74+400 (RHS) in HREL Project, 1 Person minor injured & 2 Persons non injured in this accident, help provided by ambulance team, Accident occurred on 21.10.2021 at 3:56 PM, Information given through mobile no.8539021945.

160	23.10.2021	11:39 AM	11:45 AM	11:48 AM	N/A	95+000	RHS	Urban	1	3	5	4	3	0	1	(BR-21GA-8515)	0	0	1	0	0	0	Yes	An over speed truck (BR-21GA-8515) lost his control due to mechanical failure (Break Failure) and overturned on MCW at Ch.95+000 (RHS) in HREL Project, 1 Person minor injured in this accident, Help provided by ambulance team, Accident occurred on 23.10.2021 at 11:39 AM, Information given through mobile no.8825191800.
161	26.10.2021	10:00 PM	10:06 PM	10:07 PM	10:12 PM	104+000	RHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.104+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Piska Hospital Ormanjhi at 10:12 PM, Accident occurred on 26.10.2021 at 10:00 PM, Information given through mobile no.7761823728.
162	27.10.2021	3:30 PM	3:36 PM	3:40 PM	3:50 PM	95+100	RHS	Urban	3	2	2	4	3	0	1	Trailer (NL-01N-7395) hit the Tata Magic (BR-26GA-8501) & Bike (A/F)	0	1	3	0	0	0	Yes	An over speed Trailer (NL-01N-7395) hit the Tata Magic (BR-26GA-8501) & Bike (A/F) from rear end and overturned on MCW at Ch.95+100 (RHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 3:50 PM, Accident occurred on 27.10.2021 at 3:30 PM, Information given through mobile no.8825191800.
163	30.10.2021	3:30 PM	3:35 PM	3:38 PM	3:45 PM	83+600	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-24G-7810) & Bike (JH-24C-4380)	0	1	3	0	0	0	Yes	An over speed Bike (JH-24G-7810) hit the another Bike (JH-24C-4380) from rear end and fell down on MCW at Ch.83+600 (RHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 3:45 PM, Accident occurred on 30.10.2021 at 3:30 PM, Information given through mobile no.9835185484.
164	31.10.2021	5:55 AM	6:00 AM	6:02 AM	6:15 AM	56+540	LHS	Urban	3	1	2	4	1	0	1	Mini truck (JH-02W-1143)	1	3	0	0	0	0	Yes	An over speed Mini truck (JH-02W-1143) hit the Pedestrian & Parked Lorry (JH-18C-6456) from rear end at Ch.56+540 (LHS) in HREL Project, 1 Person dead on the spot & 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:15 AM, Accident occurred on 31.10.2021 at 5:55 AM, Information given through our Patrolling team.
165	31.10.2021	11:24 PM	11:29 PM	11:30 PM	11:45 PM	104+980	RHS	Urban	3	2	2	4	1	0	1	truck (HR-55T-8257)	0	1	0	0	0	0	Yes	An over speed truck (HR-55T-8257) hit the unknown vehicle from rear end at Ch.104+980 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 11:45 PM, Accident occurred on 31.10.2021 at 11:24 PM, Information given through mobile no.7004800645.
166	01.11.2021	1:02 AM	1:12 AM	1:15 AM	N/A	91+300	RHS	Urban	1	3	2	4	1	0	1	**Container (HR-55T-8257)**	0	0	1	0	0	0	Yes	An over speed Container (HR-55T-8257) hit the unknown vehicle from rear end and overturned on MCW at Ch.91+300 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 01.11.2021 at 1:02AM, Information given through Mobile No.9155044273.
167	02.11.2021	10:14 AM	10:18 AM	10:24 AM	N/A	57+900	RHS	Urban	6	3	2	4	1	0	1	**Bike (JH-02N-4839)**	0	0	1	0	0	0	Yes	A Bike (JH-02N-4839) lost his control due to over speed and fell down on MCW at Ch.57+900 (RHS) in HREL Project, 2 Persons minor injured in this accident, Help Provided by ambulance team, Accident occurred on 02.11.2021 at 10:14 AM, Information given through mobile no.7979913430.
168	02.11.2021	9:18 AM	9:21 AM	9:24 AM	N/A	61+100	LHS	Urban	6	3	2	4	1	0	1	Bike (BR-27N-5483)	0	0	1	0	0	0	Yes	An over speed Bike (BR-27N-5483) skidded and fell down on MCW at Ch.61+100 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance tam , Accident occurred on 02.11.2021 at 9:18 AM, Information given through mobile no.8434232958.
169	02.11.2021	4:27 PM	4:35 PM	4:37 PM	4:45 PM	54+560	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-24F-2703)	0	1	0	0	0	0	Yes	A Bike (JH-24F-2703) lost his control due to drunk & drive and fell down on MCW at Ch.54+560 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:45 PM, Accident occurred on 02.11.2021 at 4:27 PM, Information given through mobile no.6200854041.

170	03.11.2021	1:00 AM	1:04 AM	1:07 AM	N/A	72+080	RHS	Urban	1	3	2	4	1	0	1	Bolero ambulance car (JH-10BU-9973)	0	0	1	0	0	0	Yes	An Bolero ambulance car (JH-10BU-9973) lost his control due to over speed and overturned on MCW at Ch.72+080 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 03.11.2021 at 1:00 AM, Information given through mobile no.7781002285.
171	03.11.2021	7:00 AM	7:07 AM	7:10 AM	7:27 AM	94+950	RHS	Urban	3	2	2	4	3	0	1	Trailor (UP-82T-6485) & Mini Truck (JH-24F-8058)	0	1	3	0	0	0	Yes	An over speed Trailor (UP-82T-6485) hit the Mini Truck (JH-24F-8058) from rear end and Mini truck overturned on on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:27 AM, Accident occurred on 03.11.2021 at 07:00 AM, Information given through mobile no.6204906142.
172	03.11.2021	10:32 AM	10:40 AM	10:42 AM	10:50 AM	109+000	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-01J-3029)	0	1	0	0	0	0	Yes	An over speed Bike (JH-01J-3029) hit the unknown vehicle from rear end and overturned on MCW at Ch.109+000 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Medanta Hospital Irba at 10:50 AM, Accident occurred on 03.11.2021 at 10:32 AM, Information given through mobile no.7004852139.
173	04.11.2021	3:21 PM	3:26 PM	3:28 PM	3:40 PM	79+300	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.79+300 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 3:40 PM, Accident occurred on 04.11.2021 at 3:21 PM, Information given through mobile no.8709806554.
174	09.11.2021	1:13 PM	1:17 PM	1:19 PM	1:35 PM	72+050	RHS	Urban	6	2	2	4	1	0	1	Scotty (JH-01EG-2043)	0	1	0	0	0	0	Yes	A Scotty (JH-01EG-2043) lost his control due to over speed and Skidded on MCW at Ch.72+050 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 1:35 PM, Accident occurred on 09.11.2021 at 1:13 PM, Information given through mobile no.6200854041.
175	09.11.2021	1:17 PM	1:25 PM	1:26 PM	2:15 PM	94+200	LHS	Urban	6	2	2	4	2	0	1	Scooty (JH-01CX-3171)	0	1	0	0	0	0	Yes	A Scooty (JH-01CX-3171) lost his control due to over speed and skidded at Ch.94+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Dipatoli Booty More at 2:15 PM, Accident occurred on 09.11.2021 at 1:17 PM, Information given through mobile no.7488446541.
176	11.11.2021	1:40 PM	1:46 PM	1:48 PM	N/A	55+800	RHS	Urban	3	3	2	4	1	0	1	unknown vehicle	0	0	1	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.55+800 (RHS) in HREL Project, 1 Person minor injured in this accident, Help provided by ambulance team , Accident occurred on 11.11.2021 at 1:40 PM, Information given through mobile no.9835692683.
177	13.11.2021	7:38 AM	7:43 AM	N/A	N/A	64+400	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.64+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the Hospital through 108 Ambulance, Accident occurred on 13.11.2021 at 7:38 AM, Information given through mobile no.9572392557.
178	14.11.2021	3:55 PM	4:00 PM	4:02 PM	4:15 PM	72+200	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Auto (JH-24D-0640)	0	1	1	6	0	0	Yes	An unknown vehicle hit the Auto (JH-24D-0640) from rear end and ran away at Ch.72+200 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:15 PM, Accident occurred on 14.11.2021 at 3:55 PM, Information given through mobile no.7870045873.
179	17.11.2021	11:37 AM	11:42 AM	11:45 AM	N/A	77+160	LHS	Urban	6	3	2	4	1	0	1	scooty (JH-09-AR-3279)	0	0	2	6	0	0	Yes	A scooty (JH-09-AR-3279) lost his control due to over speed and skidded at Ch.77+160 (LHS) in HREL Project, 2 Persons minor injured in this accident, Help provided by ambulance team, Accident occurred on 17.11.2021 at 11:37 AM, Information given through mobile no.9106648691.

180	20.11.2021	4:08 PM	4:13 PM	4:15 PM	4:30 PM	72+060	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-01CF-3050)	0	1	2	0	0	0	Yes	A Bike (JH-01CF-3050) lost his control due to over speed and skidded at Ch.72+060 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 4:30 PM, Accident occurred on 20.11.2021 at 4:08 PM, Information given through mobile no.7870636517.
181	21.11.2021	11:23 AM	11:30 AM	11:32 AM	11:45 AM	85+100	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle & Bike (JH-24C-2910)	0	2	0	0	0	0	Yes	An Unknown Vehicle hit the Bike (JH-24C-2910) from rear end and ran away at Ch.85+100 (LHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 11:45 AM, Accident occurred on 21.11.2021 at 11:23 AM, Information given through mobile no.9939114864.
182	21.11.2021	6:15 PM	6:17 PM	6:19 PM	6:22 PM	99+620	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02AD-0548)	0	1	1	0	0	0	Yes	A Bike (JH-02AD-0548) lost his control due to over speed and skidded at Ch.99+620 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Piska Hospital Ormanjhi at 6:22 PM, Accident occurred on 21.11.2021 at 6:15 PM, Information given through mobile no.8409294979.
183	22.11.2021	2:15 PM	2:17 PM	2:18 PM	2:32 PM	100+900	LHS	Urban	3	2	2	4	1	0	1	Bus (JH-02P-9036) & Bike (JH-01CE-4348)	0	1	1	0	0	0	Yes	An over speed Bus (JH-02P-9036) hit the Bike (JH-01CE-4348) from rear end and bike fell down on MCW at Ch.100+900 (LHS) in HREL Project, 1 Person grievous & 1 Person Minor injured in this accident, Help Provided by ambulance team and shifted to Medanta Hospital Irba at 2:32 PM, Accident occurred on 22.11.2021 at 2:15 PM, Information given through mobile no.8825311624.
184	23.11.2021	3:41 PM	3:49 PM	3:50 PM	4:08 PM	92+500	RHS	Urban	1	2	2	4	1	3	1	Trailor (NL-01Q-0309)	0	1	0	0	0	0	Yes	An over speed Trailor (NL-01Q-0309) lost his control due to mechanical failure and overturned on MCW at Ch.92+500 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:08 PM, Accident occurred on 23.11.2021 at 3:41 PM, Information given through mobile no.8825191800.
185	24.11.2021	9:40 AM	9:41 AM	9:42 AM	10:00 AM	99+500	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle & Bike (JH-01BS-9943)	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Bike (JH-01BS-9943) from rear end and ran away at Ch.99+500 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Rahman Hospital IRBA at 10:00 AM, Accident occurred on 24.11.2021 at 9:40 AM, Information given through local Public.
186	24.11.2021	4:44 PM	4:50 PM	4:52 PM	N/A	94+500	RHS	Urban	3	3	2	4	1	0	1	Trailer (NL-01AE-7190) & Container (PB-10HN-1013)	0	0	1	0	0	0	Yes	A Trailer (NL-01AE-7190) lost his control due to over speed and collided with Container (PB-10HN-1013) which is moving ahead at Ch.94+500 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 24.11.2021 at 4:44 PM, Information given thorough mobile no.9771421931.
187	25.11.2021	6:39 PM	6:44 PM	6:42 PM	6:50 PM	64+300	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.64+300 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:50 PM, Accident occurred on 25.11.2021, at 6:39 PM,Information given through mobile no.9110138036.
188	28.11.2021	12:32 PM	12:34 PM	12:35 PM	12:47 PM	98+800	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the scooty (JH-01CU-7264) from rear end and ran away at Ch.98+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team, and shifted to KGT Hospital Ramgarh at 12:47 PM, Accident occurred on 28.11.2021 at 12:32 PM, Information given through mobile no.8102655716.

189	01.12.2021	12:16 PM	12:25 PM	12:26 PM	12:30 PM	93+200	LHS	Urban	3	2	2	4	1	0	1	**unknown vehicle**	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.93+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Jivan Anmol Hospital Ramgarh at 12:30 PM, Accident occurred on 01.12.2021 at 12:16 PM, Information given through mobile no.7903385136.
190	01.12.2021	11:24 PM	11:33 PM	11:34 PM	12:10 AM	106+400	RHS	Urban	3	2	2	4	1	0	1	**Bike (JH-01AC-8924) & Pickup Van (JH-01CF-1948)**	0	1	0	0	0	0	Yes	A Bike (JH-01AC-8924) lost his control due to over speed and hit the Pickup Van (JH-01CF-1948) from rear end and fell down on MCW at Ch.106+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 12:10 AM, Accident occurred on 01.12.2021 at 11:24 PM, Information given through mobile no.8987790662.
191	03.12.2021	2:30 PM	2:31 PM	2:32 PM	3:20 PM	99+800	LHS	Urban	3	2	2	4	1	0	1	Trailer (NL-01N-1141) & Bike (JH-01BJ-5498)	0	1	0	0	0	0	Yes	An over speed Trailer (NL-01N-1141) hit the Bike (JH-01BJ-5498) from rear end and Bike fell down on MCW at Ch.99+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 3:20 PM, Accident occurred on 03.12.2021 at 2:30 PM, Information given through mobile no.8709046260.
192	04.12.2021	5:45 PM	5:49 PM	5:50 PM	6:08 PM	56+100	RHS	Urban	2	2	1	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	An over speed Bike(A/F) hit the another Bike (A/F) from head on collision due to drunk & drive and fell down on MCW at Ch.56+100 (RHS) in HREL Project, 1 Person grievous injured In this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:08 PM, Accident occurred on 04.12.2021 at 5:45 PM, Information given through mobile no.9931564730.
193	04.12.2021	11:11 PM	11:16 PM	11:17 PM	11:30 PM	79+000	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-02AU-8777)	0	1	0	0	0	0	Yes	A Bike (JH-02AU-8777) Lost his control due to over speed and hit the Km Stone and fell down on MCW at Ch.79+000 (RHS) in HREL Project, 1 Person grievous Injured in this accident, first aid done by ambulance team and shifted to Arogyam Helth care Ramgarh at 11:30 PM, Accident occurred on 04.12.2021 at 11:11 PM, information given through mobile no.9122127823.
194	05.12.2021	3:08 PM	3:11 PM	3:12 PM	4:10 PM	96+900	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Scooty (A/F)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Scooty (A/F) from rear end and ran away at Ch.96+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 4:10 PM, Accident occurred on 05.12.2021 at 3:08 PM, Information given through mobile no.9065344348.
195	05.12.2021	6:04 PM	6:10 PM	6:13 PM	N/A	50+900	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-02F-2947)	0	0	1	0	0	0	Yes	A Bike (JH-02F-2947) lost his control due to over speed and fell done on MCW at Ch.50+900 (LHS) in HREL Project, 1 Person minor injured in this accident, help Provided by ambulance team , Accident occurred on 05.12.2021 at 7:30 PM, Information given through our Patrolling team.
196	05.12.2021	9:39 PM	9:45 PM	9:47 PM	10:00 PM	79+240	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24B-5324)	0	1	1	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24B-5324) from rear end and ran away at Ch.79+240 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 10:00 PM, Accident occurred on 05.12.2021 at 9:39 PM, Information given through mobile no.9123165797.
197	06.12.2021	3:26 PM	3:37 PM	3:38 PM	3:55 PM	52+900	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02M-0349)	0	1	0	0	0	0	Yes	A Bike (JH-02M-0349) lost his control due to over speed and fell down on MCW at Ch.52+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 3:55 PM, Accident occurred on 06.12.2021 at 3:26 PM, Information given through mobile no.6200854041.

198	06.12.2021	4:01 PM	4:11 PM	4:15 PM	N/A	92+500	RHS	Urban	3	3	2	4	1	0	1	Trailer (RJ-02GB-6483) , Container (NL-01AB-7656) & truck (AP-05TB-9279)	0	0	1	0	0	0	Yes	A Trailer (RJ-02GB-6483) lost his control due to over speed and first hit the Container (NL-01AB-7656) than truck (AP-05TB-9279) and overturned on MCW at Ch.92+500 (RHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 06.12.2021 at 4:01 PM, Information given through mobile no.8709414885.
199	06.12.2021	5:37 PM	5:45 PM	5:46 PM	5:58 PM	55+050	RHS	Urban	6	2	1	4	1	0	1	Bike (N/A)	0	1	0	0	0	0	Yes	An over speed Bike (N/A) lost his control due to drunk & drive and fell down on MCW at Ch.55+050 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:58 PM, Accident occurred 06.12.2021 at 5:37 PM, Information given through mobile no.6207997749.
200	06.12.2021	7:05 PM	7:07 PM	7:08 PM	7:20 PM	99+800	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike from rear end and ran away at Ch.99+800 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 7:20 PM, Accident occurred on 06.12.2021 at 7:05 PM, Information given through mobile no.7903194061.
201	07.12.2021	9:24 PM	9:30 PM	9:32 PM	10:10 PM	104+900	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-01DZ-1607)	0	2	0	0	0	0	Yes	An over speed Bike (JH-01DZ-1607) hit the unknown vehicle from rear end and fell down on MCW at Ch.104+900 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 10:10 PM, Accident occurred on 07.12.2021 at 9:24 PM, Information given through mobile no.7004800645.
202	07.12.2021	9:37 PM	9:47 PM	9:48 PM	10:17 PM	51+800	LHS	Urban	1	2	2	4	1	0	1	Sumo (JH-01AG-4697)	0	10	1	0	0	0	Yes	A Tata Sumo (JH-01AG-4697) lost his control due to over speed and overturned on MCW at Ch.51+800 (LHS) at HREL Project, 10 Persons grievous injured & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Hazaribagh at 10:17 PM, Accident occurred on 07.12.2021 at 9:37 PM, Information given through mobile no.8587807087.
203	08.12.2021	1:32 PM	1:36 PM	1:37 PM	1:50 PM	54+600	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02AK-5969)	0	1	0	0	0	0	Yes	A Bike (JH-02AK-5969) lost his control due to drunk and drive and fell down on MCW at Ch.54+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 1:50 PM, Accident occurred on 08.12.2021 at 1:32 PM, Information given through mobile no.6200854041.
204	09.12.2021	9:23 AM	9:26 AM	9:27 AM	9:34 AM	60+940	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02D-8929)	0	2	0	0	0	0	Yes	A Bike (JH-02D-8929) lost his control due to over speed and fell down on MCW at Ch.60+940 (LHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 9:34 AM, Accident occurred on 09.12.2021 at 9:23 AM, Information given through mobile no.9110939472.
205	10.12.2021	6:45 PM	6:50 PM	6:52 PM	N/A	96+400	LHS	Urban	3	3	2	4	1	0	1	(JH-01EB-1967) & Car (JH-01BG-0842)	0	1	0	0	0	0	Yes	A Bike (JH-01EB-1967) hit the Car (JH-01BG-0842) from rear end and fell down on MCW at Ch.96+400 (LHS) in HREL Project, 1 Person minor injured in this accident, Help provided by ambulance team, Accident occurred on 10.12.2021 at 6:45 PM, Information given through mobile no.8102655716.
206	11.12.2021	2:04 PM	2:14 PM	2:25 PM	N/A	51+840	LHS	Urban	3	3	2	4	1	0	1	car (JH-001-8725)	0	0	3	0	0	0	Yes	An over speed car (JH-001-8725) hit the unknown vehicle from rear end at Ch.51+840 (LHS) in HREL Project, 3 Persons minor injured in this accident, Help Provided by ambulance team , Accident occurred on 11.12.2021 at 2:04 PM, Information given through mobile no.6200854041.
207	12.12.2021	7:32 PM	7:34 PM	N/A	7:55 PM	73+700	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.73+700 (LHS) in HREL Project, 1 Person died on the spot , Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:55 PM, Accident occurred on 12.12.2021 at 7:32 PM, Information given through Mobile no.8863887789.

208	13.12.2021	12:58 PM	1:01 PM	1:02 PM	2:10 PM	59+800	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24A-1160)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24A-1160) from rear end and ran away at Ch.59+800 (LHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Hazaribagh at 2:10 PM, Accident occurred on 13.12.2021 at 12:58 PM, Information given through Local Public .
209	14.12.2021	5:06 AM	5:16 AM	N/A	5:34 AM	48+000	RHS	Urban	3	1	2	4	1	0	1	Unknown Vehicle	1	0	0	0	0	0	Yes	An Unknown vehicle hit the bicycle from rear end and ran away at Ch.48+000 (RHS) in HREL Project, 1 Person died on the spot , Help Provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 5:34 AM, Accident occurred on 14.12.2021 at 5:06 AM, Information given through mobile no.9546388266.
210	14.12.2021	4:15 PM	4:22 PM	4:25 PM	N/A	66+740	LHS	Urban	1	3	1	4	1	0	1	Bike (DL-65AG-3291)	0	0	1	0	0	0	Yes	A Bike (DL-65AG-3291) lost his control due to drunk & drive and fell down on MCW at Ch.66+740 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 14.12.2021 at 4:15 PM, Information given through mobile no.8271856531.
211	14.12.2021	7:38 PM	7:50 PM	7:52 PM	8:05 PM	111+500	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01EF-4894)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01EF-4894) from rear end and ran away at Ch.111+500 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Khushi Clinic Ranchi at 8:05 PM, Accident occurred on 14.12.2021 at 7:38 PM, Information given through mobile no.9064709021.
212	15.12.2021	3:56 PM	3:59 PM	4:01 PM	4:12 PM	56+900	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02AS-0835)	0	1	0	0	0	0	Yes	A Bike (JH-02AS-0835) Lost his control due to over speed and fell down on MCW at Ch.56+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:12 PM, Accident occurred on 15.12.2021 at 3:56 PM, Information given through mobile no.8789154033.
213	15.12.2021	7:01 PM	7:04 PM	7:05 PM	7:28 PM	56+700	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02BA-9444)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02BA-9444) from rear end and ran away at Ch.56+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 7:28 PM, Accident occurred on 15.12.2021 at 7:01 PM, Information given through mobile no.6200854041.
214	16.12.2021	12:27 AM	12:38 PM	12:42 PM	1:20 PM	49+450	RHS	Urban	3	1	2	4	1	0	1	Bus (BR-03PA-8821)	2	9	0	0	0	0	Yes	A Bus (BR-03PA-8821) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.49+450 (RHS) in HREL Project, 1 Person dead on the spot , 1 Person dead during shifted to Hospital and 9 Persons grievous injured in this accident, Help Provided by ambulance & Patrolling team and shifted to Sadar Hospital Hazaribagh at 1:20 AM, Accident occurred on 16.12.2021 at 12:27 AM, Information given through mobile no.9546616894.
215	16.12.2021	11:50 AM	11:58 AM	12:00 PM	12:13 PM	51+880	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-05BX-2454)	0	1	0	0	0	0	Yes	A Bike (JH-05BX-2454) lost his control due to over speed and fell down on MCW at Ch.51+880 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 12:13 PM, Accident occurred on 16.12.2021 at 11:50 AM, Information given through mobile no.9199731421.
216	18.12.2021	7:52 PM	7:58 PM	8:00 PM	8:10 PM	56+350	RHS	Urban	1	2	1	4	1	0	1	Bike (A/F)	0	2	0	0	0	0	Yes	A Bike (A/F) lost his control due to drunk & drive and hit the Median Kerb and fell down on MCW at Ch.56+350 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 8:10 PM, Accident occurred on 18.10.2021 at 7:52 PM, Information given through mobile no.8789154033.

217	19.12.2021	12:05 PM	12:08 PM	12:10 PM	12:20 PM	72+050	RHS	Urban	3	2	2	4	1	0	1	car (JH-10BL-1679)	0	1	0	0	0	0	Yes	An over speed car (JH-10BL-1679) hit the unknown vehicle from rear end at Ch.72+050 (RHS) in HREL Project, 1 person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 12:20 PM, Accident occurred on 19.12.2021 at 12:05 AM, Information given through mobile no.6203799730.
218	19.12.2021	2:45 AM	2:52 AM	2:55 AM	3:20 AM	81+400	LHS	Urban	3	2	2	4	1	0	1	Bus (JH-02T-7748)	0	3	0	0	0	0	Yes	A Bus (JH-02T-7748) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.81+400 (LHS) in HREL Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to sadar Hospital Ramgarh at 3:20 AM, Accident occurred on 19.12.2021 at 2:45 AM, Information given through mobile no.7762854415.
219	18.12.2021	2:42 PM	2:44 PM	2:45 PM	2:48 PM	74+500	RHS	Urban	1	2	2	4	1	0	1	Scorpio Car (BR-03PB-0515)	0	3	0	1	0	0	Yes	An over speed Scorpio Car (BR-03PB-0515) hit the the Median Kerb and overturned on MCW at Ch.74+500 (RHS) in HREL Project, 3 Persons grievous & 1 Person non Injured in this accident, help provided by ambulance team and shifted to Manoram Nurshing Home Kujju at 2:48 PM, Accident occurred on 18.12.2021 at 2:42 PM.
220	18.12.2021	4:04 PM	4:06 PM	4:08 PM	4:17 PM	59+060	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-24E-7454) & Bike (JH-02V-8401)	0	1	1	0	0	0	Yes	An over speed Bike (JH-24E-7454) hit the another Bike (JH-02V-8401) from rear end and fell down on MCW at Ch.59+060 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:17 PM, Accident occurred on 18.12.2021 at 4:04 PM, Information given through mobile no.6200854041.
221	19.12.2021	4:58 PM	5:11 PM	N/A	N/A	85+100	RHS	Urban	3	2	2	4	1	0	1	Bolero (JH-24G-2446) & Bike (JH-10BL-9612)	0	1	1	0	0	0	Yes	An over speed Bolero (JH-24G-2446) hit the Bike (JH-10BL-9612) from rear end and Bike Fell down on MCW at Ch.85+100 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, grievously injured Person shifted to the Hospital through 108 Ambulance, Accident occurred on 19.12.2021 at 4:58 PM, Information given through mobile no.9106648691.
222	20.12.2021	3:07 PM	3:12 PM	3:14 PM	3:28 PM	94+850	RHS	Urban	1	2	2	4	3	0	1	Trailer (RJ-02GB-5065)	0	2	0	0	0	0	Yes	A Trailer (RJ-02GB-5065) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 2 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:28 PM, Accident occurred on 20.12.2021 at 3:07 PM, Information given through mobile no.7632994431.
223	20.12.2021	11:20 PM	11:28 PM	11:30 PM	12:15 AM	106+400	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02R-4763)	0	1	1	0	0	0	Yes	A Bike (JH-02R-4763) lost his control due to over speed and fell down on MCW at Ch.106+400 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 12:15 AM, Accident occurred on 20.12.2021 at 11:20 PM, Information given through mobile no.6299072115.
224	23.12.2021	5:03 PM	5:05 PM	5:07 PM	6:25 PM	74+500	RHS	Urban	1	1	1	4	1	0	1	Bike (JH-02AU-1802)	1	1	0	0	0	0	Yes	A Bike (JH-02AU-1802) lost his control due to over speed and hit the MBCB and fell down on MCW at Ch.74+500 (RHS) in HREL Project, 2 Persons grievous injured in this accident, 1 Person dead during shifted to the Hospital , Help Provided by ambulance team and shifted to RIMS Hospital Ranchi at 6:25 PM, Accident occurred on 23.12.2021 at 5:03 PM, Information given through mobile no.8863887789.
225	24.12.2021	5:37 PM	5:51 PM	5:52 PM	6:25 PM	48+970	RHS	Urban	6	2	1	4	1	0	1	Bike (JH-02AV-6544)	0	1	0	0	0	0	Yes	An over speed Bike (JH-02AV-6544) lost his control due to drunk & drive and fell down on MCW at Ch.48+970 (RHS) in HREL Project, 1 Person grievous injured in this accident first aid done by ambulance team and shifted to Sadar Hospital Hazaribagh at 6:25 PM, Accident occurred on 24.12.2021 at 5:37 PM, Information given through mobile no.7979913430.

226	26.12.2021	2:37 PM	2:49 PM	2:52 PM	3:09 PM	84+500	RHS	Urban	1	2	2	4	1	0	1	Car (BR-1EK-4433)	0	1	2	0	0	0	Yes	A Car (BR-1EK-4433) lost his control due to over speed and over turned on MCW at Ch.84+500 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, first aid done by ambulance team and shifted to Kujju Nurshing Home at 3:09 PM, Accident occurred on 26.12.2021 at 2:37 PM, Information given through mobile no.1033
227	27.12.2021	3:52 PM	4:02 PM	4:10 PM	N/A	83+800	LHS	Urban	6	3	2	4	1	0	1	Scooty (JH-24E-5332)	0	0	2	0	0	0	Yes	A Scooty (JH-24E-5332) lost his control due to over speed and skidded at Ch.83+380 (LHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team , Accident occurred on 27.12.2021 at 3:52 PM, Information given through mobile no.9106648691.
228	27.12.2021	5:20 PM	5:26 PM	5:27 PM	5:42 PM	56+400	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.56+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:42 PM, Accident occurred on 27.12.2021 at 5:20 PM, Information given through mobile no.8789154033.
229	27.12.2021	7:45 PM	7:47 PM	7:50 PM	7:54 PM	75+100	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24G-2129)	0	1	1	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24G-2129) from rear end and ran away at Ch.75+100 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Kujju Nurshing Home at 7:54 PM, Accident occurred on 27.12.2021 at 7:45 PM, Information given through our Patrolling team.
230	27.12.2021	9:59 PM	10:15 PM	10:18 PM	10:30 PM	89+500	RHS	Urban	3	1	2	4	1	0	1	Unknown vehicle & Bike (JH-02BA8949)	1	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02BA8949) from rear end and ran away at Ch.89+500 (RHS) in HREL Project, 1 Person dead on the spot & 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:30 PM, Accident occurred on 27.12.2021 at 9:59 PM, Information given through Our Patrolling team.
231	28.12.2021	5:10 AM	5:12 AM	5:15 AM	5:40 AM	60+500	RHS	Urban	1	2	2	4	1	0	1	Car (JH-05CH-0306) & Lorry (JH-12G-4006)	0	3	1	0	0	0	Yes	An over speed Car (JH-05CH-0306) hit the Lorry (JH-12G-4006) from head on collision and overturned on MCW at Ch.60+500 (RHS) in HREL Project, 3 Persons grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at5:40 AM, Accident occurred on 28.12.2021 at 5:10 AM, Information given through Our Patrolling team.
232	29.12.2021	11:30 AM	11:39 AM	N/A	N/A	91+100	LHS	Urban	1	2	2	4	1	0	1	car (JH-24H-2561)	0	2	0	0	0	0	Yes	An over speed car (JH-24H-2561) hit the median kerb and overturned on MCW at Ch.91+100 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured Persons shifted to the Hospital through 108 Ambulance, Accident occurred on 29.12.2021 at 11:30 AM, Information given through mobile no.9431724101.
233	29.12.2021	5:51 PM	5:59 PM	6:00 PM	6:15 PM	82+300	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-24B-2208)	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24B-2208) from rear end and ran away at Ch.82+300 (RHS) in HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Sadar Hospital Ramgarh at 6:15 PM, Accident occurred on 29.12.2021 at 5:51 PM, Information given through mobile no.9708165057.
234	30.12.2021	5:27 AM	5:39 AM	5:40 AM	5:53 AM	52+150	LHS	Urban	6	2	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.52+150 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:53 AM, Accident occurred on 30.12.2021 at 5:27 AM, Information given through mobile no.9113168146.

235	30.12.2021	5:30 PM	5:31 PM	5:32 PM	5:36 PM	100+600	RHS	Urban	3	2	2	4	1	0	1	Car (JH-01AR-6311)	0	1	0	0	0	0	Yes	A Car (JH-01AR-6311) lost his control due to over speed and hit the Pedestrian from rear end at Ch.100+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Piska at 5:36 PM, Accident occurred on 30.12.2021 at 5:30 PM, Information given through mobile no.7781002285.
236	30.12.2021	7:25 PM	7:30 PM	7:32 PM	7:42 PM	94+850	RHS	Urban	1	2	2	4	3	0	1	Container (UP-78C-9572)	0	1	1	0	0	0	Yes	A Container (UP-78C-9572) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 7:42 PM, Accident occurred on 30.12.2021 at 7:25 PM, Information given through mobile no.6203799730.
237	31.12.2021	2:44 PM	2:49 PM	2:50 PM	3:10 PM	94+850	RHS	Urban	1	2	2	4	3	0	1	Trailer (RJ-47GA-1614)	0	1	0	0	0	0	Yes	A Trailer (RJ-47GA-1614) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person grievous injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:10 PM, Accident occurred on 31.12.2021 at 2:44 PM, Information given through mobile no.6203799730.
238	31.12.2021	5:55 PM	5:57 PM	5:58 PM	6:00 PM	61+180	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-01DG-9077)	0	1	0	0	0	0	Yes	A Bike (JH-01DG-9077) lost his control due to drunk & drive and fell down on MCW at Ch.61+180 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 6:00 PM, Accident occurred on 31.12.2021 at 5:55 PM, Information given through Our Patrolling team.
239	01.01.2022	8:51 PM	8:54 PM	8:56 PM	9:15 PM	97+700	RHS	Urban	1	2	1	4	2	0	1	**Bike (JH-02P-0117)**	0	1	1	0	0	0	Yes	A Bike (JH-02P-0117) lost his control due to drunk & drive and overturned on MCW at Ch.97+700 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, first aid done by ambulance team and shifted to KGT Hospital Ramgarh at 9:15 PM, Accident occurred on 01.01.2022 at 8:51 PM, Information given through mobile no.8825191800.
240	02.01.2022	5:35 PM	5:36 PM	5:37 PM	5:42 PM	99+000	RHS	Urban	3	2	2	4	1	0	1	**Unknown Vehicle**	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.99+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Piska Hospital Ormanjhi at 5:42 PM, Accident occurred on 02.01.2022 at 5:35 PM, Information given through mobile no.8102657160.
241	02.01.2022	5:55 PM	6:02 PM	6:03 PM	6:15 PM	104+000	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.104+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to well cure Hospital Ormanjhi at 6:15 PM, Accident occurred on 02.01.2022 at 5:55 PM, Information given through mobile no.6203799730.
242	05.01.2022	11:52 AM	11:54 AM	11:56 AM	N/A	61+650	LHS	Urban	3	3	2	4	1	0	1	unknown vehicle	0	0	1	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.61+650 (LHS) in HREL Project, 1 person minor injured in this accident, Help Provided by Ambulance team, Accident occurred on 05.01.2022 at 11:52 AM, Information given through mobile no.7903607247.
243	06.01.2022	3:54 PM	3:58 PM	3:59 PM	4:06 PM	104+100	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.104+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by Ambulance team and shifted to Piska Hospital Ormanjhi at 4:06 PM, Accident occurred on 06.01.2022 at 3:54 PM Information given through mobile no.9693256504.
244	07.01.2022	2:21 PM	2:32 PM	2:33 PM	2:45 PM	52+350	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.52+350 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by Ambulance team and shifted to CHC Mandu at 2:45 PM, Accident occurred on 07.01.2022 at 2:21 PM Information given through mobile no.7632994431.

245	08.01.2022	6:43 AM	6:51 AM	N/A	N/A	94+840	RHS	Urban	1	1	2	4	3	0	1	Trailor (JH-05BD-7059)	0	1	0	0	0	0	Yes	A Trailor (JH-05BD-7059) lost his control due to over speed and overturned on MCW at Ch.94+840 (RHS) in HREL Project, 1 Person dead on the spot, Ambulance and Patrolling team reach there and inform to local police, the case in under Local Police, Accident occurred on 08.01.2022 at 6:51 AM, Information given through mobile no.8825191800.
246	08.01.2022	9:15 AM	9:30 AM	9:34 AM	N/A	94+500	LHS	Urban	3	3	2	4	2	0	1	Bike (JH-01BN-7931) & Bike (JH-01DG-1796)	0	0	2	0	0	0	Yes	An over speed Bike (JH-01BN-7931) hit the another Bike (JH-01DG-1796) from rear end and both Bike fell down on MCW at Ch.94+500 (LHS) in HREL Project, 2 Persons minor injured in this accident, Help Provided by ambulance team, Accident occurred on 08.01.2022 at 9:15 AM, Information given through our Patrolling team.
247	08.01.2022	12:37 PM	12:40 PM	12:42 PM	1:01 PM	95+560	RHS	Urban	3	2	2	4	2	0	1	Trailor (RJ-52GA-1325) & Tractor (JH 01A-9276)	0	1	3	0	0	0	Yes	An over speed Trailor (RJ-52GA-1325) hit the Tractor (JH-01A-9276) from rear end and overturned on MCW at Ch.95+560 (RHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:01 PM, Accident occurred on 08.01.2022 at 12:37 PM, Information given through mobile no.6203799730.
248	08.01.2022	1:53 PM	1:58 PM	1:59 PM	2:10 PM	62+800	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-01BF-6518)	0	1	0	0	0	0	Yes	A Bike (JH-01BF-6518) lost hit control due to over speed and fell down on MCW at Ch.62+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 2:10 PM, Accident occurred on 08.01.2022 at 1:53 PM, Information given through mobile no.7903607247.
249	08.01.2022	4:40 PM	4:45 PM	4:46 PM	4:58 PM	62+500	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-02AL-5043)	0	3	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-02AL-5043) from rear end and ran away at Ch.62+500 (RHS) in HREL Project, 3 persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:58 PM, Accident occurred on 08.01.2022 at 4:40 PM, Information given through Our Patrolling team.
250	08.01.2022	8:15 PM	8:17 PM	N/A	8:30 PM	77+350	RHS	Urban	3	1	2	4	1	0	1	unknown vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.77+350 (RHS) in HREL Project, 1 Person dead on the spot, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:30 PM, Accident occurred on 08.01.2022 at 8:15 PM.
251	09.01.2021	5:50 PM	5:55 PM	5:58 PM	N/A	102+700	Median	Urban	1	3	2	4	1	0	1	Tata Sumo (JH-01AZ-5307)	0	0	1	0	0	0	Yes	An over speed Tata Sumo (JH-01AZ-5307) hit the Median kerb Kerb at Ch.102+700 (Median) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 09.01.2022 at 5:50 PM, Information given through our Patrolling team.
252	09.01.2021	7:31 PM	7:35 PM	N/A	8:42 PM	72+750	RHS	Urban	3	1	2	4	1	0	1	Unknown Vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch. 72+750 (RHS) in HREL Project, 1 Person dead on the spot, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh Postmortem House at 8:42 PM, Accident occurred on 09.01.2022 at 7:31 PM, Information given through our Patrolling team.
253	10.01.2022	9:10 PM	9:24 PM	9:26 PM	N/A	88+650	RHS	Urban	1	2	2	4	1	0	1	Scooty (JH-01DP-6872)	0	1	1	0	0	0	Yes	A Scooty (JH-01DP-6872) lost his control due to over speed and fell down on MCW at Ch.88+650 (RHS) in HREL Project, 1 Person grievous & 1 Person minor inured in this accident, Injured Persons shifted to the Hospital through 108 Ambulance, Accident occurred on 10.01.2022 at 9:10 AM, Information given through mobile no.9931109348.
254	11.01.2021	7:10 AM	7:20 AM	N/A	8:00 AM	85+690	LHS	Urban	3	1	2	4	1	0	1	unknown vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.85+690 (LHS) in HREL Project, 1 Person dead on the spot, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:00 AM, Accident occurred on 11.01.2022 at 7:10 Am, Information given through mobile no.8825191800.

255	11.01.2021	4:31 PM	4:35 PM	4:40 PM	N/A	71+740	RHS	Urban	1	3	2	4	2	0	1	Car (JH-01AV-4538)	0	0	2	0	0	0	Yes	A Car (JH-01AV-4538) lost his control due to over speed and overturned on MCW at Ch.71+740 (RHS) in HREL Project, 2 Persons minor injured in this accident, Help Provided by ambulance team, Accident occurred on 11.01.2022 at 4:31 PM, Information given through mobile no.6203916143.
256	12.01.2022	5:18 PM	5:20 PM	5:22 PM	5:35 PM	74+700	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.74+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifed to Adarsh Nursing Home Ramgarh at 5:35 PM, Accident occurred on 12.01.2022 at 5:18 PM, Information given through mobile no.6299300490.
257	13.01.2022	2:30 AM	2:38 AM	2:40 AM	N/A	52+050	LHS	Urban	1	3	2	4	1	0	1	Container (NL-01AE-5785)	0	0	1	0	0	0	Yes	A Container (NL-01AE-5785) lost his control due to over speed and overturned on MCW at Ch.52+050 (LHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team , Accident occurred on 13.01.2022 at 2:30 AM, Information given through mobile no.9931334065.
258	13.01.2022	1:54 PM	1:56 PM	1:58 PM	2:15 PM	99+300	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-01CE-0632) & Bike (JH-24G-6065)	0	2	0	0	0	0	Yes	An over speed Bike (JH-01CE-0632) hit the another Bike (JH-24G-6065) from rear end and both Bike fell down on MCW at Ch.99+300 (LHS) In HREL Project, 2 Persons grievous injured in this accident, first aid done by ambulance team and shifted to Jivan Anmol Hospital Ramgarh at 2:15 PM, Accident occurred on 13.01.2022 at 1:54 PM, Information given through mobile no.8825191800.
259	13.01.2022	7:35 PM	7:36 PM	7:40 PM	8:20 PM	100+050	RHS	Urban	3	1	2	4	1	0	1	truck (BR-01GG-4038) & Bike (JH-01EB-0412)	1	0	1	0	0	0	Yes	An over speed truck (BR-01GG-4038) hit the Bike (JH-01EB-0412) from rear end at Ch.100+050 (RHS) in HREL Project, 1 Person dead on the spot & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:20 PM, Accident occurred on 13.01.2022 at 7:35 PM.
260	14.01.2022	12:34 PM	12:39 PM	N/A	N/A	70+790	RHS	Urban	4	2	2	4	1	0	1	Bolero (JH-21C-8277) Savari Van (JH-02AX-2130)	0	1	0	0	0	0	Yes	A Bolero (JH-21C-8277) hit the Savari Van (JH-02AX-2130) from side smash and overturned on MCW at Ch.70+790 (RHS) in HREL Project, 1 Person grievous injured in this accident, inured Person shifted to the Hospital through PCR Van, Accident occurred on 14.01.2022 at 12:34 PM, Information given through mobile no.8789154033.
261	15.01.2022	11:48 AM	12:01 PM	12:05 PM	12:35 PM	52+120	LHS	Urban	1	1	2	4	1	0	1	Pick Van (JH-02AE-7359)	1	7	0	0	0	0	Yes	A Pick Van (JH-02AE-7359) lost his control due to over speed and overturned on MCW at Ch.52+120 (LHS) in HREL Project, 1 Person dead on the spot & 7 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Hazaribagh at 12:35 PM, Accident occurred on 15.01.2022 at 11:48 AM, information given through mobile no.9973210829.
262	15.01.2022	4:43 PM	4:51 PM	4:55 PM	5:15 PM	53+360	LHS	Urban	3	2	1	4	1	0	1	Bike (JH-02N-6243) & Bike (BR-13C-1933)	0	3	0	0	0	0	Yes	A Bike (JH-02N-6243) lost his control due to drunk & drive and hit the another Bike (BR-13C-1933) from rear end and fell down on MCW at Ch.53+360 (LHS) in HREL Project, 3 Persons grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:15 PM, Accident occurred on 15.01.2022 at 4:43 PM, Information given through mobile no.7979913430.
263	16.01.2022	6:40 PM	6:46 PM	6:47 PM	6:52 PM	104+050	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-01T-4547)	0	1	0	0	0	0	Yes	A Bike (JH-01T-4547) lost his control due to over speed and fell down on MCW at Ch.104+050 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Ormanjhi at 6:52 PM, Accident occurred on 16.01.2022 at 6:40 PM, Information given through mobile no.7979829622.

264	16.01.2022	7:05 PM	7:14 PM	7:15 PM	7:31 PM	85+300	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-05M-7257)	0	1	0	0	0	0	Yes	A Bike (JH-05M-7257) lost his control due to over speed and fell down on MCW at Ch.85+300 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Hope Hospital Ranchi at 7:31 PM, Accident occurred on 16.01.2022 at 7:05 PM, Information given through mobile no.8789154033.
265	17.01.2022	5:40 AM	5:47 AM	5:50 AM	6:45 AM	94+950	RHS	Urban	1	1	5	4	3	0	1	Trailor (PB-13AR-8117)	1	0	1	0	0	0	Yes	An over speed Trailor (PB-13AR-8117) lost his control due to Mechanical failure (Break Fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person dead on the spot and 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:45 AM, Accident occurred on 17.01.2022 at 5:40 AM, Information given through mobile no.6204906142.
266	17.01.2022	2:51 PM	2:54 PM	2:57 PM	N/A	58+040	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-02BG-9932)	0	0	1	0	0	0	Yes	A Bike (JH-02BG-9932) lost his control due to over speed and fell down on MCW at Ch.58+040 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team , Accident occurred on 17.01.2022 at 2:51 PM, Information given through mobile no.7903186693.
267	20.01.2022	10:47 AM	10:53 AM	10:56 AM	N/A	94+900	RHS	Urban	3	3	2	4	3	0	1	Unknown vehicle	0	0	1	0	0	0	Yes	An Unknown vehicle hit the bicycle from rear end and ran away at Ch.94+900 (RHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team , Accident occurred on 20.01.2022 at 10:47 AM, Information given through mobile no.9771421931.
268	21.01.2022	12:52 PM	12:54 PM	12:56 PM	1:10 PM	58+400	LHS	Urban	6	2	2	4	1	0	1	Scooty (JH-24H-3134)	0	1	0	0	0	0	Yes	A Scooty (JH-24H-3134) lost his control due to over speed and skidded at Ch.58+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 1:10 PM, Accident occurred on 21.01.2022 at 12:52 PM, Information given through mobile no.7667081503.
269	21.01.2022	3:15 PM	3:17 PM	3:19 PM	3:22 PM	73+700	RHS	Urban	3	3	2	4	1	0	1	Unknown vehicle & Bike (JH-02H-6918)	0	0	1	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02H-6918) from rear end and ran away at Ch.73+700 (RHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team and shifted to Kujju Nurshing Home at 3:22 PM, Accident occurred on 21.01.2022 at 3:15 PM, Information given through mobile no. 9123165797.
270	21.01.2022	6:54 PM	6:56 PM	6:58 PM	7:05 PM	61+800	LHS	Urban	1	2	2	4	1	0	1	Car (JH-01DF-0970)	0	1	0	0	0	0	Yes	A Car (JH-01DF-0970) lost his control due to over speed and hit the Kerb and overturned on MCW at Ch.61+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 7:05 PM, Accident occurred on 21.01.2022 at 6:54 PM, Information given through mobile no.8789154033.
271	23.01.2022	7:01 AM	7:08 AM	7:10 AM	7:20 AM	71+520	RHS	Urban	6	3	2	4	1	0	1	Bike (JH-10H-2433)	0	0	1	0	0	0	Yes	A Bike (JH-10H-2433) lost his control due to over speed and skidded at Ch.71+520 (RHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 7:20 AM, Accident occurred on 23.01.2022 at 7:01 AM, Information given through mobile no.6200522792.
272	24.01.2022	5:17 PM	5:19 PM	5:22 PM	N/A	98+900	RHS	Urban	1	3	2	4	1	0	1	Auto (JH-01F-9941)	0	0	1	0	0	0	Yes	An Auto (JH-01F-9941) lost his control due to over speed and overturned on MCW at Ch.98+900 (RHS) in HREL Project, 2 Persons minor injured in this accident, help Provided by ambulance team, Accident occurred on 24.01.2022 at 5:17 PM, Information given through mobile no.8521749491.
273	25.01.2022	12:18 PM	12:28 PM	12:30 PM	12:40 PM	92+900	RHS	Urban	3	1	2	4	1	5	1	Over speed Tralor (UP-78DT-9501) & Bike (JH-01AE-1724)	1	1	0	0	0	0	Yes	An Over speed Tralor (UP-78DT-9501) hit the Bike (JH-01AE-1724) from rear end and overturned on MCW at Ch.92+900 (RHS) in HREL Project, 1 Person dead on the spot and 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:40 PM, Accident occurred on 25.01.2022 at 12:18 PM, Information given through mobile no.6203799730.

274	26.01.2022	2:20 PM	2:26 PM	2:28 PM	2:38 PM	94+500	LHS	Urban	6	2	1	4	2	0	1	Bike (JH-24F-4746)	0	1	1	0	0	0	Yes	A Bike (JH-24F-4746) lost his control due to drunk & drive and skidded at Ch.94+500 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:38 PM, Accident occurred on 26.01.2022 at 2:20 PM, Information given through mobile no.6200681192.
275	26.01.2022	2:58 PM	3:07 PM	3:10 PM	3:40 PM	52+100	RHS	Urban	2	1	2	4	1	0	1	bike (JH-11U-0560)	1	1	0	0	0	0	Yes	A bike (JH-11U-0560) hit the Metal Beam Crash Barrier and fell down on MCW at Ch.52+100 (RHS) in HREL Project, 1 Person dead on the spot and 1 person grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 3:40 PM, Accident occurred on 26.01.2022 at 2:58 PM, Information given through our Patrolling team.
276	28.01.2022	11:42 AM	11:48 AM	11:52 AM	1:04 PM	69+300	RHS	Urban	2	2	2	4	1	0	1	Car (JH-13G-2418) & Car (JH-05CZ-8512)	0	1	1	2	0	0	Yes	A Car (JH-13G-2418) hit the another Car (JH-05CZ-8512) from Head On Collision at Ch.69+300 (RHS) in HREL Project, 1 Person grievous , 1 Person minor Injured & 2 Persons non Injured in this accident, Help Provided by ambulance team and Injured Person shifted to Samford Hospital Ranchi at 1:04 PM, Accident occurred on 28.01.2022 at 11:42 AM, Information given through mobile no.7488962336.
277	28.01.2022	5:07 PM	5:08 PM	5:10 PM	5:12 PM	100+300	LHS	Urban	6	2	1	4	1	0	1	Bike (JH-01A-4424)	0	1	1	0	0	0	Yes	A Bike (JH-01A-4424) lost his control due to drunk & Drive and fell down on MCW at Ch.100+300 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Piska Hospital Ormanjhi at 5:12 PM, Accident occurred on 28.01.2022 at 5:07 PM, Information given through mobile no.8298262916.
278	28.01.2022	5:56 PM	6:00 PM	6:02 PM	N/A	70+780	LHS	Urban	6	3	1	4	1	0	1	Bike (JH-24H-2238)	0	0	1	0	0	0	Yes	A Bike (JH-24H-2238) lost his control due to drunk & drive and fell down on MCW at Ch.70+780 (LHS) in HREL Project, 1 Person Minor injured in this accident, Help Provided by ambulance team, Accident occurred on 28.01.2022 at 5:56 PM, Information given through mobile no.9106648691.
279	29.01.2022	1:57 AM	2:08 AM	2:10 AM	2:25 AM	53+280	LHS	Urban	1	2	1	4	1	0	1	Car (WB-06H-7787)	0	1	1	0	0	0	Yes	A Car (WB-06H-7787) lost his control due to drunk & drive and Overturned on MCW at Ch.53+280 (LHS) in HREL Project, 1 Person grievous & 1 Person non injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 2:25 AM, Accident occurred on 29.01.2022 at 1:57 AM, Information given through mobile no.9931334065.
280	30.01.2022	10:43 AM	10:58 AM	11:02 AM	N/A	85+200	RHS	Urban	3	3	2	4	1	0	1	Unknown Vehicle	0	0	1	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.85+200 (RHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 30.01.2022 at 10:43AM, Information given through mobile no.6203799730.
281	30.01.2022	10:33 AM	10:38 AM	10:42 AM	10:55 AM	78+500	RHS	Urban	1	1	2	4	1	0	1	Car (JH-24C-8777)	2	4	0	0	0	0	Yes	A Car (JH-24C-8777) lost his control due to over speed and hit the MBCB and overturned on MCW at Ch.78+500 (RHS) in HREL Project, 2 Persons dead on the spot & 4 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Hope Hospital at 10:55 AM, Accident occurred on 30.01.2022 at 10:33 AM, Information given through mobile no.8210731756.
282	31.01.2022	7:51 AM	7:56 AM	7:58 AM	8:05 AM	61+900	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-24C-6364)	0	1	1	0	0	0	Yes	An over speed Bike (JH-24C-6364) lost his control and hit the Electric Pole and fell down on MCW at Ch.61+900 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 8:05 AM, Accident occurred on 31.01.2022 at 7:51 AM, Information given through mobile no.8789154033.

283	31.01.2022	7:52 PM	7:59 PM	N/A	N/A	106+850	RHS	Urban	1	2	2	4	1	0	1	Turbo 407 (BR-01GD-1285) & Bike (JH-01EC-1968)	0	2	0	0	0	0	Yes	An over speed Turbo 407 (BR-01GD-1285) hit the Bike (JH-01EC-1968) from rear end and overturned on MCW at Ch.106+850 (RHS) in HREL Project, 2 Persons grievous injured in this accident, Grievously injured Persons shifted to the Hospital through other vehicle, Accident occurred on 31.01.2022 at 7:52 PM, Information given through mobile no.6203799730.
284	31.01.2022	9:08 PM	9:17 PM	9:20 PM	9:53 PM	53+300	LHS	Urban	3	1	2	4	1	0	1	unknown vehicle & tempo (A/F)	1	2	0	0	0	0	Yes	An unknown vehicle hit the tempo (A/F) from rear end and ran away at Ch.53+300 (LHS) in HREL Project, 1 Person dead on the spot & 2 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Arogyam Hospital Hazaribagh at 9:53 PM, Accident occurred on 31.01.2022 at 9:08 PM, Information given through mobile no.7091676537.
285	01.02.2022	6:59 AM	7:07 AM	7:09 AM	7:35 AM	52+700	RHS	Urban	3	2	2	4	1	0	1	**Car (JH-01DU-9847)**	0	2	0	0	0	0	Yes	A Car (JH-01DU-9847) lost his control due to over speed and hit the Tractor (A/F) from rear end at Ch.52+700 (RHS) in HREL Project, 2 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 7:35 AM, Accident occurred on 01.02.2022 at 6:59 AM, Information given through mobile no.9931334065.
286	01.02.2022	6:10 PM	6:16 PM	6:17 PM	6:35 PM	55+900	LHS	Urban	3	2	2	4	1	0	1	**Unknown vehicle & Bike (JH-02AV-9412)**	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02AV-9412) from rear end and ran away at Ch.55+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 6:35 PM, Accident occurred on 01.02.2022 at 6:10 PM, Information given through mobile no.7903186693.
287	03.02.2022	12:31 PM	12:36 PM	12:40 PM	N/A	71+950	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-24H-6510)	0	0	1	0	0	0	Yes	A Bike (JH-24H-6510) lost his control due to over speed and skidded at Ch.71+950 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 03.02.2022 at 12:31 PM, Information given through mobile no.8789154033.
288	04.02.2022	10:10 PM	10:26 PM	10:28 PM	11:00 PM	113+900	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-01EK-5916)	0	1	1	0	0	0	Yes	A Bike (JH-01EK-5916) lost his control due to drunk & drive and fell down on MCW at Ch.113+900 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to RIMS Hospital Ranchi at 11:00 PM, Accident occurred on 04.02.2022 at 10:10 PM, Information given through mobile no.8825237402.
289	07.02.2022	10:59 AM	11:10 AM	N/A	N/A	110+880	LHS	Urban	3	2	2	4	1	0	1	Car (MH-03CH-4438) & Bike (JH-01CC-1407)	0	1	0	0	0	0	Yes	An over speed Car (MH-03CH-4438) hit the Bike (JH-01CC-1407) from rear end and Bike fell down on MCW at Ch.110+880 (LHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the Hospital through PCR Van, Accident occurred on 07.02.2022 at 10:59 AM, Information given through mobile no.8340543209.
290	08.02.2022	6:32 PM	6:37 PM	6:39 PM	6:44 PM	104+800	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.104+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Piska Ormanjhi at 6:44 PM, Accident occurred on 08.02.2022 at 6:32 PM, Information given through mobile No.8102655716.
291	08.02.2022	6:43 PM	6:52 PM	6:54 PM	6:58 PM	81+900	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02L-2515)	0	1	1	0	0	0	Yes	A Bike (JH-02L-2515) lost his control due to over speed and skidded at Ch.81+900 (LHS) in HREL Project, 1 Person grievous injured & 1 Person minor injured in this accident, Help Provide by ambulance team and shifted to aarogya Helth Care Ramgarh at 6:58 PM, Accident occurred on 08.02.2022 at 6:43 PM, Information given through mobile no.9835977503.

292	08.02.2022	7:53 PM	7:58 PM	8:00 PM	8:10 PM	78+250	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-11F-5717)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-11F-5717) from rear end and ran away at Ch.78+250 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:10 PM, Accident occurred on 08.02.2022 at 7:53 PM, Information given through mobile No.6206191003.
293	08.02.2022	7:25 PM	7:34 PM	7:36 PM	N/A	108+500	LHS	Urban	6	3	1	4	1	0	1	Bike (JH-02AT-0851)	0	0	1	0	0	0	Yes	A Bike (JH-02AT-0851) lost his control due to drunk & drive and fell down on MCW at Ch.108+500 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 08.02.2022 at 7:25 PM, Information given through mobile no.7004800645.
294	11.02.2022	9:54 AM	10:02 AM	10:04 AM	10:10 AM	67+200	LHS	Urban	3	2	2	4	1	0	1	Unknown & scooty (JH-02AR-3424)	0	1	0	0	0	0	Yes	An Unknown hit the scooty (JH-02AR-3424) from rear end and ran away from reae end and ran away at Ch.67+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 10:10 AM, Accident occurred on 11.02.2022 at 9:54 AM, Information given through mobile no.8789154033.
295	14.02.2022	6:01 AM	6:07 AM	6:08 AM	6:45 AM	106+000	RHS	Urban	3	2	2	4	1	0	1	Turbo (JH-02J-7313)	0	1	0	0	0	0	Yes	An over speed Turbo (JH-02J-7313) hit the unknown vehicle from rear end and overturned on MCW at Ch.106+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, Help provided by ambulance team and shifted to RIMS Hospital Ranchi at 6:45 AM, Accident occurred on 14.02.2022 at 6:01 AM, Information given through mobile no.8102777359.
296	14.02.2022	3:54 PM	4:00 PM	4:02 PM	4:05 PM	63+020	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.63+020 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 4:05 PM, Accident occurred on 14.02.2022 at 3:54 PM, Information given through mobile no.8434232958.
297	15.02.2022	11:35 AM	11:43 AM	11:55 AM	12:10 PM	92+850	RHS	Urban	3	1	5	4	8	0	1	trailor (GJ-06BT-6325) ,Bikes (JH-01DK-3861) , (JH-01DH-0410) , XUV(JH-01BH-0913) , Baleno (JH-01EK-6557) and swift (JH-01EC-2671)	4	1	2	0	0	0	Yes	An over speed trailor (GJ-06BT-6325) lost his control due to mechanical failure (Break Failure) and first hit the two Bikes (JH-01DK-3861) , (JH-01DH-0410) from rear end then three four wheelers XUV(JH-01BH-0913) , Baleno (JH-01EK-6557) and swift (JH-01EC-2671) and overturned on MCW at Ch.92+850 (RHS) in HREL Project, 4 Persons dead on the spot , 1 Person grievous and 2 Persons minor injured in this accident, Help Provided by ambulance team and shifted to sadar Hospital Ramgarh at 12:10 AM, Accident occurred on 15.02.2022 at 11:35 AM, Information given through mobile no.8825191800.
298	15.02.2022	7:15 PM	N/A	N/A	N/A	59+300	LHS	Urban	6	2	2	4	1	0	1	Scooty (JH-24G-3892)	0	1	0	0	0	0	Yes	A Scooty (JH-24G-3892) lost his control due to over speed and skidded at Ch.59+300 (LHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured Person shifted to the hospital through PCR Van, Accident occurred on 15.02.2022 at 7:15 PM.
299	15.02.2022	11:40 PM	11:46 PM	11:50 PM	N/A	94+850	RHS	Urban	1	3	2	4	3	0	1	Trailor (UP-53BT-7677)	0	0	1	1	0	0	Yes	A Trailor (UP-53BT-7677) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person minor injured & 1 Person non injured in this accident, Help Provided by ambulance team, Accident occurred on 15.02.2022 at 11:40 PM, Information given through mobile no.6203799730.
300	16.02.2022	4:32 AM	4:48 AM	4:49 AM	5:00 AM	89+250	LHS	Urban	3	2	2	4	1	0	1	Milk Van (GJ-08AU-9701) & truck (BR-27A-5988)	0	5	0	0	0	0	Yes	A Milk Van (GJ-08AU-9701) lost his control due to over speed and hit the truck (BR-27A-5988) from rear end at Ch.89+250 (LHS) in HREL Project, 5 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:00 AM, Accident occurred on 16.02.2022 at 4:32 AM, Information given through mobile no.6203799730.

301	16.02.2022	4:06 AM	4:27 AM	N/A	5:09 AM	51+700	LHS	Urban	3	1	2	4	1	0	1	Unknown & bicycle	2	0	0	0	0	0	Yes	An Unknown vehicle hit the bicycle from rear end and ran away at Ch.51+700 (LHS) in HREL Project, 2 Persons dead on the spot , help provided by ambulance team and shifted to Sadar Hospital at 5:09 AM, Accident occurred on 4:06 AM, Information given through mobile no.9973210829.
302	16.02.2022	5:17 PM	5:23 PM	5:25 PM	5:35 PM	53+850	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02Q-4399)	0	1	0	0	0	0	Yes	A Bike (JH-02Q-4399) lost his control due to drunk & drive and fell down on MCW at Ch.53+850 (LHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 5:35 PM, Accident occurred on 16.02.2022 at 5:17 PM, Information given through mobile no.8789154033.
303	16.02.2022	11:07 PM	11:08 PM	11:09 PM	11:48 PM	100+300	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.100+300 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to RIMS Hospital Ranchi at 11:48 PM, Accident occurred on 16.02.2022 at 11:07 PM.
304	17.02.2022	6:06 AM	6:15 AM	6:17 AM	6:38 AM	52+080	RHS	Urban	1	2	2	4	1	0	1	Container (NL-01AF-2196)	0	1	0	0	0	0	Yes	A Container (NL-01AF-2196) lost his control due to over speed and overturned on MCW at Ch.52+080 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to CHC Mandu at 6:38 AM, Accident occurred on 17.02.2022 at 6:06 AM, Information given through mobile no.8789154033.
305	17.02.2022	7:19 AM	7:25 AM	7:30 AM	9:15 AM	70+900	LHS	Urban	3	1	2	4	1	0	1	Truck (NL-01L-3997)	1	0	1	0	0	0	Yes	A Truck (NL-01L-3997) lost his control due to over speed and hit the Pedestrian(School Student) from rear end at Ch.70+900 (LHS) in HREL Project, 1 Person dead on the spot & 1 Person minor injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 9:15 AM , Accident occurred on 17.02.2022 at 7:19 AM,Information given through mobile no.6200854041.
306	18.02.2022	7:50 PM	7:53 PM	7:54 PM	7:59 PM	60+600	LHS	Urban	6	2	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost his control due to over speeda and skidded at Ch.60+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to CHC Mandu at 7:59 PM, Accident occurred on 18.02.2022 at 7:50 PM, Information given through mobile no.9905397118.
307	20.02.2022	5:59 PM	6:03 PM	6:05 PM	6:20 PM	60+820	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-24G-2196)	0	1	2	0	0	0	Yes	A Bike (JH-24G-2196) lost his control due to drunk & drive and fell down on MCW at Ch.60+820 (LHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:20 PM, Accident occurred on 20.02.2022 at 5:59 PM, Information given through mobile no.6206482186.
308	21.02.2022	6:42 AM	6:48 AM	7:05 AM	N/A	68+900	LHS	Urban	1	3	2	4	1	0	1	Car (HR-29AR-6930)	0	0	1	2	0	0	Yes	A Car (HR-29AR-6930) lost his control due to over speed and hit the median kerb and overturned on MCW at Ch.68+900 (LHS) in HREL Project, 1 Person minor & 2 Persons non injured in this accident, help provided by ambulance team , Accident occurred on 21.02.2022 at 6:42 AM, Information given through mobile no.6200854041.
309	21.02.2022	6:32 PM	6:37 PM	6:38 PM	6:45 PM	63+150	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.63+150 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:45 PM, Accident occurred on 21.02.2022 at 6:32 PM, Information given through mobile no.6200854041.
310	21.02.2022	6:41 PM	6:54 PM	6:55 PM	7:04 PM	84+480	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-01T-5574)	0	1	0	0	0	0	Yes	A Bike (JH-01T-5574) lost his control due to drunk & drive and fell down on MCW at Ch.84+480 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:04 PM, Accident occurred on 21.02.2022 at 6:41 PM, Information given through mobile no.8340427627.

311	24.02.2022	8:36 PM	9:00 PM	N/A	N/A	108+400	RHS	Urban	3	2	2	4	1	0	4	unknown vehicle & Bike (JH-01EC-7808)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01EC-7808) from rear end and ran away a Ch.108+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, injured person shifted to the Hospital through another vehicle, Accident occurred on 24.02.2022 at 8:36 PM, Information given through mobile no.8825181800.
312	25.02.2022	7:11 PM	7:15 PM	7:18 PM	N/A	93+900	LHS	Urban	6	3	2	4	1	0	1	Bike (JH-02N-3657)	0	0	1	0	0	0	Yes	A Bike (JH-02N-3657) lost his control due to over speed and fell down on MCW at Ch.93+900 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 25.02.2022 at 7:11 PM, Information given through mobile no.6203799730.
313	25.02.2022	7:47 PM	8:00 PM	8:03 PM	8:45 PM	99+600	LHS	Urban	2	1	2	4	1	0	1	Bike (JH-01AZ-4125) & Bike (JH-01AK-8251)	1	1	1	0	0	0	Yes	A Bike (JH-01AZ-4125) hit the another Bike (JH-01AK-8251) from head on collision which is moving wrong direction and both bike fell down on MCW at Ch.99+600 (LHS) in HREL Project, 1 Person dead on the spot , 1 Person grievous & 1 person minor injured in this accident, help Provided by ambulance team and shifted to RIMS Hospital Ranchi at 8:45 PM, Accident occurred on 25.02.2022 at 7:47 PM, Information given through mobile no.6203799730.
314	26.02.2022	2:55 PM	3:03 PM	3:05 PM	3:30 PM	94+950	RHS	Urban	1	2	2	4	3	0	1	truck (UP-61AT-2329)	0	1	0	0	0	0	Yes	A truck (UP-61AT-2329) lost his control due to over speed and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:30 PM, Accident occurred on 26.02.2022 at 2:55 PM, Information given through mobile no.8789694032.
315	27.02.2022	5:11 AM	5:16 AM	5:18 AM	5:50 AM	78+000	LHS	Urban	1	2	2	4	1	0	1	Container (KA-51AG-5338)	0	1	1	0	0	0	Yes	A Container (KA-51AG-5338) lost his control due to over speed and overturned on MCW at Ch.78+000 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:50 AM, Accident occurred on 27.02.2022 at 5:11 AM, Information given through mobile no.7781002285.
316	27.02.2022	3:17 PM	3:25 PM	3:28 PM	3:46 PM	81+520	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-24A-8851)	0	1	1	0	0	0	Yes	An over speed Bike (JH-24A-8851) hit the animal and fell down on MCW at Ch.81+520 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:46 PM, Accident occurred on 27.02.2022 at 3:17 PM, Information given through mobile no.8789154033.
317	01.03.2022	8:19 PM	8:27 PM	8:28 PM	8:40 PM	53+540	LHS	Urban	3	2	1	4	1	0	1	**Bike (JH-02D-8331)**	0	1	0	0	0	0	Yes	A Bike (JH-02D-8331) lost his control due to drunk & drive and hit the unknown vehicle and fell down on MCW at Ch.53+540 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:40 PM, Accident occurred on 01.03.2022 at 8:19 PM, Information given through mobile no.8789154033.
318	02.03.2022	8:30 AM	8:37 AM	8:38 AM	8:55 AM	95+680	RHS	Urban	3	2	2	4	2	0	1	**unknown vehicle &Bike (JH-01CV-0522)**	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01CV-0522) from rear end and ran away at Ch.95+680 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 8:55 AM, Accident occurred on 02.03.2022 at 8:30 AM, Information given through mobile no.9771421931.
319	02.03.2022	4:20 PM	4:21 PM	4:25 PM	4:32 PM	92+800	RHS	Urban	3	2	2	4	2	5	1	truck (UP-81BT-9275) & auto (AF)	0	3	0	0	0	0	Yes	An over speed truck (UP-81BT-9275) hit the auto (AF) from rear end and overturned on MCW at Ch.92+800 (RHS) in HREL Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to sadar Hospital Ramgarh at 4:32 PM, Accident occurred on 02.03.2022 at 4:20 PM.

320	02.03.2022	11:30 PM	11:33 PM	11:34 PM	11:45 PM	92+650	RHS	Urban	1	2	2	4	2	5	1	Truck (PB-23K-9597)	0	1	0	0	0	0	Yes	A Truck (PB-23K-9597) lost his control due to over speed and overturned on MCW at Ch.92+650 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:45 PM, Accident occurred on 02.03.2022 at 11:30 PM.
321	06.03.2022	9:43 PM	9:47 PM	9:48 PM	10:05 PM	74+000	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01L-7585)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01L-7585) from rear end and ran away at Ch.74+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:05 PM, Accident occurred on 06.03.2022 at 9:43 PM, Information given through mobile no.7903837981.
322	10.03.2022	10:12 AM	10:21 AM	10:22 AM	10:35 AM	52+600	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.52+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 10:35 AM, Accident occurred on 10.03.2022 at 10:12 AM, Information given through mobile no.6200854041.
323	10.03.2022	8:52 PM	9:00 PM	9:02 PM	N/A	85+200	LHS	Urban	3	3	2	4	1	0	1	unknown vehicle & Bike (JH-09AE-7163)	0	0	1	0	0	0	Yes	An unknown vehicle hit the Bike (JH-09AE-7163) from rear end and ran away at Ch.85+200 (LHS) in HREL Project, 1 Person minor injured in this accident, Help Provided by ambulance team, Accident occurred on 10.03.2022 at 8:52 PM, Information given through mobile no.9939114864.
324	11.03.2022	11:56 AM	12:02 PM	12:04 PM	12:15 PM	94+950	RHS	Urban	1	2	5	4	3	0	1	truck (HR-46E-9051)	0	1	0	0	0	0	Yes	An over speed truck (HR-46E-9051) lost his control due to Mechanical failure (Break Fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 12:15 PM, Accident occurred on 11.03.2022 at 11:56 AM, Information given through mobile no.6200681192.
325	12.03.2022	5:55 PM	6:00 PM	6:05 PM	6:10 PM	56+850	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & savari Van (JH-10S-4267)	0	3	0	0	0	0	Yes	An Unknown vehicle hit the savari Van (JH-10S-4267) from rear end and ran away at Ch.56+850 (LHS) in HREL Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:10 PM, Accident occurred on 12.03.2022 at 5:55 PM, Information given through mobile no.8789154033.
326	13.03.2022	12:22 AM	12:26 AM	12:28 AM	12:59 AM	95+000	RHS	Urban	1	2	2	4	1	0	1	Trailor (RJ-05GB-9351)	0	2	0	0	0	0	Yes	A Trailor (RJ-05GB-9351) lost his control due to over speed and overturned on MCW at Ch.95+000 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:59 AM, Accident occurred on 13.03.2022 at 12:22 AM, Information given through mobile no.9973884583.
327	14.03.2022	4:20 AM	4:24 AM	4:26 AM	4:50 AM	94+700	LHS	Urban	2	2	2	4	3	0	1	Container (HR-610-9210)	0	8	0	0	0	0	Yes	A Container (HR-610-9210) lost his control due to over speed and jump RHS to LHS and hit the Bus from Head on collision at Ch.94+700 (LHS) in HREL Project, 8 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:50 AM, Accident occurred on 14.03.2022 at 4:20 AM, Information given through mobile no.8825191800.
328	14.03.2022	12:05 PM	12:09 PM	12:12 PM	N/A	71+400	RHS	Urban	6	3	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.71+400 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, accident occurred on 14.03.2022 at 12:05 PM, Information given through mobile no.6206191003.
329	14.03.2022	5:07 PM	5:10 PM	5:12 PM	5:18 PM	60+900	LHS	Urban	6	2	1	4	1	0	1	Bike (JH-02N-9813)	0	1	0	0	0	0	Yes	A Bike (JH-02N-9813) lost his control due to drunk & drive and skidded at Ch.60+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:18 PM, Accident occurred on 14.03.2022 at 5:07 PM.

330	17.03.2022	3:37 PM	3:43 PM	N/A	N/A	70+250	LHS	Urban	1	2	2	4	2	0	1	Car (BR-01FL-9136)	0	2	0	0	0	0	Yes	An over speed Car (BR-01FL-9136) lost his control and hit the median kerb and overturned on MCW at Ch.70+250 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the Hospital through PCR Van, Accident occurred on 17.03.2022 at 3:37 PM, Information given through mobile no.8789154033.
331	18.03.2022	12:44 AM	12:50 AM	12:52 AM	1:05 AM	64+400	LHS	Urban	1	2	1	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	An over speed Bike (A/F) lost his control due to drunk & drive and fell down on MCW at Ch.64+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Manorama Nurshing Home Murpa at 1:05 AM, Accident occurred on 18.03.2022 at 12:44 AM, Information given through mobile no.9110138036.
332	20.03.2022	12;30 PM	12:34 PM	12:35 PM	12:48 PM	93+300	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02J-5118)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02J-5118) from rear end and and ran away at Ch.93+300 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:48 PM, Accident occurred on 20.03.2022 at 12:30 PM,Information given through mobile no.6203799730.
333	21.03.2022	3:02 AM	3:06 AM	3:07 AM	3:26 AM	95+000	RHS	Urban	1	2	5	4	3	0	1	Trailor (NL-01AB-3545)	0	1	0	0	0	0	Yes	An over speed Trailor (NL-01AB-3545) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.95+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, Help Provided by ambulance team and shifted to KGT Hospital Ramgarh at 3:26 AM, Accident occurred on 21.03.2022 at 3:02 AM, Information given through mobile no.6203799730.
334	21.03.2022	2:50 PM	2:58 PM	3:00 PM	N/A	51+960	LHS	Urban	1	3	2	4	1	0	1	Bike (JH-24D-8479)	0	0	1	0	0	0	Yes	A Bike (JH-24D-8479) lost his control due to over speed and fell down on MCW at Ch.51+960 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 21.03.2022 at 2:50 PM, Information given through PCR VAN.
335	22.03.2022	8:10 PM	8:20 PM	8:21 PM	8:35 PM	51+700	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-03B-7893)	0	1	0	0	0	0	Yes	An over speed Bike (JH-03B-7893) hit the median kerb and fell down on MCW at Ch.51+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:35 PM, Accident occurred on 22.03.2022 at 8:10 PM, Information given through mobile no.8789154033.
336	23.03.2022	7:00 PM	7:04 PM	7:07 PM	7:14 PM	87+300	RHS	Urban	2	2	2	4	1	0	1	unknown tractor & Pick up Van (JH-01AH-4609)	0	1	1	0	0	0	Yes	An unknown tractor which is moving wrong direction hit the Pick up Van (JH-01AH-4609) from head on and ran away and pick up van overturned on MCW at Ch.87+300 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:14 PM, Accident occurred on 23.03.2022 at 7:00 PM, Information given through mobile no.9931109348.
337	26.03.2022	8:30 AM	8:32 AM	8:34 AM	8:55 AM	92+700	RHS	Urban	1	2	2	4	1	5	1	trailer (RJ-02GA-9027)	0	2	0	0	0	0	Yes	A trailer (RJ-02GA-9027) lost his control due to over speed and overturned on MCW at Ch.92+700 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:55 AM, Accident occurred on 26.03.2022 at 8:30 AM.
338	28.03.2022	4:13 AM	4:20 AM	4:22 AM	6:15 AM	94+900	LHS	Urban	1	2	2	4	3	0	1	Container (AP-26TJ-0036)	0	1	0	0	0	0	Yes	A Container (AP-26TJ-0036) lost his control due to over speed and overturned on MCW at Ch.94+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 6:15 AM, Accident occurred on 28.03.2022 at 4:13 AM, Information given through mobile no.8825191800.

339	28.03.2022	2:44 PM	2:46 PM	2:50 PM	N/A	61+600	RHS	Urban	1	3	1	4	1	0	1	Bike (JH-01DY-3713)	0	0	1	0	0	0	Yes	A Bike (JH-01DY-3713) lost his control due to drunk & drive and fell down on MCW at Ch.61+600 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 28.03.2022 at 2:44 PM, Information given through mobile no.7004756887.
340	29.03.2022	2:05 PM	2:10 PM	2:15 PM	N/A	96+100	LHS	Urban	1	3	5	4	2	0	1	Oil Tanker (PB-03AZ-0937)	0	0	2	0	0	0	Yes	An over speed Oil Tanker (PB-03AZ-0937) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.96+100 (LHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team, accident occurred on 29.03.2022 at 2:05 PM, Information given through mobile no.6203799730.
341	30.03.2022	9:56 AM	10:00 AM	10:02 AM	10:25 AM	71+940	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the ice cream thela from rear end and ran away at Ch.71+940 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:25 AM, Accident occurred on 30.03.2022 at 9:56 AM, Information given through mobile no.8863887789.
342	30.03.2022	3:05 PM	3:10 PM	3:12 PM	3:28 PM	55+400	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02P-6904)	0	1	0	0	0	0	Yes	A Bike (JH-02P-6904) lost his control due to over speed and fell down on MCW at Ch.55+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 3:28 PM, Accident occurred on 30.03.2022 at 3:05 PM, Information given through mobile no.8789154033.
343	01.04.2022	10:57 PM	11:01 PM	11:02 PM	11:15 PM	71+100	RHS	Urban	8	2	1	4	1	0	1	**Bus (BR-06PE-6151)**	0	1	0	0	0	0	Yes	A Bus (BR-06PE-6151) helper fell down on MCW due to drunk at Ch.71+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:15 PM, Accident occurred on 01.04.2022 at 10:57 PM, Information given through mobile no.8789154033.
344	03.04.2022	6:35 PM	6:44 PM	6:45 PM	7:40 PM	99+800	RHS	Urban	3	2	2	4	1	0	1	**Unknown Vehicle**	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.99+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Ranchi at 7:40 PM, Accident occurred on 03.04.2022 at 6:35 PM, Information given through mobile no.7979789659.
345	03.04.2022	9:07 PM	9:10 PM	9:12 PM	9:35 PM	74+540	LHS	Urban	1	2	2	4	1	0	1	Car (JH-02BF-4308)	0	1	0	4	0	0	Yes	An over speed Car (JH-02BF-4308) lost his control due to drunk & drive and jump RHS to LHS at Ch.74+540 (LHS) in HREL Project, 1 Person grievous & 4 Persons non injured in this accident, help Provided by ambulance team and grievously injured person shifted to Sadar Hospital Ramgarh at 9:35 PM, Accident occurred on 03.04.2022 at 9:07 PM.
346	04.04.2022	6:58 AM	7:05 AM	7:07 AM	7:30 AM	94+800	LHS	Urban	1	2	2	4	3	0	1	Truck (UP-78CN-6144)	0	1	1	0	0	0	Yes	A Truck (UP-78CN-6144) lost his control due to over speed and jump RHS to LHS and overturned on MCW at Ch.94+800 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:30 AM, Accident occurred on 04.04.2022 at 6:58 AM, Information given through mobile no.7717778285.
347	04.04.2022	8:11 AM	8:15 AM	8:17 AM	8:20 AM	78+210	RHS	Urban	1	3	2	4	1	0	1	Bike (JH-01CR-1166)	0	0	2	0	0	0	Yes	A Bike (JH-01CR-1166) lost his control due to over speed and fell down in drain at Ch.78+210 (RHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Jivanrekha Hospital Ramgarh at 8:20 AM, Accident occurred on 04.04.2022 at 8:11 AM, Information given through mobile no.6206191003.
348	04.04.2022	8:53 PM	9:09 PM	N/A	N/A	44+740	RHS	Urban	3	1	2	4	1	0	1	Unknown vehicle & Bike (JH-02BB-8291)	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02BB-8291) from rear end and ran away at Ch.44+740 (RHS) in HREL Project, 1 Person dead on the spot, Ambulance and Patrolling team inform to local Police, Accident occurred on 04.04.2022 at 8:53 PM, Information given through mobile no.6206266533.

349	05.04.2022	11:35 AM	11:44 AM	11:45 AM	1:00 PM	99+700	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle hit the Bike (JH-01EM-5396)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01EM-5396) from rear end and ran away at Ch.99+700 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Ranchi at 1:00 PM, Accident occurred on 05.04.2022 at 11:35 AM, Information given through mobile no.8825191800.
350	06.04.2022	12:45 AM	12:50 AM	N/A	N/A	96+680	RHS	Urban	1	1	2	4	3	0	1	LPG tanker (RJ-04-GB-2318)	1	0	0	0	0	0	Yes	A LPG tanker (RJ-04-GB-2318) lost his control due to over speed and overturned on MCW at Ch.96+680 (RHS) in HREL Project, 1 Person dead on the spot , Shifted to Sadar Hospital Ramgarh at 8:13 AM, Accident occurred on 06.04.2022 at 12:45 AM, Information given through our Patrolling team.
351	08.04.2022	8:59 PM	9:14 PM	N/A	N/A	50+360	LHS	Urban	1	2	2	4	1	0	1	Car (JH-02BC-6710)	0	2	0	0	0	0	Yes	A Car (JH-02BC-6710) lost his control due to over speed and hit the unknown vehicle from rear end and overturned on MCW at Ch.50+360 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the Hospital through another vehicle, Accident occurred on 08.04.2022 at 8:59 PM, Information given through mobile no. 6206266533.
352	12.04.2022	11:32 AM	11:41 AM	11:43 AM	11:57 AM	50+980	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-02U-1489)	0	2	0	0	0	0	Yes	A Bike (JH-02U-1489) lost his control due to drunk & drive and fell down on MCW at Ch.50+980 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:57 AM, Accident occurred on 12.04.2022 at 11:32 AM, Information given through mobile no.6200854041.
353	13.04.2022	11:26 AM	11:34 AM	11:36 AM	11:45 AM	58+960	RHS	Urban	6	2	1	4	1	0	1	Bike (JH-02BC-1612)	0	1	0	0	0	0	Yes	An over speed Bike (JH-02BC-1612) lost his control due to Drunk & drive and skidded at Ch.58+960 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:45 AM, Accident occurred on 13.04.2022 at 11:26 AM, Information given through mobile no.8789154033.
354	14.04.2022	10:37 AM	10:37 AM	10:39 AM	10:51 AM	75+020	LHS	Urban	1	2	2	4	1	0	1	auto (JH-02M-9627)	0	1	2	0	0	0	Yes	An auto (JH-02M-9627) lost his control due to over speed and overturned on MCW at Ch.75+020 (LHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:51 AM, Accident occurred on 14.04.2022 at 10:37 AM, Information given through our Patrolling team.
355	15.04.2022	2:44 AM	2:53 AM	2:55 AM	3:07 AM	56+900	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle hit the bicycle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the bicycle from rear end and ran away at Ch.56+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 3:07 AM, Accident occurred on 15.04.2022 at 2:44 AM, Information given through mobile no.7004359720.
356	16.04.2022	1:38 PM	1:45 PM	N/A	N/A	97+600	RHS	Urban	3	2	2	4	1	0	1	Car (JH-01CQ-3311) & Mini truck (JH-02AJ-0156)	0	1	0	0	0	0	Yes	A Car (JH-01CQ-3311) lost his control due to over speed and hit the Mini truck (JH-02AJ-0156) from rear end at Ch.97+600 (RHS) in HREL Project, 1 Person grievous in this accident, help provided by ambulance team and shifted to the hospital through other vehicle , Accident occurred on 16.04.2022 at 1:38 PM, Information given through mobile no.8825191800.
357	16.04.2022	1:56 PM	2:06 PM	2:08 PM	2:12 PM	104+100	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-01DF-1102)	0	1	0	0	0	0	Yes	A Bike (JH-01DF-1102) lost his control due to over speed and fell down on MCW at Ch.104+100 (RHS) in HREL Project, 1 Person grievous inured in this accident, help provided by ambulance team and shifted to Piska Hospital Ormanjhi at 2:12 PM, Accident occurred on 16.04.2022 at 1:56 PM, Information given through mobile no.9693256504.
358	18.04.2022	12:19 AM	12:21 AM	12:25 AM	N/A	75+750	RHS	Urban	1	3	1	4	1	0	1	Bike (JH-02W-8101)	0	0	1	0	0	0	Yes	A Bike (JH-02W-8101) lost his control due to drunk & drive and fell down on MCW at Ch.75+750 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 18.04.2022 at 12:19 AM, Information given through mobile no.9123165797.

359	18.04.2022	7:54 PM	7:57 PM	N/A	9:35 PM	72+800	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle & Bike (JH-02AA-6084)	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02AA-6084) from rear end and ran away at Ch.72+800 (LHS) at HREL Project, 1 Person died on the spot in this accident, help provided by ambulance team and fatal person shifted to Postmortem House Ramgarh Sadar at 9:35 PM, Accident occurred on 18.04.2022 at 7:54 PM, Information given through PCR Van.
360	20.04.2022	5:47 AM	5:52 AM	5:55 AM	N/A	94+850	RHS	Urban	1	3	2	4	3	0	1	Bike (JH-01EC-9260)	0	0	1	0	0	0	Yes	A Bike (JH-01EC-9260) lost his control due to over speed and fell down on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 20.04.2022 at 5:47 AM, Information given through mobile no.6203799730.
361	20.04.2022	7:20 PM	7:22 PM	7:23 PM	7:35 PM	92+480	RHS	Urban	3	2	2	4	1	5	1	unknown vehicle & Bike (JH-01-BA-0139)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01-BA-0139) from rear end and ran away at Ch.92+480 (RHS) in HREL Project, 1 Person grievous injured in this accident , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:35 PM, Accident occurred on 20.04.2022 at 7:20 PM, Information given through our Patrolling team.
362	21.04.2022	7:52 AM	7:57 AM	7:58 AM	8:10 AM	72+080	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-24J-4871)	0	1	0	0	0	0	Yes	A Bike (JH-24J-4871) lost his control due to over speed and fell down on MCW at Ch.72+080 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:10 AM, Accident occurred on 21.04.2022 at 7:52 AM, Information given through mobile no.7979913430.
363	24.04.2022	1:51 AM	2:04 AM	2:06 AM	2:30 AM	48+900	RHS	Urban	1	1	2	4	1	0	1	Bike (JH-02BF-3518)	2	1	0	0	0	0	Yes	A Bike (JH-02BF-3518) lost his control due to over speed and fell down on MCW at Ch.48+900 (RHS) in HREL Project, 2 Persons died on the spot and 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 2:30 AM, Accident occurred on 24.04.2022 at 1:51 AM, Information given through mobile no.6206266533.
364	24.04.2022	10:58 PM	11:05 PM	11:07 PM	12:40 PM	96+600	RHS	Urban	3	2	2	4	2	0	1	Truck (UP-06CB-5552) & trailer (WB-57D-6400)	0	1	0	0	0	0	Yes	A Truck (UP-06CB-5552) lost his control due to over speed and hit the trailer (WB-57D-6400) from rear end and overturned on MCW at Ch.96+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 12:40 AM, Accident occurred on 24.04.2022 at 10:58 PM, Information given through mobile no.8825311624.
365	24.04.2022	11:44 PM	11:54 PM	11:58 PM	12:10 AM	54+500	RHS	Urban	1	2	2	4	1	0	1	Car (WB-20H-5083)	0	3	1	0	0	0	Yes	A Car (WB-20H-5083) lost his control due to over speed and hit the Median kerb and jump to RHS to LHS at Ch.54+500 (RHS) in HREL Project, 3 Persons grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:10 AM, Accident occurred on 24.04.2022 at 11:44 PM, nformation given through mobile no.8789154033.
366	25.04.2022	10:05 PM	10:12 PM	N/A	N/A	86+000	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02AC-2078)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02AC-2078) from rear end and ran away at Ch.86+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the Hospital through 108 Ambulance, Accident occurred on 25.04.2022 at 10:05 PM, Information given through mobile No.7004967264.
367	27.04.2022	9:33 AM	9:35 AM	9:37 AM	9:41 AM	60+800	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02Z-7399) & Bike (JH-12H-0803)	0	1	1	0	0	0	Yes	An over speed Bike (JH-02Z-7399) hit the another Bike (JH-12H-0803) from rear end and fell down on MCW at Ch.60+800 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:41 AM, Accident occurred on 27.04.2022 at 9:33 AM, Information given through mobile no.9102989900.

368	28.04.2022	3:48 PM	3:55 PM	3:58 PM	4:30 PM	71+080	LHS	Urban	2	2	2	4	1	0	1	car (JH-01DX-9307) & Bike (A/F)	0	2	0	0	0	0	Yes	An over speed car (JH-01DX-9307) hit the Bike (A/F) from head on which is moving wrong direction and bike fell down on MCW at Ch.71+080 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:30 PM, Accident occurred on 28.04.2022 at 3:48 PM, Information given through mobile no.8210338917.
369	02.05.2022	6:53 PM	6:59 PM	7:00 PM	7:20 PM	82+150	RHS	Urban	3	2	2	4	1	0	1	**Unknown vehicle & Bike (JH-24H-6079)**	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24H-6079) from rear end and ran away at Ch.82+150 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ramgarh at 7:20 PM, Accident occurred on 02.05.2022 at 6:53 PM, Information given through mobile no.9608539560.
370	04.05.2022	9:01 AM	9:18 AM	N/A	9:58 AM	45+780	LHS	Urban	3	1	2	4	1	0	1	**Bike (JH-01CA-4140)**	1	0	0	0	0	0	Yes	An over speed Bike (JH-01CA-4140) hit the Pedestrian from rear end and fell down on MCW at Ch.45+780 (LHS) in HREL Project, Pedestrian dead on the spot , help Provided by ambulance team and shifted to Sadar Hospital Hazaribagh Postmortem House at 9:58 AM, Accident occurred on 04.05.2022 at 9:01 AM, Information given through mobile no.6200854041.
371	05.05.2022	12:23 PM	12:28 PM	12:30 PM	12:45 PM	77+280	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-11Z-1180)	0	1	1	0	0	0	Yes	A Bike (JH-11Z-1180) Lost his control due to over speed and skidded at Ch.77+280 (LHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Aarogya Helth Care Ramgarh at 12:45 PM, Accident occurred on 05.05.2022 at 12:23 PM, Information given through mobile no.6200854041.
372	06.05.2022	7:25 PM	7:28 PM	N/A	7:55 PM	92+500	RHS	Urban	2	1	2	4	1	5	1	Container (HR-65A-2820) & Bike (JH-01BG-9067)	1	0	0	0	0	0	Yes	A Container (HR-65A-2820) hit the Bike (JH-01BG-9067) from head on collision which is moving wrong direction and bike fell down on MCW at Ch.92+500 (RHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to Postmortem House Sadar Ramgarh at 7:55 PM, Accident occurred on 06.05.2022 at 7:25 PM, Information given through mobile no.8541863184.
373	08.05.2022	5:50 PM	5:55 PM	5:56 PM	6:15 PM	79+000	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle & Bike (A/F)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (A/F) from rear end and ran away at Ch.79+000 (LHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:15 PM, Accident occurred on 08.05.2022 at 5:50 PM, Information given through mobile no.8825196200.
374	09.05.2022	6:55 AM	6:58 AM	7:00 AM	7:17 AM	76+400	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-01DR-9591)	0	1	0	0	0	0	Yes	A Bike (JH-01DR-9591) lost his control due to over speed and skidded at Ch.76+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:17 AM, Accident occurred on 09.05.2022 at 6:55 AM, Information given through mobile no.8709806554.
375	11.05.2022	4:26 PM	4:33 PM	4:35 PM	4:54 PM	94+950	RHS	Urban	1	2	5	4	3	0	1	Trailer (RJ-14GH-6659)	0	2	0	0	0	0	Yes	An over speed Trailer (RJ-14GH-6659) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:54 PM, Accident occurred on 11.05.2022 at 4:26 PM, Information given through mobile no. 8709414885.
376	11.05.2022	8:23 PM	8:25 PM	8:27 PM	8:35 PM	58+900	LHS	Urban	3	2	2	4	1	0	1	Hywa (OD-09C-5016) & Bolero (JH-02AN-5910)	0	2	4	0	0	0	Yes	An over speed Hywa (OD-09C-5016) hit the Bolero (JH-02AN-5910) from rear end and overturned on MCW at Ch.58+900 (LHS) in HREL Project, 2 Persons grievous & 4 Persons minor injured in this accident , help provided by ambulance team and shifted to CHC Mandu at 8:35 PM,Accident occurred on 11.05.2022 at 8:23 PM, Information given through mobile no.8789154033.

377	12.05.2022	12:51 AM	12:55 AM	12:57 AM	1:15 AM	72+100	RHS	Urban	6	2	1	4	1	0	1	Bike (JH-01ER-1843)	0	1	0	0	0	0	Yes	A Bike (JH-01ER-1843) lost his control due to drunk & drive and fell down on MCW at Ch.72+100 (RHS) in HREL Project, 1 Person grievous injured in this accident help provided by ambulance team and shifted to CHC Mandu at 1:15 AM, Accident occurred on 12.05.2022, at 12:51 AM, Information given through mobile no.6204916143.
378	12.05.2022	4:45 AM	4:52 AM	4:55 AM	5:20 AM	54+620	LHS	Urban	1	2	2	4	1	0	1	Bolero (JH-01DS-9759)	0	5	3	0	0	0	Yes	A Bolero (JH-01DS-9759) lost his control due to over speed and hit the tree and overturned at Ch.54+620 (LHS) In HREL Project, 5 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:20 AM, Accident occurred on 12.05.2022 at 4:45 AM, Information given through PCR Van.
379	14.05.2022	6:35 AM	6:40 AM	6:42 AM	6:55 AM	94+680	RHS	Urban	3	2	2	4	2	0	1	Unknown Vehicle & Auto (JH-01DQ-4927)	0	1	2	0	0	0	Yes	An Unknown Vehicle hit the Auto (JH-01DQ-4927) from rear end and ran away and auto overturned on MCW at Ch.94+680 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:55 AM, Accident occurred on 14.05.2022 at 6:35 AM, Information given through mobile no.7717778285.
380	15.05.2022	11:40 AM	11:45 AM	11:47 AM	N/A	93+950	LHS	Urban	1	3	2	4	1	0	1	Car (JH-02AG-2915)	0	0	1	0	0	0	Yes	A Car (JH-02AG-2915) lost hi control due to over speed and overturned on MCW at Ch.93+950 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 15.05.2022 at 11:40 AM, Information given through mobile no.9155978998.
381	15.05.2022	11:35 AM	11:43 AM	11:45 AM	12:04 PM	54+300	RHS	Urban	2	2	2	4	1	0	1	car (BR-21L-5316)	0	2	0	0	0	0	Yes	An over car (BR-21L-5316) hit the unknown vehicle from rear end at Ch.54+300 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:04 PM, Accident occurred on 15.05.2022 at 11:35 AM, Information given through mobile no.8789144033.
382	15.05.2022	3:55 PM	3:58 PM	4:05 PM	4:25 PM	72+700	RHS	Urban	3	2	2	4	1	5	1	Trailer (RJ-02GB-8009) & car (JH-02N-1061)	0	2	2	0	0	0	Yes	A Trailer (RJ-02GB-8009) lost his control due to over speed and hit the car (JH-02N-1061) from rear end while crossing the road at Ch.72+700 (RHS) in HREL Project, 2 Persons grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:25 PM, Accident occurred on 15.05.2022 at 3:55 PM, Information given through mobile no.8210338917.
383	16.05.2022	5:25 AM	5:32 AM	5:33 AM	5:48 AM	80+600	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02R-6363)	0	1	0	0	0	0	Yes	A Bike (JH-02R-6363) lost his control due to over speed and skidded at Ch.80+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:48 AM, Accident occurred on 16.05.2022 at 5:25 AM, Information given through mobile no.7903699048.
384	16.05.2022	6:13 PM	6:13 PM	6:16 PM	6:18 PM	72+700	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle hit the Bike (JH-12N-6459)	0	0	0	0	1	0	Yes	An Unknown vehicle hit the Bike (JH-12N-6459) from rear end and ran away at Ch.72+700 (RHS) , 1 Person grievous injured in this accident, help provided by ambulance team, and shifted to Sadar Hospital Ramgarh at 6:40 PM, grievously injured person dead during shifted to the Hospital, Accident occurred on 16.05.2022 at 6:13 PM, Information given through mobile no.9006888638.
385	16.05.2022	8:37 PM	8:42 PM	8:44 PM	8:55 PM	71+500	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-10CB-7708)	0	1	0	2	0	0	Yes	A Bike (JH-10CB-7708) lost his control due to over speed and skidded at Ch.71+500 (LHS) in HREL Project, 1 Person grievous & 2 Persons non inured in this accident, help provided by ambulance team and grievously injured person shifted to Kujju Nurshing Home at 8:55 PM, Accident occurred on 16.05.2022 at 8:37 PM, Information given through mobile no.8863887789.

386	17.05.2022	7:48 AM	7:56 AM	8:00 AM	8:20 AM	53+400	LHS	Urban	1	2	2	4	1	0	1	Car (JH-24H-2043)	0	1	3	0	0	0	Yes	A Car (JH-24H-2043) los his control due to over speed and hit the median kerb and over turned on MCW at Ch.53+400 (LHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:20 AM, Accident occurred on 17.05.2022 at 7:48 AM, Information given through our Patrolling team.
387	17.05.2022	12:21 PM	12:27 PM	12:30 PM	N/A	93+100	RHS	Urban	6	3	2	4	1	0	1	Bike (JH-02Y-7230)	0	0	2	0	0	0	Yes	A Bike (JH-02Y-7230) lost his control due to over speed and skidded at Ch.93+100 (RHS) in HREL Project, 2 Persons minor injured in this accident occurred , help provided by ambulance team, Accident occurred on 17.05.2022 at 12:21 PM, Information given through mobile no.6203799730.
388	17.05.2022	9:10 PM	9:17 PM	9:20 PM	9:38 PM	70+050	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02Z-5209)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02Z-5209) from rear end and ran away at Ch.70+050 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 9:38 PM, Accident occurred on 17.05.2022 at 9:10 PM, Information given through mobile no.6206042308.
389	17.05.2022	9:20 PM	9:35 PM	9:36 PM	9:40 PM	99+780	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.99+780 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Ormanjhi at 9:40 PM, Accident occurred on 17.05.2022 at 9:20 PM, Information given through mobile no.8409380226
390	18.05.2022	10:26 AM	10:32 AM	N/A	N/A	70+600	RHS	Urban	1	2	2	4	1	0	1	Car (JH-02W-9969)	0	1	0	0	0	0	Yes	A Car (JH-02W-9969) lost his control due to over speed and overturned on MCW at Ch.70+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through another vehicle , Accident occurred on 18.05.2022 at 10:26 AM, Information given through mobile no.8789154033.
391	19.05.2022	3:55 AM	4:03 AM	4:05 AM	5:40 AM	54+010	RHS	Urban	3	2	2	4	1	0	1	Tata 407 (JH-01BV-2831)	0	1	0	0	0	0	Yes	A Tata 407 (JH-01BV-2831) lost his control due to over speed and hit the unknown vehicle from rear at Ch.54+010 (RHS) in HREL project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:40 AM, Accident occurred on 19.05.2022 at 3:55 AM, Information given through mobile no.8709311587.
392	19.05.2022	4:20 PM	4:26 PM	4:28 PM	4:37 PM	54+560	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Car (JH-02AX-6033)	0	2	2	0	0	0	Yes	An Unknown vehicle hit the Car (JH-02AX-6033) From rear end and ran away at Ch.54+560 (LHS) in HREL Project, 2 Persons grievous injured & 2 persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 4:34 PM, Accident occurred on 19.05.2022 at 4:20 PM, Information given through mobile no.9931334065.
393	19.05.2022	10:40 PM	10:46 PM	10:48 PM	11:05 PM	94+700	RHS	Urban	1	2	5	4	2	0	1	Trailer (PB-10GK-2091)	0	1	0	1	0	0	Yes	An over speed Trailer (PB-10GK-2091) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.94+700 (RHS) in HREL Project, 1 Person grievous & 1 Person non injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 11:05 PM, Accident occurred on 19.05.2022 at 10:40 PM, Information given through mobile no.9162581031.
394	20.05.2022	7:30 PM	7:35 PM	7:37 PM	7:50 PM	94+810	RHS	Urban	1	2	2	4	3	0	1	Truck (UP44AT-4434)	0	2	0	0	0	0	Yes	A Truck (UP44AT-4434) lost his control due to over speed and overturned on MCW at Ch.94+810 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:50 PM, Accident occurred on 20.05.2022 at 7:30 PM, Information given through mobile no.6200681192.

395	23.05.2022	6:52 PM	7:10 PM	7:12 PM	7:15 PM	103+750	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-01DF-6628)	0	1	0	0	0	0	Yes	A Bike (JH-01DF-6628) lost his control due to drunk & drive and skidded at Ch.103+750 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provide by ambulance team and shifted to Piska Hospital Ormanjhi at 7:15 PM, Accident occurred on 23.05.2022 at 6:52 PM, Information given through mobile no.7004223349.
396	25.05.2022	8:36 PM	8:46 PM	8:48 PM	8:58 PM	85+180	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24C-7938)	0	1	2	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24C-7938) from rear end and ran away at Ch.85+180 (LHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:58 PM, Accident occurred on 25.05.2022 at 8:36 PM, Information given through mobile no.9939114864.
397	26.05.2022	1:08 PM	1:13 PM	N/A	N/A	65+000	RHS	Urban	1	2	2	4	1	0	1	Scooty (JH-01DL-7638)	0	1	1	0	0	0	Yes	A Scooty (JH-01DL-7638) lost his control due to over speed and overturned on MCW at Ch.65+000 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, grievously injured person shifted to the Hospital through 108 Ambulance, Accident occurred on 26.05.2022 at 1:08 PM, Information given through mobile no.8789429497.
398	26.05.2022	3:32 PM	3:41 PM	3:43 PM	4:02 PM	50+020	RHS	Urban	1	2	2	4	1	0	1	Bike (A/F)	0	1	1	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.50+020 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 4:02 PM, Accident occurred on 26.05.2022 at 3:32 PM, Information given through mobile no.8789154033.
399	28.05.2022	12:48 PM	12:50 PM	12:52 PM	12:57 PM	58+760	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01AV-3012)	0	1	2	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01AV-3012) from rear end and ran away at Ch.58+760 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:57 PM, Accident occurred on 28.05.2022 at 12:48 PM, Information given through mobile no.8789154033.
400	28.05.2022	10:49 PM	10:55 PM	10:57 PM	11:05 PM	89+380	LHS	Urban	3	2	1	4	1	0	1	Bike (JH-24F-1778)	0	1	1	0	0	0	Yes	A Bike (JH-24F-1778) lost his control due to drunk & drive and hit the unknown vehicle from rear end and fell down on MCW at Ch.89+380 (LHS) in HREL Project, 1 person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:05 PM, Accident occurred on 28.05.2022 at 10:49 PM, Information given through mobile no.7870205423.
401	29.05.2022	11:13 PM	11:25 PM	11:30 PM	11:40 PM	47+300	LHS	Urban	3	2	2	4	1	0	1	Omni Car (JH-01CF-3595)	0	7	0	0	0	0	Yes	A Omni Car (JH-01CF-3595) lost his control due to over speed and hit the breakdown trailer (PB-23M-4992) from rear end at Ch.47+300 (LHS) in HREL Project, 7 Persons grievous injured in this accident help provided by ambulance team and shifted to Shrinivas Hospital Demotand Hazaribagh at 11:40 PM, Accident occurred on 29.05.2022 at 11:13 PM, Information given through mobile no.6206191003.
402	31.05.2022	12:14 AM	12:18 AM	12:20 AM	12:25 AM	62+200	LHS	Urban	2	2	2	4	1	0	1	Car (JH-02AD-9317)	0	3	0	0	0	0	Yes	A Car (JH-02AD-9317) hit the lorry from head on collision at Ch.62+200 (LHS) in HREL Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:25 AM, Accident occurred on 31.05.2022 at 12:14 AM, Information given through mobile no.8789525915.
403	02.06.2022	10:48 AM	10:53 AM	10:55 AM	11:11 AM	70+800	LHS	Urban	3	2	2	4	1	0	1	**unknown vehicle & Bike (Jh-01DF-7902)**	0	1	3	0	0	0	Yes	An unknown vehicle hit the Bike (Jh-01DF-7902) from rear end and ran away at Ch.70+800 (LHS) in HREL Project, 1 person grievous & 3 persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:11 AM, Accident occurred on 02.06.2022 at 10:48 AM, Information given thorough mobile no 9835185484.

404	03.06.2022	1:09 AM	1:15 AM	N/A	2:15 AM	72+800	RHS	Urban	3	1	2	4	1	0	1	**Bike (JH-01BH-7391)**	1	0	3	0	0	0	Yes	An over speed Bike (JH-01BH-7391) hit the unknown vehicle from rear end and Skidded at Ch.72+800 (RHS) in HREL Project, 1 Person dead on the spot , Ambulance team team reach there and inform to local police and body shifted to Sadar Hospital Ramgarh at 2:15 AM, Accident occurred on 03.06.2022 at 1:09 AM, Information given through mobile no.9905534262.
405	04.06.2022	2:44 AM	2:55 AM	3:00 AM	N/A	98+100	RHS	Urban	1	3	2	4	1	0	1	Car (JH-01EN-2781)	0	0	1	0	0	0	Yes	A Car (JH-01EN-2781) lost his control due to over speed and overturned on MCW at Ch.98+100 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 03.06.2022 at 2:44 AM, Information given through mobile no.6203799730.
406	06.06.2022	8:32 AM	8:41 AM	8:45 AM	N/A	99+800	RHS	Urban	3	3	2	4	1	0	1	unknown vehicle & Pedestrian	0	0	1	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.99+800 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance , Accident occurred on 06.06.2022 at 8:32 PM, Information given through mobile no.8539994084.
407	07.06.2022	1:42 AM	1:48 AM	1:50 AM	2:10 AM	53+800	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02BC-5974)	0	2	0	0	0	0	Yes	A Bike (JH-02BC-5974) lost his control due to over speed and skidded at Ch.53+800 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 2:10 AM, Accident occurred on 07.06.2022 at 1:42 Am, Information given through mobile no.8789154033.
408	07.06.2022	5:40 AM	5:47 AM	5:50 AM	6:10 AM	53+260	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (A/F)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (A/F) from rear and end ran away at Ch.53+260 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:10 AM, Accident occurred on 07.06.2022 at 5:47 AM, Information given through mobile no.7903186693.
409	07.06.2022	5:50 PM	5:53 PM	5:55 PM	6:32 PM	92+650	RHS	Urban	1	1	5	4	1	5	1	Trailer (RJ-02GB-6536) & Hydra	1	2	0	0	0	0	Yes	An over speed Trailer (RJ-02GB-6536) lost his control due to mechanical Failure (Break Failure) and hit the Hydra and betel Shop and overturned on MCW at Ch.92+650 (RHS) in HREL Project, 1 Person dead on the spot & 2 Persons grievous injured in this accident , Ambulance team reach there and inform to local police and body shifted to Sadar Hospital Ramgarh at 6:32 PM, Accident occurred on 07.06.2022 at 5:50 PM.
410	08.06.2022	9:36 AM	9:39 AM	N/A	10:15 AM	73+800	RHS	Urban	3	1	2	4	1	0	1	Unknown vehicle	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.73+800 (RHS) in HREL Project, 1 Person dead on the spot in this accident, body shifted to Sadar Hospital Ramgarh at 10:15 AM, Accident occurred on 08.06.2022 at 9:36 AM, Information given through our Patrolling team.
411	09.06.2022	9:45 PM	9:48 PM	9:50 PM	10:35 PM	92+850	RHS	Urban	3	2	2	4	1	5	1	Trailer (OD-14O-9757)	0	1	0	0	0	0	Yes	An over speed Trailer (OD-14O-9757) hit the Pedestrian from rear end at Ch.92+850 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:35 PM, Accident occurred on 09.06.2022 at 9:45 PM, Information given through mobile no.6203799730.
412	11.06.2022	11:57 AM	12:06 PM	12:08 PM	12:27 PM	95+400	RHS	Urban	1	2	2	4	2	0	1	Trailer (UP-12BT-0616)	0	1	0	0	0	0	Yes	A Trailer (UP-12BT-0616) lost his control due to over speed and overturned on MCW at Ch.95+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 12:27 PM, Accident occurred on 11.06.2022 at 11:57 AM, Information given through mobile no.6204906142
413	11.06.2022	4:41 PM	4:45 PM	4:47 PM	5:03 PM	92+900	LHS	Urban	1	2	5	4	1	0	1	Trailer (HR-39E-4710)	0	1	0	0	0	0	Yes	A Trailer (HR-39E-4710) lost his control due to Mechanical Failure (Break Failure) and overturned on MCW at Ch.92+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:03 PM, Accident occurred on 11.06.2022 at 4:41 PM, information given through mobile no.7488089254.

414	12.06.2022	10:17 PM	10:36 PM	10:38 PM	11:40 PM	106+800	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AR-6488) & Bike (JH-05Z-3065)	0	2	0	0	0	0	Yes	A Bike (JH-02AR-6488) hit the another Bike (JH-05Z-3065) from rear end due to over speed and fell down on MCW at Ch.106+800 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 11:40 PM, Accident occurred on 12.06.2022 at 10:17 PM, Information given through mobile no.7979822143.
415	12.06.2022	10:47 AM	10:52 AM	10:55 AM	11:15 AM	75+380	LHS	Urban	3	2	2	4	1	0	1	car (JH-01AZ-4725) & Auto (JH-02AL-1178)	0	2	3	0	0	0	Yes	A car (JH-01AZ-4725) lost his control due to over speed and hit the Auto (JH-02AL-1178) from rear end and overturned on MCW at Ch.75+380 (LHS) in HREL Project, 2 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:15 AM, Accident occurred on 12.06.2022 at 10:47 AM, Information given through mobile no.7903613338.
416	13.06.2022	2:30 PM	2:35 PM	2:40 PM	2:50 PM	58+900	LHS	Urban	1	2	2	4	1	0	1	Auto (JH-02AS-8861)	0	5	0	0	0	0	Yes	An Auto (JH-02AS-8861) lost his control due to over speed and overturned on MCW at Ch.58+900 (LHS) in HREL Project, 5 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 2:50 PM, Accident occurred on 13.06.2022 at 2:30 PM, Information given through mobile no.PCR Van.
417	15.06.2022	7:23 PM	7:27 PM	7:28 PM	7:32 PM	64+000	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AK-6575) & Bike (A/F)	0	1	0	0	0	0	Yes	A Bike (JH-02AK-6575) lost his control due to over speed and hit the another Bike (A/F) from rear end and fell down on MCW at Ch.64+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:32 PM, Accident occurred on 15.06.2022 at 7:23 PM, Information given through mobile no.7870636517.
418	15.06.2022	7:55 PM	7:58 PM	8:05 PM	8:12 PM	75+500	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle Pedestrian and Bike (JH-24J-0518)	0	3	3	0	0	0	Yes	An unknown vehicle hit the Pedestrian and Bike (JH-24J-0518) from rear end and ran away at Ch.75+500 (LHS) in HREL Project, 3 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to Manorama Hospital Kujju at 8:12PM, Accident occurred on 15.06.2022 at 7:55 PM, Information given through mobile no.7903613338.
419	17.06.2022	12:04 AM	12:10 AM	12:12 AM	1:10 AM	95+440	RHS	Urban	1	2	5	4	2	0	1	Trailer (NL-01AF-3230)	0	2	3	0	0	0	Yes	An over speed Trailer (NL-01AF-3230) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.95+440 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Zenetic Hospital Butti More at 1:10 AM, Accident occurred on 17.06.2022 at 12:04 AM, Information given through mobile no.6203799730.
420	17.06.2022	4:51 AM	4:56 AM	4:57 AM	5:03 AM	76+900	RHS	Urban	3	2	2	4	1	0	1	Gas Tanker (UP-53BT-4786)	0	1	0	0	0	0	Yes	A Gas Tanker (UP-53BT-4786) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.76+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Manorama Nursing Home Kujju at 5:03 AM, Accident occurred on 17.06.2022 at 4:51 AM, Information given through mobile no.8709806554.
421	17.06.2022	5:52 AM	5:56 AM	N/A	7:57 AM	77+100	RHS	Urban	3	1	2	4	1	0	1	Trailor (NL-01Q-4157)	1	0	0	0	0	0	Yes	A Trailor (NL-01Q-4157) lost his control due to over speed and hit the Pedestrian from rear end at Ch.77+100 (RHS) in HREL Project, 1 Person dead on the spot in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:57 AM, Accident occurred on 17.06.2022 at 5:52 AM, Information given through mobile no.8709806554.

422	17.06.2022	7:30 PM	7:33 PM	7:36 PM	7:40 PM	92+500	RHS	Urban	1	2	2	4	1	5	1	Trailor (RJ-14GL-5024) , Tractor (JH-02AU-9802) , Truck (UP-32KN-4868) & bus (JH-02AV-0980)	0	5	0	0	0	0	Yes	A Trailor (RJ-14GL-5024) lost his control due to over speed and first hit the Tractor (JH-02AU-9802) & Truck (UP-32KN-4868) from rear end then bus (JH-02AV-0980) which is moving wrong direction and overturned on MCW at Ch.92+500 (RHS) in HREL Project, 5 Persons grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 7:40 PM, Accident occurred on 17.06.2022 at 7:30 PM. Information given through local public.
423	18.06.2022	1:57 PM	2:00 PM	2:05 PM	2:33 PM	92+520	RHS	Urban	1	2	5	4	1	5	1	Trailor (HR-69C-6013)	0	1	0	0	0	0	Yes	An over speed Trailor (HR-69C-6013) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.92+520 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:33 PM, Accident occurred on 18.06.2022 at 1:57 PM, Information given through mobile no.6200681192.
424	19.06.2022	2:52 PM	2:58 PM	3:00 PM	3:25 PM	80+200	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-02J-6916)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-02J-6916) from rear end and ran away at Ch.80+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:25 PM, Accident occurred on 19.06.2022 at 2:52 PM, Information given through mobile no.8709806554.
425	20.06.2022	9:31 AM	9:36 AM	9:40 AM	N/A	82+550	RHS	Urban	6	3	2	4	1	0	1	Bike (JH-02AK-9480)	0	3	0	0	0	0	Yes	A Bike (JH-02AK-9480) lost his control due to over speed and skidded at Ch.82+550 (RHS) in HREL Project, 3 Persons minor injured in this accident, help provided by ambulance team , Accident occurred on 20.06.2022 at 9:31 AM, Information given through mobile no.8825191800.
426	23.06.2022	4:20 PM	4:26 PM	4:28 PM	4:40 PM	94+950	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-01ED-2362)	0	2	0	0	0	0	Yes	A Bike (JH-01ED-2362) lost his control due to over speed and skidded at Ch.94+950 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 4:40 PM, Accident occurred on 23.06.2022 at 4:20 PM, Information given through mobile no.8210574525.
427	24.06.2022	4:02 PM	4:04 PM	4:05 PM	4:11 PM	59+580	RHS	Urban	1	1	2	4	1	0	1	Scorpio (JH-01BQ-0145)	1	2	3	0	0	0	Yes	An over speed Scorpio (JH-01BQ-0145) hit the MBCB and overturned on MCW at Ch.59+580 (RHS) in HREL Project, 1 Person died on the spot , 2 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 4:11 PM, Accident occurred on 24.06.2022 at 4:02 PM, Information given through mobile no.9835185484.
428	24.06.2022	8:08 PM	8:13 PM	8:15 PM	8:25 PM	71+000	RHS	Urban	6	2	1	4	1	0	1	Bike (JH-02BF-2548)	0	1	0	0	0	0	Yes	A Bike (JH-02BF-2548) lost his control due to drunk & Drive and fell down on MCW at Ch.71+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:25 PM, Accident occurred on 24.06.2022 at 8:08 PM, Information given through mobile no.9835185484.
429	25.06.2022	9:55 PM	9:58 PM	10:00 PM	10:10 PM	92+600	RHS	Urban	1	2	5	4	1	5	1	Trilor (UP-22AT-4231)	0	1	0	0	0	0	Yes	An over speed Trilor (UP-22AT-4231) lost his control due to Mechanical failure (Break Fail) and overturned on MCW at Ch.92+600 (RHS) in HREL Project, 1 Person grievous injured in this accident , help provided by ambulance team and shifted to KGT Hospital Ramgarh at 10:10 PM, Accident occurred on 25.06.2022 at 9:55 PM, Information given through mobile no.9798175632.
430	27.06.2022	11:02 AM	11:09 AM	11:11 AM	N/A	82+900	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-03R-1139)	0	2	0	0	0	0	Yes	An over speed Bike (JH-03R-1139) hit the Animal and skidded at Ch.82+900 (LHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through another vehicle , Accident occurred on 27.06.2022 at 11:02 AM, Information given through mobile no.8709414885.

431	28.06.2022	10:56 AM	11:02 AM	11:04 AM	11:14 AM	54+160	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-02AH-5515)	0	1	0	0	0	0	Yes	A Bike (JH-02AH-5515) lost his control due to over speed and fell down on MCW at Ch.54+160 (RHS) in HREL project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:14 AM, Accident occurred on 28.06.2022 at 10:56 AM, Information given through mobile no.9162597171.
432	28.06.2022	4:28 PM	4:37 PM	4:38 PM	5:37 PM	98+100	RHS	Urban	2	1	2	4	2	0	1	car (BR-03X2515) hit the Bike (JH-02Y-5839)	2	0	0	0	0	0	Yes	An over speed car (BR-03X2515) hit the Bike (JH-02Y-5839) from head on car moving wrong direction at Ch.98+100 (RHS) in HREL Project, 2 Persons dead on the spot , help provided by ambulance team and shifted to RIMS Hospital Ranchi at 5:37 PM, Accident occurred on 28.06.2022 at 4:28 PM, Information given through Mobile no.8987790662.
433	30.06.2022	9:11 PM	9:17 PM	9:20 PM	9:38 PM	81+000	LHS	Urban	1	1	2	4	1	0	1	Bolero Pickup (JH-01EC-7075)	3	9	2	0	0	0	Yes	A Bolero Pickup (JH-01EC-7075) lost his control due to over speed and overturned on MCW at Ch.81+000 (LHS) in HREL Project, 3 Persons dead on the spot , 9 Persons grievous injured and 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 9:38 PM, Accident occurred on 30.06.2022 at 9:11 PM, Information given through mobile no.8210731756.
434	30.06.2022	9:30 PM	9:40 PM	N/A	10:35 PM	96+700	RHS	Urban	3	1	2	4	2	0	1	unknown vehicle & Bike	1	0	0	0	0	0	Yes	An unknown vehicle hit the bike from rear end and ran away at Ch.96+700 (RHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to sadar Hospital Ramgarh at 10:35 PM, Accident occurred on 30.06.2022 at 9:30 PM, Information given through mobile no.6203799730.
435	01.07.2022	7:13 PM	7:21 PM	7:22 PM	7:35 PM	54+800	RHS	Urban	3	2	2	4	1	0	1	**Bike (JH-02T-7840) & truck (NL-01K-1431)**	0	1	0	0	0	0	Yes	A Bike (JH-02T-7840) lost his control due to over speed and hit the truck (NL-01K-1431) from rear end at Ch.54+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:13PM, Accident occurred on 01.07.2022 at 7:13 PM, Information given through mobile no.9431140479.
436	02.07.2022	2:50 AM	2:57 AM	2:58 AM	3:18 AM	94+950	RHS	Urban	1	2	5	4	2	0	1	**Truck (CG-04MO-3777)**	0	1	0	0	0	0	Yes	A Truck (CG-04MO-3777) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:18 AM, Accident occurred on 02.07.2022 at 2:50 AM, Information given through mobile no.6204906420
437	02.07.2022	5:17 AM	5:20 AM	5:30 AM	6:23 PM	92+600	RHS	Urban	3	2	2	4	1	5	1	Trailer (AP-16TE-6986) trailer (NL-01L-1548) & Auto (JH-01DF-5759)	0	3	0	0	0	0	Yes	An over speed Trailer (AP-16TE-6986) hit the another trailer (NL-01L-1548) and auto (JH-01DF-5759) from rear end and overturned on MCW at Ch.92+600 (RHS) in HREL Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to Synergy global Hospital Ranchi at 6:23 AM, Accident occurred on 02.07.2022 at 5:17 AM, Information given through mobile no.9798175632.
438	02.07.2022	11:42 AM	11:46 AM	11:48 AM	11:55 AM	62+600	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02AL-1665)	0	2	1	0	0	0	Yes	A Bike (JH-02AL-1665) lost his control due to over speed and fell down on MCW at Ch.62+600 (LHS) in HREL Project, 2 Persons grievous injured & 1 Person minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:55 AM, Accident occurred on 02.07.2022 at 11:42 AM, Information given through mobile no.7209667285.
439	02.07.2022	12:23 PM	12:28 PM	12:35 PM	N/A	70+600	LHS	Urban	3	3	2	4	1	0	1	Bus (BR-02PB-0351)	0	0	5	0	0	0	Yes	A Bus (BR-02PB-0351) lost his control due to over speed and hit the container (DL-01GC-5904) from rear end at Ch.70+600 (LHS) in HREL Proejct, 5 Persons minor injured in this accident, help provided by ambulance team, Accident occurred on 02.07.2022 at 12:23 PM, Information given through mobile no.8789154033.

440	03.07.2022	7:07 AM	7:17 AM	7:20 AM	7:34 AM	99+000	LHS	Urban	2	2	2	4	1	0	1	(JH-01ES-1795) & auto (JH-24F-2900)	0	3	0	0	0	0	Yes	An over speed Car (JH-01ES-1795) hit the auto (JH-24F-2900) which is moving wrong direction and overturned on MCW at Ch.99+000 (LHS) in HREL Project, 3 persons grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 7:34 AM, Accident occurred on 03.07.2022 at 7:07 AM, Information given through mobile no.8987790662.
441	03.07.2022	4:28 PM	4:40 PM	4:42 PM	4:50 PM	103+800	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-24J-9062)	0	2	0	0	0	0	Yes	A Bike (JH-24J-9062) lost his control due to over speed and skidded at Ch.103+800 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Piska Ormanjhi at 4:50 PM, Accident occurred on 03.07.2022 at 4:28 PM, Information given through mobile no.8102655716.
442	03.07.2022	6:27 PM	6:36 PM	N/A	N/A	52+100	LHS	Urban	1	2	2	4	1	0	1	Auto (JH-01BU-7276)	0	1	3	0	0	0	Yes	An Auto (JH-01BU-7276) lost his control due to over speed and overturned on MCW at Ch.52+100 (LHS) in HREL Project, 1 Person grievous & 3 Persons minor injured in this accident, Injured person shifted to the Hospital through 108 Ambulance , Accident occurred on 03.07.2022 at 6:27 PM, Information given through PCR Van.
443	04.07.2022	4:49 PM	4:54 PM	4:55 PM	5:19 PM	70+800	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-02AJ-1011)	0	2	0	0	0	0	Yes	A Bike (JH-02AJ-1011) lost his control due to drunk & drive and hit the median kerb and fell down on MCW at Ch.70+800 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:19 PM, Accident occurred on 04.07.2022 at 4:49 PM, Information given through mobile no.6200854041.
444	05.07.2022	4:58 PM	5:03 PM	5:07 PM	N/A	96+750	RHS	Urban	1	3	2	4	2	0	1	trailer (PB-03Y-9965)	0	0	1	0	0	0	Yes	An over speed trailer (PB-03Y-9965) lost his control due to over speed and overturned on MCW at Ch.96+750 (RHS) in HREL Proejct, 1 Persons minor injured in this accident , help provided by ambulance team, Accident occurred on 05.07.2022 at 4:58 PM, Information given through mobile no.9106648691.
445	05.07.2022	5:54 PM	6:01 PM	6:02 PM	6:08 PM	54+900	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-01DB-3069)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01DB-3069) from rear end and ran away at Ch. 54+900 (LHS) in HREL Project, 1 Person grievous inured in this accident, help provided by ambulance team and shifted to Shiv Sushila Nurshing Home Charhi at 6:08 PM, Accident occurred on 05.07.2022 at 5:54 PM, Information given through mobile no.8877053650.
446	05.07.2022	10:48 PM	10:52 PM	10:55 PM	N/A	92+700	LHS	Urban	1	2	1	4	1	5	1	Bike (JH-01Z-7901)	0	0	1	0	0	0	Yes	A Bike (JH-01Z-7901) lost his control due to drunk & drive and fell down on MCW at Ch.92+700 (LHS) in HREL Project, 1 person minor injured in this accident, help provided by ambulance team, accident occurred on 05.07.2022 at 10:48 PM, Information given through mobile no.8409113853.
447	08.07.2022	4:47 AM	4:53 AM	N/A	N/A	69+380	RHS	Urban	1	2	2	4	1	0	1	Scorpio (BR-02PA-7322) & Bike (BR-02AZ-2853)	0	2	0	0	0	0	Yes	An Over speed Scorpio (BR-02PA-7322) hit the Bike (BR-02AZ-2853) and overturned on MCW at Ch.69+380 (RHS) in HREL Project, 2 Persons grievous injured in this accident, injured Persons shifted to the Hospital through PCR Van, Accident occurred on 08.07.2022 at 4:47 AM, Information given through mobile no.8789154033.
448	09.07.2022	9:41 AM	9:44 AM	9:46 AM	10:00 AM	92+750	RHS	Urban	3	2	2	4	1	5	1	Trailer (RJ-07GC-4109) & fuel tanker (JH-02BC-5243)	0	2	0	0	0	0	Yes	An over speed Trailer (RJ-07GC-4109) lost his control and hit the fuel tanker (JH-02BC-5243) from rear end at Ch.92+750 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:00 AM, Accident occurred on 09.07.2022 at 9:41 AM, Information given through local public.
449	12.07.2022	8:28 PM	8:30 PM	8:32 PM	8:40 PM	92+100	LHS	Urban	1	2	2	4	1	5	1	Bike (JH-01EL-5557)	0	2	0	0	0	0	Yes	A Bike (JH-01EL-5557) lost his control due to over speed and fell down on MCW at Ch.92+100 (LHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:40 PM, Accident occurred on 12.07.2022 at 8:28 PM, Information given through mobile no.6200681192.

450	13.07.2022	7:07 AM	7:12 AM	7:14 AM	7:22 AM	54+660	LHS	Urban	1	2	2	4	1	0	1	Hywa (JH-02AG-8244)	0	1	0	0	0	0	Yes	A Hywa (JH-02AG-8244) lost his control due to over speed and overturned on MCW at Ch.54+660 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:22 AM, Accident occurred on 13.07.2022 at 7:07 AM, Information given through mobile no.7903186693.
451	13.07.2022	1:27 PM	1:35 PM	1:38 PM	1:55 PM	95+600	RHS	Urban	1	2	1	4	2	0	1	Truck 709 (JH-01EG 9296)	0	2	3	0	0	0	Yes	A Truck 709 (JH-01EG-9296) lost his control due to drunk & drive and overturned on MCW at Ch.95+600 (RHS) in HREL Project, 2 Persons grievous & 3 Persons Minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:55 PM, Accident occurred on 13.07.2022 at 1:27 PM, Information given through mobile no.8825191800.
452	15.07.2022	2:19 PM	2:26 PM	2:30 PM	N/A	94+900	RHS	Urban	1	2	2	4	3	0	1	Container (NL-01Q-8084)	0	0	1	0	0	0	Yes	A Container (NL-01Q-8084) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.94+900 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 15.07.2022 at 2:19 PM, Information given through mobile no.8825191800.
453	15.07.2022	6:12 PM	6:20 PM	6:22 PM	6:30 PM	55+100	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian FROM rear end and ran away at Ch.55+100 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:30 PM, Accident occurred on 15.07.2022 at 6:12 PM, Information given through mobile no.9155285322.
454	16.07.2022	10:33 PM	10:36 PM	10:38 PM	N/A	92+100	LHS	Urban	1	3	2	4	1	0	1	Car (JH-01CY-9604)	0	0	1	0	0	0	Yes	An over speed Car (JH-01CY-9604) hit the median kerb and overturned on MCW at Ch.92+100 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 16.07.2022 at 10:33 PM, Information given through mobile no.6204906142.
455	18.07.2022	11:13 PM	11:19 PM	N/A	1:45 PM	97+300	RHS	Urban	1	1	2	4	2	0	1	Bike (JH-02AV-7338)	1	0	0	0	0	0	Yes	An over speed Bike (JH-02AV-7338) hit the median kerb and fell down on MCW at Ch.97+300 (RHS) in HREL Project, 1 Person dead on the spot , Help provided by ambulance team and shifted to RIMS Hospital Ranchi at 1:45 AM, Accident occurred on 18.07.2022 at 11:13 PM, Information given through mobile no.8825191800.
456	19.07.2022	3:39 AM	3:44 AM	3:47 AM	4:04 AM	77+200	RHS	Urban	3	2	2	4	1	0	1	Car (UP-67T-0680) & Truck (UP-67T-0680)	0	1	1	0	0	0	Yes	An over speed Car (UP-67T-0680) hit the Truck (UP-67T-0680) from rear end at Ch.77+200 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:04 AM, Accident occurred on 19.07.2022 at 3:39 AM, Information given through mobile no.6200854041.
457	19.07.2022	10:33 AM	10:41 AM	10:42 AM	11:02 AM	50+940	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-09D-6725)	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-09D-6725) from rear end and ran away at Ch.50+940 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:02 AM, Accident occurred on 19.07.2022 at 10:33 AM, Information given through mobile no.8789154033.
458	25.07.2022	6:10 PM	6:15 PM	6:18 PM	6:22 PM	61+600	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-24D-1411)	0	2	0	0	0	0	Yes	An over spped Bike (JH-24D-1411) lost his control due to drunk & drive and fell down on MCW at Ch.61+600 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 6:22 PM, Accident occurred on 25.07.2022 at 6:10 PM, Information given through mobile no.8789154033.
459	25.07.2022	10:21 PM	10:24 PM	10:26 PM	11:20 PM	93+100	LHS	Urban	2	2	2	4	1	0	1	Truck (DL-MA-9221) & Car (JH-01DZ-2924)	0	1	0	0	0	0	Yes	A Truck (DL-MA-9221) hit the Car (JH-01DZ-2924) from head on collision due to truck moving wrong direction at Ch.93+100 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Medica Hospital Ranchi at 11:20 PM, Accident occurred on 25.07.2022 at 10:21 PM, Information given through mobile no.8825191800.

460	27.07.2022	9:08 AM	9:13 AM	9:15 AM	9:30 AM	77+500	RHS	Urban	1	2	2	4	1	0	1	Trailor (RJ-07GC-6864)	0	2	0	0	0	0	Yes	A Trailor (RJ-07GC-6864) lost his control due to over speed and overturned on MCW at Ch.77+500 (RHS) in HREL Project, 2 persons grievous injured in this accident , help provided by ambulance team and shifted to Arogya health Care Ramgarh at 9:30 AM, Accident occurred on 27.07.2022 at 9:08 AM, Information given through mobile no.9123165797.
461	27.07.2022	2:00 PM	2:15 PM	2:18 PM	N/A	103+400	LHS	Urban	1	2	2	4	1	0	1	Pick up Van (JH-02BB-5180)	0	1	0	0	0	0	Yes	A Pick up Van (JH-02BB-5180) lost his control due to over speed and overturned on MCW at Ch.103+400 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 27.07.2022 at 2:00 PM, Information given through mobile no.9709168812.
462	30.07.2022	12:07 PM	12:11 PM	12:12 PM	12:16 PM	65+700	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02X-8816)	0	1	0	0	0	0	Yes	A Bike (JH-02X-8816) lost his control due to over speed and fell down on MCW at Ch.65+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:16 PM, Accident occurred on 30.07.2022 at 12:07 PM, Information given through mobile no.9110138036.
463	31.07.2022	11:24 AM	11:31 AM	11:32 AM	11:45 AM	70+900	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02K-9633)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02K-9633) from rear end and ran away at Ch.70+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:45 AM, Accident occurred on 31.07.2022 at 11:24 AM, Information given through mobile no.8789154033.
464	31.07.2022	5:07 PM	5:12 PM	5:14 PM	5:30 PM	94+850	RHS	Urban	1	2	2	4	3	0	1	Trailer (RJ-02GB-5084)	0	1	0	0	0	0	Yes	A Trailer (RJ-02GB-5084) lost his control due to over speed and fell down on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person grievous injured in this accident , help provided by ambulance team and shifted to KGT Hospital Ramgarh at 5:30 PM, Accident occurred on 31.07.2022 at 5:07 PM, Information given through mobile no.9064709021.
465	02.08.2022	11:38 AM	11:42 AM	11:45 AM	11:55 AM	75+600	LHS	Urban	1	2	2	4	1	0	1	**Scooter (BR-13A-6012)**	0	2	0	0	0	0	Yes	An over speed Scooter (BR-13A-6012) lost his control due to tire burst and fell down on MCW at Ch.75+600 (LHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Aarogya health Care Ramgarh at 11:55 AM, Accident occurred on 02.08.2022 at 11:38 AM, Information given through mobile no.6200854041.
466	04.08.2022	1:00 AM	1:10 AM	1:12 AM	N/A	94+650	LHS	Urban	1	3	2	4	3	0	1	**container (RJ -52GA-9969)**	0	0	1	0	0	0	Yes	A container (RJ -52GA-9969) lost his control due to over speed and overturned on MCW at Ch.94+650 (LHS) in HREL Project, 1 person minor injured in this accident, help provided by ambulance team, Accident occurred on 04.08.2022 at 1:00 AM, Information given through our patrolling team.
467	04.08.2022	7:03 PM	7:06 PM	7:08 PM	7:14 PM	58+200	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the bicycle from rear end and ran away at Ch.58+200 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 7:14 PM, Accident occurred on 04.08.2022 at 7:03 PM, Information given through mobile no.7870636517.
468	04.08.2022	8:54 PM	8:55 PM	8:57 PM	9:04 PM	59+750	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02BA-8383)	0	2	0	0	0	0	Yes	A Bike (JH-02BA-8383) lost his control due to drunk & drive and fell down on MCW at Ch.59+750 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:04 PM, Accident occurred on 04.08.2022 at 8:54 PM, Information given through mobile no.7903186693.
469	05.08.2022	7:10 PM	7:15 PM	7:18 PM	N/A	70+900	LHS	Urban	3	3	2	4	1	0	1	Unknown Bike	0	0	1	0	0	0	Yes	An Unknown Bike Hit the Pedestrian from rear end and ran away at Ch.70+900 (LHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team , Accident occurred on 05.08.2022 at 7:10 PM, Information given through mobile no.8595325199.

470	09.08.2022	5:02 PM	5:12 PM	5:14 PM	5:40 PM	95+980	RHS	Urban	1	2	1	4	2	0	1	Tempo (A/F)	0	2	0	0	0	0	Yes	A Tempo (A/F) lost his control due to drunk & Drive and overturned on MCW at Ch.95+980 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:40 PM, Accident occurred on 09.08.2022 at 5:02 PM, Information given through mobile no.8340427141.
471	11.08.2022	9:12 PM	9:16 PM	9:18 PM	9:33 PM	73+000	RHS	Urban	3	1	2	4	1	0	1	Pick up Van (JH-05CU-8728) & Bike (A/F)	1	2	0	0	0	0	Yes	A Pick up Van (JH-05CU-8728) lost his control due to over sped and hit the Bike (A/F) from rear end at Ch.73+000 (RHS) in HREL Project, 1 person died on the spot and 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 9:33 PM, Accident occurred on 11.08.2022 at 9:12 PM, Information given through mobile no.8709806554.
472	14.08.2022	2:50 PM	2:55 PM	2:57 PM	3:08 PM	56+550	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-24E-6446)	0	2	0	0	0	0	Yes	A Bike (JH-24E-6446) lost his control due to drunk & Drive and hit the animal and fell down on MCW at Ch.56+550 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 3:08 PM, Accident occurred on 14.08.2022 at 2:50 PM, Information given through mobile no.9931334065.
473	14.08.2022	6:40 PM	6:47 PM	N/A	N/A	89+000	LHS	Urban	1	2	2	4	1	0	1	Hydra (JH-05CA-7247) & car (JH-10DH-3293)	0	2	0	0	0	0	Yes	A Hydra (JH-05CA-7247) lost hid control due to over speed and fell down on car (JH-10DH-3293) at Ch.89+000 (LHS) in HREL Project, 2 Persons grievous injured in this accident, injured persons shifted to the hospital through PCR Van , Accident occurred on 14.08.2022 at 6:40 PM, Information given through mobile no.6203799730.
474	16.08.2022	5:54 PM	5:58 PM	6:00 PM	6:15 PM	58+650	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-02BB-6597)	0	2	0	0	0	0	Yes	A Bike (JH-02BB-6597) lost his control due to drunk & drive and fell down on MCW at Ch.58+650 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:15 PM, Accident occurred on 16.08.2022 at 5:54 PM, Information given through local public.
475	19.08.2022	6:46 PM	6:52 PM	6:54 PM	7:05 PM	69+800	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02AK-7855)	0	1	0	0	0	0	Yes	A Bike (JH-02AK-7855) lost his Control due to drunk & drive and overturned on MCW at Ch.69+800 (LHS) in HREL project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 7:05 PM, Accident occurred on 19.08.2022 at 6:46 PM, Information given through mobile no. 7781002285.
476	20.08.2022	12:24 AM	12:34 AM	12:36 AM	12:55 AM	84+700	LHS	Urban	1	2	2	4	1	0	1	Car (JH-02BH-8125)	0	1	3	0	0	0	Yes	A Car (JH-02BH-8125) lost his control due to over speed and overturned on MCW at Ch.84+700 (LHS) in HREL Proeject, 1 Person grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:55 AM, Accident occurred on 20.08.2022 at 12:24 AM, Information given through mobile no.8863887789.
477	20.08.2022	9:29 AM	9:32 AM	N/A	10:06 AM	56+920	LHS	Urban	3	1	2	4	1	0	1	Tractor (BR-07GB-5102)	1	0	0	0	0	0	Yes	A Tractor (BR-07GB-5102) lost his control due to over speed and hit the Pedestrian from rear end at Ch.56+920 (LHS) in HREL Project, 1 Person died on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:06 AM, Accident occurred on 20.08.2022 at 9:29 AM, Information given through mobile no.6205895488.
478	22.08.2022	3:39 PM	3:46 PM	3:48 PM	3:59 PM	52+400	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle & Bike (JH-24H-0986)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24H-0986) from rear end and ran away at Ch.52+400 (LHS) in HREL project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 3:59 PM, Accident occurred on 22.08.2022 at 3:39 PM, Information given through mobile no.7667081503.
479	23.08.2022	2:31 AM	2:45 AM	2:50 AM	3:20 AM	46+800	RHS	Urban	3	1	2	4	1	0	1	Oil tanker (AP-24Y-5549) & trailer (NL-01E-7692)	1	1	0	0	0	0	Yes	An Oil tanker (AP-24Y-5549) lost his control due to napping and hit the parked trailer (NL-01E-7692) from rear end at Ch.46+800 (RHS) in HREL Project, 1 person died on the spot & 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 3:20 AM, Accident occurred on 23.08.2022 at 2:31 AM, Information given through mobile no.6205895488.

480	24.08.2022	2:37 PM	2:45 PM	2:50 PM	N/A	53+200	LHS	Urban	1	3	1	4	1	0	1	Bike (JH-24C-6851)	0	0	1	0	0	0	Yes	A Bike (JH-24C-6851) lost his control due to drunk & drive and fell down on MCW at Ch.53+200 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 24.08.2022 at 2:37 PM, Information given through mobile no.8789154033.
481	24.08.2022	3:10 PM	3:15 PM	3:16 PM	3:25 PM	95+500	LHS	Urban	3	2	1	4	2	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.95+500 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Ormanjhi at 3:25 PM, Accident occurred on 24.08.2022 at 3:10 PM, Information given through mobile no.8210574525.
482	25.08.2022	12:15 AM	12:18 AM	12:19 AM	12:40 AM	60+200	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-07J-9086)	0	1	0	0	0	0	Yes	A Bike (JH-07J-9086) lost his control due to drunk & drive and fell down on MCW at Ch.60+200 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:40 AM, Accident occurred on 25.08.2022 at 12:15AM, Information given through our Patrolling team.
483	26.08.2022	5:08 PM	5:14 PM	5:18 PM	5:55 PM	96+500	RHS	Urban	3	2	2	4	3	0	1	Army Vehicle (N/A) , Trailer (NL-01L-9879) truck (UK-06CB-8251) and auto (JH-02AE-4886)	0	1	4	0	0	0	Yes	All vehicles going to Ranchi to ramgarh route and collide each others Army Vehicle (N/A) , Trailer (NL-01L-9879) truck (UK-06CB-8251) and auto (JH-02AE-4886) and overturned on MCW at Ch.96+500 (RHS) in HREL Proejct, 1 person grievous & 4 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:55 PM, Accident occurred on 26.08.2022 at 5:08 PM, Information given through mobile no.6205029735.
484	28.08.2022	12:35 PM	12:49 PM	12:52 PM	1:55 PM	106+300	LHS	Urban	1	1	2	4	1	0	1	Tractor (JH-10AX-1673)	1	2	0	0	0	0	Yes	A Tractor (JH-10AX-1673) lost his control due to over speed and overturned on MCW at Ch.106+300 (LHS) in HREL Project, 1 Person dead on the spot and 2 persons grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 3:55 PM, Accident occurred on 28.08.2022 at 12:35 PM, Information given through mobile no.6201720206.
485	29.08.2022	8:32 AM	8:38 AM	8:40 AM	8:50 AM	98+600	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.98+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Piska at 8:50 AM, Accident occurred on 29.08.2022 at 8:32 AM, Information given through mobile no.7004414913.
486	02.09.2022	1:10 AM	1:12 AM	1:14 AM	1:17 AM	61+920	LHS	Urban	1	2	2	4	1	0	1	**Bus (BR-02PA-8523)**	0	2	0	0	0	0	Yes	A Bus (BR-02PA-8523) Lost his control due to over speed and overturned on MCW at Ch.61+920 (LHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 1:17 AM, Accident occurred on 02.09.2022 at 1:10 AM, Information given through local public.
487	02.09.2022	6:25 PM	6:33 PM	6:35 PM	N/A	56+500	LHS	Urban	3	2	2	4	1	0	1	**Bike (JH-02L-2870)**	0	1	0	0	0	0	Yes	A Bike (JH-02L-2870) lost his control due to over speed and hit the pedestrian from rear end at Ch.56+500 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 02.09.2022 at 6:25 PM, Information given through mobile no.8798154033.
488	02.09.2022	10:15 PM	10:23 PM	10:26 PM	11:05 PM	82+200	RHS	Urban	3	1	2	4	1	0	1	Car (JH-11Y-9536)	1	3	0	0	0	0	Yes	A Car (JH-11Y-9536) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.82+200 (RHS) in HREL Project, 1 person dead on the spot & 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:05 PM, Accident occurred on 02.09.2022 at 10:15 PM, Information given through mobile no.6207199242.

489	05.09.2022	5:22 PM	5:30 PM	5:32 PM	5:45 PM	84+150	RHS	Urban	3	2	1	4	1	0	1	Bike (JH-24H-7518) & Truck (JH-02T-7235)	0	1	0	0	0	0	Yes	A Bike (JH-24H-7518) lost his control due to drunk & drive and hit the Truck (JH-02T-7235) from rear end at CH.84+150 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:45 PM, Accident occurred on 05.09.2022 at 5:22 PM, Information given through mobile no.9608539560.
490	05.09.2022	4:10 PM	4:14 PM	N/A	N/A	94+800	RHS	Urban	1	2	2	4	3	0	1	Trailer (RJ-02GB-1829) & Bike (JH-02AZ 2054)	0	1	0	0	0	0	Yes	An over speed Trailer (RJ-02GB-1829) hit the Bike (JH-02AZ-2054) from rear end and overturned on MCW at Ch.94+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through PCR Van, Accident occurred on 05.09.2022 at 4:10 PM, Information given through mobile no.9835185484.
491	06.09.2022	11:40 AM	11:47 AM	1:48 AM	12:03 PM	96+300	LHS	Urban	3	2	2	4	3	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.96+300 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Ormanjhi at 12:03 PM, accident occurred on 06.09.2022 at 11:40 AM, Information given through mobile no.8102655716.
492	09.09.2022	1:32 PM	1:37 PM	1:39 PM	1:55 PM	79+600	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-02M-6138)	0	1	1	0	0	0	Yes	A Bike (JH-02M-6138) lost his control due to over speed and hit the unknown vehicle from rear end and fell down on MCW at Ch.79+600 (LHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:55 PM, Accident occurred on 09.09.2022 at 1:32 PM, Information given through mobile no.6206475194.
493	09.09.2022	8:31 PM	8:33 PM	8:35 PM	8:38 PM	60+560	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02M-2765)	0	2	0	0	0	0	Yes	An over speed Bike (JH-02M-2765) lost his control due to drunk & drive and fell down on MCW at Ch.60+560 (LHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:38 PM, Accident occurred on 09.09.2022 at 8:31 PM, Information given through mobile no.8789154033.
494	11.09.2022	4:45 PM	4:51 PM	4:52 PM	5:15 PM	94+450	RHS	Urban	1	2	5	4	2	0	1	Trailer (UP-25CT-0677)	0	1	0	0	0	0	Yes	A Trailer (UP-25CT-0677) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.94+450 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:15 PM, Accident occurred on 11.09.2022 at 4:45 PM, Information given through Mobile No.6203799730.
495	11.09.2022	8:13 PM	8:15 PM	8:17 PM	8:20 PM	73+850	RHS	Urban	3	2	2	4	1	0	1	Bike (A/F)	0	2	3	0	0	0	Yes	A Bike (A/F) Lost his control due to over speed and hit the Pedestrian from rear at Ch.73+850 (RHS) in HREL Project, 2 Persons grievous & 3 Persons minor injured in this accident, help provided by ambulance team and shifted to Manorama Nurshing Home Kujju at 8:20 PM, Accident occurred on 11.09.2022 at 8:13 PM, Information given through mobile no.8709806554.
496	13.09.2022	2:55 PM	3:02 PM	3:03 PM	3:17 PM	94+950	RHS	Urban	1	2	2	4	3	0	1	Trailer (NL-01AB-6113)	0	1	0	0	0	0	Yes	A Trailer (NL-01AB-6113) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 3:17 PM, Accident occurred on 13.09.2022 at 2:55 PM, Information given through mobile no.8102655716.
497	15.09.2022	1:29 PM	1:55 PM	N/A	N/A	106+200	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-01EB-4930)	0	1	0	0	0	0	Yes	A Bike (JH-01EB-4930) lost his control due to over speed and fell down on MCW at Ch.106+200 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through another vehicle, Accident occurred on 15.09.2022 at 1:29 PM, Information given through mobile no.7004800645.
498	16.09.2022	12:51 PM	12:55 PM	12:57 PM	1:10 PM	77+100	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02R-6081)	0	2	0	0	0	0	Yes	A Bike (JH-02R-6081) lost his control due to over speed and skidded at Ch.77+100 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 01:10 PM, Accident occurred on 16.09.2022 at 12:51 PM, Information given through mobile no.9006888638.

499	17.09.2022	3:55 PM	3:57 PM	3:58 PM	4:14 PM	92+500	RHS	Urban	3	2	2	4	1	5	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.92+500 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:14 PM, Accident occurred on 17.09.2022 at 3:55 PM, Information given through mobile no.6205042609.
500	18.09.2022	10:49 PM	11:05 PM	11:06 PM	11:35 PM	51+330	RHS	Urban	3	2	2	4	1	0	1	Lorry (KA-63-9543)	0	1	0	0	0	0	Yes	A Lorry (KA-63-9543) lost his control due to over speed and hit the another vehicle from rear end at Ch.51+330 (RHS) in HREL Proejct, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 11:35 PM, Accident occurred on 18.09.2022 at 10:49PM, Information given through our Patrolling team.
501	19.09.2022	2:37 PM	2:43 PM	2:45 PM	2:53 PM	54+650	LHS	Urban	1	2	2	4	1	0	1	Pick up Van (JH-02T-1779)	0	1	0	0	0	0	Yes	A Pick up Van (JH-02T-1779) lost his control due to over speed and overturned on MCW at Ch.54+650 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 2:53 PM, Accident occurred on 19.09.2022 at 2:37 PM, Information given through mobile no.9110182244.
502	19.09.2022	8:15 PM	8:27 PM	8:40 PM	N/A	49+700	RHS	Urban	1	3	1	4	1	0	1	Bike (JH-24J-5202)	0	0	1	0	0	0	Yes	A Bike (JH-24J-5202) lost his control due to drunk & drive and fell down on MCW at Ch.49+700 (RHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team , Accident occurred on 19.09.2022 at 8:15 PM, Information given through mobile no.6200854041.
503	21.09.2022	6:18 PM	6:23 PM	6:25 PM	6:40 PM	53+600	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.53+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:40 PM, Accident occurred on 21.09.2022 at 6:18 PM, Information given through mobile no.9431140479.
504	23.09.2022	12:50 PM	12:54 PM	12:58 PM	N/A	95+200	RHS	Urban	6	3	1	4	3	0	1	Bike (JH-01DY-9663)	0	0	1	0	0	0	Yes	A Bike (JH-01DY-9663) lost his control due to drunk & drive and skidded at Ch.95+200 (RHS) in HREL Project, 95+200 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 23.09.2022 at 12:50 PM, Information given through mobile no.6203799730.
505	23.09.2022	9:07 PM	9:10 PM	9:12 PM	10:30 PM	61+750	RHS	Urban	1	1	2	4	1	0	1	Car (JH-01ET-9980)	1	2	0	0	0	0	Yes	An over speed Car (JH-01ET-9980) hit the median kerb and overturned on MCW at Ch.61+750 (RHS) in HREL Project, 2 Persons grievous Injured in this accident, help provided by ambulance team and shifted to CHC mandu , 1 persons dead during shifted to Hospital, after that dead person shifted to Sadar Hospital Ramgarh at 10:30 PM, Accident occurred on 23.09.2022 at 9:07 PM, Information given through mobile no.6200854041.
506	24.09.2022	3:19 PM	3:28 PM	3:30 PM	3:45 PM	83+550	RHS	Urban	3	2	2	4	1	0	1	Bolero (JH-02P-6922)	0	2	4	0	0	0	Yes	An over speed Bolero (JH-02P-6922) lost his control and hit the unknown vehicle from rear end at Ch.83+550 (RHS) in HREL Project, 2 Persons grievous & 4 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:45 PM, Accident occurred on 24.09.2022 at 3:19 PM, Information given through mobile no.7004743501.
507	26.09.2022	8:15 PM	8:19 AM	N/A	N/A	94+100	LHS	Urban	3	2	2	4	3	0	1	Car (BR-02AU-5457)	0	1	0	0	0	0	Yes	A Car (BR-02AU-5457) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.94+100 (LHS) in HREL Project, 1 person grievous injured in this accident, grievously injured person shifted to the hospital through PCR Van , Accident occurred on 26.09.2022 at 8:15 AM, Information given through mobile no.9709168812.

508	27.09.2022	5:20 PM	5:24 PM	5:40 PM	6:24 PM	93+500	LHS	Urban	1	2	5	4	1	0	1	**Trailer (HR-69C-8083) & innova (JH-12H-5402)**	0	2	0	0	0	0	Yes	An Over speed Trailer (HR-69C-8083) lost his control due to mechanical failure (Break Fail) and hit the innova (JH-12H-5402) from rear end and overturned on MCW at Ch.93+500 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:24 PM, Accident occurred on 27.09.2022 at 5:20 PM,Information given through mobile no.8825191800.
509	28.09.2022	4:47 PM	4:52 PM	N/A	N/A	94+400	RHS	Urban	2	2	2	4	3	0	1	Car (JH-06J-0039) & savari van (JH-01B-8359)	0	3	0	0	0	0	Yes	An over speed Car (JH-06J-0039) hit the savari van (JH-01B-8359) from Head on Collision at Ch.94+400 (RHS) in HREL Project, 3 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through another vehicle , Accident occurred on 28.09.2022 at 4:47 PM, Information given through mobile no.6200854041.
510	29.09.2022	10:44 AM	10:48 AM	N/A	N/A	64+600	RHS	Urban	3	2	2	4	1	0	1	(JH-02AE-4148) & Bike	0	2	0	0	0	0	Yes	An Over speed (JH-02AE-4148) hit the Bike from rear end at Ch.64+600 (RHS) in HREL Project, 2 Persons grievous injured in this accident, grievously injured persons shifted to the hospital through another vehicle , Accident occurred on 29.09.2022 at 10:44 AM, Information given through mobile no.8789154033.
511	29.09.2022	6:45 PM	7:05 PM	7:10 PM	N/A	107+800	RHS	Urban	3	3	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.107+800 (RHS) in HREL Project, 1 Persons minor injured in this accident, first aid done by Ambulance team, Accident occurred on 29.09.2022 at 6:45 PM, Information given through mobile no.9102882534.
512	29.09.2022	9:06 PM	9:12 PM	9:14 PM	9:25 PM	96+080	RHS	Urban	3	2	2	4	3	0	1	trailer (MH-43Y-9566) , trailer (NL-02Q-6087) & Scorpio (BR-26PA-7537)	0	1	0	0	0	0	Yes	An Over trailer (MH-43Y-9566) hit the another trailer (NL-02Q-6087) and Scorpio (BR-26PA-7537) from rear end and overturned on MCW at Ch. 96+080 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:25 PM, Information given through mobile no.8825311624.
513	30.09.2022	2:55 AM	3:10 AM	3:12 AM	4:10 AM	52+040	RHS	Urban	1	2	2	4	2	0	1	Lorry (PB-13AW-8931)	0	2	0	0	0	0	Yes	A Lorry (PB-13AW-8931) lost his control due to over speed and overturned on MCW at Ch.52+040 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 4:10 AM, Accident occurred on 30.09.2022 at 2:55 AM, Information given through mobile no.8789154033.
514	30.09.2022	6:26 PM	6:31 PM	6:32 PM	6:45 PM	56+000	RHS	Urban	3	2	1	4	2	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.56+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:45 PM, Accident occurred on 30.09.2022 at 6:26 PM, Information given through mobile no.8789154033.
515	01.10.2022	8:50 AM	8:53 AM	8:55 AM	9:04 AM	59+060	LHS	Urban	3	2	2	4	1	0	1	**Unknown vehicle & Bike (JH-02AF-8745)**	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02AF-8745) from rear end and ran away at Ch.59+060 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:04 AM, Accident occurred on 01.10.2022 at 8:50 AM, Information given through local public.
516	01.10.2022	2:30 PM	2:40 PM	2:41 PM	2:45 PM	95+380	RHS	Urban	1	2	5	4	3	0	1	**Trailer (UP-22AT-9724)**	0	3	0	0	0	0	Yes	A Trailer (UP-22AT-9724) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.95+380 (RHS) in HREL Project, 3 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:45 PM , Accident occurred on 01.10.2022 at 2:30 PM, Information given through mobile no.8825191800. Date-1-10-22

517	01.10.2022	8:52 PM	8:54 PM	9:00 PM	11:05 PM	92+950	LHS	Urban	1	1	2	4	2	4	0	Car (UP-53DL-0230)	1	1	0	0	0	0	Yes	A Truck lost his control due to Mechanical failure (Break Fail) and hit the Car (UP-53DL-0230) from rear end and overturned on MCW at Ch.92+950 (LHS) in HREL Proejct, 1 Person dead on the spot and 1 Person grievous injured in this accident , help provided by ambulance team and shifted to RIMS Ranchi at 11:05 PM, Accident occurred on 01.10.2022 at 8:52 PM, Information given through mobile no.9608477710.
518	02.10.2022	11:53 AM	11:58 AM	N/A	12:40 PM	94+950	RHS	Urban	3	1	2	4	3	0	1	Savari Van (JH-01CJ-8801)	1	0	0	0	0	0	Yes	An over speed Savari Van (JH-01CJ-8801) hit the Bike (JH-02AK-2070) from rear end at Ch.94+950 (RHS) in HREL Proejct, 1 Person died on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:40 PM, Accident occurred on 02.10.2022 at 11:53 AM, Information given through mobile No.6203799730.
519	02.10.2022	1:35 PM	1:47 PM	1:50 PM	2:20 PM	67+730	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-24J-3403) & Car (JH-02U-9105)	0	2	0	0	0	0	Yes	A Bike (JH-24J-3403) hit the Car (JH-02U-9105) from head on collision which is moving wrong direction at Ch.67+730 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ranchi Road Ramgarh at 2:20 PM, Accident occurred on 02.10.2022 at 1:35 PM, Information given through mobile no.6200854041.
520	03.10.2022	4:12 AM	4:17 AM	N/A	5:35 AM	94+950	RHS	Urban	1	1	2	4	3	0	1	Truck (NL-01AF-3581)	1	0	0	0	0	0	Yes	A Truck (NL-01AF-3581) hit the another trailer from rear end and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person died on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:35 AM, Accident occurred on 03.10.2022 at 4:12 AM, Information given through mobile no.8825191800.
521	04.10.2022	4:55 PM	5:01 PM	5:03 PM	5:16 PM	94+800	RHS	Urban	1	2	5	4	3	0	1	trailer (HR-63C-2212)	0	2	0	0	0	0	Yes	An over speed trailer (HR-63C-2212) lost his control due to Mechanical Failure (Break fail) and overturned on MCW at Ch.94+800 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provide by ambulance team and shifted to Sadar Hospital ramgarh at 5:16 PM, Accident occurred on 04.10.2022 at 4:55 PM, Information given through mobile no.8825191800.
522	04.10.2022	6:53 PM	7:20 PM	N/A	N/A	103+000	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-24G-0946)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24G-0946) from rear end and ran away at Ch.103+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured Person shifted to Hospital through another vehicle , Accident occurred on 04.10.2022 at 6:53 PM, Information given through mobile no.7979789659.
523	10.10.2022	10:06 AM	10:12 AM	10:14 AM	10:25 AM	72+560	LHS	Urban	3	2	2	4	1	0	1	Container (NL-01AB-3284) & Bike (JH-02T-4712)	0	1	0	1	0	0	Yes	A Container (NL-01AB-3284) lost his control due to over speed and hit the Bike (JH-02T-4712) from rear end at Ch.72+560 (LHS) in HREL Project, 1 person grievous & 1 Person non injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:25 AM, Accident occurred on 10.10.2022 at 10:06 AM, Information given through mobile no.8863887789.
524	12.10.2022	5:17 AM	5:19 AM	5:20 AM	5:40 AM	75+520	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle & Bike (JH-24H-0748)	1	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-24H-0748) from rear end and ran away at Ch.75+520 (LHS) in HREL Project, 1 person dead on the spot & 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:40 AM, Accident occurred on 12.10.2022 at 5:17 AM, Information given through mobile no.8709806554.
525	12.10.2022	9:31 PM	9:39 PM	9:41 PM	10:00 PM	96+000	RHS	Urban	3	2	2	4	3	0	1	Trailer (HR-39E-0083) & Trailer (CG-07CA-6138)	0	2	0	0	0	0	Yes	An over speed Trailer (HR-39E-0083) hit the another Trailer (CG-07CA-6138) from rear end at Ch.96+000 (RHS) in HREL Project, 2 Persons grievous injured in this accident, Help Provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:00 PM, Accident occurred on 12.10.2022 at 9:31 PM, Information given through mobile no.9064709021.

526	13.10.2022	2:35 AM	2:41 AM	2:45 AM	N/A	95+950	RHS	Urban	1	3	5	4	3	0	1	truck (AP-07-TF-9419)	0	0	2	0	0	0	Yes	An over speed truck (AP-07-TF-9419) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.95+950 (RHS) in HREL Project, 2 Persons minor injured in this accident, first aid done by ambulance team , Accident occurred on 13.10.2022 at 2:35 AM, Information given through mobile no.8825191800.
527	13.10.2022	10:25 AM	10:30 AM	10:32 AM	10:42 AM	63+900	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Scooty (JH-02AK-1133)	0	1	2	0	0	0	Yes	An unknown vehicle hit the Scooty (JH-02AK-1133) from rear end and ran away at Ch.63+900 (RHS) in HREL Proejct, 1 person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 10:42 AM, Accident occurred on 13.10.2022 at 10:25 AM, Information given through mobile no.9905397118.
528	14.10.2022	11:43 AM	11:48 AM	11:52 AM	N/A	89+500	RHS	Urban	2	3	2	4	1	0	1	Van (JH-01EK-9464) & Car (JH-01BY-9898)	0	0	1	0	0	0	Yes	An Over speed Pick up Van (JH-01EK-9464) hit the Car (JH-01BY-9898) from Head on Collision while crossing the road at Ch.89+500 (RHS) in HREL Project, 1 person minor injured in this accident, first aid done by ambulance team, Accident occurred on 14.10.2022 at 11:43 AM, Information given through mobile no.6203799730.
529	14.10.2022	8:12 PM	8:20 PM	8:22 PM	9:29 PM	96+800	LHS	Urban	3	2	2	4	3	0	1	Bike (JH-01CF-6776)	0	1	0	0	0	0	Yes	A Bike (JH-01CF-6776) hit the another vehicle from rare end and overturned on MCW at Ch.96+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 9:29 PM, Accident occurred on 14.10.2022 at 8:12 PM, Information given through mobile no.9835147629.
530	15.10.2022	12:30 PM	12:35 PM	12:37 PM	12:50 PM	79+000	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Scooty (JH-24H-3792)	0	1	1	0	0	0	Yes	An Unknown vehicle hit the Scooty (JH-24H-3792) from rear end and ran away at Ch.79+000 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:50 PM, Accident occurred on 15.10.2022 at 12:30 PM, Information given through mobile no.9106648691.
531	15.10.2022	10:53 PM	11:00 PM	11:02 PM	11:20 PM	94+950	RHS	Urban	1	2	5	4	3	0	1	trailer (PB-13BE-4888)	0	2	0	0	0	0	Yes	A trailer (PB-13BE-4888) lost his control due to Mechanical failure (Break fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:20 PM, Accident occurred on 15.10.2022 at 10:53 PM, Information given through mobile no.6203799730.
532	16.10.2022	12:15 PM	12:39 PM	N/A	N/A	114+200	LHS	Urban	3	1	2	4	1	0	1	container (RJ-14GJ-0015)	1	0	0	0	0	0	Yes	A container (RJ-14GJ-0015) lost his control due to over speed and hit the Bike (N/A) from rear end at Ch.114+200 (LHS) in HREL Project, 1 person died on the spot , Accident occurred on 16.10.2022 at 12:15 PM, Information given through mobile no.7004800645.
533	19.10.2022	7:47 PM	7:54 PM	7:55 PM	8:35 PM	54+100	LHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.54+100 (LHS) In HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hazaribagh at 8:35 PM, Accident occurred on 19.10.2022 at 7:47 PM, Information given through mobile no.6200854041.
534	22.10.2022	8:22 AM	8:26 AM	8:28 AM	8:50 AM	73+300	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AV-6644)	0	2	0	0	0	0	Yes	A Bike (JH-02AV-6644) lost his control due to over speed and hit the unknown vehicle from rear end and fell down on MCW at Ch.73+300 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:50 AM, Accident occurred on 22.10.2022 at 8:22 AM, Information given through local Public.

535	23.10.2022	1:37 AM	1:45 AM	1:47 AM	2:20 AM	56+030	RHS	Urban	3	2	2	4	1	0	1	Car (JH-01EN-1527)	0	1	0	0	0	0	Yes	A Car (JH-01EN-1527) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.56+030 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Arogyam Hospital Hazaribagh at 2:20 AM, Accident occurred on 23.10.2022 at 1:37 AM, Information given through mobile no.8789154033.
536	23.10.2022	5:37 AM	5:45 AM	5:47 AM	6:10 AM	83+400	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-24H-7573) & truck (TN-52H-2787)	0	1	0	0	0	0	Yes	A Bike (JH-24H-7573) lost his control due to over speed and hit the truck (TN-52H-2787) from rear end and fell down on MCW at Ch.83+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ramgarh at 6:10 AM, Accident occurred on 23.10.2022 at 5:37 AM, Information given through mobile no.9006888638.
537	23.10.2022	5:35 PM	5:40 PM	5:41 PM	5:44 PM	64+100	LHS	Urban	3	2	1	4	1	0	1	**Tempo (JH-02AN-5933) & Bike (A/F)**	0	1	0	0	0	0	Yes	An Over speed Tempo (JH-02AN-5933) hit the Bike (A/F) from rear end due to drunk & drive and fell down on MCW at Ch.64+100 (LHS) in HREL Project, 1 Person grievous inured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:44 PM, accident occurred on 23.10.2022 at 5:35 PM, Information given through mobile no.7870636517.
538	25.10.2022	8:46 AM	8:50 AM	8:51 AM	9:00 AM	57+800	LHS	Urban	3	2	2	4	1	0	1	Car (JH-11Q-3467)	0	1	0	0	0	0	Yes	A Car (JH-11Q-3467) lost his control due to over speed and hit the RCC Barrier from rear end and Overturned on MCW at Ch.57+800 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:00 AM, Accident occurred on 25.10.2022 at 8:46 AM, Information given through mobile no.7004359720.
539	25.10.2022	6:42 PM	6:55 PM	6:56 PM	7:25 PM	99+300	RHS	Urban	3	2	2	4	1	0	1	Bike (A/F)	0	2	0	0	0	0	Yes	A Bike (A/F) hit the animal from rear end and fell down on MCW at Ch.99+300 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:25 PM, Accident occurred on 25.10.2022 at 6:42 PM, Information given through mobile no.7870832554.
540	26.10.2022	4:37 AM	4:42 AM	4:44 AM	5:00 AM	80+200	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Mini Truck (BR-21J-8479)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Mini Truck (BR-21J-8479) from rear end and ran away at Ch.80+200 (LHS) in HREL Proejct, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:00 AM, Accident occurred on 26.10.2022 at 4:37 AM, Information given through PCR Van .
541	26.10.2022	5:38 PM	5:40 PM	5:41 PM	5:48 PM	61+400	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-24A-9882)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24A-9882) from rear end and ran away at Ch.61+400 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:48 PM, Accident occurred on 26.10.2022 at 5:38 PM, Information given through mobile no.7979833189.
542	26.10.2022	10:20 PM	10:26 PM	10:27 PM	10:55 PM	96+600	RHS	Urban	1	2	1	4	3	0	1	Bike (JH-01DQ-1768)	0	1	0	0	0	0	Yes	A Bike (JH-01DQ-1768) lost his control due to drunk & drive and skidded at Ch.96+600 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:55 PM, accident occurred on 26.10.2022 at 10:20 PM, Information given through local Public.
543	28.10.2022	1:25 PM	1:29 PM	1:30 PM	1:35 PM	64+300	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.64+300 (LHS) in HREL project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 1:35 PM, Accident occurred on 28.10.2022 at 1:25 PM, Information given through mobile no.8789154033.

544	05.11.2022	11:25 AM	11:26 AM	11:27 AM	11:28 AM	75+050	RHS	Urban	1	2	2	4	1	0	1	**Bike (JH-02H-3750)**	0	0	1	0	0	0	Yes	A Bike (JH-02H-3750) lost his control due to over speed and hit the Median Kerb and fell down on MCW at Ch.75+050 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Manorama Nursing Home Kujju at 11:28 AM, Accident occurred on 05.11.2022 at 11:25 AM, Information given local Public.
545	05.11.2022	3:45 PM	3:49 PM	3:50 PM	4:03 PM	94+880	RHS	Urban	3	2	2	4	3	0	1	**Trailer (OD-04K-3751)**	0	1	0	0	0	0	Yes	A Trailer (OD-04K-3751) Lost his control due to over speed and hit the unknown vehicle from rear end at Ch.94+880 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 4:03 PM, Accident occurred on 05.11.2022 at 3:45 PM, Information given through mobile no.6203799730.
546	08.11.2022	12:27 PM	12:32 PM	12:33 PM	12:45 PM	57+600	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-02AV-1528)	0	2	0	0	0	0	Yes	A Bike (JH-02AV-1528) lost his control due to drunk & Drive and fell down on MCW at Ch.57+600 RHS in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:45 PM, Accident occurred on 08.11.2022 at 12:27 PM, Information given through mobile no.8789154033.
547	09.11.2022	6:09 PM	6:20 PM	6:21 PM	6:40 PM	48+700	RHS	Urban	3	2	1	4	1	0	1	Bike (JH-02AM-6923)	0	1	0	0	0	0	Yes	A Bike (JH-02AM-6923) lost his control due to drunk & drive and fell down on MCW at Ch.48+700 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 6:40 PM, Accident Occurred on 09.11.2022 at 6:09 PM, Information given through mobile no.6200854041.
548	10.11.2022	5:24 AM	5:26 AM	5:27 AM	5:32 AM	61+300	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-24D-6935)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24D-6935) from rear end and ran away at Ch.61+300 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 5:32 AM, Accident occurred on 10.11.2022 at 5:24 AM, Information given through mobile no.8292818647.
549	13.11.2022	3:18 PM	3:25 PM	3:26 PM	3:50 PM	55+950	RHS	Urban	2	2	2	4	1	0	1	Bike (JH-02BC-1526) & Bike (JH-02C-8787)	0	1	0	0	0	0	Yes	A Bike (JH-02BC-1526) lost his control due to over speed and hit the another Bike (JH-02C-8787) and fell down on MCW at Ch.55+950 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC Hazaribagh at 3:50 PM, Accident occurred on 13.11.2022 at 3:18 PM, Information given through mobile no.9162597172.
550	13.11.2022	4:15 PM	4:21 PM	4:22 PM	5:10 PM	52+050	RHS	Urban	1	2	2	4	1	0	1	trailer (NL-01AB-2672)	0	1	0	0	0	0	Yes	A trailer (NL-01AB-2672) lost his control due to over speed and overturned on MCW at Ch.52+050 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC Hazaribagh at 5:10 PM, Accident occurred on 13.11.2022 at 4:15 PM.
551	14.11.2022	8:30 AM	8:35 AM	8:36 AM	8:40 AM	72+750	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-02R-7482)	0	1	0	0	0	0	Yes	A Bike (JH-02R-7482) lost his control due to over speed and fell down on MCW at Ch.72+750 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Manorama Nurshing Home at 8:40 AM, Accident occurred on 14.11.2022 at 8:30 AM, Information given through mobile no.7903613338.
552	14.11.2022	9:21 AM	9:30 AM	9:32 AM	9:50 AM	82+400	LHS	Urban	1	2	2	4	1	0	1	Car (JH-12E-5655)	0	1	1	2	0	0	Yes	A Car (JH-12E-5655) lost his control due to over speed and overturned on MCW at Ch.82+400 (LHS) in HREL Project, 1 Person grievous , 1 person minor injured in this accident & 2 persons non injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 9:50 AM, Accident occurred on 14.11.2022 at 9:21 Am, Information given through mobile no.9931109348.
553	17.11.2022	6:35 PM	6:40 PM	6:42 PM	N/A	77+500	RHS	Urban	1	3	2	4	1	0	1	Auto (JH-02T-1199)	0	0	2	0	0	0	Yes	An Auto (JH-02T-1199) lost his control due to over speed and overturn on MCW at Ch.77+500 (RHS) in HREL Project, 2 Persons minor injured in this accident, help provided by ambulance team, Accident occurred on 17.11.2022 at 6:35 PM.

554	19.11.2022	2:00 PM	2:05 PM	2:07 PM	2:30 PM	77+540	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-02AL-4216)	0	4	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-02AL-4216) from rear end and ran away at Ch.77+540 (LHS) in HREL Project, 4 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:30 PM, Accident occurred on 19.11.2022 at 2:00 PM, Information given through mobile no.8210130789.
555	21.11.2022	6:07 PM	6:12 PM	6:14 PM	6:45 PM	56+000	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-01ET-1950)	0	1	0	0	0	0	Yes	A Bike (JH-01ET-1950) lost his control due to drunk & drive and overturned on MCW at Ch.56+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to SBMCH Hazaribagh at 6:45 PM, Accident occurred on 21.11.2022 at 6:07 PM, Information given through mobile no.8863887789.
556	22.11.2022	11:36 AM	11:41 AM	11:43 AM	11:58 AM	78+000	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-02BF-4514)	0	2	0	0	0	0	Yes	A Bike (JH-02BF-4514) hit the another Bike (JH-10D-8672) due to over speed and fell down on MCW at Ch.78+000 (LHS) in HREL Project, 2 Persons grievous injured in this accident , help provided by ambulance team and shifted to Aarogya health care Ramgarh at 11:58 Am, Accident occurred on 22.11.2022 at 11:36 AM, Information given through mobile no.7870636517.
557	23.11.2022	6:42 AM	6:50 AM	6:52 AM	7:40 AM	95+300	RHS	Urban	1	2	2	4	3	0	1	trailer (RJ-02GB-5199)	0	1	0	0	0	0	Yes	A trailer (RJ-02GB-5199) lost his control due to over speed and overturned on MCW at Ch.95+300 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Synergy Hospital Ranchi at 7:40 AM, Accident occurred on 23.11.2022 at 6:42 AM, Information given through mobile no.6203799730.
558	23.11.2022	8:05 PM	8:13 PM	8:15 PM	N/A	52+050	RHS	Urban	1	3	2	4	2	0	1	Truck (UP-20AT-7917)	0	0	1	0	0	0	Yes	A Truck (UP-20AT-7917) lost his control due to over speed and overturned on MCW at Ch.52+050 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 23.11.2022 at 8:05 PM, Information given through mobile no.8789154033.
559	25.11.2022	6:45 PM	6:50 PM	6:52 PM	7:35 PM	89+050	RHS	Urban	1	1	2	4	1	0	1	truck (JH-02AV-2768) & truck (HP-19B-5117)	1	2	0	0	0	0	Yes	An over speed truck (JH-02AV-2768) hit the another truck (HP-19B-5117) from rear end and overturned on MCW at Ch. 89+050 (RHS) in HREL Project, 1 Person fatal on the spot & 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:35 PM, Accident occurred on 25.11.2022 at 6:45 PM, Information given through mobile no.6203799730.
560	26.11.2022	1:10 AM	1:19 AM	1:22 AM	1:50 AM	95+000	RHS	Urban	1	1	2	4	3	0	1	Truck (AP-07TG-4699)	1	1	0	0	0	0	Yes	A Truck (AP-07TG-4699) lost his control due to mechanical failure (Break Fail) and overturned on MCW at Ch.95+000 (RHS) in HREL Project, 1 Person fatal on the spot and 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:50 AM, Accident occurred on 26.11.2022 at 1:10 AM, Information given through mobile no.6203799730.
561	26.11.2022	1:15 PM	1:20 PM	1:22 PM	1:50 PM	96+020	RHS	Urban	1	2	2	4	2	0	1	Truck (HR-66B1903) & Bike (JH-24C-5694)	0	2	0	0	0	0	Yes	An over speed Truck (HR-66B1903) first hit the Bike (JH-24C-5694) from rear end then Metal Beam crash barrier and overturned on MCW at Ch.96+020 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:50 PM, Accident occurred on 26.11.2022 at 1:15 PM, Information given through mobile no.9709168812.
562	26.11.2022	9:36 PM	9:45 PM	9:50 PM	9:57 PM	54+150	RHS	Urban	3	2	2	4	1	0	1	Scorpio (BR-02U-5093)	0	3	0	0	0	0	Yes	A Scorpio (BR-02U-5093) lost his control due to over speed and hit the unknown vehicle from rear end and overturned on MCW at Ch.54+150 (RHS) in HREL Project, 3 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 9:57 PM, accident occurred on 26.11.2022 at 9:36 PM, Information given through mobile no.8709311587.

563	27.11.2022	6:30 AM	6:33 AM	N/A	7:55 AM	51+070	LHS	Urban	3	1	2	4	1	0	1	Unknown Vehicle	1	0	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.61+070 (LHS) in HREL Project, 1 Person died on the spot , help provided by ambulance team and shifted to Hazaribagh Postmortem house on 7:55 AM, Accident occurred on 27.11.2022 at 6:30 AM, Information given through PCR Van.
564	27.11.2022	12:31 PM	12:39 PM	12:40 PM	12:55 PM	51+500	RHS	Urban	3	2	1	4	1	0	1	car (JH-01AD-0957)	0	1	0	0	0	0	Yes	A car (JH-01AD-0957) lost his control due to drunk & drive and hit the lorry (TN-52B-2656) from rear end and overturned on MCW at 51+500 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:55 PM, Accident occurred on 27.11.2022 at 12:31 PM, Information given through mobile no.6200854041.
565	27.11.2022	1:53 PM	1:57 PM	1:58 PM	2:10 PM	56+600	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-01EW-0784)	0	1	0	0	0	0	Yes	A Bike (JH-01EW-0784) lost his control due to drunk & drive and fell down on MCW at Ch.56+600 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 2:10 PM, accident occurred on 27.11.2022 at 1:53 PM, Information given through mobile no.8789154033.
566	28.11.2022	12:03 PM	12:10 PM	12:15 PM	12:30 PM	82+300	LHS	Urban	3	2	2	4	1	0	1	Bolero (JH-01AH-6257) & Bolero (JH-02AY-4793)	0	2	4	0	0	0	Yes	An over speed Bolero (JH-01AH-6257) hit the another Bolero (JH-02AY-4793) from rear end at Ch.82+300 (LHS) in HREL Project, 2 persons minor injured and 4 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:30 PM, accident occurred on 28.11.2022 at 12:03 PM, Information given through local public.
567	05.12.2022	2:00 AM	2:09 AM	2:10 AM	3:10 AM	99+200	LHS	Urban	3	2	1	4	1	0	1	**Car (JH-01CF-6313)**	0	1	0	0	0	0	Yes	A Car (JH-01CF-6313) lost his control due to drunk & Drive and hit the truck from rear end at Ch.99+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 3:10 AM, Accident occurred on 05.12.2022 at 2:00 AM, Information given through mobile no.9709168812.
568	06.12.2022	3:42 AM	3:48 AM	3:49 AM	4:20 AM	53+860	LHS	Urban	1	2	2	4	1	0	1	**Scooty (JH-02AS-7137)**	0	1	0	0	0	0	Yes	A Scooty (JH-02AS-7137) lost his control due to over speed and fell down on MCW at Ch.53+860 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 4:20 AM, Accident occurred on 06.12.2022 at 3:42 AM, Information given through PCR Van.
569	07.12.2022	10:04 AM	10:09 AM	10:10 AM	10:38 AM	78+020	LHS	Urban	3	2	2	4	1	0	1	Car (JH-01AV-0812)	0	2	1	0	0	0	Yes	A Car (JH-01AV-0812) Lost his control due to over speed and hit the unknown vehicle from rear end at Ch.78+020 (LHS) in HREL Project, 2 persons grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:38 AM, Accident occurred on 07.12.2022 at 10:04 AM, Information given through mobile no.9931109348.
570	08.12.2022	5:50 PM	5:55 PM	5:56 PM	6:03 PM	58+900	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-24A-6962)	0	1	0	0	0	0	Yes	A Bike (JH-24A-6962) lost his control due to over speed and fell down on MCW at Ch.58+900 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:03 PM, Accident occurred on 08.12.2022 at 5:50 PM, Information given through mobile no.9931334065.
571	10.12.2022	7:09 AM	7:23 AM	7:25 AM	7:37 AM	43+900	RHS	Urban	3	2	2	4	1	0	1	truck (PB-13BB-4168) & Bike (JH-02AC-3833)	0	1	1	0	0	0	Yes	A truck (PB-13BB-4168) lost his control due to over speed and hit the Bike (JH-02AC-3833) from rear end and Bike fell down on MCW at Ch.43+900 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 7:37 Am, Accident occurred on 10.12.2022 at 7:09 AM, Information given through mobile no.7667823935.

572	11.12.2022	1:15 PM	1:18 PM	1:20 PM	1:25 PM	60+450	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-01DZ-6864)	0	1	0	0	0	0	Yes	A Bike (JH-01DZ-6864) lost his control due to over speed and fell down on MCW at Ch.60+450 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC mandu at 1:25 PM, Accident occurred on 11.12.2022 at 1:15 PM, Information given through mobile no.7209667285.
573	11.12.2022	4:20 PM	4:24 PM	4:26 PM	4:38 PM	94+900	RHS	Urban	1	2	1	4	3	0	1	Bike (JH-01ER-0452)	0	1	0	0	0	0	Yes	A Bike (JH-01ER-0452) lost his control due to drunk & drive and fell down on MCW at Ch.94+900 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 4:38 PM, Accident occurred on 11.12.2022 at 4:20 PM, Information given through mobile no.9709168812.
574	12.12.2022	11:38 AM	11:44 AM	11:50 AM	N/A	54+530	RHS	Urban	3	3	5	4	1	0	1	oil tanker (UP-53DT-8966) & lorry (JH-01CX-9622)	0	0	2	0	0	0	Yes	An oil tanker (UP-53DT-8966) lost his control due to mechanical failure (Break Fail) and hit the lorry (JH-01CX-9622) from rear end and overturned on MCW at Ch.54+530 (RHS) in HREL Project, 2 persons minor inured in this accident, help provided by ambulance team, Accident occurred on 12.12.2022 at 11:38 AM, Information given through mobile no.8789154033.
575	13.12.2022	11:49 AM	11:53 AM	11:55 AM	12:25 AM	78+500	LHS	Urban	1	2	2	4	1	0	1	Car (JH-02AZ-3898)	0	1	3	0	0	0	Yes	A Car (JH-02AZ-3898) lost his control due to over speed and overturned on MCW at Ch.78+500 (LHS) in HREL Project, 1 Person grievous & 3 persons minor injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ranchi road at 12:25 PM, Accident occurred on 13.12.2022 at 11:49 AM, Information given through mobile no.8709806554.
576	13.12.2022	2:58 PM	3:00 PM	3:02 PM	N/A	72+800	LHS	Urban	3	3	2	4	1	0	1	Bike (JH-02AU-3635)	0	0	1	0	0	0	Yes	A Bike (JH-02AU-3635) lost his control due to over speed and hit the another Bike (N/A) and fell down on MCW at Ch.72+800 (LHS) in HREL Project, 1 person minor injured in this accident, help provided by ambulance team , Accident occurred on 13.12.2022 at 2:58 PM, Information given through mobile no.6200854041.
577	15.12.2022	6:16 PM	6:21 PM	6:23 PM	6:40 PM	72+600	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (JH-24C-6598)	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24C-6598) from rear end and ran away at Ch.72+600 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:40 AM, Accident occurred on 15.12.2022 at 6:16 PM, Information given through mobile no.8434232958.
578	16.12.2022	12:26 AM	12:33 AM	12:34 AM	1:05 AM	95+900	RHS	Urban	3	2	2	4	3	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.95+900 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:05 AM, Accident occurred on 16.12.2022 at 12:26AM, Information given through mobile no.8825191800.
579	16.12.2022	2:25 PM	2:29 PM	N/A	3:00 PM	93+600	RHS	Urban	3	1	2	4	2	0	1	unknown vehicle & Bike (Jh-02M-2982)	2	0	0	0	0	0	Yes	An unknown vehicle hit the Bike (Jh-02M-2982) from rear end and ran away at Ch.93+600 (RHS) in HREL project, 2 Persons died on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:00 PM, Accident occurred on 16.12.2022 at 2:25 PM, Information given through mobile no.6203799730.
580	17.12.2022	7:42 PM	7:48 PM	7:50 PM	8:05 PM	70+980	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.70+980 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:05 PM, Accident occurred on 17.12.2022 at 7:42 PM, Information given through mobile no.6206191003.
581	18.12.2022	1:04 PM	1:08 PM	1:10 PM	1:39 PM	56+700	LHS	Urban	3	2	1	4	1	0	1	Bike (JH-02AR-7101)	0	1	0	0	0	0	Yes	A Bike (JH-02AR-7101) lost his control due to drunk & drive and fell down on MCW at Ch.56+700 (LHS) in HREL Project, 1 Person grievous injured in this accident , help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 1:39 PM, Accident occurred on 18.12.2022 at 1:08 PM, Information given through local Public.

582	23.12.2022	5:26 PM	5:40 PM	5:42 PM	6:05 PM	56+020	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-24H-6007) & Bike (JH-24B-3624)	0	1	0	0	0	0	Yes	A Bike (JH-24H-6007) lost his control due to over speed and hit the another Bike (JH-24B-3624) from rear end and fell down on MCW at Ch.56+020 (LHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:05 PM, Accident occurred on 23.12.2022 at 5:26 PM, Information given through mobile no.7481964784.
583	24.12.2022	1:00 AM	1:06 AM	1:08 AM	2:20 AM	96+420	RHS	Urban	3	2	2	4	2	0	1	Gas tanker (NL-01K-4146)	0	1	0	0	0	0	Yes	A Gas tanker (NL-01K-4146) lost his control due to over speed and hit the unknown trailer from rear end and overturned on MCW at Ch.96+420 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Life care Hospital Ranchi at 2:20 AM, Accident occurred on 24.12.2022 at 1:00 AM, Information given through mobile no.7717778285.
584	24.12.2022	2:55 AM	2:58 AM	N/A	3:35 AM	77+800	RHS	Urban	3	1	2	4	1	0	1	unknown vehicle & Bicycle	1	0	0	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.77+800 (RHS) in HREL Project, bicycle person fatal on the spot in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:35 AM, Accident occurred on 24.12.2022 at 2:55 AM, Information given through our Patrolling team.
585	26.12.2022	4:50 PM	4:51 PM	4:52 PM	5:19 PM	98+980	RHS	Urban	3	2	2	4	1	0	1	Oil Tanker (JH-02Y-9393)	0	1	0	0	0	0	Yes	An Oil Tanker (JH-02Y-9393) hit the Pedestrian from rear end at Ch.98+980 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:19 PM, Accident occurred on 26.12.2022 at 4:50 PM, Information given through mobile no.8102655716.
586	28.12.2022	6:16 PM	6:18 PM	6:20 PM	6:55 PM	101+800	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-02AL-1983)	0	1	1	0	0	0	Yes	A Bike (JH-02AL-1983) lost his control due to over speed and hit the unknown vehicle from rear end and fell down on MCW at Ch.101+800 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:55 PM, Accident occurred on 28.12.2022 at 6:16 PM, Information given through mobile no.6203799730.
587	30.12.2022	9:28 AM	9:35 AM	9:36 AM	9:42 AM	66+900	RHS	Urban	1	3	2	4	1	0	1	Bike (JH-24E-6494)	0	0	1	1	0	0	Yes	A Bike (JH-24E-6494) lost his control due to over speed and fell down on MCW at Ch.66+900 (RHS) in HREL Project, 1 Person minor & 1 person non injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:42 AM, Accident occurred on 30.12.2022 at 9:28 AM, Information given through mobile no8809809943.
588	01.01.2023	6:28 PM	6:30 PM	6:32 PM	7:05 PM	98+300	RHS	Urban	1	2	1	4	2	0	1	**Bike (JH-24G-5019)**	0	2	0	0	0	0	Yes	A Bike (JH-24G-5019) lost his control due to drunk & drive and hit the median kerb and fell down on MCW at Ch.98+300 (RHS) in HREL Project, 2 persons grievous injured in this accident , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 7:05 PM, Accident occurred on 01.01.2023 at 6:28 PM, Information given through mobile no.8102655716.
589	07.01.2023	2:01 AM	2:08 AM	2:10 AM	2:30 AM	95+600	RHS	Urban	3	2	2	4	2	0	1	**Trailer (RJ-02B-7215)**	0	1	0	0	0	0	Yes	A Trailer (RJ-02B-7215) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.95+600 (RHS) in HREL Project, 1 Person grievous injured in this accident , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:30 AM, Accident occurred on 07.01.2023 at 02.01 AM, Information given through mobile no. +9112063366500.
590	08.01.2023	3:39 AM	3:54 AM	N/A	N/A	110+100	RHS	Urban	3	2	2	4	1	0	1	Truck (JH-02S-6695)	0	1	0	0	0	0	Yes	A Truck (JH-02S-6695) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.110+100 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through 108 ambulance , Accident occurred on 08.01.2023 at 3:39 AM, Information given through mobile no.8709046260.

591	08.01.2023	11:01 AM	11:08 AM	11:10 AM	11:50 AM	54+700	LHS	Urban	1	2	2	4	1	0	1	Bike (Jh-01V-2356)	0	2	0	0	0	0	Yes	A Bike (Jh-01V-2356) lost his control due to over speed and fell down on MCW at Ch.54+700 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to SBMCH Hazaribagh at 11:50 AM, Accident occurred on 08.01.2023 at 11:01 AM, Information given thorough mobile no.8789154033.
592	08.01.2023	4:53 PM	5:02 PM	N/A	N/A	82+840	RHS	Urban	3	2	2	4	1	0	1	Car (BR-02BE-0347)	0	2	0	0	0	0	Yes	A Car (BR-02BE-0347) lost his control due to over speed and hit the another car (BR-03AE-4950) from rear end at Ch.82+840 (RHS) in HREL Project, 2 persons grievous injured in this accident, grievously injured persons shifted to the hospital through another ambulance , Accident occurred on 08.01.2023 at 4:53 PM, Information given through mobile no.1206336500.
593	08.01.2023	6:30 PM	6:37 PM	6:39 PM	6:51 PM	106+650	LHS	Urban	6	2	2	4	1	0	1	Scooty (JH-01EU-5147)	0	2	1	0	0	0	Yes	A Scooty (JH-01EU-5147) lost his control due to over speed and skidded at Ch.106+650 (LHS) in HREL Project, 2 Persons grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Piska Hospital Ormanjhi at 6:51 PM, Accident occurred on 08.01.2023 at 6:30 PM, Information given through mobile no.6203799730.
594	09.01.2023	2:43 PM	2:49 PM	2:52 PM	N/A	93+500	LHS	Urban	3	3	2	4	1	0	1	Unknown vehicle	0	0	1	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.93+500 (LHS) in HREL Project, 1 Person minor injured in this accident, help Provided by ambulance team, Accident occurred on 09.01.2023 at 2:43 PM, Information given through mobile no.8825191800.
595	10.01.2023	4:55 PM	5:00 PM	5:02 PM	5:15 PM	94+950	RHS	Urban	1	2	1	4	3	0	1	Bike (JH-01DV-4077)	0	2	0	0	0	0	Yes	A Bike (JH-01DV-4077) lost his control due to drunk & drive and fell down on MCW at Ch.94+950 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:15 PM, Accident occurred on 10.01.2023 at 4:55 PM, Information given through mobile no.8102655716.
596	12.01.2023	10:46 PM	10:58 PM	N/A	11:52 PM	93+100	LHS	Urban	1	1	5	4	2	0	1	Truck (JH-02AC-7557)	1	0	0	0	0	0	Yes	A Truck (JH-02AC-7557) lost his control due to Mechanical Failure (Break Fail) and overturned on MCW at Ch.93+100 (LHS) in HREL Project, 1 Person dead on the spot , Help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:52 PM, Accident occurred on 12.01.2023 at 10:46 PM, Information given through mobile no.9064709021.
597	14.01.2023	3:51 PM	3:56 PM	4:00 PM	N/A	94+950	LHS	Urban	1	3	2	4	3	0	1	Triler (RJ-52GA-0782)	0	1	2	0	0	0	Yes	A Triler (RJ-52GA-0782) lost his control due to over speed and overturned on MCW at Ch.94+950 (LHS) in HREL Project, 1 Person minor injured & 2 Persons non injured in this accident, help provided by ambulance team, Accident occurred on 14.01.2023 at 3:51 PM, Information given through mobile no.6201086596.
598	14.01.2023	4:47 PM	4:50 PM	4:52 PM	5:10 PM	98+700	LHS	Urban	3	2	2	4	2	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.98+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:10 PM, Accident occurred on 14.01.2023 at 4:47 PM, Information given through mobile no.8434419262.
599	15.01.2023	6:59 PM	7:01 PM	7:02 PM	7:04 PM	61+700	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-02BE-7349)	0	2	0	0	0	0	Yes	A Bike (JH-02BE-7349) lost his control due to drunk & drive and hit the unknown vehicle from rear end and fell down on MCW at Ch.61+700 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:04 PM, Accident occurred on 15.01.2023 at 6:59 PM, Information given through mobile no.8789154033.

600	15.01.2023	7:53 PM	7:56 PM	7:57 PM	7:59 PM	62+200	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-24B-0504)	0	1	0	0	0	0	Yes	A Bike (JH-24B-0504) lost his control due to drunk & drive and fell down on MCW at Ch.62+200 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:59 PM, Accident occurred on 15.01.2023 at 7:53 PM, Information given through mobile no.9110165616.
601	15.01.2023	9:14 PM	9:17 PM	9:19 PM	N/A	96+750	LHS	Urban	1	3	1	4	3	0	1	Bike (JH-01DW-0389)	0	0	1	0	0	0	Yes	A Bike (JH-01DW-0389) lost his control due to drunk & drive and fell down on MCW at Ch.96+750 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team, Accident occurred on 15.01.2023 at 9:14 PM, Information given through mobile no.7667071925.
602	16.01.2023	7:11 PM	7:13 PM	7:15 PM	7:47 PM	61+700	RHS	Urban	3	1	1	4	1	0	1	Unknown Vehicle & Bike (JH-02N-7178)	1	1	0	0	0	0	Yes	An Unknown hit the Bike (JH-02N-7178) from rear end and ran away at Ch.61+700 (RHS) in HREL Project, Bike Persons was dunked, 1 person dead on the spot and 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 7:47 PM, Accident occurred on 16.01.2023 at 7:11 PM, Information given through mobile no.7781002284.
603	16.01.2023	8:47 PM	8:49 PM	8:51 PM	8:58 PM	101+800	RHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle & Bike (JH-01Q-3935 & JH-01CW-2217)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01Q-3935 & JH-01CW-2217) from rear end and ran away at Ch.101+800 (RHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to CHC Piska Ormanjhi at 8:58 PM, Accident occurred on 16.01.2023 at 8:47 PM, Information given through mobile no.9709168812.
604	17.01.2023	11:17 AM	11:30 AM	11:32 AM	12:01 PM	45+700	RHS	Urban	1	2	2	4	1	0	1	Scooty (JH-12K-7153)	0	1	0	0	0	0	Yes	A Scooty (JH-12K-7153) lost his control due to over speed and fell down on MCW at Ch.45+700 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 12:01 PM, Accident occurred on 17.01.2023 at 11:17 AM, information given through mobile no.6206265533.
605	17.01.2023	4:24 PM	4:31 PM	4:32 PM	5:30 PM	103+850	RHS	Urban	3	1	2	4	1	0	1	Bike (JH-01AM-9221)	1	0	0	0	0	0	Yes	A Bike (JH-01AM-9221) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.103+850 (RHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to RIMS Hospital Ranchi at 5:30 PM, Accident occurred on 17.01.2023 at 4:24 PM, Information given through mobile no9064709021.
606	17.01.2023	9:22 PM	9:27 PM	9:28 PM	9:40 PM	58+100	LHS	Urban	3	2	2	4	1	0	1	Car (JH-01DE-5618) & Bike (JH-02AW-7509)	0	1	0	0	0	0	Yes	An over speed Car (JH-01DE-5618) hit the Bike (JH-02AW-7509) from rear end and bike fell down on MCW at Ch.58+100 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:40 PM, Accident occurred on 17.01.2023 at 9:22 PM, Information given through mobile no.7481964784.
607	19.01.2023	7:21 AM	7:31 AM	7:35 AM	N/A	67+300	RHS	Urban	3	3	2	4	1	0	1	Unknown vehicle	0	0	1	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.67+300 (RHS) in HREL Project, 1 person minor injured in this accident, help provided by ambulance team , Accident occurred on 19.01.2023 at 7:21 Am, Information given through mobile no.6200854041.
608	20.01.2023	1:36 PM	1:46 PM	1:50 PM	2:08 PM	92+500	RHS	Urban	3	2	2	4	1	0	1	Bus (BR-02AA-1051) & truck (RJ-14GJ-6567)	0	1	4	0	0	0	Yes	A Bus (BR-02AA-1051) lost his control due to over speed and hit the truck (RJ-14GJ-6567) from rear end at Ch.92+500 (RHS) in HREL Project, 1 Person grievous & 4 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:08 PM, Accident occurred on 20.01.2023 at 1:36 PM ,Information given through mobile no.6203799730. .

609	20.01.2023	3:19 PM	3:36 PM	N/A	4:07 PM	88+800	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle & Bike (JH-01BW-7968)	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01BW-7968) from rear end and ran away at Ch.88+800 (LHS) in HREL Project, 1 Person dead on the spot, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:07 PM, Accident occurred on 20.01.2023 at 3:19 PM, Information given through mobile no.7015092064.
610	22.01.2023	6:31 PM	6:38 PM	6:40 PM	N/A	55+400	LHS	Urban	1	3	1	4	1	0	1	Bike (JH-24E-6894)	0	0	1	0	0	0	Yes	A Bike (JH-24E-6894) lost his control due to drunk & Drive and fell down on MCW at Ch.55+400 (LHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team , Accident occurred on 22.01.2023 at 6:31 PM, Information given through our patrolling team.
611	23.01.2023	5:57 PM	6:05 PM	6:07 PM	6:30 PM	79+550	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.79+550 (LHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital ramgarh at 6:30 PM, Accident occurred on 23.01.2023 at 5:57 PM, Information given through mobile no.9006888638.
612	26.01.2023	11:23 AM	11:31 AM	11:32 AM	11:59 AM	52+020	RHS	Urban	1	2	2	4	2	0	1	Truck (AP-16TG-3456)	0	1	0	0	0	0	Yes	A Truck (AP-16TG-3456) lost his control due to over speed and overturned on MCW at Ch. 52+020 (RHS) in HREL Project, 1 Person grievous injured in this accident, Help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 11:59 Am, Accident occurred on 26.01.2023 at 11:23 Am, Information given through mobile no.8084278403.
613	27.01.2023	3:01 PM	3:10 PM	3:15 PM	3:25 PM	85+150	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-24D-7647) & Bike (JH-24D-4747)	0	1	2	0	0	0	Yes	A Bike (JH-24D-7647) lost his control due to over speed and hit the another Bike (JH-24D-4747) from rear end and fell down on MCW at Ch.85+150 (LHS) in HREL Project, 1 person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Prime Hospital Ramgarh at 3:25 PM, Accident occurred on 27.01.2023 at 3:01 PM, Information given through mobile no.9931109348.
614	27.01.2023	5:13 PM	5:21 PM	5:23 PM	5:55 PM	68+500	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-02AJ-4415)	0	2	0	0	0	0	Yes	A Bike (JH-02AJ-4415) lost his control due to over speed and hit the Median kerb and fell down on MCW at Ch.68+500 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:55 PM, Accident occurred on 27.01.2023 at 5:13 PM, Information given through mobile no.8789154033.
615	28.01.2023	12:15 PM	12:20 PM	12:22 PM	12:40 PM	71+700	RHS	Urban	1	2	2	4	2	0	1	Bike (BR-33AW-5930)	0	1	2	0	0	0	Yes	A Bike (BR-33AW-5930) lost his control due to over speed and fell down MCW at Ch.71+700 (RHS) in HREL Project, 1 person grievous & 2 persons minor injured in this accident, help provided by ambulance team and shifted to Aarogya Health care Ramgarh at 12:40 PM, Accident occurred on 28.01.2023 at 12:15 PM, Information given through mobile no.9835185484.
616	29.01.2023	3:50 PM	3:59 PM	4:00 PM	4:35 PM	92+300	LHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.92+300 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:35 PM, Accident occurred on 29.01.2023 at 3:50 PM, Information given through mobile no.9798175632.
617	29.01.2023	6:10 PM	6:17 PM	6:18 PM	6:45 PM	80+800	LHS	Urban	3	2	2	4	1	0	1	Bike (A/F)	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bike (A/F) from rear end and ran away at Ch.80+800 (LHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ramgarh at 6:45 PM, Accident occurred on 29.01.2023 at 6:10 PM, Information given through mobile no.8076241911.

618	30.01.2023	7:45 AM	7:50 AM	N/A	8:20 AM	94+300	LHS	Urban	3	1	2	4	2	0	1	Unknown vehicle & Bike (JH-01DG-2168)	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01DG-2168) from rear end and ran away at Ch.94+300 (LHS) in HREL Project, 1 person dead on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 8:20 AM, Accident occurred on 30.01.2023 at 7:45 AM, Information given through mobile no.8340249258.
619	02.02.2023	12:21 PM	12:25 PM	12:27 PM	12:38 PM	60+800	RHS	Urban	3	2	2	4	1	0	1	**Bus (JH-02AU-7351) , tata 407(JH-02BJ-5996) &Car (Jh-01DY-9807)**	0	4	0	0	0	0	Yes	An over speed Bus (JH-02AU-7351) lost his control due to over speed and first hit the tata 407(JH-02BJ-5996) than Car (Jh-01DY-9807) from rear end at Ch.60+800 (RHS) in HREL Project, 4 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 12:38 PM, Accident occurred on 02.02.2023 at 12:21 PM, Information given through mobile no.7209667285.
620	07.02.2023	3:19 PM	3:28 PM	3:30 PM	3:40 PM	92+050	RHS	Urban	3	2	2	4	1	1	0	**Unknown vehicle & Bus (BR-02Q-3051)**	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Bus (BR-02Q-3051) from rear end and ran away at Ch.92+050 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:40 PM, Accident occurred on 07.02.2023 at 3:19 PM, Information given through mobile no.6203799730.
621	07.02.2023	5:25 PM	5:27 PM	5:30 PM	N/A	59+400	RHS	Urban	1	3	1	4	1	0	1	Bike (JH-02G-5292)	0	0	1	0	0	0	Yes	A Bike (JH-02G-5292) lost his control due to drunk & drive and fell down on MCW at Ch.59+400 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 07.02.2023 at 5:25 PM, Information given through mobile no.8809809934.
622	08.02.2023	4:47 AM	5:02 AM	5:04 AM	5:34 AM	55+800	LHS	Urban	4	2	2	4	1	0	1	car (JH-02BC-9359)	0	1	2	0	0	0	Yes	A car (JH-02BC-9359) lost his control due to over speed and hit the another car (JH-01AT-0168) at Ch.55+800 (LHS) in HREL Project, 1 person grievous & 2 persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 5:34 AM, Accident occurred on 08.02.2023 at 4:47 Am, Information given through mobile no.8709311587.
623	08.02.2023	9:25 AM	9:31 AM	9:33 AM	9:43 AM	95+150	RHS	Urban	3	2	2	4	1	0	1	Trailer (RJ-11GB-3278)	0	1	2	0	0	0	Yes	A Trailer (RJ-11GB-3278) hit the tractor from rear end and overturned on MCW at Ch.95+150 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 9:43 AM, Accident occurred on 08.01.2023 at 9:25 AM, Information given through mobile no.6203799730.
624	08.02.2023	6:18 PM	6:22 PM	6:24 PM	6:45 PM	97+750	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear and ran away at Ch.97+750 (RHS) in HREL Project, 1 person grievous injured in this accident, help provide by ambulance team and shifted to Sadar Hospital ramgarh at 6:45 PM, Accident occurred on 08.01.2023 at 6:18 PM, Information given through mobile no.6202764042.
625	09.02.2023	10:10 PM	10:23 PM	10:25 PM	11:00 PM	110+100	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	2	1	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.110+100 (RHS) In HREL Project , 2 Persons grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 11:00 PM, Accident occurred on 09.02.2023 at 10:10 PM, Information given through mobile no.8102777359.
626	10.02.2023	3:58 PM	4:08 PM	4:10 PM	4:30 PM	52+040	LHS	Urban	1	1	2	4	1	0	1	Bike (JH-02BK-9354)	1	1	0	0	0	0	Yes	A Bike (JH-02BK-9354) lost his control due to over speed and hit the Median kerb and fell down on MCW at Ch.52+040 (LHS) in HREL Project, 1 person dead on the spot & 1 person grievous inured in this accident, help provided by ambulance team and shifted to CHC Mandu at 4:30 PM, Accident occurred on 10.02.2023 at 3:58 PM, Information given through mobile no.6206191003.

627	11.02.2023	5:40 AM	5:46 AM	5:48 AM	6:00 AM	94+950	RHS	Urban	1	2	5	4	3	0	1	trailer (RJ-14GF-7631)	0	1	1	0	0	0	Yes	A trailer (RJ-14GF-7631) lost his control due to mechanical failure (Break fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 6:00 AM, Accident occurred on 11.02.2023 at 5:40 AM, Information given through mobile no.8541863184.
628	12.02.2023	12:30 AM	12:35 AM	12:38 AM	N/A	57+000	LHS	Urban	1	3	2	4	2	0	1	Car (JH-01EG-0069)	0	0	1	0	0	0	Yes	A Car (JH-01EG-0069) lost his control due to over speed and hit the median kerb at Ch.57+000 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 12.02.2023 at 12:30 AM, Information given through mobile no.6207249179.
629	12.02.2023	3:43 PM	3:45 PM	3:47 PM	4:06 PM	74+500	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-02BF-9030)	0	1	0	0	0	0	Yes	A Bike (JH-02BF-9030) lost his control due to over speed and skidded at Ch.74+500 (LHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital ramgarh at 4:06 PM, Accident occurred on 12.02.2023 at 3:43 PM, Information given through PCR Van.
630	15.02.2023	11:13 AM	11:14 AM	11:16 AM	11:22 AM	59+800	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-09AL-1513)	0	1	1	0	0	0	Yes	A Bike (JH-09AL-1513) lost his control due to drunk & drive and fell down on MCW at Ch.59+800 (LHS) in HREL Project, 1 person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:22 Am, Accident occurred on 15.02.2023 at 11:13 AM, Information given through mobile no.7870636517.
631	15.02.2023	10:08 PM	10:18 PM	10:20 PM	10:58 PM	107+900	RHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the bicycle from rear end and ran away at Ch.107+900 (RHS) In HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 10:58 PM, Accident occurred on 15.02.2023 at 10:08 PM, Information given through mobile no.8521749491.
632	16.02.2023	7:08 PM	7:14 PM	7:16 PM	7:29 PM	56+100	LHS	Urban	3	2	1	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.56+100 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 7:29 PM, Accident occurred on 16.02.2023 at 7:08 PM, Information given through mobile no.8789154033.
633	20.02.2023	5:10 PM	5:17 PM	5:19 PM	5:25 PM	93+500	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-24G-6492)	0	2	2	0	0	0	Yes	A Bike (JH-24G-6492) lost his control due to over speed and hit the another Bike (JH-01BR-3207) from rear end and fell down on MCW at Ch.93+500 (RHS) in HREL Project, 2 Persons grievous injured and 2 Persons minor injured in this accident , help provided by ambulance team and shifted to KGT Hospital Ramgarh at 5:25 PM, Accident occurred on 20.02.2023 at 5:10 PM, Information given through mobile no.6203799730.
634	20.02.2023	6:21 PM	6:26 PM	6:27 PM	6:40 PM	56+500	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	1	0	0	0	Yes	An unknown vehicle hit the pedestrian from rear end and ran away at Ch.56+500 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team, and shifted to CHC Mandu at 6:40 PM, Accident occurred on 20.02.2023 at 6:21 PM, Information given through mobile no.9431140479.
635	23.02.2023	7:37 PM	7:41 PM	7:43 PM	7:48 PM	61+100	LHS	Urban	1	2	1	4	1	0	1	Bike (JH-01EM-3415)	0	1	1	0	0	0	Yes	A Bike (JH-01EM-3415) lost his control due to drunk & drive and fell down on MCW at Ch.61+100 (LHS) in HREL Project, 1 person grievous & 1 person minor injured in this accident , help provided by ambulance team and shifted to CHC Mandu at 7:48 PM, Accident occurred on 23.02.2023 at 7:37 PM, Information given through mobile no.7870552559.

636	24.02.2023	3:02 AM	3:05 AM	3:07 AM	3:32 AM	73+600	RHS	Urban	3	2	2	4	1	0	1	Mini truck (JH-01ES 7356)	0	1	1	0	0	0	Yes	A Mini truck (JH-01ES-7356) lost his control due to over speed and hit the unknown vehicle from rear end at Ch.73+600 (RHS) in HREL Project, 1 person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 3:32 AM, Accident occurred on 24.02.2023 at 3:02 AM, Information given through mobile no.6200854041.
637	24.02.2023	1:55 AM	2:06 AM	2:08 AM	2:25 AM	92+850	RHS	Urban	1	2	1	4	1	5	1	Bike (JH-02AL-1983)	0	1	1	0	0	0	Yes	A Bike (JH-02AL-1983) lost his control due to drunk & drive and fell down on MCW at Ch.92+850 (RHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:25 AM, Accident occurred on 24.02.2023 at 1:55 AM, Information given through mobile no.7091111993.
638	24.02.2023	5:50 AM	5:58 AM	6:00 AM	6:25 AM	94+850	RHS	Urban	1	2	2	4	3	0	1	Truck (UP-80DT-5202)	0	1	1	0	0	0	Yes	A Truck (UP-80DT-5202) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 1 person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:25 AM, Accident occurred on 24.02.2023 at 5:50 AM, Information given through mobile no.7717778285.
639	24.02.2023	2:56 PM	2:57 PM	2:58 PM	3:00 PM	74+000	LHS	Urban	1	2	2	4	1	0	1	Car (JH-10G-1414)	0	1	0	0	0	0	Yes	A Car (JH-10G-1414) lost his control due to over speed and fell down on CMW at Ch.74+000 (LHS) in HREL Project, 1 Person grievous injured in this accident, help Provided by ambulance team and shifted to Manorama Nurshing Home at 3:00 PM, Accident occurred on 24.02.2023 at 2:56 PM, Information given through mobile no.8863887789.
640	24.02.2023	5:57 PM	6:10 PM	6:12 PM	6:50 PM	51+200	RHS	Urban	1	2	2	4	1	0	1	Bike (JH-02T-1398)	0	1	1	0	0	0	Yes	A Bike (JH-02T-1398) lost his control due to over speed and fell down on MCW at Ch.51+200 (RHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 6:50 PM, Accident occurred on 24.02.2023 at 5:57 PM, Information given through mobile no.9931334065.
641	25.02.2023	3:38 AM	3:45 AM	3:46 AM	4:05 AM	94+850	RHS	Urban	1	2	2	4	3	0	1	Truck (CG-13LA-3568)	0	1	0	0	0	0	Yes	A Truck (CG-13LA-3568) lost his control due to over speed and overturned on MCW at Ch.94+850 (RHS) in HREL Project, 1 Person grievous Injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 4:05 AM, Accident occurred on 25.02.2023 at 3:38 AM, Information given through mobile no.7004591034.
642	25.02.2023	10:05 AM	10:07 AM	10:08 AM	10:12 AM	60+960	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and fell down on MCW at Ch.60+960 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:12 AM, Accident occurred on 25.02.2023 at 10:05 AM, Information given through mobile no.6299417973.
643	25.02.2023	5:55 AM	6:01 AM	N/A	6:40 AM	95+850	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle , Scorpio (JH-02AM-0041) & Scooty (JH-01EE-4687)	4	0	0	0	0	0	Yes	An Unknown vehicle hit the Scorpio (JH-02AM-0041) & Scooty (JH-01EE-4687) from rear end and ran away at Ch.95+850 (LHS) in HREL Project, 4 Persons dead on the spot , help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:40 PM, Accident occurred on 25.02.2023 at 5:55 PM, Information given through mobile no.9122879144.
644	28.02.2023	5:54 PM	5:56 PM	5:58 PM	N/A	99+600	LHS	Urban	3	3	2	4	1	0	1	Bike (JH-01EG-3128)	0	0	1	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-01EG-3128) from rear end and ran away at Ch.99+600 (LHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 28.02.2023 at 5:54 PM, Information given through mobile no.8709046260.

645	01.03.2023	12:50 PM	12:54 PM	1:00 PM	N/A	96+850	RHS	Urban	1	3	5	4	3	0	1	**Container (HR-55AE-3393)**	0	0	1	0	0	0	Yes	A Container (HR-55AE-3393) lost his control due to mechanical failure (Break fail) and overturned on MCW at Ch.96+850 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 01.03.2023 at 12:50 PM, Information given through mobile no.8825191800.
646	02.03.2023	5:25 AM	5:45 AM	5:47 AM	6:10 AM	114+200	RHS	Urban	3	2	2	4	1	0	1	**Bike (JH-01DF-7039)**	0	1	1	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01DF-7039) from rear end and ran away at Ch.114+200 (RHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Life care Hospital Ranchi at 6:10 AM, Accident occurred on 02.03.2023 at 5:25 AM, Information given through mobile no.9106648691.
647	03.03.2023	11:21 AM	11:38 AM	1:40 AM	N/A	113+000	RHS	Urban	3	3	2	4	1	0	1	Bike (JH-01AE-7573)	0	0	1	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01AE-7573) from rear end and ran away at Ch.113+000 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 03.03.2023 at 11:21 AM, Information given through mobile no.9106648691.
648	04.03.2023	12:20 PM	12:30 PM	12:32 PM	12:50 PM	90+800	RHS	Urban	3	2	2	4	1	0	1	Trailer (NL-01Q-5480) & Container (NL-02Q-9608)	0	1	1	0	0	0	Yes	A Trailer (NL-01Q-5480) lost his control due to over speed and hit the Container (NL-02Q-9608) from rear end and overturned on MCW at Ch.90+800 (RHS) in HREL Project, 1 Person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital ramgarh at 12:50 PM, Accident occurred on 04.03.2023 at 12:20 PM, Information given through mobile no.8825191800.
649	04.03.2023	11:45 PM	11:53 PM	11:55 PM	12:35 PM	96+650	RHS	Urban	3	2	2	4	3	0	1	Truck (UK-08CB-0572) & trailer (AP-39TK-5779)	0	2	0	0	0	0	Yes	A Truck (UK-08CB-0572) lost his control due to over speed and hit the trailer (AP-39TK-5779) from rear end and overturned on MCW at Ch.96+650 (RHS) in HREL Project, 2 Persons grievous inured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:35 AM, Accident occurred on 04.03.2023 at 11:45 PM, Information given through mobile no.7717778285.
650	05.03.2023	11:20 AM	11:22 AM	11:24 AM	11:44 AM	99+000	LHS	Urban	3	2	2	4	1	0	1	Car (JH-01DD-6071) & Bike (JH-01AV-9417)	0	1	0	0	0	0	Yes	A Car (JH-01DD-6071) lost his control due to over speed and hit the Bike (JH-01AV-9417) from rear end and fell down on MCW at Ch.99+000 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:44 AM, Accident occurred on 05.03.2023 at 11:20 AM, Information given through our Patrolling team.
651	08.03.2023	10:20 AM	10:30 AM	N/A	11:02 AM	108+000	LHS	Urban	3	1	2	4	1	0	1	Container (MH-46BB-8589) & scooty (JH-01EL-2976)	1	0	0	0	0	0	Yes	A Container (MH-46BB-8589) lost his control due to over speed and hit the scooty (JH-01EL-2976) from rear end and bile fell down on MCW at Ch.108+000 (LHS) in HREL Project, scooty person dead on the spot , help provided by ambulance team and shifted to RIMS Hospital Ranchi at 11:02 AM, Accident occurred on 08.03.2023 at 10:20 AM, Information given through mobile no.8409113853.
652	12.03.2023	11:08 PM	11:17 PM	N/A	11:55 PM	107+900	LHS	Urban	3	1	2	4	1	0	1	Unknown vehicle	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.107+900 (LHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to Medanta Hospital Ranchi at 11:55 PM, Accident occurred on 12.03.2023 at 11:08 PM, Information given through mobile no.7015092064.
653	13.03.2023	4:19 AM	4:21 AM	4:23 AM	N/A	60+500	RHS	Urban	3	3	2	4	1	0	1	tata magic (JH-01EY-6937) & Hywa (JH-24J-8870)	0	0	1	0	0	0	Yes	A tata magic (JH-01EY-6937) hit the Hywa (JH-24J-8870) from rear end at Ch.60+500 (RHS) in HREL Project, 1 Person minor injured in this accident, first aid done by ambulance team, Accident occurred on 13.03.2023 at 4:19 AM, Information given through mobile no.7979833189.

654	16.03.2023	4:40 PM	4:42 PM	4:43 PM	4:50 PM	99+500	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle	0	1	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.99+500 (RHS) in HREL Project, 1 Person grievous injured in this accident, first aid done by ambulance team and shifted to Piska Hospital Ormanjhi at 4:50 PM, Accident occurred on 16.03.2023 at 4:40 PM, Information give through mobile no.7761823728.
655	17.03.2023	10:38 AM	10:44 AM	10:46 AM	N/A	80+450	RHS	Urban	3	3	2	4	1	0	1	Unknown vehicle & Bike (JH-24B-7687)	0	2	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-24B-7687) from rear end and ran away at Ch.80+450 (RHS) in HREL Project, 2 persons minor injured in this accident, help provided by ambulance team , Accident occurred on 17.03.2023 at 10:38 AM, Information give through mobile no.8709806554.
656	17.03.2023	5:05 PM	5:10 PM	5:12 PM	5:20 PM	77+520	LHS	Urban	1	2	2	4	1	0	1	Bike (JH-24D-5639)	0	1	0	0	0	0	Yes	A Bike (JH-24D-5639) lost his control due to over speed and fell down on MCW at Ch.77+520 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ramgarh at 5:20 PM, Accident occurred on 17.03.2023 at 5:05 PM, Information given through mobile no.8210130789.
657	19.03.2023	1:00 PM	1:05 PM	1:07 PM	1:15 PM	94+950	RHS	Urban	1	2	5	4	3	0	1	Truck (UP-75AT-5742)	0	1	0	0	0	0	Yes	A Truck (UP-75AT-5742) lost his control due to mechanical failure (Break fail) and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:15 PM, Accident occurred on 19.03.2023 at 1:00 PM, Information give through mobile no.7717778285.
658	19.03.2023	10:24 PM	10:27 PM	10:30 PM	11:20 PM	77+480	LHS	Urban	3	2	2	4	1	0	1	Truck (GJ-01CT-9433) & truck (BR-01PJ-9268)	0	1	2	0	0	0	Yes	A Truck (GJ-01CT-9433) lost his control due to over speed and hit the another truck (BR-01PJ-9268) from rear end at Ch.77+480 (LHS) in HREL Project, 1 person grievous & 2 Persons minor injured in this accident, help provided by ambulance team and shifted to Medica Hospital Ranchi at 11:20 PM, Accident occurred on 19.03.2023 at 10:24 PM, Information given through mobile no.6200854041.
659	20.03.2023	9:33 PM	9:38 PM	9:40 PM	9:55 PM	58+800	RHS	Urban	1	2	2	4	1	0	1	Trailer (JH-02BK-8014)	0	1	0	0	0	0	Yes	A Trailer (JH-02BK-8014) lost his control due to over speed and overturned on MCW at Ch.58+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 9:55 PM, Accident occurred on 20.03.2023 at 9:33 PM, Information given through mobile no.8709311587.
660	24.03.2023	2:30 AM	2:35 AM	2:36 AM	2:50 AM	95+500	RHS	Urban	1	2	5	4	2	0	1	Trailer (RJ-02GC-1195)	0	1	0	0	0	0	Yes	A Trailer (RJ-02GC-1195) lost his control due to mechanical failure (Break fail) and overturned on MCW at 95+500 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 2:50 AM, Accident occurred on 24.03.2023 at 2:30 Am, Information given through mobile no.6203799730.
661	24.03.2023	5:47 AM	5:55 AM	5:58 AM	N/A	107+200	LHS	Urban	3	3	2	4	1	0	1	Trailer (UP-53GT-5815)	0	0	1	0	0	0	Yes	A Trailer (UP-53GT-5815) lost his control due to over speed hit the truck from rear end at Ch. 107+200 (LHS) in HREL Proejct, 1 person minor injured in this accident, help provided by ambulance team , accident occurred on 24.03.2023 at 5:47 AM, Information given local public.
662	26.03.2023	7:44 PM	7:47 PM	7:50 PM	N/A	77+600	RHS	Urban	6	3	2	4	1	0	1	Scooty (JH-02Z-5434)	0	0	2	0	0	0	Yes	A Scooty (JH-02Z-5434) lost his control due to over speed and fell down on MCW at Ch.77+600 (RHS) in HREL Project, 2 persons minor injured in this accident, help provided by ambulance team , Accident occurred on 26.03.2023 at 7:44 PM, Information given through mobile no.9309128102.
663	29.03.2023	5:41 PM	5:43 PM	5:43 PM	5:45 PM	74+500	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-24K-9777)	0	2	0	0	0	0	Yes	A Bike (JH-24K-9777) lost his control due to over speed and skidded at Ch.74+500 (LHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Manorama Nurshing Home Kujju at 5:45 PM, Accident occurred on 29.03.2023 at 5:41 PM, Information given through mobile no.6201169196.

664	31.03.2023	10:55 AM	11:01 AM	11:02 AM	11:13 AM	55+680	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle	0	1	0	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.55+680 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 11:13 AM, Accident occurred on 31.03.2023 at 10:55 AM, Information given through mobile no.6207518003.
665	04.04.2023	11:06 PM	11:14 PM	11:16 PM	11:30 PM	87+550	LHS	Urban	3	1	2	4	1	0	1	**Unknown vehicle & Bike (JH-02BK-5163)**	1	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-02BK-5163) from rear end and ran away at Ch.87+550 (LHS) in HREL Project, 1 person dead on the spot & 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 11:30 PM, Accident occurred on 04.04.2023 at 11:06 PM, Information given through mobile no.9709168812.
666	07.04.2023	5:21 PM	5:30 PM	N/A	6:32 PM	64+550	RHS	Urban	3	1	2	4	2	0	1	**Bus (JH-02AY-8304) & Bike (JH-02T-1271)**	1	0	0	0	0	0	Yes	A Bus (JH-02AY-8304) lost his control due to over speed and hit the Bike (JH-02T-1271) from rear end at Ch.64+550 (RHS) in HREL Project, 1 Person dead on the spot help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:32 PM, Accident occurred on 07.04.2023 at 5:21 PM, Information given through mobile no.7870582559.
667	07.04.2023	7:50 PM	8:00 PM	N/A	N/A	92+800	RHS	Urban	1	2	2	4	1	0	1	Auto (A/F)	0	1	0	0	0	0	Yes	An Auto (A/F) lost his control due to over speed and overturned on MCW at Ch.92+800 (RHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through 108 ambulance, accident occurred on 07.04.2023 at 7:50 PM, information given through mobile no.6203799730.
668	08.04.2023	3:39 PM	3:44 PM	N/A	N/A	70+700	LHS	Urban	6	2	2	4	1	0	1	Bike (JH-24E-7017)	0	1	0	0	0	0	Yes	A Bike (JH-24E-7017) lost his control due to over speed and skidded at Ch.70+700 (LHS) in HREL Project, 1 Person grievous injured in this accident, grievously injured person shifted to the hospital through 108 ambulance, Accident occurred on 08.04.2023 at 3:39 PM, Information given through mobile no.8789154033.
669	08.04.2023	7:01 PM	7:06 PM	N/A	N/A	64+560	LHS	Urban	3	2	2	4	2	0	1	Car (BR-01PB-1458)	0	1	1	0	0	0	Yes	A Car (BR-01PB-1458) lost his control due to over sped and hit the Bike (JH-02U-4223) from rear end at Ch.64+560 (LHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, grievously injured person shifted to the hospital through another vehicle, accident occurred on 08.04.2023 at 7:01 PM, Information given through mobile no.8789159377.
670	08.04.2023	10:27 PM	10:35 PM	10:40 PM	11:20 PM	106+500	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Bike (JH-01DQ-5874)	0	3	0	0	0	0	Yes	An unknown vehicle hit the Bike (JH-01DQ-5874) from rear end and ran away at Ch.106+500 (RHS) in HRLE Project, 3 Persons grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 11:20 PM, Accident occurred on 08.04.2023 at 10:27 PM, Information given through mobile no.7004800645.
671	09.04.2023	6:09 PM	6:13 PM	N/A	N/A	70+600	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-24H-5825)	0	1	0	0	0	0	Yes	A Bike (JH-24H-5825) lost his control due to over speed and skidded at Ch.70+600 (RHS) in HREL Project, 1 person grievous injured in this accident, grievously injured person shifted to the hospital through another vehicle , Accident occurred on 09.04.2023 at 6:09 PM, Information given through mobile no.6201741098.
672	12.04.2023	6:14 AM	6:20 AM	6:22 AM	6:35 AM	76+000	RHS	Urban	3	2	2	4	1	0	1	Unknown vehicle & Auto (JH-24H-9046)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Auto (JH-24H-9046) from rear end and ran away at Ch.76+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:35 AM, Accident occurred on 12.04.2023 at 6:14 AM, Information given through mobile no.9309128102.

673	12.04.2023	8:26 AM	8:29 AM	8:31 AM	8:48 AM	74+400	RHS	Urban	1	2	2	4	2	0	1	Bike (JH-24G-9269)	0	2	0	0	0	0	Yes	A Bike (JH-24G-9269) lost his control due to over speed and hit the Metal Beam and fell down on MCW at Ch.74+400 (RHS) in HREL Project, 2 Persons grievous injured in this accident, help provided by ambulance team and shifted to Hope Hospital Ramgarh at 8:48 AM, Accident occurred on 12.04.2023 at 8:26 AM, Information given through mobile no.7631126260.
674	12.04.2023	9:10 AM	9:15 AM	N/A	N/A	94+950	RHS	Urban	3	2	2	4	3	0	1	truck (AP-25W-7239) & auto (JH-01AS-9282)	0	2	2	0	0	0	Yes	A truck (AP-25W-7239) lost his control due to over speed and hit the auto (JH-01AS-9282) from rear end and overturned on MCW at Ch.94+950 (RHS) in HREL Project, 2 persons grievous & 2 persons minor injured in this accident, grievously injured persons shifted to the hospital through another vehicle , Accident, occurred on 12.04.2023 at 9:10 AM, Information given through mobile no.6203799730.
675	12.04.2023	12:57 PM	1:10 PM	1:15 PM	N/A	88+000	RHS	Urban	6	2	2	4	1	0	1	Bike (JH-24E-5321)	0	0	1	0	0	0	Yes	A Bike (JH-24E-5321) lost his control due to over speed and skidded at Ch.88+000 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 12.04.2023 at 12:57 PM, Information given through mobile no.9106648691.
676	13.04.2023	12:13 PM	12:26 PM	12:27 PM	12:37 PM	86+850	LHS	Urban	3	2	2	4	1	0	1	trailer (NL-01AE-2235) & mini truck (JH-02AB-1048)	0	1	0	0	0	0	Yes	A trailer (NL-01AE-2235) lost his control due to over speed and hit the mini truck (JH-02AB-1048) from rear end at Ch.86+850 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 12:37 PM, Accident occurred on 13.04.2023 at 12:13 PM, Information given through mobile no.9106648691.
677	13.04.2023	3:10 PM	3:14 PM	N/A	N/A	77+600	RHS	Urban	6	2	2	4	1	0	1	Bike (BR-13S-1913)	0	1	0	0	0	0	Yes	A Bike (BR-13S-1913) lost his control due to over speed and skidded at Ch.77+600 (RHS) in HREL Project, 1 person grievous injured in this accident, grievously injured person shifted to the hospital through another vehicle, Accident occurred on 13.04.2023 at 3:10 PM, Information given through mobile no.9931109348.
678	14.04.2023	2:43 AM	2:45 AM	2:50 AM	N/A	100+600	RHS	Urban	1	3	1	4	1	0	1	Bike (JH-01EE-4110)	0	0	2	0	0	0	Yes	A Bike (JH-01EE-4110) lost his control due to drunk & drive and fell down on MCW at Ch.100+600 (RHS) in HREL Project, 2 persons minor injured in this accident, help provided by ambulance team, Accident occurred on 14.04.2023 at 2:43 AM, Information given through mobile no.7903032166.
679	16.04.2023	11:40 PM	11:41 PM	11:42 PM	12:20 AM	99+400	RHS	Urban	3	2	2	4	1	0	1	Unknown Vehicle	0	1	0	0	0	0	Yes	An Unknown Vehicle hit the Pedestrian from rear end and ran away at Ch.99+400 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to RIMS Hospital Ranchi at 12:20 AM, Accident occurred on 16.04.2023 at 11:40 PM, Information given through local Public.
680	17.04.2023	1:26 AM	1:34 AM	1:36 AM	2:20 AM	58+060	RHS	Urban	1	2	2	4	2	0	1	Mini Truck (BR-21GD-9586)	0	1	1	0	0	0	Yes	A Mini Truck (BR-21GD-9586) lost his control due to over speed and hit the median kerb and overturned on MCW at Ch.58+060 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 2:20 AM, Accident occurred on 17.04.2023 at 1:26 AM, Information given through mobile no.8789154033.
681	17.04.2023	1:28 PM	1:30 PM	1:35 PM	1:56 PM	75+200	LHS	Urban	3	1	2	4	1	0	1	Bus (JH-02AQ-5753) & trailer (Jh-02AH-1561)	1	4	5	0	0	0	Yes	A Bus (JH-02AQ-5753) lost his control due to over speed and hit the trailer (Jh-02AH-1561) from rear end at Ch.75+200 (LHS) in HREL Project, 1 Person dead on the spot , 4 Persons grievous injured & 5 Persons minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 1:56 PM, Accident occurred on 17.04.2023 at 1:28 PM, Information given through our Patrolling team.

682	18.04.2023	12:38 PM	12:41 PM	12:42 PM	12:48 PM	75+200	LHS	Urban	1	2	2	4	1	0	1	Bike (A/F)	0	1	2	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and fell down on MCW at Ch.75+200 (LHS) in HREL Project, 1 Person grievous inured & 2 persons minor injured in this accident, help provided by ambulance team and shifted to Manorama Nurshing Home Kujju at 12:48 PM, Accident occurred on 18.04.2023 at 12:38 PM, Information given through mobile no.8789154033.
683	19.04.2023	5:40 AM	5:46 AM	5:47 AM	6:25 AM	95+200	RHS	Urban	3	2	2	4	2	0	1	Trailer (JH-06GC-2428) & trailer (JH-05CW-1687)	0	1	0	0	0	0	Yes	A Trailer (JH-06GC-2428) lost his control due to over speed and hit the another trailer (JH-05CW-1687) from rear end at Ch.95+200 (RHS) in HREL Project, 1 person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:25 Am, Accident occurred on 19.04.2023 at 5:40 AM, Information given through mobile no.8825191800.
684	19.04.2023	7:30 PM	7:32 PM	7:33 PM	7:34 PM	103+000	RHS	Urban	3	2	2	4	1	0	1	unknown vehicle & Bike (A/F)	0	1	0	0	0	0	Yes	An unknown vehicle hit the Bike (A/F) from rear end and ran away at Ch.103+000 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Piska Hospital Ormanjhi at 7:34 PM, Accident occurred on 19.04.2023 at 7:30 PM, Information given through mobile no.7004743501.
685	23.04.2023	5:05 AM	5:07 AM	N/A	7:10 AM	60+520	RHS	Urban	3	1	2	4	1	0	1	Unknown vehicle	1	0	0	0	0	0	Yes	An Unknown vehicle hit the Pedestrian from rear end and ran away at Ch.60+520 (RHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 7:10 AM, Accident occurred on 23.04.2023 at 5:05 AM, Information given through Charhi PS.
686	23.04.2023	12:24 PM	12:35 PM	12:36 PM	1:00 PM	50+000	LHS	Urban	3	2	2	4	1	0	1	unknown vehicle & (JH-02BK-7226)	0	1	0	0	0	0	Yes	An unknown vehicle hit the scooty (JH-02BK-7226) from rear end and ran away at Ch.50+000 (LHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 1:00 PM, Accident occurred on 23.04.2023 at 12:24 PM, Information given through mobile no.8789154033.
687	23.04.2023	4:53 PM	4:55 PM	4:57 PM	5:43 PM	60+800	RHS	Urban	3	2	2	4	1	0	1	Bike (JH-09AJ-1789) & Bike (JH-01V-1357)	0	1	1	0	0	0	Yes	A Bike (JH-09AJ-1789) lost his control due to over speed and hit the another Bike (JH-01V-1357) from rear end and fell down on MCW at 60+800 (RHS) in HREL Project, 1 Person grievous & 1 Person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 5:43 PM, Accident occurred on 23.04.2023 at 4:53 PM, Information give through mobile no.8789154033.
688	24.04.2023	10:58 AM	11:03 AM	11:04 AM	11:20 AM	95+850	RHS	Urban	3	2	2	4	2	0	1	Truck (PB-08CX-6771)	0	1	0	0	0	0	Yes	A Truck (PB-08CX-6771) lost his control due to over speed and hit the another Truck from rear end at Ch.95+850 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to KGT Hospital Ramgarh at 11:20 AM, Accident occurred on 24.04.2023 at 10:58 AM, Information given through mobile no.9476132005.
689	24.04.2023	6:01 PM	6:03 PM	6:04 PM	6:10 PM	65+800	RHS	Urban	1	2	1	4	1	0	1	Bike (JH-02Y-7133)	0	2	0	0	0	0	Yes	A Bike (JH-02Y-7133) lost his control due to drunk & drive and fell down on MCW at Ch.65+800 (RHS) in HREL Project, 2 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 6:10 PM, Accident occurred on 24.04.2023 at 6:01 PM, Information given through our Patrolling team.
690	24.04.2023	4:58 PM	5:22 PM	5:23 PM	6:35 PM	54+500	RHS	Urban	2	1	2	4	1	0	1	Bolero (JH-01BZ-5517) & Bike (JH-01C-7300)	1	0	0	0	0	0	Yes	A Bolero (JH-01BZ-5517) lost his control due to over speed and Jump LHS to RHS & hit the Bike (JH-01C-7300) from Head on collision at Ch.54+500 (RHS) in HREL Project, 1 Person dead on the spot , help provided by ambulance team and shifted to Sadar Hospital Hazaribagh at 6:35 PM, Accident occurred on 24.04.2023 at 4:58 PM, Information given through mobile no.8789154033.

691	24.04.2023	7:42 PM	7:48 PM	7:49 PM	8:00 PM	58+010	RHS	Urban	3	2	2	4	1	0	1	Car (JH-02AR-2795) & Bike (JH-02AU-8123)	0	1	0	0	0	0	Yes	An over speed Car (JH-02AR-2795) hit the Bike (JH-02AU-8123) from rear end and fell down on MCW at Ch.58+010 (RHS) in HREL Project, 1 Person grievous injured in this accident, help provided by ambulance team and shifted to CHC Mandu at 8:00 PM, Accident occurred on 24.04.2023 at 7:42 PM, Information given through mobile no.8434232958.
692	25.04.2023	4:58 AM	5:04 AM	5:10 AM	5:20 AM	95+400	LHS	Urban	3	1	2	4	2	0	1	Trailer & Bus (BR-21L-7774)	2	12	0	0	0	0	Yes	A Trailer lost his control due to over speed and hit the Bus (BR-21L-7774) from rear end and Jump RHS to LHS and overturned on MCW at Ch. 95+400 (LHS) in HREL Project, 2 Persons dead on the spot & 12 Persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 5:20 AM, Accident occurred on 25.04.2023 at 4:58 AM, Information given through mobile no.7004591034.
693	26.04.2023	1:00 PM	1:09 PM	1:12 PM	N/A	85+000	RHS	Urban	3	3	2	4	1	0	1	Bike (BR-13B-5160) & Car (JH-01DG-2232)	0	0	1	0	0	0	Yes	A Bike (BR-13B-5160) lost his control due to over speed and hit the Car (JH-01DG-2232) from rear end and fell down on MCW at Ch.85+000 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 26.04.2023 at 1:00 PM, Information given through mobile no.9106648691.
694	29.04.2023	10:13 AM	10:18 AM	10:20 AM	N/A	94+800	RHS	Urban	1	3	2	4	3	0	1	Truck (HR-73A-9119)	0	0	1	0	0	0	Yes	A Truck (HR-73A-9119) lost his control due to over speed and overturned on MCW at ch.94+800 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , accident occurred on 29.04.2023 at 10:13 Am, Information given through mobile no.6203799730.
695	29.04.2023	10:16 PM	10:22 PM	10:24 PM	10:45 PM	73+800	LHS	Urban	3	2	2	4	1	0	1	Bike (JH-09AU-7110)	0	2	0	0	0	0	Yes	An Unknown vehicle hit the Bike (JH-09AU-7110) from rear end and ran away at Ch.73+800 (LHS) in HREL Project, 2 persons grievous injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 10:45 PM, Accident occurred on 29.04.2023 at 10:16 PM, Information given through mobile no.9006888638.
696	30.04.2023	5:40 PM	5:43 PM	5:45 PM	6:01 PM	98+000	LHS	Urban	6	2	2	4	2	0	1	Bike (A/F)	0	1	1	0	0	0	Yes	A Bike (A/F) lost his control due to over speed and skidded at Ch.98+000 (LHS) in HREL Project, 1 Person grievous & 1 person minor injured in this accident, help provided by ambulance team and shifted to Sadar Hospital Ramgarh at 6:01 PM, Accident occurred on 30.04.2023 at 5:40 PM, Information given through mobile no.7979789659.
697	30.04.2023	6:35 PM	6:43 PM	6:45 PM	N/A	92+600	RHS	Urban	3	3	2	4	1	0	1	Unknown vehicle	0	0	1	0	0	0	Yes	An unknown vehicle hit the Pedestrian from rear end and ran away at Ch.92+600 (RHS) in HREL Project, 1 Person minor injured in this accident, help provided by ambulance team , Accident occurred on 30.04.2023 at 6:35 PM, Information given through mobile no.6203799730.
Total																	108	818	348	33	1	0		

Annexure – 3.2

- Men & Material Details

Section III

3.1 STATUS OF KEY PERSONAL AND PLANT & MACHINERY AT SITE

(A) Details of Key Personal available at Project Site

Sr. No.	Key Personal	Nos.	Remarks
1.	O&M Engineer	2	
2	HTMS Engineer	1	
3	Officer (Documentation)	1	
4.	Route Patrolling Officers	5	
5.	O&M Supervisors	3	
6.	Paramedical Officers	7	
7.	Drivers/Operators	28	

B) Details of Equipments available during the month of January 2023.

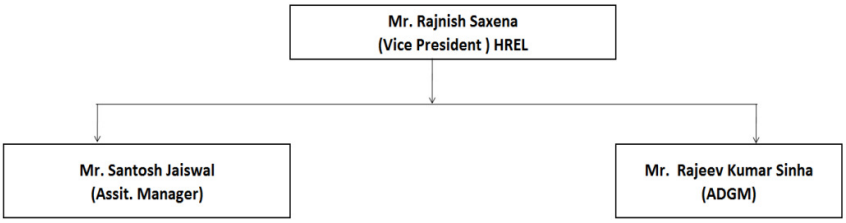
Sl No.	Machinery/Equipment	Registration No.	Nos. Mobilized	Remarks
1	Route Patrolling Vehicle	JH-10AG-4097, WB-37C-8897	2	Hired
2	Crane	WB-39-5089 NL 02G 6517	2	Hired
3	Ambulance	JH09L-4615, JH-10R-6500, JH10-W-4372	3	Hired
4	Tractor Trolley	JH 01AQ 6997, JH-01AR-1864	2	Hired
5	Utility Vehicle	JH-01EM-0586	1	Hired
6	Grass Cutter		5	Owned
7	Hydra	JH-01CJ-4817	1	Hired
8	Tractor Mounted Broomer Machine	JH-20C-9020 JH-24E-6271	2	Hired
9	Water Tanker	JH-01AN-6085 JH-01AF-9047	2	Hired

3.2 STATUS OF MANPOWER OF CONCESSIONAIRE ORGANIZATION CHART

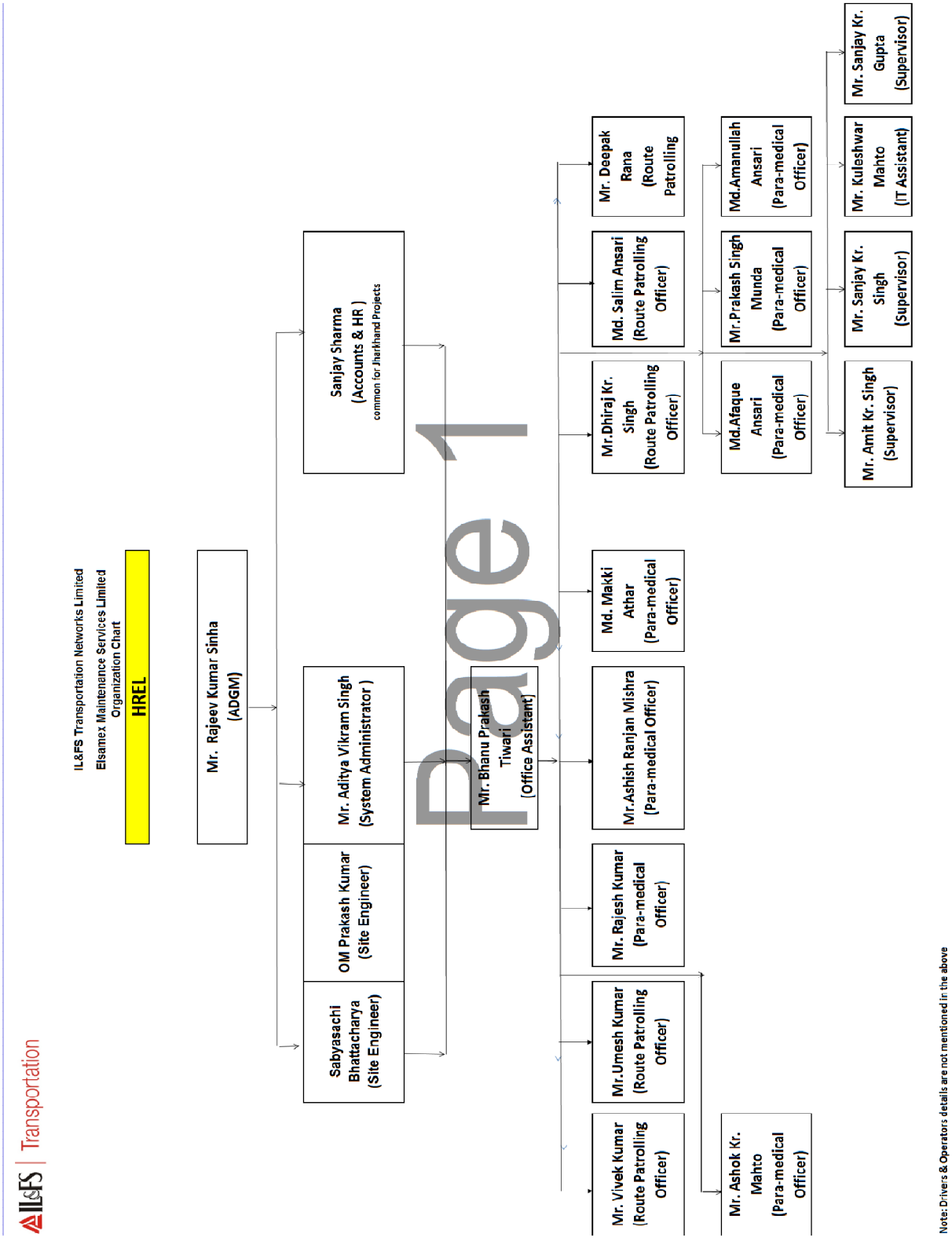
IL&FS | Transportation

HAZARIBAGH RANCHI EXPRESSWAY LIMITED

Concessionaire Organization Chart



3.4 ORGANIZATION OF O&M CONTRACTOR



Page 1

Annexure – 4.1

- Main Carriage way Details

Carriageway And Formation Width Details

S.No.	Chainage (Km)		Carriage way Width (m)	Paved Shoulder(m)	Earthen Shoulder (m)
	From	To			
1	40+500	43+100	7.5	1.200	1.900
2	43+100	45+600	7.5	1.200	2.100
3	45+600	46+400	7.4	1.300	
4	46+400	54+350	7.4	0.750	1.500
5	54+350	54+800	7.4	1.200	1.800
6	54+800	55+550	10.3		
7	55+550	56+300	7.5	1.450	
8	56+300	58+500	7.4	1.300	1.700
9	58+500	60+274	7.5	1.400	1.800
10	60+274	64+334	7.4	1.400	1.200
11	64+334	64+755	7.4	1.400	
12	64+755	65+279	10.2	1.100	
13	65+279	67+869	7.4	1.300	1.200
14	67+869	71+350	7.4	1.200	1.300
15	71+350	72+109	7.4	0.7	
16	72+109	73+359	7.3	1.300	2.100
17	73+359	74+380	7.4	1.700	
18	74+380	75+399	7.6	1.380	1.800
19	75+399	80+954	7.6	1.6	2.000
20	80+954	82+709	7.6	1.1	1.200
21	82+709	88+959	7.6	1.2	2.000
22	88+959	90+200	7.5	1.4	
23	90+200	91+979	7.6	1.2	2.000
24	91+979	92+714	10.2	1.2	
25	92+714	93+259	7.5	0.8	2.200
26	93+259	95+800	7.4	0.8	
27	95+800	96+690	7.4	0.7	1.200
28	96+690	97+300	7.5	4.2	
29	97+300	97+750	7.5	0.7	
30	97+750	100+200	7.6	1.2	2.100
31	100+200	103+850	7.5	1.2	2.200
32	103+850	104+040	7.6	1.2	
33	104+040	106+479	7.5	1.2	2.200
34	106+479	107+350	7.6	1.2	
35	107+350	107+700	7.6	1.3	2.000
36	107+700	108+500	7.7	1.3	
37	108+500	112+974	7.6	1.4	2.100
38	112+974	114+450	7.6	1.3	
39	114+450	115+000	7.6	1.4	1.800
40	115+000	114+435	7.6	1.400	1.800
41	114+435	112+974	7.6	1.320	
42	112+974	108+504	7.6	1.380	2.100
43	108+504	107+694	7.7	1.320	
44	107+694	107+339	7.6	1.3	2.000
45	107+339	106+479	7.6	1.200	
46	106+479	104+040	7.5	1.200	2.200

S.No.	Chainage (Km)		Carriage way Width (m)	Paved Shoulder(m)	Earthen Shoulder (m)
	From	To			
47	104+040	103+850	7.6	1.220	
48	103+850	100+194	7.5	1.200	2.200
49	100+194	97+764	7.6	1.200	2.100
50	97+764	97+299	7.5	0.700	
51	97+299	96+690	7.5	4.200	
52	96+690	95+814	7.4	0.700	1.200
53	95+814	93+259	7.4	0.750	
54	93+259	92+714	7.5	0.750	2.200
55	92+714	91+979	10.2	1.200	
56	91+979	90+234	7.6	1.200	2.000
57	90+234	88+959	7.5	1.400	
58	88+959	82+709	7.6	1.200	2.000
59	82+709	80+954	7.6	1.100	1.200
60	80+954	75+399	7.6	1.550	2.000
61	75+399	74+384	7.6	1.380	1.800
62	74+384	73+359	7.4	1.700	
63	73+359	72+109	7.3	1.300	2.100
64	72+109	71+350	7.4	0.700	
65	71+350	67+869	7.4	1.200	1.300
66	67+869	65+279	7.4	1.300	1.200
67	65+279	64+755	10.2	1.100	
68	64+755	64+334	7.4	1.400	
69	64+334	60+274	7.4	1.400	1.200
70	60+274	58+489	7.5	1.400	1.800
71	58+489	56+309	7.4	1.300	1.700
72	56+309	55+559	7.5	1.450	
73	55+559	54+819	10.3		
74	54+819	54+255	7.4	1.200	1.800
75	54+255	46+294	7.4	0.750	1.500
76	46+294	45+569	7.4	1.300	
77	45+569	43+124	7.5	1.200	2.100
78	43+124	40+500	7.5	1.200	1.900

Land Use Details

SL No	Chainage		Type	
	Start	End		Direction
1	41+630	41+695	Commercial	LHS
2	41+765	42+035	Commercial	LHS
3	42+090	42+880	Commercial	LHS
4	42+920	43+060	Commercial	LHS
5	43+150	43+470	Commercial	LHS
6	43+710	44+350	Commercial	LHS
7	45+065	45+725	Mixed	LHS
8	45+940	47+620	Commercial	LHS
9	48+440	50+025	Commercial	LHS
10	50+460	50+945	Commercial	LHS
11	54+825	55+010	Commercial	LHS
12	55+165	55+505	Commercial	LHS
13	55+835	57+390	Commercial	LHS
14	57+640	57+945	Commercial	LHS
15	60+325	60+995	Industrial	LHS
16	60+995	61+480	Commercial	LHS
17	61+480	62+795	Agriculture	LHS
18	62+795	64+150	Commercial	LHS
19	64+150	64+290	Agriculture	LHS
20	64+290	65+025	Commercial	LHS
21	65+025	66+190	Commercial	LHS
22	66+190	66+265	Agriculture	LHS
23	66+265	66+495	Commercial	LHS
24	66+495	67+275	Agriculture	LHS
25	67+310	67+415	Industrial	LHS
26	67+435	68+215	Agriculture	LHS
27	68+215	68+735	Commercial	LHS
28	68+735	69+770	Agriculture	LHS
29	69+770	69+960	Commercial	LHS
30	69+960	70+735	Agriculture	LHS
31	70+735	71+055	Commercial	LHS
32	71+070	71+485	Agriculture	LHS
33	71+485	71+680	Commercial	LHS
34	71+680	72+705	Hilly Area	LHS
35	72+850	73+460	Agriculture	LHS
36	73+460	74+000	Commercial	LHS
37	74+000	74+410	Agriculture	LHS
38	74+410	75+495	Commercial	LHS
39	75+495	76+705	Agriculture	LHS
40	76+705	76+910	Commercial	LHS
41	76+910	79+440	Agriculture	LHS
42	79+440	79+780	Commercial	LHS
43	79+780	81+095	Agriculture	LHS
44	81+095	82+055	Commercial	LHS
45	82+055	83+580	Agriculture	LHS
46	83+580	83+630	Industrial	LHS
47	83+630	84+200	Agriculture	LHS
48	84+200	84+340	Commercial	LHS
49	84+340	85+160	Agriculture	LHS
50	85+160	85+310	Commercial	LHS

SL No	Chainage		Type	
	Start	End		Direction
51	85+310	85+435	Agriculture	LHS
52	85+695	87+340	Agriculture	LHS
53	87+340	87+765	Commercial	LHS
54	87+765	88+840	Agriculture	LHS
55	88+840	89+125	Commercial	LHS
56	89+125	89+695	Agriculture	LHS
57	89+695	89+805	Commercial	LHS
58	89+805	89+990	Agriculture	LHS
59	90+015	91+120	Agriculture	LHS
60	91+120	91+190	Commercial	LHS
61	91+190	91+570	Agriculture	LHS
62	91+570	92+110	Commercial	LHS
63	92+110	92+335	Agriculture	LHS
64	92+335	93+060	Commercial	LHS
65	93+060	97+540	Hilly Area	LHS
66	97+540	98+520	Agriculture	LHS
67	98+520	98+725	Commercial	LHS
68	98+725	98+855	Agriculture	LHS
69	98+855	99+740	Commercial	LHS
70	99+740	100+290	Agriculture	LHS
71	100+290	100+615	Commercial	LHS
72	100+615	101+070	Agriculture	LHS
73	101+070	101+205	Commercial	LHS
74	101+205	101+890	Agriculture	LHS
75	101+890	102+525	Commercial	LHS
76	102+525	102+620	Agriculture	LHS
77	102+620	102+765	Commercial	LHS
78	102+765	104+010	Agriculture	LHS
79	104+010	104+240	Commercial	LHS
80	104+240	104+395	Agriculture	LHS
81	104+395	105+320	Commercial	LHS
82	105+320	105+825	Agriculture	LHS
83	105+825	106+160	Commercial	LHS
84	106+160	106+310	Agriculture	LHS
85	106+310	107+050	Commercial	LHS
86	107+050	107+260	Agriculture	LHS
87	107+260	107+805	Commercial	LHS
88	107+805	107+890	Agriculture	LHS
89	107+890	112+330	Commercial	LHS
90	112+330	112+725	Agriculture	LHS
91	112+725	115+050	Commercial	LHS
92	115+000	114+920	Agriculture	RHS
93	114+920	112+565	Commercial	RHS
94	112+565	112+115	Agriculture	RHS
95	112+115	110+665	Commercial	RHS
96	110+665	110+615	Agriculture	RHS
97	110+615	109+340	Commercial	RHS
98	109+340	109+110	Agriculture	RHS
99	109+110	109+345	Commercial	RHS
100	109+345	109+085	Agriculture	RHS
101	109+085	107+570	Commercial	RHS

SL No	Chainage		Type	
	Start	End		Direction
102	107+570	107+390	Agriculture	RHS
103	107+390	107+310	Commercial	RHS
104	107+310	107+185	Agriculture	RHS
105	107+185	106+210	Commercial	RHS
106	106+210	105+900	Agriculture	RHS
107	105+900	105+515	Commercial	RHS
108	105+515	105+050	Agriculture	RHS
109	105+050	104+380	Commercial	RHS
110	104+380	104+295	Agriculture	RHS
111	104+295	103+655	Commercial	RHS
112	103+655	102+350	Agriculture	RHS
113	102+350	101+320	Commercial	RHS
114	101+320	101+030	Agriculture	RHS
115	101+030	99+995	Commercial	RHS
116	99+995	99+790	Agriculture	RHS
117	99+790	98+830	Commercial	RHS
118	98+830	97+670	Agriculture	RHS
119	97+670	97+580	Commercial	RHS
120	97+580	92+940	Hilly Area	RHS
121	92+940	91+965	Commercial	RHS
122	91+965	91+765	Agriculture	RHS
123	91+765	91+385	Commercial	RHS
124	91+385	91+210	Agriculture	RHS
125	91+385	90+815	Commercial	RHS
126	90+815	90+615	Agriculture	RHS
127	90+615	90+335	Commercial	RHS
128	90+335	89+690	Agriculture	RHS
129	89+690	89+120	Commercial	RHS
130	89+120	88+020	Agriculture	RHS
131	88+020	86+455	Commercial	RHS
132	86+455	86+230	Agriculture	RHS
133	86+230	85+915	Commercial	RHS
134	85+915	83+975	Agriculture	RHS
135	83+975	83+810	Commercial	RHS
136	83+810	82+030	Agriculture	RHS
137	82+030	80+625	Commercial	RHS
138	80+625	79+865	Agriculture	RHS
139	79+865	79+215	Commercial	RHS
140	79+215	78+500	Agriculture	RHS
141	78+500	78+195	Commercial	RHS
142	78+195	77+380	Agriculture	RHS
143	77+380	76+930	Commercial	RHS
144	76+930	75+205	Agriculture	RHS
145	75+205	74+540	Commercial	RHS
146	74+540	74+180	Agriculture	RHS
147	74+180	73+280	Commercial	RHS
148	73+280	70+790	Hilly Area	RHS
149	70+790	70+580	Commercial	RHS
150	70+580	68+710	Agriculture	RHS
151	68+710	67+970	Commercial	RHS
152	67+970	66+225	Mixed	RHS

SL No	Chainage		Type	
	Start	End		Direction
153	66+225	63+125	Commercial	RHS
154	63+125	62+895	Agriculture	RHS
155	62+895	62+665	Commercial	RHS
156	62+665	61+365	Agriculture	RHS
157	61+365	60+885	Commercial	RHS
158	60+885	60+370	Agriculture	RHS
159	60+370	60+265	Commercial	RHS
160	60+265	59+215	Agriculture	RHS
161	59+215	59+120	Commercial	RHS
162	59+120	58+315	Agriculture	RHS
163	58+315	57+980	Commercial	RHS
164	57+980	57+690	Agriculture	RHS
165	57+690	57+180	Commercial	RHS
166	57+180	57+040	Agriculture	RHS
167	57+040	55+680	Commercial	RHS
168	55+680	55+290	Agriculture	RHS
169	55+290	54+790	Commercial	RHS
170	54+790	50+760	Agriculture	RHS
171	50+760	50+180	Commercial	RHS
172	50+180	49+780	Agriculture	RHS
173	49+780	49+350	Commercial	RHS
174	49+350	49+205	Agriculture	RHS
175	49+205	47+930	Commercial	RHS
176	47+930	47+435	Agriculture	RHS
177	47+435	43+515	Commercial	RHS
178	43+515	43+335	Agriculture	RHS
179	43+335	41+620	Commercial	RHS

SERVICE ROAD DETAILS

S.No.	Chainage(km)		Direction	Length (m)
	From	To		
1	45+705	46+050	LHS	345.1
2	46+390	46+740	LHS	350.0
3	55+100	56+370	LHS	1270.0
4	64+400	65+320	LHS	920.0
5	67+080	67+250	LHS	170.0
6	68+070	68+290	LHS	220.0
7	73+700	74+220	LHS	520.0
8	89+090	89+690	LHS	600.0
9	92+110	92+875	LHS	764.9
10	106+570	107+460	LHS	890.0
11	108+070	108+600	LHS	530.0
12	113+030	113+480	LHS	450.0
13	114+000	113+000	RHS	1000
14	108+550	107+810	RHS	740
15	107+460	106+570	RHS	890
16	92+875	92+110	RHS	765
17	89+690	89+090	RHS	600
18	74+520	73+700	RHS	820
19	65+320	64+780	RHS	540
20	64+650	64+400	RHS	250
21	56+370	55+100	RHS	1270
22	46+250	45+800	RHS	450
Total Length(m)				**14355**

Annexure – 4.2

- Pavement Marking

Pavement Marking Details

S.No.	Chainage (Km)		Length (m.)	Presence of Pavement Markings		
	From	To		Shoulder	Centre Line	Kerb
1	41+600	41+700	100	Present	Present	Not present
2	41+700	43+840	2140	Present	Present	Present
3	43+860	43+995	135	Present	Present	Not present
4	43+995	44+730	735	Present	Present	Present
5	44+730	44+875	145	Present	Present	Present
6	44+875	45+800	925	Present	Present	Present
7	45+800	45+825	25	Present	Present	Present
8	45+825	46+040	215	Present	Present	Present
9	46+040	46+430	390	Not Present	Present	Present
10	46+430	46+625	195	Present	Present	Present
11	46+625	46+665	40	Not Present	Present	Present
12	46+665	47+160	495	Present	Present	Present
13	47+160	47+285	125	Not Present	Present	Not present
14	47+160	47+375	215	Not Present	Present	Present
15	47+375	56+950	9575	Present	Present	Present
16	56+950	57+285	335	Not Present	Present	Not present
17	57+285	57+950	665	Present	Present	Present
18	57+950	58+030	80	Present	Not Present	Present
19	58+030	58+435	405	Present	Present	Present
20	58+435	58+515	80	Not Present	Present	Present
21	58+515	59+310	795	Present	Present	Present
22	59+310	59+390	80	Present	Present	Present
23	59+390	65+025	5635	Present	Present	Present
24	65+025	65+940	915	Present	Present	Present
25	65+940	65+975	35	Present	Present	Not present
26	65+975	70+780	4805	Present	Present	Present
27	70+780	70+965	185	Present	Present	Present
28	70+965	71+105	140	Present	Present	Present
29	71+105	71+170	65	Not Present	Not Present	Present
30	71+170	71+715	545	Present	Present	Present
31	71+715	71+870	155	Not Present	Not Present	Not present
32	71+870	71+930	60	Present	Present	Present
33	71+930	71+965	35	Not Present	Not Present	Not present
34	71+965	73+510	1545	Present	Present	Present
35	73+510	73+590	80	Present	Present	Not present
36	73+590	74+130	540	Present	Present	Present
37	74+130	74+265	135	Present	Present	Not present
38	74+265	75+880	1615	Present	Present	Present
39	75+880	76+070	190	Present	Present	Not present
40	76+070	76+605	535	Present	Present	Present
41	76+605	79+500	2895	Present	Present	Present
42	79+500	79+535	35	Not Present	Present	Present
43	79+535	81+870	2335	Present	Present	Present
44	81+870	85+070	3200	Present	Present	Present
45	85+070	85+210	140	Present	Present	Present
46	85+210	85+465	255	Present	Present	Present
47	85+465	85+655	190	Present	Present	Present

S.No.	Chainage (Km)		Length (m.)	Presence of Pavement Markings		
	From	To		Shoulder	Centre Line	Kerb
48	85+655	89+990	4335	Present	Present	Present
49	90+015	93+990	3975	Present	Present	Not present
50	93+990	94+685	695	Present	Present	Present
51	94+685	94+810	125	Present	Present	Not present
52	94+810	95+360	550	Present	Present	Present
53	95+360	95+485	125	Present	Present	Not present
54	95+485	102+695	7210	Present	Present	Present
55	102+695	102+805	110	Present	Present	Present
56	103+560	103+685	125	Present	Present	Present
57	103+685	103+690	5	Present	Present	Present
58	103+690	103+730	40	Present	Present	Present
59	103+730	109+255	5525	Present	Present	Present
60	109+255	110+365	1110	Not Present	Not Present	Not present
61	110+365	112+645	2280	Present	Present	Present
62	112+645	112+675	30	Present	Present	Present
63	112+675	115+000	2325	Present	Present	Present
64	115+000	115+050	50	Not Present	Not Present	Not present
65	115+000	114+920	80	Not Present	Not Present	Not present
66	114+920	114+255	665	Present	Present	Present
67	114+255	114+240	15	Present	Present	Present
68	114+240	114+185	55	Not Present	Present	Present
69	114+185	112+445	1740	Present	Present	Present
70	112+445	112+325	120	Present	Present	Present
71	112+325	112+280	45	Present	Present	Present
72	112+280	112+245	35	Present	Present	Present
73	112+245	110+690	1555	Present	Present	Present
74	110+690	110+420	270	Not Present	Present	Present
75	110+420	110+000	420	Present	Present	Present
76	110+000	109+865	135	Not Present	Present	Present
77	109+865	109+690	175	Present	Present	Present
78	109+690	109+285	405	Not Present	Present	Present
79	109+285	108+470	815	Present	Present	Present
80	108+470	108+265	205	Present	Present	Present
81	108+265	107+725	540	Present	Present	Present
82	107+725	107+675	50	Present	Present	Present
83	107+675	103+255	4420	Present	Present	Present
84	103+255	103+100	155	Present	Present	Present
85	103+100	102+250	850	Present	Present	Present
86	102+250	102+085	165	Not Present	Present	Present
87	102+085	101+730	355	Present	Present	Present
88	101+730	101+525	205	Not Present	Present	Present
89	101+525	100+945	580	Present	Present	Present
90	100+945	100+270	675	Not Present	Not Present	Not present
91	100+270	99+855	415	Present	Present	Present
92	99+855	99+570	285	Not Present	Present	Present
93	99+570	99+015	555	Present	Present	Present
94	99+015	98+610	405	Not Present	Not Present	Present
95	98+610	91+965	6645	Present	Present	Present

S.No.	Chainage (Km)		Length (m.)	Presence of Pavement Markings		
	From	To		Shoulder	Centre Line	Kerb
96	91+965	91+205	760	Not Present	Not Present	Present
97	91+205	88+970	2235	Present	Present	Present
98	88+970	88+165	805	Not Present	Not Present	Not present
99	88+165	87+475	690	Present	Not Present	Not present
100	87+475	86+465	1010	Not Present	Not Present	Not present
101	86+465	85+930	535	Present	Not Present	Not present
102	85+930	85+500	430	Not Present	Not Present	Not present
103	85+500	85+120	380	Present	Not Present	Present
104	85+120	83+255	1865	Not Present	Not Present	Not present
105	83+255	83+140	115	Present	Present	Present
106	83+140	82+900	240	Present	Not Present	Not present
107	82+900	82+670	230	Present	Present	Present
108	82+670	82+330	340	Present	Not Present	Not present
109	82+330	81+790	540	Present	Present	Present
110	81+790	80+920	870	Present	Present	Present
111	80+920	80+785	135	Present	Not Present	Not present
112	80+785	77+625	3160	Present	Present	Present
113	77+625	77+005	620	Present	Present	Not present
114	77+005	76+175	830	Present	Present	Present
115	76+175	69+180	6995	Present	Present	Present
116	69+180	68+365	815	Present	Present	Present
117	68+365	67+320	1045	Present	Present	Present
118	67+320	67+280	40	Present	Present	Not present
119	67+280	64+975	2305	Present	Present	Present
120	64+940	64+755	185	Present		Present
121	64+755	64+715	40	Not Present	Present	Present
122	64+715	64+580	135	Present	Present	Present
123	64+580	63+745	40	Present	Present	Present
124	63+745	63+535	135	Not Present	Present	Present
125	63+535	61+125	835	Present	Present	Present
126	61+125	60+915	210	Present	Present	Present
127	60+915	60+470	2410	Present	Present	Present
128	60+470	60+085	210	Present	Present	Present
129	60+085	59+185	445	Present	Present	Present
130	59+185	59+085	385	Not Present	Present	Present
131	59+085	58+965	900	Present	Present	Present
132	58+965	58+880	100	Present	Present	Present
133	58+880	58+670	120	Present	Present	Present
134	58+670	58+215	85	Present	Present	Present
135	58+215	58+125	210	Not Present	Present	Present
136	58+125	58+070	455	Not Present	Present	Not Present
137	58+070	57+990	90	Not Present	Present	Present
138	57+990	57+330	55	Present	Present	Present
139	57+330	57+225	80	Present	Present	Present
140	57+225	57+040	660	Present	Present	Present
141	57+040	56+998	105	Not Present	Present	Present
142	56+998	56+825	185	Not Present	Present	Present
143	56+825	56+405	42	Not Present	Present	Present

S.No.	Chainage (Km)		Length (m.)	Presence of Pavement Markings		
	From	To		Shoulder	Centre Line	Kerb
144	56+405	56+209	173	Present	Present	Present
145	56+209	55+470	420	Present	Present	Present
146	55+470	55+255	196	Present	Present	Present
147	55+255	54+940	739	Present	Present	Present
148	54+940	54+770	215	Present	Present	Present
149	54+770	54+200	315	Present	Present	Present
150	54+200	53+985	170	Present	Present	Present
151	53+985	53+550	570	Present	Present	Present
152	53+550	53+275	215	Present	Present	Present
153	53+275	52+085	435	Present	Present	Present
154	52+085	52+010	275	Present	Present	Not Present
155	52+010	51+960	1190	Present	Present	Present
156	51+960	50+970	75	Present	Present	Present
157	50+970	50+925	50	Not Present	Present	Present
158	50+925	48+690	990	Present	Present	Present
159	48+690	48+585	45	Not Present	Present	Present
160	48+585	48+365	2235	Present	Present	Present
161	48+365	47+415	105	Present	Present	Present
162	47+415	47+165	220	Present	Present	Present
163	47+165	46+335	950	Not Present	Present	Present
164	46+335	45+930	250	Present	Present	Present
165	45+930	45+815	830	Not Present	Present	Present
166	45+815	45+440	405	Present	Present	Present
167	45+440	45+155	115	Not Present	Present	Present
168	45+155	44+640	375	Present	Present	Present
169	44+640	44+445	285	Not Present	Present	Not Present
170	44+445	44+315	515	Present	Present	Present
171	44+315	44+020	195	Present	Present	Not Present
172	44+020	43+705	130	Present	Present	Present
173	43+705	43+300	295	Present	Present	Present
174	43+300	42+714	315	Present	Present	Present
175	42+714	42+285	405	Present	Present	Present
176	42+285	41+740	586	Present	Present	Present
177	41+740	41+600	429	Not Present	Present	Present
Total Length(m)			145630			

Annexure – 4.3

- Median/CW Edge Kerb stones

Median details

Sr No	Chainage (Km.)		Length(m)	Width of Median (m)	Remarks
	From	To			
1	40+500	41+190	690	5	
2	41+190	41+230	40	0	Structure
3	41+230	41+500	270	5-0	
4	41+500	41+530	30	0	median opening
5	41+530	42+760	1230	5	
6	42+760	42+825	65	5-0	
7	42+825	42+855	30	0	median opening
8	42+855	43+000	145	0-5	
9	43+000	43+600	600	5	
10	43+600	43+890	290	2.5-0	
11	43+890	43+925	35	0	median opening
12	43+925	45+790	1865	2.5-0	
13	45+790	45+815	25	0	median opening
14	45+815	46+820	1005	2.5-5	
15	46+820	47+250	430	5-0	
16	47+250	47+285	35	0	median opening
17	47+285	47+385	100	0-5	
18	47+385	48+900	1515	5	
19	48+900	49+060	160	5-0	
20	49+060	49+090	30	0	median opening
21	49+090	49+150	60	0-5	
22	49+150	50+930	1780	5	
23	50+930	51+040	110	5-0	
24	51+040	51+070	30	0	median opening
25	51+070	51+180	110	0-5	
26	51+180	51+770	590	5	
27	51+770	53+890	2120	2.5	
28	53+890	54+360	470	5	
29	54+360	54+480	120	5-0	
30	54+480	54+510	30	0	median opening
31	54+510	54+615	105	0-5	
32	54+615	55+000	385	5	
33	55+000	56+930	1930	2.5	
34	56+930	56+960	30	0	median opening
35	56+960	57+070	110	0-5	
36	57+070	59+140	2070	5	
37	59+140	59+295	155	5-0	
38	59+295	59+325	30	0	median opening
39	59+325	59+425	100	0-5	
40	59+425	60+430	1005	5	
41	60+430	60+520	90	5-0	
42	60+520	60+550	30	0	median opening
43	60+550	60+650	100	0-5	
44	60+650	61+690	1040	5	
45	61+690	61+725	35	0	Structure
46	61+725	62+675	950	5	
47	62+675	62+800	125	5-0	
48	62+800	62+840	40	0	median opening
49	62+840	62+940	100	0-5	
50	62+940	63+280	340	5	
51	63+280	63+400	120	2.5	

52	63+400	63+425	25	0	median opening
53	63+425	63+980	555	2.5	
54	63+980	64+010	30	0	median opening
55	64+010	65+345	1335	2.5	
56	65+345	65+375	30	0	median opening
57	65+375	65+480	105	5	
58	65+480	68+740	3260	2.5	
59	68+740	68+770	30	0	median opening
60	68+770	68+870	100	0-2.5	
61	68+870	70+730	1860	5	
62	70+730	70+760	30	0	median opening
63	70+760	71+015	255	5	
64	71+015	71+065	50	0	Structure
65	71+065	71+320	255	5	
66	71+320	72+820	1500	varies	Hilly region
67	72+820	72+840	20	0	median opening
68	72+840	73+550	710	5	
69	73+550	73+670	120	5-0	
70	73+670	73+700	30	0	median opening
71	73+700	73+800	100	0-5	
72	73+800	74+560	760	5	
73	74+560	74+690	130	5-0	
74	74+690	74+720	30	0	median opening
75	74+720	74+830	110	0-5	
76	74+830	76+300	1470	5	
77	76+300	76+530	230	varies	
78	76+530	76+560	30	0	median opening
79	76+560	77+000	440	varies	
80	77+000	77+640	640	5-0	
81	77+640	77+665	25	0	median opening
82	77+665	78+250	585	5	
83	78+250	79+000	750	5-2.5	
84	79+000	80+430	1430	5-0	
85	80+430	80+450	20	0	Structure
86	80+450	80+540	90	2.5	
87	80+540	80+640	100	5-0	
88	80+640	80+670	30	0	median opening
89	80+670	80+770	100	0-5	
90	80+770	83+385	2615	5	
91	83+385	83+510	125	5-0	
92	83+510	83+585	75	0	median opening
93	83+585	83+685	100	0-5	
94	83+685	85+070	1385	5	
95	85+070	85+150	80	5-0	
96	85+150	85+180	30	0	median opening
97	85+180	85+280	100	0-5	
98	85+280	85+320	40	5	
99	85+320	85+565	245	0	Structure
100	85+565	87+510	1945	5	
101	87+510	87+540	30	0	median opening
102	87+540	87+640	100	0-5	
103	87+640	89+000	1360	5	
104	89+000	90+040	1040	5-0	
105	90+040	90+080	40	0	Structure
106	90+080	90+470	390	0-5	

107	90+470	90+745	275	5	
108	90+745	90+885	140	5-0	
109	90+885	90+925	40	0	median opening
110	90+925	91+025	100	0-5	
111	91+025	91+930	905	5	
112	91+930	93+580	1650	5-2.5	
113	93+580	93+620	40	0	median opening
114	93+620	94+845	1225	2.5	
115	94+845	94+875	30	0	median opening
116	94+875	98+040	3165	2.5	
117	98+040	98+070	30	0	median opening
118	98+070	99+035	965	5	
119	99+035	99+055	20	0	median opening
120	99+055	99+505	450	0-5	
121	99+505	99+715	210	2.5-0	
122	99+715	99+750	35	0	median opening
123	99+750	99+850	100	0-5	
124	99+850	100+500	650	5	
125	100+500	100+530	30	0	median opening
126	100+530	100+730	200	0	Toll Plaza
127	100+730	100+750	20	0	median opening
128	100+750	101+650	900	5	
129	101+650	101+740	90	5-0	
130	101+740	101+770	30	0	median opening
131	101+770	101+870	100	0-5	
132	101+870	103+405	1535	5	
133	103+405	103+435	30	0	median opening
134	103+435	103+525	90	5	
135	103+525	103+640	115	5-00	
136	103+640	103+670	30	0	median opening
137	103+670	103+770	100	0-5	
138	103+770	104+900	1130	5	
139	104+900	104+930	30	0	median opening
140	104+930	105+670	740	0-5	
141	105+670	105+700	30	0	median opening
142	105+700	105+800	100	0-5	
143	105+800	107+580	1780	5	
144	107+580	107+600	20	0	Structure
145	107+600	107+840	240	5	
146	107+840	107+870	30	0	median opening
147	107+870	108+650	780	2.5	
148	108+650	108+680	30	0	median opening
149	108+680	109+000	320	0-5	
150	109+000	109+190	190	5	
151	109+190	109+220	30	0	Structure
152	109+220	109+890	670	5	
153	109+890	109+990	100	5-0	
154	109+990	110+020	30	0	median opening
155	110+020	110+120	100	0-5	
156	110+120	110+400	280	5	
157	110+400	110+500	100	5-0	
158	110+500	110+530	30	0	median opening
159	110+530	110+630	100	0-5	
160	110+630	111+000	370	5	
161	111+000	111+920	920	2.5	

162	111+920	111+950	30	0	median opening
163	111+950	112+460	510	5	
164	112+460	112+500	40	0	Structure
165	112+500	112+600	100	5	
166	112+600	113+540	940	2.5	
167	113+540	113+565	25	0	median opening
168	113+565	113+860	295	2.5	
169	113+860	113+890	30	0	median opening
170	113+890	114+000	110	2.5	
	Total Length		**73500**		

KERB						
FORWARD-DIRECTION						
S.No.	**Chainage (Km.)**		**Length (m.)**	**Side**	**Condition**	**Remarks**
	From	**To**				
1	45695	46045	350	LHS	Good	btw SR&MCW
2	46395	46595	200	LHS	Bad	btw SR&MCW (Damaged)
3	46650	46735	85	LHS	Bad	btw SR&MCW (Damaged)
4	47505	47550	45	LHS	Good	Truck Lay By
5	51100	51140	40	LHS	Good	Shoulder
6	51160	51400	240	LHS	Good	Shoulder
7	52010	52210	200	LHS	Good	Shoulder
8	52535	53055	520	LHS	Good	Shoulder
9	53825	54445	620	LHS	Bad	Shoulder (Damaged)
10	55240	56515	1275	LHS	Good	btw SR&MCW
11	60205	60380	175	LHS	Good	btw SR&MCW
12	64470	65350	880	LHS	Good	btw SR&MCW
13	71420	71705	285	LHS	Bad	Shoulder (Damaged)
14	73805	74060	255	LHS	Good	btw SR&MCW
15	74295	74520	225	LHS	Good	btw SR&MCW
16	75060	75215	155	LHS	Good	btw SR&MCW
17	75525	75760	235	LHS	Good	btw SR&MCW
18	76370	76430	60	LHS	Good	Shoulder
19	78720	79080	360	LHS	Good	Shoulder
20	80225	80790	565	LHS	Good	Shoulder
21	80840	81210	370	LHS	Good	Shoulder
22	82000	82065	65	LHS	Good	Truck Lay By
23	82190	82370	180	LHS	Good	Shoulder
24	87525	87560	35	LHS	Good	Truck Lay By
25	89150	89440	290	LHS	Good	btw SR&MCW
26	89805	90115	310	LHS	Good	Shoulder
27	94965	95030	65	LHS	Good	Truck Lay By
28	96725	96875	150	LHS	Good	Shoulder
29	96970	97020	50	LHS	Good	Shoulder
30	97100	97185	85	LHS	Bad	Shoulder (Damaged)
31	97215	97270	55	LHS	Good	Shoulder
32	97925	98075	150	LHS	Good	Shoulder
33	98130	98340	210	LHS	Good	Shoulder
34	99760	99850	90	LHS	Good	Shoulder
35	101075	101102	27	LHS	Good	Shoulder
36	101375	101510	135	LHS	Good	Shoulder
37	101755	101810	55	LHS	Good	Shoulder
38	102995	103070	75	LHS	Good	Shoulder
39	104125	104300	175	LHS	Good	btw SR&MCW
40	105200	105245	45	LHS	Good	Truck Lay By
41	106000	106045	45	LHS	Good	Truck Lay By
42	107040	107275	235	LHS	Good	btw SR&MCW
43	107360	107405	45	LHS	Good	btw SR&MCW
44	107545	107685	140	LHS	Good	btw SR&MCW
45	108290	108680	390	LHS	Good	btw SR&MCW
46	108890	109030	140	LHS	Good	Shoulder
47	111045	111090	45	LHS	Good	Truck Lay By
48	112345	112660	315	LHS	Good	Shoulder
49	113165	113625	460	LHS	Bad	btw SR&MCW (Damaged)
50	113760	113975	215	LHS	Bad	btw SR&MCW (Damaged)

51	114040	114350	310	LHS	Bad	btw SR&MCW (Damaged)
52	114400	114640	240	LHS	Good	btw SR&MCW
		Total Length (Km)	**11967**			

REVERSE-DIRECTION						
S.No.	**Chainage (Km.)**		**Length (m.)**	**Side**	**Condition**	**Remarks**
	From	**To**				
1	114425	114230	195	RHS	Good	Shoulder
2	114190	113795	395	RHS	Bad	btw SR&MCW (Damaged)
3	113725	112945	780	RHS	Bad	btw SR&MCW (Damaged)
4	112655	112610	45	RHS	Good	Truck Lay By
5	111035	110940	95	RHS	Good	Shoulder
6	108500	107705	795	RHS	Bad	btw SR&MCW (Damaged)
7	107385	106500	885	RHS	Bad	btw SR&MCW (Damaged)
8	106115	105920	195	RHS	Good	Shoulder
9	104020	103830	190	RHS	Good	btw SR&MCW
10	103530	103395	135	RHS	Good	Shoulder
11	102810	102635	175	RHS	Good	Shoulder
12	102090	101960	130	RHS	Good	Shoulder
13	101830	101785	45	RHS	Good	Truck Lay By
14	101340	101140	200	RHS	Good	Shoulder
15	100895	100850	45	RHS	Fair	Shoulder (Damaged)
16	100180	100120	60	RHS	Good	Truck Lay By
17	99610	99525	85	RHS	Fair	Shoulder (Damaged)
18	98810	98700	110	RHS	Good	Shoulder
19	98415	98125	290	RHS	Fair	Shoulder (Damaged)
20	97790	97725	65	RHS	Good	Truck Lay By
21	96340	96065	275	RHS	Bad	Shoulder (Damaged)
22	95880	95410	470	RHS	Bad	Shoulder (Damaged)
23	94400	94085	315	RHS	Good	Shoulder
24	93900	93375	525	RHS	Good	Shoulder
25	93300	93235	65	RHS	Good	Truck Lay By
26	90205	89710	495	RHS	Good	Shoulder
27	89305	89045	260	RHS	Good	btw SR&MCW
28	82210	82120	90	RHS	Bad	Shoulder (Damaged)
29	80950	80720	230	RHS	Good	Shoulder
30	80635	80025	610	RHS	Good	Shoulder
31	78845	78480	365	RHS	Good	Shoulder
32	76215	75880	335	RHS	Good	Shoulder
33	75050	74845	205	RHS	Good	btw SR&MCW
34	74235	73655	580	RHS	Good	btw SR&MCW
35	72620	72395	225	RHS	Bad	Shoulder (Damaged)
36	72340	72210	130	RHS	Good	Shoulder
37	70745	70670	75	RHS	Good	Truck Lay By
38	65260	64990	270	RHS	Good	btw SR&MCW
39	64850	64730	120	RHS	Good	btw SR&MCW
40	64635	64385	250	RHS	Good	btw SR&MCW
41	60315	60110	205	RHS	Good	btw SR&MCW
42	59335	59270	65	RHS	Good	Truck Lay By
43	56265	55080	1185	RHS	Good	btw SR&MCW
44	55050	54985	65	RHS	Good	btw SR&MCW
45	54455	54290	165	RHS	Good	Shoulder

46	54150	54085	65	RHS	Good	Shoulder
47	53965	53700	265	RHS	Good	Shoulder
48	51230	50950	280	RHS	Good	Shoulder
49	46340	46170	170	RHS	Good	btw SR&MCW
50	46095	45660	435	RHS	Good	btw SR&MCW
51	41645	41525	120	RHS	Good	Shoulder
		Total Length (m)	**13823.400**			

Median Openings					
S.No	Chainage (Km.)		Length of Median Opening (m)	Presence of Storage Lane	Remarks
	From	To			
1	42825	42855	85680	Present	
2	43890	43925	87815	Not Present	
3	45790	45815	91605	Not Present	
4	47250	47285	94535	Present	
5	49060	49090	98150	Present	
6	51125	51155	102280	Present	
7	54620	54640	109260	Present	
8	57090	57120	114210	Not Present	
9	59295	59325	118620	Present	
10	60520	60550	121070	Present	
11	62800	62840	125640	Present	
12	63400	63425	126825	Not Present	
13	63980	64010	127990	Not Present	
14	65345	65375	130720	Not Present	
15	68790	68825	137615	Present	
16	70810	70845	141655	Not Present	
17	72820	72840	145660	Present	
18	73755	73805	147560	Not Present	
19	74805	74850	149655	Present	
20	76685	76740	153425	Not Present	
21	77640	77665	155305	Present	
22	80850	80885	161735	Present	
23	83590	83690	167280	Present	
24	85255	85295	170550	Present	
25	87595	87625	175220	Present	
26	90885	90925	181810	Present	
27	92040	92080	184120	Present	
28	93580	93620	187200	Not Present	
29	94845	94875	189720	Present	
30	98040	98070	196110	Not Present	
31	99035	99050	198085	Not Present	
32	99715	99750	199465	Present	
33	100615	100645	201260	Not Present	
34	100855	100875	201730	Not Present	
35	101880	101905	203785	Present	
36	103790	103830	207620	Present	
37	105075	105110	210185	Not Present	
38	105860	105890	211750	Present	
39	108060	108100	216160	Not Present	
40	108650	108700	217350	Not Present	
41	110065	110100	220165	Not Present	
42	110600	110625	221225	Present	
43	112035	112065	224100	Not Present	
44	113670	113695	227365	Not Present	
45	113985	114010	227995	Not Present	
46	114410	114470	228880	Not Present	

Median Plantation					
S.No.	From Chainage (km)	To Chainage (km)	Length (km)	Condition	No. of Rows
1	41600	41700	100	Good	2
2	41700	42825	1125	Fair	2
3	42860	43020	160	Fair	2
4	43020	43092	72	Good	2
5	43092	43890	798	Fair	2
6	43890	44020	130	Not Present	1
7	44020	44095	75	Fair	1
8	44095	44230	135	Good	1
9	44500	44625	125	Fair	2
10	44905	45940	1035	Good	1
11	45940	46760	820	Fair	2
12	46760	47065	305	Good	2
13	47065	47250	185	Fair	2
14	47285	47375	90	Fair	1
15	47375	47900	525	Good	2
16	47900	48455	555	Fair	2
17	48455	49060	605	Good	2
18	49090	49130	40	Not Present	1
19	49130	49195	65	Fair	1
20	49195	49810	615	Good	2
21	49810	51025	1215	Good	2
22	51025	51125	100	Fair	1
23	51155	51180	25	Not Present	1
24	51180	51835	655	Fair	2
25	51835	52115	280	Good	2
26	52115	52220	105	Not Present	1
27	52220	52940	720	Good	1
28	52940	53235	295	Not Present	1
29	53600	53920	320	Not Present	1
30	53920	54555	635	Good	2
31	54555	54620	65	Not Present	1
32	54640	54710	70	Not Present	1
33	54710	55045	335	Good	2
34	55045	55530	485	Fair	2
35	55530	55890	360	Good	2
36	55890	56980	1090	Fair	2
37	56980	57080	100	Fair	1
38	57125	57680	555	Fair	2
39	57680	57870	190	Good	2
40	57870	57960	90	Fair	2
41	58000	58815	815	Fair	2
42	58815	59195	380	Good	2
43	59195	59295	100	Fair	1
44	59325	60440	1115	Good	2
45	60440	60520	80	Fair	1
46	60550	60645	95	Fair	1
47	60645	60965	320	Good	2

S.No.	From Chainage (km)	To Chainage (km)	Length (km)	Condition	No. of Rows
48	60965	61695	730	Fair	2
49	61750	62705	955	Good	2
50	62705	62800	95	Good	1
51	62840	63400	560	Good	2
52	63425	63620	195	Good	1
53	63620	63680	60	Not Present	1
54	63680	63980	300	Good	1
55	64010	65040	1030	Good	1
56	65015	65325	310	Good	2
57	65375	65405	30	Not Present	1
58	65405	65985	580	Good	2
59	65985	66795	810	Good	2
60	66795	67690	895	Fair	2
61	67690	68790	1100	Good	2
62	68825	70490	1665	Good	2
63	70490	70810	320	Fair	2
64	70845	71100	255	Good	2
65	71155	71195	40	Not Present	2
66	71195	71390	195	Good	2
67	71390	72805	1415	Not Present	2
68	72840	73632	792	Good	2
69	73632	73755	123	Fair	2
70	73805	74805	1000	Good	2
71	74850	75515	665	Good	2
72	75515	76400	885	Fair	2
73	76400	76685	285	Good	2
74	76740	77205	465	Good	2
75	77205	77530	325	Fair	2
76	77530	77570	40	Not Present	1
77	77570	77640	70	Fair	1
78	77665	78545	880	Fair	2
79	78545	79185	640	Good	1
80	79185	79485	300	Fair	2
81	79485	80850	1365	Good	2
82	80885	80975	90	Not Present	2
83	80975	81320	345	Fair	2
84	81320	82470	1150	Good	2
85	82470	83590	1120	Fair	2
86	83690	84135	445	Good	2
87	84135	85255	1120	Fair	2
88	85295	85435	140	Fair	2
89	85700	87575	1875	Good	2
90	87575	87595	20	Not Present	2
91	87625	87645	20	Not Present	1
92	87645	88475	830	Good	2
93	88475	88820	345	Fair	2
94	88820	89465	645	Good	2
95	89465	90000	535	Good	1
96	90010	90795	785	Good	2

S.No.	From Chainage (km)	To Chainage (km)	Length (km)	Condition	No. of Rows
97	90795	90880	85	Fair	1
98	90925	90955	30	Not Present	1
99	90955	91405	450	Good	2
100	91405	91960	555	Fair	2
101	91960	92040	80	Fair	1
102	93065	93580	515	Fair	1
103	93620	94840	1220	Good	2
104	94875	95485	610	Good	1
105	95485	95530	45	Not Present	1
106	95530	98040	2510	Good	1
107	98075	99025	950	Good	1
108	99055	99715	660	Good	2
109	99750	99815	65	Not Present	1
110	99815	100615	800	Good	2
111	100645	100855	210	Fair	2
112	100875	101800	925	Good	2
113	101800	101870	70	Good	1
114	101905	103790	1885	Good	2
115	103830	105075	1245	Good	2
116	105110	105850	740	Good	2
117	105890	106750	860	Good	2
118	106750	107205	455	Fair	2
119	107205	107270	65	Good	2
120	107270	107300	30	Not Present	2
121	107300	107590	290	Good	2
122	107590	107880	290	Not Present	2
123	107880	108060	180	Fair	2
124	108100	108645	545	Good	1
125	108700	109250	550	Good	2
126	109290	109365	75	Not Present	2
127	109365	109965	600	Good	2
128	109965	110065	100	Fair	1
129	110100	110510	410	Fair	2
130	110510	110570	60	Good	1
131	110570	110600	30	Not Present	1
132	110625	111255	630	Good	2
133	111255	112005	750	Good	1
134	112005	112035	30	Not Present	1
135	112065	112585	520	Good	2
136	112625	112735	110	Fair	2
137	112735	112895	160	Good	2
138	112895	113670	775	Fair	1
139	113695	113985	290	Fair	1
140	114010	114410	400	Fair	1
141	114470	115045	575	Fair	2

Annexure – 4.4

- Kilometer Stones

Kilometer Stone Details

S.No.	Chainage (Km)	Side	Present / Not present	Condition
1	42+000	LHS	Present	GOOD
2	43+000	LHS	Present	GOOD
3	44+000	LHS	Present	GOOD
4	45+000	LHS	Present	GOOD
5	47+000	LHS	Present	GOOD
6	48+000	LHS	Present	GOOD
7	49+000	LHS	Present	GOOD
8	50+000	LHS	Present	GOOD
9	51+000	LHS	Present	GOOD
10	52+000	LHS	Present	GOOD
11	53+000	LHS	Present	GOOD
12	54+000	LHS	Present	GOOD
13	55+000	LHS	Present	GOOD
14	56+000	LHS	Present	GOOD
15	58+000	LHS	Present	GOOD
16	61+000	LHS	Present	GOOD
17	62+000	LHS	Present	GOOD
18	63+000	LHS	Present	GOOD
19	64+000	LHS	Present	GOOD
20	66+000	LHS	Present	GOOD
21	68+000	LHS	Present	GOOD
22	69+000	LHS	Present	GOOD
23	70+000	LHS	Present	GOOD
24	71+000	LHS	Present	GOOD
25	72+000	LHS	Present	GOOD
26	73+000	LHS	Present	GOOD
27	74+000	LHS	Present	GOOD
28	76+000	LHS	Present	GOOD
29	77+000	LHS	Present	GOOD
30	78+000	LHS	Present	GOOD
31	79+000	LHS	Present	GOOD
32	80+000	LHS	Present	GOOD
33	81+000	LHS	Present	GOOD
34	82+000	LHS	Present	GOOD
35	83+000	LHS	Present	GOOD
36	84+000	LHS	Present	FAIR
37	85+000	LHS	Present	GOOD
38	86+000	LHS	Present	GOOD
39	87+000	LHS	Present	GOOD
40	88+000	LHS	Present	GOOD
41	91+000	LHS	Present	GOOD
42	92+000	LHS	Present	GOOD
43	94+000	LHS	Present	GOOD
44	95+000	LHS	Present	GOOD
45	96+000	LHS	Present	GOOD
46	97+000	LHS	Present	GOOD
47	98+000	LHS	Present	GOOD

S.No.	Chainage (Km)	Side	Present / Not present	Condition
48	99+000	LHS	Present	GOOD
49	100+000	LHS	Present	GOOD
50	101+000	LHS	Present	GOOD
51	103+000	LHS	Present	GOOD
52	106+000	LHS	Present	GOOD
53	107+000	LHS	Present	GOOD
54	108+000	LHS	Present	GOOD
55	109+000	LHS	Present	GOOD
56	112+000	LHS	Present	GOOD
57	113+000	LHS	Present	GOOD
58	114+000	LHS	Present	GOOD
59	115+000	LHS	Present	GOOD
1	114+000	RHS	Present	GOOD
2	113+000	RHS	Present	GOOD
3	112+000	RHS	Present	GOOD
4	111+000	RHS	Present	GOOD
5	109+000	RHS	Present	GOOD
6	108+000	RHS	Present	GOOD
7	107+000	RHS	Present	GOOD
8	106+000	RHS	Present	GOOD
9	105+000	RHS	Present	GOOD
10	104+000	RHS	Present	GOOD
11	100+000	RHS	Present	POOR
12	98+000	RHS	Present	GOOD
13	97+000	RHS	Present	GOOD
14	96+000	RHS	Present	GOOD
15	95+000	RHS	Present	GOOD
16	94+000	RHS	Present	GOOD
17	92+000	RHS	Present	GOOD
18	91+000	RHS	Present	GOOD
19	90+000	RHS	Present	GOOD
20	89+000	RHS	Present	GOOD
21	88+000	RHS	Present	GOOD
22	87+000	RHS	Present	GOOD
23	86+000	RHS	Present	GOOD
24	85+000	RHS	Present	GOOD
25	84+000	RHS	Present	GOOD
26	83+000	RHS	Present	GOOD
27	82+000	RHS	Present	GOOD
28	81+000	RHS	Present	GOOD
29	80+000	RHS	Present	GOOD
30	79+000	RHS	Present	GOOD
31	78+000	RHS	Present	GOOD
32	77+000	RHS	Present	GOOD
33	76+000	RHS	Present	GOOD
34	74+000	RHS	Present	GOOD
35	73+000	RHS	Present	GOOD
36	72+000	RHS	Present	GOOD

S.No.	Chainage (Km)	Side	Present / Not present	Condition
37	71+000	RHS	Present	GOOD
38	69+000	RHS	Present	GOOD
39	68+000	RHS	Present	GOOD
40	67+000	RHS	Present	GOOD
41	66+000	RHS	Present	GOOD
42	64+000	RHS	Present	GOOD
43	63+000	RHS	Present	GOOD
44	62+000	RHS	Present	GOOD
45	60+000	RHS	Present	GOOD
46	59+000	RHS	Present	GOOD
47	58+000	RHS	Present	GOOD
48	56+000	RHS	Present	GOOD
49	54+000	RHS	Present	GOOD
50	53+000	RHS	Present	GOOD
51	52+000	RHS	Present	GOOD
52	51+000	RHS	Present	GOOD
53	50+000	RHS	Present	GOOD
54	49+000	RHS	Present	GOOD
55	48+000	RHS	Present	GOOD
56	47+000	RHS	Present	GOOD
57	46+000	RHS	Present	GOOD
58	45+000	RHS	Present	GOOD
59	42+000	RHS	Present	GOOD
60	41+000	RHS	Present	GOOD

Annexure – 4.5

- Traffic Signage

Sign Boards

FORWARD-DIRECTION

S.No	Chainage (Km)	Type	Side	Condition	Remarks
1	41745	Informatory	LHS	Good	Shoulder
2	45450	Informatory	LHS	Good	Shoulder
3	46435	Informatory	LHS	Good	SR
4	48120	Informatory	LHS	Good	Shoulder
5	49055	Informatory	LHS	Good	Shoulder
6	50985	Informatory	LHS	Good	Shoulder
7	51040	Cautionary	LHS	Good	Mediain
8	51075	Informatory	LHS	Good	Shoulder
9	51220	Informatory	LHS	Good	Shoulder
10	51515	Informatory	LHS	Good	Mediain
11	51670	Informatory	LHS	Good	Shoulder
12	51965	Cautionary	LHS	Good	Shoulder
13	52315	Cautionary	LHS	Good	Shoulder
14	52935	Cautionary	LHS	Good	Shoulder
15	53005	Mandatory	LHS	Good	Shoulder
16	54750	Informatory	LHS	Good	Shoulder
17	56980	Cautionary	LHS	Good	Mediain
18	60110	Informatory	LHS	Good	Shoulder
19	60180	Informatory	LHS	Good	Shoulder
20	60460	Cautionary	LHS	Good	Mediain
21	62785	Informatory	LHS	Good	Shoulder
22	62850	Informatory	LHS	Good	Shoulder
23	63200	Informatory	LHS	Good	Shoulder
24	63220	Informatory	LHS	Good	Shoulder
25	63245	Mandatory	LHS	Good	Shoulder
26	63265	Informatory	LHS	Good	Shoulder
27	63935	Cautionary	LHS	Good	Mediain
28	63955	Informatory	LHS	Good	Shoulder
29	64305	Cautionary	LHS	Good	Shoulder
30	64350	Informatory	LHS	Good	Shoulder
31	68555	Informatory	LHS	Good	Shoulder
32	68685	Cautionary	LHS	Good	Shoulder
33	69680	Informatory	LHS	Good	Shoulder
34	70105	Informatory	LHS	Good	Shoulder
35	70330	Cautionary	LHS	Good	Shoulder
36	70545	Informatory	LHS	Good	Shoulder
37	70635	Cautionary	LHS	Good	Shoulder
38	71635	Cautionary	LHS	Good	Shoulder
39	71885	Cautionary	LHS	Good	Shoulder
40	72800	Informatory	LHS	Good	Shoulder
41	73690	Cautionary	LHS	Good	Mediain
42	73945	Cautionary	LHS	Good	Shoulder
43	74265	Cautionary	LHS	Good	Shoulder
44	74725	Cautionary	LHS	Good	Mediain
45	75395	Informatory	LHS	Good	Shoulder
46	76550	Cautionary	LHS	Good	Shoulder

S.No	Chainage (Km)	Type	Side	Condition	Remarks
47	76640	Cautionary	LHS	Good	Shoulder
48	76695	Informatory	LHS	Good	Shoulder
49	77415	Cautionary	LHS	Good	Mediain
50	77595	Informatory	LHS	Good	Shoulder
51	78645	Informatory	LHS	Good	Shoulder
52	79260	Mandatory	LHS	Good	Shoulder
53	79400	Informatory	LHS	Good	Shoulder
54	80710	Informatory	LHS	Good	Shoulder
55	80725	Cautionary	LHS	Good	Mediain
56	81925	Informatory	LHS	Good	Shoulder
57	82870	Informatory	LHS	Good	Shoulder
58	83420	Informatory	LHS	Good	Shoulder
59	83450	Cautionary	LHS	Good	Shoulder
60	83495	Cautionary	LHS	Good	Mediain
61	85160	Cautionary	LHS	Good	Mediain
62	85360	Cautionary	LHS	Good	Shoulder
63	87335	Informatory	LHS	Good	Shoulder
64	87375	Cautionary	LHS	Good	Shoulder
65	87435	Cautionary	LHS	Good	Shoulder
66	87905	Informatory	LHS	Good	Shoulder
67	88220	Informatory	LHS	Good	Shoulder
68	89260	Informatory	LHS	Good	Shoulder
69	90770	Informatory	LHS	Good	Shoulder
70	91850	Informatory	LHS	Good	Shoulder
71	91950	Cautionary	LHS	Good	Mediain
72	92070	Informatory	LHS	Good	Shoulder
73	92950	Cautionary	LHS	Good	SR
74	93200	Informatory	LHS	Good	Shoulder
75	93440	Mandatory	LHS	Good	Shoulder
76	93515	Cautionary	LHS	Good	M,S
77	93560	Informatory	LHS	Good	Shoulder
78	93635	Informatory	LHS	Good	Shoulder
79	93680	Informatory	LHS	Good	Shoulder
80	93900	Mandatory	LHS	Good	Shoulder
81	94450	Mandatory	LHS	Good	Shoulder
82	94780	Mandatory	LHS	Good	Shoulder
83	94800	Cautionary	LHS	Good	Shoulder
84	94815	Cautionary	LHS	Good	Shoulder
85	94835	Informatory	LHS	Good	Shoulder
86	94860	Informatory	LHS	Good	Shoulder
87	94995	Informatory	LHS	Good	Shoulder
88	95995	Cautionary	LHS	Good	Shoulder
89	96375	Mandatory	LHS	Good	Shoulder
90	96545	Cautionary	LHS	Good	Shoulder
91	97280	Cautionary	LHS	Good	Shoulder
92	97305	Mandatory	LHS	Good	Shoulder
93	97605	Cautionary	LHS	Good	Shoulder
94	97665	Mandatory	LHS	Good	Shoulder
95	98015	Cautionary	LHS	Good	Mediain
96	98480	Informatory	LHS	Good	Shoulder

S.No	Chainage (Km)	Type	Side	Condition	Remarks
97	98965	Informatory	LHS	Good	Shoulder
98	99875	Informatory	LHS	Good	Shoulder
99	99905	Informatory	LHS	Good	Shoulder
100	99965	Informatory	LHS	Good	Shoulder
101	100070	Informatory	LHS	Good	Shoulder
102	100325	Informatory	LHS	Good	Shoulder
103	100370	Informatory	LHS	Good	Shoulder
104	100430	Informatory	LHS	Good	Shoulder
105	100630	Informatory	LHS	Good	Shoulder
106	100735	Mandatory	LHS	Good	Mediain
107	100755	Cautionary	LHS	Good	Mediain
108	101530	Informatory	LHS	Good	Shoulder
109	101850	Cautionary	LHS	Good	Shoulder
110	103540	Cautionary	LHS	Good	Shoulder
111	104380	Informatory	LHS	Good	Shoulder
112	105780	Cautionary	LHS	Good	Shoulder
113	105830	Informatory	LHS	Good	Shoulder
114	105945	Informatory	LHS	Good	Shoulder
115	107185	Informatory	LHS	Good	SR
116	10775	Cautionary	LHS	Good	Shoulder
117	107960	Informatory	LHS	Good	Shoulder
118	108000	Informatory	LHS	Good	Shoulder
119	108620	Cautionary	LHS	Good	Mediain
120	108740	Informatory	LHS	Good	Shoulder
121	108865	Cautionary	LHS	Good	Shoulder
122	109225	Cautionary	LHS	Good	Shoulder
123	109295	Cautionary	LHS	Good	Shoulder
124	109425	Mandatory	LHS	Good	Shoulder
125	110175	Mandatory	LHS	Good	Mediain
126	110560	Mandatory	LHS	Good	Shoulder
127	110905	Informatory	LHS	Good	Shoulder
128	112555	Cautionary	LHS	Good	Shoulder
129	112655	Cautionary	LHS	Good	Shoulder
130	112885	Informatory	LHS	Good	Shoulder
131	112955	Informatory	LHS	Good	Shoulder
132	113915	Cautionary	LHS	Good	SR
133	114085	Cautionary	LHS	Good	SR
134	114375	Cautionary	LHS	Good	Mediain
135	114930	Informatory	LHS	Good	Shoulder

REVERSE-DIRECTION					
S.No	Chainage (Km)	Type	Side	Condition	Remarks
1	114610	Informatory	RHS	Good	Shoulder
2	114500	Informatory	RHS	Good	Shoulder
3	114480	Mandatory	RHS	Good	Shoulder
4	114430	Informatory	RHS	Good	Shoulder
5	113915	Cautionary	RHS	Good	SR
6	112960	Cautionary	RHS	Good	SR

S.No	Chainage (Km)	Type	Side	Condition	Remarks
7	112715	Informatory	RHS	Good	Shoulder
8	111940	Cautionary	RHS	Good	Median
9	111895	Cautionary	RHS	Good	Shoulder
10	110735	Informatory	RHS	Good	Shoulder
11	110715	Mandatory	RHS	Good	Shoulder
12	110665	Cautionary	RHS	Good	Shoulder
13	110530	Cautionary	RHS	Good	Median
14	108755	Informatory	RHS	Good	Shoulder
15	108685	Cautionary	RHS	Good	M,S
16	107925	Informatory	RHS	Good	SR
17	107910	Cautionary	RHS	Good	SR
18	107865	Cautionary	RHS	Good	SR
19	107775	Cautionary	RHS	Good	SR
20	107190	Informatory	RHS	Good	SR
21	106360	Informatory	RHS	Good	Shoulder
22	106245	Cautionary	RHS	Good	Shoulder
23	105710	Cautionary	RHS	Good	Median
24	105450	Cautionary	RHS	Good	Shoulder
25	104885	Cautionary	RHS	Good	Median
26	104640	Informatory	RHS	Good	Shoulder
27	104750	Informatory	RHS	Good	Shoulder
28	103630	Informatory	RHS	Good	Shoulder
29	102640	Informatory	RHS	Good	Shoulder
30	100990	Informatory	RHS	Good	Shoulder
31	100950	Informatory	RHS	Good	Shoulder
32	100775	Informatory	RHS	Good	Shoulder
33	100730	Informatory	RHS	Good	Shoulder
34	100695	Informatory	RHS	Good	Shoulder
35	100650	Informatory	RHS	Good	Shoulder
36	100560	Mandatory	RHS	Good	Median
37	100535	Cautionary	RHS	Good	Median
38	100240	Informatory	RHS	Good	Shoulder
39	99540	Informatory	RHS	Good	Shoulder
40	99340	Informatory	RHS	Good	Shoulder
41	98650	Informatory	RHS	Good	Shoulder
42	98650	Cautionary	RHS	Good	Shoulder
43	98490	Informatory	RHS	Good	Shoulder
44	98400	Cautionary	RHS	Good	Shoulder
45	98140	Cautionary	RHS	Good	Shoulder
46	98080	Informatory	RHS	Good	Shoulder
47	97890	Cautionary	RHS	Good	Median
48	97835	Informatory	RHS	Good	Shoulder
49	97705	Cautionary	RHS	Good	Shoulder
50	97660	Informatory	RHS	Good	Shoulder
51	97385	Informatory	RHS	Good	Shoulder
52	97320	Cautionary	RHS	Good	Shoulder
53	97035	Cautionary	RHS	Good	Shoulder
54	96690	Cautionary	RHS	Good	Shoulder
55	96275	Informatory	RHS	Good	Shoulder
56	96160	Cautionary	RHS	Good	Shoulder

S.No	Chainage (Km)	Type	Side	Condition	Remarks
57	96070	Informatory	RHS	Good	Shoulder
58	95860	Informatory	RHS	Good	Shoulder
59	95480	Cautionary	RHS	Good	Shoulder
60	95440	Informatory	RHS	Good	Shoulder
61	95205	Informatory	RHS	Good	Shoulder
62	94380	Mandatory	RHS	Good	Shoulder
63	94270	Mandatory	RHS	Good	Shoulder
64	94115	Informatory	RHS	Good	Shoulder
65	94095	Cautionary	RHS	Good	Shoulder
66	93720	Cautionary	RHS	Good	Shoulder
67	93720	Mandatory	RHS	Good	Shoulder
68	93550	Cautionary	RHS	Good	Shoulder
69	93355	Informatory	RHS	Good	Shoulder
70	93310	Cautionary	RHS	Good	Shoulder
71	93265	Informatory	RHS	Good	Shoulder
72	92695	Mandatory	RHS	Good	Median
73	92600	Mandatory	RHS	Good	Median
74	92335	Mandatory	RHS	Good	Median
75	92285	Mandatory	RHS	Good	Median
76	92060	Cautionary	RHS	Good	SR
77	91965	Informatory	RHS	Good	Shoulder
78	91000	Informatory	RHS	Good	Shoulder
79	89310	Mandatory	RHS	Good	SR
80	89180	Informatory	RHS	Good	SR
81	89115	Informatory	RHS	Good	SR
82	89095	Mandatory	RHS	Good	SR
83	88670	Cautionary	RHS	Good	Shoulder
84	88565	Mandatory	RHS	Good	Shoulder
85	87995	Informatory	RHS	Good	Shoulder
86	87860	Informatory	RHS	Good	Shoulder
87	87655	Cautionary	RHS	Good	Shoulder
88	87610	Cautionary	RHS	Good	Median
89	87430	Informatory	RHS	Good	Shoulder
90	86315	Mandatory	RHS	Good	Shoulder
91	86145	Informatory	RHS	Good	Shoulder
92	85560	Cautionary	RHS	Good	Shoulder
93	85240	Cautionary	RHS	Good	Median
94	83700	Informatory	RHS	Good	Shoulder
95	83660	Cautionary	RHS	Good	Median
96	83185	Mandatory	RHS	Good	Shoulder
97	82445	Informatory	RHS	Good	Shoulder
98	81950	Informatory	RHS	Good	Shoulder
99	80840	Cautionary	RHS	Good	Shoulder
100	80765	Informatory	RHS	Good	Shoulder
101	80560	Mandatory	RHS	Good	Shoulder
102	79445	Informatory	RHS	Good	Shoulder
103	79145	Informatory	RHS	Good	Shoulder
104	78885	Informatory	RHS	Good	Shoulder
105	77285	Cautionary	RHS	Good	Median
106	76640	Cautionary	RHS	Good	Shoulder

S.No	Chainage (Km)	Type	Side	Condition	Remarks
107	76550	Informatory	RHS	Good	Shoulder
108	75600	Mandatory	RHS	Good	Shoulder
109	74640	Informatory	RHS	Good	Shoulder
110	73770	Cautionary	RHS	Good	Median
111	72060	Cautionary	RHS	Good	Shoulder
112	72000	Cautionary	RHS	Good	Median
113	71880	Informatory	RHS	Good	Shoulder
114	71690	Cautionary	RHS	Good	Shoulder
115	70925	Informatory	RHS	Good	Shoulder
116	70740	Cautionary	RHS	Good	Median
117	69820	Mandatory	RHS	Good	Shoulder
118	68845	Cautionary	RHS	Good	Median
119	68825	Informatory	RHS	Good	Shoulder
120	68670	Informatory	RHS	Good	Shoulder
121	66075	Informatory	RHS	Good	Shoulder
122	65455	Informatory	RHS	Good	Shoulder
123	65320	Informatory	RHS	Good	Shoulder
124	64350	Mandatory	RHS	Good	Shoulder
125	63875	Informatory	RHS	Good	Shoulder
126	63510	Informatory	RHS	Good	Shoulder
127	62880	Cautionary	RHS	Good	Median
128	61330	Cautionary	RHS	Good	Shoulder
129	60590	Cautionary	RHS	Good	Median
130	59420	Cautionary	RHS	Good	Shoulder
131	59400	Informatory	RHS	Good	Shoulder
132	59335	Cautionary	RHS	Good	Median
133	59210	Informatory	RHS	Good	Shoulder
134	58595	Cautionary	RHS	Good	Shoulder
135	57070	Informatory	RHS	Good	Shoulder
136	56965	Cautionary	RHS	Good	Median
137	56400	Cautionary	RHS	Good	Shoulder
138	54620	Cautionary	RHS	Good	Median
139	53815	Mandatory	RHS	Good	Shoulder
140	53500	Cautionary	RHS	Good	Shoulder
141	52545	Informatory	RHS	Good	Shoulder
142	52455	Cautionary	RHS	Good	Shoulder
143	51870	Mandatory	RHS	Good	Shoulder
144	80960	Informatory	RHS	Good	Shoulder
145	49265	Informatory	RHS	Good	Shoulder
146	49210	Informatory	RHS	Good	Shoulder
147	49095	Cautionary	RHS	Good	Shoulder
148	49050	Cautionary	RHS	Good	Median
149	48975	Informatory	RHS	Good	Shoulder
150	47440	Informatory	RHS	Good	Shoulder
151	47225	Cautionary	RHS	Good	Median
152	46220	Informatory	RHS	Good	SR
153	45710	Cautionary	RHS	Good	Median
154	44965	Informatory	RHS	Good	Shoulder
155	44775	Informatory	RHS	Good	Shoulder
156	44055	Informatory	RHS	Good	Shoulder

S.No	Chainage (Km)	Type	Side	Condition	Remarks
157	42910	Cautionary	RHS	Good	Median
158	42890	Informatory	RHS	Good	Shoulder
159	42455	Cautionary	RHS	Good	Shoulder
160	42179	Mandatory	RHS	Good	Shoulder
161	41690	Cautionary	RHS	Good	Median
162	41790	Cautionary	RHS	Good	Median
163	41610	Cautionary	RHS	Good	M,S
164	41555	Cautionary	RHS	Good	Shoulder
165	41455	Cautionary	RHS	Good	Shoulder
166	41315	Mandatory	RHS	Good	Shoulder

Gantry Board					
FORWARD-DIRECTION					
S.No	Chainage (Km)	Side	Type	Condition	Remarks
1	41715	LHS	2 Legged	Good	Overhead
2	41895	LHS	1 Legged	Good	Shoulder
3	44000	LHS	1 Legged	Good	Shoulder
4	76520	LHS	1 Legged	Good	Shoulder
5	91895	LHS	1 Legged	Good	Shoulder
6	99700	LHS	1 Legged	Good	Shoulder
7	100250	LHS	1 Legged	Good	Shoulder

REVERSE-DIRECTION					
S.No	Chainage (Km)	Side	Type	Condition	Remarks
1	101565	RHS	1 Legged	Good	Shoulder
2	101075	RHS	1 Legged	Good	Shoulder
3	99755	RHS	1 Legged	Good	Shoulder
4	98885	RHS	1 Legged	Good	Shoulder
5	98230	RHS	1 Legged	Good	Shoulder
6	92970	RHS	1 Legged	Good	Shoulder
7	77790	RHS	1 Legged	Good	Shoulder
8	72975	RHS	1 Legged	Good	Shoulder
9	41855	RHS	1 Legged	Good	Shoulder
10	41670	RHS	2 Legged	Good	Overhead
11	41600	RHS	2 Legged	Good	Overhead
12	41955	RHS	1 Legged	Good	Shoulder
13	41770	RHS	2 Legged	Good	Overhead
14	41670	RHS	2 Legged	Good	Overhead

Annexure – 4.6

- Crash Barrier

W Beam Crash Barrier								
FORWARD-DIRECTION								
S.no	From Chainage (km)	To Chainage (Km)	Length (km)	Side	Type	Damaged Length(m)	Condition	Remarks
1	52320	52455	135	I	W Beam CB	2	Good	
2	53040	53165	125	I	W Beam CB	2	Good	
3	53171	53405	234	I	W Beam CB	7	Fair	
4	53475	53780	305	I	W Beam CB	7	Fair	
5	57935	57955	20	I	W Beam CB	2	Good	
6	58000	58050	50	I	W Beam CB		Good	
7	58560	58765	205	I	W Beam CB	5	Fair	
8	59060	59085	25	I	W Beam CB	1	Good	
9	59870	60045	175	I	W Beam CB	4	Good	
10	61680	61700	20	I	W Beam CB	1	Good	
11	61745	61765	20	I	W Beam CB		Good	
12	67420	67485	65	I	W Beam CB	2	Good	
13	67495	67605	110	I	W Beam CB	2	Good	
14	67615	68040	425	I	W Beam CB	7	Fair	
15	68260	68300	40	I	W Beam CB		Good	
16	68315	68410	95	I	W Beam CB		Good	
17	68450	68550	100	I	W Beam CB	2	Good	
18	71075	71100	25	I	W Beam CB		Good	
19	71155	71175	20	I	W Beam CB		Good	
20	73535	73610	75	I	W Beam CB	2	Good	
21	74145	74355	210	I	W Beam CB	2	Good	
22	74415	74455	40	I	W Beam CB		Good	
23	75255	75295	40	I	W Beam CB		Good	
24	75315	75355	40	I	W Beam CB		Good	
25	75370	75450	80	I	W Beam CB	2	Good	
26	75465	75485	20	I	W Beam CB		Good	
27	75915	76340	425	I	W Beam CB	2	Good	
28	76360	76420	60	I	W Beam CB		Good	
29	76535	76710	175	I	W Beam CB	1	Good	
30	80185	80615	430	I	W Beam CB	4	Good	
31	80680	80790	110	I	W Beam CB	2	Good	
32	80835	81190	355	I	W Beam CB	2	Good	
33	81350	81520	170	I	W Beam CB		Good	
34	82090	82140	50	I	W Beam CB		Good	
35	82175	82400	225	I	W Beam CB		Good	
36	82655	82825	170	I	W Beam CB	2	Good	
37	83060	83165	105	I	W Beam CB		Good	
38	84510	84535	25	I	W Beam CB		Good	
39	84575	84605	30	I	W Beam CB	2	Good	
40	85370	85415	45	I	W Beam CB	2	Good	
41	85700	85815	115	I	W Beam CB	1	Good	
42	85825	85935	110	I	W Beam CB	2	Good	
43	86295	86400	105	I	W Beam CB	4	Good	
44	88310	88580	270	I	W Beam CB	7	Fair	
45	89480	89755	275	I	W Beam CB	2	Good	
46	90110	90320	210	I	W Beam CB	3	Good	
47	93735	93990	255	I	W Beam CB		Good	
48	94090	94285	195	I	W Beam CB	2	Good	
49	94380	94855	475	I	W Beam CB	15	Poor	
50	95365	95420	55	I	W Beam CB	2	Good	
51	95440	95570	130	I	W Beam CB	1	Good	
52	95670	95765	95	I	W Beam CB	2	Good	
53	95950	96030	80	I	W Beam CB	2	Good	
54	96045	96240	195	I	W Beam CB	4	Good	
55	96365	96460	95	I	W Beam CB	2	Good	
56	96550	96700	150	I	W Beam CB	5	Fair	
57	96865	96950	85	I	W Beam CB	3	Good	
58	97015	97090	75	I	W Beam CB	3	Good	
59	97265	97365	100	I	W Beam CB	2	Good	
60	97460	97795	335	I	W Beam CB	2	Good	
61	97890	98065	175	I	W Beam CB	3	Good	
62	101360	101505	145	I	W Beam CB		Good	
63	102970	103070	100	I	W Beam CB	1	Good	

64	103535	103570	35	I	W Beam CB		Good	
65	103600	103630	30	I	W Beam CB		Good	
66	107760	107795	35	I	W Beam CB		Good	
67	107825	107885	60	I	W Beam CB	1	Good	
68	109220	109250	30	I	W Beam CB	1	Good	
69	109285	109350	65	I	W Beam CB	1	Good	
70	112325	112580	255	I	W Beam CB	2	Good	
71	112635	112725	90	I	W Beam CB		Good	
72	115035	115040	5	I	W Beam CB		Good	
		Total Length (m)	**9504**		**Total Damaged Length**	**140**		

REVERSE-DIRECTION								
S.no	**From Chainage (km)**	**To Chainage (Km)**	**Length (km)**	**Side**	**Type**	**Damaged Length(m)**	**Condition**	**Remarks**
1	115000	114980	20	D	W Beam CB		Good	
2	114940	114915	25	D	W Beam CB		Good	
3	112494	112460	34	D	W Beam CB		Good	
4	112399	112214	190	D	W Beam CB	6	Fair	
5	112185	112119	66	D	W Beam CB		Good	
6	109249	109199	50	D	W Beam CB		Good	
7	109149	109094	55	D	W Beam CB		Good	
8	107529	107460	69	D	W Beam CB		Good	
9	105289	105174	115	D	W Beam CB		Good	
10	103404	103344	60	D	W Beam CB		Good	
11	103295	103245	50	D	W Beam CB		Good	
12	102834	102644	190	D	W Beam CB		Good	
13	102104	101974	130	D	W Beam CB	4	Good	
14	101349	101149	200	D	W Beam CB		Good	
15	96725	96679	46	D	W Beam CB	1	Good	
16	96079	96034	45	D	W Beam CB	6	Fair	
17	95929	95880	49	D	W Beam CB	1	Good	
18	95799	95769	30	D	W Beam CB		Good	
19	93180	93079	101	D	W Beam CB	4	Good	
20	91929	91770	139	D	W Beam CB		Good	
21	90254	90054	200	D	W Beam CB	3	Good	
22	90000	89719	281	D	W Beam CB	1	Good	
23	89669	89644	25	D	W Beam CB		Good	
24	89664	89399	265	D	W Beam CB		Good	
25	86219	86110	109	D	W Beam CB		Good	
26	85624	85529	95	D	W Beam CB		Good	
27	85234	85194	40	D	W Beam CB	2	Good	
28	85069	84939	130	D	W Beam CB	3	Good	
29	84445	84409	36	D	W Beam CB		Good	
30	84364	84334	30	D	W Beam CB		Good	
31	83264	83159	105	D	W Beam CB	1	Good	
32	83000	82549	451	D	W Beam CB	5	Fair	Broken
33	82240	82034	206	D	W Beam CB		Good	
34	81999	81910	89	D	W Beam CB		Good	
35	81375	81205	170	D	W Beam CB	1	Good	
36	80969	80724	245	D	W Beam CB		Good	
37	80669	80660	9	D	W Beam CB		Good	
38	80644	80469	175	D	W Beam CB	2	Good	
39	80384	79989	395	D	W Beam CB	2	Good	
40	79524	79434	90	D	W Beam CB		Good	
41	79369	79304	65	D	W Beam CB	1	Good	
42	79134	78974	160	D	W Beam CB	4	Good	
43	78964	78669	295	D	W Beam CB		Good	
44	78654	78634	20	D	W Beam CB		Good	
45	78594	78434	160	D	W Beam CB		Good	
46	76849	76634	215	D	W Beam CB	7	Fair	
47	76419	76234	185	D	W Beam CB	5	Fair	
48	76229	76189	40	D	W Beam CB	1	Good	
49	76154	75894	260	D	W Beam CB	3	Good	
50	75879	75730	149	D	W Beam CB	3	Good	
51	74404	74215	189	D	W Beam CB	8	Fair	
52	74215	74124	91	D	W Beam CB	3	Good	
53	73489	73389	100	D	W Beam CB	3	Good	
54	70930	70909	21	D	W Beam CB		Good	
55	68264	68224	40	D	W Beam CB		Good	

56	68209	68164	45	D	W Beam CB		Good	
57	67865	67544	321	D	W Beam CB	15	Poor	
58	67535	67279	256	D	W Beam CB	8	Poor	
59	67249	67074	175	D	W Beam CB	10	Poor	
60	61724	61699	25	D	W Beam CB		Good	
61	61640	61619	21	D	W Beam CB		Good	
62	59604	59415	189	D	W Beam CB	3	Good	
63	59109	59059	50	D	W Beam CB		Good	
64	59049	59014	35	D	W Beam CB		Good	
65	58994	58885	109	D	W Beam CB	4	Good	
66	57854	57760	94	D	W Beam CB	3	Good	
67	57705	57689	16	D	W Beam CB		Good	
68	53705	53499	206	D	W Beam CB	10	Poor	
69	52345	52030	315	D	W Beam CB		Good	
70	52024	51835	189	D	W Beam CB	6	Fair	Broken
71	51669	51334	335	D	W Beam CB	10	Poor	
72	41489	41219	270	D	W Beam CB	1	Good	
73	41154	40649	505	D	W Beam CB	2	Good	Broken
		Total Length (m)	**9956**		**Total Damaged Length**	**152**		

Annexure – 4.7

- Highway Lighting

Street Lighting								
FORWARD DIRECTION								
S. No.	**Chainage**		**Length (m.)**	**Side**	**Type (SA- Single Arm; DA- Double Arm)**	**Quantity**	**Remarks**	
	From	**To**						
1	41620	41630	10	Median	High mast light	1		
2	45720	46640	920	Shoulder	Double Arm	24		
3	48615	48985	370	Median	Double Arm	11		
4	55240	55815	575	SR	Single Arm	16		
5	55815	56520	705	Shoulder	Double Arm	20		
6	56520	57475	955	Median	Double Arm	22		
7	63365	63965	600	Median	Double Arm	16		
8	64470	64910	440	Shoulder	Double Arm	13		
9	65095	65270	175	Shoulder	Double Arm	6		
10	73805	74020	215	Shoulder	Double Arm&Single Arm	7		DA=1,SA=6
11	75040	75200	160	Shoulder	Double Arm	6		
12	89750	89805	55	Median	High mast light&Single Arm	2		HML=1,SA=1
13	92475	92610	135	Shoulder	Single Arm	4		
14	93980	94690	710	Median	Double Arm	26		
15	94765	94805	40	Median	Double Arm&Single Arm	4		DA=2,SA=2
16	94900	96725	1825	Median	Double Arm&Single Arm	67		DA=60,SA=7
17	96815	98040	1225	Median	Double Arm	46		
18	98080	98815	735	Median	Double Arm	31		
19	100160	100690	530	Median	Double Arm	34		
20	104125	104370	245	Shoulder	Double Arm	7		
21	106935	107655	720	Shoulder	Double Arm	20		
22	108150	108565	415	Shoulder	Single Arm	12		
23	110080	110090	10	Shoulder	High mast light	1		
24	113210	114505	1295	Shoulder	Double Arm	37		
		Total Length (m)	**13064.0**		**Total Quantity**	**433**		

REVERSE DIRECTION								
S. No.	**Chainage**		**Length (m.)**	**Side**	**Type (SA- Single Arm; DA- Double Arm)**	**Quantity**	**Remarks**	
	From	**To**						
1	114339	112930	1409	Shoulder	Double Arm	39		
2	108625	107795	830	Shoulder	Double Arm	23		
3	107375	106655	720	Median	Double Arm	23	SR	
4	104025	103820	205	Median	Double Arm	6	SR	
5	100760	100745	15	Shoulder	High mast light	1		
6	100510	100495	15	Shoulder	High mast light	1		
7	92459	92314	145	Shoulder	Single Arm	4		
8	77420	77415	5	Shoulder	High Mast Light	1		
9	75005	74880	125	Median	Double Arm	5	SR	

10	74700	74695	5	Shoulder	High Mast Light	1		
11	74185	73670	515	Median	Double Arm	15	SR	
12	72695	72685	10	Shoulder	High Mast Light	1		
13	65185	65000	185	Median	Double Arm	6	SR	
14	64815	64390	425	Median	Double Arm	10	SR	
15	63895	63295	600	Median	Double Arm	16		
16	60275	60135	140	Median	Double Arm	5	SR	
17	57090	56925	165	Median	Double Arm	5		
18	56225	55590	635	Median	Double Arm	19	SR	
19	55565	55025	540	Shoulder	Single Arm	15		
20	55140	54995	145	Shoulder	Double Arm	2		
21	46500	46187	313	Shoulder	Double Arm	16		
22	44005	43660	345	Shoulder	Single Arm	10		
Total Length (m)			**7491.8**		**Total Quantity**	**224**		

Annexure – 4.8

- Drainage Condition

Shoulder Drain					
FORWARD-DIRECTION					
S.No.	**Chainage (Km.)**		**Length (m.)**	**Drain Type**	**Remarks**
	From	**To**			
1	44015	44065	50	Open Lined Drain	
2	49890	50065	175	Open Lined Drain	
3	52005	52190	185	Open Lined Drain	
4	52525	53040	515	Open Lined Drain	
5	53805	54430	625	Open Lined Drain	
6	55235	55390	155	Open Lined Drain	
7	58780	58850	70	Open Lined Drain	
8	59105	59805	700	Open Lined Drain	
9	61800	62225	425	Open Lined Drain	
10	66100	66195	95	Open Lined Drain	
11	69090	69390	300	Open Lined Drain	
12	71410	71690	280	Open Lined Drain	
13	73025	73430	405	Open Lined Drain	
14	74470	74525	55	Open Lined Drain	
15	76755	76945	190	Open Lined Drain	
16	78120	78275	155	Open Lined Drain	
17	83435	83865	430	Open Lined Drain	
18	84770	84955	185	Open Lined Drain	
19	85000	85140	140	Open Lined Drain	
20	86440	87475	1035	Open Lined Drain	
21	88705	89040	335	Open Lined Drain	
22	91650	93045	1395	Open Lined Drain	
23	98165	98325	160	Open Lined Drain	
24	99765	99825	60	Open Lined Drain	
25	101360	101495	135	Open Lined Drain	
26	107030	107265	235	Closed Drain	
27	107345	107380	35	Closed Drain	
28	109525	109820	295	Closed Drain	
29	110110	110415	305	Closed Drain	
30	110560	110830	270	Closed Drain	
31	112420	112525	105	Open Lined Drain	
32	114400	114665	265	Closed Drain	
		Total Length (m)	**9765.000**		

REVERSE DIRECTION					
S. No.	Chainage (Km.)		Length	Drain Type	Remarks
	From	To			
1	114980	114565	415	Open Lined Drain	
2	114565	114535	30	Closed Drain	
3	114525	114475	50	Open Lined Drain	
4	114465	113785	680	Closed Drain	
5	113910	113815	95	Open Lined Drain	
6	113705	112810	895	Closed Drain	
7	111480	111345	135	Closed Drain	
8	111340	111135	205	Open Lined Drain	
9	110740	110615	125	Open Lined Drain	
10	110610	110580	30	Closed Drain	
11	110575	110560	15	Open Lined Drain	
12	110555	110205	350	Closed Drain	
13	110200	110180	20	Open Lined Drain	
14	109980	109860	120	Closed Drain	
15	109175	109120	55	Closed Drain	
16	108715	108560	155	Open Lined Drain	
17	108430	107725	705	Closed Drain	
18	107365	106880	485	Closed Drain	
19	106885	106845	40	Open Lined Drain	
20	106840	106635	205	Closed Drain	
21	106605	106525	80	Closed Drain	
22	106120	106055	65	Open Lined Drain	
23	106020	105930	90	Open Lined Drain	
24	103535	103385	150	Open Lined Drain	
25	99610	99555	55	Open Lined Drain	
26	98495	98425	70	Open Lined Drain	
27	98080	97835	245	Closed Drain	
28	97310	97070	240	Closed Drain	
29	96105	96050	55	Open Lined Drain	
30	95890	95790	100	Open Lined Drain	
31	94740	94660	80	Closed Drain	
32	94255	94120	135	Open Lined Drain	
33	94095	93910	185	Closed Drain	
34	93780	93345	435	Open Lined Drain	
35	92775	91985	790	Closed Drain	
36	90210	90070	140	Open Lined Drain	
37	89305	89060	245	Open Lined Drain	
38	88915	88740	175	Open Lined Drain	
39	84790	84575	215	Open Lined Drain	
40	83690	83290	400	Open Lined Drain	
41	78210	77855	355	Open Lined Drain	
42	74690	74635	55	Open Lined Drain	
43	74490	73660	830	Closed Drain	
44	73275	72935	340	Open Lined Drain	

45	72635	72220	415	Open Lined Drain	
46	72155	71455	700	Open Lined Drain	BOTH SIDES DRAIN
47	63475	63225	250	Open Lined Drain	
48	62140	61410	730	Open Lined Drain	
49	57020	56980	40	Closed Drain	
50	56620	56445	175	Closed Drain	
51	56080	55510	570	Closed Drain	
52	54565	54095	470	Open Lined Drain	
53	53985	53720	265	Open Lined Drain	
54	51230	50975	255	Open Lined Drain	
55	50255	50215	40	Open Lined Drain	
56	49985	49675	310	Open Lined Drain	
57	49580	48950	630	Open Lined Drain	
58	46340	46190	150	Closed Drain	
59	46055	45840	215	Open Lined Drain	
60	45840	45665	175	Closed Drain	
		Total Length (m)	**15729**		

Median Drain					
S.No.	Chainage (Km.)		Length (m.)	Drain Type	Remarks
	From	To			
1	43935	44010	75	Open Lined Drain	
2	44240	44500	260	Open Lined Drain	
3	44625	44905	280	Open Lined Drain	
4	45705	46035	330	SR median cut drain	SR
5	46400	46575	175	SR median cut drain	SR
6	46640	46725	85	SR median cut drain	SR
7	47425	47735	310	Median cut drain	
8	48220	48465	245	Median cut drain	
9	51620	51835	215	Open Lined Drain	
10	53235	53600	365	Open Lined Drain	SR
11	55795	56510	715	SR median cut drain	
12	56645	56820	175	Median cut drain	
13	58120	58805	685	Median cut drain	
14	59065	59200	135	Median cut drain	
15	59805	60255	450	Median cut drain	
16	60310	60420	110	Median cut drain	
17	60670	60965	295	Median cut drain	
18	62195	62470	275	Median cut drain	
19	63105	63340	235	Median cut drain	SR
20	64465	64915	450	SR median cut drain	
21	65110	65340	230	SR median cut Drain	SR
22	65750	65930	180	Median cut drain	
23	66040	66340	300	Median cut drain	
24	67360	67500	140	Median cut drain	
25	67620	67995	375	Median cut drain	
26	68465	68695	230	Median cut drain	
27	68995	69155	160	Median cut drain	
28	69310	69670	360	Median cut drain	
29	70025	70240	215	Median cut drain	
30	70285	70360	75	Median cut drain	
31	70470	70705	235	Median cut drain	
32	70975	71090	115	Median cut drain	
33	73435	73600	165	Median cut drain	
34	73800	73975	175	SR median cut Drain	SR
35	74025	74205	180	Median cut drain	
36	75780	76110	330	Median cut drain	
37	76815	76900	85	Median cut drain	
38	77740	78000	260	Median cut drain	
39	79670	79990	320	Median cut drain	
40	81805	81905	100	Median cut drain	
41	81990	82170	180	Median cut drain	
42	86730	86915	185	Median cut drain	

43	87475	87540	65	Median cut drain	
44	87650	87810	160	Median cut drain	
45	88165	88830	665	Median cut drain	
46	89155	89405	250	SR median cut Drain	SR
47	90115	90465	350	Median cut drain	
48	91775	91960	185	Median cut drain	
49	93115	93405	290	Median cut drain	
50	93980	94690	710	Median cut drain	
51	94980	95155	175	Median cut drain	
52	97740	98020	280	Median cut drain	
53	98165	98295	130	Median cut drain	
54	98605	98830	225	Median cut drain	
55	99185	99355	170	Median cut drain	
56	101185	101795	610	Open Lined Drain	
57	102125	102350	225	Median cut drain	
58	103960	104210	250	Median cut drain	
59	104120	104290	170	SR median cut Drain	SR
60	104620	105070	450	Median cut drain	
61	105340	105715	375	Median cut drain	
62	106025	106220	195	Median cut drain	
63	107030	107265	235	SR median cut Drain	SR
64	107345	107380	35	SR median cut Drain	SR
65	107395	107560	165	Median cut drain	
66	107535	107665	130	SR median cut Drain	SR
67	108280	108310	30	SR median cut Drain	SR
68	108325	108415	90	SR median cut Drain	SR
69	108510	108600	90	SR median cut Drain	SR
70	108965	109230	265	Median cut drain	
71	109285	109445	160	Open Lined Drain &Median cut	
72	109890	109955	65	Median cut drain	
73	111565	111755	190	Median cut drain	
74	112225	112465	240	Median cut drain	
75	113775	113850	75	Median cut drain	
76	114235	114300	65	Median cut drain	
77	114390	114625	235	SR median cut Drain	SR
	Total Length(m)		**18460**		

REVERSE DIRECTION					
S.No.	**Chainage (Km.)**		**Length (Km.)**	**Drain Type**	**Remarks**
	From	**To**			
1	113965	113945	20	SR Median Cut Drain	SR
2	113430	112980	450	SR Median Cut Drain	SR
3	108440	108345	95	SR Median Cut Drain	SR
4	107355	107280	75	SR Median Cut Drain	SR

5	107120	107085	35	R Median & Median Cut Drain	
6	107045	106635	410	SR Median Cut Drain	SR
7	106605	106525	80	SR Median Cut Drain	SR
8	104005	103855	150	SR Median Cut Drain	SR
9	101615	100975	640	Open Lined Drain	
10	74025	73720	305	SR Median Cut Drain	SR
11	65255	65030	225	SR Median Cut Drain	SR
Total Length(km)			**2486**		

Annexure – 4.9

- Foot path Details

Foot Path

FORWARD-DIRECTION							
S.No.	Chainage (Km.)		Length (m.)	Side	Type	Condition	Remarks
	From	To					
1	85435	85690	255	Shoulder	CC	Fair	
2	90015	90110	95	Shoulder	CC	Good	
3	101065	101100	35	Shoulder	CC	Fair	
4	101745	101785	40	Shoulder	CC	Poor	
5	108950	109015	65	Shoulder	CC	Fair	
		Total Length (m)	**489.9**				

REVERSE-DIRECTION							
S. No.	Chainage (Km.)		Length (m.)	Side	Type	Condition	Remarks
	From	To					
1	114390	114245	145	Shoulder	CC	Fair	
		Total Length (m)	**145.000**				

Annexure – 4.10

- Guard posts

Guard Post							
FORWARD-DIRECTION							
Sl No	From	To	Side	Quantity	Type	Condition	Remarks
1	44690	44700	I	8	CC	Good	
2	44905	44920	I	9	CC	Good	
3	70070	70075	I	6	CC	Good	
4	70325	70330	I	6	CC	Good	
5	74120	74125	I	6	CC	Good	
6	75485	75490	I	4	CC	Good	
7	76770	76780	I	8	CC	Good	
8	77855	77860	I	5	CC	Good	
9	79820	79825	I	4	CC	Good	
10	82905	82915	I	6	CC	Good	
11	83345	83365	I	6	CC	Good	
12	83860	83870	I	7	CC	Good	
13	84485	84510	I	7	CC	Good	
14	85230	85240	I	7	CC	Good	
15	86170	86180	I	7	CC	Good	
16	87895	87900	I	5	CC	Good	
17	88245	88250	I	3	CC	Good	
18	89000	89010	I	8	CC	Poor	
19	90320	90345	I	7	CC	Good	
20	90945	90950	I	5	CC	Good	
21	91045	91060	I	11	CC	Good	
22	91365	91375	I	9	CC	Good	
23	98320	98325	I	5	CC	Good	
24	111190	111195	I	4	CC	Good	

Total Quantity 153

REVERSE-DIRECTION							
Sl No	From	To	Side	Quantity	Type	Condition	Remarks
1	98699	98689	D	9	CC	Good	
2	94449	94419	D	9	CC	Good	
3	94314	94300	D	9	CC	Good	
4	93710	93699	D	9	CC	Good	
5	93559	93549	D	9	CC	Good	
6	91969	91909	D	24	CC	Good	
7	91324	91309	D	11	CC	Good	
8	91009	90994	D	9	CC	Good	
9	90295	90280	D	7	CC	Good	
10	88920	88904	D	12	CC	Good	
11	88339	88314	D	16	CC	Good	
12	88150	88139	D	3	CC	Good	
13	87794	87785	D	4	CC	Poor	
14	87254	87245	D	5	CC	Good	
15	85999	85984	D	13	CC	Good	
16	84489	84449	D	35	CC	Good	
17	83345	83365	D	6	CC	Good	

Sl No	From	To	Side	Quantity	Type	Condition	Remarks
18	83299	83264	D	32	CC	Good	
19	79609	79594	D	5	CC	Good	
20	79204	79179	D	10	CC	Good	
21	78434	78374	D	68	CC	Good	
22	77714	77705	D	5	CC	Good	
23	76554	76544	D	8	CC	Good	
24	75325	75319	D	6	CC	Good	
25	71359	71240	D	50	CC	Good	
26	70564	70559	D	3	CC	Poor	
27	69305	69294	D	5	CC	Good	
28	68879	68864	D	3	CC	Good	
29	58624	58619	D	3	CC	Good	
30	57449	58444	D	5	CC	Good	
31	53450	83434	D	8	CC	Good	
			Total Quantity	**401**			

Annexure – 4.11

- Pedestrian crossings

Pedestrain Crossing Details

Sl No	Chainage	Direction
1	41+495	LHS
2	87+495	LHS
3	93+430	LHS
4	94+685	LHS
5	97+840	LHS
6	99+545	LHS
7	104+830	LHS
8	105+600	LHS
9	107+790	LHS
10	108+570	LHS
11	111+835	LHS
12	113+790	LHS
13	114+230	LHS
14	114+230	RHS
15	113+790	RHS
16	111+835	RHS
17	108+570	RHS
18	107+790	RHS
19	105+600	RHS
20	104+830	RHS
21	99+545	RHS
22	97+840	RHS
23	94+685	RHS
24	93+430	RHS
25	87+495	RHS
26	41+495	RHS

Pedestrain Railing								
FORWARD-DIRECTION								
S.no	**From Chainage (km)**	**To Chainage (Km)**	**Length (km)**	**Side**	**Type**	**Damaged Length(m)**	**Condition**	**Remarks**
1	45700	46045	345	I	Pedestrain Railing	3.0	Good	
2	46390	46505	115	I	Pedestrain Railing	2.0	Good	
3	46515	46570	55	I	Pedestrain Railing	4.0	Fair	
4	46640	46720	80	I	Pedestrain Railing	5.0	Good	
5	55240	55310	70	I	Pedestrain Railing		Good	
6	55805	56510	705	I	Pedestrain Railing	7.0	Fair	
7	64465	64910	445	I	Pedestrain Railing	4.0	Good	
8	65060	65340	280	I	Pedestrain Railing	2.0	Good	
9	72790	72810	20	I	Pedestrain Railing		Good	
10	73815	74025	210	I	Pedestrain Railing	1.0	Good	
11	77605	77665	60	I	Pedestrain Railing	2.0	Good	
12	89145	89480	335	I	Pedestrain Railing	2.0	Good	
13	107050	107260	210	I	Pedestrain Railing		Good	
14	107345	107400	55	I	Pedestrain Railing		Good	
15	107547	107680	133	I	Pedestrain Railing		Good	
16	108320	108400	80	I	Pedestrain Railing	5.0	Good	
17	108505	108600	95	I	Pedestrain Railing		Good	
18	108630	108655	25	I	Pedestrain Railing		Good	
19	113195	113400	205	I	Pedestrain Railing	3.0	Good	
20	113445	113460	15	I	Pedestrain Railing	1.0	Good	
21	113485	113540	55	I	Pedestrain Railing	4.0	Good	
22	113550	113605	55	I	Pedestrain Railing		Good	
23	113750	113955	205	I	Pedestrain Railing	5.0	Good	
24	114015	114135	120	I	Pedestrain Railing	3.0	Good	
25	114145	114195	50	I	Pedestrain Railing	2.0	Good	
26	114200	114335	135	I	Pedestrain Railing	4.0	Good	
27	114390	114440	50	I	Pedestrain Railing	3.0	Good	
28	114455	114625	170	I	Pedestrain Railing		Good	
		Total Length (m)	**4378**		**Total Damaged Length**	**62.0**		

REVERSE-DIRECTION								
S.no	**From Chainage (km)**	**To Chainage (Km)**	**Length (km)**	**Side**	**Type**	**Damaged Length(m)**	**Condition**	**Remarks**
1	114424	114285	139	D	Pedestrain Railing		Good	
2	114274	114260	14	D	Pedestrain Railing		Good	
3	114194	113944	250	D	Pedestrain Railing		Good	
4	113929	113794	135	D	Pedestrain Railing		Good	
5	113735	113644	91	D	Pedestrain Railing		Good	
6	113605	113534	71	D	Pedestrain Railing		Good	
7	113520	113484	36	D	Pedestrain Railing		Good	
8	113435	112969	466	D	Pedestrain Railing		Good	
9	108499	108219	280	D	Pedestrain Railing		Good	
10	108214	107909	305	D	Pedestrain Railing		Good	
11	107799	107749	50	D	Pedestrain Railing		Good	
12	107384	107060	324	D	Pedestrain Railing		Good	
13	107049	106625	424	D	Pedestrain Railing		Good	
14	106610	106519	91	D	Pedestrain Railing		Good	
15	89399	89049	350	D	Pedestrain Railing		Good	
16	73949	73669	280	D	Pedestrain Railing	4.0	Good	
17	65254	64999	255	D	Pedestrain Railing	1.0	Good	
18	64850	64764	86	D	Pedestrain Railing	1.0	Good	
19	64634	64395	239	D	Pedestrain Railing	4.0	Good	
20	56269	55564	705	D	Pedestrain Railing	5.0	Good	
21	55064	54999	65	D	Pedestrain Railing	4.0	Good	
22	46265	46194	71	D	Pedestrain Railing		Good	
23	46094	46070	24	D	Pedestrain Railing		Good	
24	46059	45899	160	D	Pedestrain Railing		Good	
25	45884	45674	210	D	Pedestrain Railing	2.0	Good	
		Total Length (m)	**5121**		**Total Damaged Length**	**21.0**		

Annexure – 4.12

- Blinkers

Solar LED Blinkers/Traffic Blinkers				
FORWARD DIRECTION				
S.No	Chainage (Km)	Side	Condition	Remarks
1	42865	Median	Good	
2	43925	Median	Good	
3	45830	Median	Good	
4	47285	Median	Good	
5	49095	Median	Good	
6	51115	Median	Good	
7	54605	Median	Good	
8	54640	Median	Good	
9	57090	Median	Good	
10	57125	Median	Good	
11	59295	Median	Good	
12	59325	Median	Good	
13	60510	Median	Good	
14	60550	Median	Good	
15	62800	Median	Good	
16	62840	Median	Good	
17	63975	Median	Good	
18	64010	Median	Good	
19	65330	Median	Good	
20	65375	Median	Good	
21	68790	Median	Good	
22	68825	Median	Good	
23	70810	Median	Good	
24	70845	Median	Good	
25	72805	Median	Good	
26	72840	Median	Good	
27	73755	Median	Good	
28	73805	Median	Good	
29	74805	Median	Good	
30	76685	Median	Good	
31	77665	Median	Good	
32	80850	Median	Good	
33	80885	Median	Good	
34	85255	Median	Good	
35	85295	Median	Good	
36	87595	Median	Good	
37	87625	Median	Good	
38	90885	Median	Good	
39	90925	Median	Good	
40	93580	Median	Good	
41	93620	Median	Good	
42	94860	Median	Good	
43	94885	Median	Good	
44	98035	Median	Good	
45	98075	Median	Good	
46	99750	Median	Good	
47	101880	Median	Good	

S.No	Chainage (Km)	Side	Condition	Remarks
48	101915	Median	Good	
49	103795	Median	Good	
50	103830	Median	Good	
51	105075	Median	Good	
52	105110	Median	Good	
53	105860	Median	Good	
54	105890	Median	Good	
55	108060	Median	Good	
56	108100	Median	Good	
57	108650	Median	Good	
58	108700	Median	Good	
59	112035	Median	Good	
60	112065	Median	Good	
61	113985	Median	Good	
62	114010	Median	Good	
63	114410	Median	Good	
64	114470	Median	Good	

REVERSE DIRECTION				
S.No	Chainage (Km)	Side	Condition	Remarks
1	114299	Median	Good	
2	114245	Median	Good	
3	113849	Median	Good	
4	113825	Median	Good	
5	111844	Median	Good	
6	108554	Median	Good	
7	107824	Median	Good	
8	107794	Median	Good	
9	105629	Median	Good	
10	105594	Median	Good	
11	103569	Median	Good	
12	103539	Median	Good	
13	101734	Median	Good	
14	101700	Median	Good	
15	99554	Median	Good	
16	99514	Median	Good	
17	97884	Median	Good	
18	97844	Median	Good	
19	94724	Median	Good	
20	94679	Median	Good	
21	93474	Median	Good	
22	93444	Median	Good	
23	90874	Median	Good	
24	90840	Median	Good	
25	87529	Median	Good	
26	87484	Median	Good	
27	85129	Median	Good	
28	85094	Median	Good	

S.No	Chainage (Km)	Side	Condition	Remarks
29	80669	Median	Good	
30	80624	Median	Good	
31	77454	Median	Good	
32	77414	Median	Good	
33	74709	Median	Good	
34	74669	Median	Good	
35	73679	Median	Good	
36	73629	Median	Good	
37	72705	Median	Good	
38	72664	Median	Good	
39	70709	Median	Good	
40	70664	Median	Good	
41	68744	Median	Good	
42	68719	Median	Good	
43	65304	Median	Good	
44	65265	Median	Good	
45	63910	Median	Good	
46	62745	Median	Good	
47	60475	Median	Poor	
48	59200	Median	Good	
49	56840	Median	Good	
50	50960	Median	Good	
51	48905	Median	Good	
52	47104	Median	Good	
53	45625	Median	Good	
54	42780	Median	Good	
55	41525	Median	Good	
56	41500	Median	Good	

Annexure – 4.13

- Junctions

Major Junctions

S. no	Chainage(km)	Junction Type	Direction	Pavement Type of Cross Road
1	72+735	Y	RHS	Asphalt
2	76+550	Y	RHS	Asphalt
3	77+600	Y	RHS	Asphalt
4	110+000	X	BHS	Asphalt
5	41+489	X	BHS	Asphalt

Minor Junctions

S. no	Chainage	Junction Type	Side	Pavement Type of Cross Road
1	42+845	T	LHS	Asphalt
2	43+990	T	LHS	Asphalt
3	51+150	Y	LHS	Asphalt
4	57+110	Y	LHS	Asphalt
5	73+800	T	LHS	Asphalt
6	80+810	T	LHS	Asphalt
7	85+285	T	LHS	Asphalt
8	87+620	Y	LHS	Asphalt
9	90+905	Y	LHS	Asphalt
10	93+600	T	LHS	Asphalt
11	94+895	Y	LHS	Asphalt
12	110+050	T	LHS	Asphalt
13	113+955	T	LHS	Asphalt
14	114+000	Y	LHS	Asphalt
15	114+250	T	RHS	Asphalt
16	113+934	T	RHS	Asphalt
17	112+091	T	RHS	Asphalt
18	106+159	Y	RHS	Asphalt
19	105+594	T	RHS	Asphalt
20	103+554	T	RHS	Asphalt
21	101+704	Y	RHS	Asphalt
22	98+849	T	RHS	Asphalt
23	90+874	Y	RHS	Asphalt
24	77+984	T	RHS	Asphalt
25	77+444	T	RHS	Asphalt
26	76+470	T	RHS	Asphalt
27	72+669	T	RHS	Asphalt
28	63+934	T	RHS	Asphalt
29	62+774	T	RHS	Asphalt
30	60+489	T	RHS	Asphalt
31	59+169	Y	RHS	Asphalt
32	50+970	T	RHS	Asphalt
33	45+660	T	RHS	Asphalt
34	43+889	Y	RHS	Asphalt
35	42+804	Y	RHS	Asphalt
36	42+280	T	RHS	Asphalt
37	42+490	Y	RHS	Asphalt
38	43+215	Y	RHS	Asphalt
39	44+220	T	RHS	Asphalt
40	45+110	Y	RHS	Asphalt
41	45+155	Y	RHS	Asphalt
42	47+210	T	LHS	Asphalt
43	49+030	T	LHS	Asphalt

Annexure – 6.1

- Pavement Roughness

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
40500	40600	40500.000	41500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.26	1.47	1.37	896.33	20	26-Apr-2023	GOOD		
40500	40600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.55	2.98	2.77	1972.05	39	26-Apr-2023	GOOD		
40600	40700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.61	2.85	2.73	1940.18	28	26-Apr-2023	GOOD		
40600	40700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	2.02	2.1	1446.19	28	26-Apr-2023	GOOD		
40700	40800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	2.16	2.14	1477.08	25	26-Apr-2023	GOOD		
40700	40800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.74	3.15	2.95	2116.12	30	26-Apr-2023	Fair		
40800	40900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.22	2.2	1523.54	32	26-Apr-2023	GOOD		
40800	40900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.87	2.49	2.68	1900.43	32	26-Apr-2023	GOOD		
40900	41000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.71	2.6	1837.01	28	26-Apr-2023	GOOD		
40900	41000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.13	2.91	3.02	2172.44	34	26-Apr-2023	Fair	1859.10	GOOD
41000	41100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	1.98	2.18	1508.04	35	26-Apr-2023	GOOD		
41000	41100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.88	2.21	2.05	1407.68	30	26-Apr-2023	GOOD		
41100	41200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.85	2.78	2.82	2011.96	40	26-Apr-2023	Fair		
41100	41200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	2.22	2.24	1554.60	35	26-Apr-2023	GOOD		
41200	41300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.76	2.27	2.51	1765.94	33	26-Apr-2023	GOOD		
41200	41300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.72	2.58	2.65	1876.62	40	26-Apr-2023	GOOD		
41300	41400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.63	2.74	2.69	1908.37	38	26-Apr-2023	GOOD		
41300	41400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.36	2.83	2.6	1837.01	43	26-Apr-2023	GOOD		
41400	41500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.27	2.89	2.58	1821.19	35	26-Apr-2023	GOOD		
41400	41500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.97	4.93	5.45	4208.28	41	26-Apr-2023	POOR		
41500	41600	41500.000	42500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.78	1.63	1.71	1148.94	34	26-Apr-2023	GOOD		
41500	41600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.67	4.91	4.79	3641.80	41	26-Apr-2023	POOR		
41600	41700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.45	2.87	3.16	2285.55	33	26-Apr-2023	Fair		
41600	41700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.11	2.2	2.66	1884.55	45	26-Apr-2023	GOOD		
41700	41800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.17	2.07	1423.07	46	26-Apr-2023	GOOD		
41700	41800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.25	1.47	969.92	47	26-Apr-2023	GOOD		
41800	41900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.67	1.64	1.66	1111.38	54	26-Apr-2023	GOOD		
41800	41900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.04	1.19	1.12	715.26	54	26-Apr-2023	GOOD		
41900	42000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.71	2.06	1.89	1285.22	56	26-Apr-2023	GOOD		
41900	42000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.91	0.98	0.95	594.83	56	26-Apr-2023	GOOD		
42000	42100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.12	1.63	1.38	903.66	59	26-Apr-2023	GOOD	1274.00	GOOD
42000	42100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.02	1.23	1.13	722.42	55	26-Apr-2023	GOOD		
42100	42200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	2	1.93	1315.72	57	26-Apr-2023	GOOD		
42100	42200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.73	2.15	1.94	1323.36	53	26-Apr-2023	GOOD		
42200	42300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	2.04	1.88	1277.61	42	26-Apr-2023	GOOD		
42200	42300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	1.53	1.68	1126.39	56	26-Apr-2023	GOOD		
42300	42400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.42	1.62	1.52	1006.94	53	26-Apr-2023	GOOD		
42300	42400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.15	1.08	1.12	715.26	62	26-Apr-2023	GOOD		
42400	42500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.53	1.63	1.58	1051.57	59	26-Apr-2023	GOOD		
42400	42500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.54	1.43	1.48	977.31	65	26-Apr-2023	GOOD		
42500	42600	42500.000	43500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.27	1.29	1.28	830.65	61	26-Apr-2023	GOOD		
42500	42600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.27	0.98	1.13	722.42	64	26-Apr-2023	GOOD		
42600	42700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.21	1.05	1.13	722.42	62	26-Apr-2023	GOOD		
42600	42700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.14	1.17	1.16	743.93	65	26-Apr-2023	GOOD		
42700	42800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	2.46	2.15	1484.81	63	26-Apr-2023	GOOD		
42700	42800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	1.71	1.69	1133.90	64	26-Apr-2023	GOOD		
42800	42900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	1.39	1.45	955.15	62	26-Apr-2023	GOOD		
42800	42900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.41	1.31	1.36	889.00	62	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
42900	43000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	1.28	1.4	918.34	61	26-Apr-2023	GOOD		
42900	43000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.19	1.11	1.15	736.75	62	26-Apr-2023	GOOD	1072.20	GOOD
43000	43100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.44	1.96	2.2	1523.54	61	26-Apr-2023	GOOD		
43000	43100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.98	1.92	1308.09	62	26-Apr-2023	GOOD		
43100	43200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	1.75	1.95	1331.00	59	26-Apr-2023	GOOD		
43100	43200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	1.48	1.65	1103.88	61	26-Apr-2023	GOOD		
43200	43300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	1.9	2.02	1384.63	58	26-Apr-2023	GOOD		
43200	43300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	1.67	1.74	1171.54	61	26-Apr-2023	GOOD		
43300	43400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.63	1.62	1.63	1088.91	59	26-Apr-2023	GOOD		
43300	43400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	2	1.87	1270.00	58	26-Apr-2023	GOOD		
43400	43500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.83	1.48	1.66	1111.38	60	26-Apr-2023	GOOD		
43400	43500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.58	1.47	1.53	1014.37	59	26-Apr-2023	GOOD		
43500	43600	43500.000	44500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	2.11	2.03	1392.31	56	26-Apr-2023	GOOD		
43500	43600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.68	1.34	1.51	999.53	58	26-Apr-2023	GOOD		
43600	43700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.54	3.2	3.37	2456.33	49	26-Apr-2023	POOR		
43600	43700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.32	3.3	3.31	2407.40	57	26-Apr-2023	POOR		
43700	43800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.01	1.94	1.98	1353.96	52	26-Apr-2023	GOOD		
43700	43800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.45	2.14	2.3	1601.31	56	26-Apr-2023	GOOD		
43800	43900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.01	2.24	1554.60	55	26-Apr-2023	GOOD		
43800	43900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.07	2.1	2.59	1829.10	53	26-Apr-2023	GOOD		
43900	44000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.04	2.73	2.89	2067.98	20	26-Apr-2023	Fair		
43900	44000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.06	1.6	1.83	1239.61	45	26-Apr-2023	GOOD		
44000	44100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.09	2.72	2.41	1687.33	48	26-Apr-2023	GOOD	1732.80	GOOD
44000	44100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.41	2.67	3.04	2188.56	53	26-Apr-2023	Fair		
44100	44200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.92	2.57	2.24	1554.60	58	26-Apr-2023	GOOD		
44100	44200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	1.8	2.1	1446.19	58	26-Apr-2023	GOOD		
44200	44300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.79	2.78	2.79	1988.00	66	26-Apr-2023	GOOD		
44200	44300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.47	2.9	3.19	2309.86	58	26-Apr-2023	Fair		
44300	44400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.75	2.66	2.71	1924.27	68	26-Apr-2023	GOOD		
44300	44400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.87	2.49	2.68	1900.43	60	26-Apr-2023	GOOD		
44400	44500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	1.82	2.17	1500.29	65	26-Apr-2023	GOOD		
44400	44500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	1.75	1.85	1254.80	61	26-Apr-2023	GOOD		
44500	44600	44500.000	45500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	2.11	2.11	1453.91	62	26-Apr-2023	GOOD		
44500	44600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.66	1.55	1.61	1073.95	63	26-Apr-2023	GOOD		
44600	44700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.42	3.45	3.44	2513.54	64	26-Apr-2023	POOR		
44600	44700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.46	2.27	2.37	1655.99	65	26-Apr-2023	GOOD		
44700	44800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.22	2.87	3.05	2196.63	65	26-Apr-2023	Fair		
44700	44800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	2.35	2.07	1423.07	62	26-Apr-2023	GOOD		
44800	44900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.93	3.09	3.01	2164.39	65	26-Apr-2023	Fair		
44800	44900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.63	2.83	2.73	1940.18	61	26-Apr-2023	GOOD		
44900	45000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.31	2.7	2.51	1765.94	65	26-Apr-2023	GOOD		
44900	45000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.06	1.96	2.01	1376.96	62	26-Apr-2023	GOOD		
45000	45100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.68	2.93	2.81	2003.97	65	26-Apr-2023	Fair	1814.60	GOOD
45000	45100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.04	3.14	3.09	2228.92	62	26-Apr-2023	Fair		
45100	45200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.04	3.62	3.33	2423.70	63	26-Apr-2023	POOR		
45100	45200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.13	2.65	2.89	2067.98	61	26-Apr-2023	Fair		
45200	45300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.04	2.14	2.09	1438.48	47	26-Apr-2023	GOOD		
45200	45300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	1.79	2.09	1438.48	58	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
45300	45400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.93	2.53	2.23	1546.83	41	26-Apr-2023	GOOD		
45300	45400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.31	3.22	3.27	2374.84	55	26-Apr-2023	Fair		
45400	45500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.98	3.15	3.07	2212.77	46	26-Apr-2023	Fair		
45400	45500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.48	1.5	992.12	55	26-Apr-2023	GOOD		
45500	45600	45500.000	46500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.58	2.05	1.82	1232.03	45	26-Apr-2023	GOOD	1096.80	GOOD
45500	45600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.53	1.24	1.39	911.00	57	26-Apr-2023	GOOD		
45600	45700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	2.21	1.86	1262.39	38	26-Apr-2023	GOOD		
45600	45700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.52	1.39	1.46	962.53	58	26-Apr-2023	GOOD		
45700	45800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	1.81	1.67	1118.88	47	26-Apr-2023	GOOD		
45700	45800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.42	1.56	1036.67	57	26-Apr-2023	GOOD		
45800	45900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.97	1.99	1.98	1353.96	55	26-Apr-2023	GOOD		
45800	45900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.88	2.07	1.97	1346.30	58	26-Apr-2023	GOOD		
45900	46000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.49	1.57	1.53	1014.37	57	26-Apr-2023	GOOD		
45900	46000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.34	1.33	867.07	54	26-Apr-2023	GOOD		
46000	46100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.27	1.51	1.39	911.00	54	26-Apr-2023	GOOD		
46000	46100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.39	1.37	1.38	903.66	57	26-Apr-2023	GOOD		
46100	46200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.93	1.61	1.77	1194.18	63	26-Apr-2023	GOOD		
46100	46200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.83	1.96	1.9	1292.84	57	26-Apr-2023	GOOD		
46200	46300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.84	1.82	1232.03	65	26-Apr-2023	GOOD		
46200	46300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.41	1.36	1.39	911.00	59	26-Apr-2023	GOOD		
46300	46400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	1.7	1.61	1073.95	66	26-Apr-2023	GOOD		
46300	46400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.64	1.43	1.54	1021.79	61	26-Apr-2023	GOOD		
46400	46500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.63	1.68	1.66	1111.38	66	26-Apr-2023	GOOD		
46400	46500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.65	1.75	1179.08	59	26-Apr-2023	GOOD		
46500	46600	46500.000	47500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.6	1.63	1.62	1081.43	65	26-Apr-2023	GOOD	1242.80	GOOD
46500	46600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.8	1.83	1239.61	53	26-Apr-2023	GOOD		
46600	46700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.82	1.9	1.86	1262.39	64	26-Apr-2023	GOOD		
46600	46700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.25	2.25	2.25	1562.37	57	26-Apr-2023	GOOD		
46700	46800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.4	2.93	2.67	1892.49	65	26-Apr-2023	GOOD		
46700	46800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.85	1.77	1194.18	58	26-Apr-2023	GOOD		
46800	46900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.53	1.86	1.7	1141.41	66	26-Apr-2023	GOOD		
46800	46900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.3	1.44	1.37	896.33	57	26-Apr-2023	GOOD		
46900	47000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.56	2.62	2.59	1829.10	67	26-Apr-2023	GOOD		
46900	47000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.94	2.08	2.01	1376.96	57	26-Apr-2023	GOOD		
47000	47100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.26	1.47	1.37	896.33	67	26-Apr-2023	GOOD		
47000	47100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.38	1.22	1.3	845.20	57	26-Apr-2023	GOOD		
47100	47200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.02	1.98	2	1369.29	64	26-Apr-2023	GOOD		
47100	47200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.86	1.83	1239.61	56	26-Apr-2023	GOOD		
47200	47300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.66	1.93	1.8	1216.87	63	26-Apr-2023	GOOD		
47200	47300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.26	1.33	1.3	845.20	49	26-Apr-2023	GOOD		
47300	47400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.47	2.21	1531.30	69	26-Apr-2023	GOOD		
47300	47400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.92	2.06	1.99	1361.62	39	26-Apr-2023	GOOD		
47400	47500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.67	1.8	1.73	1164.00	72	26-Apr-2023	GOOD		
47400	47500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.49	1.39	911.00	41	26-Apr-2023	GOOD		
47500	47600	47500.000	48500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.12	1.27	1.19	765.51	73	26-Apr-2023	GOOD		
47500	47600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.11	1.4	1.26	816.12	47	26-Apr-2023	GOOD		
47600	47700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.41	1.67	1.54	1021.79	72	26-Apr-2023	GOOD		
47600	47700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.1	1.29	1.19	765.51	58	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
47700	47800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.71	2.17	1.94	1323.36	73	26-Apr-2023	GOOD		
47700	47800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.65	1.68	1126.39	64	26-Apr-2023	GOOD		
47800	47900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.41	1.85	1.63	1088.91	75	26-Apr-2023	GOOD		
47800	47900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.09	1.86	1.97	1346.30	64	26-Apr-2023	GOOD		
47900	48000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.32	3.51	2.92	2092.04	74	26-Apr-2023	Fair		
47900	48000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.45	2.3	2.88	2059.97	62	26-Apr-2023	Fair	1303.60	GOOD
48000	48100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	2.23	1.9	1292.84	73	26-Apr-2023	GOOD		
48000	48100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.54	1.28	1.91	1300.46	63	26-Apr-2023	GOOD		
48100	48200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.35	2.36	1.86	1262.39	73	26-Apr-2023	GOOD		
48100	48200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.08	2.15	2.62	1852.84	63	26-Apr-2023	GOOD		
48200	48300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.13	2.58	2.36	1648.17	72	26-Apr-2023	GOOD		
48200	48300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	1.97	2.12	1461.63	60	26-Apr-2023	GOOD		
48300	48400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.53	2.34	1.94	1323.36	72	26-Apr-2023	GOOD		
48300	48400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.68	1.41	1.55	1029.23	60	26-Apr-2023	GOOD		
48400	48500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.25	2.13	1.69	1133.90	72	26-Apr-2023	GOOD		
48400	48500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	1.71	1.99	1361.62	64	26-Apr-2023	GOOD		
48500	48600	48500.000	49500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.81	2.52	2.17	1500.29	72	26-Apr-2023	GOOD		
48500	48600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.19	1.99	2.09	1438.48	67	26-Apr-2023	GOOD		
48600	48700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.1	1.18	1.14	729.58	72	26-Apr-2023	GOOD		
48600	48700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.36	1.23	1.3	845.20	68	26-Apr-2023	GOOD		
48700	48800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	1.95	1.92	1308.09	73	26-Apr-2023	GOOD		
48700	48800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.83	1.76	1.8	1216.87	69	26-Apr-2023	GOOD		
48800	48900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.8	2.25	2.03	1392.31	73	26-Apr-2023	GOOD		
48800	48900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.01	2.7	2.86	2043.95	69	26-Apr-2023	Fair		
48900	49000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.08	2.09	1438.48	72	26-Apr-2023	GOOD		
48900	49000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.6	1.42	1.51	999.53	69	26-Apr-2023	GOOD	1148.70	GOOD
49000	49100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.41	1.82	1.62	1081.43	72	26-Apr-2023	GOOD		
49000	49100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.15	1.22	1.18	758.31	67	26-Apr-2023	GOOD		
49100	49200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.2	1.6	1.4	918.34	73	26-Apr-2023	GOOD		
49100	49200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.31	1.39	1.35	881.69	68	26-Apr-2023	GOOD		
49200	49300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	2.04	1.88	1277.61	73	26-Apr-2023	GOOD		
49200	49300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.33	1.44	947.78	69	26-Apr-2023	GOOD		
49300	49400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	1.94	1.9	1292.84	72	26-Apr-2023	GOOD		
49300	49400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.63	1.62	1.63	1088.91	67	26-Apr-2023	GOOD		
49400	49500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.64	1.74	1.69	1133.90	72	26-Apr-2023	GOOD		
49400	49500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.14	0.99	1.07	679.60	67	26-Apr-2023	GOOD		
49500	49600	49500.000	50500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.48	1.64	1.56	1036.67	72	26-Apr-2023	GOOD		
49500	49600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.31	1.18	1.24	801.63	68	26-Apr-2023	GOOD		
49600	49700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.37	1.62	1.5	992.12	68	26-Apr-2023	GOOD		
49600	49700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	1.56	1.66	1111.38	68	26-Apr-2023	GOOD		
49700	49800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.38	2.16	1.77	1194.18	66	26-Apr-2023	GOOD		
49700	49800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.94	1.45	1.7	1141.41	69	26-Apr-2023	GOOD		
49800	49900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	2.92	2.41	1687.33	67	26-Apr-2023	GOOD		
49800	49900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.12	2.12	2.62	1852.84	68	26-Apr-2023	GOOD		
49900	50000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	2.04	1.78	1201.74	69	26-Apr-2023	GOOD		
49900	50000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.19	1.55	1.87	1270.00	66	26-Apr-2023	GOOD	1296.40	GOOD
50000	50100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.58	2.08	1.83	1239.61	70	26-Apr-2023	GOOD		
50000	50100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.78	1.65	1.71	1148.94	66	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
50100	50200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	2.82	2.48	1742.31	70	26-Apr-2023	GOOD		
50100	50200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	1.91	1.86	1262.39	66	26-Apr-2023	GOOD		
50200	50300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.62	1.92	1.77	1194.18	66	26-Apr-2023	GOOD		
50200	50300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.36	1.47	1.42	933.05	63	26-Apr-2023	GOOD		
50300	50400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.38	1.79	1.59	1059.02	64	26-Apr-2023	GOOD		
50300	50400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	1.96	1.82	1232.03	61	26-Apr-2023	GOOD		
50400	50500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.95	3.85	3.4	2480.83	66	26-Apr-2023	POOR		
50400	50500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	2.13	1.97	1346.30	62	26-Apr-2023	GOOD		
50500	50600	50500.000	51500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.57	1.88	1.73	1164.00	69	26-Apr-2023	GOOD	1263.10	GOOD
50500	50600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.33	1.21	1.27	823.38	64	26-Apr-2023	GOOD		
50600	50700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.39	1.39	1.39	911.00	70	26-Apr-2023	GOOD		
50600	50700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.11	1.31	852.48	67	26-Apr-2023	GOOD		
50700	50800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.59	1.74	1.67	1118.88	70	26-Apr-2023	GOOD		
50700	50800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.62	1.18	1.4	918.34	69	26-Apr-2023	GOOD		
50800	50900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.7	1.82	1.76	1186.63	68	26-Apr-2023	GOOD		
50800	50900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.96	1.83	1.9	1292.84	69	26-Apr-2023	GOOD		
50900	51000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.5	2.3	1601.31	66	26-Apr-2023	GOOD		
50900	51000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.86	1.83	1.85	1254.80	66	26-Apr-2023	GOOD		
51000	51100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.07	2.91	2.49	1750.18	65	26-Apr-2023	GOOD		
51000	51100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.61	1.39	1.5	992.12	55	26-Apr-2023	GOOD		
51100	51200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.64	2.38	2.01	1376.96	67	26-Apr-2023	GOOD		
51100	51200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.59	2.07	1.83	1239.61	55	26-Apr-2023	GOOD		
51200	51300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	2.43	2.06	1415.38	71	26-Apr-2023	GOOD		
51200	51300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	1.87	1.84	1247.20	61	26-Apr-2023	GOOD		
51300	51400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	3.17	2.69	1908.37	71	26-Apr-2023	GOOD		
51300	51400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.51	1.87	2.19	1515.79	65	26-Apr-2023	GOOD		
51400	51500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	2.48	2.35	1640.35	70	26-Apr-2023	GOOD		
51400	51500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	1.4	1.58	1051.57	67	26-Apr-2023	GOOD		
51500	51600	51500.000	52500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.78	1.99	1.89	1285.22	69	26-Apr-2023	GOOD	1520.90	GOOD
51500	51600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.53	1.37	1.45	955.15	70	26-Apr-2023	GOOD		
51600	51700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.74	1.89	1.82	1232.03	70	26-Apr-2023	GOOD		
51600	51700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.37	1.46	962.53	69	26-Apr-2023	GOOD		
51700	51800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.33	1.48	1.41	925.69	69	26-Apr-2023	GOOD		
51700	51800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	1.62	1.89	1285.22	69	26-Apr-2023	GOOD		
51800	51900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.3	1.45	1.38	903.66	71	26-Apr-2023	GOOD		
51800	51900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.64	1.27	1.46	962.53	70	26-Apr-2023	GOOD		
51900	52000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.47	2.34	2.41	1687.33	66	26-Apr-2023	GOOD		
51900	52000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.9	2.68	2.79	1988.00	69	26-Apr-2023	GOOD		
52000	52100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.69	1.74	2.22	1539.06	59	26-Apr-2023	GOOD		
52000	52100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.05	2.05	2.05	1407.68	59	26-Apr-2023	GOOD		
52100	52200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.06	2.84	3.45	2521.73	59	26-Apr-2023	POOR		
52100	52200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.43	4.78	5.11	3915.36	57	26-Apr-2023	POOR		
52200	52300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	2.62	2.57	1813.28	59	26-Apr-2023	GOOD		
52200	52300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.59	1.75	1179.08	58	26-Apr-2023	GOOD		
52300	52400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.24	2.1	1446.19	62	26-Apr-2023	GOOD		
52300	52400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	1.82	2	1369.29	60	26-Apr-2023	GOOD		
52400	52500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.34	2.24	2.29	1593.52	64	26-Apr-2023	GOOD		
52400	52500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.03	2.1	1446.19	63	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
52500	52600	52500.000	53500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.79	3.4	3.1	2237.00	68	26-Apr-2023	Fair		
52500	52600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.61	2.53	2.57	1813.28	63	26-Apr-2023	GOOD		
52600	52700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.7	2.81	2.76	1964.08	69	26-Apr-2023	GOOD		
52600	52700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.21	3.36	3.29	2391.11	63	26-Apr-2023	Fair		
52700	52800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.54	3.37	2.96	2124.16	68	26-Apr-2023	Fair		
52700	52800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.14	2.79	2.97	2132.20	63	26-Apr-2023	Fair		
52800	52900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	2.68	2.44	1710.87	68	26-Apr-2023	GOOD		
52800	52900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.32	2.62	2.97	2132.20	62	26-Apr-2023	Fair		
52900	53000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.25	2.81	2.53	1781.70	68	26-Apr-2023	GOOD		
52900	53000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.32	1.97	2.15	1484.81	62	26-Apr-2023	GOOD		
53000	53100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.52	3.69	3.11	2245.08	66	26-Apr-2023	Fair	1837.00	GOOD
53000	53100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.22	1.52	1.87	1270.00	64	26-Apr-2023	GOOD		
53100	53200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.9	2	1.95	1331.00	70	26-Apr-2023	GOOD		
53100	53200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.62	2.46	2.54	1789.59	66	26-Apr-2023	GOOD		
53200	53300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.61	2.85	2.73	1940.18	72	26-Apr-2023	GOOD		
53200	53300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	1.58	1.77	1194.18	68	26-Apr-2023	GOOD		
53300	53400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.12	3.16	3.14	2269.35	72	26-Apr-2023	Fair		
53300	53400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.96	2.53	2.75	1956.11	70	26-Apr-2023	GOOD		
53400	53500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.76	1.92	1.84	1247.20	70	26-Apr-2023	GOOD		
53400	53500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.54	2.37	2.46	1726.58	65	26-Apr-2023	GOOD		
53500	53600	53500.000	54500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.41	2.5	2.46	1726.58	70	26-Apr-2023	GOOD		
53500	53600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.2	1.86	2.03	1392.31	67	26-Apr-2023	GOOD		
53600	53700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.78	2.68	2.73	1940.18	67	26-Apr-2023	GOOD		
53600	53700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	1.99	2.08	1430.78	67	26-Apr-2023	GOOD		
53700	53800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.7	1.96	2.33	1624.72	69	26-Apr-2023	GOOD		
53700	53800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.07	2.47	2.77	1972.05	65	26-Apr-2023	GOOD		
53800	53900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.46	2.14	2.3	1601.31	74	26-Apr-2023	GOOD		
53800	53900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	1.56	1.65	1103.88	67	26-Apr-2023	GOOD		
53900	54000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.6	1.8	1216.87	77	26-Apr-2023	GOOD		
53900	54000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	1.64	1.86	1262.39	68	26-Apr-2023	GOOD		
54000	54100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.91	3.24	3.08	2220.84	77	26-Apr-2023	Fair	1609.00	GOOD
54000	54100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.09	2.18	2.14	1477.08	70	26-Apr-2023	GOOD		
54100	54200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.42	2	2.21	1531.30	76	26-Apr-2023	GOOD		
54100	54200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.59	2.71	2.65	1876.62	71	26-Apr-2023	GOOD		
54200	54300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.24	2.1	1446.19	77	26-Apr-2023	GOOD		
54200	54300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.31	2.2	2.26	1570.15	72	26-Apr-2023	GOOD		
54300	54400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.4	2.57	1813.28	76	26-Apr-2023	GOOD		
54300	54400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.99	1.89	1.94	1323.36	75	26-Apr-2023	GOOD		
54400	54500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.34	2.64	2.49	1750.18	76	26-Apr-2023	GOOD		
54400	54500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.69	2.67	2.68	1900.43	70	26-Apr-2023	GOOD		
54500	54600	54500.000	55500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	2.4	2.31	1609.11	76	26-Apr-2023	GOOD		
54500	54600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.07	1.64	1.86	1262.39	70	26-Apr-2023	GOOD		
54600	54700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.58	2.21	2.4	1679.49	76	26-Apr-2023	GOOD		
54600	54700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.11	2.14	1477.08	70	26-Apr-2023	GOOD		
54700	54800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.59	2.72	2.66	1884.55	75	26-Apr-2023	GOOD		
54700	54800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.58	1.62	1.6	1066.49	69	26-Apr-2023	GOOD		
54800	54900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.13	1.56	1.35	881.69	74	26-Apr-2023	GOOD		
54800	54900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.96	1.7	1.83	1239.61	68	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
54900	55000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.31	2.01	1.66	1111.38	71	26-Apr-2023	GOOD		
54900	55000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.14	1.19	1.17	751.12	69	26-Apr-2023	GOOD	1439.30	GOOD
55000	55100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.76	2.11	1.94	1323.36	69	26-Apr-2023	GOOD		
55000	55100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.35	1.05	1.2	772.72	69	26-Apr-2023	GOOD		
55100	55200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.45	2.71	2.58	1821.19	71	26-Apr-2023	GOOD		
55100	55200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.19	2.12	2.16	1492.55	68	26-Apr-2023	GOOD		
55200	55300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.08	2.09	1438.48	72	26-Apr-2023	GOOD		
55200	55300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.24	2.04	2.14	1477.08	67	26-Apr-2023	GOOD		
55300	55400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	3.48	3.11	2245.08	72	26-Apr-2023	Fair		
55300	55400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	1.78	2.09	1438.48	63	26-Apr-2023	GOOD		
55400	55500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.88	3.3	3.09	2228.92	72	26-Apr-2023	Fair		
55400	55500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.3	2.26	2.28	1585.72	60	26-Apr-2023	GOOD		
55500	55600	55500.000	56500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.92	3.32	3.12	2253.17	69	26-Apr-2023	Fair		
55500	55600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.5	3.32	3.41	2489.00	62	26-Apr-2023	POOR		
55600	55700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	2.69	2.6	1837.01	70	26-Apr-2023	GOOD		
55600	55700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.73	2.38	2.56	1805.38	63	26-Apr-2023	GOOD		
55700	55800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.9	2.74	2.32	1616.91	75	26-Apr-2023	GOOD		
55700	55800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.07	2.16	2.62	1852.84	64	26-Apr-2023	GOOD		
55800	55900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.07	2.79	2.43	1703.02	73	26-Apr-2023	GOOD		
55800	55900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	1.45	1.65	1103.88	64	26-Apr-2023	GOOD		
55900	56000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.4	2.18	1508.04	71	26-Apr-2023	GOOD		
55900	56000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.85	1.88	1277.61	67	26-Apr-2023	GOOD		
56000	56100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.31	3.06	2.69	1908.37	69	26-Apr-2023	GOOD	1587.70	GOOD
56000	56100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.93	1.68	1.81	1224.45	67	26-Apr-2023	GOOD		
56100	56200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.64	1.63	1.64	1096.39	69	26-Apr-2023	GOOD		
56100	56200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	2.19	2.22	1539.06	67	26-Apr-2023	GOOD		
56200	56300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.94	1.87	1270.00	68	26-Apr-2023	GOOD		
56200	56300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.75	1.67	1.71	1148.94	67	26-Apr-2023	GOOD		
56300	56400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.78	2.18	1.98	1353.96	68	26-Apr-2023	GOOD		
56300	56400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.34	1.4	918.34	66	26-Apr-2023	GOOD		
56400	56500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.71	3.58	3.15	2277.45	68	26-Apr-2023	Fair		
56400	56500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.22	2.3	2.26	1570.15	66	26-Apr-2023	GOOD		
56500	56600	56500.000	57500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.58	1.26	1.42	933.05	67	26-Apr-2023	GOOD		
56500	56600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.05	1.91	1.98	1353.96	64	26-Apr-2023	GOOD		
56600	56700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.05	1.39	1.22	787.16	67	26-Apr-2023	GOOD		
56600	56700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.3	1.18	1.24	801.63	64	26-Apr-2023	GOOD		
56700	56800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.49	1.24	1.37	896.33	66	26-Apr-2023	GOOD		
56700	56800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.09	1.1	1.1	700.97	63	26-Apr-2023	GOOD		
56800	56900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.26	1.36	1.31	852.48	61	26-Apr-2023	GOOD		
56800	56900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.71	1.52	1006.94	52	26-Apr-2023	GOOD		
56900	57000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.19	4.51	4.85	3692.93	25	26-Apr-2023	POOR		
56900	57000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.26	1.3	1.28	830.65	52	26-Apr-2023	GOOD		
57000	57100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.6	3.17	2.89	2067.98	25	26-Apr-2023	Fair	1790.30	GOOD
57000	57100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	8.56	11.95	10.26	8547.23	19	26-Apr-2023	POOR		
57100	57200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.45	2.99	3.22	2334.21	48	26-Apr-2023	Fair		
57100	57200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.94	3.66	4.3	3227.20	35	26-Apr-2023	POOR		
57200	57300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.38	2.96	3.17	2293.65	60	26-Apr-2023	Fair		
57200	57300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.43	1.65	1.54	1021.79	43	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
57300	57400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	2.11	2.24	1554.60	63	26-Apr-2023	GOOD		
57300	57400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.63	1.58	1.61	1073.95	53	26-Apr-2023	GOOD		
57400	57500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.53	1.5	992.12	63	26-Apr-2023	GOOD		
57400	57500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.25	1.32	1.29	837.92	60	26-Apr-2023	GOOD		
57500	57600	57500.000	58500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.72	2.88	2.8	1995.99	65	26-Apr-2023	GOOD		
57500	57600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.43	1.73	1.58	1051.57	59	26-Apr-2023	GOOD		
57600	57700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.74	3.36	3.05	2196.63	67	26-Apr-2023	Fair		
57600	57700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.29	2.9	2.6	1837.01	59	26-Apr-2023	GOOD		
57700	57800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.67	3.24	2.96	2124.16	69	26-Apr-2023	Fair		
57700	57800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.2	3.39	3.8	2809.95	62	26-Apr-2023	POOR		
57800	57900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.52	5.68	5.1	3906.78	69	26-Apr-2023	POOR		
57800	57900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.37	1.78	2.07	1423.07	63	26-Apr-2023	GOOD		
57900	58000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.26	5.54	5.4	4165.06	65	26-Apr-2023	POOR		
57900	58000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	6.18	6.23	6.21	4870.83	54	26-Apr-2023	POOR		
58000	58100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	2.06	2	1369.29	63	26-Apr-2023	GOOD	1957.90	GOOD
58000	58100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	2.52	2.35	1640.35	48	26-Apr-2023	GOOD		
58100	58200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.21	1.29	1.25	808.87	65	26-Apr-2023	GOOD		
58100	58200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.25	1.86	2.06	1415.38	57	26-Apr-2023	GOOD		
58200	58300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.85	1.82	1232.03	68	26-Apr-2023	GOOD		
58200	58300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.22	1.03	1.13	722.42	64	26-Apr-2023	GOOD		
58300	58400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	1.85	2.12	1461.63	71	26-Apr-2023	GOOD		
58300	58400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	1.83	1.8	1216.87	67	26-Apr-2023	GOOD		
58400	58500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.82	2.86	2.84	2027.95	75	26-Apr-2023	Fair		
58400	58500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.25	1.44	1.35	881.69	66	26-Apr-2023	GOOD		
58500	58600	58500.000	59500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.46	2.21	1531.30	75	26-Apr-2023	GOOD		
58500	58600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.61	1.44	1.53	1014.37	66	26-Apr-2023	GOOD		
58600	58700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.87	2.39	2.13	1469.35	74	26-Apr-2023	GOOD		
58600	58700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.94	1.99	1.97	1346.30	67	26-Apr-2023	GOOD		
58700	58800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.68	1.96	1.82	1232.03	69	26-Apr-2023	GOOD		
58700	58800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.52	1.51	1.52	1006.94	63	26-Apr-2023	GOOD		
58800	58900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.8	1.95	1.88	1277.61	66	26-Apr-2023	GOOD		
58800	58900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.71	1.58	1051.57	51	26-Apr-2023	GOOD		
58900	59000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	1.97	1.85	1254.80	63	26-Apr-2023	GOOD		
58900	59000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.39	1.5	1.45	955.15	52	26-Apr-2023	GOOD		
59000	59100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.1	2.07	2.09	1438.48	62	26-Apr-2023	GOOD	1289.30	GOOD
59000	59100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.86	4.73	4.3	3227.20	50	26-Apr-2023	POOR		
59100	59200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	1.48	1.52	1006.94	63	26-Apr-2023	GOOD		
59100	59200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.52	1.53	1.53	1014.37	56	26-Apr-2023	GOOD		
59200	59300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.29	1.59	1.44	947.78	63	26-Apr-2023	GOOD		
59200	59300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.4	1.14	1.27	823.38	60	26-Apr-2023	GOOD		
59300	59400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.63	1.57	1.6	1066.49	41	26-Apr-2023	GOOD		
59300	59400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.31	1.41	925.69	64	26-Apr-2023	GOOD		
59400	59500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.28	1.93	2.11	1453.91	41	26-Apr-2023	GOOD		
59400	59500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	2.81	2.48	1742.31	69	26-Apr-2023	GOOD		
59500	59600	59500.000	60500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.49	2.61	1844.92	52	26-Apr-2023	GOOD		
59500	59600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.41	1.53	1.47	969.92	69	26-Apr-2023	GOOD		
59600	59700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.21	1.27	1.24	801.63	52	26-Apr-2023	GOOD		
59600	59700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.72	0.86	0.79	483.82	68	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
59700	59800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	0.96	1.25	1.11	708.11	53	26-Apr-2023	GOOD		
59700	59800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.08	1.13	1.11	708.11	63	26-Apr-2023	GOOD		
59800	59900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.43	1.69	1.56	1036.67	58	26-Apr-2023	GOOD		
59800	59900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.18	1.02	1.1	700.97	60	26-Apr-2023	GOOD		
59900	60000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.35	1.49	1.42	933.05	62	26-Apr-2023	GOOD		
59900	60000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	8.49	7.44	7.97	6441.31	42	26-Apr-2023	POOR	1455.60	GOOD
60000	60100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	0.96	0.92	0.94	587.82	63	26-Apr-2023	GOOD		
60000	60100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	7.52	6.73	7.13	5685.92	62	26-Apr-2023	POOR		
60100	60200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.65	1.56	1.61	1073.95	64	26-Apr-2023	GOOD		
60100	60200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.65	1.41	1.53	1014.37	66	26-Apr-2023	GOOD		
60200	60300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.78	1.89	1285.22	62	26-Apr-2023	GOOD		
60200	60300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.21	0.99	1.1	700.97	66	26-Apr-2023	GOOD		
60300	60400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.44	1.45	955.15	64	26-Apr-2023	GOOD		
60300	60400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.41	1.37	896.33	65	26-Apr-2023	GOOD		
60400	60500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.92	1.86	1262.39	62	26-Apr-2023	GOOD		
60400	60500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.53	1.54	1021.79	67	26-Apr-2023	GOOD		
60500	60600	60500.000	61500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	2.11	2	1369.29	62	26-Apr-2023	GOOD		
60500	60600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.88	1.68	1.78	1201.74	67	26-Apr-2023	GOOD		
60600	60700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.37	1.48	1.43	940.41	67	26-Apr-2023	GOOD		
60600	60700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.44	1.3	1.37	896.33	66	26-Apr-2023	GOOD		
60700	60800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.67	1.68	1.68	1126.39	69	26-Apr-2023	GOOD		
60700	60800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.51	2.56	2.53	1781.70	62	26-Apr-2023	GOOD		
60800	60900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.31	1.99	2.15	1484.81	69	26-Apr-2023	GOOD		
60800	60900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	7.27	7.53	7.4	5927.62	21	26-Apr-2023	POOR		
60900	61000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.87	3.64	3.26	2366.71	61	26-Apr-2023	Fair		
60900	61000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.77	1.43	1.6	1066.49	43	26-Apr-2023	GOOD	1628.60	GOOD
61000	61100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.28	3.41	2.85	2035.95	61	26-Apr-2023	Fair		
61000	61100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.28	1.5	992.12	47	26-Apr-2023	GOOD		
61100	61200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.4	1.98	1.69	1133.90	64	26-Apr-2023	GOOD		
61100	61200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.79	2.23	2.51	1765.94	52	26-Apr-2023	GOOD		
61200	61300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.57	2.81	2.19	1515.79	64	26-Apr-2023	GOOD		
61200	61300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.12	2.52	2.82	2011.96	58	26-Apr-2023	Fair		
61300	61400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.07	1.81	1.94	1323.36	63	26-Apr-2023	GOOD		
61300	61400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.64	1.83	1.74	1171.54	63	26-Apr-2023	GOOD		
61400	61500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.55	2.26	1570.15	64	26-Apr-2023	GOOD		
61400	61500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.27	1.36	889.00	63	26-Apr-2023	GOOD		
61500	61600	61500.000	62500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.63	2.37	2	1369.29	66	26-Apr-2023	GOOD		
61500	61600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.42	1.36	889.00	62	26-Apr-2023	GOOD		
61600	61700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.45	2.03	1.74	1171.54	67	26-Apr-2023	GOOD		
61600	61700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	2.12	2.27	1577.94	60	26-Apr-2023	GOOD		
61700	61800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	2.47	2.21	1531.30	68	26-Apr-2023	GOOD		
61700	61800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	6.43	5.31	5.87	4573.15	57	26-Apr-2023	POOR		
61800	61900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	7.1	7.06	7.08	5641.28	62	26-Apr-2023	POOR		
61800	61900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	2.26	2.05	1407.68	60	26-Apr-2023	GOOD		
61900	62000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.7	2.83	2.77	1972.05	62	26-Apr-2023	GOOD		
61900	62000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.08	1.27	1.17	751.12	61	26-Apr-2023	GOOD		
62000	62100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.43	2.34	1.89	1285.22	62	26-Apr-2023	GOOD	1560.70	GOOD
62000	62100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.18	1.34	1.26	816.12	61	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
62100	62200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.71	2.52	2.12	1461.63	61	26-Apr-2023	GOOD		
62100	62200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.9	1.11	1.01	637.06	60	26-Apr-2023	GOOD		
62200	62300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.98	2.69	2.34	1632.53	62	26-Apr-2023	GOOD		
62200	62300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.4	1.2	1.3	845.20	61	26-Apr-2023	GOOD		
62300	62400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.63	1.66	1111.38	64	26-Apr-2023	GOOD		
62300	62400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.3	1.31	852.48	64	26-Apr-2023	GOOD		
62400	62500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.57	1.54	1.56	1036.67	67	26-Apr-2023	GOOD		
62400	62500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1	1.06	1.03	651.21	65	26-Apr-2023	GOOD		
62500	62600	62500.000	63500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.48	0.95	1.22	787.16	68	26-Apr-2023	GOOD		
62500	62600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.83	0.91	0.87	539.02	66	26-Apr-2023	GOOD		
62600	62700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	0.97	0.91	0.94	587.82	70	26-Apr-2023	GOOD		
62600	62700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.03	1.17	1.1	700.97	64	26-Apr-2023	GOOD		
62700	62800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.18	1.17	1.17	751.12	67	26-Apr-2023	GOOD		
62700	62800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.32	1.32	859.77	61	26-Apr-2023	GOOD		
62800	62900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.28	1.62	1.45	955.15	63	26-Apr-2023	GOOD		
62800	62900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.12	1.23	1.17	751.12	60	26-Apr-2023	GOOD		
62900	63000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.68	2.78	2.73	1940.18	61	26-Apr-2023	GOOD		
62900	63000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.04	1.16	1.1	700.97	64	26-Apr-2023	GOOD		
63000	63100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.51	4.81	4.66	3531.29	62	26-Apr-2023	POOR	1219.70	GOOD
63000	63100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.41	2.06	2.24	1554.60	66	26-Apr-2023	GOOD		
63100	63200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.76	2.85	2.8	1995.99	61	26-Apr-2023	GOOD		
63100	63200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.05	2.3	1601.31	63	26-Apr-2023	GOOD		
63200	63300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	1.77	1.92	1308.09	52	26-Apr-2023	GOOD		
63200	63300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	1.54	1.81	1224.45	58	26-Apr-2023	GOOD		
63300	63400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.53	1.53	1.53	1014.37	41	26-Apr-2023	GOOD		
63300	63400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	1.63	1.95	1331.00	55	26-Apr-2023	GOOD		
63400	63500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	2.01	1.74	1171.54	49	26-Apr-2023	GOOD		
63400	63500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.48	1.78	1.63	1088.91	56	26-Apr-2023	GOOD		
63500	63600	63500.000	64500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.57	2.28	1.93	1315.72	58	26-Apr-2023	GOOD		
63500	63600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	1.85	1.8	1216.87	60	26-Apr-2023	GOOD		
63600	63700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	2.92	2.65	1876.62	55	26-Apr-2023	GOOD		
63600	63700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.11	1.83	1.97	1346.30	58	26-Apr-2023	GOOD		
63700	63800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.34	2.19	2.26	1570.15	57	26-Apr-2023	GOOD		
63700	63800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	2.41	2.18	1508.04	51	26-Apr-2023	GOOD		
63800	63900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.96	3.37	3.17	2293.65	59	26-Apr-2023	Fair		
63800	63900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	1.57	1.62	1081.43	50	26-Apr-2023	GOOD		
63900	64000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.77	1.61	1.69	1133.90	64	26-Apr-2023	GOOD		
63900	64000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.41	2.84	2.63	1860.76	59	26-Apr-2023	GOOD		
64000	64100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	2.93	2.65	1876.62	64	26-Apr-2023	GOOD	1501.00	GOOD
64000	64100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.59	2.65	2.62	1852.84	62	26-Apr-2023	GOOD		
64100	64200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.22	2.63	2.43	1703.02	61	26-Apr-2023	GOOD		
64100	64200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.75	1.86	1.81	1224.45	60	26-Apr-2023	GOOD		
64200	64300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.82	1.96	1.89	1285.22	65	26-Apr-2023	GOOD		
64200	64300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.83	1.74	1.79	1209.31	56	26-Apr-2023	GOOD		
64300	64400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.75	2.36	2.05	1407.68	67	26-Apr-2023	GOOD		
64300	64400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2	1.92	1.96	1338.65	53	26-Apr-2023	GOOD		
64400	64500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.54	2.36	1648.17	53	26-Apr-2023	GOOD		
64400	64500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	1.9	1.87	1270.00	50	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
64500	64600	64500.000	65500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.86	2.25	2.06	1415.38	40	26-Apr-2023	GOOD		
64500	64600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	2.58	2.5	1758.06	49	26-Apr-2023	GOOD		
64600	64700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.33	2.41	1687.33	49	26-Apr-2023	GOOD		
64600	64700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	2.79	2.59	1829.10	51	26-Apr-2023	GOOD		
64700	64800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.61	2.47	2.54	1789.59	55	26-Apr-2023	GOOD		
64700	64800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2	1.54	1.77	1194.18	54	26-Apr-2023	GOOD		
64800	64900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.11	2.03	1392.31	61	26-Apr-2023	GOOD		
64800	64900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.99	2.04	2.01	1376.96	55	26-Apr-2023	GOOD		
64900	65000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.17	4.7	3.94	2926.15	60	26-Apr-2023	POOR		
64900	65000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.48	2.2	2.34	1632.53	53	26-Apr-2023	GOOD	1642.90	GOOD
65000	65100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.3	1.9	1.6	1066.49	63	26-Apr-2023	GOOD		
65000	65100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.94	2.54	2.74	1948.14	53	26-Apr-2023	GOOD		
65100	65200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.5	2.3	2.4	1679.49	25	26-Apr-2023	GOOD		
65100	65200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.17	1.17	1.67	1118.88	26	26-Apr-2023	GOOD		
65200	65300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.16	2.42	2.29	1593.52	50	26-Apr-2023	GOOD		
65200	65300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.86	2.49	2.68	1900.43	51	26-Apr-2023	GOOD		
65300	65400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.06	2.01	1376.96	57	26-Apr-2023	GOOD		
65300	65400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.48	2.19	2.34	1632.53	61	26-Apr-2023	GOOD		
65400	65500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.66	2.48	1742.31	61	26-Apr-2023	GOOD		
65400	65500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.62	2.48	2.55	1797.49	65	26-Apr-2023	GOOD		
65500	65600	65500.000	66500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.38	4.22	4.3	3227.20	63	26-Apr-2023	POOR		
65500	65600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.66	2.22	2.44	1710.87	65	26-Apr-2023	GOOD		
65600	65700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	1.77	1.86	1262.39	64	26-Apr-2023	GOOD		
65600	65700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.44	1.68	1126.39	64	26-Apr-2023	GOOD		
65700	65800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	1.92	1.91	1300.46	65	26-Apr-2023	GOOD		
65700	65800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	1.89	2.22	1539.06	65	26-Apr-2023	GOOD		
65800	65900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.62	1.92	1.77	1194.18	65	26-Apr-2023	GOOD		
65800	65900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	1.68	1.97	1346.30	64	26-Apr-2023	GOOD		
65900	66000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.91	2.83	2.37	1655.99	64	26-Apr-2023	GOOD		
65900	66000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	2.11	2.06	1415.38	65	26-Apr-2023	GOOD	1567.20	GOOD
66000	66100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.05	3.14	2.6	1837.01	64	26-Apr-2023	GOOD		
66000	66100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.14	2.08	2.11	1453.91	65	26-Apr-2023	GOOD		
66100	66200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	2.48	2.43	1703.02	64	26-Apr-2023	GOOD		
66100	66200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.89	1.96	1.93	1315.72	63	26-Apr-2023	GOOD		
66200	66300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.79	3.45	3.62	2661.30	64	26-Apr-2023	POOR		
66200	66300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.18	2.37	1655.99	62	26-Apr-2023	GOOD		
66300	66400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.16	2.01	2.09	1438.48	64	26-Apr-2023	GOOD		
66300	66400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.23	2.15	2.19	1515.79	62	26-Apr-2023	GOOD		
66400	66500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.56	1.63	1088.91	64	26-Apr-2023	GOOD		
66400	66500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.22	1.52	1.37	896.33	65	26-Apr-2023	GOOD		
66500	66600	66500.000	67500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.36	1.34	1.35	881.69	64	26-Apr-2023	GOOD		
66500	66600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.45	1.37	896.33	64	26-Apr-2023	GOOD		
66600	66700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	1.62	1.9	1292.84	64	26-Apr-2023	GOOD		
66600	66700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.12	1.69	1.91	1300.46	63	26-Apr-2023	GOOD		
66700	66800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	0.99	1.06	1.03	651.21	65	26-Apr-2023	GOOD		
66700	66800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	0.98	1.15	736.75	63	26-Apr-2023	GOOD		
66800	66900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	2.09	1.91	1300.46	64	26-Apr-2023	GOOD		
66800	66900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.22	1.46	962.53	64	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
66900	67000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.74	2.69	2.72	1932.23	66	26-Apr-2023	GOOD		
66900	67000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	1.71	1.95	1331.00	66	26-Apr-2023	GOOD	1277.60	GOOD
67000	67100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.45	1.83	2.14	1477.08	67	26-Apr-2023	GOOD		
67000	67100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.89	1.44	1.67	1118.88	68	26-Apr-2023	GOOD		
67100	67200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.64	1.83	1.74	1171.54	69	26-Apr-2023	GOOD		
67100	67200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	1.42	1.58	1051.57	66	26-Apr-2023	GOOD		
67200	67300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.81	2.68	2.75	1956.11	67	26-Apr-2023	GOOD		
67200	67300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	1.73	1.87	1270.00	65	26-Apr-2023	GOOD		
67300	67400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.83	1.76	1.8	1216.87	66	26-Apr-2023	GOOD		
67300	67400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.87	1.71	1.79	1209.31	67	26-Apr-2023	GOOD		
67400	67500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.69	3.24	2.97	2132.20	64	26-Apr-2023	Fair		
67400	67500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	2.33	2.38	1663.82	63	26-Apr-2023	GOOD		
67500	67600	67500.000	68500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.67	3.25	2.96	2124.16	62	26-Apr-2023	Fair		
67500	67600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.74	2.99	2.87	2051.96	62	26-Apr-2023	Fair		
67600	67700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.19	3.62	3.41	2489.00	60	26-Apr-2023	POOR		
67600	67700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.63	2.41	2.52	1773.82	63	26-Apr-2023	GOOD		
67700	67800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.2	3.15	3.18	2301.75	59	26-Apr-2023	Fair		
67700	67800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.33	3.53	3.43	2505.36	63	26-Apr-2023	POOR		
67800	67900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.73	1.71	1148.94	61	26-Apr-2023	GOOD		
67800	67900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.57	1.58	1.58	1051.57	64	26-Apr-2023	GOOD		
67900	68000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.03	3.51	3.27	2374.84	63	26-Apr-2023	Fair		
67900	68000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.96	2.18	2.07	1423.07	66	26-Apr-2023	GOOD		
68000	68100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.86	2.71	2.29	1593.52	64	26-Apr-2023	GOOD	1805.20	GOOD
68000	68100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	2.11	2.07	1423.07	67	26-Apr-2023	GOOD		
68100	68200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	3.01	2.65	1876.62	64	26-Apr-2023	GOOD		
68100	68200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.75	2.13	2.44	1710.87	67	26-Apr-2023	GOOD		
68200	68300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.66	2.26	1.96	1338.65	65	26-Apr-2023	GOOD		
68200	68300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.4	1.89	2.15	1484.81	67	26-Apr-2023	GOOD		
68300	68400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.97	3.49	3.23	2342.33	66	26-Apr-2023	Fair		
68300	68400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.41	2.26	2.34	1632.53	69	26-Apr-2023	GOOD		
68400	68500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	2.41	2.18	1508.04	67	26-Apr-2023	GOOD		
68400	68500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.09	2.38	2.74	1948.14	68	26-Apr-2023	GOOD		
68500	68600	68500.000	69500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.4	4.47	3.94	2926.15	66	26-Apr-2023	POOR		
68500	68600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.71	2.14	2.43	1703.02	67	26-Apr-2023	GOOD		
68600	68700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2	2.99	2.49	1750.18	66	26-Apr-2023	GOOD		
68600	68700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	2.11	2.25	1562.37	66	26-Apr-2023	GOOD		
68700	68800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.2	2.51	2.36	1648.17	64	26-Apr-2023	GOOD		
68700	68800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	1.97	2.18	1508.04	63	26-Apr-2023	GOOD		
68800	68900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.64	2.56	1805.38	65	26-Apr-2023	GOOD		
68800	68900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.37	1.84	2.11	1453.91	60	26-Apr-2023	GOOD		
68900	69000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.87	2.26	2.07	1423.07	66	26-Apr-2023	GOOD		
68900	69000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.24	2.2	1523.54	64	26-Apr-2023	GOOD		
69000	69100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.15	1.29	1.22	787.16	66	26-Apr-2023	GOOD	1360.40	GOOD
69000	69100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.12	1.02	1.07	679.60	67	26-Apr-2023	GOOD		
69100	69200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.26	1.27	1.27	823.38	67	26-Apr-2023	GOOD		
69100	69200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.14	1.21	779.94	66	26-Apr-2023	GOOD		
69200	69300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.32	1.17	1.25	808.87	66	26-Apr-2023	GOOD		
69200	69300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.15	1.13	1.14	729.58	66	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
69300	69400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.4	2.3	3.85	2851.39	63	26-Apr-2023	POOR		
69300	69400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.11	1.04	1.08	686.71	66	26-Apr-2023	GOOD		
69400	69500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.33	1.56	1.45	955.15	67	26-Apr-2023	GOOD		
69400	69500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.25	1.22	1.24	801.63	67	26-Apr-2023	GOOD		
69500	69600	69500.000	70500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.76	1.83	1.8	1216.87	70	26-Apr-2023	GOOD		
69500	69600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.13	1.44	1.29	837.92	68	26-Apr-2023	GOOD		
69600	69700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.34	1.84	1.59	1059.02	71	26-Apr-2023	GOOD		
69600	69700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.95	0.94	0.95	594.83	68	26-Apr-2023	GOOD		
69700	69800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.34	2.26	1570.15	69	26-Apr-2023	GOOD		
69700	69800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.93	1.06	1	630.00	65	26-Apr-2023	GOOD		
69800	69900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.83	1.81	1224.45	67	26-Apr-2023	GOOD		
69800	69900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.39	2.46	2.43	1703.02	59	26-Apr-2023	GOOD		
69900	70000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.86	2.06	1.96	1338.65	69	26-Apr-2023	GOOD		
69900	70000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.49	1.68	1.59	1059.02	53	26-Apr-2023	GOOD		
70000	70100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.04	3	3.02	2172.44	71	26-Apr-2023	Fair	1430.60	GOOD
70000	70100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.43	2.3	2.37	1655.99	46	26-Apr-2023	GOOD		
70100	70200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.77	2.75	1956.11	70	26-Apr-2023	GOOD		
70100	70200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.1	1.8	1.95	1331.00	57	26-Apr-2023	GOOD		
70200	70300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.42	2.41	2.42	1695.17	67	26-Apr-2023	GOOD		
70200	70300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.06	2.31	1609.11	67	26-Apr-2023	GOOD		
70300	70400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.56	2.64	2.6	1837.01	65	26-Apr-2023	GOOD		
70300	70400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	2.34	2.19	1515.79	70	26-Apr-2023	GOOD		
70400	70500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.71	2.33	1624.72	67	26-Apr-2023	GOOD		
70400	70500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.04	2.51	2.78	1980.03	71	26-Apr-2023	GOOD		
70500	70600	70500.000	71500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	2.31	2	1369.29	66	26-Apr-2023	GOOD		
70500	70600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	2.06	1.94	1323.36	73	26-Apr-2023	GOOD		
70600	70700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.93	2.2	2.07	1423.07	67	26-Apr-2023	GOOD		
70600	70700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	1.69	1.91	1300.46	71	26-Apr-2023	GOOD		
70700	70800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	2.17	2.18	1508.04	68	26-Apr-2023	GOOD		
70700	70800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.17	1.83	2	1369.29	69	26-Apr-2023	GOOD		
70800	70900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	3.6	3.17	2293.65	64	26-Apr-2023	Fair		
70800	70900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	1.97	2.07	1423.07	61	26-Apr-2023	GOOD		
70900	71000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.13	3.73	3.43	2505.36	63	26-Apr-2023	POOR		
70900	71000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.6	2.83	2.72	1932.23	54	26-Apr-2023	GOOD		
71000	71100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.65	3.09	2.87	2051.96	62	26-Apr-2023	Fair	2215.50	Fair
71000	71100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.46	2.56	2.51	1765.94	51	26-Apr-2023	GOOD		
71100	71200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.36	6.07	5.72	4442.47	61	26-Apr-2023	POOR		
71100	71200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.12	3.34	3.23	2342.33	50	26-Apr-2023	Fair		
71200	71300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	6.47	6.53	6.5	5126.29	60	26-Apr-2023	POOR		
71200	71300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	7.82	8.49	8.16	6613.53	53	26-Apr-2023	POOR		
71300	71400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.04	2.46	2.25	1562.37	61	26-Apr-2023	GOOD		
71300	71400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.19	1.93	2.06	1415.38	59	26-Apr-2023	GOOD		
71400	71500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.88	2.21	2.05	1407.68	62	26-Apr-2023	GOOD		
71400	71500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.79	1.58	1.69	1133.90	61	26-Apr-2023	GOOD		
71500	71600	71500.000	72500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.27	2.22	2.24	1554.60	64	26-Apr-2023	GOOD		
71500	71600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.63	1.95	2.29	1593.52	62	26-Apr-2023	GOOD		
71600	71700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.72	3.58	3.65	2686.02	62	26-Apr-2023	POOR		
71600	71700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.86	1.73	1.8	1216.87	61	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
71700	71800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.36	3.83	4.6	3480.40	61	26-Apr-2023	POOR		
71700	71800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.99	2.86	2.93	2100.06	52	26-Apr-2023	Fair		
71800	71900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.49	2.87	2.68	1900.43	49	26-Apr-2023	GOOD		
71800	71900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.15	2.15	1484.81	22	26-Apr-2023	GOOD		
71900	72000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.02	2.04	2.03	1392.31	40	26-Apr-2023	GOOD		
71900	72000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.32	5.56	5.44	4199.63	24	26-Apr-2023	POOR	2342.40	Fair
72000	72100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.87	4.93	4.9	3735.60	43	26-Apr-2023	POOR		
72000	72100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	6.56	5.54	6.05	4730.49	35	26-Apr-2023	POOR		
72100	72200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.64	2.92	2.78	1980.03	51	26-Apr-2023	GOOD		
72100	72200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.53	2.35	2.44	1710.87	41	26-Apr-2023	GOOD		
72200	72300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.87	4.01	3.94	2926.15	55	26-Apr-2023	POOR		
72200	72300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.99	3.35	3.17	2293.65	46	26-Apr-2023	Fair		
72300	72400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.49	2.81	2.65	1876.62	56	26-Apr-2023	GOOD		
72300	72400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.23	2.96	2.6	1837.01	52	26-Apr-2023	GOOD		
72400	72500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.23	2.81	2.52	1773.82	55	26-Apr-2023	GOOD		
72400	72500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.7	2.84	3.27	2374.84	53	26-Apr-2023	Fair		
72500	72600	72500.000	73500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.93	2.49	2.71	1924.27	57	26-Apr-2023	GOOD		
72500	72600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.31	2.34	2.82	2011.96	49	26-Apr-2023	Fair		
72600	72700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.33	2.52	2.43	1703.02	41	26-Apr-2023	GOOD		
72600	72700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	2.24	2.14	1477.08	50	26-Apr-2023	GOOD		
72700	72800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.42	4.58	4.5	3395.77	36	26-Apr-2023	POOR		
72700	72800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.36	3.35	3.36	2448.16	52	26-Apr-2023	POOR		
72800	72900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.87	2.36	2.12	1461.63	47	26-Apr-2023	GOOD		
72800	72900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.67	2.79	2.73	1940.18	50	26-Apr-2023	GOOD		
72900	73000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.95	3.4	3.18	2301.75	54	26-Apr-2023	Fair		
72900	73000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.45	2.7	2.58	1821.19	54	26-Apr-2023	GOOD	1592.20	GOOD
73000	73100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.26	2.47	2.37	1655.99	57	26-Apr-2023	GOOD		
73000	73100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.34	2.43	2.39	1671.65	54	26-Apr-2023	GOOD		
73100	73200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.45	1.78	1.62	1081.43	60	26-Apr-2023	GOOD		
73100	73200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.58	1.39	1.49	984.71	54	26-Apr-2023	GOOD		
73200	73300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.42	1.38	1.4	918.34	60	26-Apr-2023	GOOD		
73200	73300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.66	1.73	1164.00	61	26-Apr-2023	GOOD		
73300	73400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.31	1.44	1.38	903.66	62	26-Apr-2023	GOOD		
73300	73400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.33	1.24	1.29	837.92	63	26-Apr-2023	GOOD		
73400	73500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.47	1.66	1.57	1044.11	64	26-Apr-2023	GOOD		
73400	73500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.72	1.55	1.64	1096.39	64	26-Apr-2023	GOOD		
73500	73600	73500.000	74500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.49	3.16	2.83	2019.95	65	26-Apr-2023	Fair		
73500	73600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.37	1.98	2.18	1508.04	65	26-Apr-2023	GOOD		
73600	73700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.87	3.02	2.95	2116.12	63	26-Apr-2023	Fair		
73600	73700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.85	2.78	2.82	2011.96	65	26-Apr-2023	Fair		
73700	73800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	2.62	2.42	1695.17	61	26-Apr-2023	GOOD		
73700	73800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.76	2.27	2.51	1765.94	63	26-Apr-2023	GOOD		
73800	73900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.45	2.4	2.43	1703.02	59	26-Apr-2023	GOOD		
73800	73900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.11	2.05	2.08	1430.78	62	26-Apr-2023	GOOD		
73900	74000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.55	1.31	1.43	940.41	61	26-Apr-2023	GOOD		
73900	74000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	2.07	2.1	1446.19	64	26-Apr-2023	GOOD	1868.90	GOOD
74000	74100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.31	1.69	1.5	992.12	63	26-Apr-2023	GOOD		
74000	74100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.53	1.31	1.42	933.05	64	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
74100	74200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.02	2.51	2.26	1570.15	64	26-Apr-2023	GOOD		
74100	74200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.86	1.47	1.67	1118.88	64	26-Apr-2023	GOOD		
74200	74300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.47	3.67	3.57	2620.17	65	26-Apr-2023	POOR		
74200	74300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.09	3.05	3.07	2212.77	64	26-Apr-2023	Fair		
74300	74400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.69	2.92	2.81	2003.97	64	26-Apr-2023	Fair		
74300	74400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.85	2.74	2.8	1995.99	62	26-Apr-2023	GOOD		
74400	74500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.89	5.12	5.01	3829.65	61	26-Apr-2023	POOR		
74400	74500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.01	4.15	4.58	3463.46	61	26-Apr-2023	POOR		
74500	74600	74500.000	75500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3	2.86	2.93	2100.06	63	26-Apr-2023	Fair	1571.70	GOOD
74500	74600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4	3.41	3.71	2735.52	62	26-Apr-2023	POOR		
74600	74700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.36	2.04	2.2	1523.54	67	26-Apr-2023	GOOD		
74600	74700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.62	2.02	2.32	1616.91	64	26-Apr-2023	GOOD		
74700	74800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.76	1.73	1164.00	67	26-Apr-2023	GOOD		
74700	74800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.61	1.44	1.53	1014.37	63	26-Apr-2023	GOOD		
74800	74900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.36	2.16	1492.55	67	26-Apr-2023	GOOD		
74800	74900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.25	1.89	2.07	1423.07	63	26-Apr-2023	GOOD		
74900	75000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.1	2.75	2.43	1703.02	67	26-Apr-2023	GOOD		
74900	75000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.02	2.35	2.69	1908.37	63	26-Apr-2023	GOOD		
75000	75100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	3.36	2.74	1948.14	65	26-Apr-2023	GOOD		
75000	75100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	2.31	2.23	1546.83	63	26-Apr-2023	GOOD		
75100	75200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.91	2.74	2.33	1624.72	65	26-Apr-2023	GOOD		
75100	75200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	2.1	1.97	1346.30	66	26-Apr-2023	GOOD		
75200	75300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.91	3.02	2.46	1726.58	67	26-Apr-2023	GOOD		
75200	75300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.29	2.15	2.22	1539.06	68	26-Apr-2023	GOOD		
75300	75400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	2.69	2.27	1577.94	66	26-Apr-2023	GOOD		
75300	75400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.86	2.12	2.49	1750.18	66	26-Apr-2023	GOOD		
75400	75500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.23	1.73	1.48	977.31	64	26-Apr-2023	GOOD		
75400	75500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.19	1.05	1.12	715.26	66	26-Apr-2023	GOOD		
75500	75600	75500.000	76500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.66	1.84	1.75	1179.08	62	26-Apr-2023	GOOD	1907.30	GOOD
75500	75600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.6	1.84	1.72	1156.46	66	26-Apr-2023	GOOD		
75600	75700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.66	3.45	3.06	2204.70	67	26-Apr-2023	Fair		
75600	75700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	2	2.07	1423.07	67	26-Apr-2023	GOOD		
75700	75800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.56	2.59	2.57	1813.28	68	26-Apr-2023	GOOD		
75700	75800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.22	2.49	2.36	1648.17	68	26-Apr-2023	GOOD		
75800	75900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	2.4	2.35	1640.35	67	26-Apr-2023	GOOD		
75800	75900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	1.94	2.01	1376.96	70	26-Apr-2023	GOOD		
75900	76000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	2.59	2.22	1539.06	67	26-Apr-2023	GOOD		
75900	76000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.98	2.02	2	1369.29	69	26-Apr-2023	GOOD		
76000	76100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.81	3.44	3.13	2261.26	65	26-Apr-2023	Fair		
76000	76100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.31	2.15	2.23	1546.83	68	26-Apr-2023	GOOD		
76100	76200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	3.42	2.95	2116.12	60	26-Apr-2023	Fair		
76100	76200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.12	3.04	3.08	2220.84	66	26-Apr-2023	Fair		
76200	76300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.15	2.17	1500.29	53	26-Apr-2023	GOOD		
76200	76300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.49	2.05	2.27	1577.94	64	26-Apr-2023	GOOD		
76300	76400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.85	3.58	3.22	2334.21	52	26-Apr-2023	Fair		
76300	76400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.29	2.05	2.17	1500.29	63	26-Apr-2023	GOOD		
76400	76500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.96	5.54	5.25	4035.70	51	26-Apr-2023	POOR		
76400	76500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.64	5.09	4.86	3701.46	63	26-Apr-2023	POOR		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
76500	76600	76500.000	77500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.92	2.43	2.68	1900.43	50	26-Apr-2023	GOOD		
76500	76600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.55	2.72	2.64	1868.69	65	26-Apr-2023	GOOD		
76600	76700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.8	4.03	3.92	2909.52	48	26-Apr-2023	POOR		
76600	76700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	2.62	2.44	1710.87	66	26-Apr-2023	GOOD		
76700	76800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.81	2.95	2.88	2059.97	44	26-Apr-2023	Fair		
76700	76800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.58	3.14	3.36	2448.16	50	26-Apr-2023	POOR		
76800	76900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	1.93	1.83	1239.61	51	26-Apr-2023	GOOD		
76800	76900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.27	1.73	1.5	992.12	51	26-Apr-2023	GOOD		
76900	77000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.13	2.2	2.17	1500.29	59	26-Apr-2023	GOOD		
76900	77000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.77	2.14	2.46	1726.58	60	26-Apr-2023	GOOD		
77000	77100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.91	2.51	2.71	1924.27	70	26-Apr-2023	GOOD	1677.10	GOOD
77000	77100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.21	2.66	2.44	1710.87	66	26-Apr-2023	GOOD		
77100	77200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	1.91	2.03	1392.31	73	26-Apr-2023	GOOD		
77100	77200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	2.15	1.95	1331.00	70	26-Apr-2023	GOOD		
77200	77300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.64	2.61	2.63	1860.76	77	26-Apr-2023	GOOD		
77200	77300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	2.26	2.2	1523.54	70	26-Apr-2023	GOOD		
77300	77400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.45	2.38	1663.82	78	26-Apr-2023	GOOD		
77300	77400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.07	2.02	2.05	1407.68	64	26-Apr-2023	GOOD		
77400	77500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.03	2.18	2.11	1453.91	76	26-Apr-2023	GOOD		
77400	77500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.33	1.46	1.4	918.34	66	26-Apr-2023	GOOD		
77500	77600	77500.000	78500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.67	2.29	1.98	1353.96	71	26-Apr-2023	GOOD		
77500	77600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.87	1.69	1.78	1201.74	68	26-Apr-2023	GOOD		
77600	77700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.35	3.44	2.9	2076.00	66	26-Apr-2023	Fair		
77600	77700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.99	1.72	1.86	1262.39	65	26-Apr-2023	GOOD		
77700	77800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.65	2.11	1.88	1277.61	67	26-Apr-2023	GOOD		
77700	77800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.12	1.48	1.8	1216.87	66	26-Apr-2023	GOOD		
77800	77900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.43	2.46	1726.58	70	26-Apr-2023	GOOD		
77800	77900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.5	1.71	2.11	1453.91	69	26-Apr-2023	GOOD		
77900	78000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.45	1.58	1.52	1006.94	73	26-Apr-2023	GOOD		
77900	78000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.92	1.89	1285.22	67	26-Apr-2023	GOOD		
78000	78100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.31	1.39	911.00	73	26-Apr-2023	GOOD	1234.50	GOOD
78000	78100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.42	1.37	1.4	918.34	69	26-Apr-2023	GOOD		
78100	78200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	1.63	1.74	1171.54	75	26-Apr-2023	GOOD		
78100	78200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.59	1.45	1.52	1006.94	70	26-Apr-2023	GOOD		
78200	78300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.91	2.24	2.08	1430.78	74	26-Apr-2023	GOOD		
78200	78300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.79	2.08	1.94	1323.36	69	26-Apr-2023	GOOD		
78300	78400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.61	1.72	1.67	1118.88	72	26-Apr-2023	GOOD		
78300	78400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.53	1.41	925.69	70	26-Apr-2023	GOOD		
78400	78500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.81	1.52	1.67	1118.88	73	26-Apr-2023	GOOD		
78400	78500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.46	1.29	1.38	903.66	71	26-Apr-2023	GOOD		
78500	78600	78500.000	79500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	1.67	1.6	1066.49	73	26-Apr-2023	GOOD		
78500	78600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.47	1.67	1.57	1044.11	72	26-Apr-2023	GOOD		
78600	78700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.83	1.5	1.67	1118.88	70	26-Apr-2023	GOOD		
78600	78700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	1.54	1.65	1103.88	71	26-Apr-2023	GOOD		
78700	78800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.78	2.29	2.03	1392.31	67	26-Apr-2023	GOOD		
78700	78800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.61	1.71	1.66	1111.38	68	26-Apr-2023	GOOD		
78800	78900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.44	3.01	2.73	1940.18	66	26-Apr-2023	GOOD		
78800	78900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	2.08	2.06	1415.38	64	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
78900	79000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.58	1.86	1.72	1156.46	66	26-Apr-2023	GOOD		
78900	79000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.12	2.03	2.07	1423.07	63	26-Apr-2023	GOOD	1197.30	GOOD
79000	79100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	1.88	1.84	1247.20	68	26-Apr-2023	GOOD		
79000	79100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.59	1.75	1179.08	65	26-Apr-2023	GOOD		
79100	79200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.04	2.14	2.09	1438.48	68	26-Apr-2023	GOOD		
79100	79200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.78	1.85	1254.80	67	26-Apr-2023	GOOD		
79200	79300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	1.6	1.58	1051.57	70	26-Apr-2023	GOOD		
79200	79300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.57	1.3	1.44	947.78	65	26-Apr-2023	GOOD		
79300	79400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.57	1.71	1.64	1096.39	71	26-Apr-2023	GOOD		
79300	79400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.34	1.29	1.32	859.77	60	26-Apr-2023	GOOD		
79400	79500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.8	1.8	1.8	1216.87	69	26-Apr-2023	GOOD		
79400	79500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.37	1.33	1.35	881.69	58	26-Apr-2023	GOOD		
79500	79600	79500.000	80500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.18	1.58	1.38	903.66	67	26-Apr-2023	GOOD		
79500	79600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.29	1.5	992.12	61	26-Apr-2023	GOOD		
79600	79700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.38	2.43	1703.02	63	26-Apr-2023	GOOD		
79600	79700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.89	1.69	1.79	1209.31	61	26-Apr-2023	GOOD		
79700	79800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.22	1.89	1.56	1036.67	62	26-Apr-2023	GOOD		
79700	79800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.39	1.52	1.46	962.53	62	26-Apr-2023	GOOD		
79800	79900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.49	1.66	1.58	1051.57	64	26-Apr-2023	GOOD		
79800	79900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.43	1.44	1.44	947.78	64	26-Apr-2023	GOOD		
79900	80000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.45	2.23	1.84	1247.20	68	26-Apr-2023	GOOD		
79900	80000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	1.59	1.63	1088.91	66	26-Apr-2023	GOOD		
80000	80100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.59	1.78	1.69	1133.90	72	26-Apr-2023	GOOD	1128.40	GOOD
80000	80100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	1.74	1.95	1331.00	69	26-Apr-2023	GOOD		
80100	80200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	2.3	2.05	1407.68	74	26-Apr-2023	GOOD		
80100	80200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.56	1.59	1.58	1051.57	69	26-Apr-2023	GOOD		
80200	80300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	1.99	1.92	1308.09	72	26-Apr-2023	GOOD		
80200	80300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.09	1.37	1.23	794.39	68	26-Apr-2023	GOOD		
80300	80400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	1.59	1.55	1029.23	70	26-Apr-2023	GOOD		
80300	80400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.48	1.24	1.36	889.00	69	26-Apr-2023	GOOD		
80400	80500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.78	2.28	2.03	1392.31	69	26-Apr-2023	GOOD		
80400	80500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.75	1.63	1088.91	69	26-Apr-2023	GOOD		
80500	80600	80500.000	81500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.54	2.78	2.66	1884.55	66	26-Apr-2023	GOOD		
80500	80600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.37	2.2	2.28	1585.72	69	26-Apr-2023	GOOD		
80600	80700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.5	2.56	2.53	1781.70	63	26-Apr-2023	GOOD		
80600	80700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.66	1.61	1.64	1096.39	67	26-Apr-2023	GOOD		
80700	80800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.7	5.14	4.92	3752.68	58	26-Apr-2023	POOR		
80700	80800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.56	5.55	5.06	3872.48	67	26-Apr-2023	POOR		
80800	80900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.8	2.73	2.77	1972.05	62	26-Apr-2023	GOOD		
80800	80900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.22	2.17	2.2	1523.54	69	26-Apr-2023	GOOD		
80900	81000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.7	2.19	1.95	1331.00	66	26-Apr-2023	GOOD		
80900	81000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	1.72	1.87	1270.00	69	26-Apr-2023	GOOD		
81000	81100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	1.86	1.9	1292.84	67	26-Apr-2023	GOOD	1662.90	GOOD
81000	81100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.31	1.66	1.48	977.31	71	26-Apr-2023	GOOD		
81100	81200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.35	1.6	1.97	1346.30	66	26-Apr-2023	GOOD		
81100	81200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.62	1.9	1.76	1186.63	72	26-Apr-2023	GOOD		
81200	81300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.77	1.56	2.17	1500.29	67	26-Apr-2023	GOOD		
81200	81300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.39	1.49	1.44	947.78	69	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
81300	81400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.28	2.06	2.17	1500.29	69	26-Apr-2023	GOOD		
81300	81400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.37	3.05	3.21	2326.09	65	26-Apr-2023	Fair		
81400	81500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.61	2.27	1.94	1323.36	71	26-Apr-2023	GOOD		
81400	81500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.07	1.37	1.22	787.16	69	26-Apr-2023	GOOD		
81500	81600	81500.000	82500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.23	1.68	1.46	962.53	70	26-Apr-2023	GOOD	1384.50	GOOD
81500	81600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.74	2.41	2.58	1821.19	71	26-Apr-2023	GOOD		
81600	81700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	0.96	1.49	1.23	794.39	69	26-Apr-2023	GOOD		
81600	81700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.93	2.67	2.8	1995.99	70	26-Apr-2023	GOOD		
81700	81800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.61	3.15	3.38	2464.49	68	26-Apr-2023	POOR		
81700	81800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	1.9	1.82	1232.03	71	26-Apr-2023	GOOD		
81800	81900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.16	2.77	2.97	2132.20	65	26-Apr-2023	Fair		
81800	81900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.35	1.13	1.24	801.63	71	26-Apr-2023	GOOD		
81900	82000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.95	2.43	2.19	1515.79	64	26-Apr-2023	GOOD		
81900	82000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.75	1.8	1216.87	72	26-Apr-2023	GOOD		
82000	82100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.17	1.17	1.17	751.12	65	26-Apr-2023	GOOD		
82000	82100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	1.66	1.9	1292.84	71	26-Apr-2023	GOOD		
82100	82200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.88	2.17	2.03	1392.31	65	26-Apr-2023	GOOD		
82100	82200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.48	1.71	2.1	1446.19	69	26-Apr-2023	GOOD		
82200	82300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.7	1.93	1.82	1232.03	66	26-Apr-2023	GOOD		
82200	82300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.82	2.46	2.64	1868.69	70	26-Apr-2023	GOOD		
82300	82400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.9	2.22	2.06	1415.38	68	26-Apr-2023	GOOD		
82300	82400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.41	1.07	1.24	801.63	71	26-Apr-2023	GOOD		
82400	82500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.39	1.69	1.54	1021.79	69	26-Apr-2023	GOOD		
82400	82500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.32	2.1	2.21	1531.30	72	26-Apr-2023	GOOD		
82500	82600	82500.000	83500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.81	2.52	2.67	1892.49	69	26-Apr-2023	GOOD	1412.90	GOOD
82500	82600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.15	1.24	801.63	72	26-Apr-2023	GOOD		
82600	82700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.11	2.11	1453.91	71	26-Apr-2023	GOOD		
82600	82700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.15	1.28	1.21	779.94	72	26-Apr-2023	GOOD		
82700	82800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.06	1.59	1.33	867.07	70	26-Apr-2023	GOOD		
82700	82800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.37	1.56	1.46	962.53	73	26-Apr-2023	GOOD		
82800	82900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.12	1.75	1.44	947.78	69	26-Apr-2023	GOOD		
82800	82900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	1.97	2.07	1423.07	73	26-Apr-2023	GOOD		
82900	83000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.74	2.08	1.91	1300.46	68	26-Apr-2023	GOOD		
82900	83000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	1.75	1.92	1308.09	73	26-Apr-2023	GOOD		
83000	83100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.74	2.32	2.03	1392.31	67	26-Apr-2023	GOOD		
83000	83100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.68	2.14	2.41	1687.33	74	26-Apr-2023	GOOD		
83100	83200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	2.67	2.43	1703.02	67	26-Apr-2023	GOOD		
83100	83200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.54	2.16	2.35	1640.35	72	26-Apr-2023	GOOD		
83200	83300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	2.44	2.37	1655.99	69	26-Apr-2023	GOOD		
83200	83300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.66	1.9	2.28	1585.72	69	26-Apr-2023	GOOD		
83300	83400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	3	2.48	1742.31	67	26-Apr-2023	GOOD		
83300	83400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.25	2.82	3.04	2188.56	69	26-Apr-2023	Fair		
83400	83500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.41	2.38	1.9	1292.84	64	26-Apr-2023	GOOD		
83400	83500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.49	2.18	2.34	1632.53	67	26-Apr-2023	GOOD		
83500	83600	83500.000	84500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.66	3.71	3.69	2719.01	57	26-Apr-2023	POOR		
83500	83600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.83	1.74	1.79	1209.31	69	26-Apr-2023	GOOD		
83600	83700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.46	2.86	2.66	1884.55	57	26-Apr-2023	GOOD		
83600	83700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.06	1.45	1.76	1186.63	70	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
83700	83800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	2.72	2.62	1852.84	60	26-Apr-2023	GOOD		
83700	83800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.88	1.73	1.81	1224.45	71	26-Apr-2023	GOOD		
83800	83900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	2.81	2.59	1829.10	62	26-Apr-2023	GOOD		
83800	83900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.79	1.84	1.82	1232.03	73	26-Apr-2023	GOOD		
83900	84000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.26	2.34	2.3	1601.31	65	26-Apr-2023	GOOD		
83900	84000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.83	1.87	1270.00	73	26-Apr-2023	GOOD	1401.20	GOOD
84000	84100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.79	2.18	1.99	1361.62	64	26-Apr-2023	GOOD		
84000	84100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.59	1.01	1.3	845.20	74	26-Apr-2023	GOOD		
84100	84200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.01	0.92	0.97	608.87	66	26-Apr-2023	GOOD		
84100	84200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.68	1.49	1.59	1059.02	73	26-Apr-2023	GOOD		
84200	84300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	1.46	1.49	984.71	73	26-Apr-2023	GOOD		
84200	84300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.1	1.78	1.94	1323.36	70	26-Apr-2023	GOOD		
84300	84400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.16	1.7	1.93	1315.72	76	26-Apr-2023	GOOD		
84300	84400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.34	1.92	2.13	1469.35	70	26-Apr-2023	GOOD		
84400	84500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.59	2.95	2.77	1972.05	74	26-Apr-2023	GOOD		
84400	84500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	1.55	1.61	1073.95	69	26-Apr-2023	GOOD		
84500	84600	84500.000	85500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.27	1.3	1.29	837.92	75	26-Apr-2023	GOOD		
84500	84600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.59	1.64	1.62	1081.43	70	26-Apr-2023	GOOD		
84600	84700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.6	1.69	1.65	1103.88	73	26-Apr-2023	GOOD		
84600	84700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.68	2.79	3.24	2350.45	69	26-Apr-2023	Fair		
84700	84800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.74	3.43	3.09	2228.92	69	26-Apr-2023	Fair		
84700	84800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.87	1.95	1.91	1300.46	68	26-Apr-2023	GOOD		
84800	84900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.57	3.32	2.95	2116.12	63	26-Apr-2023	Fair		
84800	84900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.61	1.71	1148.94	66	26-Apr-2023	GOOD		
84900	85000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	2.84	2.39	1671.65	62	26-Apr-2023	GOOD		
84900	85000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.54	1.64	1.59	1059.02	65	26-Apr-2023	GOOD	1441.00	GOOD
85000	85100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.04	2.78	2.41	1687.33	68	26-Apr-2023	GOOD		
85000	85100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.63	1.67	1118.88	66	26-Apr-2023	GOOD		
85100	85200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.54	2.31	1.93	1315.72	67	26-Apr-2023	GOOD		
85100	85200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	2.22	2.13	1469.35	67	26-Apr-2023	GOOD		
85200	85300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.03	3.27	2.65	1876.62	68	26-Apr-2023	GOOD		
85200	85300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.34	1.84	1.59	1059.02	67	26-Apr-2023	GOOD		
85300	85400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.73	1.72	1.73	1164.00	60	26-Apr-2023	GOOD		
85300	85400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.34	1.85	2.1	1446.19	69	26-Apr-2023	GOOD		
85400	85500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	1.91	2.05	1407.68	44	26-Apr-2023	GOOD		
85400	85500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.67	2.36	2.01	1376.96	70	26-Apr-2023	GOOD		
85500	85600	85500.000	86500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.17	4.46	4.32	3244.01	51	26-Apr-2023	POOR		
85500	85600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.1	3.62	3.86	2859.69	62	26-Apr-2023	POOR		
85600	85700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.39	5.71	5.55	4294.86	59	26-Apr-2023	POOR		
85600	85700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	2.41	2.42	1695.17	64	26-Apr-2023	GOOD		
85700	85800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.41	3.59	3.5	2562.69	63	26-Apr-2023	POOR		
85700	85800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.3	3.87	3.59	2636.61	63	26-Apr-2023	POOR		
85800	85900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.79	4.73	4.76	3616.27	62	26-Apr-2023	POOR		
85800	85900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.46	2.67	2.57	1813.28	59	26-Apr-2023	GOOD		
85900	86000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.38	3.83	3.61	2653.07	64	26-Apr-2023	POOR		
85900	86000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.99	2.32	2.16	1492.55	60	26-Apr-2023	GOOD	2058.60	Fair
86000	86100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.9	2.54	2.72	1932.23	69	26-Apr-2023	GOOD		
86000	86100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.6	2.01	1.81	1224.45	64	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
86100	86200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.52	2.34	2.43	1703.02	72	26-Apr-2023	GOOD		
86100	86200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	2.1	1.96	1338.65	66	26-Apr-2023	GOOD		
86200	86300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.04	2.17	1500.29	70	26-Apr-2023	GOOD		
86200	86300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.94	1.77	1.86	1262.39	67	26-Apr-2023	GOOD		
86300	86400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.13	2.12	2.13	1469.35	70	26-Apr-2023	GOOD		
86300	86400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.02	1.69	1.86	1262.39	68	26-Apr-2023	GOOD		
86400	86500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.06	2.18	1508.04	70	26-Apr-2023	GOOD		
86400	86500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.87	1.42	1.65	1103.88	69	26-Apr-2023	GOOD		
86500	86600	86500.000	87500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	1.63	1.92	1308.09	69	26-Apr-2023	GOOD		
86500	86600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	2.04	2.06	1415.38	69	26-Apr-2023	GOOD		
86600	86700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.21	3.26	3.24	2350.45	68	26-Apr-2023	Fair		
86600	86700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.31	1.29	1.3	845.20	68	26-Apr-2023	GOOD		
86700	86800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.43	1.54	1.99	1361.62	68	26-Apr-2023	GOOD		
86700	86800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.5	1.1	1.3	845.20	68	26-Apr-2023	GOOD		
86800	86900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	1.14	1.6	1066.49	68	26-Apr-2023	GOOD		
86800	86900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	2.14	2.16	1492.55	67	26-Apr-2023	GOOD		
86900	87000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.21	2.29	2.75	1956.11	68	26-Apr-2023	GOOD		
86900	87000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.76	1.84	1247.20	67	26-Apr-2023	GOOD		
87000	87100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.4	2.61	2.51	1765.94	68	26-Apr-2023	GOOD	1336.20	GOOD
87000	87100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	1.27	1.66	1111.38	67	26-Apr-2023	GOOD		
87100	87200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.66	1.77	1.71	1148.94	69	26-Apr-2023	GOOD		
87100	87200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.53	1.48	1.51	999.53	69	26-Apr-2023	GOOD		
87200	87300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	2.27	1.87	1270.00	68	26-Apr-2023	GOOD		
87200	87300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.52	1.82	1.67	1118.88	71	26-Apr-2023	GOOD		
87300	87400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	2.16	2.26	1570.15	67	26-Apr-2023	GOOD		
87300	87400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.65	2.02	1.84	1247.20	69	26-Apr-2023	GOOD		
87400	87500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.61	1.6	2.11	1453.91	67	26-Apr-2023	GOOD		
87400	87500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.72	1.7	1.71	1148.94	68	26-Apr-2023	GOOD		
87500	87600	87500.000	88500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.58	3.66	3.12	2253.17	67	26-Apr-2023	Fair		
87500	87600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.83	1.87	1270.00	68	26-Apr-2023	GOOD		
87600	87700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.35	3.06	2.71	1924.27	67	26-Apr-2023	GOOD		
87600	87700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.77	2.28	2.53	1781.70	62	26-Apr-2023	GOOD		
87700	87800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.23	2.47	2.35	1640.35	67	26-Apr-2023	GOOD		
87700	87800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.47	2.62	2.55	1797.49	65	26-Apr-2023	GOOD		
87800	87900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.93	2.97	2.95	2116.12	67	26-Apr-2023	Fair		
87800	87900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.62	1.38	1.5	992.12	66	26-Apr-2023	GOOD		
87900	88000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.2	1.85	2.03	1392.31	69	26-Apr-2023	GOOD		
87900	88000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	1.88	1.92	1308.09	67	26-Apr-2023	GOOD		
88000	88100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	2.15	1.86	1262.39	70	26-Apr-2023	GOOD	1563.30	GOOD
88000	88100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.2	1.87	2.04	1399.99	69	26-Apr-2023	GOOD		
88100	88200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.15	2.9	2.53	1781.70	71	26-Apr-2023	GOOD		
88100	88200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.7	1.77	1.74	1171.54	71	26-Apr-2023	GOOD		
88200	88300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.41	1.97	1.69	1133.90	72	26-Apr-2023	GOOD		
88200	88300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.98	1.86	1.92	1308.09	71	26-Apr-2023	GOOD		
88300	88400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.75	2.56	2.16	1492.55	72	26-Apr-2023	GOOD		
88300	88400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	1.95	2.01	1376.96	69	26-Apr-2023	GOOD		
88400	88500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.32	2.27	2.3	1601.31	68	26-Apr-2023	GOOD		
88400	88500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.88	3.37	3.13	2261.26	68	26-Apr-2023	Fair		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
88500	88600	88500.000	89500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.17	3.83	3.5	2562.69	67	26-Apr-2023	POOR		
88500	88600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.73	1.81	1.77	1194.18	67	26-Apr-2023	GOOD		
88600	88700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.55	3.12	3.34	2431.85	64	26-Apr-2023	POOR		
88600	88700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.5	1.82	2.16	1492.55	66	26-Apr-2023	GOOD		
88700	88800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.8	1.74	1.77	1194.18	65	26-Apr-2023	GOOD		
88700	88800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.47	1.44	1.46	962.53	66	26-Apr-2023	GOOD		
88800	88900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	2.15	1.83	1239.61	66	26-Apr-2023	GOOD		
88800	88900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.3	1.97	2.14	1477.08	66	26-Apr-2023	GOOD		
88900	89000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.68	2.4	2.04	1399.99	65	26-Apr-2023	GOOD		
88900	89000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.48	1.39	1.44	947.78	67	26-Apr-2023	GOOD		
89000	89100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2	2.28	2.14	1477.08	65	26-Apr-2023	GOOD	1403.20	GOOD
89000	89100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.46	2.59	2.53	1781.70	64	26-Apr-2023	GOOD		
89100	89200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	1.31	1.73	1164.00	65	26-Apr-2023	GOOD		
89100	89200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.44	1.73	1.59	1059.02	66	26-Apr-2023	GOOD		
89200	89300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.77	1.91	1.84	1247.20	65	26-Apr-2023	GOOD		
89200	89300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.03	2.22	2.13	1469.35	63	26-Apr-2023	GOOD		
89300	89400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.37	1.72	1.55	1029.23	66	26-Apr-2023	GOOD		
89300	89400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.95	1.73	1164.00	61	26-Apr-2023	GOOD		
89400	89500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.33	1.82	2.08	1430.78	55	26-Apr-2023	GOOD		
89400	89500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	2.15	1.96	1338.65	56	26-Apr-2023	GOOD		
89500	89600	89500.000	90500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.23	3.09	2.66	1884.55	33	26-Apr-2023	GOOD		
89500	89600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.17	3.21	3.19	2309.86	60	26-Apr-2023	Fair		
89600	89700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.55	2.43	1703.02	25	26-Apr-2023	GOOD		
89600	89700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.2	2.93	3.07	2212.77	63	26-Apr-2023	Fair		
89700	89800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	2.43	2.31	1609.11	22	26-Apr-2023	GOOD		
89700	89800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.73	2.75	2.74	1948.14	62	26-Apr-2023	GOOD		
89800	89900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.23	2.74	2.49	1750.18	16	26-Apr-2023	GOOD		
89800	89900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.73	3.09	3.41	2489.00	58	26-Apr-2023	POOR		
89900	90000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.12	4.01	3.57	2620.17	18	26-Apr-2023	POOR		
89900	90000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	7.32	7.12	7.22	5766.37	52	26-Apr-2023	POOR		
90000	90100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	6.73	5.5	6.12	4791.84	26	26-Apr-2023	POOR	2342.90	Fair
90000	90100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.87	3.14	3.51	2570.90	50	26-Apr-2023	POOR		
90100	90200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.54	4.51	3.53	2587.31	16	26-Apr-2023	POOR		
90100	90200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.87	2.91	2.89	2067.98	33	26-Apr-2023	Fair		
90200	90300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	5.72	5.59	5.66	4390.31	32	26-Apr-2023	POOR		
90200	90300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	1.83	1.83	1239.61	20	26-Apr-2023	GOOD		
90300	90400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	1.5	1.72	1156.46	51	26-Apr-2023	GOOD		
90300	90400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.54	1.53	1.54	1021.79	42	26-Apr-2023	GOOD		
90400	90500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.13	1.99	2.06	1415.38	63	26-Apr-2023	GOOD		
90400	90500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.97	1.94	1323.36	52	26-Apr-2023	GOOD		
90500	90600	90500.000	91500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.41	2.41	2.41	1687.33	67	26-Apr-2023	GOOD		
90500	90600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.35	2.16	2.26	1570.15	57	26-Apr-2023	GOOD		
90600	90700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.34	3.48	3.41	2489.00	68	26-Apr-2023	POOR		
90600	90700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.3	2.96	3.13	2261.26	59	26-Apr-2023	Fair		
90700	90800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.51	3.09	3.3	2399.25	66	26-Apr-2023	Fair		
90700	90800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.33	1.38	1.36	889.00	61	26-Apr-2023	GOOD		
90800	90900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.98	2.08	2.03	1392.31	63	26-Apr-2023	GOOD		
90800	90900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.38	2.04	1.71	1148.94	64	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
90900	91000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	1.68	1.81	1224.45	64	26-Apr-2023	GOOD		
90900	91000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.28	2.64	2.46	1726.58	67	26-Apr-2023	GOOD	1591.20	GOOD
91000	91100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.17	1.93	2.05	1407.68	64	26-Apr-2023	GOOD		
91000	91100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.28	2.45	2.37	1655.99	68	26-Apr-2023	GOOD		
91100	91200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.37	2.33	2.35	1640.35	65	26-Apr-2023	GOOD		
91100	91200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.37	1.59	1.48	977.31	69	26-Apr-2023	GOOD		
91200	91300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.05	1.73	1.89	1285.22	68	26-Apr-2023	GOOD		
91200	91300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.63	1.57	2.1	1446.19	70	26-Apr-2023	GOOD		
91300	91400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.12	2.56	2.84	2027.95	67	26-Apr-2023	Fair		
91300	91400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	1.52	1.97	1346.30	68	26-Apr-2023	GOOD		
91400	91500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.89	1.8	2.35	1640.35	67	26-Apr-2023	GOOD		
91400	91500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.49	2.13	2.31	1609.11	67	26-Apr-2023	GOOD		
91500	91600	91500.000	92500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.26	2.02	2.14	1477.08	68	26-Apr-2023	GOOD		
91500	91600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.14	1.54	1.34	874.38	64	26-Apr-2023	GOOD		
91600	91700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.03	2.69	2.86	2043.95	67	26-Apr-2023	Fair		
91600	91700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.68	4.31	4	2976.10	59	26-Apr-2023	POOR		
91700	91800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.55	3.52	3.04	2188.56	69	26-Apr-2023	Fair		
91700	91800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.23	2.92	3.08	2220.84	28	26-Apr-2023	Fair		
91800	91900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.63	3.01	2.82	2011.96	68	26-Apr-2023	Fair		
91800	91900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.66	2.37	3.02	2172.44	34	26-Apr-2023	Fair		
91900	92000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	2.67	2.53	1781.70	66	26-Apr-2023	GOOD		
91900	92000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.27	2.16	2.72	1932.23	47	26-Apr-2023	GOOD		
92000	92100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	2.38	2.45	1718.73	66	26-Apr-2023	GOOD	1747.50	GOOD
92000	92100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.62	2.2	2.91	2084.01	51	26-Apr-2023	Fair		
92100	92200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.25	2.67	2.46	1726.58	64	26-Apr-2023	GOOD		
92100	92200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.86	2.54	2.7	1916.32	56	26-Apr-2023	GOOD		
92200	92300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.75	3.21	2.98	2140.24	65	26-Apr-2023	Fair		
92200	92300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.09	1.95	2.02	1384.63	59	26-Apr-2023	GOOD		
92300	92400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.36	1.96	2.16	1492.55	64	26-Apr-2023	GOOD		
92300	92400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.37	1.29	1.33	867.07	62	26-Apr-2023	GOOD		
92400	92500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.55	1.58	1.57	1044.11	67	26-Apr-2023	GOOD		
92400	92500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.54	1.2	1.37	896.33	61	26-Apr-2023	GOOD		
92500	92600	92500.000	93500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.44	1.43	1.44	947.78	69	26-Apr-2023	GOOD		
92500	92600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.6	1.35	1.48	977.31	60	26-Apr-2023	GOOD		
92600	92700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.68	1.61	1.65	1103.88	68	26-Apr-2023	GOOD		
92600	92700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.46	5.86	5.66	4390.31	63	26-Apr-2023	POOR		
92700	92800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	6.09	5.79	5.94	4634.27	60	26-Apr-2023	POOR		
92700	92800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2	2.09	2.05	1407.68	63	26-Apr-2023	GOOD		
92800	92900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	1.75	1.66	1111.38	61	26-Apr-2023	GOOD		
92800	92900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.61	1.66	1111.38	63	26-Apr-2023	GOOD		
92900	93000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.25	1.14	1.19	765.51	65	26-Apr-2023	GOOD		
92900	93000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.6	1.47	1.54	1021.79	62	26-Apr-2023	GOOD		
93000	93100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.58	1.4	1.49	984.71	65	26-Apr-2023	GOOD	1789.50	GOOD
93000	93100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.97	1.7	1.84	1247.20	59	26-Apr-2023	GOOD		
93100	93200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.89	3.9	3.4	2480.83	64	26-Apr-2023	POOR		
93100	93200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.36	3.79	4.07	3034.49	57	26-Apr-2023	POOR		
93200	93300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.21	2.82	3.02	2172.44	59	26-Apr-2023	Fair		
93200	93300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.38	2.15	2.27	1577.94	50	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
93300	93400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.28	2.24	2.26	1570.15	31	26-Apr-2023	GOOD		
93300	93400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.23	2.34	2.28	1585.72	43	26-Apr-2023	GOOD		
93400	93500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.82	3.41	2.62	1852.84	36	26-Apr-2023	GOOD		
93400	93500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.88	2.26	2.57	1813.28	44	26-Apr-2023	GOOD		
93500	93600	93500.000	94500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	2	1.92	1308.09	51	26-Apr-2023	GOOD		
93500	93600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.57	2.33	2.45	1718.73	47	26-Apr-2023	GOOD		
93600	93700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.61	1.62	1.62	1081.43	54	26-Apr-2023	GOOD		
93600	93700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	2.41	2.34	1632.53	53	26-Apr-2023	GOOD		
93700	93800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.51	2.87	2.69	1908.37	54	26-Apr-2023	GOOD		
93700	93800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.65	2.7	2.68	1900.43	52	26-Apr-2023	GOOD		
93800	93900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.68	2.71	1924.27	56	26-Apr-2023	GOOD		
93800	93900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.43	2.2	2.32	1616.91	49	26-Apr-2023	GOOD		
93900	94000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.66	2.43	2.55	1797.49	59	26-Apr-2023	GOOD		
93900	94000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.53	2.53	2.53	1781.70	55	26-Apr-2023	GOOD		
94000	94100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.05	3.14	3.1	2237.00	60	26-Apr-2023	Fair	1668.50	GOOD
94000	94100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.99	2.43	2.71	1924.27	59	26-Apr-2023	GOOD		
94100	94200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.25	2.25	2.25	1562.37	56	26-Apr-2023	GOOD		
94100	94200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.31	2.27	2.29	1593.52	57	26-Apr-2023	GOOD		
94200	94300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.61	2.43	2.52	1773.82	56	26-Apr-2023	GOOD		
94200	94300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	1.64	1.73	1164.00	57	26-Apr-2023	GOOD		
94300	94400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	2.69	2.34	1632.53	57	26-Apr-2023	GOOD		
94300	94400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.75	1.99	2.37	1655.99	56	26-Apr-2023	GOOD		
94400	94500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.34	3.06	2.7	1916.32	61	26-Apr-2023	GOOD		
94400	94500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.96	1.69	1.83	1239.61	61	26-Apr-2023	GOOD		
94500	94600	94500.000	95500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.37	2.13	1.75	1179.08	63	26-Apr-2023	GOOD		
94500	94600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.89	1.76	1.83	1239.61	63	26-Apr-2023	GOOD		
94600	94700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	2.32	2.09	1438.48	57	26-Apr-2023	GOOD		
94600	94700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.03	1.85	2.44	1710.87	61	26-Apr-2023	GOOD		
94700	94800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.35	2.69	2.52	1773.82	58	26-Apr-2023	GOOD		
94700	94800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.92	1.89	1285.22	50	26-Apr-2023	GOOD		
94800	94900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	2.73	2.56	1805.38	56	26-Apr-2023	GOOD		
94800	94900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.22	2.28	2.25	1562.37	53	26-Apr-2023	GOOD		
94900	95000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.5	1.55	1.53	1014.37	58	26-Apr-2023	GOOD		
94900	95000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.72	1.68	1.7	1141.41	57	26-Apr-2023	GOOD		
95000	95100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	1.74	1.63	1088.91	58	26-Apr-2023	GOOD	1686.10	GOOD
95000	95100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.9	1.85	1254.80	52	26-Apr-2023	GOOD		
95100	95200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.17	2.16	2.17	1500.29	56	26-Apr-2023	GOOD		
95100	95200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.87	3.5	4.19	3134.88	53	26-Apr-2023	POOR		
95200	95300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.43	3.46	3.95	2934.47	53	26-Apr-2023	POOR		
95200	95300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.3	3.09	3.2	2317.97	44	26-Apr-2023	Fair		
95300	95400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.82	2.3	2.56	1805.38	57	26-Apr-2023	GOOD		
95300	95400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.32	3.24	3.28	2382.97	36	26-Apr-2023	Fair		
95400	95500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.56	2.62	2.59	1829.10	60	26-Apr-2023	GOOD		
95400	95500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	2.04	1.94	1323.36	37	26-Apr-2023	GOOD		
95500	95600	95500.000	96500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.63	1.7	2.17	1500.29	56	26-Apr-2023	GOOD		
95500	95600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	2.03	1.99	1361.62	34	26-Apr-2023	GOOD		
95600	95700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.22	2.12	2.17	1500.29	56	26-Apr-2023	GOOD		
95600	95700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.21	1.94	2.08	1430.78	47	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
95700	95800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.39	2.28	2.34	1632.53	60	26-Apr-2023	GOOD		
95700	95800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.2	2.39	2.3	1601.31	52	26-Apr-2023	GOOD		
95800	95900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.12	2.53	2.82	2011.96	67	26-Apr-2023	Fair		
95800	95900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.38	2.05	2.22	1539.06	50	26-Apr-2023	GOOD		
95900	96000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.33	1.84	1.59	1059.02	67	26-Apr-2023	GOOD		
95900	96000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	1.78	1.76	1186.63	53	26-Apr-2023	GOOD		
96000	96100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.83	2.35	2.09	1438.48	62	26-Apr-2023	GOOD	1546.80	GOOD
96000	96100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.29	2.46	2.38	1663.82	54	26-Apr-2023	GOOD		
96100	96200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	2.18	2.04	1399.99	52	26-Apr-2023	GOOD		
96100	96200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.87	2.12	2.49	1750.18	53	26-Apr-2023	GOOD		
96200	96300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.54	2.19	2.37	1655.99	52	26-Apr-2023	GOOD		
96200	96300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.92	2.28	2.6	1837.01	54	26-Apr-2023	GOOD		
96300	96400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.05	2.39	1671.65	58	26-Apr-2023	GOOD		
96300	96400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.32	1.9	2.11	1453.91	53	26-Apr-2023	GOOD		
96400	96500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.22	2.46	2.34	1632.53	60	26-Apr-2023	GOOD		
96400	96500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.44	2.17	2.31	1609.11	50	26-Apr-2023	GOOD		
96500	96600	96500.000	97500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.38	2.77	2.58	1821.19	60	26-Apr-2023	GOOD		
96500	96600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.29	1.8	2.05	1407.68	52	26-Apr-2023	GOOD		
96600	96700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.9	2.26	2.08	1430.78	48	26-Apr-2023	GOOD		
96600	96700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.45	1.72	2.09	1438.48	55	26-Apr-2023	GOOD		
96700	96800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.9	1.49	1.7	1141.41	52	26-Apr-2023	GOOD		
96700	96800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.67	1.69	2.18	1508.04	55	26-Apr-2023	GOOD		
96800	96900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.39	2.12	2.26	1570.15	60	26-Apr-2023	GOOD		
96800	96900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.5	2.17	2.34	1632.53	55	26-Apr-2023	GOOD		
96900	97000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.92	2.73	2.33	1624.72	54	26-Apr-2023	GOOD		
96900	97000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.1	2.73	2.92	2092.04	55	26-Apr-2023	Fair		
97000	97100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.81	2.85	2.83	2019.95	28	26-Apr-2023	Fair	1684.70	GOOD
97000	97100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.32	2.28	2.8	1995.99	53	26-Apr-2023	GOOD		
97100	97200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.1	2.54	2.82	2011.96	22	26-Apr-2023	Fair		
97100	97200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.1	2	2.05	1407.68	54	26-Apr-2023	GOOD		
97200	97300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.67	3.27	2.97	2132.20	48	26-Apr-2023	Fair		
97200	97300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.36	2.84	2.6	1837.01	56	26-Apr-2023	GOOD		
97300	97400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.99	3.13	3.06	2204.70	57	26-Apr-2023	Fair		
97300	97400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.11	2.34	1632.53	56	26-Apr-2023	GOOD		
97400	97500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.94	1.95	1.95	1331.00	61	26-Apr-2023	GOOD		
97400	97500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	2.13	2.11	1453.91	52	26-Apr-2023	GOOD		
97500	97600	97500.000	98500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.07	2.32	2.2	1523.54	56	26-Apr-2023	GOOD		
97500	97600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.13	3.03	3.08	2220.84	51	26-Apr-2023	Fair		
97600	97700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.71	3.35	3.03	2180.50	56	26-Apr-2023	Fair		
97600	97700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	2.1	2.19	1515.79	55	26-Apr-2023	GOOD		
97700	97800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.61	1.8	1216.87	60	26-Apr-2023	GOOD		
97700	97800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.75	1.78	1201.74	61	26-Apr-2023	GOOD		
97800	97900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.32	1.95	2.14	1477.08	63	26-Apr-2023	GOOD		
97800	97900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.68	2.31	2.49	1750.18	63	26-Apr-2023	GOOD		
97900	98000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.42	1.55	1.99	1361.62	59	26-Apr-2023	GOOD		
97900	98000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.62	2.07	2.34	1632.53	58	26-Apr-2023	GOOD		
98000	98100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.6	1.9	2.25	1562.37	59	26-Apr-2023	GOOD	1541.60	GOOD
98000	98100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.51	2.01	2.26	1570.15	58	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
98100	98200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.58	1.64	1096.39	61	26-Apr-2023	GOOD		
98100	98200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.31	2.18	2.24	1554.60	62	26-Apr-2023	GOOD		
98200	98300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.24	2.1	1446.19	62	26-Apr-2023	GOOD		
98200	98300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.09	1.86	2.47	1734.45	64	26-Apr-2023	GOOD		
98300	98400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.98	1.72	1156.46	64	26-Apr-2023	GOOD		
98300	98400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.69	1.67	2.18	1508.04	63	26-Apr-2023	GOOD		
98400	98500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.63	2.06	1.85	1254.80	66	26-Apr-2023	GOOD		
98400	98500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.7	2.58	2.64	1868.69	63	26-Apr-2023	GOOD		
98500	98600	98500.000	99500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.59	2.31	2.45	1718.73	66	26-Apr-2023	GOOD	1614.60	GOOD
98500	98600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.85	2.81	2.83	2019.95	62	26-Apr-2023	Fair		
98600	98700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.64	2.08	1.86	1262.39	65	26-Apr-2023	GOOD		
98600	98700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.89	2.24	2.57	1813.28	60	26-Apr-2023	GOOD		
98700	98800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.22	2.2	1523.54	67	26-Apr-2023	GOOD		
98700	98800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.85	2.74	2.8	1995.99	60	26-Apr-2023	GOOD		
98800	98900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.48	2.71	2.6	1837.01	66	26-Apr-2023	GOOD		
98800	98900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.71	2.52	2.62	1852.84	60	26-Apr-2023	GOOD		
98900	99000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.22	2.63	2.43	1703.02	67	26-Apr-2023	GOOD		
98900	99000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.82	2.58	2.7	1916.32	62	26-Apr-2023	GOOD		
99000	99100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.22	1.89	2.06	1415.38	69	26-Apr-2023	GOOD		
99000	99100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.71	1.74	1.73	1164.00	64	26-Apr-2023	GOOD		
99100	99200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	2.31	2.19	1515.79	69	26-Apr-2023	GOOD		
99100	99200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.49	1.96	1.73	1164.00	64	26-Apr-2023	GOOD		
99200	99300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.1	2.14	2.12	1461.63	64	26-Apr-2023	GOOD		
99200	99300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.08	2.09	2.09	1438.48	62	26-Apr-2023	GOOD		
99300	99400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.03	3.91	3.47	2538.10	59	26-Apr-2023	POOR		
99300	99400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.56	1.56	1.56	1036.67	61	26-Apr-2023	GOOD		
99400	99500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.15	2.13	1469.35	54	26-Apr-2023	GOOD		
99400	99500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.17	2.03	2.1	1446.19	60	26-Apr-2023	GOOD		
99500	99600	99500.000	100500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	1.93	1.99	1361.62	53	26-Apr-2023	GOOD	1352.70	GOOD
99500	99600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.44	1.95	1.7	1141.41	61	26-Apr-2023	GOOD		
99600	99700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2	1.99	2	1369.29	58	26-Apr-2023	GOOD		
99600	99700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.93	2.28	2.11	1453.91	62	26-Apr-2023	GOOD		
99700	99800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	2.62	2.46	1726.58	62	26-Apr-2023	GOOD		
99700	99800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	2.01	2.08	1430.78	56	26-Apr-2023	GOOD		
99800	99900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.19	2.07	2.13	1469.35	64	26-Apr-2023	GOOD		
99800	99900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.99	2.65	2.82	2011.96	55	26-Apr-2023	Fair		
99900	100000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.33	2.24	2.28	1585.72	66	26-Apr-2023	GOOD		
99900	100000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.82	1.41	1.62	1081.43	58	26-Apr-2023	GOOD		
100000	100100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.66	1.83	1239.61	62	26-Apr-2023	GOOD		
100000	100100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.32	1.51	999.53	56	26-Apr-2023	GOOD		
100100	100200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.05	2.04	2.05	1407.68	55	26-Apr-2023	GOOD		
100100	100200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.31	1.38	903.66	60	26-Apr-2023	GOOD		
100200	100300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.55	2.01	2.28	1585.72	49	26-Apr-2023	GOOD		
100200	100300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.21	1.58	1.4	918.34	62	26-Apr-2023	GOOD		
100300	100400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.84	1.92	1308.09	50	26-Apr-2023	GOOD		
100300	100400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.64	1.45	1.55	1029.23	61	26-Apr-2023	GOOD		
100400	100500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.88	1.74	1.81	1224.45	55	26-Apr-2023	GOOD		
100400	100500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.47	2.65	2.56	1805.38	63	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
100500	100600	100500.000	101500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.73	2.1	1.92	1308.09	57	26-Apr-2023	GOOD		
100500	100600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.85	1.83	1.84	1247.20	64	26-Apr-2023	GOOD		
100600	100700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.51	1.83	1.67	1118.88	51	26-Apr-2023	GOOD		
100600	100700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.93	1.56	1.74	1171.54	62	26-Apr-2023	GOOD		
100700	100800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.15	1.75	1.95	1331.00	41	26-Apr-2023	GOOD		
100700	100800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.23	4.3	4.27	3201.99	55	26-Apr-2023	POOR		
100800	100900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.67	2.76	2.72	1932.23	32	26-Apr-2023	GOOD		
100800	100900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.68	2.55	2.61	1844.92	25	26-Apr-2023	GOOD		
100900	101000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.2	1.4	1.3	845.20	2	26-Apr-2023	GOOD		
100900	101000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.2	3.05	3.63	2669.54	3	26-Apr-2023	POOR		
101000	101100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	8.37	8.45	8.41	6840.88	22	26-Apr-2023	POOR	1849.70	GOOD
101000	101100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	0.97	1.01	0.99	622.95	30	26-Apr-2023	GOOD		
101100	101200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.1	1.47	1.29	837.92	47	26-Apr-2023	GOOD		
101100	101200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	1.97	2.12	1461.63	37	26-Apr-2023	GOOD		
101200	101300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.01	1.85	1.93	1315.72	53	26-Apr-2023	GOOD		
101200	101300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.25	2.21	1531.30	39	26-Apr-2023	GOOD		
101300	101400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.97	4.08	4.03	3001.11	55	26-Apr-2023	POOR		
101300	101400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	2.32	2.11	1453.91	47	26-Apr-2023	GOOD		
101400	101500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.11	1.81	2.46	1726.58	61	26-Apr-2023	GOOD		
101400	101500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.14	2.28	2.21	1531.30	56	26-Apr-2023	GOOD		
101500	101600	101500.000	102500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.34	2.93	3.14	2269.35	66	26-Apr-2023	Fair		
101500	101600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.12	2.7	2.91	2084.01	57	26-Apr-2023	Fair		
101600	101700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	2.36	2.21	1531.30	68	26-Apr-2023	GOOD		
101600	101700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	1.64	1.84	1247.20	58	26-Apr-2023	GOOD		
101700	101800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.7	2.17	1.94	1323.36	67	26-Apr-2023	GOOD		
101700	101800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.03	2.03	2.03	1392.31	58	26-Apr-2023	GOOD		
101800	101900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.35	1.71	2.03	1392.31	66	26-Apr-2023	GOOD		
101800	101900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.57	1.8	1.69	1133.90	61	26-Apr-2023	GOOD		
101900	102000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.9	2.54	2.72	1932.23	62	26-Apr-2023	GOOD		
101900	102000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.79	1.83	1.81	1224.45	65	26-Apr-2023	GOOD		
102000	102100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.2	2.31	2.26	1570.15	55	26-Apr-2023	GOOD	1430.70	GOOD
102000	102100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.78	1.84	1247.20	62	26-Apr-2023	GOOD		
102100	102200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.3	1.46	1.38	903.66	55	26-Apr-2023	GOOD		
102100	102200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.59	1.21	1.4	918.34	62	26-Apr-2023	GOOD		
102200	102300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.48	1.37	1.43	940.41	54	26-Apr-2023	GOOD		
102200	102300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.41	1.48	977.31	59	26-Apr-2023	GOOD		
102300	102400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.69	1.99	1.84	1247.20	56	26-Apr-2023	GOOD		
102300	102400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.15	2.41	2.28	1585.72	58	26-Apr-2023	GOOD		
102400	102500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.1	3.19	3.65	2686.02	58	26-Apr-2023	POOR		
102400	102500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.34	1.52	1006.94	61	26-Apr-2023	GOOD		
102500	102600	102500.000	103500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	1.38	1.61	1073.95	57	26-Apr-2023	GOOD		
102500	102600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	1.51	1.76	1186.63	62	26-Apr-2023	GOOD		
102600	102700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.26	1.1	1.18	758.31	57	26-Apr-2023	GOOD		
102600	102700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.27	1.36	889.00	62	26-Apr-2023	GOOD		
102700	102800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.34	1.4	918.34	58	26-Apr-2023	GOOD		
102700	102800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.56	1.28	1.42	933.05	65	26-Apr-2023	GOOD		
102800	102900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.49	1.54	1.52	1006.94	59	26-Apr-2023	GOOD		
102800	102900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.66	1.5	1.58	1051.57	67	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
102900	103000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.43	1.63	1.53	1014.37	58	26-Apr-2023	GOOD		
102900	103000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.46	1.38	1.42	933.05	68	26-Apr-2023	GOOD	989.90	GOOD
103000	103100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.7	1.45	1.58	1051.57	59	26-Apr-2023	GOOD		
103000	103100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.92	1.35	1.64	1096.39	68	26-Apr-2023	GOOD		
103100	103200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.06	1.7	1.88	1277.61	59	26-Apr-2023	GOOD		
103100	103200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.5	1.61	1.56	1036.67	69	26-Apr-2023	GOOD		
103200	103300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.53	1.39	1.46	962.53	57	26-Apr-2023	GOOD		
103200	103300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.22	1.26	816.12	69	26-Apr-2023	GOOD		
103300	103400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.43	1.35	1.39	911.00	57	26-Apr-2023	GOOD		
103300	103400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.49	1.42	1.46	962.53	70	26-Apr-2023	GOOD		
103400	103500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.37	1.36	1.37	896.33	57	26-Apr-2023	GOOD		
103400	103500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.57	1.51	1.54	1021.79	72	26-Apr-2023	GOOD		
103500	103600	103500.000	104500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	2.04	1.94	1323.36	58	26-Apr-2023	GOOD		
103500	103600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.84	1.82	1.83	1239.61	71	26-Apr-2023	GOOD		
103600	103700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.14	2.6	2.37	1655.99	61	26-Apr-2023	GOOD		
103600	103700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.97	2.22	2.6	1837.01	70	26-Apr-2023	GOOD		
103700	103800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.63	3.1	2.87	2051.96	61	26-Apr-2023	Fair		
103700	103800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.37	2.31	2.34	1632.53	68	26-Apr-2023	GOOD		
103800	103900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.31	2.5	2.41	1687.33	60	26-Apr-2023	GOOD		
103800	103900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	2.02	2.15	1484.81	65	26-Apr-2023	GOOD		
103900	104000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	2.12	1.98	1353.96	58	26-Apr-2023	GOOD		
103900	104000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.77	1.92	1.85	1254.80	63	26-Apr-2023	GOOD		
104000	104100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	2.46	2.29	1593.52	58	26-Apr-2023	GOOD	1547.50	GOOD
104000	104100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.97	2.07	2.02	1384.63	61	26-Apr-2023	GOOD		
104100	104200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.58	2.85	2.72	1932.23	59	26-Apr-2023	GOOD		
104100	104200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.22	2.32	2.77	1972.05	61	26-Apr-2023	GOOD		
104200	104300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.52	1.71	2.12	1461.63	61	26-Apr-2023	GOOD		
104200	104300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.57	1.56	1036.67	63	26-Apr-2023	GOOD		
104300	104400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2	2.2	2.1	1446.19	55	26-Apr-2023	GOOD		
104300	104400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.35	2.04	2.2	1523.54	66	26-Apr-2023	GOOD		
104400	104500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.15	2.48	2.32	1616.91	57	26-Apr-2023	GOOD		
104400	104500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.26	1.98	2.12	1461.63	67	26-Apr-2023	GOOD		
104500	104600	104500.000	105500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.71	2.46	2.09	1438.48	60	26-Apr-2023	GOOD		
104500	104600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.06	1.76	1.91	1300.46	67	26-Apr-2023	GOOD		
104600	104700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.72	2.37	2.05	1407.68	62	26-Apr-2023	GOOD		
104600	104700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.47	2.14	2.31	1609.11	67	26-Apr-2023	GOOD		
104700	104800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.2	2.93	2.57	1813.28	60	26-Apr-2023	GOOD		
104700	104800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.53	3.03	2.78	1980.03	69	26-Apr-2023	GOOD		
104800	104900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.99	3.94	3.97	2951.11	57	26-Apr-2023	POOR		
104800	104900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.96	3.59	3.28	2382.97	64	26-Apr-2023	Fair		
104900	105000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.47	2.23	2.35	1640.35	57	26-Apr-2023	GOOD		
104900	105000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.42	2.3	2.36	1648.17	55	26-Apr-2023	GOOD		
105000	105100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.05	2.79	2.42	1695.17	62	26-Apr-2023	GOOD	1704.70	GOOD
105000	105100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	1.8	1.88	1277.61	53	26-Apr-2023	GOOD		
105100	105200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.87	2.35	2.11	1453.91	63	26-Apr-2023	GOOD		
105100	105200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	2	2.07	1423.07	60	26-Apr-2023	GOOD		
105200	105300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.1	2.74	2.42	1695.17	64	26-Apr-2023	GOOD		
105200	105300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.3	2.31	2.3	1601.31	62	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
105300	105400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.26	2.67	2.97	2132.20	63	26-Apr-2023	Fair		
105300	105400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.81	2.94	2.38	1663.82	60	26-Apr-2023	GOOD		
105400	105500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	2.55	2.42	1695.17	61	26-Apr-2023	GOOD		
105400	105500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.04	1.73	1.89	1285.22	61	26-Apr-2023	GOOD		
105500	105600	105500.000	106500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.88	1.67	1.78	1201.74	59	26-Apr-2023	GOOD		
105500	105600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.47	1.69	1133.90	61	26-Apr-2023	GOOD		
105600	105700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.92	2.06	1.99	1361.62	47	26-Apr-2023	GOOD		
105600	105700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.4	1.6	1066.49	63	26-Apr-2023	GOOD		
105700	105800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.56	2.42	2.49	1750.18	46	26-Apr-2023	GOOD		
105700	105800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.76	1.73	1.75	1179.08	63	26-Apr-2023	GOOD		
105800	105900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.55	2.81	2.68	1900.43	55	26-Apr-2023	GOOD		
105800	105900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.58	1.57	1.58	1051.57	64	26-Apr-2023	GOOD		
105900	106000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.87	1.68	1.78	1201.74	56	26-Apr-2023	GOOD		
105900	106000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.18	1.7	1.94	1323.36	65	26-Apr-2023	GOOD		
106000	106100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	2.23	2.26	1570.15	61	26-Apr-2023	GOOD	1513.50	GOOD
106000	106100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.7	2	1.85	1254.80	60	26-Apr-2023	GOOD		
106100	106200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.93	2.51	2.22	1539.06	64	26-Apr-2023	GOOD		
106100	106200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	1.89	1.95	1331.00	60	26-Apr-2023	GOOD		
106200	106300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.58	3.22	2.9	2076.00	65	26-Apr-2023	Fair		
106200	106300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.88	2.02	1.95	1331.00	64	26-Apr-2023	GOOD		
106300	106400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.03	2.81	2.92	2092.04	67	26-Apr-2023	Fair		
106300	106400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.8	1.93	1.87	1270.00	66	26-Apr-2023	GOOD		
106400	106500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.89	3.23	3.06	2204.70	66	26-Apr-2023	Fair		
106400	106500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.53	3.15	3.34	2431.85	69	26-Apr-2023	POOR		
106500	106600	106500.000	107500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.42	3.23	3.33	2423.70	67	26-Apr-2023	POOR		
106500	106600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.34	2.09	2.21	1531.30	70	26-Apr-2023	GOOD		
106600	106700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.84	2.18	2.51	1765.94	70	26-Apr-2023	GOOD		
106600	106700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.44	2.62	2.53	1781.70	69	26-Apr-2023	GOOD		
106700	106800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.58	2.41	2.49	1750.18	69	26-Apr-2023	GOOD		
106700	106800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.02	2.28	2.15	1484.81	67	26-Apr-2023	GOOD		
106800	106900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.15	2.06	1415.38	69	26-Apr-2023	GOOD		
106800	106900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.27	2.06	2.17	1500.29	63	26-Apr-2023	GOOD		
106900	107000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.28	2.29	2.28	1585.72	70	26-Apr-2023	GOOD		
106900	107000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	2.18	2.1	1446.19	61	26-Apr-2023	GOOD		
107000	107100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	1.96	2.04	1399.99	71	26-Apr-2023	GOOD	1625.40	GOOD
107000	107100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.64	1.4	1.52	1006.94	61	26-Apr-2023	GOOD		
107100	107200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.43	1.56	1.49	984.71	70	26-Apr-2023	GOOD		
107100	107200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	1.46	1.8	1216.87	66	26-Apr-2023	GOOD		
107200	107300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.42	3.5	3.46	2529.91	66	26-Apr-2023	POOR		
107200	107300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.1	3.89	4	2976.10	68	26-Apr-2023	POOR		
107300	107400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.8	3.28	3.04	2188.56	61	26-Apr-2023	Fair		
107300	107400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.17	1.97	2.07	1423.07	65	26-Apr-2023	GOOD		
107400	107500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.85	1.52	1.69	1133.90	61	26-Apr-2023	GOOD		
107400	107500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.52	1.39	1.46	962.53	64	26-Apr-2023	GOOD		
107500	107600	107500.000	108500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.04	2.14	2.09	1438.48	61	26-Apr-2023	GOOD		
107500	107600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.81	1.66	1111.38	57	26-Apr-2023	GOOD		
107600	107700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.86	2.16	2.01	1376.96	64	26-Apr-2023	GOOD		
107600	107700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.06	1.92	1.99	1361.62	51	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
107700	107800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.49	2.9	2.7	1916.32	64	26-Apr-2023	GOOD		
107700	107800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.59	2.61	2.6	1837.01	58	26-Apr-2023	GOOD		
107800	107900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.25	2	2.13	1469.35	64	26-Apr-2023	GOOD		
107800	107900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.12	1.73	1.93	1315.72	65	26-Apr-2023	GOOD		
107900	108000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.46	3.64	3.55	2603.73	63	26-Apr-2023	POOR		
107900	108000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.86	3.15	3.01	2164.39	66	26-Apr-2023	Fair	1653.40	GOOD
108000	108100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.84	1.41	1.63	1088.91	58	26-Apr-2023	GOOD		
108000	108100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.91	1.62	1081.43	64	26-Apr-2023	GOOD		
108100	108200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.89	2.88	2.89	2067.98	46	26-Apr-2023	Fair		
108100	108200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.09	1.87	1.98	1353.96	61	26-Apr-2023	GOOD		
108200	108300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.03	2.79	2.91	2084.01	46	26-Apr-2023	Fair		
108200	108300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.59	3.02	3.3	2399.25	62	26-Apr-2023	Fair		
108300	108400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.59	1.71	1.65	1103.88	58	26-Apr-2023	GOOD		
108300	108400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.43	2.49	1750.18	63	26-Apr-2023	GOOD		
108400	108500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.99	2.68	2.84	2027.95	66	26-Apr-2023	Fair		
108400	108500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.13	2.24	2.19	1515.79	61	26-Apr-2023	GOOD		
108500	108600	108500.000	109500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.55	2.07	2.31	1609.11	66	26-Apr-2023	GOOD		
108500	108600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.62	1.48	1.55	1029.23	62	26-Apr-2023	GOOD		
108600	108700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.75	1.99	1.87	1270.00	64	26-Apr-2023	GOOD		
108600	108700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.34	1.17	1.26	816.12	60	26-Apr-2023	GOOD		
108700	108800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.52	1.78	1.65	1103.88	55	26-Apr-2023	GOOD		
108700	108800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.72	1.3	1.51	999.53	61	26-Apr-2023	GOOD		
108800	108900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.71	2.26	1.99	1361.62	54	26-Apr-2023	GOOD		
108800	108900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.73	1.83	2.28	1585.72	62	26-Apr-2023	GOOD		
108900	109000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.73	1.85	1.79	1209.31	42	26-Apr-2023	GOOD		
108900	109000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.09	1.84	1.96	1338.65	64	26-Apr-2023	GOOD		
109000	109100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.21	2.49	2.35	1640.35	45	26-Apr-2023	GOOD	1979.20	GOOD
109000	109100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.36	1.9	2.13	1469.35	64	26-Apr-2023	GOOD		
109100	109200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.19	2.19	1515.79	53	26-Apr-2023	GOOD		
109100	109200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.19	1.25	1.22	787.16	64	26-Apr-2023	GOOD		
109200	109300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.8	2.02	1.91	1300.46	51	26-Apr-2023	GOOD		
109200	109300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.56	2.55	2.55	1797.49	63	26-Apr-2023	GOOD		
109300	109400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.36	2.12	1.74	1171.54	40	26-Apr-2023	GOOD		
109300	109400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	4.88	5.17	5.03	3846.77	67	26-Apr-2023	POOR		
109400	109500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	10.76	17.95	14.36	12455.28	4	26-Apr-2023	POOR		
109400	109500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.83	1.93	1.88	1277.61	68	26-Apr-2023	GOOD		
109500	109600	109500.000	110500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.86	5.42	5.14	3941.12	36	26-Apr-2023	POOR		
109500	109600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.7	1.69	1.7	1141.41	68	26-Apr-2023	GOOD		
109600	109700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.74	2.08	1.91	1300.46	46	26-Apr-2023	GOOD		
109600	109700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.15	1.17	1.16	743.93	62	26-Apr-2023	GOOD		
109700	109800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.89	1.92	1.91	1300.46	54	26-Apr-2023	GOOD		
109700	109800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.51	1.38	1.45	955.15	59	26-Apr-2023	GOOD		
109800	109900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.75	1.62	1.69	1133.90	55	26-Apr-2023	GOOD		
109800	109900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.54	1.38	1.46	962.53	56	26-Apr-2023	GOOD		
109900	110000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.32	3.82	3.57	2620.17	57	26-Apr-2023	POOR		
109900	110000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.55	1.38	1.46	962.53	54	26-Apr-2023	GOOD		
110000	110100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.01	2.88	2.45	1718.73	57	26-Apr-2023	GOOD	1698.90	GOOD
110000	110100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.48	1.5	1.49	984.71	56	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
110100	110200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.55	1.91	2.23	1546.83	51	26-Apr-2023	GOOD		
110100	110200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.45	2.5	2.48	1742.31	50	26-Apr-2023	GOOD		
110200	110300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.07	2.01	1376.96	37	26-Apr-2023	GOOD		
110200	110300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.23	1.78	1.51	999.53	8	26-Apr-2023	GOOD		
110300	110400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	9.37	8.58	8.98	7362.24	12	26-Apr-2023	POOR		
110300	110400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.47	1.98	1.73	1164.00	24	26-Apr-2023	GOOD		
110400	110500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.56	1.68	1.62	1081.43	36	26-Apr-2023	GOOD		
110400	110500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.29	1.56	1.43	940.41	40	26-Apr-2023	GOOD		
110500	110600	110500.000	111500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.12	1.78	1.95	1331.00	43	26-Apr-2023	GOOD		
110500	110600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.63	1.39	1.51	999.53	48	26-Apr-2023	GOOD		
110600	110700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3.16	2.62	2.89	2067.98	49	26-Apr-2023	Fair		
110600	110700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.69	1.23	1.46	962.53	54	26-Apr-2023	GOOD		
110700	110800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.47	2.51	1.99	1361.62	51	26-Apr-2023	GOOD		
110700	110800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.22	1.43	1.33	867.07	53	26-Apr-2023	GOOD		
110800	110900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.83	1.84	1.84	1247.20	51	26-Apr-2023	GOOD		
110800	110900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.77	1.22	1.5	992.12	54	26-Apr-2023	GOOD		
110900	111000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.61	1.11	1.36	889.00	53	26-Apr-2023	GOOD		
110900	111000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.4	1.78	1.59	1059.02	53	26-Apr-2023	GOOD		
111000	111100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.46	1.45	1.46	962.53	54	26-Apr-2023	GOOD	1218.20	GOOD
111000	111100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.91	1.09	1.5	992.12	50	26-Apr-2023	GOOD		
111100	111200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.26	1.72	1.99	1361.62	53	26-Apr-2023	GOOD		
111100	111200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.03	2.15	2.09	1438.48	51	26-Apr-2023	GOOD		
111200	111300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.55	1.36	1.46	962.53	48	26-Apr-2023	GOOD		
111200	111300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.41	2.26	2.34	1632.53	53	26-Apr-2023	GOOD		
111300	111400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.18	2.96	2.57	1813.28	43	26-Apr-2023	GOOD		
111300	111400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.32	1.26	1.29	837.92	56	26-Apr-2023	GOOD		
111400	111500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.29	2.28	2.28	1585.72	43	26-Apr-2023	GOOD		
111400	111500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.56	1.45	1.51	999.53	58	26-Apr-2023	GOOD		
111500	111600	111500.000	112500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.54	1.44	1.49	984.71	44	26-Apr-2023	GOOD		
111500	111600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.63	1.86	1.75	1179.08	58	26-Apr-2023	GOOD		
111600	111700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.68	2.15	1.92	1308.09	46	26-Apr-2023	GOOD		
111600	111700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.94	1.88	1.91	1300.46	55	26-Apr-2023	GOOD		
111700	111800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.65	1.82	1.74	1171.54	49	26-Apr-2023	GOOD		
111700	111800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.87	1.63	1.75	1179.08	52	26-Apr-2023	GOOD		
111800	111900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.16	2.14	2.15	1484.81	50	26-Apr-2023	GOOD		
111800	111900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.6	2.27	2.44	1710.87	53	26-Apr-2023	GOOD		
111900	112000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.32	1.4	1.86	1262.39	51	26-Apr-2023	GOOD		
111900	112000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.73	3.98	3.36	2448.16	56	26-Apr-2023	POOR		
112000	112100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.67	3.48	3.08	2220.84	53	26-Apr-2023	Fair	1471.80	GOOD
112000	112100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.16	2.41	2.29	1593.52	58	26-Apr-2023	GOOD		
112100	112200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.11	2.9	2.51	1765.94	53	26-Apr-2023	GOOD		
112100	112200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.9	1.81	1.86	1262.39	45	26-Apr-2023	GOOD		
112200	112300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.34	2.05	2.2	1523.54	31	26-Apr-2023	GOOD		
112200	112300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.74	2.51	2.13	1469.35	45	26-Apr-2023	GOOD		
112300	112400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.77	1.62	1.7	1141.41	37	26-Apr-2023	GOOD		
112300	112400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.95	2.53	2.24	1554.60	50	26-Apr-2023	GOOD		
112400	112500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.99	1.45	1.72	1156.46	41	26-Apr-2023	GOOD		
112400	112500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.99	2.9	2.45	1718.73	48	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
112500	112600	112500.000	113500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.44	2.39	2.42	1695.17	43	26-Apr-2023	GOOD		
112500	112600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.42	1.91	1.67	1118.88	52	26-Apr-2023	GOOD		
112600	112700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.73	2.85	2.79	1988.00	40	26-Apr-2023	GOOD		
112600	112700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.44	3.75	3.6	2644.84	51	26-Apr-2023	POOR		
112700	112800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.76	1.74	1.75	1179.08	37	26-Apr-2023	GOOD		
112700	112800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	5.32	5.14	5.23	4018.49	50	26-Apr-2023	POOR		
112800	112900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	6.36	6.15	6.26	4914.78	33	26-Apr-2023	POOR		
112800	112900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.01	1.83	1.92	1308.09	44	26-Apr-2023	GOOD		
112900	113000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.52	3.19	2.86	2043.95	40	26-Apr-2023	Fair		
112900	113000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.43	1.57	1.5	992.12	43	26-Apr-2023	GOOD		
113000	113100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.47	1.7	1.59	1059.02	47	26-Apr-2023	GOOD	1697.80	GOOD
113000	113100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.23	1.29	1.26	816.12	42	26-Apr-2023	GOOD		
113100	113200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.34	1.47	1.41	925.69	49	26-Apr-2023	GOOD		
113100	113200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.93	1.61	1.77	1194.18	39	26-Apr-2023	GOOD		
113200	113300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.67	1.9	1.79	1209.31	52	26-Apr-2023	GOOD		
113200	113300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.48	2.37	2.43	1703.02	29	26-Apr-2023	GOOD		
113300	113400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.86	2.15	2.01	1376.96	49	26-Apr-2023	GOOD		
113300	113400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.45	1.26	1.36	889.00	36	26-Apr-2023	GOOD		
113400	113500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.49	2.64	2.57	1813.28	47	26-Apr-2023	GOOD		
113400	113500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.7	1.5	1.6	1066.49	39	26-Apr-2023	GOOD		
113500	113600	113500.000	114500.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.39	2.1	1.74	1171.54	50	26-Apr-2023	GOOD		
113500	113600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.02	2.35	2.19	1515.79	38	26-Apr-2023	GOOD		
113600	113700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.91	2.53	2.22	1539.06	51	26-Apr-2023	GOOD		
113600	113700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.74	3.15	2.95	2116.12	37	26-Apr-2023	Fair		
113700	113800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.47	2.7	2.59	1829.10	52	26-Apr-2023	GOOD		
113700	113800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.87	2.49	2.68	1900.43	38	26-Apr-2023	GOOD		
113800	113900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	3	3.02	3.01	2164.39	53	26-Apr-2023	Fair		
113800	113900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.13	2.91	3.02	2172.44	38	26-Apr-2023	Fair		
113900	114000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.92	2.64	2.78	1980.03	49	26-Apr-2023	GOOD		
113900	114000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.3	2.05	2.18	1508.04	32	26-Apr-2023	GOOD		
114000	114100			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.62	2.61	2.61	1844.92	49	26-Apr-2023	GOOD	1618.80	GOOD
114000	114100			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.63	2.74	2.69	1908.37	26	26-Apr-2023	GOOD		
114100	114200			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.73	1.9	1.82	1232.03	50	26-Apr-2023	GOOD		
114100	114200			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.27	1.89	1.58	1051.57	7	26-Apr-2023	GOOD		
114200	114300			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.3	1.64	1.97	1346.30	47	26-Apr-2023	GOOD		
114200	114300			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.78	1.63	1.71	1148.94	17	26-Apr-2023	GOOD		
114300	114400			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.09	1.76	1.93	1315.72	47	26-Apr-2023	GOOD		
114300	114400			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.36	1.52	1.94	1323.36	21	26-Apr-2023	GOOD		
114400	114500			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.1	1.55	1.83	1239.61	44	26-Apr-2023	GOOD		
114400	114500			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.23	2.55	2.89	2067.98	28	26-Apr-2023	Fair		
114500	114600	114500.000	115000.000	Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.96	2.09	2.03	1392.31	41	26-Apr-2023	GOOD		
114500	114600			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.88	2.23	2.56	1805.38	14	26-Apr-2023	GOOD		
114600	114700			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	4.02	4.2	4.11	3067.92	27	26-Apr-2023	POOR		
114600	114700			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	3.18	1.67	2.43	1703.02	25	26-Apr-2023	GOOD		
114700	114800			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.67	2.02	2.35	1640.35	35	26-Apr-2023	GOOD		
114700	114800			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.66	1.7	1.68	1126.39	34	26-Apr-2023	GOOD	1566.00	GOOD
114800	114900			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	2.02	2.3	2.16	1492.55	39	26-Apr-2023	GOOD		
114800	114900			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	1.48	1.14	1.31	852.48	37	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
114900	115000			Flexible	Hazaribagh-Ranchi	LHS	Outer lane	1.92	1.51	1.71	1148.94	40	26-Apr-2023	GOOD		
114900	115000			Flexible	Hazaribagh-Ranchi	LHS	Inner Lane	2.13	2.02	2.08	1430.78	40	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
115000	114900	115000.000	114500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	2.33	2.28	1585.72	23	26-Apr-2023	GOOD		
115000	114900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.55	1.28	1.92	1308.09	16	26-Apr-2023	GOOD		
114900	114800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	3.15	3	2156.34	41	26-Apr-2023	Fair		
114900	114800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.15	1.26	816.12	25	26-Apr-2023	GOOD		
114800	114700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	1.49	1.71	1148.94	45	26-Apr-2023	GOOD		
114800	114700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.16	1.26	816.12	29	26-Apr-2023	GOOD	1415.20	GOOD
114700	114600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.11	2.35	2.73	1940.18	47	26-Apr-2023	Fair		
114700	114600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	1.59	1.75	1179.08	31	26-Apr-2023	GOOD		
114600	114500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	3.02	2.89	2067.98	47	26-Apr-2023	Fair		
114600	114500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.87	1.51	1.69	1133.90	27	26-Apr-2023	GOOD		
114500	114400	114500.000	113500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.01	2.85	2.93	2100.06	48	26-Apr-2023	Fair		
114500	114400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.57	1.89	1.73	1164.00	29	26-Apr-2023	GOOD		
114400	114300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.83	3.49	3.16	2285.55	39	26-Apr-2023	Fair		
114400	114300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.34	2.17	2.26	1570.15	27	26-Apr-2023	GOOD		
114300	114200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.04	2.08	1430.78	35	26-Apr-2023	GOOD		
114300	114200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.02	2.49	2.76	1964.08	25	26-Apr-2023	Fair		
114200	114100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.4	2.02	2.21	1531.30	45	26-Apr-2023	GOOD		
114200	114100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.04	1.72	1.88	1277.61	41	26-Apr-2023	GOOD		
114100	114000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.6	2.62	2.61	1844.92	49	26-Apr-2023	Fair		
114100	114000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.58	1.58	1051.57	43	26-Apr-2023	GOOD		
114000	113900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.62	2.09	1.86	1262.39	40	26-Apr-2023	GOOD	1555.00	GOOD
114000	113900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.39	1.19	1.29	837.92	41	26-Apr-2023	GOOD		
113900	113800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.58	1.76	1.67	1118.88	29	26-Apr-2023	GOOD		
113900	113800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.33	1.58	1.46	962.53	36	26-Apr-2023	GOOD		
113800	113700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.04	2.48	2.26	1570.15	36	26-Apr-2023	GOOD		
113800	113700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	1.79	1.91	1300.46	44	26-Apr-2023	GOOD		
113700	113600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.06	2.88	2.97	2132.20	41	26-Apr-2023	Fair		
113700	113600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.31	3.2	3.26	2366.71	46	26-Apr-2023	Fair		
113600	113500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.38	2.79	2.59	1829.10	41	26-Apr-2023	Fair		
113600	113500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.32	2.01	2.17	1500.29	46	26-Apr-2023	GOOD		
113500	113400	113500.000	112500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	2.02	2.39	1671.65	48	26-Apr-2023	GOOD		
113500	113400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.38	2.48	2.43	1703.02	43	26-Apr-2023	GOOD		
113400	113300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	1.53	1.75	1179.08	46	26-Apr-2023	GOOD		
113400	113300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.06	1.19	1.13	722.42	36	26-Apr-2023	GOOD		
113300	113200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.1	2.25	2.68	1900.43	45	26-Apr-2023	Fair		
113300	113200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.87	2.09	1.98	1353.96	51	26-Apr-2023	GOOD		
113200	113100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.07	1.35	1.71	1148.94	44	26-Apr-2023	GOOD		
113200	113100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.25	1.33	867.07	54	26-Apr-2023	GOOD		
113100	113000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.02	1.68	1.85	1254.80	43	26-Apr-2023	GOOD		
113100	113000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.04	0.83	0.93	580.82	53	26-Apr-2023	GOOD		
113000	112900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	2.54	2.37	1655.99	41	26-Apr-2023	GOOD	1169.10	GOOD
113000	112900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.18	1.3	845.20	46	26-Apr-2023	GOOD		
112900	112800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.96	1.72	1.84	1247.20	42	26-Apr-2023	GOOD		
112900	112800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	2.24	2.05	1407.68	43	26-Apr-2023	GOOD		
112800	112700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	0.88	1.17	1.03	651.21	42	26-Apr-2023	GOOD		
112800	112700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	0.88	1.04	658.29	53	26-Apr-2023	GOOD		
112700	112600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.47	2.42	1695.17	45	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
112700	112600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.79	1.53	1014.37	56	26-Apr-2023	GOOD		
112600	112500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.5	1.69	1.6	1066.49	43	26-Apr-2023	GOOD		
112600	112500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.16	1.21	1.18	758.31	56	26-Apr-2023	GOOD		
112500	112400	112500.000	111500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.71	4.68	4.69	3556.76	43	26-Apr-2023	POOR	1497.70	GOOD
112500	112400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	4.41	4.06	4.23	3168.41	57	26-Apr-2023	POOR		
112400	112300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.02	2.22	2.12	1461.63	53	26-Apr-2023	GOOD		
112400	112300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.12	2.32	2.22	1539.06	56	26-Apr-2023	GOOD		
112300	112200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.27	2.1	2.19	1515.79	54	26-Apr-2023	GOOD		
112300	112200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.18	1.93	2.06	1415.38	56	26-Apr-2023	GOOD		
112200	112100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.38	1.88	2.13	1469.35	51	26-Apr-2023	GOOD		
112200	112100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.3	2.11	2.21	1531.30	56	26-Apr-2023	GOOD		
112100	112000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	1.91	2.05	1407.68	48	26-Apr-2023	GOOD		
112100	112000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.25	1.3	1.28	830.65	52	26-Apr-2023	GOOD		
112000	111900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	2	2.18	1508.04	46	26-Apr-2023	GOOD		
112000	111900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.02	1.55	1.29	837.92	52	26-Apr-2023	GOOD		
111900	111800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.05	1.98	2.01	1376.96	47	26-Apr-2023	GOOD		
111900	111800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	1.8	1.77	1194.18	55	26-Apr-2023	GOOD		
111800	111700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	1.98	1.97	1346.30	45	26-Apr-2023	GOOD		
111800	111700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.34	1.3	845.20	57	26-Apr-2023	GOOD		
111700	111600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	2	2.22	1539.06	47	26-Apr-2023	GOOD		
111700	111600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.89	1.74	1171.54	60	26-Apr-2023	GOOD		
111600	111500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.75	1.73	1164.00	48	26-Apr-2023	GOOD		
111600	111500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.55	1.61	1073.95	61	26-Apr-2023	GOOD		
111500	111400	111500.000	110500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.79	1.2	1.5	992.12	50	26-Apr-2023	GOOD	1259.90	GOOD
111500	111400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.31	1.36	889.00	61	26-Apr-2023	GOOD		
111400	111300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.21	1.4	1.31	852.48	51	26-Apr-2023	GOOD		
111400	111300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.01	1.04	1.03	651.21	59	26-Apr-2023	GOOD		
111300	111200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.82	1.93	1.88	1277.61	50	26-Apr-2023	GOOD		
111300	111200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.77	1.87	2.32	1616.91	59	26-Apr-2023	GOOD		
111200	111100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.07	2.74	2.41	1687.33	49	26-Apr-2023	GOOD		
111200	111100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.72	1.7	1141.41	59	26-Apr-2023	GOOD		
111100	111000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.77	2.62	2.7	1916.32	41	26-Apr-2023	Fair		
111100	111000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.43	2.1	2.26	1570.15	61	26-Apr-2023	GOOD		
111000	110900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	5.36	1.91	3.64	2677.78	25	26-Apr-2023	POOR		
111000	110900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.28	1.26	1.27	823.38	60	26-Apr-2023	GOOD		
110900	110800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.72	1.82	2.27	1577.94	42	26-Apr-2023	GOOD		
110900	110800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.07	1.11	1.09	693.84	60	26-Apr-2023	GOOD		
110800	110700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.17	1.91	2.04	1399.99	47	26-Apr-2023	GOOD		
110800	110700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.14	1.03	1.09	693.84	59	26-Apr-2023	GOOD		
110700	110600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.8	2.44	2.62	1852.84	48	26-Apr-2023	Fair		
110700	110600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.82	1.97	1.9	1292.84	58	26-Apr-2023	GOOD		
110600	110500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	1.17	1.59	1059.02	49	26-Apr-2023	GOOD		
110600	110500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.93	0.79	0.86	532.08	55	26-Apr-2023	GOOD		
110500	110400	110500.000	109500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.26	2.6	2.93	2100.06	51	26-Apr-2023	Fair		
110500	110400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.41	1.55	1029.23	53	26-Apr-2023	GOOD		
110400	110300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.23	2.52	2.38	1663.82	51	26-Apr-2023	GOOD		
110400	110300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	1.72	1.85	1254.80	53	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
110300	110200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.56	1.33	1.45	955.15	45	26-Apr-2023	GOOD		
110300	110200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.32	1.94	2.13	1469.35	52	26-Apr-2023	GOOD		
110200	110100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	1.96	2.03	1392.31	40	26-Apr-2023	GOOD		
110200	110100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.12	1.86	1.99	1361.62	54	26-Apr-2023	GOOD		
110100	110000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.94	2.5	2.72	1932.23	16	26-Apr-2023	Fair		
110100	110000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.87	1.64	1.76	1186.63	46	26-Apr-2023	GOOD	1695.80	GOOD
110000	109900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.92	3.21	3.57	2620.17	36	26-Apr-2023	POOR		
110000	109900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.22	3.14	2.68	1900.43	22	26-Apr-2023	Fair		
109900	109800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.4	2.93	2.67	1892.49	48	26-Apr-2023	Fair		
109900	109800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.09	2.42	2.26	1570.15	38	26-Apr-2023	GOOD		
109800	109700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.71	2.52	2.62	1852.84	55	26-Apr-2023	Fair		
109800	109700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.82	1.98	2.9	2076.00	46	26-Apr-2023	Fair		
109700	109600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.01	2.3	2.66	1884.55	58	26-Apr-2023	Fair		
109700	109600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.54	1.4	918.34	51	26-Apr-2023	GOOD		
109600	109500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.09	4.05	4.07	3034.49	58	26-Apr-2023	POOR		
109600	109500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.65	2.51	2.58	1821.19	51	26-Apr-2023	Fair		
109500	109400	109500	108500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.39	2.24	1554.60	63	26-Apr-2023	GOOD		
109500	109400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.71	1.75	1179.08	47	26-Apr-2023	GOOD		
109400	109300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.6	3.18	2.89	2067.98	65	26-Apr-2023	Fair		
109400	109300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.73	2.89	2.81	2003.97	50	26-Apr-2023	Fair		
109300	109200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.41	2.39	2.4	1679.49	67	26-Apr-2023	GOOD		
109300	109200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.2	2.18	2.19	1515.79	54	26-Apr-2023	GOOD		
109200	109100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	5.06	5.22	5.14	3941.12	65	26-Apr-2023	POOR		
109200	109100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	5.27	5.35	5.31	4087.39	52	26-Apr-2023	POOR		
109100	109000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.35	2.93	3.14	2269.35	64	26-Apr-2023	Fair		
109100	109000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.76	2.78	2.27	1577.94	52	26-Apr-2023	GOOD	1725.30	GOOD
109000	108900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.84	2.33	2.09	1438.48	64	26-Apr-2023	GOOD		
109000	108900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	1.63	1.57	1044.11	53	26-Apr-2023	GOOD		
108900	108800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.02	2.23	1546.83	58	26-Apr-2023	GOOD		
108900	108800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.97	2.27	2.12	1461.63	53	26-Apr-2023	GOOD		
108800	108700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	2.44	2.24	1554.60	47	26-Apr-2023	GOOD		
108800	108700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.26	1.34	874.38	53	26-Apr-2023	GOOD		
108700	108600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	2.05	2.03	1392.31	44	26-Apr-2023	GOOD		
108700	108600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.44	1.25	1.35	881.69	53	26-Apr-2023	GOOD		
108600	108500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.08	1.93	2	1369.29	46	26-Apr-2023	GOOD		
108600	108500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.53	1.6	1066.49	54	26-Apr-2023	GOOD		
108500	108400	108500.000	107500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.27	1.51	1.39	911.00	37	26-Apr-2023	GOOD		
108500	108400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.06	0.99	1.03	651.21	54	26-Apr-2023	GOOD		
108400	108300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.09	1.4	1.25	808.87	29	26-Apr-2023	GOOD		
108400	108300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	1	1.1	700.97	51	26-Apr-2023	GOOD		
108300	108200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.16	1.13	1.15	736.75	36	26-Apr-2023	GOOD		
108300	108200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.16	0.97	1.07	679.60	40	26-Apr-2023	GOOD		
108200	108100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.7	2.17	1.94	1323.36	39	26-Apr-2023	GOOD		
108200	108100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	1.77	1.71	1148.94	47	26-Apr-2023	GOOD		
108100	108000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.51	1.28	1.4	918.34	50	26-Apr-2023	GOOD		
108100	108000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.31	1.4	918.34	54	26-Apr-2023	GOOD	1255.10	GOOD
108000	107900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.79	1.63	1.71	1148.94	54	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
108000	107900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.4	1.96	2.18	1508.04	54	26-Apr-2023	GOOD		
107900	107800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.29	2.32	1616.91	50	26-Apr-2023	GOOD		
107900	107800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.53	2.14	2.84	2027.95	47	26-Apr-2023	Fair		
107800	107700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.72	1.83	1.78	1201.74	52	26-Apr-2023	GOOD		
107800	107700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.82	1.7	1141.41	50	26-Apr-2023	GOOD		
107700	107600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.85	1.97	1.91	1300.46	55	26-Apr-2023	GOOD		
107700	107600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.26	1.47	969.92	54	26-Apr-2023	GOOD		
107600	107500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.54	4.25	3.9	2892.90	60	26-Apr-2023	POOR		
107600	107500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.48	3.35	3.42	2497.18	58	26-Apr-2023	POOR		
107500	107400	107500.000	106500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	1.34	1.66	1111.38	62	26-Apr-2023	GOOD		
107500	107400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.24	1.23	794.39	61	26-Apr-2023	GOOD		
107400	107300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	1.61	1.76	1186.63	59	26-Apr-2023	GOOD		
107400	107300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	1.49	1.5	992.12	63	26-Apr-2023	GOOD		
107300	107200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.66	1.84	1.75	1179.08	59	26-Apr-2023	GOOD		
107300	107200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.11	1.01	1.06	672.49	63	26-Apr-2023	GOOD		
107200	107100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	1.9	1.99	1361.62	61	26-Apr-2023	GOOD		
107200	107100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.11	1.17	751.12	60	26-Apr-2023	GOOD		
107100	107000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.42	1.57	1044.11	59	26-Apr-2023	GOOD		
107100	107000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.29	1.11	1.2	772.72	59	26-Apr-2023	GOOD		
107000	106900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.45	1.86	1.66	1111.38	55	26-Apr-2023	GOOD	1088.60	GOOD
107000	106900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.33	1.35	1.34	874.38	61	26-Apr-2023	GOOD		
106900	106800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	2.17	2.23	1546.83	54	26-Apr-2023	GOOD		
106900	106800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.5	2.13	2.32	1616.91	58	26-Apr-2023	GOOD		
106800	106700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	1.83	1.79	1209.31	57	26-Apr-2023	GOOD		
106800	106700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.08	1.15	1.12	715.26	52	26-Apr-2023	GOOD		
106700	106600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	2.45	2.24	1554.60	60	26-Apr-2023	GOOD		
106700	106600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.3	1.11	1.2	772.72	40	26-Apr-2023	GOOD		
106600	106500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	2.13	2.07	1423.07	60	26-Apr-2023	GOOD		
106600	106500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.84	1.39	1.62	1081.43	27	26-Apr-2023	GOOD		
106500	106400	106500.000	105500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.96	2.66	2.81	2003.97	60	26-Apr-2023	Fair		
106500	106400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.04	1.53	1.79	1209.31	35	26-Apr-2023	GOOD		
106400	106300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.91	2.85	2.88	2059.97	60	26-Apr-2023	Fair		
106400	106300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.12	1.19	765.51	42	26-Apr-2023	GOOD		
106300	106200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.73	1.53	1.63	1088.91	58	26-Apr-2023	GOOD		
106300	106200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	1.87	1.81	1224.45	50	26-Apr-2023	GOOD		
106200	106100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	2.08	1.97	1346.30	56	26-Apr-2023	GOOD		
106200	106100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.56	1.46	1.51	999.53	54	26-Apr-2023	GOOD		
106100	106000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.76	1.73	1.75	1179.08	55	26-Apr-2023	GOOD		
106100	106000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.09	1.54	1.82	1232.03	56	26-Apr-2023	GOOD		
106000	105900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	1.93	2.08	1430.78	55	26-Apr-2023	GOOD	1300.30	GOOD
106000	105900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.42	1.91	2.17	1500.29	57	26-Apr-2023	GOOD		
105900	105800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	2.13	2.18	1508.04	55	26-Apr-2023	GOOD		
105900	105800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.61	1.48	977.31	59	26-Apr-2023	GOOD		
105800	105700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.52	1.61	1.57	1044.11	59	26-Apr-2023	GOOD		
105800	105700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.39	1.44	947.78	60	26-Apr-2023	GOOD		
105700	105600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.67	2.19	1.93	1315.72	62	26-Apr-2023	GOOD		
105700	105600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.64	1.56	1036.67	59	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
105600	105500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.94	2.57	2.76	1964.08	64	26-Apr-2023	Fair		
105600	105500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.77	1.74	1171.54	64	26-Apr-2023	GOOD		
105500	105400	105500.000	104500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	1.99	2.11	1453.91	64	26-Apr-2023	GOOD		
105500	105400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.25	1.42	933.05	67	26-Apr-2023	GOOD		
105400	105300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	1.62	1.7	1141.41	59	26-Apr-2023	GOOD		
105400	105300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.83	1.5	1.67	1118.88	66	26-Apr-2023	GOOD		
105300	105200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.81	2.02	1.92	1308.09	57	26-Apr-2023	GOOD		
105300	105200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.14	1.74	1.94	1323.36	64	26-Apr-2023	GOOD		
105200	105100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	1.58	1.76	1186.63	66	26-Apr-2023	GOOD		
105200	105100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.55	2.38	2.47	1734.45	66	26-Apr-2023	GOOD		
105100	105000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.99	3.24	3.12	2253.17	69	26-Apr-2023	Fair		
105100	105000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.73	1.72	1156.46	64	26-Apr-2023	GOOD		
105000	104900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.05	2.05	2.05	1407.68	70	26-Apr-2023	GOOD	1348.90	GOOD
105000	104900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.55	1.62	1081.43	60	26-Apr-2023	GOOD		
104900	104800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.59	1.81	2.2	1523.54	70	26-Apr-2023	GOOD		
104900	104800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.43	1.42	933.05	62	26-Apr-2023	GOOD		
104800	104700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	1.96	2.16	1492.55	71	26-Apr-2023	GOOD		
104800	104700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.5	1.33	1.42	933.05	65	26-Apr-2023	GOOD		
104700	104600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.64	3.26	2.95	2116.12	71	26-Apr-2023	Fair		
104700	104600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.69	1.64	1096.39	68	26-Apr-2023	GOOD		
104600	104500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.51	2.7	2.61	1844.92	70	26-Apr-2023	Fair		
104600	104500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.5	1.43	940.41	69	26-Apr-2023	GOOD		
104500	104400	104500.000	103500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	2.66	2.27	1577.94	70	26-Apr-2023	GOOD		
104500	104400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	1.76	1.64	1096.39	69	26-Apr-2023	GOOD		
104400	104300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.34	3.17	2.76	1964.08	70	26-Apr-2023	Fair		
104400	104300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.92	1.57	1044.11	68	26-Apr-2023	GOOD		
104300	104200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.86	2.59	2.22	1539.06	69	26-Apr-2023	GOOD		
104300	104200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.49	1.42	1.46	962.53	64	26-Apr-2023	GOOD		
104200	104100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	2.68	2.49	1750.18	70	26-Apr-2023	GOOD		
104200	104100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.55	1.39	911.00	64	26-Apr-2023	GOOD		
104100	104000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.74	2.42	3.08	2220.84	68	26-Apr-2023	Fair		
104100	104000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.83	3.39	3.11	2245.08	65	26-Apr-2023	Fair		
104000	103900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.09	2.3	2.7	1916.32	69	26-Apr-2023	Fair	1491.60	GOOD
104000	103900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2	1.86	1.93	1315.72	67	26-Apr-2023	GOOD		
103900	103800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.57	1.59	1.58	1051.57	70	26-Apr-2023	GOOD		
103900	103800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.45	1.28	1.37	896.33	68	26-Apr-2023	GOOD		
103800	103700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	2.08	1.97	1346.30	69	26-Apr-2023	GOOD		
103800	103700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.56	1.67	1118.88	65	26-Apr-2023	GOOD		
103700	103600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.08	3.09	3.09	2228.92	64	26-Apr-2023	Fair		
103700	103600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.6	1.59	1.6	1066.49	65	26-Apr-2023	GOOD		
103600	103500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.5	2.81	2.66	1884.55	62	26-Apr-2023	Fair		
103600	103500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.41	2.42	2.42	1695.17	54	26-Apr-2023	GOOD		
103500	103400	103500	102500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	2.34	2.12	1461.63	64	26-Apr-2023	GOOD		
103500	103400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.57	1.63	1088.91	58	26-Apr-2023	GOOD		
103400	103300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.97	3.03	3	2156.34	62	26-Apr-2023	Fair		
103400	103300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.99	3.69	3.84	2843.10	60	26-Apr-2023	POOR		
103300	103200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.81	4.25	4.03	3001.11	51	26-Apr-2023	POOR		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
103300	103200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.25	2.33	2.29	1593.52	59	26-Apr-2023	GOOD		
103200	103100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.15	1.16	1.16	743.93	59	26-Apr-2023	GOOD		
103200	103100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	1.07	1.14	729.58	53	26-Apr-2023	GOOD		
103100	103000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.2	1.42	1.31	852.48	62	26-Apr-2023	GOOD		
103100	103000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.09	1.16	743.93	48	26-Apr-2023	GOOD		
103000	102900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.6	1.95	1.78	1201.74	61	26-Apr-2023	GOOD	1388.30	GOOD
103000	102900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.42	1.56	1036.67	43	26-Apr-2023	GOOD		
102900	102800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.21	1.88	2.05	1407.68	62	26-Apr-2023	GOOD		
102900	102800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.57	1.55	1.56	1036.67	47	26-Apr-2023	GOOD		
102800	102700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	1.89	2.1	1446.19	63	26-Apr-2023	GOOD		
102800	102700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.49	1.51	999.53	30	26-Apr-2023	GOOD		
102700	102600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.85	1.95	1.9	1292.84	62	26-Apr-2023	GOOD		
102700	102600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.31	1.36	889.00	48	26-Apr-2023	GOOD		
102600	102500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.47	2.32	1616.91	62	26-Apr-2023	GOOD		
102600	102500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.36	2.3	2.33	1624.72	57	26-Apr-2023	GOOD		
102500	102400	102500.000	101500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.83	2.08	2.46	1726.58	61	26-Apr-2023	GOOD		
102500	102400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.33	2.04	2.19	1515.79	59	26-Apr-2023	GOOD		
102400	102300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.56	3.07	2.82	2011.96	60	26-Apr-2023	Fair		
102400	102300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.15	1.8	1.98	1353.96	59	26-Apr-2023	GOOD		
102300	102200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.25	2.17	1500.29	61	26-Apr-2023	GOOD		
102300	102200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.48	1.85	2.17	1500.29	52	26-Apr-2023	GOOD		
102200	102100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.65	2.28	2.47	1734.45	59	26-Apr-2023	GOOD		
102200	102100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.27	2.08	2.18	1508.04	38	26-Apr-2023	GOOD		
102100	102000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.19	2.19	2.19	1515.79	55	26-Apr-2023	GOOD		
102100	102000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.72	1.75	1179.08	44	26-Apr-2023	GOOD		
102000	101900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.77	2.47	2.62	1852.84	53	26-Apr-2023	Fair	1453.10	GOOD
102000	101900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.82	1.76	1186.63	52	26-Apr-2023	GOOD		
101900	101800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.76	2.55	2.16	1492.55	52	26-Apr-2023	GOOD		
101900	101800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.57	1.62	1081.43	49	26-Apr-2023	GOOD		
101800	101700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.13	2.12	2.13	1469.35	55	26-Apr-2023	GOOD		
101800	101700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.88	1.75	1179.08	42	26-Apr-2023	GOOD		
101700	101600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	1.84	1.87	1270.00	57	26-Apr-2023	GOOD		
101700	101600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	2.64	2.21	1531.30	24	26-Apr-2023	GOOD		
101600	101500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	2.12	2.06	1415.38	59	26-Apr-2023	GOOD		
101600	101500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.41	1.56	1036.67	49	26-Apr-2023	GOOD		
101500	101400	101500.000	100500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.84	2.22	2.03	1392.31	58	26-Apr-2023	GOOD		
101500	101400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	1.68	1.83	1239.61	50	26-Apr-2023	GOOD		
101400	101300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	2.81	2.38	1663.82	60	26-Apr-2023	GOOD		
101400	101300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.69	1.69	1133.90	49	26-Apr-2023	GOOD		
101300	101200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.96	2.37	2.17	1500.29	62	26-Apr-2023	GOOD		
101300	101200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.82	1.65	1103.88	60	26-Apr-2023	GOOD		
101200	101100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	2.86	2.48	1742.31	59	26-Apr-2023	GOOD		
101200	101100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.28	1.31	852.48	59	26-Apr-2023	GOOD		
101100	101000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.11	3.45	3.28	2382.97	60	26-Apr-2023	Fair		
101100	101000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.69	2.69	2.69	1908.37	47	26-Apr-2023	Fair		
101000	100900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.24	3.35	3.3	2399.25	59	26-Apr-2023	Fair	1845.20	Fair
101000	100900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.41	1.44	947.78	49	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
100900	100800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	2.39	2.25	1562.37	57	26-Apr-2023	GOOD		
100900	100800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.27	1.35	881.69	49	26-Apr-2023	GOOD		
100800	100700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.07	2.61	2.84	2027.95	48	26-Apr-2023	Fair		
100800	100700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.71	2.21	2.46	1726.58	47	26-Apr-2023	GOOD		
100700	100600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	7.05	9.3	8.18	6631.69	14	26-Apr-2023	POOR		
100700	100600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.56	4.09	3.83	2834.80	30	26-Apr-2023	POOR		
100600	100500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.3	2.4	2.35	1640.35	3	26-Apr-2023	GOOD		
100600	100500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.1	1.8	1.95	1331.00	2	26-Apr-2023	GOOD		
100500	100400	100500.000	99500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	2.23	2.1	1446.19	39	26-Apr-2023	GOOD		
100500	100400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.24	2.21	2.22	1539.06	24	26-Apr-2023	GOOD		
100400	100300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	2.11	1.93	1315.72	45	26-Apr-2023	GOOD		
100400	100300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	1.35	1.55	1029.23	36	26-Apr-2023	GOOD		
100300	100200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.49	2.17	2.33	1624.72	52	26-Apr-2023	GOOD		
100300	100200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.39	2.05	2.22	1539.06	42	26-Apr-2023	GOOD		
100200	100100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.63	2.34	2.49	1750.18	55	26-Apr-2023	GOOD		
100200	100100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.17	1.99	2.08	1430.78	44	26-Apr-2023	GOOD		
100100	100000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.87	2.32	2.59	1829.10	55	26-Apr-2023	Fair		
100100	100000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.31	1.46	1.39	911.00	50	26-Apr-2023	GOOD		
100000	99900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.86	3.14	3	2156.34	55	26-Apr-2023	Fair	1437.60	GOOD
100000	99900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.56	1.36	1.46	962.53	53	26-Apr-2023	GOOD		
99900	99800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.55	1.84	1.7	1141.41	53	26-Apr-2023	GOOD		
99900	99800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.07	2.05	2.06	1415.38	50	26-Apr-2023	GOOD		
99800	99700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.25	2.58	2.42	1695.17	50	26-Apr-2023	GOOD		
99800	99700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.16	1.21	779.94	48	26-Apr-2023	GOOD		
99700	99600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.58	2.34	1632.53	49	26-Apr-2023	GOOD		
99700	99600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.26	2.38	2.32	1616.91	50	26-Apr-2023	GOOD		
99600	99500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.53	2.38	2.46	1726.58	48	26-Apr-2023	GOOD		
99600	99500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	1.78	1.79	1209.31	52	26-Apr-2023	GOOD		
99500	99400	99500.000	98500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.22	3.36	3.29	2391.11	52	26-Apr-2023	Fair		
99500	99400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.52	1.81	2.17	1500.29	53	26-Apr-2023	GOOD		
99400	99300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.56	2.17	2.37	1655.99	57	26-Apr-2023	GOOD		
99400	99300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.63	3.1	3.37	2456.33	46	26-Apr-2023	POOR		
99300	99200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.55	2.49	1750.18	59	26-Apr-2023	GOOD		
99300	99200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.71	1.59	1.65	1103.88	35	26-Apr-2023	GOOD		
99200	99100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.94	2.77	2.86	2043.95	61	26-Apr-2023	Fair		
99200	99100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.34	1.35	881.69	41	26-Apr-2023	GOOD		
99100	99000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.81	3.29	3.05	2196.63	63	26-Apr-2023	Fair		
99100	99000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.83	1.62	1.73	1164.00	48	26-Apr-2023	GOOD		
99000	98900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.67	2.8	2.74	1948.14	61	26-Apr-2023	Fair	1755.80	GOOD
99000	98900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.13	2.93	2.53	1781.70	45	26-Apr-2023	GOOD		
98900	98800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	6.25	4.87	5.56	4303.52	61	26-Apr-2023	POOR		
98900	98800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.83	2.75	3.29	2391.11	51	26-Apr-2023	Fair		
98800	98700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.34	1.21	1.28	830.65	63	26-Apr-2023	GOOD		
98800	98700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.63	3.66	3.65	2686.02	56	26-Apr-2023	POOR		
98700	98600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.43	1.48	1.46	962.53	66	26-Apr-2023	GOOD		
98700	98600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.2	1.26	816.12	54	26-Apr-2023	GOOD		
98600	98500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.52	2.82	2.17	1500.29	66	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
98600	98500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.15	1.18	1.17	751.12	64	26-Apr-2023	GOOD		
98500	98400	98500.000	97500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.38	2.12	1.75	1179.08	66	26-Apr-2023	GOOD		
98500	98400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.38	1.41	925.69	69	26-Apr-2023	GOOD		
98400	98300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.43	1.59	1.51	999.53	66	26-Apr-2023	GOOD		
98400	98300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.47	1.4	918.34	69	26-Apr-2023	GOOD		
98300	98200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.72	1.65	1.69	1133.90	64	26-Apr-2023	GOOD		
98300	98200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	1.61	1.69	1133.90	72	26-Apr-2023	GOOD		
98200	98100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.36	1.08	1.22	787.16	60	26-Apr-2023	GOOD		
98200	98100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.34	1.36	889.00	71	26-Apr-2023	GOOD		
98100	98000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.74	1.99	1.87	1270.00	61	26-Apr-2023	GOOD		
98100	98000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	1.35	1.28	830.65	70	26-Apr-2023	GOOD		
98000	97900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	2.01	1.9	1292.84	66	26-Apr-2023	GOOD	1157.20	GOOD
98000	97900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.5	1.52	1006.94	71	26-Apr-2023	GOOD		
97900	97800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.06	2.17	2.12	1461.63	58	26-Apr-2023	GOOD		
97900	97800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.78	1.67	1118.88	72	26-Apr-2023	GOOD		
97800	97700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.23	2.16	1492.55	48	26-Apr-2023	GOOD		
97800	97700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.46	1.65	1.56	1036.67	69	26-Apr-2023	GOOD		
97700	97600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	2.12	2.28	1585.72	54	26-Apr-2023	GOOD		
97700	97600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.94	1.81	1224.45	59	26-Apr-2023	GOOD		
97600	97500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.65	1.93	1.79	1209.31	58	26-Apr-2023	GOOD		
97600	97500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.45	2.26	2.36	1648.17	61	26-Apr-2023	GOOD		
97500	97400	97500	96500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.67	1.69	1133.90	56	26-Apr-2023	GOOD		
97500	97400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.31	1.6	1.46	962.53	68	26-Apr-2023	GOOD		
97400	97300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.82	1.57	1.7	1141.41	53	26-Apr-2023	GOOD		
97400	97300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.6	1.81	1.71	1148.94	72	26-Apr-2023	GOOD		
97300	97200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.56	1.37	1.46	962.53	53	26-Apr-2023	GOOD		
97300	97200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.83	1.81	1224.45	71	26-Apr-2023	GOOD		
97200	97100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.5	1.42	1.46	962.53	54	26-Apr-2023	GOOD		
97200	97100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.47	1.58	1051.57	72	26-Apr-2023	GOOD		
97100	97000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.13	1.96	2.05	1407.68	57	26-Apr-2023	GOOD		
97100	97000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.46	1.59	1.53	1014.37	76	26-Apr-2023	GOOD		
97000	96900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.37	2.26	1570.15	44	26-Apr-2023	GOOD	1136.50	GOOD
97000	96900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.18	1.56	1.87	1270.00	73	26-Apr-2023	GOOD		
96900	96800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.94	2.24	2.09	1438.48	39	26-Apr-2023	GOOD		
96900	96800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.83	2.08	1.96	1338.65	74	26-Apr-2023	GOOD		
96800	96700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.56	1.86	1.71	1148.94	36	26-Apr-2023	GOOD		
96800	96700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.38	1.5	992.12	75	26-Apr-2023	GOOD		
96700	96600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.38	1.64	1.51	999.53	47	26-Apr-2023	GOOD		
96700	96600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.6	1.43	1.52	1006.94	64	26-Apr-2023	GOOD		
96600	96500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.49	1.62	1.56	1036.67	54	26-Apr-2023	GOOD		
96600	96500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.39	1.4	1.4	918.34	56	26-Apr-2023	GOOD		
96500	96400	96500.000	95500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	0.91	1.28	1.1	700.97	53	26-Apr-2023	GOOD		
96500	96400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.49	1.53	1.51	999.53	58	26-Apr-2023	GOOD		
96400	96300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.1	1.17	1.14	729.58	41	26-Apr-2023	GOOD		
96400	96300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.04	0.99	1.02	644.13	60	26-Apr-2023	GOOD		
96300	96200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.08	1.19	1.14	729.58	36	26-Apr-2023	GOOD		
96300	96200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1	0.9	0.95	594.83	62	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
96200	96100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	2.14	2.12	1461.63	50	26-Apr-2023	GOOD		
96200	96100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.11	1.23	794.39	62	26-Apr-2023	GOOD		
96100	96000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	2.37	2.19	1515.79	49	26-Apr-2023	GOOD		
96100	96000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.6	1.51	999.53	58	26-Apr-2023	GOOD	1051.80	GOOD
96000	95900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.28	2.28	2.28	1585.72	53	26-Apr-2023	GOOD		
96000	95900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.92	3.9	3.41	2489.00	57	26-Apr-2023	POOR		
95900	95800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.29	1.57	1.43	940.41	59	26-Apr-2023	GOOD		
95900	95800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.63	1.39	1.51	999.53	66	26-Apr-2023	GOOD		
95800	95700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	1.95	1.94	1323.36	61	26-Apr-2023	GOOD		
95800	95700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.84	1.53	1.69	1133.90	64	26-Apr-2023	GOOD		
95700	95600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.1	0.94	1.02	644.13	62	26-Apr-2023	GOOD		
95700	95600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2	1.2	1.6	1066.49	59	26-Apr-2023	GOOD		
95600	95500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.27	1.36	1.32	859.77	62	26-Apr-2023	GOOD		
95600	95500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.26	1.27	823.38	60	26-Apr-2023	GOOD		
95500	95400	95500.000	94500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.29	1.22	1.26	816.12	62	26-Apr-2023	GOOD		
95500	95400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.12	1.27	823.38	64	26-Apr-2023	GOOD		
95400	95300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	2.74	2.26	1570.15	59	26-Apr-2023	GOOD		
95400	95300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.15	1.57	1.86	1262.39	62	26-Apr-2023	GOOD		
95300	95200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.42	1.14	1.28	830.65	57	26-Apr-2023	GOOD		
95300	95200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.14	1.37	896.33	62	26-Apr-2023	GOOD		
95200	95100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.82	1.79	1.81	1224.45	56	26-Apr-2023	GOOD		
95200	95100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	1.87	1.83	1239.61	61	26-Apr-2023	GOOD		
95100	95000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.71	3.58	3.15	2277.45	56	26-Apr-2023	Fair		
95100	95000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	1.36	1.49	984.71	60	26-Apr-2023	GOOD	1307.70	GOOD
95000	94900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.44	3.3	3.37	2456.33	49	26-Apr-2023	POOR		
95000	94900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.54	2.75	2.65	1876.62	59	26-Apr-2023	Fair		
94900	94800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.32	1.35	1.34	874.38	52	26-Apr-2023	GOOD		
94900	94800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.41	2.6	3.01	2164.39	54	26-Apr-2023	Fair		
94800	94700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.79	1.58	1.69	1133.90	54	26-Apr-2023	GOOD		
94800	94700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.97	1.62	1.8	1216.87	56	26-Apr-2023	GOOD		
94700	94600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.42	1.97	1.7	1141.41	55	26-Apr-2023	GOOD		
94700	94600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.73	1.64	1096.39	56	26-Apr-2023	GOOD		
94600	94500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.91	2.2	2.06	1415.38	50	26-Apr-2023	GOOD		
94600	94500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.2	1.31	852.48	48	26-Apr-2023	GOOD		
94500	94400	94500.000	93500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.52	1.96	1.74	1171.54	49	26-Apr-2023	GOOD		
94500	94400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.5	2.25	2.38	1663.82	52	26-Apr-2023	GOOD		
94400	94300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.59	1.69	1.64	1096.39	57	26-Apr-2023	GOOD		
94400	94300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.21	1.36	1.29	837.92	52	26-Apr-2023	GOOD		
94300	94200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.16	2.77	2.97	2132.20	64	26-Apr-2023	Fair		
94300	94200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.11	0.98	1.05	665.38	62	26-Apr-2023	GOOD		
94200	94100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.5	3.51	3.01	2164.39	58	26-Apr-2023	Fair		
94200	94100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	1.99	2.01	1376.96	68	26-Apr-2023	GOOD		
94100	94000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	2.48	2.39	1671.65	55	26-Apr-2023	GOOD		
94100	94000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.2	2.85	3.03	2180.50	57	26-Apr-2023	Fair		
94000	93900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.6	1.84	1.72	1156.46	56	26-Apr-2023	GOOD	1359.10	GOOD
94000	93900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.67	2.21	2.44	1710.87	53	26-Apr-2023	GOOD		
93900	93800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.88	2.01	1.95	1331.00	56	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
93900	93800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.66	1.61	1073.95	56	26-Apr-2023	GOOD		
93800	93700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.79	1.85	1.82	1232.03	58	26-Apr-2023	GOOD		
93800	93700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.05	2.06	2.05	1407.68	59	26-Apr-2023	GOOD		
93700	93600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	1.95	1.85	1254.80	60	26-Apr-2023	GOOD		
93700	93600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.3	1.27	823.38	62	26-Apr-2023	GOOD		
93600	93500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.35	1.76	1.56	1036.67	63	26-Apr-2023	GOOD		
93600	93500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.81	1.72	1.77	1194.18	63	26-Apr-2023	GOOD		
93500	93400	93500.000	92500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.59	1.49	1.54	1021.79	65	26-Apr-2023	GOOD	1251.80	GOOD
93500	93400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.76	1.57	1.67	1118.88	62	26-Apr-2023	GOOD		
93400	93300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.53	1.67	1.6	1066.49	62	26-Apr-2023	GOOD		
93400	93300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.03	1.24	1.14	729.58	63	26-Apr-2023	GOOD		
93300	93200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.29	1.39	1.34	874.38	58	26-Apr-2023	GOOD		
93300	93200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.21	1.41	1.31	852.48	60	26-Apr-2023	GOOD		
93200	93100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.34	1.28	1.31	852.48	57	26-Apr-2023	GOOD		
93200	93100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.32	1.44	947.78	57	26-Apr-2023	GOOD		
93100	93000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.44	1.67	1.56	1036.67	57	26-Apr-2023	GOOD		
93100	93000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.49	1.89	1.69	1133.90	41	26-Apr-2023	GOOD		
93000	92900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.67	3.89	3.78	2793.39	55	26-Apr-2023	POOR		
93000	92900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.85	1.76	1186.63	46	26-Apr-2023	GOOD		
92900	92800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.41	2.39	1671.65	57	26-Apr-2023	GOOD		
92900	92800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.52	3.96	3.74	2760.30	56	26-Apr-2023	POOR		
92800	92700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.06	2.01	2.03	1392.31	56	26-Apr-2023	GOOD		
92800	92700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	1.77	1.77	1194.18	65	26-Apr-2023	GOOD		
92700	92600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.45	1.19	1.32	859.77	55	26-Apr-2023	GOOD		
92700	92600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.36	1.39	911.00	70	26-Apr-2023	GOOD		
92600	92500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	1.93	1.95	1331.00	55	26-Apr-2023	GOOD		
92600	92500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.92	1.89	1.91	1300.46	70	26-Apr-2023	GOOD		
92500	92400	92500.000	91500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	5.68	4.73	5.21	4001.28	57	26-Apr-2023	POOR	1528.60	GOOD
92500	92400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.85	3.2	3.03	2180.50	66	26-Apr-2023	Fair		
92400	92300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.98	1.8	1.89	1285.22	59	26-Apr-2023	GOOD		
92400	92300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.17	4.2	3.69	2719.01	61	26-Apr-2023	POOR		
92300	92200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.38	1.69	1.54	1021.79	61	26-Apr-2023	GOOD		
92300	92200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.47	2.3	2.39	1671.65	66	26-Apr-2023	GOOD		
92200	92100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.65	1.63	1.64	1096.39	62	26-Apr-2023	GOOD		
92200	92100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.43	1.41	925.69	69	26-Apr-2023	GOOD		
92100	92000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.62	2.49	1750.18	63	26-Apr-2023	GOOD		
92100	92000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.5	1.68	1126.39	65	26-Apr-2023	GOOD		
92000	91900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	2.39	2.16	1492.55	62	26-Apr-2023	GOOD		
92000	91900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.4	2.23	2.32	1616.91	45	26-Apr-2023	GOOD		
91900	91800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.81	2.38	2.1	1446.19	63	26-Apr-2023	GOOD		
91900	91800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.66	1.61	1073.95	59	26-Apr-2023	GOOD		
91800	91700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.59	2.65	2.62	1852.84	63	26-Apr-2023	Fair		
91800	91700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.13	1.19	1.16	743.93	62	26-Apr-2023	GOOD		
91700	91600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.19	2.58	2.39	1671.65	64	26-Apr-2023	GOOD		
91700	91600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.25	1.31	852.48	63	26-Apr-2023	GOOD		
91600	91500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.54	2.21	1.88	1277.61	64	26-Apr-2023	GOOD		
91600	91500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.16	1.23	1.19	765.51	62	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
91500	91400	91500	90500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	2.22	2.2	1523.54	65	26-Apr-2023	GOOD		
91500	91400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.6	1.52	1.56	1036.67	64	26-Apr-2023	GOOD		
91400	91300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.66	2.55	2.61	1844.92	65	26-Apr-2023	Fair		
91400	91300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.28	1.29	1.29	837.92	65	26-Apr-2023	GOOD		
91300	91200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.74	1.97	2.36	1648.17	64	26-Apr-2023	GOOD		
91300	91200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.07	1.09	1.08	686.71	64	26-Apr-2023	GOOD		
91200	91100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	2.83	2.8	1995.99	62	26-Apr-2023	Fair		
91200	91100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.5	1.42	933.05	64	26-Apr-2023	GOOD		
91100	91000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.94	2.12	1461.63	60	26-Apr-2023	GOOD		
91100	91000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.29	1.83	1.56	1036.67	66	26-Apr-2023	GOOD		
91000	90900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.95	2.89	3.42	2497.18	58	26-Apr-2023	POOR	1369.70	GOOD
91000	90900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	2.22	1.96	1338.65	66	26-Apr-2023	GOOD		
90900	90800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	1.55	1.96	1338.65	56	26-Apr-2023	GOOD		
90900	90800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.1	1.12	1.11	708.11	67	26-Apr-2023	GOOD		
90800	90700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.18	1.88	2.53	1781.70	56	26-Apr-2023	GOOD		
90800	90700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	2.02	1.96	1338.65	68	26-Apr-2023	GOOD		
90700	90600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.65	1.95	2.3	1601.31	60	26-Apr-2023	GOOD		
90700	90600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.92	0.83	0.88	545.96	70	26-Apr-2023	GOOD		
90600	90500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	2.5	2.63	1860.76	65	26-Apr-2023	Fair		
90600	90500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	2.12	2.01	1376.96	71	26-Apr-2023	GOOD		
90500	90400	90500.000	89500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.92	2.11	1453.91	65	26-Apr-2023	GOOD		
90500	90400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.3	1.34	874.38	68	26-Apr-2023	GOOD		
90400	90300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.28	2.04	2.16	1492.55	60	26-Apr-2023	GOOD		
90400	90300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.34	1.44	947.78	67	26-Apr-2023	GOOD		
90300	90200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.83	2.06	1415.38	56	26-Apr-2023	GOOD		
90300	90200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.21	1.11	1.16	743.93	62	26-Apr-2023	GOOD		
90200	90100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.77	1.99	2.38	1663.82	50	26-Apr-2023	GOOD		
90200	90100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.16	1.03	1.1	700.97	58	26-Apr-2023	GOOD		
90100	90000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	7	4.43	5.72	4442.47	37	26-Apr-2023	POOR		
90100	90000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.88	3.91	3.9	2892.90	39	26-Apr-2023	POOR		
90000	89900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.59	1.98	1.79	1209.31	27	26-Apr-2023	GOOD	1588.50	GOOD
90000	89900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.38	5.19	3.79	2801.67	20	26-Apr-2023	POOR		
89900	89800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	2.55	2.26	1570.15	47	26-Apr-2023	GOOD		
89900	89800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.34	1.44	947.78	22	26-Apr-2023	GOOD		
89800	89700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.61	2.07	1.84	1247.20	55	26-Apr-2023	GOOD		
89800	89700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.26	2.17	2.22	1539.06	44	26-Apr-2023	GOOD		
89700	89600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	3.11	2.98	2140.24	63	26-Apr-2023	Fair		
89700	89600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.59	1.56	1036.67	51	26-Apr-2023	GOOD		
89600	89500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.55	2.56	2.55	1797.49	64	26-Apr-2023	GOOD		
89600	89500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.36	1.31	852.48	56	26-Apr-2023	GOOD		
89500	89400	89500.000	88500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.23	2.24	2.24	1554.60	64	26-Apr-2023	GOOD		
89500	89400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.24	1.33	1.29	837.92	61	26-Apr-2023	GOOD		
89400	89300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	2.04	1.91	1300.46	63	26-Apr-2023	GOOD		
89400	89300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.35	1.44	947.78	61	26-Apr-2023	GOOD		
89300	89200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.53	1.6	1.57	1044.11	62	26-Apr-2023	GOOD		
89300	89200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.16	1.19	765.51	62	26-Apr-2023	GOOD		
89200	89100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.49	1.82	1.66	1111.38	59	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
89200	89100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.59	2.42	2.51	1765.94	63	26-Apr-2023	GOOD		
89100	89000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.74	2.7	2.72	1932.23	55	26-Apr-2023	Fair		
89100	89000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.87	1.66	1.77	1194.18	58	26-Apr-2023	GOOD	1340.90	GOOD
89000	88900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.52	2.74	2.63	1860.76	52	26-Apr-2023	Fair		
89000	88900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.3	1.85	1.58	1051.57	55	26-Apr-2023	GOOD		
88900	88800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	2.42	2.22	1539.06	55	26-Apr-2023	GOOD		
88900	88800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.5	1.75	1.63	1088.91	58	26-Apr-2023	GOOD		
88800	88700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.15	2.14	1477.08	62	26-Apr-2023	GOOD		
88800	88700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.81	1.65	1.73	1164.00	55	26-Apr-2023	GOOD		
88700	88600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.73	2.42	2.58	1821.19	64	26-Apr-2023	Fair		
88700	88600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	2.22	2.05	1407.68	53	26-Apr-2023	GOOD		
88600	88500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.99	2.22	2.11	1453.91	65	26-Apr-2023	GOOD		
88600	88500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.18	2.15	2.17	1500.29	57	26-Apr-2023	GOOD		
88500	88400	88500.000	87500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.5	2.26	2.38	1663.82	66	26-Apr-2023	GOOD		
88500	88400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.46	2.71	2.59	1829.10	58	26-Apr-2023	Fair		
88400	88300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.17	1.86	2.02	1384.63	64	26-Apr-2023	GOOD		
88400	88300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.3	2.25	2.28	1585.72	58	26-Apr-2023	GOOD		
88300	88200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.37	2.14	2.26	1570.15	63	26-Apr-2023	GOOD		
88300	88200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.97	2.01	1.99	1361.62	60	26-Apr-2023	GOOD		
88200	88100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.64	2.81	2.73	1940.18	62	26-Apr-2023	Fair		
88200	88100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.99	2.1	2.05	1407.68	60	26-Apr-2023	GOOD		
88100	88000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	2.07	2.09	1438.48	63	26-Apr-2023	GOOD		
88100	88000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.04	2.38	2.21	1531.30	59	26-Apr-2023	GOOD		
88000	87900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	1.94	2.07	1423.07	62	26-Apr-2023	GOOD	1461.70	GOOD
88000	87900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.22	1.79	2.01	1376.96	59	26-Apr-2023	GOOD		
87900	87800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.06	3.27	3.17	2293.65	61	26-Apr-2023	Fair		
87900	87800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.25	1.3	845.20	59	26-Apr-2023	GOOD		
87800	87700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.66	2.44	2.55	1797.49	62	26-Apr-2023	GOOD		
87800	87700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.39	1.38	903.66	58	26-Apr-2023	GOOD		
87700	87600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	1.83	1.85	1254.80	62	26-Apr-2023	GOOD		
87700	87600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	1.56	1.61	1073.95	57	26-Apr-2023	GOOD		
87600	87500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.37	2.41	2.39	1671.65	62	26-Apr-2023	GOOD		
87600	87500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.29	1.35	881.69	56	26-Apr-2023	GOOD		
87500	87400	87500.000	86500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.49	2.37	2.43	1703.02	63	26-Apr-2023	GOOD		
87500	87400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.14	1.07	1.11	708.11	54	26-Apr-2023	GOOD		
87400	87300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	2.38	2.41	1687.33	66	26-Apr-2023	GOOD		
87400	87300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.89	2.29	2.59	1829.10	59	26-Apr-2023	Fair		
87300	87200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.72	2.67	2.7	1916.32	67	26-Apr-2023	Fair		
87300	87200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.63	2.02	2.33	1624.72	65	26-Apr-2023	GOOD		
87200	87100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.52	2.65	2.59	1829.10	66	26-Apr-2023	Fair		
87200	87100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.18	2.08	2.13	1469.35	68	26-Apr-2023	GOOD		
87100	87000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.28	1.84	2.06	1415.38	65	26-Apr-2023	GOOD		
87100	87000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.24	1.06	1.15	736.75	68	26-Apr-2023	GOOD		
87000	86900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.17	1.46	1.32	859.77	64	26-Apr-2023	GOOD	1339.50	GOOD
87000	86900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.21	1.36	1.29	837.92	66	26-Apr-2023	GOOD		
86900	86800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.55	1.95	2.25	1562.37	64	26-Apr-2023	GOOD		
86900	86800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.14	1.36	1.25	808.87	66	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
86800	86700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.68	2.23	2.46	1726.58	66	26-Apr-2023	GOOD		
86800	86700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.79	1.79	1209.31	69	26-Apr-2023	GOOD		
86700	86600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	2.31	2.26	1570.15	66	26-Apr-2023	GOOD		
86700	86600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.15	1.82	1.99	1361.62	69	26-Apr-2023	GOOD		
86600	86500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.59	1.65	1.62	1081.43	65	26-Apr-2023	GOOD		
86600	86500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.03	1.31	852.48	67	26-Apr-2023	GOOD		
86500	86400	86500.000	85500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	2.12	2.21	1531.30	66	26-Apr-2023	GOOD		
86500	86400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.36	1.45	955.15	66	26-Apr-2023	GOOD		
86400	86300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.4	1.68	2.04	1399.99	66	26-Apr-2023	GOOD		
86400	86300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.86	1.56	1.71	1148.94	66	26-Apr-2023	GOOD		
86300	86200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.54	2.22	2.38	1663.82	64	26-Apr-2023	GOOD		
86300	86200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.72	1.71	1148.94	67	26-Apr-2023	GOOD		
86200	86100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	2.03	2.13	1469.35	65	26-Apr-2023	GOOD		
86200	86100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.04	1.04	1.04	658.29	66	26-Apr-2023	GOOD		
86100	86000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	2	1.94	1323.36	64	26-Apr-2023	GOOD		
86100	86000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.18	1.22	787.16	64	26-Apr-2023	GOOD		
86000	85900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.98	1.85	1.92	1308.09	65	26-Apr-2023	GOOD	1532.70	GOOD
86000	85900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.62	1.64	1096.39	64	26-Apr-2023	GOOD		
85900	85800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.08	1.82	1.95	1331.00	65	26-Apr-2023	GOOD		
85900	85800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.25	2.26	2.26	1570.15	65	26-Apr-2023	GOOD		
85800	85700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	2.41	2.22	1539.06	64	26-Apr-2023	GOOD		
85800	85700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	2.02	1.94	1323.36	65	26-Apr-2023	GOOD		
85700	85600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.79	2.26	2.03	1392.31	61	26-Apr-2023	GOOD		
85700	85600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	5.36	5.22	5.29	4070.15	65	26-Apr-2023	POOR		
85600	85500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.25	3.97	4.11	3067.92	58	26-Apr-2023	POOR		
85600	85500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.7	2.58	2.64	1868.69	63	26-Apr-2023	Fair		
85500	85400	85500	84500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	2.58	2.51	1765.94	60	26-Apr-2023	GOOD		
85500	85400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.92	2.3	2.61	1844.92	61	26-Apr-2023	Fair		
85400	85300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.2	3.77	3.49	2554.49	62	26-Apr-2023	POOR		
85400	85300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.28	3.29	3.29	2391.11	55	26-Apr-2023	Fair		
85300	85200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.66	3.39	3.53	2587.31	62	26-Apr-2023	POOR		
85300	85200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.37	3.19	2.78	1980.03	54	26-Apr-2023	Fair		
85200	85100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.75	3.6	3.68	2710.75	60	26-Apr-2023	POOR		
85200	85100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.7	2.08	2.39	1671.65	56	26-Apr-2023	GOOD		
85100	85000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.93	2.48	2.71	1924.27	59	26-Apr-2023	Fair		
85100	85000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	1.69	1.79	1209.31	55	26-Apr-2023	GOOD		
85000	84900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.91	2.68	1900.43	61	26-Apr-2023	Fair	1936.60	Fair
85000	84900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.23	1.33	867.07	54	26-Apr-2023	GOOD		
84900	84800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.68	3.61	3.65	2686.02	62	26-Apr-2023	POOR		
84900	84800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.21	1.32	859.77	57	26-Apr-2023	GOOD		
84800	84700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.49	2.97	3.23	2342.33	62	26-Apr-2023	Fair		
84800	84700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.29	0.9	1.1	700.97	58	26-Apr-2023	GOOD		
84700	84600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.55	2.57	2.56	1805.38	62	26-Apr-2023	Fair		
84700	84600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.47	2.2	2.34	1632.53	58	26-Apr-2023	GOOD		
84600	84500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.18	3.32	3.75	2768.57	62	26-Apr-2023	POOR		
84600	84500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.79	3.12	3.46	2529.91	60	26-Apr-2023	POOR		
84500	84400	84500.000	83500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.63	3.37	3.5	2562.69	63	26-Apr-2023	POOR		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
84500	84400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.63	3.03	2.83	2019.95	61	26-Apr-2023	Fair		
84400	84300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.83	3.18	3.01	2164.39	63	26-Apr-2023	Fair		
84400	84300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.51	1.49	984.71	63	26-Apr-2023	GOOD		
84300	84200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.42	2.4	2.41	1687.33	61	26-Apr-2023	GOOD		
84300	84200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.6	1.58	1.59	1059.02	61	26-Apr-2023	GOOD		
84200	84100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.13	2.09	2.11	1453.91	62	26-Apr-2023	GOOD		
84200	84100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	2.3	1.97	1346.30	58	26-Apr-2023	GOOD		
84100	84000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.59	2.33	2.46	1726.58	60	26-Apr-2023	GOOD		
84100	84000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	2.36	1.95	1331.00	55	26-Apr-2023	GOOD		
84000	83900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.14	2.07	2.11	1453.91	60	26-Apr-2023	GOOD	1818.90	Fair
84000	83900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.9	1.78	1201.74	53	26-Apr-2023	GOOD		
83900	83800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.15	2.23	2.19	1515.79	60	26-Apr-2023	GOOD		
83900	83800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.63	3.88	3.76	2776.84	55	26-Apr-2023	POOR		
83800	83700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.5	2.75	3.13	2261.26	58	26-Apr-2023	Fair		
83800	83700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.57	2.74	2.66	1884.55	57	26-Apr-2023	Fair		
83700	83600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.83	3.66	3.75	2768.57	43	26-Apr-2023	POOR		
83700	83600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.95	2.88	2.92	2092.04	57	26-Apr-2023	Fair		
83600	83500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.08	2.81	2.95	2116.12	51	26-Apr-2023	Fair		
83600	83500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.72	2.81	2.77	1972.05	57	26-Apr-2023	Fair		
83500	83400	83500.000	82500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.38	4.38	3.88	2876.29	56	26-Apr-2023	POOR		
83500	83400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.48	2.62	2.55	1797.49	58	26-Apr-2023	GOOD		
83400	83300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.21	2.57	2.39	1671.65	60	26-Apr-2023	GOOD		
83400	83300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.66	3.33	3	2156.34	59	26-Apr-2023	Fair		
83300	83200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.94	3.97	3.96	2942.79	58	26-Apr-2023	POOR		
83300	83200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.46	1.53	1014.37	60	26-Apr-2023	GOOD		
83200	83100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.48	3.9	3.69	2719.01	51	26-Apr-2023	POOR		
83200	83100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.17	1.32	859.77	60	26-Apr-2023	GOOD		
83100	83000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	2.41	2.32	1616.91	53	26-Apr-2023	GOOD		
83100	83000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.28	1.39	1.34	874.38	61	26-Apr-2023	GOOD		
83000	82900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.93	3.41	3.17	2293.65	51	26-Apr-2023	Fair	1664.00	GOOD
83000	82900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.14	1.23	794.39	61	26-Apr-2023	GOOD		
82900	82800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.61	1.74	1.68	1126.39	56	26-Apr-2023	GOOD		
82900	82800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.22	1.32	859.77	61	26-Apr-2023	GOOD		
82800	82700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.9	3.19	3.55	2603.73	57	26-Apr-2023	POOR		
82800	82700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.04	1.14	1.09	693.84	59	26-Apr-2023	GOOD		
82700	82600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.25	2.98	3.12	2253.17	52	26-Apr-2023	Fair		
82700	82600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	1.54	1.58	1051.57	60	26-Apr-2023	GOOD		
82600	82500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	2.6	2.73	1940.18	52	26-Apr-2023	Fair		
82600	82500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.45	1.93	1.69	1133.90	59	26-Apr-2023	GOOD		
82500	82400	82500.000	81500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.78	2.91	2.85	2035.95	55	26-Apr-2023	Fair		
82500	82400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.12	1.01	1.07	679.60	57	26-Apr-2023	GOOD		
82400	82300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	3.48	2.79	1988.00	59	26-Apr-2023	Fair		
82400	82300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.75	1.59	1059.02	52	26-Apr-2023	GOOD		
82300	82200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.05	1.52	1.79	1209.31	62	26-Apr-2023	GOOD		
82300	82200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.36	1.32	859.77	50	26-Apr-2023	GOOD		
82200	82100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.76	1.74	1171.54	60	26-Apr-2023	GOOD		
82200	82100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.88	2.8	2.84	2027.95	57	26-Apr-2023	Fair		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
82100	82000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.03	2.86	2.95	2116.12	60	26-Apr-2023	Fair		
82100	82000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	1.68	1.8	1216.87	60	26-Apr-2023	GOOD		
82000	81900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.59	1.94	1323.36	60	26-Apr-2023	GOOD	1485.90	GOOD
82000	81900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	1.62	1.83	1239.61	52	26-Apr-2023	GOOD		
81900	81800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.69	1.65	1.67	1118.88	56	26-Apr-2023	GOOD		
81900	81800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.22	2.12	2.17	1500.29	41	26-Apr-2023	GOOD		
81800	81700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.82	3.48	3.15	2277.45	59	26-Apr-2023	Fair		
81800	81700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	2.85	2.37	1655.99	43	26-Apr-2023	GOOD		
81700	81600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.65	2.03	1.84	1247.20	63	26-Apr-2023	GOOD		
81700	81600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.55	1.52	1006.94	47	26-Apr-2023	GOOD		
81600	81500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.67	2.7	2.69	1908.37	57	26-Apr-2023	Fair		
81600	81500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.57	3.23	2.9	2076.00	57	26-Apr-2023	Fair		
81500	81400	81500.000	80500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.03	4.01	3.52	2579.10	53	26-Apr-2023	POOR		
81500	81400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.25	3.4	3.33	2423.70	60	26-Apr-2023	POOR		
81400	81300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.22	2.93	3.08	2220.84	55	26-Apr-2023	Fair		
81400	81300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.09	1.8	1.95	1331.00	55	26-Apr-2023	GOOD		
81300	81200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	2.93	2.63	1860.76	57	26-Apr-2023	Fair		
81300	81200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.54	1.61	1073.95	54	26-Apr-2023	GOOD		
81200	81100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.67	3.16	2.92	2092.04	59	26-Apr-2023	Fair		
81200	81100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	1.39	1.52	1006.94	62	26-Apr-2023	GOOD		
81100	81000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	3.98	3.21	2326.09	59	26-Apr-2023	Fair		
81100	81000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.68	2.23	2.96	2124.16	66	26-Apr-2023	Fair		
81000	80900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.56	3.68	3.62	2661.30	58	26-Apr-2023	POOR	1951.10	Fair
81000	80900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	1.55	1.74	1171.54	65	26-Apr-2023	GOOD		
80900	80800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.01	3.09	3.05	2196.63	56	26-Apr-2023	Fair		
80900	80800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.69	2.2	2.45	1718.73	63	26-Apr-2023	GOOD		
80800	80700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.87	3.83	3.85	2851.39	52	26-Apr-2023	POOR		
80800	80700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.25	1.18	1.71	1148.94	64	26-Apr-2023	GOOD		
80700	80600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.23	2.24	1554.60	31	26-Apr-2023	GOOD		
80700	80600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.02	1.82	1.92	1308.09	61	26-Apr-2023	GOOD		
80600	80500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	5.3	3.11	4.21	3151.64	27	26-Apr-2023	POOR		
80600	80500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.68	3.48	3.08	2220.84	61	26-Apr-2023	Fair		
80500	80400	80500.000	79500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	2.59	2.72	1932.23	38	26-Apr-2023	Fair		
80500	80400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.9	1.62	1.76	1186.63	65	26-Apr-2023	GOOD		
80400	80300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.74	4.9	4.32	3244.01	44	26-Apr-2023	POOR		
80400	80300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.53	1.69	1133.90	66	26-Apr-2023	GOOD		
80300	80200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	1.83	1.92	1308.09	49	26-Apr-2023	GOOD		
80300	80200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.2	1.77	1.99	1361.62	68	26-Apr-2023	GOOD		
80200	80100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.62	1.89	1.76	1186.63	52	26-Apr-2023	GOOD		
80200	80100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.17	1.62	1.9	1292.84	72	26-Apr-2023	GOOD		
80100	80000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.46	2.59	2.53	1781.70	54	26-Apr-2023	GOOD		
80100	80000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	1.51	1.71	1148.94	72	26-Apr-2023	GOOD		
80000	79900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.56	2.46	1726.58	52	26-Apr-2023	GOOD	1336.90	GOOD
80000	79900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.76	1.44	1.6	1066.49	68	26-Apr-2023	GOOD		
79900	79800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.83	2.15	1.99	1361.62	52	26-Apr-2023	GOOD		
79900	79800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.31	1.1	1.2	772.72	65	26-Apr-2023	GOOD		
79800	79700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.18	1.2	1.19	765.51	51	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
79800	79700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.52	1.43	940.41	61	26-Apr-2023	GOOD		
79700	79600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.36	1.32	1.34	874.38	58	26-Apr-2023	GOOD		
79700	79600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.41	1.55	1029.23	59	26-Apr-2023	GOOD		
79600	79500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.61	2.35	1.98	1353.96	64	26-Apr-2023	GOOD		
79600	79500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	1.7	1.87	1270.00	57	26-Apr-2023	GOOD		
79500	79400	79500	78500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.63	1.76	2.7	1916.32	63	26-Apr-2023	Fair		
79500	79400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.85	2.56	2.71	1924.27	59	26-Apr-2023	Fair		
79400	79300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.92	2.74	2.83	2019.95	64	26-Apr-2023	Fair		
79400	79300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	1.93	2.05	1407.68	63	26-Apr-2023	GOOD		
79300	79200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.07	3.02	3.05	2196.63	65	26-Apr-2023	Fair		
79300	79200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.47	2.14	2.31	1609.11	64	26-Apr-2023	GOOD		
79200	79100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.3	2.37	1655.99	62	26-Apr-2023	GOOD		
79200	79100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.72	1.88	1.8	1216.87	66	26-Apr-2023	GOOD		
79100	79000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.69	2.31	2	1369.29	56	26-Apr-2023	GOOD		
79100	79000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.49	1.19	1.34	874.38	65	26-Apr-2023	GOOD		
79000	78900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.86	3.09	2.47	1734.45	59	26-Apr-2023	GOOD	1744.00	GOOD
79000	78900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.24	1.24	801.63	61	26-Apr-2023	GOOD		
78900	78800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.28	4.78	4.53	3421.14	61	26-Apr-2023	POOR		
78900	78800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.46	1.7	2.08	1430.78	61	26-Apr-2023	GOOD		
78800	78700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.03	2.72	3.38	2464.49	63	26-Apr-2023	POOR		
78800	78700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.63	2.32	2.47	1734.45	64	26-Apr-2023	GOOD		
78700	78600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.73	3.13	3.43	2505.36	62	26-Apr-2023	POOR		
78700	78600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	1.53	1.67	1118.88	64	26-Apr-2023	GOOD		
78600	78500	78600	77600	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.08	2.9	2.99	2148.29	63	26-Apr-2023	Fair		
78600	78500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.12	1.78	1.95	1331.00	63	26-Apr-2023	GOOD		
78500	78400	78500.000	77500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	3.1	2.68	1900.43	65	26-Apr-2023	Fair		
78500	78400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.27	2.21	2.24	1554.60	64	26-Apr-2023	GOOD		
78400	78300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.47	2.2	2.84	2027.95	66	26-Apr-2023	Fair		
78400	78300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.34	2.1	2.22	1539.06	65	26-Apr-2023	GOOD		
78300	78200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.86	3.04	2.95	2116.12	66	26-Apr-2023	Fair		
78300	78200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	0.99	1.29	837.92	65	26-Apr-2023	GOOD		
78200	78100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.37	2.21	2.29	1593.52	69	26-Apr-2023	GOOD		
78200	78100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.76	1.29	1.53	1014.37	64	26-Apr-2023	GOOD		
78100	78000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.89	1.7	1.8	1216.87	69	26-Apr-2023	GOOD		
78100	78000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	3.11	2.32	1616.91	64	26-Apr-2023	GOOD		
78000	77900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.41	2.51	3.46	2529.91	60	26-Apr-2023	POOR	1484.80	GOOD
78000	77900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	1.56	1.68	1126.39	63	26-Apr-2023	GOOD		
77900	77800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.85	1.87	2.86	2043.95	56	26-Apr-2023	Fair		
77900	77800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.44	1.25	1.35	881.69	56	26-Apr-2023	GOOD		
77800	77700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.28	1.95	1.62	1081.43	52	26-Apr-2023	GOOD		
77800	77700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.75	1.24	1.5	992.12	56	26-Apr-2023	GOOD		
77700	77600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.28	3.03	2.16	1492.55	57	26-Apr-2023	GOOD		
77700	77600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.56	1.56	1036.67	60	26-Apr-2023	GOOD		
77600	77500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.38	3.24	2.81	2003.97	60	26-Apr-2023	Fair		
77600	77500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.44	1.81	1.63	1088.91	48	26-Apr-2023	GOOD		
77500	77400	77500.000	76500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	2.29	2.15	1484.81	52	26-Apr-2023	GOOD		
77500	77400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.55	1.39	911.00	51	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
77400	77300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.92	3.17	2.55	1797.49	34	26-Apr-2023	GOOD		
77400	77300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	1.51	1.36	889.00	53	26-Apr-2023	GOOD		
77300	77200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.47	2.44	1.96	1338.65	39	26-Apr-2023	GOOD		
77300	77200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.56	3.29	3.43	2505.36	49	26-Apr-2023	POOR		
77200	77100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.19	5.63	4.91	3744.14	49	26-Apr-2023	POOR		
77200	77100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.57	1.68	1.63	1088.91	52	26-Apr-2023	GOOD		
77100	77000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	2.94	2.65	1876.62	55	26-Apr-2023	Fair		
77100	77000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.29	2.99	2.64	1868.69	52	26-Apr-2023	Fair		
77000	76900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.57	2.3	2.44	1710.87	57	26-Apr-2023	GOOD	1902.00	Fair
77000	76900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.26	4.19	3.73	2752.04	46	26-Apr-2023	POOR		
76900	76800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.22	3.73	3.48	2546.30	59	26-Apr-2023	POOR		
76900	76800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	2.29	2.09	1438.48	48	26-Apr-2023	GOOD		
76800	76700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.47	3.96	3.72	2743.78	61	26-Apr-2023	POOR		
76800	76700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.5	3.35	2.93	2100.06	48	26-Apr-2023	Fair		
76700	76600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.8	3.32	3.06	2204.70	60	26-Apr-2023	Fair		
76700	76600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	2.09	1.89	1285.22	40	26-Apr-2023	GOOD		
76600	76500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	3.55	2.83	2019.95	57	26-Apr-2023	Fair		
76600	76500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.34	2.61	2.47	1734.45	49	26-Apr-2023	GOOD		
76500	76400	76500.000	75500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.28	2.94	2.61	1844.92	50	26-Apr-2023	Fair		
76500	76400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.99	1.79	1.89	1285.22	56	26-Apr-2023	GOOD		
76400	76300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.38	3.78	3.58	2628.39	49	26-Apr-2023	POOR		
76400	76300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.73	3.28	3.01	2164.39	61	26-Apr-2023	Fair		
76300	76200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.94	3.92	3.43	2505.36	56	26-Apr-2023	POOR		
76300	76200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	4.62	4.41	4.52	3412.68	65	26-Apr-2023	POOR		
76200	76100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.56	3.49	3.03	2180.50	54	26-Apr-2023	Fair		
76200	76100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.61	3.11	3.36	2448.16	64	26-Apr-2023	POOR		
76100	76000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.68	5.48	5.08	3889.63	57	26-Apr-2023	POOR		
76100	76000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.86	3.4	3.63	2669.54	65	26-Apr-2023	POOR		
76000	75900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.17	3.23	3.2	2317.97	61	26-Apr-2023	Fair	2283.10	Fair
76000	75900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.64	2.86	2.75	1956.11	67	26-Apr-2023	Fair		
75900	75800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.16	2.89	3.03	2180.50	63	26-Apr-2023	Fair		
75900	75800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	2.3	2.23	1546.83	69	26-Apr-2023	GOOD		
75800	75700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.16	3.41	3.29	2391.11	63	26-Apr-2023	Fair		
75800	75700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.9	2.89	2.9	2076.00	69	26-Apr-2023	Fair		
75700	75600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.74	2.34	2.04	1399.99	62	26-Apr-2023	GOOD		
75700	75600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.66	3.16	2.91	2084.01	66	26-Apr-2023	Fair		
75600	75500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.24	4.56	4.4	3311.37	58	26-Apr-2023	POOR		
75600	75500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2	2	2	1369.29	61	26-Apr-2023	GOOD		
75500	75400	75500.000	74500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.57	3.38	3.48	2546.30	59	26-Apr-2023	POOR		
75500	75400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.4	2.08	2.24	1554.60	64	26-Apr-2023	GOOD		
75400	75300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	2.85	2.53	1781.70	55	26-Apr-2023	GOOD		
75400	75300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.96	1.89	1.93	1315.72	64	26-Apr-2023	GOOD		
75300	75200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.64	1.73	1.69	1133.90	56	26-Apr-2023	GOOD		
75300	75200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.82	1.6	1066.49	63	26-Apr-2023	GOOD		
75200	75100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3	2.33	2.67	1892.49	57	26-Apr-2023	Fair		
75200	75100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.76	1.87	1.82	1232.03	64	26-Apr-2023	GOOD		
75100	75000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.66	5.07	4.86	3701.46	58	26-Apr-2023	POOR		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
75100	75000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.95	1.82	1232.03	64	26-Apr-2023	GOOD	1780.30	GOOD
75000	74900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.75	4.84	4.3	3227.20	54	26-Apr-2023	POOR		
75000	74900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.32	2.46	2.39	1671.65	65	26-Apr-2023	GOOD		
74900	74800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.41	3.99	3.7	2727.26	47	26-Apr-2023	POOR		
74900	74800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.05	1.9	1.97	1346.30	65	26-Apr-2023	GOOD		
74800	74700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.77	3.48	3.13	2261.26	46	26-Apr-2023	Fair		
74800	74700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.59	1.57	1044.11	66	26-Apr-2023	GOOD		
74700	74600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.3	2.47	2.39	1671.65	50	26-Apr-2023	GOOD		
74700	74600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	1.96	1.92	1308.09	67	26-Apr-2023	GOOD		
74600	74500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.48	1.95	1.72	1156.46	58	26-Apr-2023	GOOD		
74600	74500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.35	2.59	2.47	1734.45	69	26-Apr-2023	GOOD		
74500	74400	74500.000	73500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	1.95	1.91	1300.46	63	26-Apr-2023	GOOD	1922.10	Fair
74500	74400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.19	2.52	2.36	1648.17	69	26-Apr-2023	GOOD		
74400	74300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.22	2.76	2.49	1750.18	60	26-Apr-2023	GOOD		
74400	74300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.38	2.17	2.28	1585.72	67	26-Apr-2023	GOOD		
74300	74200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.9	2.91	2.91	2084.01	59	26-Apr-2023	Fair		
74300	74200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.25	2.85	3.05	2196.63	65	26-Apr-2023	Fair		
74200	74100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.1	4.13	3.62	2661.30	63	26-Apr-2023	POOR		
74200	74100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.71	3.04	2.88	2059.97	67	26-Apr-2023	Fair		
74100	74000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.79	3.11	3.45	2521.73	64	26-Apr-2023	POOR		
74100	74000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.47	2.52	2.49	1750.18	69	26-Apr-2023	GOOD		
74000	73900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.77	2.18	2.47	1734.45	64	26-Apr-2023	GOOD		
74000	73900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.5	1.68	1126.39	70	26-Apr-2023	GOOD		
73900	73800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.88	3.55	3.72	2743.78	61	26-Apr-2023	POOR		
73900	73800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	1.79	1.98	1353.96	69	26-Apr-2023	GOOD		
73800	73700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.93	3.55	3.24	2350.45	63	26-Apr-2023	Fair		
73800	73700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.21	2.12	2.17	1500.29	69	26-Apr-2023	GOOD		
73700	73600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.3	2.79	3.05	2196.63	63	26-Apr-2023	Fair		
73700	73600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.61	2.69	2.65	1876.62	67	26-Apr-2023	Fair		
73600	73500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.07	2.75	2.91	2084.01	65	26-Apr-2023	Fair		
73600	73500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.8	2.6	2.7	1916.32	66	26-Apr-2023	Fair		
73500	73400	73500	72500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.05	3.16	3.11	2245.08	64	26-Apr-2023	Fair	1598.10	GOOD
73500	73400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.41	2.49	2.45	1718.73	68	26-Apr-2023	GOOD		
73400	73300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.98	3.15	3.07	2212.77	63	26-Apr-2023	Fair		
73400	73300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.19	1.81	1.5	992.12	65	26-Apr-2023	GOOD		
73300	73200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	3.15	2.75	1956.11	62	26-Apr-2023	Fair		
73300	73200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	2.52	1.95	1331.00	63	26-Apr-2023	GOOD		
73200	73100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.84	2.72	2.78	1980.03	62	26-Apr-2023	Fair		
73200	73100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.93	1.65	1103.88	64	26-Apr-2023	GOOD		
73100	73000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.93	3.11	3.02	2172.44	62	26-Apr-2023	Fair		
73100	73000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.25	1.71	1.48	977.31	65	26-Apr-2023	GOOD		
73000	72900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.06	2.13	2.1	1446.19	62	26-Apr-2023	GOOD		
73000	72900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.72	1.65	1103.88	66	26-Apr-2023	GOOD		
72900	72800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.89	1.8	1216.87	58	26-Apr-2023	GOOD		
72900	72800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.79	2.32	2.55	1797.49	67	26-Apr-2023	GOOD		
72800	72700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.42	2.4	2.41	1687.33	58	26-Apr-2023	GOOD		
72800	72700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.68	1.79	2.24	1554.60	68	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
72700	72600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.24	2.66	2.45	1718.73	61	26-Apr-2023	GOOD		
72700	72600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	1.91	1.92	1308.09	69	26-Apr-2023	GOOD		
72600	72500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.75	3.13	2.94	2108.09	68	26-Apr-2023	Fair		
72600	72500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	2.38	1.95	1331.00	70	26-Apr-2023	GOOD		
72500	72400	72500.000	71500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	2.61	2.47	1734.45	70	26-Apr-2023	GOOD		
72500	72400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.69	1.69	1133.90	71	26-Apr-2023	GOOD		
72400	72300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.69	2.59	2.64	1868.69	69	26-Apr-2023	Fair		
72400	72300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	1.65	1.65	1103.88	72	26-Apr-2023	GOOD		
72300	72200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.71	2.5	2.61	1844.92	61	26-Apr-2023	Fair		
72300	72200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.42	2.56	2.49	1750.18	73	26-Apr-2023	GOOD		
72200	72100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.42	3.02	3.22	2334.21	58	26-Apr-2023	Fair		
72200	72100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.91	3.91	3.41	2489.00	69	26-Apr-2023	POOR		
72100	72000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.59	3.01	3.3	2399.25	52	26-Apr-2023	Fair		
72100	72000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.48	2.51	2.49	1750.18	63	26-Apr-2023	GOOD		
72000	71900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.13	1.54	2.34	1632.53	48	26-Apr-2023	GOOD	1494.50	GOOD
72000	71900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.41	1.17	1.29	837.92	56	26-Apr-2023	GOOD		
71900	71800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.36	1.51	1.44	947.78	49	26-Apr-2023	GOOD		
71900	71800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.2	1.34	1.27	823.38	43	26-Apr-2023	GOOD		
71800	71700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.22	1.47	1.35	881.69	55	26-Apr-2023	GOOD		
71800	71700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.19	1.92	1.56	1036.67	50	26-Apr-2023	GOOD		
71700	71600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.77	1.84	1.81	1224.45	58	26-Apr-2023	GOOD		
71700	71600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.37	1.46	962.53	51	26-Apr-2023	GOOD		
71600	71500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.39	1.79	2.09	1438.48	59	26-Apr-2023	GOOD		
71600	71500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	2.67	2.42	1695.17	47	26-Apr-2023	GOOD		
71500	71400	71500.000	70500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.97	2.06	3.02	2172.44	51	26-Apr-2023	Fair		
71500	71400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.94	1.86	1262.39	52	26-Apr-2023	GOOD		
71400	71300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.6	2.52	2.56	1805.38	57	26-Apr-2023	Fair		
71400	71300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	1.86	1.82	1232.03	36	26-Apr-2023	GOOD		
71300	71200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	2.49	2.63	1860.76	63	26-Apr-2023	Fair		
71300	71200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.57	2.74	2.66	1884.55	44	26-Apr-2023	Fair		
71200	71100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.02	2.57	2.8	1995.99	62	26-Apr-2023	Fair		
71200	71100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.17	2.51	2.34	1632.53	48	26-Apr-2023	GOOD		
71100	71000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.7	3.82	3.26	2366.71	63	26-Apr-2023	Fair		
71100	71000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	2.16	2.1	1446.19	48	26-Apr-2023	GOOD		
71000	70900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.95	2.99	2.97	2132.20	62	26-Apr-2023	Fair	1777.20	GOOD
71000	70900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.48	2.83	2.66	1884.55	45	26-Apr-2023	Fair		
70900	70800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.06	3.25	3.16	2285.55	59	26-Apr-2023	Fair		
70900	70800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.31	2.41	2.36	1648.17	39	26-Apr-2023	GOOD		
70800	70700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.7	2.34	2.52	1773.82	55	26-Apr-2023	GOOD		
70800	70700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	2.4	2.1	1446.19	39	26-Apr-2023	GOOD		
70700	70600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	1.43	1.59	1059.02	61	26-Apr-2023	GOOD		
70700	70600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.44	3.09	3.27	2374.84	39	26-Apr-2023	Fair		
70600	70500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.23	2.36	2.3	1601.31	68	26-Apr-2023	GOOD		
70600	70500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.35	2.44	2.4	1679.49	42	26-Apr-2023	GOOD		
70500	70400	70500.000	69500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.73	4.13	3.93	2917.83	70	26-Apr-2023	POOR		
70500	70400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.42	3.92	3.67	2702.51	51	26-Apr-2023	POOR		
70400	70300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.64	3.42	3.03	2180.50	67	26-Apr-2023	Fair		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
70400	70300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	2.11	1.75	1179.08	55	26-Apr-2023	GOOD		
70300	70200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.64	4.1	3.87	2867.98	63	26-Apr-2023	POOR		
70300	70200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.81	2.49	2.15	1484.81	58	26-Apr-2023	GOOD		
70200	70100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	1.67	2.26	1570.15	64	26-Apr-2023	GOOD		
70200	70100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.28	2.41	2.35	1640.35	56	26-Apr-2023	GOOD		
70100	70000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.52	2.69	2.61	1844.92	64	26-Apr-2023	Fair		
70100	70000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.46	2.85	2.66	1884.55	54	26-Apr-2023	Fair	1664.80	GOOD
70000	69900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	1.99	2	1369.29	66	26-Apr-2023	GOOD		
70000	69900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.9	2.04	1.97	1346.30	54	26-Apr-2023	GOOD		
69900	69800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	2.1	2.03	1392.31	64	26-Apr-2023	GOOD		
69900	69800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.1	1.97	2.03	1392.31	55	26-Apr-2023	GOOD		
69800	69700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.7	1.99	1.85	1254.80	62	26-Apr-2023	GOOD		
69800	69700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.5	1.44	947.78	56	26-Apr-2023	GOOD		
69700	69600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.42	2.27	1577.94	63	26-Apr-2023	GOOD		
69700	69600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.92	1.57	1.75	1179.08	53	26-Apr-2023	GOOD		
69600	69500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	2.04	2	1369.29	65	26-Apr-2023	GOOD		
69600	69500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	1.55	1.77	1194.18	55	26-Apr-2023	GOOD		
69500	69400	69500.000	68500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	2.16	1.97	1346.30	67	26-Apr-2023	GOOD		
69500	69400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.01	1.84	1.93	1315.72	59	26-Apr-2023	GOOD		
69400	69300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.84	2.65	2.75	1956.11	68	26-Apr-2023	Fair		
69400	69300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.78	1.68	1126.39	61	26-Apr-2023	GOOD		
69300	69200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.76	2.16	1.96	1338.65	67	26-Apr-2023	GOOD		
69300	69200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.57	1.52	1.55	1029.23	62	26-Apr-2023	GOOD		
69200	69100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.69	2.84	2.26	1570.15	69	26-Apr-2023	GOOD		
69200	69100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.41	1.98	2.2	1523.54	62	26-Apr-2023	GOOD		
69100	69000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.91	2.22	2.57	1813.28	61	26-Apr-2023	Fair		
69100	69000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.39	1.77	2.08	1430.78	61	26-Apr-2023	GOOD	1758.70	GOOD
69000	68900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.07	2.35	2.21	1531.30	63	26-Apr-2023	GOOD		
69000	68900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.72	1.57	1.65	1103.88	57	26-Apr-2023	GOOD		
68900	68800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	2.71	2.31	1609.11	63	26-Apr-2023	GOOD		
68900	68800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	2.66	2.32	1616.91	58	26-Apr-2023	GOOD		
68800	68700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.02	4.27	3.65	2686.02	60	26-Apr-2023	POOR		
68800	68700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.07	3.22	3.15	2277.45	58	26-Apr-2023	Fair		
68700	68600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.21	3.8	3.51	2570.90	54	26-Apr-2023	POOR		
68700	68600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.74	2.82	2.78	1980.03	57	26-Apr-2023	Fair		
68600	68500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.73	3.44	3.59	2636.61	56	26-Apr-2023	POOR		
68600	68500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.91	3.44	3.68	2710.75	56	26-Apr-2023	POOR		
68500	68400	68500.000	67500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.23	3.36	3.3	2399.25	60	26-Apr-2023	Fair		
68500	68400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	2.92	2.54	1789.59	56	26-Apr-2023	GOOD		
68400	68300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.24	2.53	2.39	1671.65	64	26-Apr-2023	GOOD		
68400	68300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.16	2.48	2.32	1616.91	51	26-Apr-2023	GOOD		
68300	68200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.2	3.47	3.34	2431.85	65	26-Apr-2023	POOR		
68300	68200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	2.37	1.99	1361.62	56	26-Apr-2023	GOOD		
68200	68100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.14	2.4	2.27	1577.94	66	26-Apr-2023	GOOD		
68200	68100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.55	2.83	2.69	1908.37	59	26-Apr-2023	Fair		
68100	68000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	2.85	2.6	1837.01	66	26-Apr-2023	Fair		
68100	68000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.11	1.6	1.36	889.00	60	26-Apr-2023	GOOD	1759.00	GOOD

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
68000	67900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	2.43	2.18	1508.04	63	26-Apr-2023	GOOD	1739.00	GOOD
68000	67900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.84	1.95	1.9	1292.84	60	26-Apr-2023	GOOD		
67900	67800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.81	2.1	2.46	1726.58	65	26-Apr-2023	GOOD		
67900	67800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.04	1.79	1.92	1308.09	60	26-Apr-2023	GOOD		
67800	67700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.51	1.86	1.69	1133.90	64	26-Apr-2023	GOOD		
67800	67700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.08	1.74	1.91	1300.46	62	26-Apr-2023	GOOD		
67700	67600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.79	2.32	2.55	1797.49	62	26-Apr-2023	GOOD		
67700	67600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	5.43	4.8	5.11	3915.36	62	26-Apr-2023	POOR		
67600	67500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.59	3.84	3.72	2743.78	64	26-Apr-2023	POOR		
67600	67500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.27	1.47	969.92	61	26-Apr-2023	GOOD		
67500	67400	67500	66500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.39	1.49	1.44	947.78	65	26-Apr-2023	GOOD	1368.90	GOOD
67500	67400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.16	1.26	816.12	62	26-Apr-2023	GOOD		
67400	67300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.73	1.78	1.76	1186.63	66	26-Apr-2023	GOOD		
67400	67300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.45	1.6	1.53	1014.37	64	26-Apr-2023	GOOD		
67300	67200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.19	2.67	2.43	1703.02	63	26-Apr-2023	GOOD		
67300	67200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	1.96	1.79	1209.31	65	26-Apr-2023	GOOD		
67200	67100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.58	2.47	2.53	1781.70	61	26-Apr-2023	GOOD		
67200	67100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.41	1.47	969.92	56	26-Apr-2023	GOOD		
67100	67000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.84	1.75	1.8	1216.87	59	26-Apr-2023	GOOD		
67100	67000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	1.88	1.76	1186.63	58	26-Apr-2023	GOOD		
67000	66900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.81	1.73	1.77	1194.18	62	26-Apr-2023	GOOD		
67000	66900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	2.2	1.94	1323.36	60	26-Apr-2023	GOOD		
66900	66800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.47	2.32	1.9	1292.84	62	26-Apr-2023	GOOD		
66900	66800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.02	2.11	2.07	1423.07	61	26-Apr-2023	GOOD		
66800	66700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.2	2.23	1546.83	64	26-Apr-2023	GOOD		
66800	66700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.73	2.72	2.22	1539.06	62	26-Apr-2023	GOOD		
66700	66600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.65	3.34	3	2156.34	67	26-Apr-2023	Fair		
66700	66600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.07	2.85	2.46	1726.58	59	26-Apr-2023	GOOD		
66600	66500	66600	65600	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.92	2.2	2.56	1805.38	65	26-Apr-2023	Fair		
66600	66500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	2.14	1.96	1338.65	55	26-Apr-2023	GOOD		
66500	66400	66500.000	65500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	2.49	2.23	1546.83	62	26-Apr-2023	GOOD	1018.50	GOOD
66500	66400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.46	1.23	1.35	881.69	53	26-Apr-2023	GOOD		
66400	66300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.48	1.47	1.48	977.31	59	26-Apr-2023	GOOD		
66400	66300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.97	1.8	1216.87	54	26-Apr-2023	GOOD		
66300	66200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	1.94	2.05	1407.68	54	26-Apr-2023	GOOD		
66300	66200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	2	1.81	1224.45	56	26-Apr-2023	GOOD		
66200	66100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.58	2.79	2.69	1908.37	58	26-Apr-2023	Fair		
66200	66100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.36	1.4	918.34	54	26-Apr-2023	GOOD		
66100	66000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.74	2.67	2.21	1531.30	59	26-Apr-2023	GOOD		
66100	66000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.99	0.73	0.86	532.08	58	26-Apr-2023	GOOD		
66000	65900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.13	1.45	1.29	837.92	61	26-Apr-2023	GOOD		
66000	65900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.1	1.14	1.12	715.26	62	26-Apr-2023	GOOD		
65900	65800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.37	1.24	1.31	852.48	62	26-Apr-2023	GOOD		
65900	65800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.06	1.2	772.72	64	26-Apr-2023	GOOD		
65800	65700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	1.1	1.55	1029.23	58	26-Apr-2023	GOOD		
65800	65700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.31	1.23	1.27	823.38	64	26-Apr-2023	GOOD		
65700	65600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.1	1.31	1.2	772.72	54	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
65700	65600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.88	0.9	0.89	552.91	62	26-Apr-2023	GOOD		
65600	65500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	1.19	1.65	1103.88	61	26-Apr-2023	GOOD		
65600	65500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.08	1.3	1.19	765.51	62	26-Apr-2023	GOOD		
65500	65400	65500.000	64500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.84	1.61	1.73	1164.00	57	26-Apr-2023	GOOD		
65500	65400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.42	2.08	2.25	1562.37	63	26-Apr-2023	GOOD		
65400	65300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.13	2.1	2.12	1461.63	46	26-Apr-2023	GOOD		
65400	65300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.27	2.59	2.93	2100.06	55	26-Apr-2023	Fair		
65300	65200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	2.01	1.96	1338.65	23	26-Apr-2023	GOOD		
65300	65200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.36	1.4	918.34	46	26-Apr-2023	GOOD		
65200	65100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.21	2.48	2.35	1640.35	26	26-Apr-2023	GOOD		
65200	65100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.24	1.71	1.98	1353.96	41	26-Apr-2023	GOOD		
65100	65000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	2.51	2.43	1703.02	33	26-Apr-2023	GOOD		
65100	65000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	4.08	3.59	3.84	2843.10	40	26-Apr-2023	POOR		
65000	64900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.28	2.63	3.46	2529.91	28	26-Apr-2023	POOR	1631.90	GOOD
65000	64900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.01	3.01	3.01	2164.39	24	26-Apr-2023	Fair		
64900	64800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.97	2.97	2.97	2132.20	51	26-Apr-2023	Fair		
64900	64800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.39	2.43	2.41	1687.33	43	26-Apr-2023	GOOD		
64800	64700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.86	1.86	1.86	1262.39	51	26-Apr-2023	GOOD		
64800	64700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.94	1.48	1.71	1148.94	48	26-Apr-2023	GOOD		
64700	64600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.86	2.19	2.03	1392.31	56	26-Apr-2023	GOOD		
64700	64600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.77	1.68	1126.39	53	26-Apr-2023	GOOD		
64600	64500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.02	2.65	2.84	2027.95	61	26-Apr-2023	Fair		
64600	64500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.56	1.62	1081.43	54	26-Apr-2023	GOOD		
64500	64400	64500.000	63500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.45	3.58	3.52	2579.10	64	26-Apr-2023	POOR		
64500	64400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.38	2.38	2.38	1663.82	55	26-Apr-2023	GOOD		
64400	64300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.56	2.79	2.68	1900.43	65	26-Apr-2023	Fair		
64400	64300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	1.79	1.86	1262.39	59	26-Apr-2023	GOOD		
64300	64200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.88	2.49	2.69	1908.37	59	26-Apr-2023	Fair		
64300	64200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	2.09	1.94	1323.36	61	26-Apr-2023	GOOD		
64200	64100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.13	1.92	2.03	1392.31	61	26-Apr-2023	GOOD		
64200	64100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	2.11	2.02	1384.63	56	26-Apr-2023	GOOD		
64100	64000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.99	2.25	2.12	1461.63	68	26-Apr-2023	GOOD		
64100	64000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.84	1.73	1164.00	55	26-Apr-2023	GOOD		
64000	63900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.04	2.15	2.1	1446.19	63	26-Apr-2023	GOOD	1574.90	GOOD
64000	63900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.83	1.82	1.83	1239.61	55	26-Apr-2023	GOOD		
63900	63800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.48	3.12	2.8	1995.99	62	26-Apr-2023	Fair		
63900	63800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.89	2.28	2.09	1438.48	55	26-Apr-2023	GOOD		
63800	63700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.47	2.28	1585.72	61	26-Apr-2023	GOOD		
63800	63700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	2.33	2.12	1461.63	42	26-Apr-2023	GOOD		
63700	63600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.87	1.9	1.89	1285.22	57	26-Apr-2023	GOOD		
63700	63600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.28	1.86	1.57	1044.11	46	26-Apr-2023	GOOD		
63600	63500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.96	2.76	2.86	2043.95	56	26-Apr-2023	Fair		
63600	63500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.5	2.89	2.7	1916.32	44	26-Apr-2023	Fair		
63500	63400	63500.000	62500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.94	2.4	2.17	1500.29	56	26-Apr-2023	GOOD		
63500	63400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	1.86	1.78	1201.74	42	26-Apr-2023	GOOD		
63400	63300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	2.64	2.41	1687.33	53	26-Apr-2023	GOOD		
63400	63300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	2.13	1.95	1331.00	35	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
63300	63200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.8	1.76	1186.63	44	26-Apr-2023	GOOD		
63300	63200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.61	1.47	969.92	43	26-Apr-2023	GOOD		
63200	63100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	1.73	1.82	1232.03	46	26-Apr-2023	GOOD		
63200	63100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.55	1.47	969.92	58	26-Apr-2023	GOOD		
63100	63000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.02	1.58	1.8	1216.87	50	26-Apr-2023	GOOD		
63100	63000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.02	1.3	1.16	743.93	58	26-Apr-2023	GOOD	1326.50	GOOD
63000	62900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.18	3.54	3.36	2448.16	54	26-Apr-2023	POOR		
63000	62900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.99	2.09	2.04	1399.99	60	26-Apr-2023	GOOD		
62900	62800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.58	1.65	1103.88	64	26-Apr-2023	GOOD		
62900	62800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	1.74	1.74	1171.54	44	26-Apr-2023	GOOD		
62800	62700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.6	2.24	2.92	2092.04	66	26-Apr-2023	Fair		
62800	62700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.76	1.69	1133.90	45	26-Apr-2023	GOOD		
62700	62600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	1.64	1.87	1270.00	67	26-Apr-2023	GOOD		
62700	62600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.14	1.52	1.33	867.07	58	26-Apr-2023	GOOD		
62600	62500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.47	2.32	2.4	1679.49	68	26-Apr-2023	GOOD		
62600	62500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.09	1.78	1.94	1323.36	65	26-Apr-2023	GOOD		
62500	62400	62500.000	61500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.11	2.89	3	2156.34	69	26-Apr-2023	Fair		
62500	62400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.34	2.34	2.34	1632.53	66	26-Apr-2023	GOOD		
62400	62300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.38	2.89	3.14	2269.35	68	26-Apr-2023	Fair		
62400	62300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.92	1.81	1224.45	66	26-Apr-2023	GOOD		
62300	62200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.48	2.48	2.48	1742.31	69	26-Apr-2023	GOOD		
62300	62200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.5	1.54	1021.79	63	26-Apr-2023	GOOD		
62200	62100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3	3.14	3.07	2212.77	68	26-Apr-2023	Fair		
62200	62100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	2.03	1.89	1285.22	64	26-Apr-2023	GOOD		
62100	62000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.66	2.71	2.69	1908.37	66	26-Apr-2023	Fair		
62100	62000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.71	1.79	1.75	1179.08	65	26-Apr-2023	GOOD	1841.60	Fair
62000	61900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.96	3.29	3.13	2261.26	64	26-Apr-2023	Fair		
62000	61900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.22	2.49	2.36	1648.17	62	26-Apr-2023	GOOD		
61900	61800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.19	3.39	2.79	1988.00	62	26-Apr-2023	Fair		
61900	61800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.78	1.58	1051.57	62	26-Apr-2023	GOOD		
61800	61700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.87	3.81	3.84	2843.10	62	26-Apr-2023	POOR		
61800	61700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.04	2.63	2.34	1632.53	63	26-Apr-2023	GOOD		
61700	61600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.19	3.72	3.96	2942.79	64	26-Apr-2023	POOR		
61700	61600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	4.17	4.62	4.4	3311.37	60	26-Apr-2023	POOR		
61600	61500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.42	1.87	2.15	1484.81	64	26-Apr-2023	GOOD		
61600	61500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.54	1.57	1.56	1036.67	59	26-Apr-2023	GOOD		
61500	61400	61500	60500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.61	1.62	1.62	1081.43	59	26-Apr-2023	GOOD		
61500	61400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.8	1.83	1239.61	58	26-Apr-2023	GOOD		
61400	61300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.36	1.68	1.52	1006.94	65	26-Apr-2023	GOOD		
61400	61300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.18	1.27	823.38	59	26-Apr-2023	GOOD		
61300	61200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.62	2.87	2.75	1956.11	67	26-Apr-2023	Fair		
61300	61200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	1.97	1.95	1331.00	59	26-Apr-2023	GOOD		
61200	61100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.84	1.95	1.9	1292.84	63	26-Apr-2023	GOOD		
61200	61100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.34	2.25	2.3	1601.31	58	26-Apr-2023	GOOD		
61100	61000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.37	2.37	2.37	1655.99	52	26-Apr-2023	GOOD		
61100	61000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.95	1.81	1224.45	60	26-Apr-2023	GOOD		
61000	60900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.02	2.12	2.07	1423.07	50	26-Apr-2023	GOOD	1154.90	GOOD

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
61000	60900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.52	1.81	1.67	1118.88	62	26-Apr-2023	GOOD		
60900	60800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	1.59	1.8	1216.87	61	26-Apr-2023	GOOD		
60900	60800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.77	1.8	1.79	1209.31	62	26-Apr-2023	GOOD		
60800	60700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.17	1.54	1.86	1262.39	65	26-Apr-2023	GOOD		
60800	60700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.3	1.23	1.27	823.38	61	26-Apr-2023	GOOD		
60700	60600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.65	1.31	1.48	977.31	64	26-Apr-2023	GOOD		
60700	60600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.87	0.84	0.86	532.08	62	26-Apr-2023	GOOD		
60600	60500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.27	1.35	1.31	852.48	62	26-Apr-2023	GOOD		
60600	60500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.83	0.71	0.77	470.12	63	26-Apr-2023	GOOD		
60500	60400	60500.000	59500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	2.1	1.91	1300.46	61	26-Apr-2023	GOOD		
60500	60400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.08	1.07	1.08	686.71	63	26-Apr-2023	GOOD		
60400	60300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.61	2.13	1.87	1270.00	64	26-Apr-2023	GOOD		
60400	60300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.35	1.35	881.69	63	26-Apr-2023	GOOD		
60300	60200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.2	2.15	1484.81	63	26-Apr-2023	GOOD		
60300	60200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.79	1.64	1096.39	64	26-Apr-2023	GOOD		
60200	60100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	2.55	2.42	1695.17	62	26-Apr-2023	GOOD		
60200	60100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.28	1.33	867.07	64	26-Apr-2023	GOOD		
60100	60000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	2.17	2.1	1446.19	56	26-Apr-2023	GOOD		
60100	60000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.89	1.54	1.71	1148.94	58	26-Apr-2023	GOOD		
60000	59900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	1.72	1.81	1224.45	53	26-Apr-2023	GOOD	1277.50	GOOD
60000	59900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.99	2.33	2.16	1492.55	51	26-Apr-2023	GOOD		
59900	59800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.98	2.2	2.09	1438.48	56	26-Apr-2023	GOOD		
59900	59800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.2	1.26	816.12	57	26-Apr-2023	GOOD		
59800	59700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.36	1.21	1.29	837.92	61	26-Apr-2023	GOOD		
59800	59700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.5	1.25	1.38	903.66	61	26-Apr-2023	GOOD		
59700	59600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.2	3.2	3.2	2317.97	66	26-Apr-2023	Fair		
59700	59600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.26	3.41	3.34	2431.85	63	26-Apr-2023	POOR		
59600	59500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.67	1.96	1.82	1232.03	68	26-Apr-2023	GOOD		
59600	59500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.38	1.48	977.31	63	26-Apr-2023	GOOD		
59500	59400	59500.000	58500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.91	1.76	1.84	1247.20	67	26-Apr-2023	GOOD		
59500	59400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.56	1.66	1.61	1073.95	60	26-Apr-2023	GOOD		
59400	59300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.85	1.49	1.67	1118.88	63	26-Apr-2023	GOOD		
59400	59300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.28	2.27	2.28	1585.72	56	26-Apr-2023	GOOD		
59300	59200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	3.21	2.99	2148.29	60	26-Apr-2023	Fair		
59300	59200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	2.03	2.01	1376.96	53	26-Apr-2023	GOOD		
59200	59100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.43	2.77	2.6	1837.01	61	26-Apr-2023	Fair		
59200	59100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	2.28	1.8	1216.87	56	26-Apr-2023	GOOD		
59100	59000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.64	2.54	2.59	1829.10	66	26-Apr-2023	Fair		
59100	59000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	1.82	1.67	1118.88	61	26-Apr-2023	GOOD		
59000	58900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	2.45	2.28	1585.72	68	26-Apr-2023	GOOD	1415.30	GOOD
59000	58900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	1.99	1.94	1323.36	59	26-Apr-2023	GOOD		
58900	58800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.62	2.88	2.75	1956.11	70	26-Apr-2023	Fair		
58900	58800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	2.16	1.78	1201.74	58	26-Apr-2023	GOOD		
58800	58700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.38	2.25	1562.37	71	26-Apr-2023	GOOD		
58800	58700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	2.06	1.85	1254.80	57	26-Apr-2023	GOOD		
58700	58600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.34	2.09	2.21	1531.30	71	26-Apr-2023	GOOD		
58700	58600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.9	1.72	1.31	852.48	58	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
58600	58500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.52	1.86	2.19	1515.79	68	26-Apr-2023	GOOD		
58600	58500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.15	1.79	1.47	969.92	61	26-Apr-2023	GOOD		
58500	58400	58500.000	57500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.83	1.78	1.81	1224.45	66	26-Apr-2023	GOOD		
58500	58400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	2.39	2.02	1384.63	63	26-Apr-2023	GOOD		
58400	58300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.56	2.35	2.46	1726.58	65	26-Apr-2023	GOOD		
58400	58300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.95	1.42	1.69	1133.90	63	26-Apr-2023	GOOD		
58300	58200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	1.51	1.71	1148.94	65	26-Apr-2023	GOOD		
58300	58200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.24	1.33	1.29	837.92	63	26-Apr-2023	GOOD		
58200	58100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.31	2.28	1585.72	61	26-Apr-2023	GOOD		
58200	58100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.94	1.68	1126.39	61	26-Apr-2023	GOOD		
58100	58000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.26	1.72	1.49	984.71	60	26-Apr-2023	GOOD		
58100	58000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.21	1.5	1.36	889.00	65	26-Apr-2023	GOOD		
58000	57900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.64	1.91	1.78	1201.74	65	26-Apr-2023	GOOD	1645.90	GOOD
58000	57900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.59	1.82	1.71	1148.94	69	26-Apr-2023	GOOD		
57900	57800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.86	4.38	3.62	2661.30	68	26-Apr-2023	POOR		
57900	57800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.17	2.4	2.29	1593.52	68	26-Apr-2023	GOOD		
57800	57700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	4.43	4.99	4.71	3573.75	67	26-Apr-2023	POOR		
57800	57700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	5.31	5.08	5.2	3992.68	63	26-Apr-2023	POOR		
57700	57600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.73	3.33	3.53	2587.31	66	26-Apr-2023	POOR		
57700	57600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.02	1.79	1.91	1300.46	62	26-Apr-2023	GOOD		
57600	57500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.83	2.49	1750.18	63	26-Apr-2023	GOOD		
57600	57500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	1.55	1.6	1066.49	61	26-Apr-2023	GOOD		
57500	57400	57500.000	56500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	3.44	2.89	2067.98	62	26-Apr-2023	Fair		
57500	57400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.16	2.69	2.93	2100.06	61	26-Apr-2023	Fair		
57400	57300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.34	2.94	2.64	1868.69	63	26-Apr-2023	Fair		
57400	57300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.73	2.05	1.89	1285.22	61	26-Apr-2023	GOOD		
57300	57200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	2.54	2.36	1648.17	64	26-Apr-2023	GOOD		
57300	57200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	2.27	1.97	1346.30	60	26-Apr-2023	GOOD		
57200	57100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	2.21	2.26	1570.15	64	26-Apr-2023	GOOD		
57200	57100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.69	2.47	2.08	1430.78	59	26-Apr-2023	GOOD		
57100	57000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.93	2.47	2.7	1916.32	61	26-Apr-2023	Fair		
57100	57000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.66	1.91	1.79	1209.31	57	26-Apr-2023	GOOD		
57000	56900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.88	3.14	3.01	2164.39	58	26-Apr-2023	Fair	1581.40	GOOD
57000	56900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	2.07	1.73	1164.00	54	26-Apr-2023	GOOD		
56900	56800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.53	2.83	2.68	1900.43	55	26-Apr-2023	Fair		
56900	56800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.24	2.52	2.38	1663.82	53	26-Apr-2023	GOOD		
56800	56700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.73	2.33	2.03	1392.31	50	26-Apr-2023	GOOD		
56800	56700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.91	1.69	1133.90	50	26-Apr-2023	GOOD		
56700	56600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	1.79	1.98	1353.96	54	26-Apr-2023	GOOD		
56700	56600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.34	1.76	1.55	1029.23	39	26-Apr-2023	GOOD		
56600	56500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	2.15	2.26	1570.15	58	26-Apr-2023	GOOD		
56600	56500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.54	2.6	2.57	1813.28	38	26-Apr-2023	Fair		
56500	56400	56500.000	55500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.23	2.44	2.34	1632.53	59	26-Apr-2023	GOOD		
56500	56400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.94	1.73	1.84	1247.20	35	26-Apr-2023	GOOD		
56400	56300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.62	1.71	2.17	1500.29	62	26-Apr-2023	GOOD		
56400	56300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.88	1.64	1096.39	45	26-Apr-2023	GOOD		
56300	56200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	1.89	2	1369.29	65	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
56300	56200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	1.99	1.71	1148.94	50	26-Apr-2023	GOOD		
56200	56100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.14	2	2.07	1423.07	62	26-Apr-2023	GOOD		
56200	56100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.7	1.62	1081.43	55	26-Apr-2023	GOOD		
56100	56000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.1	2.81	2.96	2124.16	60	26-Apr-2023	Fair		
56100	56000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.57	2.21	1.89	1285.22	58	26-Apr-2023	GOOD		
56000	55900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	1.68	1.86	1262.39	60	26-Apr-2023	GOOD	1312.70	GOOD
56000	55900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.63	1.44	1.54	1021.79	60	26-Apr-2023	GOOD		
55900	55800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	1.28	1.52	1006.94	64	26-Apr-2023	GOOD		
55900	55800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.91	0.98	0.95	594.83	60	26-Apr-2023	GOOD		
55800	55700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.36	1.8	2.08	1430.78	67	26-Apr-2023	GOOD		
55800	55700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	1.77	1.66	1111.38	60	26-Apr-2023	GOOD		
55700	55600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	2.3	2.24	1554.60	66	26-Apr-2023	GOOD		
55700	55600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	2.12	2.07	1423.07	60	26-Apr-2023	GOOD		
55600	55500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.02	2.39	2.21	1531.30	65	26-Apr-2023	GOOD		
55600	55500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.75	2.36	2.05	1407.68	61	26-Apr-2023	GOOD		
55500	55400	55500	54500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.76	2.22	1.99	1361.62	65	26-Apr-2023	GOOD		
55500	55400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.49	1.69	1.59	1059.02	60	26-Apr-2023	GOOD		
55400	55300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.39	2.95	2.67	1892.49	65	26-Apr-2023	Fair		
55400	55300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.73	3.03	2.88	2059.97	60	26-Apr-2023	Fair		
55300	55200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.41	3.24	2.83	2019.95	66	26-Apr-2023	Fair		
55300	55200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.32	2.15	2.24	1554.60	61	26-Apr-2023	GOOD		
55200	55100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.3	2.31	2.3	1601.31	68	26-Apr-2023	GOOD		
55200	55100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.85	1.78	1201.74	58	26-Apr-2023	GOOD		
55100	55000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.32	2.15	2.24	1554.60	71	26-Apr-2023	GOOD		
55100	55000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.42	2.46	2.44	1710.87	57	26-Apr-2023	GOOD		
55000	54900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	2.64	2.42	1695.17	71	26-Apr-2023	GOOD	1471.30	GOOD
55000	54900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	1.9	1.94	1323.36	57	26-Apr-2023	GOOD		
54900	54800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.8	1.91	1.86	1262.39	70	26-Apr-2023	GOOD		
54900	54800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.03	1.91	1.97	1346.30	55	26-Apr-2023	GOOD		
54800	54700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.18	2.14	1477.08	69	26-Apr-2023	GOOD		
54800	54700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.95	2.12	2.03	1392.31	58	26-Apr-2023	GOOD		
54700	54600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	1.93	2.12	1461.63	65	26-Apr-2023	GOOD		
54700	54600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.53	1.26	1.4	918.34	46	26-Apr-2023	GOOD		
54600	54500	54600	53600	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	1.98	2.04	1399.99	64	26-Apr-2023	GOOD		
54600	54500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	1.59	1.69	1133.90	26	26-Apr-2023	GOOD		
54500	54400	54500.000	53500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3	2.73	2.87	2051.96	61	26-Apr-2023	Fair		
54500	54400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.27	1.32	859.77	28	26-Apr-2023	GOOD		
54400	54300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.54	2.42	2.48	1742.31	54	26-Apr-2023	GOOD		
54400	54300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	1.56	1.6	1066.49	36	26-Apr-2023	GOOD		
54300	54200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.51	1.7	1.61	1073.95	53	26-Apr-2023	GOOD		
54300	54200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.67	1.76	1186.63	24	26-Apr-2023	GOOD		
54200	54100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.72	2.42	2.07	1423.07	61	26-Apr-2023	GOOD		
54200	54100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.95	1.89	1.92	1308.09	29	26-Apr-2023	GOOD		
54100	54000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.19	2.44	2.32	1616.91	68	26-Apr-2023	GOOD		
54100	54000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.59	1.65	1103.88	24	26-Apr-2023	GOOD		
54000	53900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.34	1.28	1.31	852.48	62	26-Apr-2023	GOOD	1477.80	GOOD
54000	53900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.69	1.52	1006.94	25	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
53900	53800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.32	1.63	1.48	977.31	53	26-Apr-2023	GOOD		
53900	53800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.8	1.59	1059.02	23	26-Apr-2023	GOOD		
53800	53700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.85	2	1.93	1315.72	51	26-Apr-2023	GOOD		
53800	53700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	5.31	5.5	5.41	4173.70	14	26-Apr-2023	POOR		
53700	53600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.54	2.2	2.37	1655.99	61	26-Apr-2023	GOOD		
53700	53600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.08	3.42	3.25	2358.58	18	26-Apr-2023	Fair		
53600	53500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.9	2.22	2.06	1415.38	59	26-Apr-2023	GOOD		
53600	53500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.91	1.92	1.92	1308.09	41	26-Apr-2023	GOOD		
53500	53400	53500.000	52500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	2.52	2.22	1539.06	52	26-Apr-2023	GOOD		
53500	53400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.29	2.11	2.2	1523.54	53	26-Apr-2023	GOOD		
53400	53300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	2.27	2.19	1515.79	35	26-Apr-2023	GOOD		
53400	53300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.05	2.03	2.04	1399.99	51	26-Apr-2023	GOOD		
53300	53200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.6	2.36	1648.17	43	26-Apr-2023	GOOD		
53300	53200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.9	3.19	3.05	2196.63	46	26-Apr-2023	Fair		
53200	53100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.42	2.56	2.49	1750.18	50	26-Apr-2023	GOOD		
53200	53100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.76	1.73	1164.00	49	26-Apr-2023	GOOD		
53100	53000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.67	2.71	2.69	1908.37	49	26-Apr-2023	Fair		
53100	53000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.3	1.93	2.12	1461.63	53	26-Apr-2023	GOOD		
53000	52900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	1.86	2.1	1446.19	41	26-Apr-2023	GOOD	1532.20	GOOD
53000	52900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.09	1.84	1.96	1338.65	57	26-Apr-2023	GOOD		
52900	52800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	3.1	2.7	1916.32	34	26-Apr-2023	Fair		
52900	52800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.97	1.79	1.88	1277.61	61	26-Apr-2023	GOOD		
52800	52700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.18	2.18	2.18	1508.04	22	26-Apr-2023	GOOD		
52800	52700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.73	1.9	1.82	1232.03	63	26-Apr-2023	GOOD		
52700	52600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.28	2.27	1577.94	19	26-Apr-2023	GOOD		
52700	52600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.42	1.55	1029.23	63	26-Apr-2023	GOOD		
52600	52500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.08	2.4	2.24	1554.60	40	26-Apr-2023	GOOD		
52600	52500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.56	2.17	2.37	1655.99	62	26-Apr-2023	GOOD		
52500	52400	52500.000	51500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.81	1.48	1.65	1103.88	55	26-Apr-2023	GOOD		
52500	52400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.86	1.63	1.75	1179.08	60	26-Apr-2023	GOOD		
52400	52300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	2.11	1.93	1315.72	64	26-Apr-2023	GOOD		
52400	52300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.48	1.59	1059.02	58	26-Apr-2023	GOOD		
52300	52200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.64	1.89	1.77	1194.18	61	26-Apr-2023	GOOD		
52300	52200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	2.06	1.93	1315.72	33	26-Apr-2023	GOOD		
52200	52100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.07	2.26	2.67	1892.49	34	26-Apr-2023	Fair		
52200	52100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.15	2.13	2.14	1477.08	39	26-Apr-2023	GOOD		
52100	52000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	5.61	3.5	4.56	3446.52	16	26-Apr-2023	POOR		
52100	52000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.05	2.42	2.24	1554.60	47	26-Apr-2023	GOOD		
52000	51900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.61	2.53	1781.70	39	26-Apr-2023	GOOD	1558.40	GOOD
52000	51900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.74	2.66	2.7	1916.32	50	26-Apr-2023	Fair		
51900	51800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.48	2.99	2.74	1948.14	50	26-Apr-2023	Fair		
51900	51800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	1.83	1.74	1171.54	55	26-Apr-2023	GOOD		
51800	51700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.3	2.83	2.57	1813.28	54	26-Apr-2023	Fair		
51800	51700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.32	1.35	881.69	57	26-Apr-2023	GOOD		
51700	51600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.85	3.42	2.64	1868.69	55	26-Apr-2023	Fair		
51700	51600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.06	1.74	1.9	1292.84	57	26-Apr-2023	GOOD		
51600	51500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	2.19	2.25	1562.37	61	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
51600	51500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.26	1.79	2.03	1392.31	51	26-Apr-2023	GOOD		
51500	51400	51500.000	50500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.48	2.52	2.5	1758.06	55	26-Apr-2023	GOOD		
51500	51400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2	2.13	2.07	1423.07	36	26-Apr-2023	GOOD		
51400	51300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.73	3.19	3.46	2529.91	57	26-Apr-2023	POOR		
51400	51300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.81	1.77	1.79	1209.31	40	26-Apr-2023	GOOD		
51300	51200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.66	3.36	3.51	2570.90	66	26-Apr-2023	POOR		
51300	51200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.95	1.62	1.79	1209.31	37	26-Apr-2023	GOOD		
51200	51100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.63	2.94	2.79	1988.00	65	26-Apr-2023	Fair		
51200	51100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.44	3.2	2.82	2011.96	19	26-Apr-2023	Fair		
51100	51000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.54	1.63	1088.91	66	26-Apr-2023	GOOD		
51100	51000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.08	1.53	1.81	1224.45	38	26-Apr-2023	GOOD		
51000	50900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.86	3.03	2.95	2116.12	67	26-Apr-2023	Fair	1594.40	GOOD
51000	50900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.67	2.76	2.72	1932.23	46	26-Apr-2023	Fair		
50900	50800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.56	2.5	1758.06	70	26-Apr-2023	GOOD		
50900	50800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.83	1.87	1.85	1254.80	51	26-Apr-2023	GOOD		
50800	50700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.58	2.37	1655.99	70	26-Apr-2023	GOOD		
50800	50700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	1.57	1.58	1051.57	55	26-Apr-2023	GOOD		
50700	50600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.51	2.33	2.42	1695.17	70	26-Apr-2023	GOOD		
50700	50600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.63	1.81	1.72	1156.46	56	26-Apr-2023	GOOD		
50600	50500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.17	2.24	2.21	1531.30	70	26-Apr-2023	GOOD		
50600	50500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.06	1.2	1.13	722.42	57	26-Apr-2023	GOOD		
50500	50400	50500.000	49500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.32	1.97	2.15	1484.81	69	26-Apr-2023	GOOD		
50500	50400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.08	1.54	1.31	852.48	56	26-Apr-2023	GOOD		
50400	50300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.14	2.99	2.57	1813.28	68	26-Apr-2023	Fair		
50400	50300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.32	1.84	1.58	1051.57	60	26-Apr-2023	GOOD		
50300	50200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.89	2.14	2.02	1384.63	67	26-Apr-2023	GOOD		
50300	50200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.15	1.29	837.92	61	26-Apr-2023	GOOD		
50200	50100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.69	2.64	2.67	1892.49	67	26-Apr-2023	Fair		
50200	50100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.65	1.76	1.71	1148.94	60	26-Apr-2023	GOOD		
50100	50000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.41	2.63	2.52	1773.82	68	26-Apr-2023	GOOD		
50100	50000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.3	1.17	1.23	794.39	59	26-Apr-2023	GOOD		
50000	49900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.09	2.14	2.12	1461.63	67	26-Apr-2023	GOOD	1270.50	GOOD
50000	49900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.38	1.48	1.43	940.41	55	26-Apr-2023	GOOD		
49900	49800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.93	2.03	1.98	1353.96	66	26-Apr-2023	GOOD		
49900	49800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.93	1.19	1.06	672.49	49	26-Apr-2023	GOOD		
49800	49700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.21	2.2	2.21	1531.30	66	26-Apr-2023	GOOD		
49800	49700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.93	2.35	2.14	1477.08	59	26-Apr-2023	GOOD		
49700	49600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.78	2.63	2.21	1531.30	67	26-Apr-2023	GOOD		
49700	49600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.47	1.73	1.6	1066.49	62	26-Apr-2023	GOOD		
49600	49500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	2.36	2.24	1554.60	68	26-Apr-2023	GOOD		
49600	49500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.16	1.29	1.22	787.16	64	26-Apr-2023	GOOD		
49500	49400	49500	48500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.31	2.3	2.3	1601.31	70	26-Apr-2023	GOOD		
49500	49400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.44	1.4	918.34	63	26-Apr-2023	GOOD		
49400	49300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.89	3.1	3	2156.34	69	26-Apr-2023	Fair		
49400	49300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.46	1.21	1.34	874.38	62	26-Apr-2023	GOOD		
49300	49200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	2.4	2.18	1508.04	65	26-Apr-2023	GOOD		
49300	49200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.45	1.72	2.09	1438.48	60	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
49200	49100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.71	1.95	1.83	1239.61	40	26-Apr-2023	GOOD		
49200	49100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.85	1.67	1.76	1186.63	60	26-Apr-2023	GOOD		
49100	49000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	0.94	1.12	1.03	651.21	38	26-Apr-2023	GOOD		
49100	49000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.31	1.14	1.22	787.16	59	26-Apr-2023	GOOD	1256.80	GOOD
49000	48900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.94	2.36	2.15	1484.81	52	26-Apr-2023	GOOD		
49000	48900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.6	1.61	1073.95	59	26-Apr-2023	GOOD		
48900	48800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.81	3.54	3.18	2301.75	56	26-Apr-2023	Fair		
48900	48800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.66	1.67	1118.88	62	26-Apr-2023	GOOD		
48800	48700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.03	2.06	2.05	1407.68	57	26-Apr-2023	GOOD		
48800	48700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.63	1.5	1.57	1044.11	57	26-Apr-2023	GOOD		
48700	48600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.31	1.74	1.53	1014.37	58	26-Apr-2023	GOOD		
48700	48600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.51	1.38	1.45	955.15	35	26-Apr-2023	GOOD		
48600	48500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.72	1.93	1.83	1239.61	68	26-Apr-2023	GOOD		
48600	48500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	1.58	1.69	1133.90	39	26-Apr-2023	GOOD		
48500	48400	48500.000	47500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	1.9	2.12	1461.63	69	26-Apr-2023	GOOD		
48500	48400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.6	1.52	1006.94	47	26-Apr-2023	GOOD		
48400	48300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.12	1.28	1.7	1141.41	66	26-Apr-2023	GOOD		
48400	48300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.24	1.49	1.37	896.33	51	26-Apr-2023	GOOD		
48300	48200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.92	2.61	2.77	1972.05	63	26-Apr-2023	Fair		
48300	48200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.62	2.25	2.44	1710.87	50	26-Apr-2023	GOOD		
48200	48100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.7	2.24	2.47	1734.45	58	26-Apr-2023	GOOD		
48200	48100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.25	3.07	3.16	2285.55	59	26-Apr-2023	Fair		
48100	48000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.22	1.19	1.21	779.94	57	26-Apr-2023	GOOD		
48100	48000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.19	1.21	779.94	65	26-Apr-2023	GOOD	1362.10	GOOD
48000	47900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.45	1.53	1.49	984.71	59	26-Apr-2023	GOOD		
48000	47900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.46	1.22	1.34	874.38	64	26-Apr-2023	GOOD		
47900	47800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.14	2.45	2.3	1601.31	64	26-Apr-2023	GOOD		
47900	47800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.13	1.25	808.87	64	26-Apr-2023	GOOD		
47800	47700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.13	2.92	3.03	2180.50	69	26-Apr-2023	Fair		
47800	47700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.73	2.07	1.9	1292.84	61	26-Apr-2023	GOOD		
47700	47600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	2.78	2.77	1972.05	70	26-Apr-2023	Fair		
47700	47600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.55	2.44	2	1369.29	57	26-Apr-2023	GOOD		
47600	47500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.06	1.61	1.84	1247.20	69	26-Apr-2023	GOOD		
47600	47500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.61	1.78	1.7	1141.41	39	26-Apr-2023	GOOD		
47500	47400	47500.000	46500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	2.44	2.28	1585.72	68	26-Apr-2023	GOOD		
47500	47400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.96	2.06	2.01	1376.96	37	26-Apr-2023	GOOD		
47400	47300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2	2.06	2.03	1392.31	67	26-Apr-2023	GOOD		
47400	47300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	1.83	1.82	1232.03	53	26-Apr-2023	GOOD		
47300	47200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.91	2.64	2.28	1585.72	66	26-Apr-2023	GOOD		
47300	47200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.36	1.98	1.67	1118.88	56	26-Apr-2023	GOOD		
47200	47100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.62	2.73	2.68	1900.43	65	26-Apr-2023	Fair		
47200	47100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.44	1.94	1.69	1133.90	51	26-Apr-2023	GOOD		
47100	47000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.4	2.1	2.25	1562.37	65	26-Apr-2023	GOOD		
47100	47000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	2.32	2.03	1392.31	51	26-Apr-2023	GOOD		
47000	46900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.1	2.05	2.07	1423.07	68	26-Apr-2023	GOOD	1466.20	GOOD
47000	46900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.76	1.73	1164.00	56	26-Apr-2023	GOOD		
46900	46800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.37	2.07	2.22	1539.06	69	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
46900	46800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	1.86	1.8	1216.87	56	26-Apr-2023	GOOD		
46800	46700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.62	2.59	2.61	1844.92	68	26-Apr-2023	Fair		
46800	46700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.68	1.46	1.57	1044.11	59	26-Apr-2023	GOOD		
46700	46600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.64	4.23	3.44	2513.54	66	26-Apr-2023	POOR		
46700	46600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.24	3.18	2.71	1924.27	57	26-Apr-2023	Fair		
46600	46500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.82	1.62	1.72	1156.46	66	26-Apr-2023	GOOD		
46600	46500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.81	1.79	1.8	1216.87	56	26-Apr-2023	GOOD		
46500	46400	46500.000	45500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.44	1.76	1.6	1066.49	66	26-Apr-2023	GOOD		
46500	46400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.01	1.26	1.14	729.58	57	26-Apr-2023	GOOD		
46400	46300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.94	1.82	1.88	1277.61	69	26-Apr-2023	GOOD		
46400	46300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.4	1.8	1.6	1066.49	59	26-Apr-2023	GOOD		
46300	46200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.89	2.12	2	1369.29	71	26-Apr-2023	GOOD		
46300	46200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.06	1.2	1.13	722.42	57	26-Apr-2023	GOOD		
46200	46100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.91	1.45	1.68	1126.39	71	26-Apr-2023	GOOD		
46200	46100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.25	1.56	1.41	925.69	57	26-Apr-2023	GOOD		
46100	46000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.04	2.02	2.03	1392.31	66	26-Apr-2023	GOOD		
46100	46000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.11	1.19	1.15	736.75	60	26-Apr-2023	GOOD		
46000	45900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.7	1.51	1.61	1073.95	64	26-Apr-2023	GOOD	1093.10	GOOD
46000	45900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.04	1.32	1.18	758.31	65	26-Apr-2023	GOOD		
45900	45800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.41	1.17	1.29	837.92	65	26-Apr-2023	GOOD		
45900	45800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.98	1.15	1.07	679.60	66	26-Apr-2023	GOOD		
45800	45700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.08	2.23	2.16	1492.55	66	26-Apr-2023	GOOD		
45800	45700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.71	1.8	1.76	1186.63	57	26-Apr-2023	GOOD		
45700	45600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.86	2.33	2.1	1446.19	58	26-Apr-2023	GOOD		
45700	45600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.55	3.36	3.45	2521.73	16	26-Apr-2023	POOR		
45600	45500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.18	1.17	1.17	751.12	60	26-Apr-2023	GOOD		
45600	45500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.07	1.12	1.1	700.97	41	26-Apr-2023	GOOD		
45500	45400	45500.000	44500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.46	1.42	1.44	947.78	71	26-Apr-2023	GOOD		
45500	45400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.36	1.32	859.77	54	26-Apr-2023	GOOD		
45400	45300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.37	1.37	1.37	896.33	70	26-Apr-2023	GOOD		
45400	45300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.02	1.17	1.1	700.97	58	26-Apr-2023	GOOD		
45300	45200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.89	1.51	1.7	1141.41	68	26-Apr-2023	GOOD		
45300	45200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.56	1.49	1.53	1014.37	57	26-Apr-2023	GOOD		
45200	45100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.98	1.6	1.79	1209.31	67	26-Apr-2023	GOOD		
45200	45100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.35	1.34	1.35	881.69	58	26-Apr-2023	GOOD		
45100	45000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.83	1.65	1.74	1171.54	68	26-Apr-2023	GOOD		
45100	45000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.98	1.49	1.74	1171.54	59	26-Apr-2023	GOOD		
45000	44900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.3	1.86	2.08	1430.78	70	26-Apr-2023	GOOD	1186.20	GOOD
45000	44900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.96	1.72	1156.46	56	26-Apr-2023	GOOD		
44900	44800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.55	2.46	2.51	1765.94	70	26-Apr-2023	GOOD		
44900	44800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.62	1.85	1.74	1171.54	62	26-Apr-2023	GOOD		
44800	44700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.66	1.89	1.78	1201.74	69	26-Apr-2023	GOOD		
44800	44700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.64	2.07	1.86	1262.39	63	26-Apr-2023	GOOD		
44700	44600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.91	2.4	2.16	1492.55	66	26-Apr-2023	GOOD		
44700	44600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.17	2.27	2.22	1539.06	62	26-Apr-2023	GOOD		
44600	44500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.82	2.34	2.08	1430.78	65	26-Apr-2023	GOOD		
44600	44500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.8	1.96	1.88	1277.61	63	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
44500	44400	44500.000	43500.000	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.76	1.67	1.71	1148.94	58	26-Apr-2023	GOOD		
44500	44400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.23	1.5	1.37	896.33	62	26-Apr-2023	GOOD		
44400	44300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.56	2.12	1.84	1247.20	54	26-Apr-2023	GOOD		
44400	44300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.43	1.55	1.49	984.71	60	26-Apr-2023	GOOD		
44300	44200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	0.99	1.24	1.12	715.26	64	26-Apr-2023	GOOD		
44300	44200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	0.82	1.42	1.12	715.26	61	26-Apr-2023	GOOD		
44200	44100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.41	1.46	1.44	947.78	66	26-Apr-2023	GOOD		
44200	44100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.06	1.42	1.24	801.63	63	26-Apr-2023	GOOD		
44100	44000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.63	1.68	1.66	1111.38	68	26-Apr-2023	GOOD		
44100	44000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.1	1.33	1.22	787.16	62	26-Apr-2023	GOOD	1110.40	GOOD
44000	43900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.01	1.68	1.85	1254.80	68	26-Apr-2023	GOOD		
44000	43900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.05	3.23	3.14	2269.35	58	26-Apr-2023	Fair		
43900	43800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.85	2.08	2.46	1726.58	62	26-Apr-2023	GOOD		
43900	43800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.78	1.45	1.62	1081.43	57	26-Apr-2023	GOOD		
43800	43700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	1.6	1.78	1201.74	35	26-Apr-2023	GOOD		
43800	43700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.1	1.07	1.09	693.84	62	26-Apr-2023	GOOD		
43700	43600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.92	1.3	1.61	1073.95	27	26-Apr-2023	GOOD		
43700	43600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	2.07	1.72	1156.46	63	26-Apr-2023	GOOD		
43600	43500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.33	1.85	2.09	1438.48	31	26-Apr-2023	GOOD		
43600	43500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.64	1.45	955.15	63	26-Apr-2023	GOOD		
43500	43400	43500	42500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.19	2.22	1539.06	39	26-Apr-2023	GOOD		
43500	43400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.27	1.26	1.27	823.38	63	26-Apr-2023	GOOD		
43400	43300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.46	1.95	1.71	1148.94	57	26-Apr-2023	GOOD		
43400	43300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.88	2.04	1.96	1338.65	63	26-Apr-2023	GOOD		
43300	43200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.99	2.42	2.21	1531.30	62	26-Apr-2023	GOOD		
43300	43200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.58	2.29	1.94	1323.36	62	26-Apr-2023	GOOD		
43200	43100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.31	2.24	1554.60	59	26-Apr-2023	GOOD		
43200	43100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.56	1.94	1.75	1179.08	55	26-Apr-2023	GOOD		
43100	43000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.16	2.18	2.17	1500.29	61	26-Apr-2023	GOOD		
43100	43000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.24	2.16	2.2	1523.54	51	26-Apr-2023	GOOD		
43000	42900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.2	2.02	2.11	1453.91	63	26-Apr-2023	GOOD	1372.70	GOOD
43000	42900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.61	2.48	2.55	1797.49	47	26-Apr-2023	GOOD		
42900	42800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.35	2.05	2.2	1523.54	64	26-Apr-2023	GOOD		
42900	42800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.22	1.6	1.41	925.69	42	26-Apr-2023	GOOD		
42800	42700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.97	1.67	1.82	1232.03	66	26-Apr-2023	GOOD		
42800	42700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.14	1.32	1.23	794.39	39	26-Apr-2023	GOOD		
42700	42600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.76	1.88	2.32	1616.91	66	26-Apr-2023	GOOD		
42700	42600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.42	2.21	1.82	1232.03	46	26-Apr-2023	GOOD		
42600	42500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.58	2.67	2.63	1860.76	66	26-Apr-2023	Fair		
42600	42500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.42	2.06	2.24	1554.60	49	26-Apr-2023	GOOD		
42500	42400	42500	41500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.44	2.11	2.28	1585.72	65	26-Apr-2023	GOOD		
42500	42400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.74	2.01	1.88	1277.61	56	26-Apr-2023	GOOD		
42400	42300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.95	2.42	2.19	1515.79	65	26-Apr-2023	GOOD		
42400	42300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.3	1.28	830.65	57	26-Apr-2023	GOOD		
42300	42200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.11	2.04	2.07	1423.07	62	26-Apr-2023	GOOD		
42300	42200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.26	1.65	1.46	962.53	54	26-Apr-2023	GOOD		
42200	42100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	2.17	2.23	1546.83	60	26-Apr-2023	GOOD		

Chainage (km)				Pavement Type[1]	Direction	Side	LaneNumber	LWP IRI	RWP IRI	Lane IRI	UI	Speed	SurveyDate	Ride Quality	UI	Ride Quality
From	To															
42200	42100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.11	1.18	1.15	736.75	53	26-Apr-2023	GOOD		
42100	42000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.66	1.57	1.62	1081.43	58	26-Apr-2023	GOOD		
42100	42000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.48	1.46	1.47	969.92	53	26-Apr-2023	GOOD	1589.00	GOOD
42000	41900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.94	1.58	1.76	1186.63	58	26-Apr-2023	GOOD		
42000	41900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.37	1.32	1.35	881.69	50	26-Apr-2023	GOOD		
41900	41800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.24	1.54	1.89	1285.22	57	26-Apr-2023	GOOD		
41900	41800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.14	2.05	2.1	1446.19	46	26-Apr-2023	GOOD		
41800	41700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.46	2.28	2.37	1655.99	56	26-Apr-2023	GOOD		
41800	41700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.12	3.35	3.24	2350.45	38	26-Apr-2023	Fair		
41700	41600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.44	2.53	2.99	2148.29	52	26-Apr-2023	Fair		
41700	41600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.02	3.18	3.1	2237.00	35	26-Apr-2023	Fair		
41600	41500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	8.29	4.09	6.19	4853.27	45	26-Apr-2023	POOR		
41600	41500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.29	2.83	2.56	1805.38	28	26-Apr-2023	Fair		
41500	41400	41500	40500	Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	9.61	5.08	7.35	5882.78	47	26-Apr-2023	POOR		
41500	41400			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.73	1.9	1.82	1232.03	33	26-Apr-2023	GOOD		
41400	41300			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.26	2.28	2.27	1577.94	48	26-Apr-2023	GOOD		
41400	41300			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.67	1.42	1.55	1029.23	38	26-Apr-2023	GOOD		
41300	41200			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.08	2.4	2.24	1554.60	50	26-Apr-2023	GOOD		
41300	41200			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.56	2.17	2.37	1655.99	37	26-Apr-2023	GOOD		
41200	41100			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.81	1.48	1.65	1103.88	53	26-Apr-2023	GOOD		
41200	41100			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.86	1.63	1.75	1179.08	35	26-Apr-2023	GOOD		
41100	41000			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.75	2.11	1.93	1315.72	52	26-Apr-2023	GOOD		
41100	41000			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.7	1.48	1.59	1059.02	32	26-Apr-2023	GOOD	1824.50	Fair
41000	40900			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	1.64	1.89	1.77	1194.18	55	26-Apr-2023	GOOD		
41000	40900			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	1.79	2.06	1.93	1315.72	31	26-Apr-2023	GOOD		
40900	40800			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	3.07	2.26	2.67	1892.49	54	26-Apr-2023	Fair		
40900	40800			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.15	2.13	2.14	1477.08	30	26-Apr-2023	GOOD		
40800	40700			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.92	2.11	1453.91	48	26-Apr-2023	GOOD		
40800	40700			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	2.46	2.28	2.37	1655.99	28	26-Apr-2023	GOOD		
40700	40600			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.28	2.04	2.16	1492.55	45	26-Apr-2023	GOOD		
40700	40600			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	3.44	2.53	2.99	2148.29	25	26-Apr-2023	Fair		
40600	40500			Flexible	Ranchi-Hazaribagh	RHS	Inner Lane	2.29	1.83	2.06	1415.38	44	26-Apr-2023	GOOD		
40600	40500			Flexible	Ranchi-Hazaribagh	RHS	Outer lane	8.29	4.09	6.19	4853.27	20	26-Apr-2023	POOR		

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
40500	40600	Hazaribagh-Ranchi	LHS	1.37	2.77	2.07	1423	26-Apr-2023
40600	40700	Hazaribagh-Ranchi	LHS	2.73	2.1	2.42	1691	26-Apr-2023
40700	40800	Hazaribagh-Ranchi	LHS	2.14	2.95	2.55	1794	26-Apr-2023
40800	40900	Hazaribagh-Ranchi	LHS	2.2	2.68	2.44	1711	26-Apr-2023
40900	41000	Hazaribagh-Ranchi	LHS	2.6	3.02	2.81	2004	26-Apr-2023
41000	41100	Hazaribagh-Ranchi	LHS	2.18	2.05	2.12	1458	26-Apr-2023
41100	41200	Hazaribagh-Ranchi	LHS	2.82	2.24	2.53	1782	26-Apr-2023
41200	41300	Hazaribagh-Ranchi	LHS	2.51	2.65	2.58	1821	26-Apr-2023
41300	41400	Hazaribagh-Ranchi	LHS	2.69	2.6	2.65	1873	26-Apr-2023
41400	41500	Hazaribagh-Ranchi	LHS	2.58	5.45	4.02	2989	26-Apr-2023
41500	41600	Hazaribagh-Ranchi	LHS	1.71	4.79	3.25	2359	26-Apr-2023
41600	41700	Hazaribagh-Ranchi	LHS	3.16	2.66	2.91	2084	26-Apr-2023
41700	41800	Hazaribagh-Ranchi	LHS	2.07	1.47	1.77	1194	26-Apr-2023
41800	41900	Hazaribagh-Ranchi	LHS	1.66	1.12	1.39	911	26-Apr-2023
41900	42000	Hazaribagh-Ranchi	LHS	1.89	0.95	1.42	933	26-Apr-2023
42000	42100	Hazaribagh-Ranchi	LHS	1.38	1.13	1.26	812	26-Apr-2023
42100	42200	Hazaribagh-Ranchi	LHS	1.93	1.94	1.94	1320	26-Apr-2023
42200	42300	Hazaribagh-Ranchi	LHS	1.88	1.68	1.78	1202	26-Apr-2023
42300	42400	Hazaribagh-Ranchi	LHS	1.52	1.12	1.32	860	26-Apr-2023
42400	42500	Hazaribagh-Ranchi	LHS	1.58	1.48	1.53	1014	26-Apr-2023
42500	42600	Hazaribagh-Ranchi	LHS	1.28	1.13	1.21	776	26-Apr-2023
42600	42700	Hazaribagh-Ranchi	LHS	1.13	1.16	1.15	733	26-Apr-2023
42700	42800	Hazaribagh-Ranchi	LHS	2.15	1.69	1.92	1308	26-Apr-2023
42800	42900	Hazaribagh-Ranchi	LHS	1.45	1.36	1.41	922	26-Apr-2023
42900	43000	Hazaribagh-Ranchi	LHS	1.4	1.15	1.28	827	26-Apr-2023
43000	43100	Hazaribagh-Ranchi	LHS	2.2	1.92	2.06	1415	26-Apr-2023
43100	43200	Hazaribagh-Ranchi	LHS	1.95	1.65	1.80	1217	26-Apr-2023
43200	43300	Hazaribagh-Ranchi	LHS	2.02	1.74	1.88	1278	26-Apr-2023
43300	43400	Hazaribagh-Ranchi	LHS	1.63	1.87	1.75	1179	26-Apr-2023
43400	43500	Hazaribagh-Ranchi	LHS	1.66	1.53	1.60	1063	26-Apr-2023
43500	43600	Hazaribagh-Ranchi	LHS	2.03	1.51	1.77	1194	26-Apr-2023
43600	43700	Hazaribagh-Ranchi	LHS	3.37	3.31	3.34	2432	26-Apr-2023
43700	43800	Hazaribagh-Ranchi	LHS	1.98	2.3	2.14	1477	26-Apr-2023
43800	43900	Hazaribagh-Ranchi	LHS	2.24	2.59	2.42	1691	26-Apr-2023
43900	44000	Hazaribagh-Ranchi	LHS	2.89	1.83	2.36	1648	26-Apr-2023
44000	44100	Hazaribagh-Ranchi	LHS	2.41	3.04	2.73	1936	26-Apr-2023
44100	44200	Hazaribagh-Ranchi	LHS	2.24	2.1	2.17	1500	26-Apr-2023
44200	44300	Hazaribagh-Ranchi	LHS	2.79	3.19	2.99	2148	26-Apr-2023
44300	44400	Hazaribagh-Ranchi	LHS	2.71	2.68	2.70	1912	26-Apr-2023
44400	44500	Hazaribagh-Ranchi	LHS	2.17	1.85	2.01	1377	26-Apr-2023
44500	44600	Hazaribagh-Ranchi	LHS	2.11	1.61	1.86	1262	26-Apr-2023
44600	44700	Hazaribagh-Ranchi	LHS	3.44	2.37	2.91	2080	26-Apr-2023
44700	44800	Hazaribagh-Ranchi	LHS	3.05	2.07	2.56	1805	26-Apr-2023
44800	44900	Hazaribagh-Ranchi	LHS	3.01	2.73	2.87	2052	26-Apr-2023
44900	45000	Hazaribagh-Ranchi	LHS	2.51	2.01	2.26	1570	26-Apr-2023
45000	45100	Hazaribagh-Ranchi	LHS	2.81	3.09	2.95	2116	26-Apr-2023
45100	45200	Hazaribagh-Ranchi	LHS	3.33	2.89	3.11	2245	26-Apr-2023
45200	45300	Hazaribagh-Ranchi	LHS	2.09	2.09	2.09	1438	26-Apr-2023
45300	45400	Hazaribagh-Ranchi	LHS	2.23	3.27	2.75	1956	26-Apr-2023
45400	45500	Hazaribagh-Ranchi	LHS	3.07	1.5	2.29	1590	26-Apr-2023
45500	45600	Hazaribagh-Ranchi	LHS	1.82	1.39	1.61	1070	26-Apr-2023
45600	45700	Hazaribagh-Ranchi	LHS	1.86	1.46	1.66	1111	26-Apr-2023
45700	45800	Hazaribagh-Ranchi	LHS	1.67	1.56	1.62	1078	26-Apr-2023
45800	45900	Hazaribagh-Ranchi	LHS	1.98	1.97	1.98	1350	26-Apr-2023
45900	46000	Hazaribagh-Ranchi	LHS	1.53	1.33	1.43	940	26-Apr-2023
46000	46100	Hazaribagh-Ranchi	LHS	1.39	1.38	1.39	907	26-Apr-2023
46100	46200	Hazaribagh-Ranchi	LHS	1.77	1.9	1.84	1243	26-Apr-2023
46200	46300	Hazaribagh-Ranchi	LHS	1.82	1.39	1.61	1070	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
46300	46400	Hazaribagh-Ranchi	LHS	1.61	1.54	1.58	1048	26-Apr-2023
46400	46500	Hazaribagh-Ranchi	LHS	1.66	1.75	1.71	1145	26-Apr-2023
46500	46600	Hazaribagh-Ranchi	LHS	1.62	1.83	1.73	1160	26-Apr-2023
46600	46700	Hazaribagh-Ranchi	LHS	1.86	2.25	2.06	1412	26-Apr-2023
46700	46800	Hazaribagh-Ranchi	LHS	2.67	1.77	2.22	1539	26-Apr-2023
46800	46900	Hazaribagh-Ranchi	LHS	1.7	1.37	1.54	1018	26-Apr-2023
46900	47000	Hazaribagh-Ranchi	LHS	2.59	2.01	2.30	1601	26-Apr-2023
47000	47100	Hazaribagh-Ranchi	LHS	1.37	1.3	1.34	871	26-Apr-2023
47100	47200	Hazaribagh-Ranchi	LHS	2	1.83	1.92	1304	26-Apr-2023
47200	47300	Hazaribagh-Ranchi	LHS	1.8	1.3	1.55	1029	26-Apr-2023
47300	47400	Hazaribagh-Ranchi	LHS	2.21	1.99	2.10	1446	26-Apr-2023
47400	47500	Hazaribagh-Ranchi	LHS	1.73	1.39	1.56	1037	26-Apr-2023
47500	47600	Hazaribagh-Ranchi	LHS	1.19	1.26	1.23	791	26-Apr-2023
47600	47700	Hazaribagh-Ranchi	LHS	1.54	1.19	1.37	893	26-Apr-2023
47700	47800	Hazaribagh-Ranchi	LHS	1.94	1.68	1.81	1224	26-Apr-2023
47800	47900	Hazaribagh-Ranchi	LHS	1.63	1.97	1.80	1217	26-Apr-2023
47900	48000	Hazaribagh-Ranchi	LHS	2.92	2.88	2.90	2076	26-Apr-2023
48000	48100	Hazaribagh-Ranchi	LHS	1.9	1.91	1.91	1297	26-Apr-2023
48100	48200	Hazaribagh-Ranchi	LHS	1.86	2.62	2.24	1555	26-Apr-2023
48200	48300	Hazaribagh-Ranchi	LHS	2.36	2.12	2.24	1555	26-Apr-2023
48300	48400	Hazaribagh-Ranchi	LHS	1.94	1.55	1.75	1175	26-Apr-2023
48400	48500	Hazaribagh-Ranchi	LHS	1.69	1.99	1.84	1247	26-Apr-2023
48500	48600	Hazaribagh-Ranchi	LHS	2.17	2.09	2.13	1469	26-Apr-2023
48600	48700	Hazaribagh-Ranchi	LHS	1.14	1.3	1.22	787	26-Apr-2023
48700	48800	Hazaribagh-Ranchi	LHS	1.92	1.8	1.86	1262	26-Apr-2023
48800	48900	Hazaribagh-Ranchi	LHS	2.03	2.86	2.45	1715	26-Apr-2023
48900	49000	Hazaribagh-Ranchi	LHS	2.09	1.51	1.80	1217	26-Apr-2023
49000	49100	Hazaribagh-Ranchi	LHS	1.62	1.18	1.40	918	26-Apr-2023
49100	49200	Hazaribagh-Ranchi	LHS	1.4	1.35	1.38	900	26-Apr-2023
49200	49300	Hazaribagh-Ranchi	LHS	1.88	1.44	1.66	1111	26-Apr-2023
49300	49400	Hazaribagh-Ranchi	LHS	1.9	1.63	1.77	1190	26-Apr-2023
49400	49500	Hazaribagh-Ranchi	LHS	1.69	1.07	1.38	904	26-Apr-2023
49500	49600	Hazaribagh-Ranchi	LHS	1.56	1.24	1.40	918	26-Apr-2023
49600	49700	Hazaribagh-Ranchi	LHS	1.5	1.66	1.58	1052	26-Apr-2023
49700	49800	Hazaribagh-Ranchi	LHS	1.77	1.7	1.74	1168	26-Apr-2023
49800	49900	Hazaribagh-Ranchi	LHS	2.41	2.62	2.52	1770	26-Apr-2023
49900	50000	Hazaribagh-Ranchi	LHS	1.78	1.87	1.83	1236	26-Apr-2023
50000	50100	Hazaribagh-Ranchi	LHS	1.83	1.71	1.77	1194	26-Apr-2023
50100	50200	Hazaribagh-Ranchi	LHS	2.48	1.86	2.17	1500	26-Apr-2023
50200	50300	Hazaribagh-Ranchi	LHS	1.77	1.42	1.60	1063	26-Apr-2023
50300	50400	Hazaribagh-Ranchi	LHS	1.59	1.82	1.71	1145	26-Apr-2023
50400	50500	Hazaribagh-Ranchi	LHS	3.4	1.97	2.69	1904	26-Apr-2023
50500	50600	Hazaribagh-Ranchi	LHS	1.73	1.27	1.50	992	26-Apr-2023
50600	50700	Hazaribagh-Ranchi	LHS	1.39	1.31	1.35	882	26-Apr-2023
50700	50800	Hazaribagh-Ranchi	LHS	1.67	1.4	1.54	1018	26-Apr-2023
50800	50900	Hazaribagh-Ranchi	LHS	1.76	1.9	1.83	1240	26-Apr-2023
50900	51000	Hazaribagh-Ranchi	LHS	2.3	1.85	2.08	1427	26-Apr-2023
51000	51100	Hazaribagh-Ranchi	LHS	2.49	1.5	2.00	1365	26-Apr-2023
51100	51200	Hazaribagh-Ranchi	LHS	2.01	1.83	1.92	1308	26-Apr-2023
51200	51300	Hazaribagh-Ranchi	LHS	2.06	1.84	1.95	1331	26-Apr-2023
51300	51400	Hazaribagh-Ranchi	LHS	2.69	2.19	2.44	1711	26-Apr-2023
51400	51500	Hazaribagh-Ranchi	LHS	2.35	1.58	1.97	1342	26-Apr-2023
51500	51600	Hazaribagh-Ranchi	LHS	1.89	1.45	1.67	1119	26-Apr-2023
51600	51700	Hazaribagh-Ranchi	LHS	1.82	1.46	1.64	1096	26-Apr-2023
51700	51800	Hazaribagh-Ranchi	LHS	1.41	1.89	1.65	1104	26-Apr-2023
51800	51900	Hazaribagh-Ranchi	LHS	1.38	1.46	1.42	933	26-Apr-2023
51900	52000	Hazaribagh-Ranchi	LHS	2.41	2.79	2.60	1837	26-Apr-2023
52000	52100	Hazaribagh-Ranchi	LHS	2.22	2.05	2.14	1473	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
52100	52200	Hazaribagh-Ranchi	LHS	3.45	5.11	4.28	3210	26-Apr-2023
52200	52300	Hazaribagh-Ranchi	LHS	2.57	1.75	2.16	1493	26-Apr-2023
52300	52400	Hazaribagh-Ranchi	LHS	2.1	2	2.05	1408	26-Apr-2023
52400	52500	Hazaribagh-Ranchi	LHS	2.29	2.1	2.20	1520	26-Apr-2023
52500	52600	Hazaribagh-Ranchi	LHS	3.1	2.57	2.84	2024	26-Apr-2023
52600	52700	Hazaribagh-Ranchi	LHS	2.76	3.29	3.03	2176	26-Apr-2023
52700	52800	Hazaribagh-Ranchi	LHS	2.96	2.97	2.97	2128	26-Apr-2023
52800	52900	Hazaribagh-Ranchi	LHS	2.44	2.97	2.71	1920	26-Apr-2023
52900	53000	Hazaribagh-Ranchi	LHS	2.53	2.15	2.34	1633	26-Apr-2023
53000	53100	Hazaribagh-Ranchi	LHS	3.11	1.87	2.49	1750	26-Apr-2023
53100	53200	Hazaribagh-Ranchi	LHS	1.95	2.54	2.25	1558	26-Apr-2023
53200	53300	Hazaribagh-Ranchi	LHS	2.73	1.77	2.25	1562	26-Apr-2023
53300	53400	Hazaribagh-Ranchi	LHS	3.14	2.75	2.95	2112	26-Apr-2023
53400	53500	Hazaribagh-Ranchi	LHS	1.84	2.46	2.15	1485	26-Apr-2023
53500	53600	Hazaribagh-Ranchi	LHS	2.46	2.03	2.25	1558	26-Apr-2023
53600	53700	Hazaribagh-Ranchi	LHS	2.73	2.08	2.41	1683	26-Apr-2023
53700	53800	Hazaribagh-Ranchi	LHS	2.33	2.77	2.55	1797	26-Apr-2023
53800	53900	Hazaribagh-Ranchi	LHS	2.3	1.65	1.98	1350	26-Apr-2023
53900	54000	Hazaribagh-Ranchi	LHS	1.8	1.86	1.83	1240	26-Apr-2023
54000	54100	Hazaribagh-Ranchi	LHS	3.08	2.14	2.61	1845	26-Apr-2023
54100	54200	Hazaribagh-Ranchi	LHS	2.21	2.65	2.43	1703	26-Apr-2023
54200	54300	Hazaribagh-Ranchi	LHS	2.1	2.26	2.18	1508	26-Apr-2023
54300	54400	Hazaribagh-Ranchi	LHS	2.57	1.94	2.26	1566	26-Apr-2023
54400	54500	Hazaribagh-Ranchi	LHS	2.49	2.68	2.59	1825	26-Apr-2023
54500	54600	Hazaribagh-Ranchi	LHS	2.31	1.86	2.09	1435	26-Apr-2023
54600	54700	Hazaribagh-Ranchi	LHS	2.4	2.14	2.27	1578	26-Apr-2023
54700	54800	Hazaribagh-Ranchi	LHS	2.66	1.6	2.13	1469	26-Apr-2023
54800	54900	Hazaribagh-Ranchi	LHS	1.35	1.83	1.59	1059	26-Apr-2023
54900	55000	Hazaribagh-Ranchi	LHS	1.66	1.17	1.42	929	26-Apr-2023
55000	55100	Hazaribagh-Ranchi	LHS	1.94	1.2	1.57	1044	26-Apr-2023
55100	55200	Hazaribagh-Ranchi	LHS	2.58	2.16	2.37	1656	26-Apr-2023
55200	55300	Hazaribagh-Ranchi	LHS	2.09	2.14	2.12	1458	26-Apr-2023
55300	55400	Hazaribagh-Ranchi	LHS	3.11	2.09	2.60	1837	26-Apr-2023
55400	55500	Hazaribagh-Ranchi	LHS	3.09	2.28	2.69	1904	26-Apr-2023
55500	55600	Hazaribagh-Ranchi	LHS	3.12	3.41	3.27	2371	26-Apr-2023
55600	55700	Hazaribagh-Ranchi	LHS	2.6	2.56	2.58	1821	26-Apr-2023
55700	55800	Hazaribagh-Ranchi	LHS	2.32	2.62	2.47	1734	26-Apr-2023
55800	55900	Hazaribagh-Ranchi	LHS	2.43	1.65	2.04	1400	26-Apr-2023
55900	56000	Hazaribagh-Ranchi	LHS	2.18	1.88	2.03	1392	26-Apr-2023
56000	56100	Hazaribagh-Ranchi	LHS	2.69	1.81	2.25	1562	26-Apr-2023
56100	56200	Hazaribagh-Ranchi	LHS	1.64	2.22	1.93	1316	26-Apr-2023
56200	56300	Hazaribagh-Ranchi	LHS	1.87	1.71	1.79	1209	26-Apr-2023
56300	56400	Hazaribagh-Ranchi	LHS	1.98	1.4	1.69	1134	26-Apr-2023
56400	56500	Hazaribagh-Ranchi	LHS	3.15	2.26	2.71	1920	26-Apr-2023
56500	56600	Hazaribagh-Ranchi	LHS	1.42	1.98	1.70	1141	26-Apr-2023
56600	56700	Hazaribagh-Ranchi	LHS	1.22	1.24	1.23	794	26-Apr-2023
56700	56800	Hazaribagh-Ranchi	LHS	1.37	1.1	1.24	798	26-Apr-2023
56800	56900	Hazaribagh-Ranchi	LHS	1.31	1.52	1.42	929	26-Apr-2023
56900	57000	Hazaribagh-Ranchi	LHS	4.85	1.28	3.07	2209	26-Apr-2023
57000	57100	Hazaribagh-Ranchi	LHS	2.89	10.26	6.58	5193	26-Apr-2023
57100	57200	Hazaribagh-Ranchi	LHS	3.22	4.3	3.76	2777	26-Apr-2023
57200	57300	Hazaribagh-Ranchi	LHS	3.17	1.54	2.36	1644	26-Apr-2023
57300	57400	Hazaribagh-Ranchi	LHS	2.24	1.61	1.93	1312	26-Apr-2023
57400	57500	Hazaribagh-Ranchi	LHS	1.5	1.29	1.40	915	26-Apr-2023
57500	57600	Hazaribagh-Ranchi	LHS	2.8	1.58	2.19	1516	26-Apr-2023
57600	57700	Hazaribagh-Ranchi	LHS	3.05	2.6	2.83	2016	26-Apr-2023
57700	57800	Hazaribagh-Ranchi	LHS	2.96	3.8	3.38	2464	26-Apr-2023
57800	57900	Hazaribagh-Ranchi	LHS	5.1	2.07	3.59	2633	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
57900	58000	Hazaribagh-Ranchi	LHS	5.4	6.21	5.81	4516	26-Apr-2023
58000	58100	Hazaribagh-Ranchi	LHS	2	2.35	2.18	1504	26-Apr-2023
58100	58200	Hazaribagh-Ranchi	LHS	1.25	2.06	1.66	1108	26-Apr-2023
58200	58300	Hazaribagh-Ranchi	LHS	1.82	1.13	1.48	974	26-Apr-2023
58300	58400	Hazaribagh-Ranchi	LHS	2.12	1.8	1.96	1339	26-Apr-2023
58400	58500	Hazaribagh-Ranchi	LHS	2.84	1.35	2.10	1442	26-Apr-2023
58500	58600	Hazaribagh-Ranchi	LHS	2.21	1.53	1.87	1270	26-Apr-2023
58600	58700	Hazaribagh-Ranchi	LHS	2.13	1.97	2.05	1408	26-Apr-2023
58700	58800	Hazaribagh-Ranchi	LHS	1.82	1.52	1.67	1119	26-Apr-2023
58800	58900	Hazaribagh-Ranchi	LHS	1.88	1.58	1.73	1164	26-Apr-2023
58900	59000	Hazaribagh-Ranchi	LHS	1.85	1.45	1.65	1104	26-Apr-2023
59000	59100	Hazaribagh-Ranchi	LHS	2.09	4.3	3.20	2314	26-Apr-2023
59100	59200	Hazaribagh-Ranchi	LHS	1.52	1.53	1.53	1011	26-Apr-2023
59200	59300	Hazaribagh-Ranchi	LHS	1.44	1.27	1.36	885	26-Apr-2023
59300	59400	Hazaribagh-Ranchi	LHS	1.6	1.41	1.51	996	26-Apr-2023
59400	59500	Hazaribagh-Ranchi	LHS	2.11	2.48	2.30	1597	26-Apr-2023
59500	59600	Hazaribagh-Ranchi	LHS	2.61	1.47	2.04	1400	26-Apr-2023
59600	59700	Hazaribagh-Ranchi	LHS	1.24	0.79	1.02	641	26-Apr-2023
59700	59800	Hazaribagh-Ranchi	LHS	1.11	1.11	1.11	708	26-Apr-2023
59800	59900	Hazaribagh-Ranchi	LHS	1.56	1.1	1.33	867	26-Apr-2023
59900	60000	Hazaribagh-Ranchi	LHS	1.42	7.97	4.70	3561	26-Apr-2023
60000	60100	Hazaribagh-Ranchi	LHS	0.94	7.13	4.04	3005	26-Apr-2023
60100	60200	Hazaribagh-Ranchi	LHS	1.61	1.53	1.57	1044	26-Apr-2023
60200	60300	Hazaribagh-Ranchi	LHS	1.89	1.1	1.50	988	26-Apr-2023
60300	60400	Hazaribagh-Ranchi	LHS	1.45	1.37	1.41	926	26-Apr-2023
60400	60500	Hazaribagh-Ranchi	LHS	1.86	1.54	1.70	1141	26-Apr-2023
60500	60600	Hazaribagh-Ranchi	LHS	2	1.78	1.89	1285	26-Apr-2023
60600	60700	Hazaribagh-Ranchi	LHS	1.43	1.37	1.40	918	26-Apr-2023
60700	60800	Hazaribagh-Ranchi	LHS	1.68	2.53	2.11	1450	26-Apr-2023
60800	60900	Hazaribagh-Ranchi	LHS	2.15	7.4	4.78	3629	26-Apr-2023
60900	61000	Hazaribagh-Ranchi	LHS	3.26	1.6	2.43	1703	26-Apr-2023
61000	61100	Hazaribagh-Ranchi	LHS	2.85	1.5	2.18	1504	26-Apr-2023
61100	61200	Hazaribagh-Ranchi	LHS	1.69	2.51	2.10	1446	26-Apr-2023
61200	61300	Hazaribagh-Ranchi	LHS	2.19	2.82	2.51	1762	26-Apr-2023
61300	61400	Hazaribagh-Ranchi	LHS	1.94	1.74	1.84	1247	26-Apr-2023
61400	61500	Hazaribagh-Ranchi	LHS	2.26	1.36	1.81	1224	26-Apr-2023
61500	61600	Hazaribagh-Ranchi	LHS	2	1.36	1.68	1126	26-Apr-2023
61600	61700	Hazaribagh-Ranchi	LHS	1.74	2.27	2.01	1373	26-Apr-2023
61700	61800	Hazaribagh-Ranchi	LHS	2.21	5.87	4.04	3009	26-Apr-2023
61800	61900	Hazaribagh-Ranchi	LHS	7.08	2.05	4.57	3451	26-Apr-2023
61900	62000	Hazaribagh-Ranchi	LHS	2.77	1.17	1.97	1346	26-Apr-2023
62000	62100	Hazaribagh-Ranchi	LHS	1.89	1.26	1.58	1048	26-Apr-2023
62100	62200	Hazaribagh-Ranchi	LHS	2.12	1.01	1.57	1040	26-Apr-2023
62200	62300	Hazaribagh-Ranchi	LHS	2.34	1.3	1.82	1232	26-Apr-2023
62300	62400	Hazaribagh-Ranchi	LHS	1.66	1.31	1.49	981	26-Apr-2023
62400	62500	Hazaribagh-Ranchi	LHS	1.56	1.03	1.30	842	26-Apr-2023
62500	62600	Hazaribagh-Ranchi	LHS	1.22	0.87	1.05	662	26-Apr-2023
62600	62700	Hazaribagh-Ranchi	LHS	0.94	1.1	1.02	644	26-Apr-2023
62700	62800	Hazaribagh-Ranchi	LHS	1.17	1.32	1.25	805	26-Apr-2023
62800	62900	Hazaribagh-Ranchi	LHS	1.45	1.17	1.31	852	26-Apr-2023
62900	63000	Hazaribagh-Ranchi	LHS	2.73	1.1	1.92	1304	26-Apr-2023
63000	63100	Hazaribagh-Ranchi	LHS	4.66	2.24	3.45	2522	26-Apr-2023
63100	63200	Hazaribagh-Ranchi	LHS	2.8	2.3	2.55	1797	26-Apr-2023
63200	63300	Hazaribagh-Ranchi	LHS	1.92	1.81	1.87	1266	26-Apr-2023
63300	63400	Hazaribagh-Ranchi	LHS	1.53	1.95	1.74	1172	26-Apr-2023
63400	63500	Hazaribagh-Ranchi	LHS	1.74	1.63	1.69	1130	26-Apr-2023
63500	63600	Hazaribagh-Ranchi	LHS	1.93	1.8	1.87	1266	26-Apr-2023
63600	63700	Hazaribagh-Ranchi	LHS	2.65	1.97	2.31	1609	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
63700	63800	Hazaribagh-Ranchi	LHS	2.26	2.18	2.22	1539	26-Apr-2023
63800	63900	Hazaribagh-Ranchi	LHS	3.17	1.62	2.40	1676	26-Apr-2023
63900	64000	Hazaribagh-Ranchi	LHS	1.69	2.63	2.16	1493	26-Apr-2023
64000	64100	Hazaribagh-Ranchi	LHS	2.65	2.62	2.64	1865	26-Apr-2023
64100	64200	Hazaribagh-Ranchi	LHS	2.43	1.81	2.12	1462	26-Apr-2023
64200	64300	Hazaribagh-Ranchi	LHS	1.89	1.79	1.84	1247	26-Apr-2023
64300	64400	Hazaribagh-Ranchi	LHS	2.05	1.96	2.01	1373	26-Apr-2023
64400	64500	Hazaribagh-Ranchi	LHS	2.36	1.87	2.12	1458	26-Apr-2023
64500	64600	Hazaribagh-Ranchi	LHS	2.06	2.5	2.28	1586	26-Apr-2023
64600	64700	Hazaribagh-Ranchi	LHS	2.41	2.59	2.50	1758	26-Apr-2023
64700	64800	Hazaribagh-Ranchi	LHS	2.54	1.77	2.16	1489	26-Apr-2023
64800	64900	Hazaribagh-Ranchi	LHS	2.03	2.01	2.02	1385	26-Apr-2023
64900	65000	Hazaribagh-Ranchi	LHS	3.94	2.34	3.14	2269	26-Apr-2023
65000	65100	Hazaribagh-Ranchi	LHS	1.6	2.74	2.17	1500	26-Apr-2023
65100	65200	Hazaribagh-Ranchi	LHS	2.4	1.67	2.04	1396	26-Apr-2023
65200	65300	Hazaribagh-Ranchi	LHS	2.29	2.68	2.49	1746	26-Apr-2023
65300	65400	Hazaribagh-Ranchi	LHS	2.01	2.34	2.18	1504	26-Apr-2023
65400	65500	Hazaribagh-Ranchi	LHS	2.48	2.55	2.52	1770	26-Apr-2023
65500	65600	Hazaribagh-Ranchi	LHS	4.3	2.44	3.37	2456	26-Apr-2023
65600	65700	Hazaribagh-Ranchi	LHS	1.86	1.68	1.77	1194	26-Apr-2023
65700	65800	Hazaribagh-Ranchi	LHS	1.91	2.22	2.07	1419	26-Apr-2023
65800	65900	Hazaribagh-Ranchi	LHS	1.77	1.97	1.87	1270	26-Apr-2023
65900	66000	Hazaribagh-Ranchi	LHS	2.37	2.06	2.22	1535	26-Apr-2023
66000	66100	Hazaribagh-Ranchi	LHS	2.6	2.11	2.36	1644	26-Apr-2023
66100	66200	Hazaribagh-Ranchi	LHS	2.43	1.93	2.18	1508	26-Apr-2023
66200	66300	Hazaribagh-Ranchi	LHS	3.62	2.37	3.00	2152	26-Apr-2023
66300	66400	Hazaribagh-Ranchi	LHS	2.09	2.19	2.14	1477	26-Apr-2023
66400	66500	Hazaribagh-Ranchi	LHS	1.63	1.37	1.50	992	26-Apr-2023
66500	66600	Hazaribagh-Ranchi	LHS	1.35	1.37	1.36	889	26-Apr-2023
66600	66700	Hazaribagh-Ranchi	LHS	1.9	1.91	1.91	1297	26-Apr-2023
66700	66800	Hazaribagh-Ranchi	LHS	1.03	1.15	1.09	694	26-Apr-2023
66800	66900	Hazaribagh-Ranchi	LHS	1.91	1.46	1.69	1130	26-Apr-2023
66900	67000	Hazaribagh-Ranchi	LHS	2.72	1.95	2.34	1629	26-Apr-2023
67000	67100	Hazaribagh-Ranchi	LHS	2.14	1.67	1.91	1297	26-Apr-2023
67100	67200	Hazaribagh-Ranchi	LHS	1.74	1.58	1.66	1111	26-Apr-2023
67200	67300	Hazaribagh-Ranchi	LHS	2.75	1.87	2.31	1609	26-Apr-2023
67300	67400	Hazaribagh-Ranchi	LHS	1.8	1.79	1.80	1213	26-Apr-2023
67400	67500	Hazaribagh-Ranchi	LHS	2.97	2.38	2.68	1896	26-Apr-2023
67500	67600	Hazaribagh-Ranchi	LHS	2.96	2.87	2.92	2088	26-Apr-2023
67600	67700	Hazaribagh-Ranchi	LHS	3.41	2.52	2.97	2128	26-Apr-2023
67700	67800	Hazaribagh-Ranchi	LHS	3.18	3.43	3.31	2403	26-Apr-2023
67800	67900	Hazaribagh-Ranchi	LHS	1.71	1.58	1.65	1100	26-Apr-2023
67900	68000	Hazaribagh-Ranchi	LHS	3.27	2.07	2.67	1892	26-Apr-2023
68000	68100	Hazaribagh-Ranchi	LHS	2.29	2.07	2.18	1508	26-Apr-2023
68100	68200	Hazaribagh-Ranchi	LHS	2.65	2.44	2.55	1794	26-Apr-2023
68200	68300	Hazaribagh-Ranchi	LHS	1.96	2.15	2.06	1412	26-Apr-2023
68300	68400	Hazaribagh-Ranchi	LHS	3.23	2.34	2.79	1984	26-Apr-2023
68400	68500	Hazaribagh-Ranchi	LHS	2.18	2.74	2.46	1727	26-Apr-2023
68500	68600	Hazaribagh-Ranchi	LHS	3.94	2.43	3.19	2306	26-Apr-2023
68600	68700	Hazaribagh-Ranchi	LHS	2.49	2.25	2.37	1656	26-Apr-2023
68700	68800	Hazaribagh-Ranchi	LHS	2.36	2.18	2.27	1578	26-Apr-2023
68800	68900	Hazaribagh-Ranchi	LHS	2.56	2.11	2.34	1629	26-Apr-2023
68900	69000	Hazaribagh-Ranchi	LHS	2.07	2.2	2.14	1473	26-Apr-2023
69000	69100	Hazaribagh-Ranchi	LHS	1.22	1.07	1.15	733	26-Apr-2023
69100	69200	Hazaribagh-Ranchi	LHS	1.27	1.21	1.24	802	26-Apr-2023
69200	69300	Hazaribagh-Ranchi	LHS	1.25	1.14	1.20	769	26-Apr-2023
69300	69400	Hazaribagh-Ranchi	LHS	3.85	1.08	2.47	1731	26-Apr-2023
69400	69500	Hazaribagh-Ranchi	LHS	1.45	1.24	1.35	878	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
69500	69600	Hazaribagh-Ranchi	LHS	1.8	1.29	1.55	1026	26-Apr-2023
69600	69700	Hazaribagh-Ranchi	LHS	1.59	0.95	1.27	823	26-Apr-2023
69700	69800	Hazaribagh-Ranchi	LHS	2.26	1	1.63	1089	26-Apr-2023
69800	69900	Hazaribagh-Ranchi	LHS	1.81	2.43	2.12	1462	26-Apr-2023
69900	70000	Hazaribagh-Ranchi	LHS	1.96	1.59	1.78	1198	26-Apr-2023
70000	70100	Hazaribagh-Ranchi	LHS	3.02	2.37	2.70	1912	26-Apr-2023
70100	70200	Hazaribagh-Ranchi	LHS	2.75	1.95	2.35	1640	26-Apr-2023
70200	70300	Hazaribagh-Ranchi	LHS	2.42	2.31	2.37	1652	26-Apr-2023
70300	70400	Hazaribagh-Ranchi	LHS	2.6	2.19	2.40	1676	26-Apr-2023
70400	70500	Hazaribagh-Ranchi	LHS	2.33	2.78	2.56	1801	26-Apr-2023
70500	70600	Hazaribagh-Ranchi	LHS	2	1.94	1.97	1346	26-Apr-2023
70600	70700	Hazaribagh-Ranchi	LHS	2.07	1.91	1.99	1362	26-Apr-2023
70700	70800	Hazaribagh-Ranchi	LHS	2.18	2	2.09	1438	26-Apr-2023
70800	70900	Hazaribagh-Ranchi	LHS	3.17	2.07	2.62	1853	26-Apr-2023
70900	71000	Hazaribagh-Ranchi	LHS	3.43	2.72	3.08	2217	26-Apr-2023
71000	71100	Hazaribagh-Ranchi	LHS	2.87	2.51	2.69	1908	26-Apr-2023
71100	71200	Hazaribagh-Ranchi	LHS	5.72	3.23	4.48	3375	26-Apr-2023
71200	71300	Hazaribagh-Ranchi	LHS	6.5	8.16	7.33	5865	26-Apr-2023
71300	71400	Hazaribagh-Ranchi	LHS	2.25	2.06	2.16	1489	26-Apr-2023
71400	71500	Hazaribagh-Ranchi	LHS	2.05	1.69	1.87	1270	26-Apr-2023
71500	71600	Hazaribagh-Ranchi	LHS	2.24	2.29	2.27	1574	26-Apr-2023
71600	71700	Hazaribagh-Ranchi	LHS	3.65	1.8	2.73	1936	26-Apr-2023
71700	71800	Hazaribagh-Ranchi	LHS	4.6	2.93	3.77	2781	26-Apr-2023
71800	71900	Hazaribagh-Ranchi	LHS	2.68	2.15	2.42	1691	26-Apr-2023
71900	72000	Hazaribagh-Ranchi	LHS	2.03	5.44	3.74	2756	26-Apr-2023
72000	72100	Hazaribagh-Ranchi	LHS	4.9	6.05	5.48	4230	26-Apr-2023
72100	72200	Hazaribagh-Ranchi	LHS	2.78	2.44	2.61	1845	26-Apr-2023
72200	72300	Hazaribagh-Ranchi	LHS	3.94	3.17	3.56	2608	26-Apr-2023
72300	72400	Hazaribagh-Ranchi	LHS	2.65	2.6	2.63	1857	26-Apr-2023
72400	72500	Hazaribagh-Ranchi	LHS	2.52	3.27	2.90	2072	26-Apr-2023
72500	72600	Hazaribagh-Ranchi	LHS	2.71	2.82	2.77	1968	26-Apr-2023
72600	72700	Hazaribagh-Ranchi	LHS	2.43	2.14	2.29	1590	26-Apr-2023
72700	72800	Hazaribagh-Ranchi	LHS	4.5	3.36	3.93	2918	26-Apr-2023
72800	72900	Hazaribagh-Ranchi	LHS	2.12	2.73	2.43	1699	26-Apr-2023
72900	73000	Hazaribagh-Ranchi	LHS	3.18	2.58	2.88	2060	26-Apr-2023
73000	73100	Hazaribagh-Ranchi	LHS	2.37	2.39	2.38	1664	26-Apr-2023
73100	73200	Hazaribagh-Ranchi	LHS	1.62	1.49	1.56	1033	26-Apr-2023
73200	73300	Hazaribagh-Ranchi	LHS	1.4	1.73	1.57	1040	26-Apr-2023
73300	73400	Hazaribagh-Ranchi	LHS	1.38	1.29	1.34	871	26-Apr-2023
73400	73500	Hazaribagh-Ranchi	LHS	1.57	1.64	1.61	1070	26-Apr-2023
73500	73600	Hazaribagh-Ranchi	LHS	2.83	2.18	2.51	1762	26-Apr-2023
73600	73700	Hazaribagh-Ranchi	LHS	2.95	2.82	2.89	2064	26-Apr-2023
73700	73800	Hazaribagh-Ranchi	LHS	2.42	2.51	2.47	1731	26-Apr-2023
73800	73900	Hazaribagh-Ranchi	LHS	2.43	2.08	2.26	1566	26-Apr-2023
73900	74000	Hazaribagh-Ranchi	LHS	1.43	2.1	1.77	1190	26-Apr-2023
74000	74100	Hazaribagh-Ranchi	LHS	1.5	1.42	1.46	963	26-Apr-2023
74100	74200	Hazaribagh-Ranchi	LHS	2.26	1.67	1.97	1342	26-Apr-2023
74200	74300	Hazaribagh-Ranchi	LHS	3.57	3.07	3.32	2416	26-Apr-2023
74300	74400	Hazaribagh-Ranchi	LHS	2.81	2.8	2.81	2000	26-Apr-2023
74400	74500	Hazaribagh-Ranchi	LHS	5.01	4.58	4.80	3646	26-Apr-2023
74500	74600	Hazaribagh-Ranchi	LHS	2.93	3.71	3.32	2416	26-Apr-2023
74600	74700	Hazaribagh-Ranchi	LHS	2.2	2.32	2.26	1570	26-Apr-2023
74700	74800	Hazaribagh-Ranchi	LHS	1.73	1.53	1.63	1089	26-Apr-2023
74800	74900	Hazaribagh-Ranchi	LHS	2.16	2.07	2.12	1458	26-Apr-2023
74900	75000	Hazaribagh-Ranchi	LHS	2.43	2.69	2.56	1805	26-Apr-2023
75000	75100	Hazaribagh-Ranchi	LHS	2.74	2.23	2.49	1746	26-Apr-2023
75100	75200	Hazaribagh-Ranchi	LHS	2.33	1.97	2.15	1485	26-Apr-2023
75200	75300	Hazaribagh-Ranchi	LHS	2.46	2.22	2.34	1633	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
75300	75400	Hazaribagh-Ranchi	LHS	2.27	2.49	2.38	1664	26-Apr-2023
75400	75500	Hazaribagh-Ranchi	LHS	1.48	1.12	1.30	845	26-Apr-2023
75500	75600	Hazaribagh-Ranchi	LHS	1.75	1.72	1.74	1168	26-Apr-2023
75600	75700	Hazaribagh-Ranchi	LHS	3.06	2.07	2.57	1809	26-Apr-2023
75700	75800	Hazaribagh-Ranchi	LHS	2.57	2.36	2.47	1731	26-Apr-2023
75800	75900	Hazaribagh-Ranchi	LHS	2.35	2.01	2.18	1508	26-Apr-2023
75900	76000	Hazaribagh-Ranchi	LHS	2.22	2	2.11	1454	26-Apr-2023
76000	76100	Hazaribagh-Ranchi	LHS	3.13	2.23	2.68	1900	26-Apr-2023
76100	76200	Hazaribagh-Ranchi	LHS	2.95	3.08	3.02	2168	26-Apr-2023
76200	76300	Hazaribagh-Ranchi	LHS	2.17	2.27	2.22	1539	26-Apr-2023
76300	76400	Hazaribagh-Ranchi	LHS	3.22	2.17	2.70	1912	26-Apr-2023
76400	76500	Hazaribagh-Ranchi	LHS	5.25	4.86	5.06	3868	26-Apr-2023
76500	76600	Hazaribagh-Ranchi	LHS	2.68	2.64	2.66	1885	26-Apr-2023
76600	76700	Hazaribagh-Ranchi	LHS	3.92	2.44	3.18	2302	26-Apr-2023
76700	76800	Hazaribagh-Ranchi	LHS	2.88	3.36	3.12	2253	26-Apr-2023
76800	76900	Hazaribagh-Ranchi	LHS	1.83	1.5	1.67	1115	26-Apr-2023
76900	77000	Hazaribagh-Ranchi	LHS	2.17	2.46	2.32	1613	26-Apr-2023
77000	77100	Hazaribagh-Ranchi	LHS	2.71	2.44	2.58	1817	26-Apr-2023
77100	77200	Hazaribagh-Ranchi	LHS	2.03	1.95	1.99	1362	26-Apr-2023
77200	77300	Hazaribagh-Ranchi	LHS	2.63	2.2	2.42	1691	26-Apr-2023
77300	77400	Hazaribagh-Ranchi	LHS	2.38	2.05	2.22	1535	26-Apr-2023
77400	77500	Hazaribagh-Ranchi	LHS	2.11	1.4	1.76	1183	26-Apr-2023
77500	77600	Hazaribagh-Ranchi	LHS	1.98	1.78	1.88	1278	26-Apr-2023
77600	77700	Hazaribagh-Ranchi	LHS	2.9	1.86	2.38	1664	26-Apr-2023
77700	77800	Hazaribagh-Ranchi	LHS	1.88	1.8	1.84	1247	26-Apr-2023
77800	77900	Hazaribagh-Ranchi	LHS	2.46	2.11	2.29	1590	26-Apr-2023
77900	78000	Hazaribagh-Ranchi	LHS	1.52	1.89	1.71	1145	26-Apr-2023
78000	78100	Hazaribagh-Ranchi	LHS	1.39	1.4	1.40	915	26-Apr-2023
78100	78200	Hazaribagh-Ranchi	LHS	1.74	1.52	1.63	1089	26-Apr-2023
78200	78300	Hazaribagh-Ranchi	LHS	2.08	1.94	2.01	1377	26-Apr-2023
78300	78400	Hazaribagh-Ranchi	LHS	1.67	1.41	1.54	1022	26-Apr-2023
78400	78500	Hazaribagh-Ranchi	LHS	1.67	1.38	1.53	1011	26-Apr-2023
78500	78600	Hazaribagh-Ranchi	LHS	1.6	1.57	1.59	1055	26-Apr-2023
78600	78700	Hazaribagh-Ranchi	LHS	1.67	1.65	1.66	1111	26-Apr-2023
78700	78800	Hazaribagh-Ranchi	LHS	2.03	1.66	1.85	1251	26-Apr-2023
78800	78900	Hazaribagh-Ranchi	LHS	2.73	2.06	2.40	1676	26-Apr-2023
78900	79000	Hazaribagh-Ranchi	LHS	1.72	2.07	1.90	1289	26-Apr-2023
79000	79100	Hazaribagh-Ranchi	LHS	1.84	1.75	1.80	1213	26-Apr-2023
79100	79200	Hazaribagh-Ranchi	LHS	2.09	1.85	1.97	1346	26-Apr-2023
79200	79300	Hazaribagh-Ranchi	LHS	1.58	1.44	1.51	1000	26-Apr-2023
79300	79400	Hazaribagh-Ranchi	LHS	1.64	1.32	1.48	977	26-Apr-2023
79400	79500	Hazaribagh-Ranchi	LHS	1.8	1.35	1.58	1048	26-Apr-2023
79500	79600	Hazaribagh-Ranchi	LHS	1.38	1.5	1.44	948	26-Apr-2023
79600	79700	Hazaribagh-Ranchi	LHS	2.43	1.79	2.11	1454	26-Apr-2023
79700	79800	Hazaribagh-Ranchi	LHS	1.56	1.46	1.51	1000	26-Apr-2023
79800	79900	Hazaribagh-Ranchi	LHS	1.58	1.44	1.51	1000	26-Apr-2023
79900	80000	Hazaribagh-Ranchi	LHS	1.84	1.63	1.74	1168	26-Apr-2023
80000	80100	Hazaribagh-Ranchi	LHS	1.69	1.95	1.82	1232	26-Apr-2023
80100	80200	Hazaribagh-Ranchi	LHS	2.05	1.58	1.82	1228	26-Apr-2023
80200	80300	Hazaribagh-Ranchi	LHS	1.92	1.23	1.58	1048	26-Apr-2023
80300	80400	Hazaribagh-Ranchi	LHS	1.55	1.36	1.46	959	26-Apr-2023
80400	80500	Hazaribagh-Ranchi	LHS	2.03	1.63	1.83	1240	26-Apr-2023
80500	80600	Hazaribagh-Ranchi	LHS	2.66	2.28	2.47	1734	26-Apr-2023
80600	80700	Hazaribagh-Ranchi	LHS	2.53	1.64	2.09	1435	26-Apr-2023
80700	80800	Hazaribagh-Ranchi	LHS	4.92	5.06	4.99	3813	26-Apr-2023
80800	80900	Hazaribagh-Ranchi	LHS	2.77	2.2	2.49	1746	26-Apr-2023
80900	81000	Hazaribagh-Ranchi	LHS	1.95	1.87	1.91	1300	26-Apr-2023
81000	81100	Hazaribagh-Ranchi	LHS	1.9	1.48	1.69	1134	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
81100	81200	Hazaribagh-Ranchi	LHS	1.97	1.76	1.87	1266	26-Apr-2023
81200	81300	Hazaribagh-Ranchi	LHS	2.17	1.44	1.81	1221	26-Apr-2023
81300	81400	Hazaribagh-Ranchi	LHS	2.17	3.21	2.69	1908	26-Apr-2023
81400	81500	Hazaribagh-Ranchi	LHS	1.94	1.22	1.58	1052	26-Apr-2023
81500	81600	Hazaribagh-Ranchi	LHS	1.46	2.58	2.02	1385	26-Apr-2023
81600	81700	Hazaribagh-Ranchi	LHS	1.23	2.8	2.02	1381	26-Apr-2023
81700	81800	Hazaribagh-Ranchi	LHS	3.38	1.82	2.60	1837	26-Apr-2023
81800	81900	Hazaribagh-Ranchi	LHS	2.97	1.24	2.11	1450	26-Apr-2023
81900	82000	Hazaribagh-Ranchi	LHS	2.19	1.8	2.00	1365	26-Apr-2023
82000	82100	Hazaribagh-Ranchi	LHS	1.17	1.9	1.54	1018	26-Apr-2023
82100	82200	Hazaribagh-Ranchi	LHS	2.03	2.1	2.07	1419	26-Apr-2023
82200	82300	Hazaribagh-Ranchi	LHS	1.82	2.64	2.23	1547	26-Apr-2023
82300	82400	Hazaribagh-Ranchi	LHS	2.06	1.24	1.65	1104	26-Apr-2023
82400	82500	Hazaribagh-Ranchi	LHS	1.54	2.21	1.88	1274	26-Apr-2023
82500	82600	Hazaribagh-Ranchi	LHS	2.67	1.24	1.96	1335	26-Apr-2023
82600	82700	Hazaribagh-Ranchi	LHS	2.11	1.21	1.66	1111	26-Apr-2023
82700	82800	Hazaribagh-Ranchi	LHS	1.33	1.46	1.40	915	26-Apr-2023
82800	82900	Hazaribagh-Ranchi	LHS	1.44	2.07	1.76	1183	26-Apr-2023
82900	83000	Hazaribagh-Ranchi	LHS	1.91	1.92	1.92	1304	26-Apr-2023
83000	83100	Hazaribagh-Ranchi	LHS	2.03	2.41	2.22	1539	26-Apr-2023
83100	83200	Hazaribagh-Ranchi	LHS	2.43	2.35	2.39	1672	26-Apr-2023
83200	83300	Hazaribagh-Ranchi	LHS	2.37	2.28	2.33	1621	26-Apr-2023
83300	83400	Hazaribagh-Ranchi	LHS	2.48	3.04	2.76	1964	26-Apr-2023
83400	83500	Hazaribagh-Ranchi	LHS	1.9	2.34	2.12	1462	26-Apr-2023
83500	83600	Hazaribagh-Ranchi	LHS	3.69	1.79	2.74	1948	26-Apr-2023
83600	83700	Hazaribagh-Ranchi	LHS	2.66	1.76	2.21	1531	26-Apr-2023
83700	83800	Hazaribagh-Ranchi	LHS	2.62	1.81	2.22	1535	26-Apr-2023
83800	83900	Hazaribagh-Ranchi	LHS	2.59	1.82	2.21	1527	26-Apr-2023
83900	84000	Hazaribagh-Ranchi	LHS	2.3	1.87	2.09	1435	26-Apr-2023
84000	84100	Hazaribagh-Ranchi	LHS	1.99	1.3	1.65	1100	26-Apr-2023
84100	84200	Hazaribagh-Ranchi	LHS	0.97	1.59	1.28	831	26-Apr-2023
84200	84300	Hazaribagh-Ranchi	LHS	1.49	1.94	1.72	1153	26-Apr-2023
84300	84400	Hazaribagh-Ranchi	LHS	1.93	2.13	2.03	1392	26-Apr-2023
84400	84500	Hazaribagh-Ranchi	LHS	2.77	1.61	2.19	1516	26-Apr-2023
84500	84600	Hazaribagh-Ranchi	LHS	1.29	1.62	1.46	959	26-Apr-2023
84600	84700	Hazaribagh-Ranchi	LHS	1.65	3.24	2.45	1715	26-Apr-2023
84700	84800	Hazaribagh-Ranchi	LHS	3.09	1.91	2.50	1758	26-Apr-2023
84800	84900	Hazaribagh-Ranchi	LHS	2.95	1.71	2.33	1625	26-Apr-2023
84900	85000	Hazaribagh-Ranchi	LHS	2.39	1.59	1.99	1362	26-Apr-2023
85000	85100	Hazaribagh-Ranchi	LHS	2.41	1.67	2.04	1400	26-Apr-2023
85100	85200	Hazaribagh-Ranchi	LHS	1.93	2.13	2.03	1392	26-Apr-2023
85200	85300	Hazaribagh-Ranchi	LHS	2.65	1.59	2.12	1462	26-Apr-2023
85300	85400	Hazaribagh-Ranchi	LHS	1.73	2.1	1.92	1304	26-Apr-2023
85400	85500	Hazaribagh-Ranchi	LHS	2.05	2.01	2.03	1392	26-Apr-2023
85500	85600	Hazaribagh-Ranchi	LHS	4.32	3.86	4.09	3051	26-Apr-2023
85600	85700	Hazaribagh-Ranchi	LHS	5.55	2.42	3.99	2964	26-Apr-2023
85700	85800	Hazaribagh-Ranchi	LHS	3.5	3.59	3.55	2600	26-Apr-2023
85800	85900	Hazaribagh-Ranchi	LHS	4.76	2.57	3.67	2698	26-Apr-2023
85900	86000	Hazaribagh-Ranchi	LHS	3.61	2.16	2.89	2064	26-Apr-2023
86000	86100	Hazaribagh-Ranchi	LHS	2.72	1.81	2.27	1574	26-Apr-2023
86100	86200	Hazaribagh-Ranchi	LHS	2.43	1.96	2.20	1520	26-Apr-2023
86200	86300	Hazaribagh-Ranchi	LHS	2.17	1.86	2.02	1381	26-Apr-2023
86300	86400	Hazaribagh-Ranchi	LHS	2.13	1.86	2.00	1365	26-Apr-2023
86400	86500	Hazaribagh-Ranchi	LHS	2.18	1.65	1.92	1304	26-Apr-2023
86500	86600	Hazaribagh-Ranchi	LHS	1.92	2.06	1.99	1362	26-Apr-2023
86600	86700	Hazaribagh-Ranchi	LHS	3.24	1.3	2.27	1578	26-Apr-2023
86700	86800	Hazaribagh-Ranchi	LHS	1.99	1.3	1.65	1100	26-Apr-2023
86800	86900	Hazaribagh-Ranchi	LHS	1.6	2.16	1.88	1278	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
86900	87000	Hazaribagh-Ranchi	LHS	2.75	1.84	2.30	1597	26-Apr-2023
87000	87100	Hazaribagh-Ranchi	LHS	2.51	1.66	2.09	1435	26-Apr-2023
87100	87200	Hazaribagh-Ranchi	LHS	1.71	1.51	1.61	1074	26-Apr-2023
87200	87300	Hazaribagh-Ranchi	LHS	1.87	1.67	1.77	1194	26-Apr-2023
87300	87400	Hazaribagh-Ranchi	LHS	2.26	1.84	2.05	1408	26-Apr-2023
87400	87500	Hazaribagh-Ranchi	LHS	2.11	1.71	1.91	1300	26-Apr-2023
87500	87600	Hazaribagh-Ranchi	LHS	3.12	1.87	2.50	1754	26-Apr-2023
87600	87700	Hazaribagh-Ranchi	LHS	2.71	2.53	2.62	1853	26-Apr-2023
87700	87800	Hazaribagh-Ranchi	LHS	2.35	2.55	2.45	1719	26-Apr-2023
87800	87900	Hazaribagh-Ranchi	LHS	2.95	1.5	2.23	1543	26-Apr-2023
87900	88000	Hazaribagh-Ranchi	LHS	2.03	1.92	1.98	1350	26-Apr-2023
88000	88100	Hazaribagh-Ranchi	LHS	1.86	2.04	1.95	1331	26-Apr-2023
88100	88200	Hazaribagh-Ranchi	LHS	2.53	1.74	2.14	1473	26-Apr-2023
88200	88300	Hazaribagh-Ranchi	LHS	1.69	1.92	1.81	1221	26-Apr-2023
88300	88400	Hazaribagh-Ranchi	LHS	2.16	2.01	2.09	1435	26-Apr-2023
88400	88500	Hazaribagh-Ranchi	LHS	2.3	3.13	2.72	1928	26-Apr-2023
88500	88600	Hazaribagh-Ranchi	LHS	3.5	1.77	2.64	1865	26-Apr-2023
88600	88700	Hazaribagh-Ranchi	LHS	3.34	2.16	2.75	1956	26-Apr-2023
88700	88800	Hazaribagh-Ranchi	LHS	1.77	1.46	1.62	1078	26-Apr-2023
88800	88900	Hazaribagh-Ranchi	LHS	1.83	2.14	1.99	1358	26-Apr-2023
88900	89000	Hazaribagh-Ranchi	LHS	2.04	1.44	1.74	1172	26-Apr-2023
89000	89100	Hazaribagh-Ranchi	LHS	2.14	2.53	2.34	1629	26-Apr-2023
89100	89200	Hazaribagh-Ranchi	LHS	1.73	1.59	1.66	1111	26-Apr-2023
89200	89300	Hazaribagh-Ranchi	LHS	1.84	2.13	1.99	1358	26-Apr-2023
89300	89400	Hazaribagh-Ranchi	LHS	1.55	1.73	1.64	1096	26-Apr-2023
89400	89500	Hazaribagh-Ranchi	LHS	2.08	1.96	2.02	1385	26-Apr-2023
89500	89600	Hazaribagh-Ranchi	LHS	2.66	3.19	2.93	2096	26-Apr-2023
89600	89700	Hazaribagh-Ranchi	LHS	2.43	3.07	2.75	1956	26-Apr-2023
89700	89800	Hazaribagh-Ranchi	LHS	2.31	2.74	2.53	1778	26-Apr-2023
89800	89900	Hazaribagh-Ranchi	LHS	2.49	3.41	2.95	2116	26-Apr-2023
89900	90000	Hazaribagh-Ranchi	LHS	3.57	7.22	5.40	4161	26-Apr-2023
90000	90100	Hazaribagh-Ranchi	LHS	6.12	3.51	4.82	3663	26-Apr-2023
90100	90200	Hazaribagh-Ranchi	LHS	3.53	2.89	3.21	2326	26-Apr-2023
90200	90300	Hazaribagh-Ranchi	LHS	5.66	1.83	3.75	2764	26-Apr-2023
90300	90400	Hazaribagh-Ranchi	LHS	1.72	1.54	1.63	1089	26-Apr-2023
90400	90500	Hazaribagh-Ranchi	LHS	2.06	1.94	2.00	1369	26-Apr-2023
90500	90600	Hazaribagh-Ranchi	LHS	2.41	2.26	2.34	1629	26-Apr-2023
90600	90700	Hazaribagh-Ranchi	LHS	3.41	3.13	3.27	2375	26-Apr-2023
90700	90800	Hazaribagh-Ranchi	LHS	3.3	1.36	2.33	1625	26-Apr-2023
90800	90900	Hazaribagh-Ranchi	LHS	2.03	1.71	1.87	1270	26-Apr-2023
90900	91000	Hazaribagh-Ranchi	LHS	1.81	2.46	2.14	1473	26-Apr-2023
91000	91100	Hazaribagh-Ranchi	LHS	2.05	2.37	2.21	1531	26-Apr-2023
91100	91200	Hazaribagh-Ranchi	LHS	2.35	1.48	1.92	1304	26-Apr-2023
91200	91300	Hazaribagh-Ranchi	LHS	1.89	2.1	2.00	1365	26-Apr-2023
91300	91400	Hazaribagh-Ranchi	LHS	2.84	1.97	2.41	1683	26-Apr-2023
91400	91500	Hazaribagh-Ranchi	LHS	2.35	2.31	2.33	1625	26-Apr-2023
91500	91600	Hazaribagh-Ranchi	LHS	2.14	1.34	1.74	1172	26-Apr-2023
91600	91700	Hazaribagh-Ranchi	LHS	2.86	4	3.43	2505	26-Apr-2023
91700	91800	Hazaribagh-Ranchi	LHS	3.04	3.08	3.06	2205	26-Apr-2023
91800	91900	Hazaribagh-Ranchi	LHS	2.82	3.02	2.92	2092	26-Apr-2023
91900	92000	Hazaribagh-Ranchi	LHS	2.53	2.72	2.63	1857	26-Apr-2023
92000	92100	Hazaribagh-Ranchi	LHS	2.45	2.91	2.68	1900	26-Apr-2023
92100	92200	Hazaribagh-Ranchi	LHS	2.46	2.7	2.58	1821	26-Apr-2023
92200	92300	Hazaribagh-Ranchi	LHS	2.98	2.02	2.50	1758	26-Apr-2023
92300	92400	Hazaribagh-Ranchi	LHS	2.16	1.33	1.75	1175	26-Apr-2023
92400	92500	Hazaribagh-Ranchi	LHS	1.57	1.37	1.47	970	26-Apr-2023
92500	92600	Hazaribagh-Ranchi	LHS	1.44	1.48	1.46	963	26-Apr-2023
92600	92700	Hazaribagh-Ranchi	LHS	1.65	5.66	3.66	2690	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
92700	92800	Hazaribagh-Ranchi	LHS	5.94	2.05	4.00	2972	26-Apr-2023
92800	92900	Hazaribagh-Ranchi	LHS	1.66	1.66	1.66	1111	26-Apr-2023
92900	93000	Hazaribagh-Ranchi	LHS	1.19	1.54	1.37	893	26-Apr-2023
93000	93100	Hazaribagh-Ranchi	LHS	1.49	1.84	1.67	1115	26-Apr-2023
93100	93200	Hazaribagh-Ranchi	LHS	3.4	4.07	3.74	2756	26-Apr-2023
93200	93300	Hazaribagh-Ranchi	LHS	3.02	2.27	2.65	1873	26-Apr-2023
93300	93400	Hazaribagh-Ranchi	LHS	2.26	2.28	2.27	1578	26-Apr-2023
93400	93500	Hazaribagh-Ranchi	LHS	2.62	2.57	2.60	1833	26-Apr-2023
93500	93600	Hazaribagh-Ranchi	LHS	1.92	2.45	2.19	1512	26-Apr-2023
93600	93700	Hazaribagh-Ranchi	LHS	1.62	2.34	1.98	1354	26-Apr-2023
93700	93800	Hazaribagh-Ranchi	LHS	2.69	2.68	2.69	1904	26-Apr-2023
93800	93900	Hazaribagh-Ranchi	LHS	2.71	2.32	2.52	1770	26-Apr-2023
93900	94000	Hazaribagh-Ranchi	LHS	2.55	2.53	2.54	1790	26-Apr-2023
94000	94100	Hazaribagh-Ranchi	LHS	3.1	2.71	2.91	2080	26-Apr-2023
94100	94200	Hazaribagh-Ranchi	LHS	2.25	2.29	2.27	1578	26-Apr-2023
94200	94300	Hazaribagh-Ranchi	LHS	2.52	1.73	2.13	1465	26-Apr-2023
94300	94400	Hazaribagh-Ranchi	LHS	2.34	2.37	2.36	1644	26-Apr-2023
94400	94500	Hazaribagh-Ranchi	LHS	2.7	1.83	2.27	1574	26-Apr-2023
94500	94600	Hazaribagh-Ranchi	LHS	1.75	1.83	1.79	1209	26-Apr-2023
94600	94700	Hazaribagh-Ranchi	LHS	2.09	2.44	2.27	1574	26-Apr-2023
94700	94800	Hazaribagh-Ranchi	LHS	2.52	1.89	2.21	1527	26-Apr-2023
94800	94900	Hazaribagh-Ranchi	LHS	2.56	2.25	2.41	1683	26-Apr-2023
94900	95000	Hazaribagh-Ranchi	LHS	1.53	1.7	1.62	1078	26-Apr-2023
95000	95100	Hazaribagh-Ranchi	LHS	1.63	1.85	1.74	1172	26-Apr-2023
95100	95200	Hazaribagh-Ranchi	LHS	2.17	4.19	3.18	2302	26-Apr-2023
95200	95300	Hazaribagh-Ranchi	LHS	3.95	3.2	3.58	2624	26-Apr-2023
95300	95400	Hazaribagh-Ranchi	LHS	2.56	3.28	2.92	2092	26-Apr-2023
95400	95500	Hazaribagh-Ranchi	LHS	2.59	1.94	2.27	1574	26-Apr-2023
95500	95600	Hazaribagh-Ranchi	LHS	2.17	1.99	2.08	1431	26-Apr-2023
95600	95700	Hazaribagh-Ranchi	LHS	2.17	2.08	2.13	1465	26-Apr-2023
95700	95800	Hazaribagh-Ranchi	LHS	2.34	2.3	2.32	1617	26-Apr-2023
95800	95900	Hazaribagh-Ranchi	LHS	2.82	2.22	2.52	1774	26-Apr-2023
95900	96000	Hazaribagh-Ranchi	LHS	1.59	1.76	1.68	1123	26-Apr-2023
96000	96100	Hazaribagh-Ranchi	LHS	2.09	2.38	2.24	1551	26-Apr-2023
96100	96200	Hazaribagh-Ranchi	LHS	2.04	2.49	2.27	1574	26-Apr-2023
96200	96300	Hazaribagh-Ranchi	LHS	2.37	2.6	2.49	1746	26-Apr-2023
96300	96400	Hazaribagh-Ranchi	LHS	2.39	2.11	2.25	1562	26-Apr-2023
96400	96500	Hazaribagh-Ranchi	LHS	2.34	2.31	2.33	1621	26-Apr-2023
96500	96600	Hazaribagh-Ranchi	LHS	2.58	2.05	2.32	1613	26-Apr-2023
96600	96700	Hazaribagh-Ranchi	LHS	2.08	2.09	2.09	1435	26-Apr-2023
96700	96800	Hazaribagh-Ranchi	LHS	1.7	2.18	1.94	1323	26-Apr-2023
96800	96900	Hazaribagh-Ranchi	LHS	2.26	2.34	2.30	1601	26-Apr-2023
96900	97000	Hazaribagh-Ranchi	LHS	2.33	2.92	2.63	1857	26-Apr-2023
97000	97100	Hazaribagh-Ranchi	LHS	2.83	2.8	2.82	2008	26-Apr-2023
97100	97200	Hazaribagh-Ranchi	LHS	2.82	2.05	2.44	1707	26-Apr-2023
97200	97300	Hazaribagh-Ranchi	LHS	2.97	2.6	2.79	1984	26-Apr-2023
97300	97400	Hazaribagh-Ranchi	LHS	3.06	2.34	2.70	1916	26-Apr-2023
97400	97500	Hazaribagh-Ranchi	LHS	1.95	2.11	2.03	1392	26-Apr-2023
97500	97600	Hazaribagh-Ranchi	LHS	2.2	3.08	2.64	1869	26-Apr-2023
97600	97700	Hazaribagh-Ranchi	LHS	3.03	2.19	2.61	1845	26-Apr-2023
97700	97800	Hazaribagh-Ranchi	LHS	1.8	1.78	1.79	1209	26-Apr-2023
97800	97900	Hazaribagh-Ranchi	LHS	2.14	2.49	2.32	1613	26-Apr-2023
97900	98000	Hazaribagh-Ranchi	LHS	1.99	2.34	2.17	1496	26-Apr-2023
98000	98100	Hazaribagh-Ranchi	LHS	2.25	2.26	2.26	1566	26-Apr-2023
98100	98200	Hazaribagh-Ranchi	LHS	1.64	2.24	1.94	1323	26-Apr-2023
98200	98300	Hazaribagh-Ranchi	LHS	2.1	2.47	2.29	1590	26-Apr-2023
98300	98400	Hazaribagh-Ranchi	LHS	1.72	2.18	1.95	1331	26-Apr-2023
98400	98500	Hazaribagh-Ranchi	LHS	1.85	2.64	2.25	1558	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
98500	98600	Hazaribagh-Ranchi	LHS	2.45	2.83	2.64	1869	26-Apr-2023
98600	98700	Hazaribagh-Ranchi	LHS	1.86	2.57	2.22	1535	26-Apr-2023
98700	98800	Hazaribagh-Ranchi	LHS	2.2	2.8	2.50	1758	26-Apr-2023
98800	98900	Hazaribagh-Ranchi	LHS	2.6	2.62	2.61	1845	26-Apr-2023
98900	99000	Hazaribagh-Ranchi	LHS	2.43	2.7	2.57	1809	26-Apr-2023
99000	99100	Hazaribagh-Ranchi	LHS	2.06	1.73	1.90	1289	26-Apr-2023
99100	99200	Hazaribagh-Ranchi	LHS	2.19	1.73	1.96	1339	26-Apr-2023
99200	99300	Hazaribagh-Ranchi	LHS	2.12	2.09	2.11	1450	26-Apr-2023
99300	99400	Hazaribagh-Ranchi	LHS	3.47	1.56	2.52	1770	26-Apr-2023
99400	99500	Hazaribagh-Ranchi	LHS	2.13	2.1	2.12	1458	26-Apr-2023
99500	99600	Hazaribagh-Ranchi	LHS	1.99	1.7	1.85	1251	26-Apr-2023
99600	99700	Hazaribagh-Ranchi	LHS	2	2.11	2.06	1412	26-Apr-2023
99700	99800	Hazaribagh-Ranchi	LHS	2.46	2.08	2.27	1578	26-Apr-2023
99800	99900	Hazaribagh-Ranchi	LHS	2.13	2.82	2.48	1738	26-Apr-2023
99900	100000	Hazaribagh-Ranchi	LHS	2.28	1.62	1.95	1331	26-Apr-2023
100000	100100	Hazaribagh-Ranchi	LHS	1.83	1.51	1.67	1119	26-Apr-2023
100100	100200	Hazaribagh-Ranchi	LHS	2.05	1.38	1.72	1153	26-Apr-2023
100200	100300	Hazaribagh-Ranchi	LHS	2.28	1.4	1.84	1247	26-Apr-2023
100300	100400	Hazaribagh-Ranchi	LHS	1.92	1.55	1.74	1168	26-Apr-2023
100400	100500	Hazaribagh-Ranchi	LHS	1.81	2.56	2.19	1512	26-Apr-2023
100500	100600	Hazaribagh-Ranchi	LHS	1.92	1.84	1.88	1278	26-Apr-2023
100600	100700	Hazaribagh-Ranchi	LHS	1.67	1.74	1.71	1145	26-Apr-2023
100700	100800	Hazaribagh-Ranchi	LHS	1.95	4.27	3.11	2245	26-Apr-2023
100800	100900	Hazaribagh-Ranchi	LHS	2.72	2.61	2.67	1889	26-Apr-2023
100900	101000	Hazaribagh-Ranchi	LHS	1.3	3.63	2.47	1731	26-Apr-2023
101000	101100	Hazaribagh-Ranchi	LHS	8.41	0.99	4.70	3565	26-Apr-2023
101100	101200	Hazaribagh-Ranchi	LHS	1.29	2.12	1.71	1145	26-Apr-2023
101200	101300	Hazaribagh-Ranchi	LHS	1.93	2.21	2.07	1423	26-Apr-2023
101300	101400	Hazaribagh-Ranchi	LHS	4.03	2.11	3.07	2213	26-Apr-2023
101400	101500	Hazaribagh-Ranchi	LHS	2.46	2.21	2.34	1629	26-Apr-2023
101500	101600	Hazaribagh-Ranchi	LHS	3.14	2.91	3.03	2176	26-Apr-2023
101600	101700	Hazaribagh-Ranchi	LHS	2.21	1.84	2.03	1388	26-Apr-2023
101700	101800	Hazaribagh-Ranchi	LHS	1.94	2.03	1.99	1358	26-Apr-2023
101800	101900	Hazaribagh-Ranchi	LHS	2.03	1.69	1.86	1262	26-Apr-2023
101900	102000	Hazaribagh-Ranchi	LHS	2.72	1.81	2.27	1574	26-Apr-2023
102000	102100	Hazaribagh-Ranchi	LHS	2.26	1.84	2.05	1408	26-Apr-2023
102100	102200	Hazaribagh-Ranchi	LHS	1.38	1.4	1.39	911	26-Apr-2023
102200	102300	Hazaribagh-Ranchi	LHS	1.43	1.48	1.46	959	26-Apr-2023
102300	102400	Hazaribagh-Ranchi	LHS	1.84	2.28	2.06	1415	26-Apr-2023
102400	102500	Hazaribagh-Ranchi	LHS	3.65	1.52	2.59	1825	26-Apr-2023
102500	102600	Hazaribagh-Ranchi	LHS	1.61	1.76	1.69	1130	26-Apr-2023
102600	102700	Hazaribagh-Ranchi	LHS	1.18	1.36	1.27	823	26-Apr-2023
102700	102800	Hazaribagh-Ranchi	LHS	1.4	1.42	1.41	926	26-Apr-2023
102800	102900	Hazaribagh-Ranchi	LHS	1.52	1.58	1.55	1029	26-Apr-2023
102900	103000	Hazaribagh-Ranchi	LHS	1.53	1.42	1.48	974	26-Apr-2023
103000	103100	Hazaribagh-Ranchi	LHS	1.58	1.64	1.61	1074	26-Apr-2023
103100	103200	Hazaribagh-Ranchi	LHS	1.88	1.56	1.72	1156	26-Apr-2023
103200	103300	Hazaribagh-Ranchi	LHS	1.46	1.26	1.36	889	26-Apr-2023
103300	103400	Hazaribagh-Ranchi	LHS	1.39	1.46	1.43	937	26-Apr-2023
103400	103500	Hazaribagh-Ranchi	LHS	1.37	1.54	1.46	959	26-Apr-2023
103500	103600	Hazaribagh-Ranchi	LHS	1.94	1.83	1.89	1281	26-Apr-2023
103600	103700	Hazaribagh-Ranchi	LHS	2.37	2.6	2.49	1746	26-Apr-2023
103700	103800	Hazaribagh-Ranchi	LHS	2.87	2.34	2.61	1841	26-Apr-2023
103800	103900	Hazaribagh-Ranchi	LHS	2.41	2.15	2.28	1586	26-Apr-2023
103900	104000	Hazaribagh-Ranchi	LHS	1.98	1.85	1.92	1304	26-Apr-2023
104000	104100	Hazaribagh-Ranchi	LHS	2.29	2.02	2.16	1489	26-Apr-2023
104100	104200	Hazaribagh-Ranchi	LHS	2.72	2.77	2.75	1952	26-Apr-2023
104200	104300	Hazaribagh-Ranchi	LHS	2.12	1.56	1.84	1247	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
104300	104400	Hazaribagh-Ranchi	LHS	2.1	2.2	2.15	1485	26-Apr-2023
104400	104500	Hazaribagh-Ranchi	LHS	2.32	2.12	2.22	1539	26-Apr-2023
104500	104600	Hazaribagh-Ranchi	LHS	2.09	1.91	2.00	1369	26-Apr-2023
104600	104700	Hazaribagh-Ranchi	LHS	2.05	2.31	2.18	1508	26-Apr-2023
104700	104800	Hazaribagh-Ranchi	LHS	2.57	2.78	2.68	1896	26-Apr-2023
104800	104900	Hazaribagh-Ranchi	LHS	3.97	3.28	3.63	2665	26-Apr-2023
104900	105000	Hazaribagh-Ranchi	LHS	2.35	2.36	2.36	1644	26-Apr-2023
105000	105100	Hazaribagh-Ranchi	LHS	2.42	1.88	2.15	1485	26-Apr-2023
105100	105200	Hazaribagh-Ranchi	LHS	2.11	2.07	2.09	1438	26-Apr-2023
105200	105300	Hazaribagh-Ranchi	LHS	2.42	2.3	2.36	1648	26-Apr-2023
105300	105400	Hazaribagh-Ranchi	LHS	2.97	2.38	2.68	1896	26-Apr-2023
105400	105500	Hazaribagh-Ranchi	LHS	2.42	1.89	2.16	1489	26-Apr-2023
105500	105600	Hazaribagh-Ranchi	LHS	1.78	1.69	1.74	1168	26-Apr-2023
105600	105700	Hazaribagh-Ranchi	LHS	1.99	1.6	1.80	1213	26-Apr-2023
105700	105800	Hazaribagh-Ranchi	LHS	2.49	1.75	2.12	1462	26-Apr-2023
105800	105900	Hazaribagh-Ranchi	LHS	2.68	1.58	2.13	1469	26-Apr-2023
105900	106000	Hazaribagh-Ranchi	LHS	1.78	1.94	1.86	1262	26-Apr-2023
106000	106100	Hazaribagh-Ranchi	LHS	2.26	1.85	2.06	1412	26-Apr-2023
106100	106200	Hazaribagh-Ranchi	LHS	2.22	1.95	2.09	1435	26-Apr-2023
106200	106300	Hazaribagh-Ranchi	LHS	2.9	1.95	2.43	1699	26-Apr-2023
106300	106400	Hazaribagh-Ranchi	LHS	2.92	1.87	2.40	1676	26-Apr-2023
106400	106500	Hazaribagh-Ranchi	LHS	3.06	3.34	3.20	2318	26-Apr-2023
106500	106600	Hazaribagh-Ranchi	LHS	3.33	2.21	2.77	1972	26-Apr-2023
106600	106700	Hazaribagh-Ranchi	LHS	2.51	2.53	2.52	1774	26-Apr-2023
106700	106800	Hazaribagh-Ranchi	LHS	2.49	2.15	2.32	1617	26-Apr-2023
106800	106900	Hazaribagh-Ranchi	LHS	2.06	2.17	2.12	1458	26-Apr-2023
106900	107000	Hazaribagh-Ranchi	LHS	2.28	2.1	2.19	1516	26-Apr-2023
107000	107100	Hazaribagh-Ranchi	LHS	2.04	1.52	1.78	1202	26-Apr-2023
107100	107200	Hazaribagh-Ranchi	LHS	1.49	1.8	1.65	1100	26-Apr-2023
107200	107300	Hazaribagh-Ranchi	LHS	3.46	4	3.73	2752	26-Apr-2023
107300	107400	Hazaribagh-Ranchi	LHS	3.04	2.07	2.56	1801	26-Apr-2023
107400	107500	Hazaribagh-Ranchi	LHS	1.69	1.46	1.58	1048	26-Apr-2023
107500	107600	Hazaribagh-Ranchi	LHS	2.09	1.66	1.88	1274	26-Apr-2023
107600	107700	Hazaribagh-Ranchi	LHS	2.01	1.99	2.00	1369	26-Apr-2023
107700	107800	Hazaribagh-Ranchi	LHS	2.7	2.6	2.65	1877	26-Apr-2023
107800	107900	Hazaribagh-Ranchi	LHS	2.13	1.93	2.03	1392	26-Apr-2023
107900	108000	Hazaribagh-Ranchi	LHS	3.55	3.01	3.28	2383	26-Apr-2023
108000	108100	Hazaribagh-Ranchi	LHS	1.63	1.62	1.63	1085	26-Apr-2023
108100	108200	Hazaribagh-Ranchi	LHS	2.89	1.98	2.44	1707	26-Apr-2023
108200	108300	Hazaribagh-Ranchi	LHS	2.91	3.3	3.11	2241	26-Apr-2023
108300	108400	Hazaribagh-Ranchi	LHS	1.65	2.49	2.07	1423	26-Apr-2023
108400	108500	Hazaribagh-Ranchi	LHS	2.84	2.19	2.52	1770	26-Apr-2023
108500	108600	Hazaribagh-Ranchi	LHS	2.31	1.55	1.93	1316	26-Apr-2023
108600	108700	Hazaribagh-Ranchi	LHS	1.87	1.26	1.57	1040	26-Apr-2023
108700	108800	Hazaribagh-Ranchi	LHS	1.65	1.51	1.58	1052	26-Apr-2023
108800	108900	Hazaribagh-Ranchi	LHS	1.99	2.28	2.14	1473	26-Apr-2023
108900	109000	Hazaribagh-Ranchi	LHS	1.79	1.96	1.88	1274	26-Apr-2023
109000	109100	Hazaribagh-Ranchi	LHS	2.35	2.13	2.24	1555	26-Apr-2023
109100	109200	Hazaribagh-Ranchi	LHS	2.19	1.22	1.71	1145	26-Apr-2023
109200	109300	Hazaribagh-Ranchi	LHS	1.91	2.55	2.23	1547	26-Apr-2023
109300	109400	Hazaribagh-Ranchi	LHS	1.74	5.03	3.39	2469	26-Apr-2023
109400	109500	Hazaribagh-Ranchi	LHS	14.36	1.88	8.12	6577	26-Apr-2023
109500	109600	Hazaribagh-Ranchi	LHS	5.14	1.7	3.42	2497	26-Apr-2023
109600	109700	Hazaribagh-Ranchi	LHS	1.91	1.16	1.54	1018	26-Apr-2023
109700	109800	Hazaribagh-Ranchi	LHS	1.91	1.45	1.68	1126	26-Apr-2023
109800	109900	Hazaribagh-Ranchi	LHS	1.69	1.46	1.58	1048	26-Apr-2023
109900	110000	Hazaribagh-Ranchi	LHS	3.57	1.46	2.52	1770	26-Apr-2023
110000	110100	Hazaribagh-Ranchi	LHS	2.45	1.49	1.97	1346	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
110100	110200	Hazaribagh-Ranchi	LHS	2.23	2.48	2.36	1644	26-Apr-2023
110200	110300	Hazaribagh-Ranchi	LHS	2.01	1.51	1.76	1187	26-Apr-2023
110300	110400	Hazaribagh-Ranchi	LHS	8.98	1.73	5.36	4126	26-Apr-2023
110400	110500	Hazaribagh-Ranchi	LHS	1.62	1.43	1.53	1011	26-Apr-2023
110500	110600	Hazaribagh-Ranchi	LHS	1.95	1.51	1.73	1164	26-Apr-2023
110600	110700	Hazaribagh-Ranchi	LHS	2.89	1.46	2.18	1504	26-Apr-2023
110700	110800	Hazaribagh-Ranchi	LHS	1.99	1.33	1.66	1111	26-Apr-2023
110800	110900	Hazaribagh-Ranchi	LHS	1.84	1.5	1.67	1119	26-Apr-2023
110900	111000	Hazaribagh-Ranchi	LHS	1.36	1.59	1.48	974	26-Apr-2023
111000	111100	Hazaribagh-Ranchi	LHS	1.46	1.5	1.48	977	26-Apr-2023
111100	111200	Hazaribagh-Ranchi	LHS	1.99	2.09	2.04	1400	26-Apr-2023
111200	111300	Hazaribagh-Ranchi	LHS	1.46	2.34	1.90	1293	26-Apr-2023
111300	111400	Hazaribagh-Ranchi	LHS	2.57	1.29	1.93	1316	26-Apr-2023
111400	111500	Hazaribagh-Ranchi	LHS	2.28	1.51	1.90	1289	26-Apr-2023
111500	111600	Hazaribagh-Ranchi	LHS	1.49	1.75	1.62	1081	26-Apr-2023
111600	111700	Hazaribagh-Ranchi	LHS	1.92	1.91	1.92	1304	26-Apr-2023
111700	111800	Hazaribagh-Ranchi	LHS	1.74	1.75	1.75	1175	26-Apr-2023
111800	111900	Hazaribagh-Ranchi	LHS	2.15	2.44	2.30	1597	26-Apr-2023
111900	112000	Hazaribagh-Ranchi	LHS	1.86	3.36	2.61	1845	26-Apr-2023
112000	112100	Hazaribagh-Ranchi	LHS	3.08	2.29	2.69	1904	26-Apr-2023
112100	112200	Hazaribagh-Ranchi	LHS	2.51	1.86	2.19	1512	26-Apr-2023
112200	112300	Hazaribagh-Ranchi	LHS	2.2	2.13	2.17	1496	26-Apr-2023
112300	112400	Hazaribagh-Ranchi	LHS	1.7	2.24	1.97	1346	26-Apr-2023
112400	112500	Hazaribagh-Ranchi	LHS	1.72	2.45	2.09	1435	26-Apr-2023
112500	112600	Hazaribagh-Ranchi	LHS	2.42	1.67	2.05	1404	26-Apr-2023
112600	112700	Hazaribagh-Ranchi	LHS	2.79	3.6	3.20	2314	26-Apr-2023
112700	112800	Hazaribagh-Ranchi	LHS	1.75	5.23	3.49	2554	26-Apr-2023
112800	112900	Hazaribagh-Ranchi	LHS	6.26	1.92	4.09	3051	26-Apr-2023
112900	113000	Hazaribagh-Ranchi	LHS	2.86	1.5	2.18	1508	26-Apr-2023
113000	113100	Hazaribagh-Ranchi	LHS	1.59	1.26	1.43	937	26-Apr-2023
113100	113200	Hazaribagh-Ranchi	LHS	1.41	1.77	1.59	1059	26-Apr-2023
113200	113300	Hazaribagh-Ranchi	LHS	1.79	2.43	2.11	1454	26-Apr-2023
113300	113400	Hazaribagh-Ranchi	LHS	2.01	1.36	1.69	1130	26-Apr-2023
113400	113500	Hazaribagh-Ranchi	LHS	2.57	1.6	2.09	1435	26-Apr-2023
113500	113600	Hazaribagh-Ranchi	LHS	1.74	2.19	1.97	1342	26-Apr-2023
113600	113700	Hazaribagh-Ranchi	LHS	2.22	2.95	2.59	1825	26-Apr-2023
113700	113800	Hazaribagh-Ranchi	LHS	2.59	2.68	2.64	1865	26-Apr-2023
113800	113900	Hazaribagh-Ranchi	LHS	3.01	3.02	3.02	2168	26-Apr-2023
113900	114000	Hazaribagh-Ranchi	LHS	2.78	2.18	2.48	1742	26-Apr-2023
114000	114100	Hazaribagh-Ranchi	LHS	2.61	2.69	2.65	1877	26-Apr-2023
114100	114200	Hazaribagh-Ranchi	LHS	1.82	1.58	1.70	1141	26-Apr-2023
114200	114300	Hazaribagh-Ranchi	LHS	1.97	1.71	1.84	1247	26-Apr-2023
114300	114400	Hazaribagh-Ranchi	LHS	1.93	1.94	1.94	1320	26-Apr-2023
114400	114500	Hazaribagh-Ranchi	LHS	1.83	2.89	2.36	1648	26-Apr-2023
114500	114600	Hazaribagh-Ranchi	LHS	2.03	2.56	2.30	1597	26-Apr-2023
114600	114700	Hazaribagh-Ranchi	LHS	4.11	2.43	3.27	2375	26-Apr-2023
114700	114800	Hazaribagh-Ranchi	LHS	1.68	2.35	2.02	1381	26-Apr-2023
114800	114900	Hazaribagh-Ranchi	LHS	1.31	2.16	1.74	1168	26-Apr-2023
114900	115000	Hazaribagh-Ranchi	LHS	2.08	1.71	1.90	1289	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
115000	114900	Ranchi-Hazaribagh	RHS	2.28	1.92	2.1	1446	26-Apr-2023
114900	114800	Ranchi-Hazaribagh	RHS	3	1.26	2.13	1469	26-Apr-2023
114800	114700	Ranchi-Hazaribagh	RHS	1.71	1.26	1.485	981	26-Apr-2023
114700	114600	Ranchi-Hazaribagh	RHS	2.73	1.75	2.24	1555	26-Apr-2023
114600	114500	Ranchi-Hazaribagh	RHS	2.89	1.69	2.29	1594	26-Apr-2023
114500	114400	Ranchi-Hazaribagh	RHS	2.93	1.73	2.33	1625	26-Apr-2023
114400	114300	Ranchi-Hazaribagh	RHS	3.16	2.26	2.71	1924	26-Apr-2023
114300	114200	Ranchi-Hazaribagh	RHS	2.08	2.76	2.42	1695	26-Apr-2023
114200	114100	Ranchi-Hazaribagh	RHS	2.21	1.88	2.045	1404	26-Apr-2023
114100	114000	Ranchi-Hazaribagh	RHS	2.61	1.58	2.095	1442	26-Apr-2023
114000	113900	Ranchi-Hazaribagh	RHS	1.86	1.29	1.575	1048	26-Apr-2023
113900	113800	Ranchi-Hazaribagh	RHS	1.67	1.46	1.565	1040	26-Apr-2023
113800	113700	Ranchi-Hazaribagh	RHS	2.26	1.91	2.085	1435	26-Apr-2023
113700	113600	Ranchi-Hazaribagh	RHS	2.97	3.26	3.115	2249	26-Apr-2023
113600	113500	Ranchi-Hazaribagh	RHS	2.59	2.17	2.38	1664	26-Apr-2023
113500	113400	Ranchi-Hazaribagh	RHS	2.39	2.43	2.41	1687	26-Apr-2023
113400	113300	Ranchi-Hazaribagh	RHS	1.75	1.13	1.44	948	26-Apr-2023
113300	113200	Ranchi-Hazaribagh	RHS	2.68	1.98	2.33	1625	26-Apr-2023
113200	113100	Ranchi-Hazaribagh	RHS	1.71	1.33	1.52	1007	26-Apr-2023
113100	113000	Ranchi-Hazaribagh	RHS	1.85	0.93	1.39	911	26-Apr-2023
113000	112900	Ranchi-Hazaribagh	RHS	2.37	1.3	1.835	1243	26-Apr-2023
112900	112800	Ranchi-Hazaribagh	RHS	1.84	2.05	1.945	1327	26-Apr-2023
112800	112700	Ranchi-Hazaribagh	RHS	1.03	1.04	1.035	655	26-Apr-2023
112700	112600	Ranchi-Hazaribagh	RHS	2.42	1.53	1.975	1350	26-Apr-2023
112600	112500	Ranchi-Hazaribagh	RHS	1.6	1.18	1.39	911	26-Apr-2023
112500	112400	Ranchi-Hazaribagh	RHS	4.69	4.23	4.46	3362	26-Apr-2023
112400	112300	Ranchi-Hazaribagh	RHS	2.12	2.22	2.17	1500	26-Apr-2023
112300	112200	Ranchi-Hazaribagh	RHS	2.19	2.06	2.125	1465	26-Apr-2023
112200	112100	Ranchi-Hazaribagh	RHS	2.13	2.21	2.17	1500	26-Apr-2023
112100	112000	Ranchi-Hazaribagh	RHS	2.05	1.28	1.665	1115	26-Apr-2023
112000	111900	Ranchi-Hazaribagh	RHS	2.18	1.29	1.735	1168	26-Apr-2023
111900	111800	Ranchi-Hazaribagh	RHS	2.01	1.77	1.89	1285	26-Apr-2023
111800	111700	Ranchi-Hazaribagh	RHS	1.97	1.3	1.635	1093	26-Apr-2023
111700	111600	Ranchi-Hazaribagh	RHS	2.22	1.74	1.98	1354	26-Apr-2023
111600	111500	Ranchi-Hazaribagh	RHS	1.73	1.61	1.67	1119	26-Apr-2023
111500	111400	Ranchi-Hazaribagh	RHS	1.5	1.36	1.43	940	26-Apr-2023
111400	111300	Ranchi-Hazaribagh	RHS	1.31	1.03	1.17	751	26-Apr-2023
111300	111200	Ranchi-Hazaribagh	RHS	1.88	2.32	2.1	1446	26-Apr-2023
111200	111100	Ranchi-Hazaribagh	RHS	2.41	1.7	2.055	1412	26-Apr-2023
111100	111000	Ranchi-Hazaribagh	RHS	2.7	2.26	2.48	1742	26-Apr-2023
111000	110900	Ranchi-Hazaribagh	RHS	3.64	1.27	2.455	1723	26-Apr-2023
110900	110800	Ranchi-Hazaribagh	RHS	2.27	1.09	1.68	1126	26-Apr-2023
110800	110700	Ranchi-Hazaribagh	RHS	2.04	1.09	1.565	1040	26-Apr-2023
110700	110600	Ranchi-Hazaribagh	RHS	2.62	1.9	2.26	1570	26-Apr-2023
110600	110500	Ranchi-Hazaribagh	RHS	1.59	0.86	1.225	791	26-Apr-2023
110500	110400	Ranchi-Hazaribagh	RHS	2.93	1.55	2.24	1555	26-Apr-2023
110400	110300	Ranchi-Hazaribagh	RHS	2.38	1.85	2.115	1458	26-Apr-2023
110300	110200	Ranchi-Hazaribagh	RHS	1.45	2.13	1.79	1209	26-Apr-2023
110200	110100	Ranchi-Hazaribagh	RHS	2.03	1.99	2.01	1377	26-Apr-2023
110100	110000	Ranchi-Hazaribagh	RHS	2.72	1.76	2.24	1555	26-Apr-2023
110000	109900	Ranchi-Hazaribagh	RHS	3.57	2.68	3.125	2257	26-Apr-2023
109900	109800	Ranchi-Hazaribagh	RHS	2.67	2.26	2.465	1731	26-Apr-2023
109800	109700	Ranchi-Hazaribagh	RHS	2.62	2.9	2.76	1964	26-Apr-2023
109700	109600	Ranchi-Hazaribagh	RHS	2.66	1.4	2.03	1392	26-Apr-2023
109600	109500	Ranchi-Hazaribagh	RHS	4.07	2.58	3.325	2420	26-Apr-2023
109500	109400	Ranchi-Hazaribagh	RHS	2.24	1.75	1.995	1365	26-Apr-2023
109400	109300	Ranchi-Hazaribagh	RHS	2.89	2.81	2.85	2036	26-Apr-2023
109300	109200	Ranchi-Hazaribagh	RHS	2.4	2.19	2.295	1597	26-Apr-2023
109200	109100	Ranchi-Hazaribagh	RHS	5.14	5.31	5.225	4014	26-Apr-2023
109100	109000	Ranchi-Hazaribagh	RHS	3.14	2.27	2.705	1920	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
109000	108900	Ranchi-Hazaribagh	RHS	2.09	1.57	1.83	1240	26-Apr-2023
108900	108800	Ranchi-Hazaribagh	RHS	2.23	2.12	2.175	1504	26-Apr-2023
108800	108700	Ranchi-Hazaribagh	RHS	2.24	1.34	1.79	1209	26-Apr-2023
108700	108600	Ranchi-Hazaribagh	RHS	2.03	1.35	1.69	1134	26-Apr-2023
108600	108500	Ranchi-Hazaribagh	RHS	2	1.6	1.8	1217	26-Apr-2023
108500	108400	Ranchi-Hazaribagh	RHS	1.39	1.03	1.21	780	26-Apr-2023
108400	108300	Ranchi-Hazaribagh	RHS	1.25	1.1	1.175	755	26-Apr-2023
108300	108200	Ranchi-Hazaribagh	RHS	1.15	1.07	1.11	708	26-Apr-2023
108200	108100	Ranchi-Hazaribagh	RHS	1.94	1.71	1.825	1236	26-Apr-2023
108100	108000	Ranchi-Hazaribagh	RHS	1.4	1.4	1.4	918	26-Apr-2023
108000	107900	Ranchi-Hazaribagh	RHS	1.71	2.18	1.945	1327	26-Apr-2023
107900	107800	Ranchi-Hazaribagh	RHS	2.32	2.84	2.58	1821	26-Apr-2023
107800	107700	Ranchi-Hazaribagh	RHS	1.78	1.7	1.74	1172	26-Apr-2023
107700	107600	Ranchi-Hazaribagh	RHS	1.91	1.47	1.69	1134	26-Apr-2023
107600	107500	Ranchi-Hazaribagh	RHS	3.9	3.42	3.66	2694	26-Apr-2023
107500	107400	Ranchi-Hazaribagh	RHS	1.66	1.23	1.445	951	26-Apr-2023
107400	107300	Ranchi-Hazaribagh	RHS	1.76	1.5	1.63	1089	26-Apr-2023
107300	107200	Ranchi-Hazaribagh	RHS	1.75	1.06	1.405	922	26-Apr-2023
107200	107100	Ranchi-Hazaribagh	RHS	1.99	1.17	1.58	1052	26-Apr-2023
107100	107000	Ranchi-Hazaribagh	RHS	1.57	1.2	1.385	907	26-Apr-2023
107000	106900	Ranchi-Hazaribagh	RHS	1.66	1.34	1.5	992	26-Apr-2023
106900	106800	Ranchi-Hazaribagh	RHS	2.23	2.32	2.275	1582	26-Apr-2023
106800	106700	Ranchi-Hazaribagh	RHS	1.79	1.12	1.455	959	26-Apr-2023
106700	106600	Ranchi-Hazaribagh	RHS	2.24	1.2	1.72	1156	26-Apr-2023
106600	106500	Ranchi-Hazaribagh	RHS	2.07	1.62	1.845	1251	26-Apr-2023
106500	106400	Ranchi-Hazaribagh	RHS	2.81	1.79	2.3	1601	26-Apr-2023
106400	106300	Ranchi-Hazaribagh	RHS	2.88	1.19	2.035	1396	26-Apr-2023
106300	106200	Ranchi-Hazaribagh	RHS	1.63	1.81	1.72	1156	26-Apr-2023
106200	106100	Ranchi-Hazaribagh	RHS	1.97	1.51	1.74	1172	26-Apr-2023
106100	106000	Ranchi-Hazaribagh	RHS	1.75	1.82	1.785	1206	26-Apr-2023
106000	105900	Ranchi-Hazaribagh	RHS	2.08	2.17	2.125	1465	26-Apr-2023
105900	105800	Ranchi-Hazaribagh	RHS	2.18	1.48	1.83	1240	26-Apr-2023
105800	105700	Ranchi-Hazaribagh	RHS	1.57	1.44	1.505	996	26-Apr-2023
105700	105600	Ranchi-Hazaribagh	RHS	1.93	1.56	1.745	1175	26-Apr-2023
105600	105500	Ranchi-Hazaribagh	RHS	2.76	1.74	2.25	1562	26-Apr-2023
105500	105400	Ranchi-Hazaribagh	RHS	2.11	1.42	1.765	1190	26-Apr-2023
105400	105300	Ranchi-Hazaribagh	RHS	1.7	1.67	1.685	1130	26-Apr-2023
105300	105200	Ranchi-Hazaribagh	RHS	1.92	1.94	1.93	1316	26-Apr-2023
105200	105100	Ranchi-Hazaribagh	RHS	1.76	2.47	2.115	1458	26-Apr-2023
105100	105000	Ranchi-Hazaribagh	RHS	3.12	1.72	2.42	1695	26-Apr-2023
105000	104900	Ranchi-Hazaribagh	RHS	2.05	1.62	1.835	1243	26-Apr-2023
104900	104800	Ranchi-Hazaribagh	RHS	2.2	1.42	1.81	1224	26-Apr-2023
104800	104700	Ranchi-Hazaribagh	RHS	2.16	1.42	1.79	1209	26-Apr-2023
104700	104600	Ranchi-Hazaribagh	RHS	2.95	1.64	2.295	1597	26-Apr-2023
104600	104500	Ranchi-Hazaribagh	RHS	2.61	1.43	2.02	1385	26-Apr-2023
104500	104400	Ranchi-Hazaribagh	RHS	2.27	1.64	1.955	1335	26-Apr-2023
104400	104300	Ranchi-Hazaribagh	RHS	2.76	1.57	2.165	1496	26-Apr-2023
104300	104200	Ranchi-Hazaribagh	RHS	2.22	1.46	1.84	1247	26-Apr-2023
104200	104100	Ranchi-Hazaribagh	RHS	2.49	1.39	1.94	1323	26-Apr-2023
104100	104000	Ranchi-Hazaribagh	RHS	3.08	3.11	3.095	2233	26-Apr-2023
104000	103900	Ranchi-Hazaribagh	RHS	2.7	1.93	2.315	1613	26-Apr-2023
103900	103800	Ranchi-Hazaribagh	RHS	1.58	1.37	1.475	974	26-Apr-2023
103800	103700	Ranchi-Hazaribagh	RHS	1.97	1.67	1.82	1232	26-Apr-2023
103700	103600	Ranchi-Hazaribagh	RHS	3.09	1.6	2.345	1636	26-Apr-2023
103600	103500	Ranchi-Hazaribagh	RHS	2.66	2.42	2.54	1790	26-Apr-2023
103500	103400	Ranchi-Hazaribagh	RHS	2.12	1.63	1.875	1274	26-Apr-2023
103400	103300	Ranchi-Hazaribagh	RHS	3	3.84	3.42	2497	26-Apr-2023
103300	103200	Ranchi-Hazaribagh	RHS	4.03	2.29	3.16	2286	26-Apr-2023
103200	103100	Ranchi-Hazaribagh	RHS	1.16	1.14	1.15	737	26-Apr-2023
103100	103000	Ranchi-Hazaribagh	RHS	1.31	1.16	1.235	798	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
103000	102900	Ranchi-Hazaribagh	RHS	1.78	1.56	1.67	1119	26-Apr-2023
102900	102800	Ranchi-Hazaribagh	RHS	2.05	1.56	1.805	1221	26-Apr-2023
102800	102700	Ranchi-Hazaribagh	RHS	2.1	1.51	1.805	1221	26-Apr-2023
102700	102600	Ranchi-Hazaribagh	RHS	1.9	1.36	1.63	1089	26-Apr-2023
102600	102500	Ranchi-Hazaribagh	RHS	2.32	2.33	2.325	1621	26-Apr-2023
102500	102400	Ranchi-Hazaribagh	RHS	2.46	2.19	2.325	1621	26-Apr-2023
102400	102300	Ranchi-Hazaribagh	RHS	2.82	1.98	2.4	1679	26-Apr-2023
102300	102200	Ranchi-Hazaribagh	RHS	2.17	2.17	2.17	1500	26-Apr-2023
102200	102100	Ranchi-Hazaribagh	RHS	2.47	2.18	2.325	1621	26-Apr-2023
102100	102000	Ranchi-Hazaribagh	RHS	2.19	1.75	1.97	1346	26-Apr-2023
102000	101900	Ranchi-Hazaribagh	RHS	2.62	1.76	2.19	1516	26-Apr-2023
101900	101800	Ranchi-Hazaribagh	RHS	2.16	1.62	1.89	1285	26-Apr-2023
101800	101700	Ranchi-Hazaribagh	RHS	2.13	1.75	1.94	1323	26-Apr-2023
101700	101600	Ranchi-Hazaribagh	RHS	1.87	2.21	2.04	1400	26-Apr-2023
101600	101500	Ranchi-Hazaribagh	RHS	2.06	1.56	1.81	1224	26-Apr-2023
101500	101400	Ranchi-Hazaribagh	RHS	2.03	1.83	1.93	1316	26-Apr-2023
101400	101300	Ranchi-Hazaribagh	RHS	2.38	1.69	2.035	1396	26-Apr-2023
101300	101200	Ranchi-Hazaribagh	RHS	2.17	1.65	1.91	1300	26-Apr-2023
101200	101100	Ranchi-Hazaribagh	RHS	2.48	1.31	1.895	1289	26-Apr-2023
101100	101000	Ranchi-Hazaribagh	RHS	3.28	2.69	2.985	2144	26-Apr-2023
101000	100900	Ranchi-Hazaribagh	RHS	3.3	1.44	2.37	1656	26-Apr-2023
100900	100800	Ranchi-Hazaribagh	RHS	2.25	1.35	1.8	1217	26-Apr-2023
100800	100700	Ranchi-Hazaribagh	RHS	2.84	2.46	2.65	1877	26-Apr-2023
100700	100600	Ranchi-Hazaribagh	RHS	8.18	3.83	6.005	4691	26-Apr-2023
100600	100500	Ranchi-Hazaribagh	RHS	2.35	1.95	2.15	1485	26-Apr-2023
100500	100400	Ranchi-Hazaribagh	RHS	2.1	2.22	2.16	1493	26-Apr-2023
100400	100300	Ranchi-Hazaribagh	RHS	1.93	1.55	1.74	1172	26-Apr-2023
100300	100200	Ranchi-Hazaribagh	RHS	2.33	2.22	2.275	1582	26-Apr-2023
100200	100100	Ranchi-Hazaribagh	RHS	2.49	2.08	2.285	1590	26-Apr-2023
100100	100000	Ranchi-Hazaribagh	RHS	2.59	1.39	1.99	1362	26-Apr-2023
100000	99900	Ranchi-Hazaribagh	RHS	3	1.46	2.23	1547	26-Apr-2023
99900	99800	Ranchi-Hazaribagh	RHS	1.7	2.06	1.88	1278	26-Apr-2023
99800	99700	Ranchi-Hazaribagh	RHS	2.42	1.21	1.815	1228	26-Apr-2023
99700	99600	Ranchi-Hazaribagh	RHS	2.34	2.32	2.33	1625	26-Apr-2023
99600	99500	Ranchi-Hazaribagh	RHS	2.46	1.79	2.125	1465	26-Apr-2023
99500	99400	Ranchi-Hazaribagh	RHS	3.29	2.17	2.73	1940	26-Apr-2023
99400	99300	Ranchi-Hazaribagh	RHS	2.37	3.37	2.87	2052	26-Apr-2023
99300	99200	Ranchi-Hazaribagh	RHS	2.49	1.65	2.07	1423	26-Apr-2023
99200	99100	Ranchi-Hazaribagh	RHS	2.86	1.35	2.105	1450	26-Apr-2023
99100	99000	Ranchi-Hazaribagh	RHS	3.05	1.73	2.39	1672	26-Apr-2023
99000	98900	Ranchi-Hazaribagh	RHS	2.74	2.53	2.635	1865	26-Apr-2023
98900	98800	Ranchi-Hazaribagh	RHS	5.56	3.29	4.425	3332	26-Apr-2023
98800	98700	Ranchi-Hazaribagh	RHS	1.28	3.65	2.465	1731	26-Apr-2023
98700	98600	Ranchi-Hazaribagh	RHS	1.46	1.26	1.36	889	26-Apr-2023
98600	98500	Ranchi-Hazaribagh	RHS	2.17	1.17	1.67	1119	26-Apr-2023
98500	98400	Ranchi-Hazaribagh	RHS	1.75	1.41	1.58	1052	26-Apr-2023
98400	98300	Ranchi-Hazaribagh	RHS	1.51	1.4	1.455	959	26-Apr-2023
98300	98200	Ranchi-Hazaribagh	RHS	1.69	1.69	1.69	1134	26-Apr-2023
98200	98100	Ranchi-Hazaribagh	RHS	1.22	1.36	1.29	838	26-Apr-2023
98100	98000	Ranchi-Hazaribagh	RHS	1.87	1.28	1.575	1048	26-Apr-2023
98000	97900	Ranchi-Hazaribagh	RHS	1.9	1.52	1.71	1149	26-Apr-2023
97900	97800	Ranchi-Hazaribagh	RHS	2.12	1.67	1.895	1289	26-Apr-2023
97800	97700	Ranchi-Hazaribagh	RHS	2.16	1.56	1.86	1262	26-Apr-2023
97700	97600	Ranchi-Hazaribagh	RHS	2.28	1.81	2.045	1404	26-Apr-2023
97600	97500	Ranchi-Hazaribagh	RHS	1.79	2.36	2.075	1427	26-Apr-2023
97500	97400	Ranchi-Hazaribagh	RHS	1.69	1.46	1.575	1048	26-Apr-2023
97400	97300	Ranchi-Hazaribagh	RHS	1.7	1.71	1.705	1145	26-Apr-2023
97300	97200	Ranchi-Hazaribagh	RHS	1.46	1.81	1.635	1093	26-Apr-2023
97200	97100	Ranchi-Hazaribagh	RHS	1.46	1.58	1.52	1007	26-Apr-2023
97100	97000	Ranchi-Hazaribagh	RHS	2.05	1.53	1.79	1209	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
97000	96900	Ranchi-Hazaribagh	RHS	2.26	1.87	2.065	1419	26-Apr-2023
96900	96800	Ranchi-Hazaribagh	RHS	2.09	1.96	2.025	1388	26-Apr-2023
96800	96700	Ranchi-Hazaribagh	RHS	1.71	1.5	1.605	1070	26-Apr-2023
96700	96600	Ranchi-Hazaribagh	RHS	1.51	1.52	1.515	1003	26-Apr-2023
96600	96500	Ranchi-Hazaribagh	RHS	1.56	1.4	1.48	977	26-Apr-2023
96500	96400	Ranchi-Hazaribagh	RHS	1.1	1.51	1.305	849	26-Apr-2023
96400	96300	Ranchi-Hazaribagh	RHS	1.14	1.02	1.08	687	26-Apr-2023
96300	96200	Ranchi-Hazaribagh	RHS	1.14	0.95	1.045	662	26-Apr-2023
96200	96100	Ranchi-Hazaribagh	RHS	2.12	1.23	1.675	1123	26-Apr-2023
96100	96000	Ranchi-Hazaribagh	RHS	2.19	1.51	1.85	1255	26-Apr-2023
96000	95900	Ranchi-Hazaribagh	RHS	2.28	3.41	2.845	2032	26-Apr-2023
95900	95800	Ranchi-Hazaribagh	RHS	1.43	1.51	1.47	970	26-Apr-2023
95800	95700	Ranchi-Hazaribagh	RHS	1.94	1.69	1.815	1228	26-Apr-2023
95700	95600	Ranchi-Hazaribagh	RHS	1.02	1.6	1.31	852	26-Apr-2023
95600	95500	Ranchi-Hazaribagh	RHS	1.32	1.27	1.295	842	26-Apr-2023
95500	95400	Ranchi-Hazaribagh	RHS	1.26	1.27	1.265	820	26-Apr-2023
95400	95300	Ranchi-Hazaribagh	RHS	2.26	1.86	2.06	1415	26-Apr-2023
95300	95200	Ranchi-Hazaribagh	RHS	1.28	1.37	1.325	863	26-Apr-2023
95200	95100	Ranchi-Hazaribagh	RHS	1.81	1.83	1.82	1232	26-Apr-2023
95100	95000	Ranchi-Hazaribagh	RHS	3.15	1.49	2.32	1617	26-Apr-2023
95000	94900	Ranchi-Hazaribagh	RHS	3.37	2.65	3.01	2164	26-Apr-2023
94900	94800	Ranchi-Hazaribagh	RHS	1.34	3.01	2.175	1504	26-Apr-2023
94800	94700	Ranchi-Hazaribagh	RHS	1.69	1.8	1.745	1175	26-Apr-2023
94700	94600	Ranchi-Hazaribagh	RHS	1.7	1.64	1.67	1119	26-Apr-2023
94600	94500	Ranchi-Hazaribagh	RHS	2.06	1.31	1.685	1130	26-Apr-2023
94500	94400	Ranchi-Hazaribagh	RHS	1.74	2.38	2.06	1415	26-Apr-2023
94400	94300	Ranchi-Hazaribagh	RHS	1.64	1.29	1.465	966	26-Apr-2023
94300	94200	Ranchi-Hazaribagh	RHS	2.97	1.05	2.01	1377	26-Apr-2023
94200	94100	Ranchi-Hazaribagh	RHS	3.01	2.01	2.51	1766	26-Apr-2023
94100	94000	Ranchi-Hazaribagh	RHS	2.39	3.03	2.71	1924	26-Apr-2023
94000	93900	Ranchi-Hazaribagh	RHS	1.72	2.44	2.08	1431	26-Apr-2023
93900	93800	Ranchi-Hazaribagh	RHS	1.95	1.61	1.78	1202	26-Apr-2023
93800	93700	Ranchi-Hazaribagh	RHS	1.82	2.05	1.935	1320	26-Apr-2023
93700	93600	Ranchi-Hazaribagh	RHS	1.85	1.27	1.56	1037	26-Apr-2023
93600	93500	Ranchi-Hazaribagh	RHS	1.56	1.77	1.665	1115	26-Apr-2023
93500	93400	Ranchi-Hazaribagh	RHS	1.54	1.67	1.605	1070	26-Apr-2023
93400	93300	Ranchi-Hazaribagh	RHS	1.6	1.14	1.37	896	26-Apr-2023
93300	93200	Ranchi-Hazaribagh	RHS	1.34	1.31	1.325	863	26-Apr-2023
93200	93100	Ranchi-Hazaribagh	RHS	1.31	1.44	1.375	900	26-Apr-2023
93100	93000	Ranchi-Hazaribagh	RHS	1.56	1.69	1.625	1085	26-Apr-2023
93000	92900	Ranchi-Hazaribagh	RHS	3.78	1.76	2.77	1972	26-Apr-2023
92900	92800	Ranchi-Hazaribagh	RHS	2.39	3.74	3.065	2209	26-Apr-2023
92800	92700	Ranchi-Hazaribagh	RHS	2.03	1.77	1.9	1293	26-Apr-2023
92700	92600	Ranchi-Hazaribagh	RHS	1.32	1.39	1.355	885	26-Apr-2023
92600	92500	Ranchi-Hazaribagh	RHS	1.95	1.91	1.93	1316	26-Apr-2023
92500	92400	Ranchi-Hazaribagh	RHS	5.21	3.03	4.12	3076	26-Apr-2023
92400	92300	Ranchi-Hazaribagh	RHS	1.89	3.69	2.79	1988	26-Apr-2023
92300	92200	Ranchi-Hazaribagh	RHS	1.54	2.39	1.965	1342	26-Apr-2023
92200	92100	Ranchi-Hazaribagh	RHS	1.64	1.41	1.525	1011	26-Apr-2023
92100	92000	Ranchi-Hazaribagh	RHS	2.49	1.68	2.085	1435	26-Apr-2023
92000	91900	Ranchi-Hazaribagh	RHS	2.16	2.32	2.24	1555	26-Apr-2023
91900	91800	Ranchi-Hazaribagh	RHS	2.1	1.61	1.855	1259	26-Apr-2023
91800	91700	Ranchi-Hazaribagh	RHS	2.62	1.16	1.89	1285	26-Apr-2023
91700	91600	Ranchi-Hazaribagh	RHS	2.39	1.31	1.85	1255	26-Apr-2023
91600	91500	Ranchi-Hazaribagh	RHS	1.88	1.19	1.535	1018	26-Apr-2023
91500	91400	Ranchi-Hazaribagh	RHS	2.2	1.56	1.88	1278	26-Apr-2023
91400	91300	Ranchi-Hazaribagh	RHS	2.61	1.29	1.95	1331	26-Apr-2023
91300	91200	Ranchi-Hazaribagh	RHS	2.36	1.08	1.72	1156	26-Apr-2023
91200	91100	Ranchi-Hazaribagh	RHS	2.8	1.42	2.11	1454	26-Apr-2023
91100	91000	Ranchi-Hazaribagh	RHS	2.12	1.56	1.84	1247	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
91000	90900	Ranchi-Hazaribagh	RHS	3.42	1.96	2.69	1908	26-Apr-2023
90900	90800	Ranchi-Hazaribagh	RHS	1.96	1.11	1.535	1018	26-Apr-2023
90800	90700	Ranchi-Hazaribagh	RHS	2.53	1.96	2.245	1558	26-Apr-2023
90700	90600	Ranchi-Hazaribagh	RHS	2.3	0.88	1.59	1059	26-Apr-2023
90600	90500	Ranchi-Hazaribagh	RHS	2.63	2.01	2.32	1617	26-Apr-2023
90500	90400	Ranchi-Hazaribagh	RHS	2.11	1.34	1.725	1160	26-Apr-2023
90400	90300	Ranchi-Hazaribagh	RHS	2.16	1.44	1.8	1217	26-Apr-2023
90300	90200	Ranchi-Hazaribagh	RHS	2.06	1.16	1.61	1074	26-Apr-2023
90200	90100	Ranchi-Hazaribagh	RHS	2.38	1.1	1.74	1172	26-Apr-2023
90100	90000	Ranchi-Hazaribagh	RHS	5.72	3.9	4.81	3659	26-Apr-2023
90000	89900	Ranchi-Hazaribagh	RHS	1.79	3.79	2.79	1988	26-Apr-2023
89900	89800	Ranchi-Hazaribagh	RHS	2.26	1.44	1.85	1255	26-Apr-2023
89800	89700	Ranchi-Hazaribagh	RHS	1.84	2.22	2.03	1392	26-Apr-2023
89700	89600	Ranchi-Hazaribagh	RHS	2.98	1.56	2.27	1578	26-Apr-2023
89600	89500	Ranchi-Hazaribagh	RHS	2.55	1.31	1.93	1316	26-Apr-2023
89500	89400	Ranchi-Hazaribagh	RHS	2.24	1.29	1.765	1190	26-Apr-2023
89400	89300	Ranchi-Hazaribagh	RHS	1.91	1.44	1.675	1123	26-Apr-2023
89300	89200	Ranchi-Hazaribagh	RHS	1.57	1.19	1.38	904	26-Apr-2023
89200	89100	Ranchi-Hazaribagh	RHS	1.66	2.51	2.085	1435	26-Apr-2023
89100	89000	Ranchi-Hazaribagh	RHS	2.72	1.77	2.245	1558	26-Apr-2023
89000	88900	Ranchi-Hazaribagh	RHS	2.63	1.58	2.105	1450	26-Apr-2023
88900	88800	Ranchi-Hazaribagh	RHS	2.22	1.63	1.925	1312	26-Apr-2023
88800	88700	Ranchi-Hazaribagh	RHS	2.14	1.73	1.935	1320	26-Apr-2023
88700	88600	Ranchi-Hazaribagh	RHS	2.58	2.05	2.315	1613	26-Apr-2023
88600	88500	Ranchi-Hazaribagh	RHS	2.11	2.17	2.14	1477	26-Apr-2023
88500	88400	Ranchi-Hazaribagh	RHS	2.38	2.59	2.485	1746	26-Apr-2023
88400	88300	Ranchi-Hazaribagh	RHS	2.02	2.28	2.15	1485	26-Apr-2023
88300	88200	Ranchi-Hazaribagh	RHS	2.26	1.99	2.125	1465	26-Apr-2023
88200	88100	Ranchi-Hazaribagh	RHS	2.73	2.05	2.39	1672	26-Apr-2023
88100	88000	Ranchi-Hazaribagh	RHS	2.09	2.21	2.15	1485	26-Apr-2023
88000	87900	Ranchi-Hazaribagh	RHS	2.07	2.01	2.04	1400	26-Apr-2023
87900	87800	Ranchi-Hazaribagh	RHS	3.17	1.3	2.235	1551	26-Apr-2023
87800	87700	Ranchi-Hazaribagh	RHS	2.55	1.38	1.965	1342	26-Apr-2023
87700	87600	Ranchi-Hazaribagh	RHS	1.85	1.61	1.73	1164	26-Apr-2023
87600	87500	Ranchi-Hazaribagh	RHS	2.39	1.35	1.87	1270	26-Apr-2023
87500	87400	Ranchi-Hazaribagh	RHS	2.43	1.11	1.77	1194	26-Apr-2023
87400	87300	Ranchi-Hazaribagh	RHS	2.41	2.59	2.5	1758	26-Apr-2023
87300	87200	Ranchi-Hazaribagh	RHS	2.7	2.33	2.515	1770	26-Apr-2023
87200	87100	Ranchi-Hazaribagh	RHS	2.59	2.13	2.36	1648	26-Apr-2023
87100	87000	Ranchi-Hazaribagh	RHS	2.06	1.15	1.605	1070	26-Apr-2023
87000	86900	Ranchi-Hazaribagh	RHS	1.32	1.29	1.305	849	26-Apr-2023
86900	86800	Ranchi-Hazaribagh	RHS	2.25	1.25	1.75	1179	26-Apr-2023
86800	86700	Ranchi-Hazaribagh	RHS	2.46	1.79	2.125	1465	26-Apr-2023
86700	86600	Ranchi-Hazaribagh	RHS	2.26	1.99	2.125	1465	26-Apr-2023
86600	86500	Ranchi-Hazaribagh	RHS	1.62	1.31	1.465	966	26-Apr-2023
86500	86400	Ranchi-Hazaribagh	RHS	2.21	1.45	1.83	1240	26-Apr-2023
86400	86300	Ranchi-Hazaribagh	RHS	2.04	1.71	1.875	1274	26-Apr-2023
86300	86200	Ranchi-Hazaribagh	RHS	2.38	1.71	2.045	1404	26-Apr-2023
86200	86100	Ranchi-Hazaribagh	RHS	2.13	1.04	1.585	1055	26-Apr-2023
86100	86000	Ranchi-Hazaribagh	RHS	1.94	1.22	1.58	1052	26-Apr-2023
86000	85900	Ranchi-Hazaribagh	RHS	1.92	1.64	1.78	1202	26-Apr-2023
85900	85800	Ranchi-Hazaribagh	RHS	1.95	2.26	2.105	1450	26-Apr-2023
85800	85700	Ranchi-Hazaribagh	RHS	2.22	1.94	2.08	1431	26-Apr-2023
85700	85600	Ranchi-Hazaribagh	RHS	2.03	5.29	3.66	2694	26-Apr-2023
85600	85500	Ranchi-Hazaribagh	RHS	4.11	2.64	3.375	2460	26-Apr-2023
85500	85400	Ranchi-Hazaribagh	RHS	2.51	2.61	2.56	1805	26-Apr-2023
85400	85300	Ranchi-Hazaribagh	RHS	3.49	3.29	3.39	2473	26-Apr-2023
85300	85200	Ranchi-Hazaribagh	RHS	3.53	2.78	3.155	2281	26-Apr-2023
85200	85100	Ranchi-Hazaribagh	RHS	3.68	2.39	3.035	2185	26-Apr-2023
85100	85000	Ranchi-Hazaribagh	RHS	2.71	1.79	2.25	1562	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
85000	84900	Ranchi-Hazaribagh	RHS	2.68	1.33	2.005	1373	26-Apr-2023
84900	84800	Ranchi-Hazaribagh	RHS	3.65	1.32	2.485	1746	26-Apr-2023
84800	84700	Ranchi-Hazaribagh	RHS	3.23	1.1	2.165	1496	26-Apr-2023
84700	84600	Ranchi-Hazaribagh	RHS	2.56	2.34	2.45	1719	26-Apr-2023
84600	84500	Ranchi-Hazaribagh	RHS	3.75	3.46	3.605	2649	26-Apr-2023
84500	84400	Ranchi-Hazaribagh	RHS	3.5	2.83	3.165	2290	26-Apr-2023
84400	84300	Ranchi-Hazaribagh	RHS	3.01	1.49	2.25	1562	26-Apr-2023
84300	84200	Ranchi-Hazaribagh	RHS	2.41	1.59	2	1369	26-Apr-2023
84200	84100	Ranchi-Hazaribagh	RHS	2.11	1.97	2.04	1400	26-Apr-2023
84100	84000	Ranchi-Hazaribagh	RHS	2.46	1.95	2.205	1527	26-Apr-2023
84000	83900	Ranchi-Hazaribagh	RHS	2.11	1.78	1.945	1327	26-Apr-2023
83900	83800	Ranchi-Hazaribagh	RHS	2.19	3.76	2.975	2136	26-Apr-2023
83800	83700	Ranchi-Hazaribagh	RHS	3.13	2.66	2.895	2072	26-Apr-2023
83700	83600	Ranchi-Hazaribagh	RHS	3.75	2.92	3.335	2428	26-Apr-2023
83600	83500	Ranchi-Hazaribagh	RHS	2.95	2.77	2.86	2044	26-Apr-2023
83500	83400	Ranchi-Hazaribagh	RHS	3.88	2.55	3.215	2330	26-Apr-2023
83400	83300	Ranchi-Hazaribagh	RHS	2.39	3	2.695	1912	26-Apr-2023
83300	83200	Ranchi-Hazaribagh	RHS	3.96	1.53	2.745	1952	26-Apr-2023
83200	83100	Ranchi-Hazaribagh	RHS	3.69	1.32	2.505	1762	26-Apr-2023
83100	83000	Ranchi-Hazaribagh	RHS	2.32	1.34	1.83	1240	26-Apr-2023
83000	82900	Ranchi-Hazaribagh	RHS	3.17	1.23	2.2	1524	26-Apr-2023
82900	82800	Ranchi-Hazaribagh	RHS	1.68	1.32	1.5	992	26-Apr-2023
82800	82700	Ranchi-Hazaribagh	RHS	3.55	1.09	2.32	1617	26-Apr-2023
82700	82600	Ranchi-Hazaribagh	RHS	3.12	1.58	2.35	1640	26-Apr-2023
82600	82500	Ranchi-Hazaribagh	RHS	2.73	1.69	2.21	1531	26-Apr-2023
82500	82400	Ranchi-Hazaribagh	RHS	2.85	1.07	1.96	1339	26-Apr-2023
82400	82300	Ranchi-Hazaribagh	RHS	2.79	1.59	2.19	1516	26-Apr-2023
82300	82200	Ranchi-Hazaribagh	RHS	1.79	1.32	1.555	1033	26-Apr-2023
82200	82100	Ranchi-Hazaribagh	RHS	1.74	2.84	2.29	1594	26-Apr-2023
82100	82000	Ranchi-Hazaribagh	RHS	2.95	1.8	2.375	1660	26-Apr-2023
82000	81900	Ranchi-Hazaribagh	RHS	1.94	1.83	1.885	1281	26-Apr-2023
81900	81800	Ranchi-Hazaribagh	RHS	1.67	2.17	1.92	1308	26-Apr-2023
81800	81700	Ranchi-Hazaribagh	RHS	3.15	2.37	2.76	1964	26-Apr-2023
81700	81600	Ranchi-Hazaribagh	RHS	1.84	1.52	1.68	1126	26-Apr-2023
81600	81500	Ranchi-Hazaribagh	RHS	2.69	2.9	2.795	1992	26-Apr-2023
81500	81400	Ranchi-Hazaribagh	RHS	3.52	3.33	3.425	2501	26-Apr-2023
81400	81300	Ranchi-Hazaribagh	RHS	3.08	1.95	2.515	1770	26-Apr-2023
81300	81200	Ranchi-Hazaribagh	RHS	2.63	1.61	2.12	1462	26-Apr-2023
81200	81100	Ranchi-Hazaribagh	RHS	2.92	1.52	2.22	1539	26-Apr-2023
81100	81000	Ranchi-Hazaribagh	RHS	3.21	2.96	3.085	2225	26-Apr-2023
81000	80900	Ranchi-Hazaribagh	RHS	3.62	1.74	2.68	1900	26-Apr-2023
80900	80800	Ranchi-Hazaribagh	RHS	3.05	2.45	2.75	1956	26-Apr-2023
80800	80700	Ranchi-Hazaribagh	RHS	3.85	1.71	2.78	1980	26-Apr-2023
80700	80600	Ranchi-Hazaribagh	RHS	2.24	1.92	2.08	1431	26-Apr-2023
80600	80500	Ranchi-Hazaribagh	RHS	4.21	3.08	3.645	2682	26-Apr-2023
80500	80400	Ranchi-Hazaribagh	RHS	2.72	1.76	2.24	1555	26-Apr-2023
80400	80300	Ranchi-Hazaribagh	RHS	4.32	1.69	3.005	2160	26-Apr-2023
80300	80200	Ranchi-Hazaribagh	RHS	1.92	1.99	1.955	1335	26-Apr-2023
80200	80100	Ranchi-Hazaribagh	RHS	1.76	1.9	1.83	1240	26-Apr-2023
80100	80000	Ranchi-Hazaribagh	RHS	2.53	1.71	2.12	1462	26-Apr-2023
80000	79900	Ranchi-Hazaribagh	RHS	2.46	1.6	2.03	1392	26-Apr-2023
79900	79800	Ranchi-Hazaribagh	RHS	1.99	1.2	1.595	1063	26-Apr-2023
79800	79700	Ranchi-Hazaribagh	RHS	1.19	1.43	1.31	852	26-Apr-2023
79700	79600	Ranchi-Hazaribagh	RHS	1.34	1.55	1.445	951	26-Apr-2023
79600	79500	Ranchi-Hazaribagh	RHS	1.98	1.87	1.925	1312	26-Apr-2023
79500	79400	Ranchi-Hazaribagh	RHS	2.7	2.71	2.705	1920	26-Apr-2023
79400	79300	Ranchi-Hazaribagh	RHS	2.83	2.05	2.44	1711	26-Apr-2023
79300	79200	Ranchi-Hazaribagh	RHS	3.05	2.31	2.68	1900	26-Apr-2023
79200	79100	Ranchi-Hazaribagh	RHS	2.37	1.8	2.085	1435	26-Apr-2023
79100	79000	Ranchi-Hazaribagh	RHS	2	1.34	1.67	1119	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
79000	78900	Ranchi-Hazaribagh	RHS	2.47	1.24	1.855	1259	26-Apr-2023
78900	78800	Ranchi-Hazaribagh	RHS	4.53	2.08	3.305	2403	26-Apr-2023
78800	78700	Ranchi-Hazaribagh	RHS	3.38	2.47	2.925	2096	26-Apr-2023
78700	78600	Ranchi-Hazaribagh	RHS	3.43	1.67	2.55	1797	26-Apr-2023
78600	78500	Ranchi-Hazaribagh	RHS	2.99	1.95	2.47	1734	26-Apr-2023
78500	78400	Ranchi-Hazaribagh	RHS	2.68	2.24	2.46	1727	26-Apr-2023
78400	78300	Ranchi-Hazaribagh	RHS	2.84	2.22	2.53	1782	26-Apr-2023
78300	78200	Ranchi-Hazaribagh	RHS	2.95	1.29	2.12	1462	26-Apr-2023
78200	78100	Ranchi-Hazaribagh	RHS	2.29	1.53	1.91	1300	26-Apr-2023
78100	78000	Ranchi-Hazaribagh	RHS	1.8	2.32	2.06	1415	26-Apr-2023
78000	77900	Ranchi-Hazaribagh	RHS	3.46	1.68	2.57	1813	26-Apr-2023
77900	77800	Ranchi-Hazaribagh	RHS	2.86	1.35	2.105	1450	26-Apr-2023
77800	77700	Ranchi-Hazaribagh	RHS	1.62	1.5	1.56	1037	26-Apr-2023
77700	77600	Ranchi-Hazaribagh	RHS	2.16	1.56	1.86	1262	26-Apr-2023
77600	77500	Ranchi-Hazaribagh	RHS	2.81	1.63	2.22	1539	26-Apr-2023
77500	77400	Ranchi-Hazaribagh	RHS	2.15	1.39	1.77	1194	26-Apr-2023
77400	77300	Ranchi-Hazaribagh	RHS	2.55	1.36	1.955	1335	26-Apr-2023
77300	77200	Ranchi-Hazaribagh	RHS	1.96	3.43	2.695	1912	26-Apr-2023
77200	77100	Ranchi-Hazaribagh	RHS	4.91	1.63	3.27	2375	26-Apr-2023
77100	77000	Ranchi-Hazaribagh	RHS	2.65	2.64	2.645	1873	26-Apr-2023
77000	76900	Ranchi-Hazaribagh	RHS	2.44	3.73	3.085	2225	26-Apr-2023
76900	76800	Ranchi-Hazaribagh	RHS	3.48	2.09	2.785	1984	26-Apr-2023
76800	76700	Ranchi-Hazaribagh	RHS	3.72	2.93	3.325	2420	26-Apr-2023
76700	76600	Ranchi-Hazaribagh	RHS	3.06	1.89	2.475	1738	26-Apr-2023
76600	76500	Ranchi-Hazaribagh	RHS	2.83	2.47	2.65	1877	26-Apr-2023
76500	76400	Ranchi-Hazaribagh	RHS	2.61	1.89	2.25	1562	26-Apr-2023
76400	76300	Ranchi-Hazaribagh	RHS	3.58	3.01	3.295	2395	26-Apr-2023
76300	76200	Ranchi-Hazaribagh	RHS	3.43	4.52	3.975	2955	26-Apr-2023
76200	76100	Ranchi-Hazaribagh	RHS	3.03	3.36	3.195	2314	26-Apr-2023
76100	76000	Ranchi-Hazaribagh	RHS	5.08	3.63	4.355	3273	26-Apr-2023
76000	75900	Ranchi-Hazaribagh	RHS	3.2	2.75	2.975	2136	26-Apr-2023
75900	75800	Ranchi-Hazaribagh	RHS	3.03	2.23	2.63	1861	26-Apr-2023
75800	75700	Ranchi-Hazaribagh	RHS	3.29	2.9	3.095	2233	26-Apr-2023
75700	75600	Ranchi-Hazaribagh	RHS	2.04	2.91	2.475	1738	26-Apr-2023
75600	75500	Ranchi-Hazaribagh	RHS	4.4	2	3.2	2318	26-Apr-2023
75500	75400	Ranchi-Hazaribagh	RHS	3.48	2.24	2.86	2044	26-Apr-2023
75400	75300	Ranchi-Hazaribagh	RHS	2.53	1.93	2.23	1547	26-Apr-2023
75300	75200	Ranchi-Hazaribagh	RHS	1.69	1.6	1.645	1100	26-Apr-2023
75200	75100	Ranchi-Hazaribagh	RHS	2.67	1.82	2.245	1558	26-Apr-2023
75100	75000	Ranchi-Hazaribagh	RHS	4.86	1.82	3.34	2432	26-Apr-2023
75000	74900	Ranchi-Hazaribagh	RHS	4.3	2.39	3.345	2436	26-Apr-2023
74900	74800	Ranchi-Hazaribagh	RHS	3.7	1.97	2.835	2024	26-Apr-2023
74800	74700	Ranchi-Hazaribagh	RHS	3.13	1.57	2.35	1640	26-Apr-2023
74700	74600	Ranchi-Hazaribagh	RHS	2.39	1.92	2.155	1489	26-Apr-2023
74600	74500	Ranchi-Hazaribagh	RHS	1.72	2.47	2.095	1442	26-Apr-2023
74500	74400	Ranchi-Hazaribagh	RHS	1.91	2.36	2.135	1473	26-Apr-2023
74400	74300	Ranchi-Hazaribagh	RHS	2.49	2.28	2.385	1668	26-Apr-2023
74300	74200	Ranchi-Hazaribagh	RHS	2.91	3.05	2.98	2140	26-Apr-2023
74200	74100	Ranchi-Hazaribagh	RHS	3.62	2.88	3.25	2359	26-Apr-2023
74100	74000	Ranchi-Hazaribagh	RHS	3.45	2.49	2.97	2132	26-Apr-2023
74000	73900	Ranchi-Hazaribagh	RHS	2.47	1.68	2.075	1427	26-Apr-2023
73900	73800	Ranchi-Hazaribagh	RHS	3.72	1.98	2.85	2036	26-Apr-2023
73800	73700	Ranchi-Hazaribagh	RHS	3.24	2.17	2.705	1920	26-Apr-2023
73700	73600	Ranchi-Hazaribagh	RHS	3.05	2.65	2.85	2036	26-Apr-2023
73600	73500	Ranchi-Hazaribagh	RHS	2.91	2.7	2.805	2000	26-Apr-2023
73500	73400	Ranchi-Hazaribagh	RHS	3.11	2.45	2.78	1980	26-Apr-2023
73400	73300	Ranchi-Hazaribagh	RHS	3.07	1.5	2.285	1590	26-Apr-2023
73300	73200	Ranchi-Hazaribagh	RHS	2.75	1.95	2.35	1640	26-Apr-2023
73200	73100	Ranchi-Hazaribagh	RHS	2.78	1.65	2.215	1535	26-Apr-2023
73100	73000	Ranchi-Hazaribagh	RHS	3.02	1.48	2.25	1562	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
73000	72900	Ranchi-Hazaribagh	RHS	2.1	1.65	1.875	1274	26-Apr-2023
72900	72800	Ranchi-Hazaribagh	RHS	1.8	2.55	2.175	1504	26-Apr-2023
72800	72700	Ranchi-Hazaribagh	RHS	2.41	2.24	2.325	1621	26-Apr-2023
72700	72600	Ranchi-Hazaribagh	RHS	2.45	1.92	2.185	1512	26-Apr-2023
72600	72500	Ranchi-Hazaribagh	RHS	2.94	1.95	2.445	1715	26-Apr-2023
72500	72400	Ranchi-Hazaribagh	RHS	2.47	1.69	2.08	1431	26-Apr-2023
72400	72300	Ranchi-Hazaribagh	RHS	2.64	1.65	2.145	1481	26-Apr-2023
72300	72200	Ranchi-Hazaribagh	RHS	2.61	2.49	2.55	1797	26-Apr-2023
72200	72100	Ranchi-Hazaribagh	RHS	3.22	3.41	3.315	2411	26-Apr-2023
72100	72000	Ranchi-Hazaribagh	RHS	3.3	2.49	2.895	2072	26-Apr-2023
72000	71900	Ranchi-Hazaribagh	RHS	2.34	1.29	1.815	1228	26-Apr-2023
71900	71800	Ranchi-Hazaribagh	RHS	1.44	1.27	1.355	885	26-Apr-2023
71800	71700	Ranchi-Hazaribagh	RHS	1.35	1.56	1.455	959	26-Apr-2023
71700	71600	Ranchi-Hazaribagh	RHS	1.81	1.46	1.635	1093	26-Apr-2023
71600	71500	Ranchi-Hazaribagh	RHS	2.09	2.42	2.255	1566	26-Apr-2023
71500	71400	Ranchi-Hazaribagh	RHS	3.02	1.86	2.44	1711	26-Apr-2023
71400	71300	Ranchi-Hazaribagh	RHS	2.56	1.82	2.19	1516	26-Apr-2023
71300	71200	Ranchi-Hazaribagh	RHS	2.63	2.66	2.645	1873	26-Apr-2023
71200	71100	Ranchi-Hazaribagh	RHS	2.8	2.34	2.57	1813	26-Apr-2023
71100	71000	Ranchi-Hazaribagh	RHS	3.26	2.1	2.68	1900	26-Apr-2023
71000	70900	Ranchi-Hazaribagh	RHS	2.97	2.66	2.815	2008	26-Apr-2023
70900	70800	Ranchi-Hazaribagh	RHS	3.16	2.36	2.76	1964	26-Apr-2023
70800	70700	Ranchi-Hazaribagh	RHS	2.52	2.1	2.31	1609	26-Apr-2023
70700	70600	Ranchi-Hazaribagh	RHS	1.59	3.27	2.43	1703	26-Apr-2023
70600	70500	Ranchi-Hazaribagh	RHS	2.3	2.4	2.35	1640	26-Apr-2023
70500	70400	Ranchi-Hazaribagh	RHS	3.93	3.67	3.8	2810	26-Apr-2023
70400	70300	Ranchi-Hazaribagh	RHS	3.03	1.75	2.39	1672	26-Apr-2023
70300	70200	Ranchi-Hazaribagh	RHS	3.87	2.15	3.01	2164	26-Apr-2023
70200	70100	Ranchi-Hazaribagh	RHS	2.26	2.35	2.305	1605	26-Apr-2023
70100	70000	Ranchi-Hazaribagh	RHS	2.61	2.66	2.635	1865	26-Apr-2023
70000	69900	Ranchi-Hazaribagh	RHS	2	1.97	1.985	1358	26-Apr-2023
69900	69800	Ranchi-Hazaribagh	RHS	2.03	2.03	2.03	1392	26-Apr-2023
69800	69700	Ranchi-Hazaribagh	RHS	1.85	1.44	1.645	1100	26-Apr-2023
69700	69600	Ranchi-Hazaribagh	RHS	2.27	1.75	2.01	1377	26-Apr-2023
69600	69500	Ranchi-Hazaribagh	RHS	2	1.77	1.885	1281	26-Apr-2023
69500	69400	Ranchi-Hazaribagh	RHS	1.97	1.93	1.95	1331	26-Apr-2023
69400	69300	Ranchi-Hazaribagh	RHS	2.75	1.68	2.215	1535	26-Apr-2023
69300	69200	Ranchi-Hazaribagh	RHS	1.96	1.55	1.755	1183	26-Apr-2023
69200	69100	Ranchi-Hazaribagh	RHS	2.26	2.2	2.23	1547	26-Apr-2023
69100	69000	Ranchi-Hazaribagh	RHS	2.57	2.08	2.325	1621	26-Apr-2023
69000	68900	Ranchi-Hazaribagh	RHS	2.21	1.65	1.93	1316	26-Apr-2023
68900	68800	Ranchi-Hazaribagh	RHS	2.31	2.32	2.315	1613	26-Apr-2023
68800	68700	Ranchi-Hazaribagh	RHS	3.65	3.15	3.4	2481	26-Apr-2023
68700	68600	Ranchi-Hazaribagh	RHS	3.51	2.78	3.145	2273	26-Apr-2023
68600	68500	Ranchi-Hazaribagh	RHS	3.59	3.68	3.635	2674	26-Apr-2023
68500	68400	Ranchi-Hazaribagh	RHS	3.3	2.54	2.92	2092	26-Apr-2023
68400	68300	Ranchi-Hazaribagh	RHS	2.39	2.32	2.355	1644	26-Apr-2023
68300	68200	Ranchi-Hazaribagh	RHS	3.34	1.99	2.665	1889	26-Apr-2023
68200	68100	Ranchi-Hazaribagh	RHS	2.27	2.69	2.48	1742	26-Apr-2023
68100	68000	Ranchi-Hazaribagh	RHS	2.6	1.36	1.98	1354	26-Apr-2023
68000	67900	Ranchi-Hazaribagh	RHS	2.18	1.9	2.04	1400	26-Apr-2023
67900	67800	Ranchi-Hazaribagh	RHS	2.46	1.92	2.19	1516	26-Apr-2023
67800	67700	Ranchi-Hazaribagh	RHS	1.69	1.91	1.8	1217	26-Apr-2023
67700	67600	Ranchi-Hazaribagh	RHS	2.55	5.11	3.83	2835	26-Apr-2023
67600	67500	Ranchi-Hazaribagh	RHS	3.72	1.47	2.595	1833	26-Apr-2023
67500	67400	Ranchi-Hazaribagh	RHS	1.44	1.26	1.35	882	26-Apr-2023
67400	67300	Ranchi-Hazaribagh	RHS	1.76	1.53	1.645	1100	26-Apr-2023
67300	67200	Ranchi-Hazaribagh	RHS	2.43	1.79	2.11	1454	26-Apr-2023
67200	67100	Ranchi-Hazaribagh	RHS	2.53	1.47	2	1369	26-Apr-2023
67100	67000	Ranchi-Hazaribagh	RHS	1.8	1.76	1.78	1202	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
67000	66900	Ranchi-Hazaribagh	RHS	1.77	1.94	1.855	1259	26-Apr-2023
66900	66800	Ranchi-Hazaribagh	RHS	1.9	2.07	1.985	1358	26-Apr-2023
66800	66700	Ranchi-Hazaribagh	RHS	2.23	2.22	2.225	1543	26-Apr-2023
66700	66600	Ranchi-Hazaribagh	RHS	3	2.46	2.73	1940	26-Apr-2023
66600	66500	Ranchi-Hazaribagh	RHS	2.56	1.96	2.26	1570	26-Apr-2023
66500	66400	Ranchi-Hazaribagh	RHS	2.23	1.35	1.79	1209	26-Apr-2023
66400	66300	Ranchi-Hazaribagh	RHS	1.48	1.8	1.64	1096	26-Apr-2023
66300	66200	Ranchi-Hazaribagh	RHS	2.05	1.81	1.93	1316	26-Apr-2023
66200	66100	Ranchi-Hazaribagh	RHS	2.69	1.4	2.045	1404	26-Apr-2023
66100	66000	Ranchi-Hazaribagh	RHS	2.21	0.86	1.535	1018	26-Apr-2023
66000	65900	Ranchi-Hazaribagh	RHS	1.29	1.12	1.205	776	26-Apr-2023
65900	65800	Ranchi-Hazaribagh	RHS	1.31	1.2	1.255	812	26-Apr-2023
65800	65700	Ranchi-Hazaribagh	RHS	1.55	1.27	1.41	926	26-Apr-2023
65700	65600	Ranchi-Hazaribagh	RHS	1.2	0.89	1.045	662	26-Apr-2023
65600	65500	Ranchi-Hazaribagh	RHS	1.65	1.19	1.42	933	26-Apr-2023
65500	65400	Ranchi-Hazaribagh	RHS	1.73	2.25	1.99	1362	26-Apr-2023
65400	65300	Ranchi-Hazaribagh	RHS	2.12	2.93	2.525	1778	26-Apr-2023
65300	65200	Ranchi-Hazaribagh	RHS	1.96	1.4	1.68	1126	26-Apr-2023
65200	65100	Ranchi-Hazaribagh	RHS	2.35	1.98	2.165	1496	26-Apr-2023
65100	65000	Ranchi-Hazaribagh	RHS	2.43	3.84	3.135	2265	26-Apr-2023
65000	64900	Ranchi-Hazaribagh	RHS	3.46	3.01	3.235	2346	26-Apr-2023
64900	64800	Ranchi-Hazaribagh	RHS	2.97	2.41	2.69	1908	26-Apr-2023
64800	64700	Ranchi-Hazaribagh	RHS	1.86	1.71	1.785	1206	26-Apr-2023
64700	64600	Ranchi-Hazaribagh	RHS	2.03	1.68	1.855	1259	26-Apr-2023
64600	64500	Ranchi-Hazaribagh	RHS	2.84	1.62	2.23	1547	26-Apr-2023
64500	64400	Ranchi-Hazaribagh	RHS	3.52	2.38	2.95	2116	26-Apr-2023
64400	64300	Ranchi-Hazaribagh	RHS	2.68	1.86	2.27	1578	26-Apr-2023
64300	64200	Ranchi-Hazaribagh	RHS	2.69	1.94	2.315	1613	26-Apr-2023
64200	64100	Ranchi-Hazaribagh	RHS	2.03	2.02	2.025	1388	26-Apr-2023
64100	64000	Ranchi-Hazaribagh	RHS	2.12	1.73	1.925	1312	26-Apr-2023
64000	63900	Ranchi-Hazaribagh	RHS	2.1	1.83	1.965	1342	26-Apr-2023
63900	63800	Ranchi-Hazaribagh	RHS	2.8	2.09	2.445	1715	26-Apr-2023
63800	63700	Ranchi-Hazaribagh	RHS	2.28	2.12	2.2	1524	26-Apr-2023
63700	63600	Ranchi-Hazaribagh	RHS	1.89	1.57	1.73	1164	26-Apr-2023
63600	63500	Ranchi-Hazaribagh	RHS	2.86	2.7	2.78	1980	26-Apr-2023
63500	63400	Ranchi-Hazaribagh	RHS	2.17	1.78	1.975	1350	26-Apr-2023
63400	63300	Ranchi-Hazaribagh	RHS	2.41	1.95	2.18	1508	26-Apr-2023
63300	63200	Ranchi-Hazaribagh	RHS	1.76	1.47	1.615	1078	26-Apr-2023
63200	63100	Ranchi-Hazaribagh	RHS	1.82	1.47	1.645	1100	26-Apr-2023
63100	63000	Ranchi-Hazaribagh	RHS	1.8	1.16	1.48	977	26-Apr-2023
63000	62900	Ranchi-Hazaribagh	RHS	3.36	2.04	2.7	1916	26-Apr-2023
62900	62800	Ranchi-Hazaribagh	RHS	1.65	1.74	1.695	1138	26-Apr-2023
62800	62700	Ranchi-Hazaribagh	RHS	2.92	1.69	2.305	1605	26-Apr-2023
62700	62600	Ranchi-Hazaribagh	RHS	1.87	1.33	1.6	1066	26-Apr-2023
62600	62500	Ranchi-Hazaribagh	RHS	2.4	1.94	2.17	1500	26-Apr-2023
62500	62400	Ranchi-Hazaribagh	RHS	3	2.34	2.67	1892	26-Apr-2023
62400	62300	Ranchi-Hazaribagh	RHS	3.14	1.81	2.475	1738	26-Apr-2023
62300	62200	Ranchi-Hazaribagh	RHS	2.48	1.54	2.01	1377	26-Apr-2023
62200	62100	Ranchi-Hazaribagh	RHS	3.07	1.89	2.48	1742	26-Apr-2023
62100	62000	Ranchi-Hazaribagh	RHS	2.69	1.75	2.22	1539	26-Apr-2023
62000	61900	Ranchi-Hazaribagh	RHS	3.13	2.36	2.745	1952	26-Apr-2023
61900	61800	Ranchi-Hazaribagh	RHS	2.79	1.58	2.185	1512	26-Apr-2023
61800	61700	Ranchi-Hazaribagh	RHS	3.84	2.34	3.09	2229	26-Apr-2023
61700	61600	Ranchi-Hazaribagh	RHS	3.96	4.4	4.18	3126	26-Apr-2023
61600	61500	Ranchi-Hazaribagh	RHS	2.15	1.56	1.855	1259	26-Apr-2023
61500	61400	Ranchi-Hazaribagh	RHS	1.62	1.83	1.725	1160	26-Apr-2023
61400	61300	Ranchi-Hazaribagh	RHS	1.52	1.27	1.395	915	26-Apr-2023
61300	61200	Ranchi-Hazaribagh	RHS	2.75	1.95	2.35	1640	26-Apr-2023
61200	61100	Ranchi-Hazaribagh	RHS	1.9	2.3	2.1	1446	26-Apr-2023
61100	61000	Ranchi-Hazaribagh	RHS	2.37	1.81	2.09	1438	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
61000	60900	Ranchi-Hazaribagh	RHS	2.07	1.67	1.87	1270	26-Apr-2023
60900	60800	Ranchi-Hazaribagh	RHS	1.8	1.79	1.795	1213	26-Apr-2023
60800	60700	Ranchi-Hazaribagh	RHS	1.86	1.27	1.565	1040	26-Apr-2023
60700	60600	Ranchi-Hazaribagh	RHS	1.48	0.86	1.17	751	26-Apr-2023
60600	60500	Ranchi-Hazaribagh	RHS	1.31	0.77	1.04	658	26-Apr-2023
60500	60400	Ranchi-Hazaribagh	RHS	1.91	1.08	1.495	988	26-Apr-2023
60400	60300	Ranchi-Hazaribagh	RHS	1.87	1.35	1.61	1074	26-Apr-2023
60300	60200	Ranchi-Hazaribagh	RHS	2.15	1.64	1.895	1289	26-Apr-2023
60200	60100	Ranchi-Hazaribagh	RHS	2.42	1.33	1.875	1274	26-Apr-2023
60100	60000	Ranchi-Hazaribagh	RHS	2.1	1.71	1.905	1297	26-Apr-2023
60000	59900	Ranchi-Hazaribagh	RHS	1.81	2.16	1.985	1358	26-Apr-2023
59900	59800	Ranchi-Hazaribagh	RHS	2.09	1.26	1.675	1123	26-Apr-2023
59800	59700	Ranchi-Hazaribagh	RHS	1.29	1.38	1.335	871	26-Apr-2023
59700	59600	Ranchi-Hazaribagh	RHS	3.2	3.34	3.27	2375	26-Apr-2023
59600	59500	Ranchi-Hazaribagh	RHS	1.82	1.48	1.65	1104	26-Apr-2023
59500	59400	Ranchi-Hazaribagh	RHS	1.84	1.61	1.725	1160	26-Apr-2023
59400	59300	Ranchi-Hazaribagh	RHS	1.67	2.28	1.975	1350	26-Apr-2023
59300	59200	Ranchi-Hazaribagh	RHS	2.99	2.01	2.5	1758	26-Apr-2023
59200	59100	Ranchi-Hazaribagh	RHS	2.6	1.8	2.2	1524	26-Apr-2023
59100	59000	Ranchi-Hazaribagh	RHS	2.59	1.67	2.13	1469	26-Apr-2023
59000	58900	Ranchi-Hazaribagh	RHS	2.28	1.94	2.11	1454	26-Apr-2023
58900	58800	Ranchi-Hazaribagh	RHS	2.75	1.78	2.265	1574	26-Apr-2023
58800	58700	Ranchi-Hazaribagh	RHS	2.25	1.85	2.05	1408	26-Apr-2023
58700	58600	Ranchi-Hazaribagh	RHS	2.21	1.31	1.76	1187	26-Apr-2023
58600	58500	Ranchi-Hazaribagh	RHS	2.19	1.47	1.83	1240	26-Apr-2023
58500	58400	Ranchi-Hazaribagh	RHS	1.81	2.02	1.915	1304	26-Apr-2023
58400	58300	Ranchi-Hazaribagh	RHS	2.46	1.69	2.075	1427	26-Apr-2023
58300	58200	Ranchi-Hazaribagh	RHS	1.71	1.29	1.5	992	26-Apr-2023
58200	58100	Ranchi-Hazaribagh	RHS	2.28	1.68	1.98	1354	26-Apr-2023
58100	58000	Ranchi-Hazaribagh	RHS	1.49	1.36	1.425	937	26-Apr-2023
58000	57900	Ranchi-Hazaribagh	RHS	1.78	1.71	1.745	1175	26-Apr-2023
57900	57800	Ranchi-Hazaribagh	RHS	3.62	2.29	2.955	2120	26-Apr-2023
57800	57700	Ranchi-Hazaribagh	RHS	4.71	5.2	4.955	3783	26-Apr-2023
57700	57600	Ranchi-Hazaribagh	RHS	3.53	1.91	2.72	1932	26-Apr-2023
57600	57500	Ranchi-Hazaribagh	RHS	2.49	1.6	2.045	1404	26-Apr-2023
57500	57400	Ranchi-Hazaribagh	RHS	2.89	2.93	2.91	2084	26-Apr-2023
57400	57300	Ranchi-Hazaribagh	RHS	2.64	1.89	2.265	1574	26-Apr-2023
57300	57200	Ranchi-Hazaribagh	RHS	2.36	1.97	2.165	1496	26-Apr-2023
57200	57100	Ranchi-Hazaribagh	RHS	2.26	2.08	2.17	1500	26-Apr-2023
57100	57000	Ranchi-Hazaribagh	RHS	2.7	1.79	2.245	1558	26-Apr-2023
57000	56900	Ranchi-Hazaribagh	RHS	3.01	1.73	2.37	1656	26-Apr-2023
56900	56800	Ranchi-Hazaribagh	RHS	2.68	2.38	2.53	1782	26-Apr-2023
56800	56700	Ranchi-Hazaribagh	RHS	2.03	1.69	1.86	1262	26-Apr-2023
56700	56600	Ranchi-Hazaribagh	RHS	1.98	1.55	1.765	1190	26-Apr-2023
56600	56500	Ranchi-Hazaribagh	RHS	2.26	2.57	2.415	1691	26-Apr-2023
56500	56400	Ranchi-Hazaribagh	RHS	2.34	1.84	2.09	1438	26-Apr-2023
56400	56300	Ranchi-Hazaribagh	RHS	2.17	1.64	1.905	1297	26-Apr-2023
56300	56200	Ranchi-Hazaribagh	RHS	2	1.71	1.855	1259	26-Apr-2023
56200	56100	Ranchi-Hazaribagh	RHS	2.07	1.62	1.845	1251	26-Apr-2023
56100	56000	Ranchi-Hazaribagh	RHS	2.96	1.89	2.425	1699	26-Apr-2023
56000	55900	Ranchi-Hazaribagh	RHS	1.86	1.54	1.7	1141	26-Apr-2023
55900	55800	Ranchi-Hazaribagh	RHS	1.52	0.95	1.235	798	26-Apr-2023
55800	55700	Ranchi-Hazaribagh	RHS	2.08	1.66	1.87	1270	26-Apr-2023
55700	55600	Ranchi-Hazaribagh	RHS	2.24	2.07	2.155	1489	26-Apr-2023
55600	55500	Ranchi-Hazaribagh	RHS	2.21	2.05	2.13	1469	26-Apr-2023
55500	55400	Ranchi-Hazaribagh	RHS	1.99	1.59	1.79	1209	26-Apr-2023
55400	55300	Ranchi-Hazaribagh	RHS	2.67	2.88	2.775	1976	26-Apr-2023
55300	55200	Ranchi-Hazaribagh	RHS	2.83	2.24	2.535	1786	26-Apr-2023
55200	55100	Ranchi-Hazaribagh	RHS	2.3	1.78	2.04	1400	26-Apr-2023
55100	55000	Ranchi-Hazaribagh	RHS	2.24	2.44	2.34	1633	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
55000	54900	Ranchi-Hazaribagh	RHS	2.42	1.94	2.18	1508	26-Apr-2023
54900	54800	Ranchi-Hazaribagh	RHS	1.86	1.97	1.915	1304	26-Apr-2023
54800	54700	Ranchi-Hazaribagh	RHS	2.14	2.03	2.085	1435	26-Apr-2023
54700	54600	Ranchi-Hazaribagh	RHS	2.12	1.4	1.76	1187	26-Apr-2023
54600	54500	Ranchi-Hazaribagh	RHS	2.04	1.69	1.865	1266	26-Apr-2023
54500	54400	Ranchi-Hazaribagh	RHS	2.87	1.32	2.095	1442	26-Apr-2023
54400	54300	Ranchi-Hazaribagh	RHS	2.48	1.6	2.04	1400	26-Apr-2023
54300	54200	Ranchi-Hazaribagh	RHS	1.61	1.76	1.685	1130	26-Apr-2023
54200	54100	Ranchi-Hazaribagh	RHS	2.07	1.92	1.995	1365	26-Apr-2023
54100	54000	Ranchi-Hazaribagh	RHS	2.32	1.65	1.985	1358	26-Apr-2023
54000	53900	Ranchi-Hazaribagh	RHS	1.31	1.52	1.415	929	26-Apr-2023
53900	53800	Ranchi-Hazaribagh	RHS	1.48	1.59	1.535	1018	26-Apr-2023
53800	53700	Ranchi-Hazaribagh	RHS	1.93	5.41	3.67	2703	26-Apr-2023
53700	53600	Ranchi-Hazaribagh	RHS	2.37	3.25	2.81	2004	26-Apr-2023
53600	53500	Ranchi-Hazaribagh	RHS	2.06	1.92	1.99	1362	26-Apr-2023
53500	53400	Ranchi-Hazaribagh	RHS	2.22	2.2	2.21	1531	26-Apr-2023
53400	53300	Ranchi-Hazaribagh	RHS	2.19	2.04	2.115	1458	26-Apr-2023
53300	53200	Ranchi-Hazaribagh	RHS	2.36	3.05	2.705	1920	26-Apr-2023
53200	53100	Ranchi-Hazaribagh	RHS	2.49	1.73	2.11	1454	26-Apr-2023
53100	53000	Ranchi-Hazaribagh	RHS	2.69	2.12	2.405	1683	26-Apr-2023
53000	52900	Ranchi-Hazaribagh	RHS	2.1	1.96	2.03	1392	26-Apr-2023
52900	52800	Ranchi-Hazaribagh	RHS	2.7	1.88	2.29	1594	26-Apr-2023
52800	52700	Ranchi-Hazaribagh	RHS	2.18	1.82	2	1369	26-Apr-2023
52700	52600	Ranchi-Hazaribagh	RHS	2.27	1.55	1.91	1300	26-Apr-2023
52600	52500	Ranchi-Hazaribagh	RHS	2.24	2.37	2.305	1605	26-Apr-2023
52500	52400	Ranchi-Hazaribagh	RHS	1.65	1.75	1.7	1141	26-Apr-2023
52400	52300	Ranchi-Hazaribagh	RHS	1.93	1.59	1.76	1187	26-Apr-2023
52300	52200	Ranchi-Hazaribagh	RHS	1.77	1.93	1.85	1255	26-Apr-2023
52200	52100	Ranchi-Hazaribagh	RHS	2.67	2.14	2.405	1683	26-Apr-2023
52100	52000	Ranchi-Hazaribagh	RHS	4.56	2.24	3.4	2481	26-Apr-2023
52000	51900	Ranchi-Hazaribagh	RHS	2.53	2.7	2.615	1849	26-Apr-2023
51900	51800	Ranchi-Hazaribagh	RHS	2.74	1.74	2.24	1555	26-Apr-2023
51800	51700	Ranchi-Hazaribagh	RHS	2.57	1.35	1.96	1339	26-Apr-2023
51700	51600	Ranchi-Hazaribagh	RHS	2.64	1.9	2.27	1578	26-Apr-2023
51600	51500	Ranchi-Hazaribagh	RHS	2.25	2.03	2.14	1477	26-Apr-2023
51500	51400	Ranchi-Hazaribagh	RHS	2.5	2.07	2.285	1590	26-Apr-2023
51400	51300	Ranchi-Hazaribagh	RHS	3.46	1.79	2.625	1857	26-Apr-2023
51300	51200	Ranchi-Hazaribagh	RHS	3.51	1.79	2.65	1877	26-Apr-2023
51200	51100	Ranchi-Hazaribagh	RHS	2.79	2.82	2.805	2000	26-Apr-2023
51100	51000	Ranchi-Hazaribagh	RHS	1.63	1.81	1.72	1156	26-Apr-2023
51000	50900	Ranchi-Hazaribagh	RHS	2.95	2.72	2.835	2024	26-Apr-2023
50900	50800	Ranchi-Hazaribagh	RHS	2.5	1.85	2.175	1504	26-Apr-2023
50800	50700	Ranchi-Hazaribagh	RHS	2.37	1.58	1.975	1350	26-Apr-2023
50700	50600	Ranchi-Hazaribagh	RHS	2.42	1.72	2.07	1423	26-Apr-2023
50600	50500	Ranchi-Hazaribagh	RHS	2.21	1.13	1.67	1119	26-Apr-2023
50500	50400	Ranchi-Hazaribagh	RHS	2.15	1.31	1.73	1164	26-Apr-2023
50400	50300	Ranchi-Hazaribagh	RHS	2.57	1.58	2.075	1427	26-Apr-2023
50300	50200	Ranchi-Hazaribagh	RHS	2.02	1.29	1.655	1108	26-Apr-2023
50200	50100	Ranchi-Hazaribagh	RHS	2.67	1.71	2.19	1516	26-Apr-2023
50100	50000	Ranchi-Hazaribagh	RHS	2.52	1.23	1.875	1274	26-Apr-2023
50000	49900	Ranchi-Hazaribagh	RHS	2.12	1.43	1.775	1198	26-Apr-2023
49900	49800	Ranchi-Hazaribagh	RHS	1.98	1.06	1.52	1007	26-Apr-2023
49800	49700	Ranchi-Hazaribagh	RHS	2.21	2.14	2.175	1504	26-Apr-2023
49700	49600	Ranchi-Hazaribagh	RHS	2.21	1.6	1.905	1297	26-Apr-2023
49600	49500	Ranchi-Hazaribagh	RHS	2.24	1.22	1.73	1164	26-Apr-2023
49500	49400	Ranchi-Hazaribagh	RHS	2.3	1.4	1.85	1255	26-Apr-2023
49400	49300	Ranchi-Hazaribagh	RHS	3	1.34	2.17	1500	26-Apr-2023
49300	49200	Ranchi-Hazaribagh	RHS	2.18	2.09	2.135	1473	26-Apr-2023
49200	49100	Ranchi-Hazaribagh	RHS	1.83	1.76	1.795	1213	26-Apr-2023
49100	49000	Ranchi-Hazaribagh	RHS	1.03	1.22	1.125	719	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
49000	48900	Ranchi-Hazaribagh	RHS	2.15	1.61	1.88	1278	26-Apr-2023
48900	48800	Ranchi-Hazaribagh	RHS	3.18	1.67	2.425	1699	26-Apr-2023
48800	48700	Ranchi-Hazaribagh	RHS	2.05	1.57	1.81	1224	26-Apr-2023
48700	48600	Ranchi-Hazaribagh	RHS	1.53	1.45	1.49	985	26-Apr-2023
48600	48500	Ranchi-Hazaribagh	RHS	1.83	1.69	1.76	1187	26-Apr-2023
48500	48400	Ranchi-Hazaribagh	RHS	2.12	1.52	1.82	1232	26-Apr-2023
48400	48300	Ranchi-Hazaribagh	RHS	1.7	1.37	1.535	1018	26-Apr-2023
48300	48200	Ranchi-Hazaribagh	RHS	2.77	2.44	2.605	1841	26-Apr-2023
48200	48100	Ranchi-Hazaribagh	RHS	2.47	3.16	2.815	2008	26-Apr-2023
48100	48000	Ranchi-Hazaribagh	RHS	1.21	1.21	1.21	780	26-Apr-2023
48000	47900	Ranchi-Hazaribagh	RHS	1.49	1.34	1.415	929	26-Apr-2023
47900	47800	Ranchi-Hazaribagh	RHS	2.3	1.25	1.775	1198	26-Apr-2023
47800	47700	Ranchi-Hazaribagh	RHS	3.03	1.9	2.465	1731	26-Apr-2023
47700	47600	Ranchi-Hazaribagh	RHS	2.77	2	2.385	1668	26-Apr-2023
47600	47500	Ranchi-Hazaribagh	RHS	1.84	1.7	1.77	1194	26-Apr-2023
47500	47400	Ranchi-Hazaribagh	RHS	2.28	2.01	2.145	1481	26-Apr-2023
47400	47300	Ranchi-Hazaribagh	RHS	2.03	1.82	1.925	1312	26-Apr-2023
47300	47200	Ranchi-Hazaribagh	RHS	2.28	1.67	1.975	1350	26-Apr-2023
47200	47100	Ranchi-Hazaribagh	RHS	2.68	1.69	2.185	1512	26-Apr-2023
47100	47000	Ranchi-Hazaribagh	RHS	2.25	2.03	2.14	1477	26-Apr-2023
47000	46900	Ranchi-Hazaribagh	RHS	2.07	1.73	1.9	1293	26-Apr-2023
46900	46800	Ranchi-Hazaribagh	RHS	2.22	1.8	2.01	1377	26-Apr-2023
46800	46700	Ranchi-Hazaribagh	RHS	2.61	1.57	2.09	1438	26-Apr-2023
46700	46600	Ranchi-Hazaribagh	RHS	3.44	2.71	3.075	2217	26-Apr-2023
46600	46500	Ranchi-Hazaribagh	RHS	1.72	1.8	1.76	1187	26-Apr-2023
46500	46400	Ranchi-Hazaribagh	RHS	1.6	1.14	1.37	896	26-Apr-2023
46400	46300	Ranchi-Hazaribagh	RHS	1.88	1.6	1.74	1172	26-Apr-2023
46300	46200	Ranchi-Hazaribagh	RHS	2	1.13	1.565	1040	26-Apr-2023
46200	46100	Ranchi-Hazaribagh	RHS	1.68	1.41	1.545	1026	26-Apr-2023
46100	46000	Ranchi-Hazaribagh	RHS	2.03	1.15	1.59	1059	26-Apr-2023
46000	45900	Ranchi-Hazaribagh	RHS	1.61	1.18	1.395	915	26-Apr-2023
45900	45800	Ranchi-Hazaribagh	RHS	1.29	1.07	1.18	758	26-Apr-2023
45800	45700	Ranchi-Hazaribagh	RHS	2.16	1.76	1.96	1339	26-Apr-2023
45700	45600	Ranchi-Hazaribagh	RHS	2.1	3.45	2.775	1976	26-Apr-2023
45600	45500	Ranchi-Hazaribagh	RHS	1.17	1.1	1.135	726	26-Apr-2023
45500	45400	Ranchi-Hazaribagh	RHS	1.44	1.32	1.38	904	26-Apr-2023
45400	45300	Ranchi-Hazaribagh	RHS	1.37	1.1	1.235	798	26-Apr-2023
45300	45200	Ranchi-Hazaribagh	RHS	1.7	1.53	1.615	1078	26-Apr-2023
45200	45100	Ranchi-Hazaribagh	RHS	1.79	1.35	1.57	1044	26-Apr-2023
45100	45000	Ranchi-Hazaribagh	RHS	1.74	1.74	1.74	1172	26-Apr-2023
45000	44900	Ranchi-Hazaribagh	RHS	2.08	1.72	1.9	1293	26-Apr-2023
44900	44800	Ranchi-Hazaribagh	RHS	2.51	1.74	2.125	1465	26-Apr-2023
44800	44700	Ranchi-Hazaribagh	RHS	1.78	1.86	1.82	1232	26-Apr-2023
44700	44600	Ranchi-Hazaribagh	RHS	2.16	2.22	2.19	1516	26-Apr-2023
44600	44500	Ranchi-Hazaribagh	RHS	2.08	1.88	1.98	1354	26-Apr-2023
44500	44400	Ranchi-Hazaribagh	RHS	1.71	1.37	1.54	1022	26-Apr-2023
44400	44300	Ranchi-Hazaribagh	RHS	1.84	1.49	1.665	1115	26-Apr-2023
44300	44200	Ranchi-Hazaribagh	RHS	1.12	1.12	1.12	715	26-Apr-2023
44200	44100	Ranchi-Hazaribagh	RHS	1.44	1.24	1.34	874	26-Apr-2023
44100	44000	Ranchi-Hazaribagh	RHS	1.66	1.22	1.44	948	26-Apr-2023
44000	43900	Ranchi-Hazaribagh	RHS	1.85	3.14	2.495	1754	26-Apr-2023
43900	43800	Ranchi-Hazaribagh	RHS	2.46	1.62	2.04	1400	26-Apr-2023
43800	43700	Ranchi-Hazaribagh	RHS	1.78	1.09	1.435	944	26-Apr-2023
43700	43600	Ranchi-Hazaribagh	RHS	1.61	1.72	1.665	1115	26-Apr-2023
43600	43500	Ranchi-Hazaribagh	RHS	2.09	1.45	1.77	1194	26-Apr-2023
43500	43400	Ranchi-Hazaribagh	RHS	2.22	1.27	1.745	1175	26-Apr-2023
43400	43300	Ranchi-Hazaribagh	RHS	1.71	1.96	1.835	1243	26-Apr-2023
43300	43200	Ranchi-Hazaribagh	RHS	2.21	1.94	2.075	1427	26-Apr-2023
43200	43100	Ranchi-Hazaribagh	RHS	2.24	1.75	1.995	1365	26-Apr-2023
43100	43000	Ranchi-Hazaribagh	RHS	2.17	2.2	2.185	1512	26-Apr-2023

From Chainage (m)	To Chainage(m)	Direction	Side	Lane IRI (L1+L2)		Carriageway IRI	Carriageway UI	SurveyDate
43000	42900	Ranchi-Hazaribagh	RHS	2.11	2.55	2.33	1625	26-Apr-2023
42900	42800	Ranchi-Hazaribagh	RHS	2.2	1.41	1.805	1221	26-Apr-2023
42800	42700	Ranchi-Hazaribagh	RHS	1.82	1.23	1.525	1011	26-Apr-2023
42700	42600	Ranchi-Hazaribagh	RHS	2.32	1.82	2.07	1423	26-Apr-2023
42600	42500	Ranchi-Hazaribagh	RHS	2.63	2.24	2.435	1707	26-Apr-2023
42500	42400	Ranchi-Hazaribagh	RHS	2.28	1.88	2.08	1431	26-Apr-2023
42400	42300	Ranchi-Hazaribagh	RHS	2.19	1.28	1.735	1168	26-Apr-2023
42300	42200	Ranchi-Hazaribagh	RHS	2.07	1.46	1.765	1190	26-Apr-2023
42200	42100	Ranchi-Hazaribagh	RHS	2.23	1.15	1.69	1134	26-Apr-2023
42100	42000	Ranchi-Hazaribagh	RHS	1.62	1.47	1.545	1026	26-Apr-2023
42000	41900	Ranchi-Hazaribagh	RHS	1.76	1.35	1.555	1033	26-Apr-2023
41900	41800	Ranchi-Hazaribagh	RHS	1.89	2.1	1.995	1365	26-Apr-2023
41800	41700	Ranchi-Hazaribagh	RHS	2.37	3.24	2.805	2000	26-Apr-2023
41700	41600	Ranchi-Hazaribagh	RHS	2.99	3.1	3.045	2193	26-Apr-2023
41600	41500	Ranchi-Hazaribagh	RHS	6.19	2.56	4.375	3290	26-Apr-2023
41500	41400	Ranchi-Hazaribagh	RHS	7.35	1.82	4.585	3468	26-Apr-2023
41400	41300	Ranchi-Hazaribagh	RHS	2.27	1.55	1.91	1300	26-Apr-2023
41300	41200	Ranchi-Hazaribagh	RHS	2.24	2.37	2.305	1605	26-Apr-2023
41200	41100	Ranchi-Hazaribagh	RHS	1.65	1.75	1.7	1141	26-Apr-2023
41100	41000	Ranchi-Hazaribagh	RHS	1.93	1.59	1.76	1187	26-Apr-2023
41000	40900	Ranchi-Hazaribagh	RHS	1.77	1.93	1.85	1255	26-Apr-2023
40900	40800	Ranchi-Hazaribagh	RHS	2.67	2.14	2.405	1683	26-Apr-2023
40800	40700	Ranchi-Hazaribagh	RHS	2.11	2.37	2.24	1555	26-Apr-2023
40700	40600	Ranchi-Hazaribagh	RHS	2.16	2.99	2.575	1817	26-Apr-2023
40600	40500	Ranchi-Hazaribagh	RHS	2.06	6.19	4.125	3080	26-Apr-2023

Annexure – 6.2

- Pavement Condition by NSV

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
40500	40600	Inner lane	40500.000	40600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40500	40600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40600	40700	Inner lane	40600.000	40700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	1.25	0.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.3	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40600	40700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0.56	0.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.6	0.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40700	40800	Inner lane	40700.000	40800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40700	40800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	1.53	0.4	0.00	0.0	0.00	0.0	1.5	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40800	40900	Inner lane	40800.000	40900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.12	0.3	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40800	40900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40900	41000	Inner lane	40900.000	41000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
40900	41000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	2.53	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.5	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41000	41100	Inner lane	41000.000	41100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	1.52	0.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.5	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41000	41100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41100	41200	Inner lane	41100.000	41200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41100	41200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	6.22	1.8	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41200	41300	Inner lane	41200.000	41300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41200	41300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41300	41400	Inner lane	41300.000	41400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41300	41400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41400	41500	Inner lane	41400.000	41500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41400	41500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41500	41600	Inner lane	41500.000	41600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41500	41600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	2.10	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41600	41700	Inner lane	41600.000	41700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	2.23	0.6	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41600	41700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41700	41800	Inner lane	41700.000	41800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41700	41800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41800	41900	Inner lane	41800.000	41900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41800	41900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41900	42000	Inner lane	41900.000	42000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41900	42000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42000	42100	Inner lane	42000.000	42100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42000	42100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42100	42200	Inner lane	42100.000	42200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	1.10	0.3	0.100	
42100	42200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42200	42300	Inner lane	42200.000	42300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	20.58	5.9	0.00	0.0	0.39	0.1	0.00	0.0	0.00	0.0	21.0	6.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42200	42300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42300	42400	Inner lane	42300.000	42400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	15.25	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.3	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42300	42400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42400	42500	Inner lane	42400.000	42500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.55	1.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.6	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42400	42500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	2.14	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	2.65	0.8	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42500	42600	Inner lane	42500.000	42600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42500	42600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	7.23	2.1	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42600	42700	Inner lane	42600.000	42700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42600	42700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	8.22	2.3	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42700	42800	Inner lane	42700.000	42800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.21	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42700	42800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	1.22	0.3	1.20	0.3	0.00	0.0	2.4	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	10.23	2.9	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42800	42900	Inner lane	42800.000	42900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	22.23	6.4	0.00	0.0	3.22	0.9	0.00	0.0	0.00	0.0	25.5	7.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42800	42900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42900	43000	Inner lane	42900.000	43000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	35.15	10.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	35.2	10.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42900	43000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.88	0.3	0.00	0.0	0.00	0.0	0.9	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43000	43100	Inner lane	43000.000	43100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.53	0.2	0.00	0.0	0.5	0.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43000	43100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43100	43200	Inner lane	43100.000	43200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	8.23	2.4	0.00	0.0	0.00	0.0	8.2	2.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43100	43200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43200	43300	Inner lane	43200.000	43300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	10.51	3.0	1.58	0.5	0.00	0.0	0.00	0.0	0.00	0.0	12.1	3.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43200	43300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43300	43400	Inner lane	43300.000	43400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43300	43400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43400	43500	Inner lane	43400.000	43500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	6.23	1.8	0.00	0.0	5.41	1.5	0.00	0.0	0.00	0.0	11.6	3.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	1.53	0.4	0.000	
43400	43500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	3.25	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43500	43600	Inner lane	43500.000	43600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	25.24	7.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	25.2	7.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43500	43600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0

Chainage										Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																							
										Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
47000	47100	Inner lane	47000.000	47100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	3.25	0.9	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47000	47100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47100	47200	Inner lane	47100.000	47200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47100	47200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47200	47300	Inner lane	47200.000	47300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	2.36	0.7	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47200	47300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47300	47400	Inner lane	47300.000	47400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47300	47400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47400	47500	Inner lane	47400.000	47500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47400	47500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47500	47600	Inner lane	47500.000	47600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47500	47600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47600	47700	Inner lane	47600.000	47700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47600	47700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47700	47800	Inner lane	47700.000	47800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47700	47800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47800	47900	Inner lane	47800.000	47900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47800	47900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47900	48000	Inner lane	47900.000	48000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
47900	48000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48000	48100	Inner lane	48000.000	48100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48000	48100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48100	48200	Inner lane	48100.000	48200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48100	48200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48200	48300	Inner lane	48200.000	48300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48200	48300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48300	48400	Inner lane	48300.000	48400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48300	48400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48400	48500	Inner lane	48400.000	48500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48400	48500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48500	48600	Inner lane	48500.000	48600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48500	48600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48600	48700	Inner lane	48600.000	48700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48600	48700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48700	48800	Inner lane	48700.000	48800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48700	48800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48800	48900	Inner lane	48800.000	48900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48800	48900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48900	49000	Inner lane	48900.000	49000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48900	49000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49000	49100	Inner lane	49000.000	49100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49000	49100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49100	49200	Inner lane	49100.000	49200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49100	49200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49200	49300	Inner lane	49200.000	49300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	3.55	1.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49200	49300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49300	49400	Inner lane	49300.000	49400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49300	49400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49400	49500	Inner lane	49400.000	49500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49400	49500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49500	49600	Inner lane	49500.000	49600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49500	49600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49600	49700	Inner lane	49600.000	49700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49600	49700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49700	49800	Inner lane	49700.000	49800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49700	49800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49800	49900	Inner lane	49800.000	49900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49800	49900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49900	50000	Inner lane	49900.000	50000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49900	50000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50000	50100	Inner lane	50000.000	50100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50000	50100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50100	50200	Inner lane	50100.000	50200.000

Chainage										Cracks								Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
53500	53600	Inner lane	53500.000	53600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53500	53600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53600	53700	Inner lane	53600.000	53700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53600	53700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53700	53800	Inner lane	53700.000	53800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53700	53800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53800	53900	Inner lane	53800.000	53900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	2.47	0.7	0.00	0.0	0.00	0.0	2.5	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53800	53900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53900	54000	Inner lane	53900.000	54000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
53900	54000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54000	54100	Inner lane	54000.000	54100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.12	1.2	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54000	54100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54100	54200	Inner lane	54100.000	54200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54100	54200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54200	54300	Inner lane	54200.000	54300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54200	54300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54300	54400	Inner lane	54300.000	54400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.04	1.2	0.00	0.0	0.00	0.0	4.0	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54300	54400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54400	54500	Inner lane	54400.000	54500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54400	54500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54500	54600	Inner lane	54500.000	54600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	3.54	1.0	0.00	0.0	0.00	0.0	3.5	1.0	0	0.0	6.38	1.8	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54500	54600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54600	54700	Inner lane	54600.000	54700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	5.68	1.6	0.00	0.0	0.00	0.0	0.00	0.0	5.7	1.6	0	0.0	9.23	2.6	2.32	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54600	54700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54700	54800	Inner lane	54700.000	54800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54700	54800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54800	54900	Inner lane	54800.000	54900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54800	54900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54900	55000	Inner lane	54900.000	55000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54900	55000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55000	55100	Inner lane	55000.000	55100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	2.65	0.8	0.00	0.0	0.00	0.0	0.00	0.0	2.7	0.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55000	55100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55100	55200	Inner lane	55100.000	55200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55100	55200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55200	55300	Inner lane	55200.000	55300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55200	55300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55300	55400	Inner lane	55300.000	55400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55300	55400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55400	55500	Inner lane	55400.000	55500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55400	55500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55500	55600	Inner lane	55500.000	55600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55500	55600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55600	55700	Inner lane	55600.000	55700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55600	55700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55700	55800	Inner lane	55700.000	55800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55700	55800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55800	55900	Inner lane	55800.000	55900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55800	55900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55900	56000	Inner lane	55900.000	56000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55900	56000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56000	56100	Inner lane	56000.000	56100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56000	56100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56100	56200	Inner lane	56100.000	56200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.58	1.3	0.00	0.0	0.00	0.0	4.6	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56100	56200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56200	56300	Inner lane	56200.000	56300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56200	56300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56300	56400	Inner lane	56300.000	56400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56300	56400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56400	56500	Inner lane	56400.000	56500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	9.25	2.6	0.00	0.0	0.00	0.0	9.3	2.6	0	0.0	16.58	4.7	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56400	56500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56500	56600	Inner lane	56500.000	56600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	12.63	3.6	2.30	0.7	7.00	2.0	0.00	0.0	0.00	0.0	21.9	6.3	0	0.0	22.23	6.4	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56500	56600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	2.56	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.6	0.7	0	0.0	8.79	2.5	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56600	56700	Inner lane	56600.000

Chainage										Cracks								Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																	
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
60000	60100	Inner lane	60000.000	60100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60000	60100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60100	60200	Inner lane	60100.000	60200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	2.64	0.8	0.00	0.0	0.00	0.0	2.6	0.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60100	60200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60200	60300	Inner lane	60200.000	60300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	11.32	3.2	2.41	0.7	0.00	0.0	0.00	0.0	0.00	0.0	13.7	3.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60200	60300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60300	60400	Inner lane	60300.000	60400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60300	60400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60400	60500	Inner lane	60400.000	60500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60400	60500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60500	60600	Inner lane	60500.000	60600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.23	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60500	60600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60600	60700	Inner lane	60600.000	60700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60600	60700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60700	60800	Inner lane	60700.000	60800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60700	60800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60800	60900	Inner lane	60800.000	60900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60800	60900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60900	61000	Inner lane	60900.000	61000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
60900	61000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61000	61100	Inner lane	61000.000	61100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61000	61100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61100	61200	Inner lane	61100.000	61200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61100	61200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61200	61300	Inner lane	61200.000	61300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61200	61300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61300	61400	Inner lane	61300.000	61400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61300	61400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61400	61500	Inner lane	61400.000	61500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61400	61500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61500	61600	Inner lane	61500.000	61600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61500	61600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61600	61700	Inner lane	61600.000	61700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61600	61700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61700	61800	Inner lane	61700.000	61800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61700	61800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	6.32	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61800	61900	Inner lane	61800.000	61900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	11.25	3.2	10.32	2.9	0.00	0.0	0.00	0.0	0.00	0.0	21.6	6.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61800	61900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	1.23	0.4	0.00	0.0	2.85	0.8	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61900	62000	Inner lane	61900.000	62000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.52	1.3	0.00	0.0	3.21	0.9	0.00	0.0	0.00	0.0	7.7	2.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
61900	62000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62000	62100	Inner lane	62000.000	62100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.69	1.3	0.00	0.0	0.00	0.0	4.7	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62000	62100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62100	62200	Inner lane	62100.000	62200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	10.58	3.0	0.00	0.0	0.00	0.0	10.6	3.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62100	62200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62200	62300	Inner lane	62200.000	62300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.43	1.6	0.00	0.0	5.89	1.7	0.00	0.0	0.00	0.0	11.3	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62200	62300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62300	62400	Inner lane	62300.000	62400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	13.35	3.8	0.00	0.0	8.92	2.5	0.00	0.0	0.00	0.0	22.3	6.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62300	62400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62400	62500	Inner lane	62400.000	62500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	17.32	4.9	9.52	2.7	8.02	2.3	0.00	0.0	0.00	0.0	34.9	10.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62400	62500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62500	62600	Inner lane	62500.000	62600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	3.22	0.9	0.00	0.0	7.21	2.1	0.00	0.0	0.00	0.0	10.4	3.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62500	62600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62600	62700	Inner lane	62600.000	62700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62600	62700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62700	62800	Inner lane	62700.000	62800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.63	1.6	0.00	0.0	11.78	3.4	0.00	0.0	0.00	0.0	17.4	5.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62700	62800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62800	62900	Inner lane	62800.000	62900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	13.32	3.8	8.56	2.4	0.00	0.0	0.00	0.0	0.00	0.0	21.9	6.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62800	62900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62900	63000	Inner lane	62900.000	63000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	21.52	6.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	21.5	6.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
62900	63000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
63000	63100	Inner lane	63000.000	63100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	32.12	9.2	13.88	4.0	0.00	0.0	0.00	0.0	0.00	0.0	46.0	13.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
63000	63100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
63100	63200	Inner lane

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks								Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
66500	66600	Inner lane	66500.000	66600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66500	66600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66600	66700	Inner lane	66600.000	66700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66600	66700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66700	66800	Inner lane	66700.000	66800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66700	66800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66800	66900	Inner lane	66800.000	66900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66800	66900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66900	67000	Inner lane	66900.000	67000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
66900	67000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67000	67100	Inner lane	67000.000	67100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67000	67100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67100	67200	Inner lane	67100.000	67200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	3.22	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67100	67200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67200	67300	Inner lane	67200.000	67300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	1.89	0.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.9	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67200	67300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67300	67400	Inner lane	67300.000	67400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67300	67400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67400	67500	Inner lane	67400.000	67500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	1.10	0.3	0.78	0.2	0.00	0.0	1.9	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67400	67500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67500	67600	Inner lane	67500.000	67600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67500	67600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67600	67700	Inner lane	67600.000	67700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.23	1.2	0.00	0.0	1.23	0.4	0.00	0.0	0.00	0.0	5.5	1.6	0	0.0	4.29	1.2	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67600	67700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	1.1	0.3	0.00	0.0	1.20	0.3	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67700	67800	Inner lane	67700.000	67800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.02	0.3	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67700	67800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67800	67900	Inner lane	67800.000	67900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67800	67900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67900	68000	Inner lane	67900.000	68000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67900	68000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68000	68100	Inner lane	68000.000	68100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68000	68100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68100	68200	Inner lane	68100.000	68200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68100	68200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68200	68300	Inner lane	68200.000	68300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	5.21	1.5	6.57	1.9	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68200	68300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68300	68400	Inner lane	68300.000	68400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	1.10	0.3	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68300	68400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68400	68500	Inner lane	68400.000	68500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.53	1.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.5	1.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68400	68500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68500	68600	Inner lane	68500.000	68600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	7.14	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.1	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68500	68600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68600	68700	Inner lane	68600.000	68700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68600	68700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68700	68800	Inner lane	68700.000	68800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68700	68800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68800	68900	Inner lane	68800.000	68900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68800	68900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68900	69000	Inner lane	68900.000	69000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68900	69000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69000	69100	Inner lane	69000.000	69100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	1.92	0.5	0.00	0.0	0.00	0.0	1.9	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69000	69100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69100	69200	Inner lane	69100.000	69200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69100	69200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69200	69300	Inner lane	69200.000	69300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	12.54	3.6	0.00	0.0	2.31	0.7	0.00	0.0	0.00	0.0	14.9	4.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	5.89	1.7	0.00	0.0	0.0	0.0	0.100	
69200	69300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69300	69400	Inner lane	69300.000	69400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	7.25	2.1	5.62	1.6	0.00	0.0	0.00	0.0	0.00	0.0	12.9	3.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69300	69400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69400	69500	Inner lane	69400.000	69500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	10.32	2.9	0.00	0.0	0.00	0.0	10.3	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69400	69500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69500	69600	Inner lane	69500.000	69600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	9.36	2.7	0.00	0.0	8.22	2.3	0.00	0.0	4.32	1.2	21.9	6.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69500	69600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69600	69700	Inner lane	69600.000	69700.

Chainage										Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																							
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
73000	73100	Inner lane	73000.000	73100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73000	73100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73100	73200	Inner lane	73100.000	73200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73100	73200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73200	73300	Inner lane	73200.000	73300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73200	73300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73300	73400	Inner lane	73300.000	73400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73300	73400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73400	73500	Inner lane	73400.000	73500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73400	73500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73500	73600	Inner lane	73500.000	73600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.88	0.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.9	0.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73500	73600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73600	73700	Inner lane	73600.000	73700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.25	1.2	2.36	0.7	0.00	0.0	0.00	0.0	0.00	0.0	6.6	1.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73600	73700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73700	73800	Inner lane	73700.000	73800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.32	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.3	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73700	73800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73800	73900	Inner lane	73800.000	73900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	12.22	3.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	12.2	3.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73800	73900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73900	74000	Inner lane	73900.000	74000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	1.06	0.3	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
73900	74000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74000	74100	Inner lane	74000.000	74100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74000	74100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74100	74200	Inner lane	74100.000	74200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	3.26	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	1.76	0.5	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74100	74200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74200	74300	Inner lane	74200.000	74300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	8.96	2.6	0.00	0.0	6.32	1.8	0.00	0.0	0.00	0.0	15.3	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74200	74300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74300	74400	Inner lane	74300.000	74400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	11.56	3.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.6	3.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74300	74400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.54	0.2	0.00	0.0	0.5	0.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74400	74500	Inner lane	74400.000	74500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	19.56	5.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	19.6	5.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74400	74500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74500	74600	Inner lane	74500.000	74600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74500	74600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74600	74700	Inner lane	74600.000	74700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74600	74700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74700	74800	Inner lane	74700.000	74800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74700	74800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74800	74900	Inner lane	74800.000	74900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	6.87	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.9	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74800	74900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74900	75000	Inner lane	74900.000	75000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
74900	75000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75000	75100	Inner lane	75000.000	75100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75000	75100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75100	75200	Inner lane	75100.000	75200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.11	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.1	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75100	75200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75200	75300	Inner lane	75200.000	75300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75200	75300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75300	75400	Inner lane	75300.000	75400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75300	75400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75400	75500	Inner lane	75400.000	75500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75400	75500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75500	75600	Inner lane	75500.000	75600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75500	75600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75600	75700	Inner lane	75600.000	75700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75600	75700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75700	75800	Inner lane	75700.000	75800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75700	75800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75800	75900	Inner lane	75800.000	75900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	3.65	1.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.7	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75800	75900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75900	76000	Inner lane	75900.000	76000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
75900	76000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	2.15	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76000	76100	Inner lane	76000.000	76100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	12.65	3.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	12.7	3.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76000	76100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76100	76200	Inner lane	76100.000	76200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76100	76200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	2.32	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76200	76300	Inner lane	76200.000	76300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	25.98	7.4	0.00	0.0	8.45	2.4	0.00	0.0	0.00	0.0	34.4	9.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
76200	76300	Outer lane			NH-33_NSV	27-Apr-2023

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks								Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
79500	79600	Inner lane	79500.000	79600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.13	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79500	79600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79600	79700	Inner lane	79600.000	79700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79600	79700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	2.20	0.6	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79700	79800	Inner lane	79700.000	79800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79700	79800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79800	79900	Inner lane	79800.000	79900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79800	79900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79900	80000	Inner lane	79900.000	80000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
79900	80000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80000	80100	Inner lane	80000.000	80100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.2	0.6	0.00	0.0	0.78	0.2	0.00	0.0	0.00	0.0	3.0	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80000	80100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80100	80200	Inner lane	80100.000	80200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	3.11	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.1	0.9	0	0.0	0	0.0	0.35	0.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80100	80200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80200	80300	Inner lane	80200.000	80300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80200	80300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80300	80400	Inner lane	80300.000	80400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80300	80400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80400	80500	Inner lane	80400.000	80500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80400	80500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80500	80600	Inner lane	80500.000	80600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.18	0.6	0.00	0.0	0.98	0.3	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80500	80600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80600	80700	Inner lane	80600.000	80700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	5.21	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.2	1.5	0	0.0	0	0.0	2.16	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80600	80700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80700	80800	Inner lane	80700.000	80800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	6.32	1.8	0.00	0.0	2.80	0.8	0.00	0.0	0.00	0.0	9.1	2.6	0	0.0	0	0.0	2.18	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	2.1	0.6	0.100	
80700	80800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80800	80900	Inner lane	80800.000	80900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.3	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80800	80900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80900	81000	Inner lane	80900.000	81000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.25	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80900	81000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81000	81100	Inner lane	81000.000	81100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.35	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81000	81100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81100	81200	Inner lane	81100.000	81200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.65	0.8	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81100	81200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81200	81300	Inner lane	81200.000	81300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	3.96	1.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81200	81300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81300	81400	Inner lane	81300.000	81400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81300	81400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81400	81500	Inner lane	81400.000	81500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81400	81500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81500	81600	Inner lane	81500.000	81600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81500	81600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81600	81700	Inner lane	81600.000	81700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81600	81700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81700	81800	Inner lane	81700.000	81800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	3.98	1.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81700	81800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81800	81900	Inner lane	81800.000	81900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.23	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81800	81900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81900	82000	Inner lane	81900.000	82000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81900	82000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82000	82100	Inner lane	82000.000	82100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82000	82100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82100	82200	Inner lane	82100.000	82200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82100	82200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82200	82300	Inner lane	82200.000	82300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82200	82300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82300	82400	Inner lane	82300.000	82400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82300	82400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82400	82500	Inner lane	82400.000	82500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82400	82500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82500	82600	Inner lane	82500.000	82600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82500	82600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
86000	86100	Inner lane	86000.000	86100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86000	86100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86100	86200	Inner lane	86100.000	86200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86100	86200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.25	0.1	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86200	86300	Inner lane	86200.000	86300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.32	1.2	0.00	0.0	0.00	0.0	4.3	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86200	86300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86300	86400	Inner lane	86300.000	86400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	6.23	1.8	0.00	0.0	2.62	0.7	0.00	0.0	0.00	0.0	8.9	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86300	86400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86400	86500	Inner lane	86400.000	86500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	19.32	5.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	19.3	5.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86400	86500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86500	86600	Inner lane	86500.000	86600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	5.12	1.5	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86500	86600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86600	86700	Inner lane	86600.000	86700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86600	86700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86700	86800	Inner lane	86700.000	86800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.3	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86700	86800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86800	86900	Inner lane	86800.000	86900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.78	0.8	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86800	86900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86900	87000	Inner lane	86900.000	87000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.28	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
86900	87000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87000	87100	Inner lane	87000.000	87100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87000	87100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87100	87200	Inner lane	87100.000	87200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87100	87200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.59	0.5	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87200	87300	Inner lane	87200.000	87300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.35	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87200	87300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87300	87400	Inner lane	87300.000	87400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	4.65	1.3	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87300	87400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87400	87500	Inner lane	87400.000	87500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	6.88	2.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87400	87500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87500	87600	Inner lane	87500.000	87600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87500	87600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87600	87700	Inner lane	87600.000	87700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87600	87700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87700	87800	Inner lane	87700.000	87800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87700	87800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87800	87900	Inner lane	87800.000	87900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87800	87900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87900	88000	Inner lane	87900.000	88000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
87900	88000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88000	88100	Inner lane	88000.000	88100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88000	88100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88100	88200	Inner lane	88100.000	88200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88100	88200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88200	88300	Inner lane	88200.000	88300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88200	88300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88300	88400	Inner lane	88300.000	88400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88300	88400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88400	88500	Inner lane	88400.000	88500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88400	88500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88500	88600	Inner lane	88500.000	88600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88500	88600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88600	88700	Inner lane	88600.000	88700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88600	88700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88700	88800	Inner lane	88700.000	88800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88700	88800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88800	88900	Inner lane	88800.000	88900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88800	88900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88900	89000	Inner lane	88900.000	89000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
88900	89000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
89000	89100	Inner lane	89000.000	89100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	24.23	6.9	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
89000	89100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
89100	89200

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
92500	92600	Inner lane	92500.000	92600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92500	92600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92600	92700	Inner lane	92600.000	92700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92600	92700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92700	92800	Inner lane	92700.000	92800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92700	92800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92800	92900	Inner lane	92800.000	92900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92800	92900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92900	93000	Inner lane	92900.000	93000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92900	93000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93000	93100	Inner lane	93000.000	93100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93000	93100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93100	93200	Inner lane	93100.000	93200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93100	93200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93200	93300	Inner lane	93200.000	93300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93200	93300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93300	93400	Inner lane	93300.000	93400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93300	93400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93400	93500	Inner lane	93400.000	93500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93400	93500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93500	93600	Inner lane	93500.000	93600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93500	93600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93600	93700	Inner lane	93600.000	93700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93600	93700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	5.43	1.6	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93700	93800	Inner lane	93700.000	93800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93700	93800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93800	93900	Inner lane	93800.000	93900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	8.32	2.4	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93800	93900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93900	94000	Inner lane	93900.000	94000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.98	0.3	0.00	0.0	0.00	0.0	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93900	94000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94000	94100	Inner lane	94000.000	94100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	1.21	0.3	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94000	94100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	1.44	0.4	0.00	0.0	0.0	0.0	0.100	
94100	94200	Inner lane	94100.000	94200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94100	94200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94200	94300	Inner lane	94200.000	94300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	4.62	1.3	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94200	94300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94300	94400	Inner lane	94300.000	94400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94300	94400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94400	94500	Inner lane	94400.000	94500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94400	94500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94500	94600	Inner lane	94500.000	94600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94500	94600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94600	94700	Inner lane	94600.000	94700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94600	94700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94700	94800	Inner lane	94700.000	94800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94700	94800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94800	94900	Inner lane	94800.000	94900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94800	94900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94900	95000	Inner lane	94900.000	95000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94900	95000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95000	95100	Inner lane	95000.000	95100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.25	0.1	0.00	0.0	0.00	0.0	0.3	0.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95000	95100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	2.28	0.7	0.00	0.0	0.0	0.0	0.100	
95100	95200	Inner lane	95100.000	95200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95100	95200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95200	95300	Inner lane	95200.000	95300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	2.10	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.35	0.1	0.100	
95200	95300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95300	95400	Inner lane	95300.000	95400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	4.12	1.2	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	4.89	1.4	0.00	0.0	1.55	0.4	0.100	
95300	95400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95400	95500	Inner lane	95400.000	95500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95400	95500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95500	95600	Inner lane	95500.000	95600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95500	95600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	1.97	0.6	0.00	0.0	0.0	0.0	0.100	
95600	95700	Inner

Chainage										Cracks								Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
99000	99100	Inner lane	99000.000	99100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99000	99100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99100	99200	Inner lane	99100.000	99200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99100	99200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99200	99300	Inner lane	99200.000	99300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99200	99300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99300	99400	Inner lane	99300.000	99400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99300	99400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99400	99500	Inner lane	99400.000	99500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	9.11	2.6	8.35	2.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99400	99500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99500	99600	Inner lane	99500.000	99600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	4.25	1.2	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99500	99600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99600	99700	Inner lane	99600.000	99700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99600	99700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99700	99800	Inner lane	99700.000	99800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	5.64	1.6	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99700	99800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99800	99900	Inner lane	99800.000	99900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99800	99900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99900	100000	Inner lane	99900.000	100000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	2.14	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	2.32	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99900	100000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100000	100100	Inner lane	100000.000	100100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	7.11	2.0	0.00	0.0	0.00	0.0	7.1	2.0	0	0.0	9.23	2.6	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100000	100100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100100	100200	Inner lane	100100.000	100200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	4.11	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	14.32	4.1	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100100	100200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100200	100300	Inner lane	100200.000	100300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	12.55	3.6	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100200	100300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.97	0.3	0.0	0.0	0.00	0.0	0.0	0.0	0.100	
100300	100400	Inner lane	100300.000	100400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	6.22	1.8	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	11.74	3.4	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100300	100400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100400	100500	Inner lane	100400.000	100500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100400	100500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.20	0.3	1.2	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100500	100600	Inner lane	100500.000	100600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100500	100600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.44	0.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100600	100700	Inner lane	100600.000	100700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100600	100700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100700	100800	Inner lane	100700.000	100800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100700	100800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100800	100900	Inner lane	100800.000	100900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100800	100900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100900	101000	Inner lane	100900.000	101000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100900	101000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101000	101100	Inner lane	101000.000	101100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101000	101100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101100	101200	Inner lane	101100.000	101200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101100	101200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101200	101300	Inner lane	101200.000	101300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	4.33	1.2	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101200	101300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101300	101400	Inner lane	101300.000	101400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101300	101400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101400	101500	Inner lane	101400.000	101500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.33	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101400	101500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101500	101600	Inner lane	101500.000	101600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101500	101600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101600	101700	Inner lane	101600.000	101700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101600	101700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101700	101800	Inner lane	101700.000	101800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101700	101800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101800	101900	Inner lane	101800.000	101900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.23	0.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101800	101900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101900	102000	Inner lane	101900.000	102000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.23	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101900	102000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102000	102100	Inner lane	102000.000	102100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.54	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102000	102100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102100

Chainage										Cracks								Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																					
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
105500	105600	Inner lane	105500.000	105600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.21	0.3	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105500	105600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.2	0.3	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105600	105700	Inner lane	105600.000	105700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105600	105700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105700	105800	Inner lane	105700.000	105800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105700	105800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105800	105900	Inner lane	105800.000	105900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105800	105900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105900	106000	Inner lane	105900.000	106000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
105900	106000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106000	106100	Inner lane	106000.000	106100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106000	106100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106100	106200	Inner lane	106100.000	106200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	3.21	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106100	106200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106200	106300	Inner lane	106200.000	106300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.23	0.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106200	106300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.45	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106300	106400	Inner lane	106300.000	106400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.1	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106300	106400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106400	106500	Inner lane	106400.000	106500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	3.2	0.9	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106400	106500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106500	106600	Inner lane	106500.000	106600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106500	106600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.23	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106600	106700	Inner lane	106600.000	106700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106600	106700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106700	106800	Inner lane	106700.000	106800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106700	106800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106800	106900	Inner lane	106800.000	106900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	1.8	0.5	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106800	106900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106900	107000	Inner lane	106900.000	107000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	2.22	0.6	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
106900	107000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.98	0.3	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107000	107100	Inner lane	107000.000	107100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	3.12	0.9	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107000	107100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.22	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107100	107200	Inner lane	107100.000	107200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107100	107200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107200	107300	Inner lane	107200.000	107300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107200	107300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107300	107400	Inner lane	107300.000	107400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107300	107400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107400	107500	Inner lane	107400.000	107500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	1.1	0.3	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107400	107500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107500	107600	Inner lane	107500.000	107600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107500	107600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107600	107700	Inner lane	107600.000	107700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107600	107700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107700	107800	Inner lane	107700.000	107800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	1.2	0.3	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107700	107800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	2.05	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107800	107900	Inner lane	107800.000	107900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.87	0.2	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107800	107900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107900	108000	Inner lane	107900.000	108000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
107900	108000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108000	108100	Inner lane	108000.000	108100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108000	108100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108100	108200	Inner lane	108100.000	108200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108100	108200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108200	108300	Inner lane	108200.000	108300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.64	0.5	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108200	108300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108300	108400	Inner lane	108300.000	108400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.9	0.3	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108300	108400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108400	108500	Inner lane	108400.000	108500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108400	108500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108500	108600	Inner lane	108500.000	108600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.98	0.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108500	108600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.100	
108600	108700

Chainage										Cracks												Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																					
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
112000	112100	Inner lane	112000.000	112100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112000	112100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112100	112200	Inner lane	112100.000	112200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112100	112200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112200	112300	Inner lane	112200.000	112300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112200	112300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112300	112400	Inner lane	112300.000	112400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112300	112400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112400	112500	Inner lane	112400.000	112500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112400	112500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112500	112600	Inner lane	112500.000	112600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112500	112600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112600	112700	Inner lane	112600.000	112700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112600	112700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112700	112800	Inner lane	112700.000	112800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112700	112800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112800	112900	Inner lane	112800.000	112900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112800	112900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112900	113000	Inner lane	112900.000	113000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112900	113000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113000	113100	Inner lane	113000.000	113100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113000	113100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113100	113200	Inner lane	113100.000	113200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113100	113200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113200	113300	Inner lane	113200.000	113300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113200	113300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113300	113400	Inner lane	113300.000	113400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113300	113400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113400	113500	Inner lane	113400.000	113500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113400	113500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113500	113600	Inner lane	113500.000	113600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113500	113600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113600	113700	Inner lane	113600.000	113700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113600	113700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113700	113800	Inner lane	113700.000	113800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113700	113800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113800	113900	Inner lane	113800.000	113900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113800	113900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113900	114000	Inner lane	113900.000	114000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113900	114000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114000	114100	Inner lane	114000.000	114100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114000	114100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114100	114200	Inner lane	114100.000	114200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114100	114200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114200	114300	Inner lane	114200.000	114300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114200	114300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114300	114400	Inner lane	114300.000	114400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114300	114400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114400	114500	Inner lane	114400.000	114500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114400	114500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114500	114600	Inner lane	114500.000	114600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114500	114600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114600	114700	Inner lane	114600.000	114700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	2.3	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114600	114700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114700	114800	Inner lane	114700.000	114800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114700	114800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114800	114900	Inner lane	114800.000	114900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114800	114900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114900	115000	Inner lane	114900.000	115000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Inner lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114900	115000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	LHS	Outer lane	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
40500	40600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40500	40600	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
40600	40700	Inner lane	0.357	**2.9**	**2.9**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40600	40700	Outer lane	0.160	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
40700	40800	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40700	40800	Outer lane	0.437	**2.9**	**2.9**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40800	40900	Inner lane	0.320	**2.9**	**2.9**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40800	40900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40900	41000	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
40900	41000	Outer lane	0.723	**2.9**	**2.9**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41000	41100	Inner lane	0.434	**2.9**	**2.9**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41000	41100	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41100	41200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41100	41200	Outer lane	1.777	**2.7**	**2.7**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
41200	41300	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41200	41300	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41300	41400	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41300	41400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41400	41500	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41400	41500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41500	41600	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41500	41600	Outer lane	0.600	**2.9**	**2.9**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41600	41700	Inner lane	0.637	**2.9**	**2.9**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41600	41700	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41700	41800	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41700	41800	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41800	41900	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41800	41900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41900	42000	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
41900	42000	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42000	42100	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42000	42100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42100	42200	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42100	42200	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42200	42300	Inner lane	5.991	**1.8**	**1.8**	Fair	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
42200	42300	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42300	42400	Inner lane	4.357	**2.2**	**2.2**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
42300	42400	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42400	42500	Inner lane	1.300	**2.8**	**2.8**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42400	42500	Outer lane	0.611	**2.9**	**2.9**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42500	42600	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42500	42600	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42600	42700	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42600	42700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42700	42800	Inner lane	0.631	**2.9**	**2.9**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42700	42800	Outer lane	0.691	**2.9**	**2.9**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42800	42900	Inner lane	7.271	**1.6**	**1.6**	Fair	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
42800	42900	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
42900	43000	Inner lane	10.043	**1.0**	**1.0**	Poor	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
42900	43000	Outer lane	0.251	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43000	43100	Inner lane	0.151	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43000	43100	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43100	43200	Inner lane	2.351	**2.6**	**2.6**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43100	43200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43200	43300	Inner lane	3.454	**2.4**	**2.4**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43200	43300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43300	43400	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43300	43400	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43400	43500	Inner lane	3.326	**2.4**	**2.4**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43400	43500	Outer lane	0.929	**2.8**	**2.8**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43500	43600	Inner lane	7.211	**1.6**	**1.6**	Fair	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
43500	43600	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43600	43700	Inner lane	9.583	**1.2**	**1.2**	Fair	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
43600	43700	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43700	43800	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
43700	43800	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43800	43900	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43800	43900	Outer lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43900	44000	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
43900	44000	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44000	44100	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
44000	44100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44100	44200	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
44100	44200	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44200	44300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44200	44300	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44300	44400	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	1.60857143	1.9	1.4	Fair	2.3	Good
44300	44400	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44400	44500	Inner lane	2.729	**2.5**	**2.5**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0.731429	2.3	1.8	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
44400	44500	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane	Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
44500	44600	Inner lane	2.051	**2.6**	**2.6**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0.451429	2.6	2.0	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
44500	44600	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44600	44700	Inner lane	1.014	**2.8**	**2.8**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	2.922857	1.8	1.4	Fair	0.0657143	2.9	2.2	Good	0	3.0	3.0	Good	2.35428571	1.7	1.3	Fair	2.1	Good
44600	44700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44700	44800	Inner lane	3.529	**2.4**	**2.4**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
44700	44800	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44800	44900	Inner lane	3.323	**2.4**	**2.4**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
44800	44900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44900	45000	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
44900	45000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45000	45100	Inner lane	0.729	**2.9**	**2.9**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
45000	45100	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45100	45200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45100	45200	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
45200	45300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45200	45300	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45300	45400	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45300	45400	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45400	45500	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5342857	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
45400	45500	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45500	45600	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
45500	45600	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45600	45700	Inner lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
45600	45700	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45700	45800	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45700	45800	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45800	45900	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45800	45900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
45900	46000	Inner lane	1.420	**2.7**	**2.7**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	1.394286	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
45900	46000	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46000	46100	Inner lane	0.923	**2.8**	**2.8**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46000	46100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46100	46200	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46100	46200	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46200	46300	Inner lane	0.446	**2.9**	**2.9**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
46200	46300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46300	46400	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46300	46400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46400	46500	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
46400	46500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46500	46600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46500	46600	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46600	46700	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
46600	46700	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46700	46800	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46700	46800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46800	46900	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46800	46900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
46900	47000	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
46900	47000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47000	47100	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47000	47100	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47100	47200	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47100	47200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47200	47300	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47200	47300	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47300	47400	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47300	47400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47400	47500	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47400	47500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47500	47600	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47500	47600	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47600	47700	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
47600	47700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47700	47800	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47700	47800	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
47800	47900	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
47800	47900	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
47900	48000	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
47900	48000	Outer lane	0.000	**3.0**	**3.0**	Good	10.9	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
48000	48100	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48000	48100	Outer lane	0.000	**3.0**	**3.0**	Good	11.1	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
48100	48200	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48100	48200	Outer lane	0.000	**3.0**	**3.0**	Good	7.6	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
48200	48300	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48200	48300	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48300	48400	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48300	48400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48400	48500	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
48400	48500	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48500	48600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
48500	48600	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48600	48700	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48600	48700	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48700	48800	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48700	48800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48800	48900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48800	48900	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48900	49000	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
48900	49000	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49000	49100	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49000	49100	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49100	49200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49100	49200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49200	49300	Inner lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
49200	49300	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49300	49400	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
49300	49400	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49400	49500	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49400	49500	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49500	49600	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49500	49600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49600	49700	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49600	49700	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49700	49800	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49700	49800	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49800	49900	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49800	49900	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49900	50000	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
49900	50000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50000	50100	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50000	50100	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50100	50200	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50100	50200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50200	50300	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50200	50300	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50300	50400	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50300	50400	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50400	50500	Inner lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
50400	50500	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50500	50600	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
50500	50600	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50600	50700	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50600	50700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50700	50800	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50700	50800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50800	50900	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50800	50900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50900	51000	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
50900	51000	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51000	51100	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51000	51100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51100	51200	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51100	51200	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51200	51300	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
51200	51300	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51300	51400	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51300	51400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51400	51500	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51400	51500	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51500	51600	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51500	51600	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51600	51700	Inner lane	2.437	**2.6**	**2.6**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
51600	51700	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51700	51800	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51700	51800	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51800	51900	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51800	51900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51900	52000	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
51900	52000	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52000	52100	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52000	52100	Outer lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52100	52200	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52100	52200	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	2.9371429	1.8	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
52200	52300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52200	52300	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52300	52400	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52300	52400	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
52400	52500	Inner lane	0.629	**2.9**	**2.9**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52400	52500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52500	52600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52500	52600	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
52600	52700	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
52600	52700	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52700	52800	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
52700	52800	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52800	52900	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52800	52900	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
52900	53000	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
52900	53000	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53000	53100	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53000	53100	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53100	53200	Inner lane	0.914	**2.8**	**2.8**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
53100	53200	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53200	53300	Inner lane	3.117	**2.4**	**2.4**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
53200	53300	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53300	53400	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
53300	53400	Outer lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
53400	53500	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53400	53500	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53500	53600	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53500	53600	Outer lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
53600	53700	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53600	53700	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53700	53800	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53700	53800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53800	53900	Inner lane	0.706	**2.9**	**2.9**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53800	53900	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53900	54000	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
53900	54000	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54000	54100	Inner lane	1.177	**2.8**	**2.8**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
54000	54100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54100	54200	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
54100	54200	Outer lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54200	54300	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54200	54300	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54300	54400	Inner lane	1.154	**2.8**	**2.8**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54300	54400	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54400	54500	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54400	54500	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54500	54600	Inner lane	1.011	**2.8**	**2.8**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	1.822857	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
54500	54600	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54600	54700	Inner lane	1.623	**2.7**	**2.7**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	2.637143	1.8	1.4	Fair	0.6628571	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
54600	54700	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54700	54800	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54700	54800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54800	54900	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54800	54900	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54900	55000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
54900	55000	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55000	55100	Inner lane	0.757	**2.9**	**2.9**	Good	2.4	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55000	55100	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55100	55200	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55100	55200	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55200	55300	Inner lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55200	55300	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55300	55400	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55300	55400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55400	55500	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55400	55500	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55500	55600	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55500	55600	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55600	55700	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55600	55700	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55700	55800	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55700	55800	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55800	55900	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55800	55900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55900	56000	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
55900	56000	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56000	56100	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56000	56100	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56100	56200	Inner lane	1.309	**2.8**	**2.8**	Good	2.4	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56100	56200	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56200	56300	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56200	56300	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56300	56400	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56300	56400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56400	56500	Inner lane	2.643	**2.5**	**2.5**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	4.737143	1.6	1.2	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
56400	56500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56500	56600	Inner lane	6.266	**1.8**	**1.8**	Fair	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	6.351429	1.5	1.1	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
56500	56600	Outer lane	0.731	**2.9**	**2.9**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	2.511429	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
56600	56700	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	5.417143	1.6	1.2	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
56600	56700	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	1.78	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
56700	56800	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	4.074286	1.7	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
56700	56800	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56800	56900	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56800	56900	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
56900	57000	Inner lane	7.203	**1.6**	**1.6**	Fair	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	4.822857	1.6	1.2	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Fair
56900	57000	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	1.494286	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
57000	57100	Inner lane	6.911	**1.7**	**1.7**	Fair	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.38	2.7	2.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
57000	57100	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57100	57200	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57100	57200	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	1.774286	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
57200	57300	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
57200	57300	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57300	57400	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57300	57400	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57400	57500	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57400	57500	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57500	57600	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57500	57600	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57600	57700	Inner lane	3.914	**2.3**	**2.3**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
57600	57700	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57700	57800	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57700	57800	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57800	57900	Inner lane	16.817	**1.0**	**1.0**	Poor	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
57800	57900	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
57900	58000	Inner lane	16.449	**1.0**	**1.0**	Poor	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
57900	58000	Outer lane	1.780	**2.7**	**2.7**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58000	58100	Inner lane	3.586	**2.4**	**2.4**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58000	58100	Outer lane	0.540	**2.9**	**2.9**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58100	58200	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58100	58200	Outer lane	1.437	**2.7**	**2.7**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58200	58300	Inner lane	14.086	**1.0**	**1.0**	Poor	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
58200	58300	Outer lane	0.849	**2.9**	**2.9**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58300	58400	Inner lane	20.877	**1.0**	**1.0**	Poor	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
58300	58400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58400	58500	Inner lane	3.849	**2.3**	**2.3**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0.52	2.5	1.9	Fair	2.2	Good
58400	58500	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58500	58600	Inner lane	10.986	**1.0**	**1.0**	Poor	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
58500	58600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58600	58700	Inner lane	13.234	**1.0**	**1.0**	Poor	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
58600	58700	Outer lane	0.891	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58700	58800	Inner lane	3.520	**2.4**	**2.4**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58700	58800	Outer lane	2.737	**2.5**	**2.5**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58800	58900	Inner lane	4.463	**2.2**	**2.2**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58800	58900	Outer lane	0.891	**2.8**	**2.8**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
58900	59000	Inner lane	0.349	**2.9**	**2.9**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
58900	59000	Outer lane	0.314	**2.9**	**2.9**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59000	59100	Inner lane	14.749	**1.0**	**1.0**	Poor	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
59000	59100	Outer lane	1.031	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59100	59200	Inner lane	10.283	**1.0**	**1.0**	Poor	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
59100	59200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59200	59300	Inner lane	1.463	**2.7**	**2.7**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
59200	59300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59300	59400	Inner lane	16.823	**1.0**	**1.0**	Poor	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
59300	59400	Outer lane	0.926	**2.8**	**2.8**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
59400	59500	Inner lane	4.586	**2.2**	**2.2**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
59400	59500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59500	59600	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.9857143	2.1	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
59500	59600	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59600	59700	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59600	59700	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59700	59800	Inner lane	2.029	**2.6**	**2.6**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
59700	59800	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59800	59900	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59800	59900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59900	60000	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
59900	60000	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60000	60100	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60000	60100	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60100	60200	Inner lane	0.754	**2.9**	**2.9**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60100	60200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60200	60300	Inner lane	3.923	**2.3**	**2.3**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
60200	60300	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60300	60400	Inner lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60300	60400	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60400	60500	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60400	60500	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60500	60600	Inner lane	1.209	**2.8**	**2.8**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
60500	60600	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60600	60700	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60600	60700	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
60700	60800	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60700	60800	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60800	60900	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60800	60900	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
60900	61000	Inner lane	0.000	**3.0**	**3.0**	Good	7.3	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
60900	61000	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61000	61100	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
61000	61100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61100	61200	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
61100	61200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61200	61300	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61200	61300	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61300	61400	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61300	61400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61400	61500	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61400	61500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61500	61600	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61500	61600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61600	61700	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61600	61700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61700	61800	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
61700	61800	Outer lane	1.806	**2.7**	**2.7**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
61800	61900	Inner lane	6.163	**1.8**	**1.8**	Fair	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
61800	61900	Outer lane	1.166	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
61900	62000	Inner lane	2.209	**2.6**	**2.6**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
61900	62000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62000	62100	Inner lane	1.340	**2.8**	**2.8**	Good	7.5	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62000	62100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62100	62200	Inner lane	3.023	**2.5**	**2.5**	Good	7.7	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62100	62200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62200	62300	Inner lane	3.234	**2.4**	**2.4**	Good	7.4	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62200	62300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62300	62400	Inner lane	6.363	**1.8**	**1.8**	Fair	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62300	62400	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62400	62500	Inner lane	9.960	**1.1**	**1.1**	Fair	2.1	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
62400	62500	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62500	62600	Inner lane	2.980	**2.5**	**2.5**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
62500	62600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62600	62700	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62600	62700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62700	62800	Inner lane	4.974	**2.1**	**2.1**	Good	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
62700	62800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62800	62900	Inner lane	6.251	**1.8**	**1.8**	Fair	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62800	62900	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
62900	63000	Inner lane	6.149	**1.8**	**1.8**	Fair	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
62900	63000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63000	63100	Inner lane	13.143	**1.0**	**1.0**	Poor	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Fair
63000	63100	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63100	63200	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63100	63200	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63200	63300	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63200	63300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63300	63400	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63300	63400	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63400	63500	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63400	63500	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63500	63600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63500	63600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63600	63700	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63600	63700	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63700	63800	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63700	63800	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63800	63900	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63800	63900	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63900	64000	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
63900	64000	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64000	64100	Inner lane	3.311	**2.4**	**2.4**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64000	64100	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64100	64200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64100	64200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64200	64300	Inner lane	3.346	**2.4**	**2.4**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
64200	64300	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64300	64400	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64300	64400	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64400	64500	Inner lane	1.777	**2.7**	**2.7**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64400	64500	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64500	64600	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64500	64600	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64600	64700	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64600	64700	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64700	64800	Inner lane	2.537	**2.5**	**2.5**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane	Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
64700	64800	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64800	64900	Inner lane	0.666	**2.9**	**2.9**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64800	64900	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
64900	65000	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
64900	65000	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65000	65100	Inner lane	4.503	**2.2**	**2.2**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
65000	65100	Outer lane	0.343	**2.9**	**2.9**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65100	65200	Inner lane	8.983	**1.3**	**1.3**	Fair	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
65100	65200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65200	65300	Inner lane	8.440	**1.4**	**1.4**	Fair	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
65200	65300	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65300	65400	Inner lane	7.934	**1.5**	**1.5**	Fair	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
65300	65400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65400	65500	Inner lane	4.351	**2.2**	**2.2**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
65400	65500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65500	65600	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65500	65600	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65600	65700	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65600	65700	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65700	65800	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65700	65800	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65800	65900	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65800	65900	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65900	66000	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
65900	66000	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66000	66100	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66000	66100	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66100	66200	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66100	66200	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66200	66300	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66200	66300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66300	66400	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66300	66400	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66400	66500	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66400	66500	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66500	66600	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66500	66600	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66600	66700	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66600	66700	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66700	66800	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66700	66800	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66800	66900	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66800	66900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66900	67000	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
66900	67000	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67000	67100	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67000	67100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67100	67200	Inner lane	0.920	**2.8**	**2.8**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67100	67200	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67200	67300	Inner lane	0.540	**2.9**	**2.9**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67200	67300	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67300	67400	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67300	67400	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67400	67500	Inner lane	0.537	**2.9**	**2.9**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67400	67500	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67500	67600	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67500	67600	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
67600	67700	Inner lane	1.560	**2.7**	**2.7**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	1.225714	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
67600	67700	Outer lane	0.657	**2.9**	**2.9**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67700	67800	Inner lane	0.291	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67700	67800	Outer lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67800	67900	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67800	67900	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67900	68000	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
67900	68000	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68000	68100	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68000	68100	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68100	68200	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68100	68200	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68200	68300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	1.488571	2.0	1.5	Fair	1.8771429	1.9	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
68200	68300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68300	68400	Inner lane	0.314	**2.9**	**2.9**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
68300	68400	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68400	68500	Inner lane	1.580	**2.7**	**2.7**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
68400	68500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68500	68600	Inner lane	2.040	**2.6**	**2.6**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
68500	68600	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68600	68700	Inner lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
68600	68700	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68700	68800	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68700	68800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
68800	68900	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68800	68900	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68900	69000	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
68900	69000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69000	69100	Inner lane	0.549	**2.9**	**2.9**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69000	69100	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69100	69200	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69100	69200	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69200	69300	Inner lane	4.243	**2.2**	**2.2**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
69200	69300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69300	69400	Inner lane	3.677	**2.3**	**2.3**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
69300	69400	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69400	69500	Inner lane	2.949	**2.5**	**2.5**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
69400	69500	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69500	69600	Inner lane	6.257	**1.8**	**1.8**	Fair	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
69500	69600	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69600	69700	Inner lane	6.289	**1.8**	**1.8**	Fair	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
69600	69700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69700	69800	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69700	69800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69800	69900	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69800	69900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
69900	70000	Inner lane	0.934	**2.8**	**2.8**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
69900	70000	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70000	70100	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70000	70100	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70100	70200	Inner lane	0.731	**2.9**	**2.9**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70100	70200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70200	70300	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70200	70300	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70300	70400	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70300	70400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70400	70500	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70400	70500	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70500	70600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70500	70600	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70600	70700	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70600	70700	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70700	70800	Inner lane	0.226	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
70700	70800	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70800	70900	Inner lane	1.231	**2.8**	**2.8**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
70800	70900	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
70900	71000	Inner lane	2.400	**2.6**	**2.6**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
70900	71000	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71000	71100	Inner lane	0.757	**2.9**	**2.9**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	1.111429	2.0	1.5	Fair	0.1542857	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
71000	71100	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71100	71200	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71100	71200	Outer lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71200	71300	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71200	71300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71300	71400	Inner lane	0.349	**2.9**	**2.9**	Good	5.6	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71300	71400	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71400	71500	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71400	71500	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71500	71600	Inner lane	0.000	**3.0**	**3.0**	Good	7.5	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71500	71600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71600	71700	Inner lane	0.446	**2.9**	**2.9**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71600	71700	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71700	71800	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71700	71800	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71800	71900	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
71800	71900	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71900	72000	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
71900	72000	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
72000	72100	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72000	72100	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72100	72200	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72100	72200	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72200	72300	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72200	72300	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
72300	72400	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72300	72400	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
72400	72500	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72400	72500	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72500	72600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72500	72600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72600	72700	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
72600	72700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72700	72800	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72700	72800	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72800	72900	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane	Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
72800	72900	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72900	73000	Inner lane	0.000	**3.0**	**3.0**	Good	2.3	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
72900	73000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73000	73100	Inner lane	0.000	**3.0**	**3.0**	Good	2.1	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73000	73100	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73100	73200	Inner lane	0.000	**3.0**	**3.0**	Good	2.2	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73100	73200	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73200	73300	Inner lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73200	73300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73300	73400	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73300	73400	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73400	73500	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73400	73500	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73500	73600	Inner lane	0.823	**2.9**	**2.9**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73500	73600	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73600	73700	Inner lane	1.889	**2.7**	**2.7**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
73600	73700	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73700	73800	Inner lane	1.520	**2.7**	**2.7**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
73700	73800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73800	73900	Inner lane	3.491	**2.4**	**2.4**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
73800	73900	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73900	74000	Inner lane	0.303	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
73900	74000	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74000	74100	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74000	74100	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74100	74200	Inner lane	0.931	**2.8**	**2.8**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5028571	2.6	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74100	74200	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74200	74300	Inner lane	4.366	**2.2**	**2.2**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74200	74300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74300	74400	Inner lane	3.303	**2.4**	**2.4**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74300	74400	Outer lane	0.154	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74400	74500	Inner lane	5.589	**1.9**	**1.9**	Fair	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
74400	74500	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74500	74600	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74500	74600	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74600	74700	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74600	74700	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74700	74800	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74700	74800	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74800	74900	Inner lane	1.963	**2.7**	**2.7**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74800	74900	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
74900	75000	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
74900	75000	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75000	75100	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75000	75100	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75100	75200	Inner lane	1.460	**2.7**	**2.7**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
75100	75200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75200	75300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75200	75300	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75300	75400	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75300	75400	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75400	75500	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75400	75500	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75500	75600	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
75500	75600	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75600	75700	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75600	75700	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75700	75800	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75700	75800	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75800	75900	Inner lane	1.043	**2.8**	**2.8**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
75800	75900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75900	76000	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
75900	76000	Outer lane	0.614	**2.9**	**2.9**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76000	76100	Inner lane	3.614	**2.4**	**2.4**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76000	76100	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76100	76200	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76100	76200	Outer lane	0.663	**2.9**	**2.9**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76200	76300	Inner lane	9.837	**1.1**	**1.1**	Fair	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
76200	76300	Outer lane	1.303	**2.8**	**2.8**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76300	76400	Inner lane	4.151	**2.3**	**2.3**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
76300	76400	Outer lane	1.774	**2.7**	**2.7**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76400	76500	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76400	76500	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76500	76600	Inner lane	3.703	**2.3**	**2.3**	Good	6.7	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
76500	76600	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76600	76700	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76600	76700	Outer lane	0.629	**2.9**	**2.9**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76700	76800	Inner lane	1.600	**2.7**	**2.7**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76700	76800	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76800	76900	Inner lane	2.560	**2.5**	**2.5**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
76800	76900	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
76900	77000	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
76900	77000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77000	77100	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77000	77100	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77100	77200	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77100	77200	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
77200	77300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77200	77300	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77300	77400	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77300	77400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77400	77500	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77400	77500	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77500	77600	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77500	77600	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77600	77700	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77600	77700	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77700	77800	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77700	77800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77800	77900	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77800	77900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77900	78000	Inner lane	0.000	**3.0**	**3.0**	Good	2.3	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
77900	78000	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78000	78100	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78000	78100	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78100	78200	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78100	78200	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78200	78300	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78200	78300	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78300	78400	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78300	78400	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78400	78500	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78400	78500	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
78500	78600	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78500	78600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78600	78700	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
78600	78700	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78700	78800	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78700	78800	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78800	78900	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78800	78900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78900	79000	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
78900	79000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79000	79100	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79000	79100	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79100	79200	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79100	79200	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79200	79300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79200	79300	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79300	79400	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79300	79400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79400	79500	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79400	79500	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79500	79600	Inner lane	0.609	**2.9**	**2.9**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79500	79600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79600	79700	Inner lane	0.000	**3.0**	**3.0**	Good	7	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79600	79700	Outer lane	0.000	**3.0**	**3.0**	Good	2.2	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79700	79800	Inner lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79700	79800	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
79800	79900	Inner lane	0.000	**3.0**	**3.0**	Good	7.3	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79800	79900	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79900	80000	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
79900	80000	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80000	80100	Inner lane	0.851	**2.9**	**2.9**	Good	8.3	**1.4**	**1.4**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
80000	80100	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80100	80200	Inner lane	0.889	**2.8**	**2.8**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.1	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80100	80200	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80200	80300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80200	80300	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80300	80400	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80300	80400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80400	80500	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80400	80500	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80500	80600	Inner lane	0.903	**2.8**	**2.8**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80500	80600	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80600	80700	Inner lane	1.489	**2.7**	**2.7**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6171429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80600	80700	Outer lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80700	80800	Inner lane	2.606	**2.5**	**2.5**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6228571	2.4	1.8	Fair	0	3.0	3.0	Good	0.6	2.4	1.8	Fair	2.2	Good
80700	80800	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80800	80900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6571429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
80800	80900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
80900	81000	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3571429	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
80900	81000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81000	81100	Inner lane	0.000	**3.0**	**3.0**	Good	7.1	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6714286	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
81000	81100	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81100	81200	Inner lane	0.000	**3.0**	**3.0**	Good	8.4	**1.4**	**1.4**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.7571429	2.3	1.7	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
81100	81200	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81200	81300	Inner lane	0.000	**3.0**	**3.0**	Good	6	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.1314286	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
81200	81300	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81300	81400	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81300	81400	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81400	81500	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81400	81500	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81500	81600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81500	81600	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81600	81700	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81600	81700	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81700	81800	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.1371429	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
81700	81800	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81800	81900	Inner lane	1.209	**2.8**	**2.8**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
81800	81900	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81900	82000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
81900	82000	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82000	82100	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82000	82100	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82100	82200	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82100	82200	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82200	82300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82200	82300	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82300	82400	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82300	82400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82400	82500	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82400	82500	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82500	82600	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82500	82600	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82600	82700	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82600	82700	Outer lane	1.006	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82700	82800	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.0742857	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82700	82800	Outer lane	0.066	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82800	82900	Inner lane	5.060	**2.0**	**2.0**	Fair	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
82800	82900	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
82900	83000	Inner lane	1.880	**2.7**	**2.7**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
82900	83000	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83000	83100	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83000	83100	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83100	83200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83100	83200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83200	83300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83200	83300	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83300	83400	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83300	83400	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.12	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83400	83500	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83400	83500	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.4228571	2.6	2.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
83500	83600	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83500	83600	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83600	83700	Inner lane	0.637	**2.9**	**2.9**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83600	83700	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83700	83800	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83700	83800	Outer lane	0.306	**2.9**	**2.9**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83800	83900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83800	83900	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83900	84000	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
83900	84000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84000	84100	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84000	84100	Outer lane	0.223	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84100	84200	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84100	84200	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84200	84300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84200	84300	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84300	84400	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84300	84400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84400	84500	Inner lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84400	84500	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
84500	84600	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84500	84600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84600	84700	Inner lane	0.614	**2.9**	**2.9**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
84600	84700	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84700	84800	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
84700	84800	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84800	84900	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
84800	84900	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
84900	85000	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	1.52	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
84900	85000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
85000	85100	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85000	85100	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85100	85200	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85100	85200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85200	85300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85200	85300	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85300	85400	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85300	85400	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
85400	85500	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3457143	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
85400	85500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85500	85600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85500	85600	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85600	85700	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85600	85700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85700	85800	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85700	85800	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85800	85900	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
85800	85900	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
85900	86000	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
85900	86000	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86000	86100	Inner lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86000	86100	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86100	86200	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86100	86200	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86200	86300	Inner lane	1.234	**2.8**	**2.8**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86200	86300	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86300	86400	Inner lane	2.529	**2.5**	**2.5**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86300	86400	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86400	86500	Inner lane	5.520	**1.9**	**1.9**	Fair	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
86400	86500	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86500	86600	Inner lane	0.000	**3.0**	**3.0**	Good	6.8	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86500	86600	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86600	86700	Inner lane	0.000	**3.0**	**3.0**	Good	13.4	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
86600	86700	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86700	86800	Inner lane	0.000	**3.0**	**3.0**	Good	10	**1.1**	**1.1**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6571429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
86700	86800	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86800	86900	Inner lane	0.000	**3.0**	**3.0**	Good	12.9	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.7942857	2.3	1.7	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
86800	86900	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
86900	87000	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3657143	2.7	2.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
86900	87000	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
87000	87100	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87000	87100	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87100	87200	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87100	87200	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.4542857	2.6	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
87200	87300	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6714286	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
87200	87300	Outer lane	0.000	**3.0**	**3.0**	Good	9	**1.3**	**1.3**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
87300	87400	Inner lane	0.000	**3.0**	**3.0**	Good	7.6	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.3285714	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
87300	87400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87400	87500	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.9657143	1.9	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
87400	87500	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87500	87600	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87500	87600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87600	87700	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
87600	87700	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87700	87800	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87700	87800	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87800	87900	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87800	87900	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87900	88000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
87900	88000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88000	88100	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88000	88100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88100	88200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88100	88200	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88200	88300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88200	88300	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88300	88400	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
88300	88400	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88400	88500	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88400	88500	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88500	88600	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88500	88600	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88600	88700	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88600	88700	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88700	88800	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88700	88800	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88800	88900	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
88800	88900	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
88900	89000	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
88900	89000	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89000	89100	Inner lane	0.000	**3.0**	**3.0**	Good	8.8	**1.3**	**1.3**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	6.9228571	1.4	1.1	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
89000	89100	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89100	89200	Inner lane	0.000	3.0	3.0	Good	6.8	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89100	89200	Outer lane	0.000	3.0	3.0	Good	8.2	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
89200	89300	Inner lane	0.000	3.0	3.0	Good	8.3	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	2.9228571	1.8	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
89200	89300	Outer lane	0.000	3.0	3.0	Good	7.7	1.5	1.5	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89300	89400	Inner lane	0.000	3.0	3.0	Good	8.1	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	1.8057143	1.9	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
89300	89400	Outer lane	0.000	3.0	3.0	Good	5.9	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89400	89500	Inner lane	1.611	2.7	2.7	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89400	89500	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89500	89600	Inner lane	0.929	2.8	2.8	Good	3.6	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89500	89600	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89600	89700	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89600	89700	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89700	89800	Inner lane	0.923	2.8	2.8	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89700	89800	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89800	89900	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89800	89900	Outer lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
89900	90000	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
89900	90000	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
90000	90100	Inner lane	0.000	3.0	3.0	Good	11.7	1.0	1.0	Poor	0	3.0	1.5	Fair	4.237143	1.7	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
90000	90100	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
90100	90200	Inner lane	0.000	3.0	3.0	Good	11.4	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	7.5142857	1.4	1.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
90100	90200	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
90200	90300	Inner lane	0.000	3.0	3.0	Good	12.4	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90200	90300	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
90300	90400	Inner lane	2.166	2.6	2.6	Good	11.3	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
90300	90400	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
90400	90500	Inner lane	2.637	2.5	2.5	Good	8.6	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90400	90500	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0	3.0	1.5	Fair	0.731429	2.3	1.8	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
90500	90600	Inner lane	2.603	2.5	2.5	Good	7.1	1.6	1.6	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90500	90600	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
90600	90700	Inner lane	0.000	3.0	3.0	Good	9.9	1.1	1.1	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	1.2	2.0	1.5	Fair	2.1	Good
90600	90700	Outer lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
90700	90800	Inner lane	2.549	2.5	2.5	Good	8.3	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90700	90800	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
90800	90900	Inner lane	0.000	3.0	3.0	Good	9	1.3	1.3	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90800	90900	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0	3.0	1.5	Fair	0.92	2.2	1.6	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
90900	91000	Inner lane	2.183	2.6	2.6	Good	5.5	1.9	1.9	Fair	0	3.0	1.5	Fair	0.928571	2.2	1.6	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
90900	91000	Outer lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91000	91100	Inner lane	11.009	1.0	1.0	Poor	14.5	1.0	1.0	Poor	0	3.0	1.5	Fair	1.78	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	1.8	Fair
91000	91100	Outer lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91100	91200	Inner lane	0.929	2.8	2.8	Good	7.4	1.6	1.6	Fair	0	3.0	1.5	Fair	1.494286	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
91100	91200	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
91200	91300	Inner lane	1.337	2.8	2.8	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91200	91300	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
91300	91400	Inner lane	0.920	2.8	2.8	Good	5.5	1.9	1.9	Fair	0	3.0	1.5	Fair	1.177143	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
91300	91400	Outer lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91400	91500	Inner lane	1.991	2.6	2.6	Good	9	1.3	1.3	Fair	0	3.0	1.5	Fair	1.78	1.9	1.4	Fair	0.92	2.2	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Fair
91400	91500	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91500	91600	Inner lane	1.209	2.8	2.8	Good	4.4	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91500	91600	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
91600	91700	Inner lane	2.080	2.6	2.6	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91600	91700	Outer lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91700	91800	Inner lane	4.091	2.3	2.3	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
91700	91800	Outer lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91800	91900	Inner lane	2.963	2.5	2.5	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
91800	91900	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
91900	92000	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
91900	92000	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
92000	92100	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0	3.0	1.5	Fair	6.374286	1.5	1.1	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
92000	92100	Outer lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92100	92200	Inner lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	3.58	1.7	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92100	92200	Outer lane	0.000	3.0	3.0	Good	6.7	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92200	92300	Inner lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0	3.0	1.5	Fair	0.0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92200	92300	Outer lane	0.000	3.0	3.0	Good	18.2	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92300	92400	Inner lane	0.000	3.0	3.0	Good	5.6	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92300	92400	Outer lane	0.000	3.0	3.0	Good	15	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92400	92500	Inner lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92400	92500	Outer lane	0.000	3.0	3.0	Good	18.2	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92500	92600	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92500	92600	Outer lane	0.000	3.0	3.0	Good	10.3	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92600	92700	Inner lane	0.000	3.0	3.0	Good	5.3	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92600	92700	Outer lane	0.000	3.0	3.0	Good	17.1	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92700	92800	Inner lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
92700	92800	Outer lane	0.000	3.0	3.0	Good	17.5	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92800	92900	Inner lane	0.000	3.0	3.0	Good	8.3	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92800	92900	Outer lane	0.000	3.0	3.0	Good	10.1	1.0	1.0	Poor	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
92900	93000	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
92900	93000	Outer lane	0.000	3.0	3.0	Good	6.8	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93000	93100	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93000	93100	Outer lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
93100	93200	Inner lane	0.000	3.0	3.0	Good	7.7	1.5	1.5	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93100	93200	Outer lane	0.000	3.0	3.0	Good	7.3	1.6	1.6	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93200	93300	Inner lane	0.000	3.0	3.0	Good	8.1	1.4	1.4	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
93200	93300	Outer lane	0.000	3.0	3.0	Good	6.4	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93300	93400	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93300	93400	Outer lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93400	93500	Inner lane	0.000	3.0	3.0	Good	6.1	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93400	93500	Outer lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93500	93600	Inner lane	0.000	3.0	3.0	Good	6.8	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93500	93600	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93600	93700	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
93600	93700	Outer lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	1.551429	1.9	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
93700	93800	Inner lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93700	93800	Outer lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93800	93900	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0	3.0	1.5	Fair	2.377143	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
93800	93900	Outer lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
93900	94000	Inner lane	0.280	3.0	3.0	Good	4	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
93900	94000	Outer lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94000	94100	Inner lane	0.346	2.9	2.9	Good	6.1	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94000	94100	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94100	94200	Inner lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94100	94200	Outer lane	0.000	3.0	3.0	Good	6.7	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94200	94300	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	1.32	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
94200	94300	Outer lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94300	94400	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94300	94400	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94400	94500	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94400	94500	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94500	94600	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94500	94600	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94600	94700	Inner lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94600	94700	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94700	94800	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94700	94800	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94800	94900	Inner lane	0.000	3.0	3.0	Good	6.7	1.7	1.7	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94800	94900	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
94900	95000	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
94900	95000	Outer lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
95000	95100	Inner lane	0.071	3.0	3.0	Good	6.1	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95000	95100	Outer lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95100	95200	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95100	95200	Outer lane	0.000	3.0	3.0	Good	6.4	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95200	95300	Inner lane	0.600	2.9	2.9	Good	4.5	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95200	95300	Outer lane	0.000	3.0	3.0	Good	7.4	1.6	1.6	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95300	95400	Inner lane	1.177	2.8	2.8	Good	4	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95300	95400	Outer lane	0.000	3.0	3.0	Good	6.1	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95400	95500	Inner lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95400	95500	Outer lane	0.000	3.0	3.0	Good	7	1.6	1.6	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95500	95600	Inner lane	0.000	3.0	3.0	Good	7.6	1.5	1.5	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95500	95600	Outer lane	0.000	3.0	3.0	Good	5.6	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95600	95700	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95600	95700	Outer lane	0.000	3.0	3.0	Good	6.1	1.8	1.8	Fair	0	3.0	1.5	Fair	0.808571	2.3	1.7	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
95700	95800	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
95700	95800	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
95800	95900	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
95800	95900	Outer lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
95900	96000	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
95900	96000	Outer lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96000	96100	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96000	96100	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96100	96200	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96100	96200	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96200	96300	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96200	96300	Outer lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96300	96400	Inner lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96300	96400	Outer lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96400	96500	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96400	96500	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96500	96600	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96500	96600	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96600	96700	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96600	96700	Outer lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96700	96800	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96700	96800	Outer lane	0.000	3.0	3.0	Good	5.3	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96800	96900	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96800	96900	Outer lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
96900	97000	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
96900	97000	Outer lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97000	97100	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97000	97100	Outer lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
97100	97200	Inner lane	0.000	3.0	3.0	Good	5.3	2.0	2.0	Fair	0	3.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane	Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
97100	97200	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97200	97300	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97200	97300	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.1285714	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
97300	97400	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97300	97400	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97400	97500	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97400	97500	Outer lane	0.606	**2.9**	**2.9**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97500	97600	Inner lane	4.869	**2.1**	**2.1**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
97500	97600	Outer lane	1.180	**2.8**	**2.8**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97600	97700	Inner lane	4.637	**2.2**	**2.2**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
97600	97700	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97700	97800	Inner lane	1.937	**2.7**	**2.7**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97700	97800	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
97800	97900	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97800	97900	Outer lane	0.000	**3.0**	**3.0**	Good	6.6	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97900	98000	Inner lane	0.000	**3.0**	**3.0**	Good	7.2	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
97900	98000	Outer lane	0.343	**2.9**	**2.9**	Good	11.4	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
98000	98100	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98000	98100	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98100	98200	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98100	98200	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98200	98300	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98200	98300	Outer lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98300	98400	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98300	98400	Outer lane	0.000	**3.0**	**3.0**	Good	7.6	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98400	98500	Inner lane	0.000	**3.0**	**3.0**	Good	9	**1.3**	**1.3**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
98400	98500	Outer lane	0.000	**3.0**	**3.0**	Good	9.7	**1.2**	**1.2**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
98500	98600	Inner lane	0.000	**3.0**	**3.0**	Good	10.2	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
98500	98600	Outer lane	0.000	**3.0**	**3.0**	Good	6.8	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98600	98700	Inner lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98600	98700	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98700	98800	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98700	98800	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98800	98900	Inner lane	0.000	**3.0**	**3.0**	Good	9.7	**1.2**	**1.2**	Fair	0	**3.0**	**1.5**	Fair	1.177143	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
98800	98900	Outer lane	0.000	**3.0**	**3.0**	Good	7.1	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
98900	99000	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	1.52	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
98900	99000	Outer lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99000	99100	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99000	99100	Outer lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99100	99200	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99100	99200	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99200	99300	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99200	99300	Outer lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99300	99400	Inner lane	0.000	**3.0**	**3.0**	Good	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99300	99400	Outer lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99400	99500	Inner lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	2.602857	1.8	1.4	Fair	2.3857143	1.9	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
99400	99500	Outer lane	0.000	**3.0**	**3.0**	Good	6.8	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99500	99600	Inner lane	0.000	**3.0**	**3.0**	Good	7.8	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	1.214286	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
99500	99600	Outer lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99600	99700	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99600	99700	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99700	99800	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	1.611429	1.9	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99700	99800	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99800	99900	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
99800	99900	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
99900	100000	Inner lane	0.611	**2.9**	**2.9**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6628571	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
99900	100000	Outer lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100000	100100	Inner lane	2.031	**2.6**	**2.6**	Good	8	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	2.637143	1.8	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
100000	100100	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100100	100200	Inner lane	1.174	**2.8**	**2.8**	Good	8.2	**1.4**	**1.4**	Fair	0	**3.0**	**1.5**	Fair	4.091429	1.7	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
100100	100200	Outer lane	0.000	**3.0**	**3.0**	Good	6.4	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100200	100300	Inner lane	0.000	**3.0**	**3.0**	Good	9.1	**1.3**	**1.3**	Fair	0	**3.0**	**1.5**	Fair	3.585714	1.7	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
100200	100300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100300	100400	Inner lane	1.777	**2.7**	**2.7**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	3.354286	1.8	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
100300	100400	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100400	100500	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100400	100500	Outer lane	0.343	**2.9**	**2.9**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100500	100600	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100500	100600	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.1257143	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100600	100700	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100600	100700	Outer lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100700	100800	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100700	100800	Outer lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100800	100900	Inner lane	0.000	**3.0**	**3.0**	Good	7	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100800	100900	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
100900	101000	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
100900	101000	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101000	101100	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101000	101100	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101100	101200	Inner lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101100	101200	Outer lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																															
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
101200	101300	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.2371429	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
101200	101300	Outer lane	0.000	**3.0**	**3.0**	Good	6	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101300	101400	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101300	101400	Outer lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101400	101500	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6657143	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101400	101500	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101500	101600	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101500	101600	Outer lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101600	101700	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101600	101700	Outer lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101700	101800	Inner lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101700	101800	Outer lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101800	101900	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.0657143	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
101800	101900	Outer lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101900	102000	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6371429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
101900	102000	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102000	102100	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.44	2.6	2.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102000	102100	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102100	102200	Inner lane	0.117	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102100	102200	Outer lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102200	102300	Inner lane	1.866	**2.7**	**2.7**	Good	6.7	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.0114286	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
102200	102300	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102300	102400	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102300	102400	Outer lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102400	102500	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102400	102500	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102500	102600	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102500	102600	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102600	102700	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102600	102700	Outer lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102700	102800	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6657143	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102700	102800	Outer lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
102800	102900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102800	102900	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
102900	103000	Inner lane	1.106	**2.8**	**2.8**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0.60571429	2.4	1.8	Fair	2.3	Good
102900	103000	Outer lane	0.660	**2.9**	**2.9**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103000	103100	Inner lane	2.883	**2.5**	**2.5**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103000	103100	Outer lane	0.334	**2.9**	**2.9**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103100	103200	Inner lane	2.383	**2.6**	**2.6**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103100	103200	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103200	103300	Inner lane	3.326	**2.4**	**2.4**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103200	103300	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103300	103400	Inner lane	3.871	**2.3**	**2.3**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.9285714	2.2	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
103300	103400	Outer lane	0.280	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103400	103500	Inner lane	0.946	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
103400	103500	Outer lane	0.157	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103500	103600	Inner lane	1.177	**2.8**	**2.8**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103500	103600	Outer lane	0.603	**2.9**	**2.9**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103600	103700	Inner lane	0.000	**3.0**	**3.0**	Good	4.9	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103600	103700	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103700	103800	Inner lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	3.268571	1.8	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
103700	103800	Outer lane	0.000	**3.0**	**3.0**	Good	6.3	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	1.677143	1.9	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
103800	103900	Inner lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
103800	103900	Outer lane	0.000	**3.0**	**3.0**	Good	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0.688571	2.4	1.8	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
103900	104000	Inner lane	3.626	**2.4**	**2.4**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
103900	104000	Outer lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104000	104100	Inner lane	1.477	**2.7**	**2.7**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104000	104100	Outer lane	0.354	**2.9**	**2.9**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104100	104200	Inner lane	1.203	**2.8**	**2.8**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104100	104200	Outer lane	0.066	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104200	104300	Inner lane	0.000	**3.0**	**3.0**	Good	6.4	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.4857143	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
104200	104300	Outer lane	0.063	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104300	104400	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.7714286	1.9	1.4	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
104300	104400	Outer lane	0.243	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104400	104500	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104400	104500	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104500	104600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104500	104600	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104600	104700	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104600	104700	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
104700	104800	Inner lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104700	104800	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104800	104900	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104800	104900	Outer lane	0.000	**3.0**	**3.0**	Good	7.2	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104900	105000	Inner lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
104900	105000	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
105000	105100	Inner lane	0.000	**3.0**	**3.0**	Good	7.9	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
105000	105100	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
105100	105200	Inner lane	0.731	**2.9**	**2.9**	Good	12.2	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	2.374286	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
105100	105200	Outer lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105200	105300	Inner lane	0.000	**3.0**	**3.0**	Good	7.3	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
105200	105300	Outer lane	0.000	**3.0**	**3.0**	Good	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105300	105400	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	1.234286	2.0	1.5	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
105300	105400	Outer lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105400	105500	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.2285714	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
105400	105500	Outer lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5342857	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105500	105600	Inner lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3457143	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105500	105600	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3428571	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105600	105700	Inner lane	0.000	**3.0**	**3.0**	Good	7.9	**1.5**	**1.5**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
105600	105700	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105700	105800	Inner lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105700	105800	Outer lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105800	105900	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105800	105900	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
105900	106000	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
105900	106000	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106000	106100	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106000	106100	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106100	106200	Inner lane	0.917	**2.8**	**2.8**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106100	106200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106200	106300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.0657143	2.9	2.2	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106200	106300	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.4142857	2.6	2.0	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106300	106400	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106300	106400	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106400	106500	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.9142857	2.2	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106400	106500	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106500	106600	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106500	106600	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3514286	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106600	106700	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106600	106700	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106700	106800	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106700	106800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106800	106900	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5142857	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106800	106900	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
106900	107000	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6342857	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
106900	107000	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.28	2.8	2.1	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107000	107100	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.8914286	2.2	1.7	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107000	107100	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6342857	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107100	107200	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107100	107200	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107200	107300	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107200	107300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107300	107400	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107300	107400	Outer lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107400	107500	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3142857	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107400	107500	Outer lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107500	107600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107500	107600	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107600	107700	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107600	107700	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107700	107800	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.3428571	2.7	2.0	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107700	107800	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5857143	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107800	107900	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.2485714	2.8	2.1	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107800	107900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
107900	108000	Inner lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
107900	108000	Outer lane	0.000	**3.0**	**3.0**	Good	6	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108000	108100	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108000	108100	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108100	108200	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108100	108200	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108200	108300	Inner lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.4685714	2.6	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108200	108300	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108300	108400	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.2571429	2.8	2.1	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108300	108400	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108400	108500	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108400	108500	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108500	108600	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.5657143	2.5	1.9	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108500	108600	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108600	108700	Inner lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108600	108700	Outer lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108700	108800	Inner lane	0.000	**3.0**	**3.0**	Good	6.9	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108700	108800	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108800	108900	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108800	108900	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
108900	109000	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.66	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
108900	109000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109000	109100	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109000	109100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109100	109200	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109100	109200	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109200	109300	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109200	109300	Outer lane	1.134	**2.8**	**2.8**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane	Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
109300	109400	Inner lane	0.720	**2.9**	**2.9**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6371429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
109300	109400	Outer lane	1.074	**2.8**	**2.8**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
109400	109500	Inner lane	4.703	**2.2**	**2.2**	Good	5.1	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
109400	109500	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	2.434286	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
109500	109600	Inner lane	0.897	**2.8**	**2.8**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109500	109600	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	1.805714	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
109600	109700	Inner lane	0.611	**2.9**	**2.9**	Good	5	**2.0**	**2.0**	Fair	1.488571	**1.0**	**0.5**	Poor	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
109600	109700	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109700	109800	Inner lane	17.029	**1.0**	**1.0**	Poor	11.3	**1.0**	**1.0**	Poor	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	1.9	Fair
109700	109800	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	3.52	1.8	1.3	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
109800	109900	Inner lane	14.703	**1.0**	**1.0**	Poor	8.7	**1.3**	**1.3**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	1.9	Fair
109800	109900	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
109900	110000	Inner lane	12.117	**1.0**	**1.0**	Poor	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
109900	110000	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110000	110100	Inner lane	11.257	**1.0**	**1.0**	Poor	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
110000	110100	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110100	110200	Inner lane	7.577	**1.5**	**1.5**	Fair	6	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	2.08	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Fair
110100	110200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110200	110300	Inner lane	2.120	**2.6**	**2.6**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110200	110300	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110300	110400	Inner lane	5.254	**2.0**	**2.0**	Fair	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
110300	110400	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110400	110500	Inner lane	9.389	**1.2**	**1.2**	Fair	6.4	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.0	Good
110400	110500	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110500	110600	Inner lane	9.654	**1.2**	**1.2**	Fair	4.4	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.1	Good
110500	110600	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110600	110700	Inner lane	5.331	**1.9**	**1.9**	Fair	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
110600	110700	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	1.968571	1.9	1.4	Fair	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
110700	110800	Inner lane	0.937	**2.8**	**2.8**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
110700	110800	Outer lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110800	110900	Inner lane	1.140	**2.8**	**2.8**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110800	110900	Outer lane	0.000	**3.0**	**3.0**	Good	5.8	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110900	111000	Inner lane	4.134	**2.3**	**2.3**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
110900	111000	Outer lane	0.000	**3.0**	**3.0**	Good	6.6	**1.7**	**1.7**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.6371429	2.4	1.8	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.2	Good
111000	111100	Inner lane	0.366	**2.9**	**2.9**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111000	111100	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.9285714	2.2	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111100	111200	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111100	111200	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	1.5142857	2.0	1.5	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111200	111300	Inner lane	0.314	**2.9**	**2.9**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111200	111300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.9285714	2.2	1.6	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111300	111400	Inner lane	0.351	**2.9**	**2.9**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111300	111400	Outer lane	0.000	**3.0**	**3.0**	Good	5.9	**1.8**	**1.8**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111400	111500	Inner lane	0.357	**2.9**	**2.9**	Good	5.6	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111400	111500	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0.7628571	2.3	1.7	Fair	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111500	111600	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111500	111600	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111600	111700	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111600	111700	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111700	111800	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111700	111800	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
111800	111900	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111800	111900	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111900	112000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
111900	112000	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112000	112100	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112000	112100	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112100	112200	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112100	112200	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112200	112300	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112200	112300	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112300	112400	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112300	112400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112400	112500	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112400	112500	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112500	112600	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
112500	112600	Outer lane	0.000	**3.0**	**3.0**	Good	5.5	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
112600	112700	Inner lane	0.000	**3.0**	**3.0**	Good	7.2	**1.6**	**1.6**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
112600	112700	Outer lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
112700	112800	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112700	112800	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112800	112900	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112800	112900	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112900	113000	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
112900	113000	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113000	113100	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113000	113100	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113100	113200	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113100	113200	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113200	113300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113200	113300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113300	113400	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
113300	113400	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113400	113500	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
113400	113500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113500	113600	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
113500	113600	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113600	113700	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113600	113700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113700	113800	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113700	113800	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113800	113900	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113800	113900	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113900	114000	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
113900	114000	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114000	114100	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114000	114100	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114100	114200	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114100	114200	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114200	114300	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114200	114300	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114300	114400	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114300	114400	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114400	114500	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114400	114500	Outer lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.3	Good
114500	114600	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114500	114600	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114600	114700	Inner lane	0.657	**2.9**	**2.9**	Good	3.4	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114600	114700	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114700	114800	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114700	114800	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114800	114900	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114800	114900	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114900	115000	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good
114900	115000	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0	**3.0**	**1.5**	Fair	0	3.0	2.3	Good	0	3.0	2.3	Good	0	3.0	3.0	Good	0	3.0	2.3	Good	2.4	Good

NH-33_Hazaribagh-Ranchi _Road and Pavement Condition Survey															
Road Name: NH-33_Hazaribagh-Ranchi															Date:26.04.2023
Direction : LHS															
Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)	
										Length	depth[3]				
40500	40600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0	
40500	40600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0	
40600	40700	Inner lane	Flexible	GOOD	0.36	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0	
40600	40700	Outer lane	Flexible	GOOD	0.16	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0	
40700	40800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0	
40700	40800	Outer lane	Flexible	Fair	0.44	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0	
40800	40900	Inner lane	Flexible	GOOD	0.32	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0	
40800	40900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0	
40900	41000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0	
40900	41000	Outer lane	Flexible	Fair	0.72	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0	
41000	41100	Inner lane	Flexible	GOOD	0.43	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0	
41000	41100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0	
41100	41200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0	
41100	41200	Outer lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0	
41200	41300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0	
41200	41300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0	
41300	41400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0	
41300	41400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0	
41400	41500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0	
41400	41500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0	
41500	41600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0	
41500	41600	Outer lane	Flexible	POOR	0.60	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0	
41600	41700	Inner lane	Flexible	Fair	0.64	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0	
41600	41700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0	
41700	41800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0	
41700	41800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0	
41800	41900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0	
41800	41900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0	
41900	42000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0	
41900	42000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0	
42000	42100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0	
42000	42100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0	
42100	42200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0	
42100	42200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0	
42200	42300	Inner lane	Flexible	GOOD	5.99	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0	
42200	42300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0	
42300	42400	Inner lane	Flexible	GOOD	4.36	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0	
42300	42400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0	
42400	42500	Inner lane	Flexible	GOOD	1.30	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0	
42400	42500	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0	

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
42500	42600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
42500	42600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
42600	42700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
42600	42700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
42700	42800	Inner lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
42700	42800	Outer lane	Flexible	GOOD	0.69	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
42800	42900	Inner lane	Flexible	GOOD	7.27	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
42800	42900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
42900	43000	Inner lane	Flexible	GOOD	10.04	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
42900	43000	Outer lane	Flexible	GOOD	0.25	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
43000	43100	Inner lane	Flexible	GOOD	0.15	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
43000	43100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
43100	43200	Inner lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
43100	43200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
43200	43300	Inner lane	Flexible	GOOD	3.45	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
43200	43300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
43300	43400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
43300	43400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
43400	43500	Inner lane	Flexible	GOOD	3.33	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
43400	43500	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
43500	43600	Inner lane	Flexible	GOOD	7.21	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
43500	43600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
43600	43700	Inner lane	Flexible	POOR	9.58	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
43600	43700	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
43700	43800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
43700	43800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
43800	43900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
43800	43900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
43900	44000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
43900	44000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
44000	44100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
44000	44100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
44100	44200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
44100	44200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
44200	44300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
44200	44300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
44300	44400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
44300	44400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
44400	44500	Inner lane	Flexible	GOOD	2.73	0.73	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
44400	44500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
44500	44600	Inner lane	Flexible	GOOD	2.05	0.45	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
44500	44600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
44600	44700	Inner lane	Flexible	POOR	1.01	2.92	0.00	0.00	0.07	0.1	3.9	Paved & Earthen	Good	0.0
44600	44700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
44700	44800	Inner lane	Flexible	Fair	3.53	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
44700	44800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
44800	44900	Inner lane	Flexible	Fair	3.32	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
44800	44900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
44900	45000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
44900	45000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
45000	45100	Inner lane	Flexible	Fair	0.73	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
45000	45100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
45100	45200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
45100	45200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
45200	45300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
45200	45300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
45300	45400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
45300	45400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
45400	45500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.53	0.1	4.8	Paved & Earthen	Good	0.0
45400	45500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
45500	45600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
45500	45600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
45600	45700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.5	Paved & Earthen	Good	0.0
45600	45700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
45700	45800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
45700	45800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
45800	45900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
45800	45900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
45900	46000	Inner lane	Flexible	GOOD	1.42	1.39	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
45900	46000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
46000	46100	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
46000	46100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
46100	46200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
46100	46200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
46200	46300	Inner lane	Flexible	GOOD	0.45	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
46200	46300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
46300	46400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
46300	46400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
46400	46500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
46400	46500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
46500	46600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
46500	46600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
46600	46700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
46600	46700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
46700	46800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
46700	46800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
46800	46900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
46800	46900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
46900	47000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
46900	47000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
47000	47100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
47000	47100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
47100	47200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
47100	47200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
47200	47300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
47200	47300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
47300	47400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
47300	47400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
47400	47500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
47400	47500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
47500	47600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
47500	47600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
47600	47700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
47600	47700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
47700	47800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
47700	47800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
47800	47900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
47800	47900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
47900	48000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
47900	48000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	10.9	Paved & Earthen	Good	0.0
48000	48100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
48000	48100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	11.1	Paved & Earthen	Good	0.0
48100	48200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
48100	48200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.6	Paved & Earthen	Good	0.0
48200	48300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
48200	48300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
48300	48400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
48300	48400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
48400	48500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
48400	48500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
48500	48600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
48500	48600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
48600	48700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
48600	48700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
48700	48800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
48700	48800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
48800	48900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
48800	48900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
48900	49000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
48900	49000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
49000	49100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
49000	49100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
49100	49200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
49100	49200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
49200	49300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
49200	49300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
49300	49400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
49300	49400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
49400	49500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
49400	49500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
49500	49600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
49500	49600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
49600	49700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
49600	49700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
49700	49800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
49700	49800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
49800	49900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
49800	49900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
49900	50000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
49900	50000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
50000	50100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
50000	50100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
50100	50200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
50100	50200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
50200	50300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
50200	50300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
50300	50400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
50300	50400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
50400	50500	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
50400	50500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
50500	50600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
50500	50600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
50600	50700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
50600	50700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
50700	50800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
50700	50800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
50800	50900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
50800	50900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
50900	51000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
50900	51000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
51000	51100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
51000	51100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
51100	51200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
51100	51200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
51200	51300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
51200	51300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
51300	51400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
51300	51400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
51400	51500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
51400	51500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
51500	51600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
51500	51600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
51600	51700	Inner lane	Flexible	GOOD	2.44	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
51600	51700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
51700	51800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
51700	51800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
51800	51900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
51800	51900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
51900	52000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
51900	52000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
52000	52100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
52000	52100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.5	Paved & Earthen	Good	0.0
52100	52200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
52100	52200	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	2.94	0.1	4.7	Paved & Earthen	Good	0.0
52200	52300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
52200	52300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
52300	52400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
52300	52400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
52400	52500	Inner lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
52400	52500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
52500	52600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
52500	52600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
52600	52700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
52600	52700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
52700	52800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
52700	52800	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
52800	52900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
52800	52900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
52900	53000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
52900	53000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
53000	53100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
53000	53100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
53100	53200	Inner lane	Flexible	GOOD	0.91	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
53100	53200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
53200	53300	Inner lane	Flexible	GOOD	3.12	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
53200	53300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
53300	53400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
53300	53400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.5	Paved & Earthen	Good	0.0
53400	53500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
53400	53500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
53500	53600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
53500	53600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
53600	53700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
53600	53700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
53700	53800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
53700	53800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
53800	53900	Inner lane	Flexible	GOOD	0.71	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
53800	53900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
53900	54000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
53900	54000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
54000	54100	Inner lane	Flexible	Fair	1.18	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
54000	54100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
54100	54200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
54100	54200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.5	Paved & Earthen	Good	0.0
54200	54300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
54200	54300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
54300	54400	Inner lane	Flexible	GOOD	1.15	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
54300	54400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.6	Paved & Earthen	Good	0.0
54400	54500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.6	Paved & Earthen	Good	0.0
54400	54500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
54500	54600	Inner lane	Flexible	GOOD	1.01	1.82	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
54500	54600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
54600	54700	Inner lane	Flexible	GOOD	1.62	2.64	0.00	0.00	0.66	0.1	3.3	Paved & Earthen	Good	0.0
54600	54700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
54700	54800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
54700	54800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
54800	54900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
54800	54900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
54900	55000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
54900	55000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
55000	55100	Inner lane	Flexible	GOOD	0.76	0.00	0.00	0.00	0.00	0.1	2.4	Paved & Earthen	Good	0.0
55000	55100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.6	Paved & Earthen	Good	0.0
55100	55200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
55100	55200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
55200	55300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.5	Paved & Earthen	Good	0.0
55200	55300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
55300	55400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
55300	55400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
55400	55500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
55400	55500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
55500	55600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
55500	55600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
55600	55700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
55600	55700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
55700	55800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
55700	55800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
55800	55900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
55800	55900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
55900	56000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
55900	56000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
56000	56100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
56000	56100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
56100	56200	Inner lane	Flexible	GOOD	1.31	0.00	0.00	0.00	0.00	0.1	2.40	Paved & Earthen	Good	0.0
56100	56200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
56200	56300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
56200	56300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
56300	56400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
56300	56400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
56400	56500	Inner lane	Flexible	Fair	2.64	4.74	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
56400	56500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
56500	56600	Inner lane	Flexible	GOOD	6.27	6.35	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
56500	56600	Outer lane	Flexible	GOOD	0.73	2.51	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
56600	56700	Inner lane	Flexible	GOOD	0.00	5.42	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
56600	56700	Outer lane	Flexible	GOOD	0.00	1.78	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
56700	56800	Inner lane	Flexible	GOOD	0.00	4.07	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
56700	56800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
56800	56900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
56800	56900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
56900	57000	Inner lane	Flexible	POOR	7.20	4.82	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
56900	57000	Outer lane	Flexible	GOOD	0.00	1.49	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
57000	57100	Inner lane	Flexible	Fair	6.91	0.00	0.00	0.00	0.38	0.1	5.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
57000	57100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
57100	57200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
57100	57200	Outer lane	Flexible	POOR	0.00	1.77	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
57200	57300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
57200	57300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
57300	57400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
57300	57400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
57400	57500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
57400	57500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
57500	57600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
57500	57600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
57600	57700	Inner lane	Flexible	Fair	3.91	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
57600	57700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
57700	57800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
57700	57800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
57800	57900	Inner lane	Flexible	POOR	16.82	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
57800	57900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
57900	58000	Inner lane	Flexible	POOR	16.45	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
57900	58000	Outer lane	Flexible	POOR	1.78	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
58000	58100	Inner lane	Flexible	GOOD	3.59	0.00	0.00	0.00	0.00	0.1	2.70	Paved & Earthen	Good	0.0
58000	58100	Outer lane	Flexible	GOOD	0.54	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
58100	58200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
58100	58200	Outer lane	Flexible	GOOD	1.44	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
58200	58300	Inner lane	Flexible	GOOD	14.09	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
58200	58300	Outer lane	Flexible	GOOD	0.85	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
58300	58400	Inner lane	Flexible	GOOD	20.88	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
58300	58400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
58400	58500	Inner lane	Flexible	Fair	3.85	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
58400	58500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
58500	58600	Inner lane	Flexible	GOOD	10.99	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
58500	58600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
58600	58700	Inner lane	Flexible	GOOD	13.23	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
58600	58700	Outer lane	Flexible	GOOD	0.89	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
58700	58800	Inner lane	Flexible	GOOD	3.52	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
58700	58800	Outer lane	Flexible	GOOD	2.74	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
58800	58900	Inner lane	Flexible	GOOD	4.46	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
58800	58900	Outer lane	Flexible	GOOD	0.89	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
58900	59000	Inner lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.00	0.1	2.50	Paved & Earthen	Good	0.0
58900	59000	Outer lane	Flexible	GOOD	0.31	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
59000	59100	Inner lane	Flexible	GOOD	14.75	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
59000	59100	Outer lane	Flexible	POOR	1.03	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
59100	59200	Inner lane	Flexible	GOOD	10.28	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
59100	59200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
59200	59300	Inner lane	Flexible	GOOD	1.46	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
59200	59300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
59300	59400	Inner lane	Flexible	GOOD	16.82	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
59300	59400	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
59400	59500	Inner lane	Flexible	GOOD	4.59	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
59400	59500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
59500	59600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.99	0.1	4.90	Paved & Earthen	Good	0.0
59500	59600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
59600	59700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
59600	59700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
59700	59800	Inner lane	Flexible	GOOD	2.03	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
59700	59800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
59800	59900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
59800	59900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
59900	60000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
59900	60000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
60000	60100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
60000	60100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
60100	60200	Inner lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
60100	60200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
60200	60300	Inner lane	Flexible	GOOD	3.92	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
60200	60300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
60300	60400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.50	Paved & Earthen	Good	0.0
60300	60400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
60400	60500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
60400	60500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
60500	60600	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
60500	60600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
60600	60700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
60600	60700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
60700	60800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
60700	60800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
60800	60900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
60800	60900	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
60900	61000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	7.30	Paved & Earthen	Good	0.0
60900	61000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
61000	61100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
61000	61100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
61100	61200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
61100	61200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
61200	61300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
61200	61300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
61300	61400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
61300	61400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
61400	61500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
61400	61500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
61500	61600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
61500	61600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
61600	61700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
61600	61700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
61700	61800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
61700	61800	Outer lane	Flexible	POOR	1.81	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
61800	61900	Inner lane	Flexible	POOR	6.16	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
61800	61900	Outer lane	Flexible	GOOD	1.17	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
61900	62000	Inner lane	Flexible	GOOD	2.21	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
61900	62000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
62000	62100	Inner lane	Flexible	GOOD	1.34	0.00	0.00	0.00	0.00	0.1	7.50	Paved & Earthen	Good	0.0
62000	62100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
62100	62200	Inner lane	Flexible	GOOD	3.02	0.00	0.00	0.00	0.00	0.1	7.70	Paved & Earthen	Good	0.0
62100	62200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
62200	62300	Inner lane	Flexible	GOOD	3.23	0.00	0.00	0.00	0.00	0.1	7.40	Paved & Earthen	Good	0.0
62200	62300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
62300	62400	Inner lane	Flexible	GOOD	6.36	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
62300	62400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
62400	62500	Inner lane	Flexible	GOOD	9.96	0.00	0.00	0.00	0.00	0.1	2.10	Paved & Earthen	Good	0.0
62400	62500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
62500	62600	Inner lane	Flexible	GOOD	2.98	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
62500	62600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
62600	62700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
62600	62700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
62700	62800	Inner lane	Flexible	GOOD	4.97	0.00	0.00	0.00	0.00	0.1	6.90	Paved & Earthen	Good	0.0
62700	62800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
62800	62900	Inner lane	Flexible	GOOD	6.25	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
62800	62900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
62900	63000	Inner lane	Flexible	GOOD	6.15	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
62900	63000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
63000	63100	Inner lane	Flexible	POOR	13.14	0.00	0.00	0.00	0.00	0.1	6.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
63000	63100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
63100	63200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
63100	63200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
63200	63300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
63200	63300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
63300	63400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
63300	63400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
63400	63500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
63400	63500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
63500	63600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
63500	63600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
63600	63700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
63600	63700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
63700	63800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
63700	63800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
63800	63900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
63800	63900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
63900	64000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
63900	64000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
64000	64100	Inner lane	Flexible	GOOD	3.31	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
64000	64100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
64100	64200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
64100	64200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
64200	64300	Inner lane	Flexible	GOOD	3.35	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
64200	64300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
64300	64400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
64300	64400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
64400	64500	Inner lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
64400	64500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
64500	64600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
64500	64600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
64600	64700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
64600	64700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
64700	64800	Inner lane	Flexible	GOOD	2.54	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
64700	64800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
64800	64900	Inner lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
64800	64900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
64900	65000	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
64900	65000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
65000	65100	Inner lane	Flexible	GOOD	4.50	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
65000	65100	Outer lane	Flexible	GOOD	0.34	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
65100	65200	Inner lane	Flexible	GOOD	8.98	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
65100	65200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
65200	65300	Inner lane	Flexible	GOOD	8.44	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
65200	65300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
65300	65400	Inner lane	Flexible	GOOD	7.93	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
65300	65400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
65400	65500	Inner lane	Flexible	GOOD	4.35	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
65400	65500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
65500	65600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
65500	65600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
65600	65700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
65600	65700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
65700	65800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
65700	65800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
65800	65900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
65800	65900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
65900	66000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
65900	66000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.7	Paved & Earthen	Good	0.0
66000	66100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
66000	66100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
66100	66200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
66100	66200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
66200	66300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
66200	66300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
66300	66400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
66300	66400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
66400	66500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
66400	66500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
66500	66600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
66500	66600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
66600	66700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
66600	66700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
66700	66800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
66700	66800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
66800	66900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
66800	66900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
66900	67000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
66900	67000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
67000	67100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
67000	67100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
67100	67200	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
67100	67200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
67200	67300	Inner lane	Flexible	GOOD	0.54	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
67200	67300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
67300	67400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
67300	67400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
67400	67500	Inner lane	Flexible	Fair	0.54	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
67400	67500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
67500	67600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
67500	67600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
67600	67700	Inner lane	Flexible	POOR	1.56	1.23	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
67600	67700	Outer lane	Flexible	GOOD	0.66	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
67700	67800	Inner lane	Flexible	Fair	0.29	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
67700	67800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
67800	67900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
67800	67900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
67900	68000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
67900	68000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
68000	68100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
68000	68100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
68100	68200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
68100	68200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
68200	68300	Inner lane	Flexible	GOOD	0.00	1.49	0.00	0.00	1.88	0.1	3.80	Paved & Earthen	Good	0.0
68200	68300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
68300	68400	Inner lane	Flexible	Fair	0.31	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
68300	68400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
68400	68500	Inner lane	Flexible	GOOD	1.58	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
68400	68500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
68500	68600	Inner lane	Flexible	POOR	2.04	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
68500	68600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
68600	68700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
68600	68700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
68700	68800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
68700	68800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
68800	68900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
68800	68900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
68900	69000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
68900	69000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
69000	69100	Inner lane	Flexible	GOOD	0.55	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
69000	69100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
69100	69200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
69100	69200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
69200	69300	Inner lane	Flexible	GOOD	4.24	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
69200	69300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
69300	69400	Inner lane	Flexible	POOR	3.68	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
69300	69400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
69400	69500	Inner lane	Flexible	GOOD	2.95	0.00	0.00	0.00	0.00	0.1	2.70	Paved & Earthen	Good	0.0
69400	69500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.6	Paved & Earthen	Good	0.0
69500	69600	Inner lane	Flexible	GOOD	6.26	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
69500	69600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
69600	69700	Inner lane	Flexible	GOOD	6.29	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
69600	69700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
69700	69800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
69700	69800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
69800	69900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
69800	69900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
69900	70000	Inner lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
69900	70000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
70000	70100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
70000	70100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
70100	70200	Inner lane	Flexible	GOOD	0.73	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
70100	70200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
70200	70300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
70200	70300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
70300	70400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
70300	70400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
70400	70500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
70400	70500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
70500	70600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
70500	70600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
70600	70700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
70600	70700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
70700	70800	Inner lane	Flexible	GOOD	0.23	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
70700	70800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
70800	70900	Inner lane	Flexible	Fair	1.23	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
70800	70900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
70900	71000	Inner lane	Flexible	POOR	2.40	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
70900	71000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
71000	71100	Inner lane	Flexible	Fair	0.76	1.11	0.00	0.00	0.15	0.1	3.80	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
71000	71100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
71100	71200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
71100	71200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
71200	71300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
71200	71300	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
71300	71400	Inner lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.00	0.1	5.60	Paved & Earthen	Good	0.0
71300	71400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
71400	71500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
71400	71500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
71500	71600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.50	Paved & Earthen	Good	0.0
71500	71600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
71600	71700	Inner lane	Flexible	POOR	0.45	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
71600	71700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
71700	71800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
71700	71800	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
71800	71900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
71800	71900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
71900	72000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0
71900	72000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
72000	72100	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
72000	72100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
72100	72200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
72100	72200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
72200	72300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
72200	72300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
72300	72400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
72300	72400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
72400	72500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
72400	72500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
72500	72600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
72500	72600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
72600	72700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
72600	72700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
72700	72800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
72700	72800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
72800	72900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
72800	72900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
72900	73000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	2.30	Paved & Earthen	Good	0.0
72900	73000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
73000	73100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.10	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
73000	73100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
73100	73200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.20	Paved & Earthen	Good	0.0
73100	73200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
73200	73300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.40	Paved & Earthen	Good	0.0
73200	73300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
73300	73400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
73300	73400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
73400	73500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
73400	73500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
73500	73600	Inner lane	Flexible	Fair	0.82	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
73500	73600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
73600	73700	Inner lane	Flexible	Fair	1.89	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
73600	73700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
73700	73800	Inner lane	Flexible	GOOD	1.52	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
73700	73800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
73800	73900	Inner lane	Flexible	GOOD	3.49	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
73800	73900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
73900	74000	Inner lane	Flexible	GOOD	0.30	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
73900	74000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
74000	74100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
74000	74100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
74100	74200	Inner lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.50	0.1	4.10	Paved & Earthen	Good	0.0
74100	74200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
74200	74300	Inner lane	Flexible	POOR	4.37	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
74200	74300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
74300	74400	Inner lane	Flexible	Fair	3.30	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
74300	74400	Outer lane	Flexible	GOOD	0.15	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
74400	74500	Inner lane	Flexible	POOR	5.59	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
74400	74500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
74500	74600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
74500	74600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
74600	74700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
74600	74700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
74700	74800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
74700	74800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
74800	74900	Inner lane	Flexible	GOOD	1.96	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
74800	74900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
74900	75000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
74900	75000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
75000	75100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
75000	75100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
75100	75200	Inner lane	Flexible	GOOD	1.46	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
75100	75200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
75200	75300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
75200	75300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
75300	75400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
75300	75400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
75400	75500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
75400	75500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
75500	75600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
75500	75600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.6	Paved & Earthen	Good	0.0
75600	75700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
75600	75700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
75700	75800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
75700	75800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
75800	75900	Inner lane	Flexible	GOOD	1.04	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
75800	75900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
75900	76000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
75900	76000	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
76000	76100	Inner lane	Flexible	Fair	3.61	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
76000	76100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
76100	76200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
76100	76200	Outer lane	Flexible	Fair	0.66	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
76200	76300	Inner lane	Flexible	GOOD	9.84	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
76200	76300	Outer lane	Flexible	GOOD	1.30	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
76300	76400	Inner lane	Flexible	Fair	4.15	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
76300	76400	Outer lane	Flexible	GOOD	1.77	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
76400	76500	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
76400	76500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
76500	76600	Inner lane	Flexible	GOOD	3.70	0.00	0.00	0.00	0.00	0.1	6.70	Paved & Earthen	Good	0.0
76500	76600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
76600	76700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
76600	76700	Outer lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
76700	76800	Inner lane	Flexible	Fair	1.60	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
76700	76800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
76800	76900	Inner lane	Flexible	GOOD	2.56	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
76800	76900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
76900	77000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
76900	77000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
77000	77100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.70	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
77000	77100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
77100	77200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
77100	77200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
77200	77300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
77200	77300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
77300	77400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
77300	77400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
77400	77500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.70	Paved & Earthen	Good	0.0
77400	77500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
77500	77600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
77500	77600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
77600	77700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
77600	77700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
77700	77800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
77700	77800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
77800	77900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
77800	77900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
77900	78000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.30	Paved & Earthen	Good	0.0
77900	78000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
78000	78100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
78000	78100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
78100	78200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
78100	78200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
78200	78300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
78200	78300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
78300	78400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
78300	78400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
78400	78500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
78400	78500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
78500	78600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
78500	78600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
78600	78700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
78600	78700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
78700	78800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
78700	78800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
78800	78900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
78800	78900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
78900	79000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
78900	79000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
79000	79100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
79000	79100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
79100	79200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
79100	79200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
79200	79300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
79200	79300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
79300	79400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
79300	79400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
79400	79500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
79400	79500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
79500	79600	Inner lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
79500	79600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
79600	79700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.00	Paved & Earthen	Good	0.0
79600	79700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.2	Paved & Earthen	Good	0.0
79700	79800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.90	Paved & Earthen	Good	0.0
79700	79800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
79800	79900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.30	Paved & Earthen	Good	0.0
79800	79900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
79900	80000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
79900	80000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
80000	80100	Inner lane	Flexible	GOOD	0.85	0.00	0.00	0.00	0.00	0.1	8.30	Paved & Earthen	Good	0.0
80000	80100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
80100	80200	Inner lane	Flexible	GOOD	0.89	0.00	0.00	0.00	0.10	0.1	5.10	Paved & Earthen	Good	0.0
80100	80200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
80200	80300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
80200	80300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
80300	80400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
80300	80400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
80400	80500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
80400	80500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
80500	80600	Inner lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
80500	80600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
80600	80700	Inner lane	Flexible	GOOD	1.49	0.00	0.00	0.00	0.62	0.1	3.60	Paved & Earthen	Good	0.0
80600	80700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
80700	80800	Inner lane	Flexible	POOR	2.61	0.00	0.00	0.00	0.62	0.1	3.90	Paved & Earthen	Good	0.0
80700	80800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
80800	80900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.66	0.1	3.90	Paved & Earthen	Good	0.0
80800	80900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
80900	81000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.36	0.1	3.20	Paved & Earthen	Good	0.0
80900	81000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
81000	81100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.67	0.1	7.10	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
81000	81100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
81100	81200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.76	0.1	8.40	Paved & Earthen	Good	0.0
81100	81200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
81200	81300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.13	0.1	6.00	Paved & Earthen	Good	0.0
81200	81300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
81300	81400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
81300	81400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
81400	81500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
81400	81500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
81500	81600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
81500	81600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
81600	81700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
81600	81700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
81700	81800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	1.14	0.1	5.20	Paved & Earthen	Good	0.0
81700	81800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
81800	81900	Inner lane	Flexible	Fair	1.21	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
81800	81900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
81900	82000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
81900	82000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
82000	82100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
82000	82100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
82100	82200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
82100	82200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
82200	82300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
82200	82300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
82300	82400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
82300	82400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
82400	82500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
82400	82500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
82500	82600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
82500	82600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
82600	82700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
82600	82700	Outer lane	Flexible	GOOD	1.01	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
82700	82800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.07	0.1	3.40	Paved & Earthen	Good	0.0
82700	82800	Outer lane	Flexible	GOOD	0.07	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
82800	82900	Inner lane	Flexible	GOOD	5.06	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
82800	82900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
82900	83000	Inner lane	Flexible	GOOD	1.88	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
82900	83000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
83000	83100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
83000	83100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
83100	83200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
83100	83200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
83200	83300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
83200	83300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
83300	83400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
83300	83400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.12	0.1	4	Paved & Earthen	Good	0.0
83400	83500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
83400	83500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.42	0.1	3.8	Paved & Earthen	Good	0.0
83500	83600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
83500	83600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
83600	83700	Inner lane	Flexible	GOOD	0.64	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
83600	83700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
83700	83800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
83700	83800	Outer lane	Flexible	GOOD	0.31	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
83800	83900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
83800	83900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
83900	84000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
83900	84000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
84000	84100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
84000	84100	Outer lane	Flexible	GOOD	0.22	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
84100	84200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
84100	84200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
84200	84300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
84200	84300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
84300	84400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
84300	84400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
84400	84500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.50	Paved & Earthen	Good	0.0
84400	84500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
84500	84600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
84500	84600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
84600	84700	Inner lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
84600	84700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
84700	84800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
84700	84800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
84800	84900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
84800	84900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
84900	85000	Inner lane	Flexible	GOOD	0.00	1.52	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
84900	85000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
85000	85100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
85000	85100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
85100	85200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
85100	85200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
85200	85300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
85200	85300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
85300	85400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
85300	85400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
85400	85500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.35	0.1	3.70	Paved & Earthen	Good	0.0
85400	85500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
85500	85600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
85500	85600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
85600	85700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
85600	85700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
85700	85800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
85700	85800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
85800	85900	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
85800	85900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
85900	86000	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
85900	86000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
86000	86100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
86000	86100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
86100	86200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
86100	86200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
86200	86300	Inner lane	Flexible	GOOD	1.23	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
86200	86300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
86300	86400	Inner lane	Flexible	GOOD	2.53	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
86300	86400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
86400	86500	Inner lane	Flexible	GOOD	5.52	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
86400	86500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
86500	86600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.80	Paved & Earthen	Good	0.0
86500	86600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
86600	86700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	13.40	Paved & Earthen	Good	0.0
86600	86700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
86700	86800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.66	0.1	10.00	Paved & Earthen	Good	0.0
86700	86800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
86800	86900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.79	0.1	12.90	Paved & Earthen	Good	0.0
86800	86900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
86900	87000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.37	0.1	3.40	Paved & Earthen	Good	0.0
86900	87000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
87000	87100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
87000	87100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
87100	87200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
87100	87200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.45	0.1	5.2	Paved & Earthen	Good	0.0
87200	87300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.67	0.1	5.80	Paved & Earthen	Good	0.0
87200	87300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	9	Paved & Earthen	Good	0.0
87300	87400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.33	0.1	7.60	Paved & Earthen	Good	0.0
87300	87400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
87400	87500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.97	0.1	3.90	Paved & Earthen	Good	0.0
87400	87500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
87500	87600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
87500	87600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
87600	87700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
87600	87700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
87700	87800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
87700	87800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
87800	87900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
87800	87900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
87900	88000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
87900	88000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
88000	88100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
88000	88100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
88100	88200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
88100	88200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
88200	88300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
88200	88300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
88300	88400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0
88300	88400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
88400	88500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
88400	88500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
88500	88600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
88500	88600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
88600	88700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
88600	88700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
88700	88800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
88700	88800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
88800	88900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
88800	88900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
88900	89000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
88900	89000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
89000	89100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	6.92	0.1	8.80	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
89000	89100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
89100	89200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.80	Paved & Earthen	Good	0.0
89100	89200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	8.2	Paved & Earthen	Good	0.0
89200	89300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	2.92	0.1	8.30	Paved & Earthen	Good	0.0
89200	89300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.7	Paved & Earthen	Good	0.0
89300	89400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.81	0.1	8.10	Paved & Earthen	Good	0.0
89300	89400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
89400	89500	Inner lane	Flexible	GOOD	1.61	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
89400	89500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
89500	89600	Inner lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
89500	89600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
89600	89700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
89600	89700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
89700	89800	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
89700	89800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
89800	89900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
89800	89900	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
89900	90000	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
89900	90000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
90000	90100	Inner lane	Flexible	POOR	0.00	4.24	0.00	0.00	0.00	0.1	11.70	Paved & Earthen	Good	0.0
90000	90100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
90100	90200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	7.51	0.1	11.40	Paved & Earthen	Good	0.0
90100	90200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
90200	90300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	12.40	Paved & Earthen	Good	0.0
90200	90300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
90300	90400	Inner lane	Flexible	GOOD	2.17	0.00	0.00	0.00	0.00	0.1	11.30	Paved & Earthen	Good	0.0
90300	90400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
90400	90500	Inner lane	Flexible	GOOD	2.64	0.00	0.00	0.00	0.00	0.1	8.60	Paved & Earthen	Good	0.0
90400	90500	Outer lane	Flexible	GOOD	0.00	0.73	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
90500	90600	Inner lane	Flexible	GOOD	2.60	0.00	0.00	0.00	0.00	0.1	7.10	Paved & Earthen	Good	0.0
90500	90600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
90600	90700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	9.90	Paved & Earthen	Good	0.0
90600	90700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
90700	90800	Inner lane	Flexible	Fair	2.55	0.00	0.00	0.00	0.00	0.1	8.30	Paved & Earthen	Good	0.0
90700	90800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6	Paved & Earthen	Good	0.0
90800	90900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	9.00	Paved & Earthen	Good	0.0
90800	90900	Outer lane	Flexible	GOOD	0.00	0.92	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
90900	91000	Inner lane	Flexible	GOOD	2.18	0.93	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
90900	91000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
91000	91100	Inner lane	Flexible	GOOD	11.01	1.78	0.00	0.00	0.00	0.1	14.50	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
91000	91100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
91100	91200	Inner lane	Flexible	GOOD	0.93	1.49	0.00	0.00	0.00	0.1	7.40	Paved & Earthen	Good	0.0
91100	91200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
91200	91300	Inner lane	Flexible	GOOD	1.34	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
91200	91300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
91300	91400	Inner lane	Flexible	Fair	0.92	1.18	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
91300	91400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
91400	91500	Inner lane	Flexible	GOOD	1.99	1.78	0.00	0.00	0.92	0.1	9.00	Paved & Earthen	Good	0.0
91400	91500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6	Paved & Earthen	Good	0.0
91500	91600	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
91500	91600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
91600	91700	Inner lane	Flexible	Fair	2.08	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
91600	91700	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
91700	91800	Inner lane	Flexible	Fair	4.09	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
91700	91800	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
91800	91900	Inner lane	Flexible	Fair	2.96	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
91800	91900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
91900	92000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
91900	92000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
92000	92100	Inner lane	Flexible	GOOD	0.00	6.37	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
92000	92100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
92100	92200	Inner lane	Flexible	GOOD	0.00	3.58	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
92100	92200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.7	Paved & Earthen	Good	0.0
92200	92300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
92200	92300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	18.2	Paved & Earthen	Good	0.0
92300	92400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.60	Paved & Earthen	Good	0.0
92300	92400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	15	Paved & Earthen	Good	0.0
92400	92500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
92400	92500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	18.2	Paved & Earthen	Good	0.0
92500	92600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
92500	92600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	10.3	Paved & Earthen	Good	0.0
92600	92700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0
92600	92700	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	17.1	Paved & Earthen	Good	0.0
92700	92800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.40	Paved & Earthen	Good	0.0
92700	92800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	17.5	Paved & Earthen	Good	0.0
92800	92900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	8.30	Paved & Earthen	Good	0.0
92800	92900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	10.1	Paved & Earthen	Good	0.0
92900	93000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
92900	93000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.8	Paved & Earthen	Good	0.0
93000	93100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
93000	93100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
93100	93200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	7.70	Paved & Earthen	Good	0.0
93100	93200	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	7.3	Paved & Earthen	Good	0.0
93200	93300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	8.10	Paved & Earthen	Good	0.0
93200	93300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.4	Paved & Earthen	Good	0.0
93300	93400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
93300	93400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
93400	93500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0
93400	93500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
93500	93600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.80	Paved & Earthen	Good	0.0
93500	93600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
93600	93700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
93600	93700	Outer lane	Flexible	GOOD	0.00	1.55	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
93700	93800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.00	Paved & Earthen	Good	0.0
93700	93800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
93800	93900	Inner lane	Flexible	GOOD	0.00	2.38	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
93800	93900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
93900	94000	Inner lane	Flexible	GOOD	0.28	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
93900	94000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
94000	94100	Inner lane	Flexible	Fair	0.35	0.00	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0
94000	94100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
94100	94200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
94100	94200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.7	Paved & Earthen	Good	0.0
94200	94300	Inner lane	Flexible	GOOD	0.00	1.32	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
94200	94300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
94300	94400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
94300	94400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
94400	94500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
94400	94500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
94500	94600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
94500	94600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
94600	94700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
94600	94700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
94700	94800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
94700	94800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
94800	94900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.70	Paved & Earthen	Good	0.0
94800	94900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6	Paved & Earthen	Good	0.0
94900	95000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
94900	95000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
95000	95100	Inner lane	Flexible	GOOD	0.07	0.00	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
95000	95100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
95100	95200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
95100	95200	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	6.4	Paved & Earthen	Good	0.0
95200	95300	Inner lane	Flexible	POOR	0.60	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
95200	95300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	7.4	Paved & Earthen	Good	0.0
95300	95400	Inner lane	Flexible	GOOD	1.18	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
95300	95400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
95400	95500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.00	Paved & Earthen	Good	0.0
95400	95500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7	Paved & Earthen	Good	0.0
95500	95600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.60	Paved & Earthen	Good	0.0
95500	95600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.6	Paved & Earthen	Good	0.0
95600	95700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
95600	95700	Outer lane	Flexible	GOOD	0.00	0.81	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
95700	95800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
95700	95800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
95800	95900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
95800	95900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
95900	96000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
95900	96000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
96000	96100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
96000	96100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
96100	96200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
96100	96200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.2	Paved & Earthen	Good	0.0
96200	96300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
96200	96300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
96300	96400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
96300	96400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
96400	96500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
96400	96500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
96500	96600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
96500	96600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
96600	96700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
96600	96700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
96700	96800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
96700	96800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
96800	96900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
96800	96900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
96900	97000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
96900	97000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
97000	97100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
97000	97100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
97100	97200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0
97100	97200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
97200	97300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
97200	97300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.13	0.1	4.3	Paved & Earthen	Good	0.0
97300	97400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
97300	97400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
97400	97500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
97400	97500	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	5.7	Paved & Earthen	Good	0.0
97500	97600	Inner lane	Flexible	GOOD	4.87	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
97500	97600	Outer lane	Flexible	Fair	1.18	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
97600	97700	Inner lane	Flexible	Fair	4.64	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
97600	97700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
97700	97800	Inner lane	Flexible	GOOD	1.94	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
97700	97800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
97800	97900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
97800	97900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.6	Paved & Earthen	Good	0.0
97900	98000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.20	Paved & Earthen	Good	0.0
97900	98000	Outer lane	Flexible	GOOD	0.34	0.00	0.00	0.00	0.00	0.1	11.4	Paved & Earthen	Good	0.0
98000	98100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
98000	98100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
98100	98200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.30	Paved & Earthen	Good	0.0
98100	98200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
98200	98300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.60	Paved & Earthen	Good	0.0
98200	98300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
98300	98400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
98300	98400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.6	Paved & Earthen	Good	0.0
98400	98500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	9.00	Paved & Earthen	Good	0.0
98400	98500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	9.7	Paved & Earthen	Good	0.0
98500	98600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	10.20	Paved & Earthen	Good	0.0
98500	98600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	6.8	Paved & Earthen	Good	0.0
98600	98700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
98600	98700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
98700	98800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
98700	98800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
98800	98900	Inner lane	Flexible	GOOD	0.00	1.18	0.00	0.00	0.00	0.1	9.70	Paved & Earthen	Good	0.0
98800	98900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.1	Paved & Earthen	Good	0.0
98900	99000	Inner lane	Flexible	GOOD	0.00	1.52	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0
98900	99000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.2	Paved & Earthen	Good	0.0
99000	99100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
99000	99100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
99100	99200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
99100	99200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
99200	99300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
99200	99300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.5	Paved & Earthen	Good	0.0
99300	99400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	6.90	Paved & Earthen	Good	0.0
99300	99400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
99400	99500	Inner lane	Flexible	GOOD	0.00	2.60	0.00	0.00	2.39	0.1	5.90	Paved & Earthen	Good	0.0
99400	99500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.8	Paved & Earthen	Good	0.0
99500	99600	Inner lane	Flexible	GOOD	0.00	1.21	0.00	0.00	0.00	0.1	7.80	Paved & Earthen	Good	0.0
99500	99600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
99600	99700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
99600	99700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
99700	99800	Inner lane	Flexible	GOOD	0.00	1.61	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
99700	99800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
99800	99900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
99800	99900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
99900	100000	Inner lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.66	0.1	5.70	Paved & Earthen	Good	0.0
99900	100000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
100000	100100	Inner lane	Flexible	GOOD	2.03	2.64	0.00	0.00	0.00	0.1	8.00	Paved & Earthen	Good	0.0
100000	100100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
100100	100200	Inner lane	Flexible	GOOD	1.17	4.09	0.00	0.00	0.00	0.1	8.20	Paved & Earthen	Good	0.0
100100	100200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.4	Paved & Earthen	Good	0.0
100200	100300	Inner lane	Flexible	GOOD	0.00	3.59	0.00	0.00	0.00	0.1	9.10	Paved & Earthen	Good	0.0
100200	100300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
100300	100400	Inner lane	Flexible	GOOD	1.78	3.35	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
100300	100400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
100400	100500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
100400	100500	Outer lane	Flexible	GOOD	0.34	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
100500	100600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
100500	100600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.13	0.1	3.3	Paved & Earthen	Good	0.0
100600	100700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
100600	100700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
100700	100800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
100700	100800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
100800	100900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.00	Paved & Earthen	Good	0.0
100800	100900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
100900	101000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
100900	101000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
101000	101100	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
101000	101100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
101100	101200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.70	Paved & Earthen	Good	0.0
101100	101200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.5	Paved & Earthen	Good	0.0
101200	101300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.24	0.1	6.20	Paved & Earthen	Good	0.0
101200	101300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6	Paved & Earthen	Good	0.0
101300	101400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
101300	101400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
101400	101500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.67	0.1	4.10	Paved & Earthen	Good	0.0
101400	101500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
101500	101600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
101500	101600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	6.5	Paved & Earthen	Good	0.0
101600	101700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
101600	101700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.6	Paved & Earthen	Good	0.0
101700	101800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.40	Paved & Earthen	Good	0.0
101700	101800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
101800	101900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.07	0.1	3.40	Paved & Earthen	Good	0.0
101800	101900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.1	Paved & Earthen	Good	0.0
101900	102000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.64	0.1	4.00	Paved & Earthen	Good	0.0
101900	102000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
102000	102100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.44	0.1	4.00	Paved & Earthen	Good	0.0
102000	102100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
102100	102200	Inner lane	Flexible	GOOD	0.12	0.00	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
102100	102200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
102200	102300	Inner lane	Flexible	GOOD	1.87	0.00	0.00	0.00	1.01	0.1	6.70	Paved & Earthen	Good	0.0
102200	102300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
102300	102400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
102300	102400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
102400	102500	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
102400	102500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
102500	102600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
102500	102600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
102600	102700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
102600	102700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
102700	102800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.67	0.1	4.00	Paved & Earthen	Good	0.0
102700	102800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.9	Paved & Earthen	Good	0.0
102800	102900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
102800	102900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
102900	103000	Inner lane	Flexible	GOOD	1.11	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
102900	103000	Outer lane	Flexible	GOOD	0.66	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
103000	103100	Inner lane	Flexible	GOOD	2.88	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
103000	103100	Outer lane	Flexible	GOOD	0.33	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
103100	103200	Inner lane	Flexible	GOOD	2.38	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
103100	103200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
103200	103300	Inner lane	Flexible	GOOD	3.33	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
103200	103300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
103300	103400	Inner lane	Flexible	GOOD	3.87	0.00	0.00	0.00	0.93	0.1	4.10	Paved & Earthen	Good	0.0
103300	103400	Outer lane	Flexible	GOOD	0.28	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
103400	103500	Inner lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
103400	103500	Outer lane	Flexible	GOOD	0.16	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
103500	103600	Inner lane	Flexible	GOOD	1.18	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
103500	103600	Outer lane	Flexible	GOOD	0.60	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
103600	103700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.90	Paved & Earthen	Good	0.0
103600	103700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
103700	103800	Inner lane	Flexible	Fair	0.00	3.27	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
103700	103800	Outer lane	Flexible	GOOD	0.00	1.68	0.00	0.00	0.00	0.1	6.3	Paved & Earthen	Good	0.0
103800	103900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.90	Paved & Earthen	Good	0.0
103800	103900	Outer lane	Flexible	GOOD	0.00	0.69	0.00	0.00	0.00	0.1	6.9	Paved & Earthen	Good	0.0
103900	104000	Inner lane	Flexible	GOOD	3.63	0.00	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
103900	104000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5	Paved & Earthen	Good	0.0
104000	104100	Inner lane	Flexible	GOOD	1.48	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
104000	104100	Outer lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
104100	104200	Inner lane	Flexible	GOOD	1.20	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
104100	104200	Outer lane	Flexible	GOOD	0.07	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
104200	104300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.49	0.1	6.40	Paved & Earthen	Good	0.0
104200	104300	Outer lane	Flexible	GOOD	0.06	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
104300	104400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.77	0.1	4.50	Paved & Earthen	Good	0.0
104300	104400	Outer lane	Flexible	GOOD	0.24	0.00	0.00	0.00	0.00	0.1	5.2	Paved & Earthen	Good	0.0
104400	104500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
104400	104500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
104500	104600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
104500	104600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
104600	104700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
104600	104700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
104700	104800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.90	Paved & Earthen	Good	0.0
104700	104800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
104800	104900	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
104800	104900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	7.2	Paved & Earthen	Good	0.0
104900	105000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.80	Paved & Earthen	Good	0.0
104900	105000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
105000	105100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.90	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
105000	105100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
105100	105200	Inner lane	Flexible	GOOD	0.73	2.37	0.00	0.00	0.00	0.1	12.20	Paved & Earthen	Good	0.0
105100	105200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
105200	105300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.30	Paved & Earthen	Good	0.0
105200	105300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.9	Paved & Earthen	Good	0.0
105300	105400	Inner lane	Flexible	Fair	0.00	1.23	0.00	0.00	0.00	0.1	6.20	Paved & Earthen	Good	0.0
105300	105400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.3	Paved & Earthen	Good	0.0
105400	105500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.23	0.1	5.50	Paved & Earthen	Good	0.0
105400	105500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.53	0.1	5	Paved & Earthen	Good	0.0
105500	105600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.35	0.1	5.40	Paved & Earthen	Good	0.0
105500	105600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.34	0.1	4.8	Paved & Earthen	Good	0.0
105600	105700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.90	Paved & Earthen	Good	0.0
105600	105700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
105700	105800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.90	Paved & Earthen	Good	0.0
105700	105800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.7	Paved & Earthen	Good	0.0
105800	105900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.60	Paved & Earthen	Good	0.0
105800	105900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
105900	106000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
105900	106000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
106000	106100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.50	Paved & Earthen	Good	0.0
106000	106100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
106100	106200	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
106100	106200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
106200	106300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.07	0.1	3.70	Paved & Earthen	Good	0.0
106200	106300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.41	0.1	4.4	Paved & Earthen	Good	0.0
106300	106400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.60	0.1	4.20	Paved & Earthen	Good	0.0
106300	106400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
106400	106500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.91	0.1	2.90	Paved & Earthen	Good	0.0
106400	106500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
106500	106600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
106500	106600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.35	0.1	3.2	Paved & Earthen	Good	0.0
106600	106700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.30	Paved & Earthen	Good	0.0
106600	106700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
106700	106800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
106700	106800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
106800	106900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.51	0.1	4.80	Paved & Earthen	Good	0.0
106800	106900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
106900	107000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.63	0.1	4.50	Paved & Earthen	Good	0.0
106900	107000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.28	0.1	5.5	Paved & Earthen	Good	0.0
107000	107100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.89	0.1	4.60	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
107000	107100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.63	0.1	4.7	Paved & Earthen	Good	0.0
107100	107200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
107100	107200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
107200	107300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.80	Paved & Earthen	Good	0.0
107200	107300	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
107300	107400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	5.20	Paved & Earthen	Good	0.0
107300	107400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.1	Paved & Earthen	Good	0.0
107400	107500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.31	0.1	3.60	Paved & Earthen	Good	0.0
107400	107500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.5	Paved & Earthen	Good	0.0
107500	107600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
107500	107600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
107600	107700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.10	Paved & Earthen	Good	0.0
107600	107700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
107700	107800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.34	0.1	4.50	Paved & Earthen	Good	0.0
107700	107800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.59	0.1	4.2	Paved & Earthen	Good	0.0
107800	107900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.25	0.1	4.40	Paved & Earthen	Good	0.0
107800	107900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
107900	108000	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4.70	Paved & Earthen	Good	0.0
107900	108000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	6	Paved & Earthen	Good	0.0
108000	108100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
108000	108100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
108100	108200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
108100	108200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
108200	108300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.47	0.1	5.50	Paved & Earthen	Good	0.0
108200	108300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
108300	108400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.26	0.1	4.40	Paved & Earthen	Good	0.0
108300	108400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
108400	108500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
108400	108500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
108500	108600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.57	0.1	4.60	Paved & Earthen	Good	0.0
108500	108600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
108600	108700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.40	Paved & Earthen	Good	0.0
108600	108700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.7	Paved & Earthen	Good	0.0
108700	108800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	6.90	Paved & Earthen	Good	0.0
108700	108800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
108800	108900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
108800	108900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
108900	109000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.66	0.1	3.70	Paved & Earthen	Good	0.0
108900	109000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
109000	109100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
109000	109100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3	Paved & Earthen	Good	0.0
109100	109200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
109100	109200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
109200	109300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
109200	109300	Outer lane	Flexible	GOOD	1.13	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
109300	109400	Inner lane	Flexible	GOOD	0.72	0.00	0.00	0.00	0.64	0.1	3.90	Paved & Earthen	Good	0.0
109300	109400	Outer lane	Flexible	POOR	1.07	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
109400	109500	Inner lane	Flexible	POOR	4.70	0.00	0.00	0.00	0.00	0.1	5.10	Paved & Earthen	Good	0.0
109400	109500	Outer lane	Flexible	GOOD	0.00	2.43	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
109500	109600	Inner lane	Flexible	POOR	0.90	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
109500	109600	Outer lane	Flexible	GOOD	0.00	1.81	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
109600	109700	Inner lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
109600	109700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
109700	109800	Inner lane	Flexible	GOOD	17.03	0.00	0.00	0.00	0.00	0.1	11.30	Paved & Earthen	Good	0.0
109700	109800	Outer lane	Flexible	GOOD	0.00	3.52	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
109800	109900	Inner lane	Flexible	GOOD	14.70	0.00	0.00	0.00	0.00	0.1	8.70	Paved & Earthen	Good	0.0
109800	109900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
109900	110000	Inner lane	Flexible	POOR	12.12	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
109900	110000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
110000	110100	Inner lane	Flexible	GOOD	11.26	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
110000	110100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
110100	110200	Inner lane	Flexible	GOOD	7.58	2.08	0.00	0.00	0.00	0.1	6.00	Paved & Earthen	Good	0.0
110100	110200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
110200	110300	Inner lane	Flexible	GOOD	2.12	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
110200	110300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
110300	110400	Inner lane	Flexible	POOR	5.25	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
110300	110400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
110400	110500	Inner lane	Flexible	GOOD	9.39	0.00	0.00	0.00	0.00	0.1	6.40	Paved & Earthen	Good	0.0
110400	110500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.4	Paved & Earthen	Good	0.0
110500	110600	Inner lane	Flexible	GOOD	9.65	0.00	0.00	0.00	0.00	0.1	4.40	Paved & Earthen	Good	0.0
110500	110600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
110600	110700	Inner lane	Flexible	Fair	5.33	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
110600	110700	Outer lane	Flexible	GOOD	0.00	1.97	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
110700	110800	Inner lane	Flexible	GOOD	0.94	0.00	0.00	0.00	0.00	0.1	2.90	Paved & Earthen	Good	0.0
110700	110800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.6	Paved & Earthen	Good	0.0
110800	110900	Inner lane	Flexible	GOOD	1.14	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
110800	110900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.8	Paved & Earthen	Good	0.0
110900	111000	Inner lane	Flexible	GOOD	4.13	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
110900	111000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.64	0.1	6.6	Paved & Earthen	Good	0.0
111000	111100	Inner lane	Flexible	GOOD	0.37	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
111000	111100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.93	0.1	4.1	Paved & Earthen	Good	0.0
111100	111200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
111100	111200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.51	0.1	3.8	Paved & Earthen	Good	0.0
111200	111300	Inner lane	Flexible	GOOD	0.31	0.00	0.00	0.00	0.00	0.1	3.10	Paved & Earthen	Good	0.0
111200	111300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.93	0.1	3.7	Paved & Earthen	Good	0.0
111300	111400	Inner lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
111300	111400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.9	Paved & Earthen	Good	0.0
111400	111500	Inner lane	Flexible	GOOD	0.36	0.00	0.00	0.00	0.00	0.1	5.60	Paved & Earthen	Good	0.0
111400	111500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.76	0.1	3.9	Paved & Earthen	Good	0.0
111500	111600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
111500	111600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
111600	111700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
111600	111700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.7	Paved & Earthen	Good	0.0
111700	111800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
111700	111800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
111800	111900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0
111800	111900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.2	Paved & Earthen	Good	0.0
111900	112000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
111900	112000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
112000	112100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
112000	112100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
112100	112200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.60	Paved & Earthen	Good	0.0
112100	112200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.3	Paved & Earthen	Good	0.0
112200	112300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.80	Paved & Earthen	Good	0.0
112200	112300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
112300	112400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.70	Paved & Earthen	Good	0.0
112300	112400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
112400	112500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
112400	112500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
112500	112600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.00	Paved & Earthen	Good	0.0
112500	112600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	5.5	Paved & Earthen	Good	0.0
112600	112700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	7.20	Paved & Earthen	Good	0.0
112600	112700	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	5.4	Paved & Earthen	Good	0.0
112700	112800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
112700	112800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
112800	112900	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.00	0.1	3.80	Paved & Earthen	Good	0.0
112800	112900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.3	Paved & Earthen	Good	0.0
112900	113000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
112900	113000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
113000	113100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.00	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
113000	113100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
113100	113200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
113100	113200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
113200	113300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
113200	113300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
113300	113400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
113300	113400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
113400	113500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.50	Paved & Earthen	Good	0.0
113400	113500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.7	Paved & Earthen	Good	0.0
113500	113600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.60	Paved & Earthen	Good	0.0
113500	113600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.9	Paved & Earthen	Good	0.0
113600	113700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
113600	113700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.4	Paved & Earthen	Good	0.0
113700	113800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.20	Paved & Earthen	Good	0.0
113700	113800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.5	Paved & Earthen	Good	0.0
113800	113900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	3.20	Paved & Earthen	Good	0.0
113800	113900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.1	Paved & Earthen	Good	0.0
113900	114000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
113900	114000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
114000	114100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.60	Paved & Earthen	Good	0.0
114000	114100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
114100	114200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
114100	114200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
114200	114300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
114200	114300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.8	Paved & Earthen	Good	0.0
114300	114400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.90	Paved & Earthen	Good	0.0
114300	114400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.6	Paved & Earthen	Good	0.0
114400	114500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.50	Paved & Earthen	Good	0.0
114400	114500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.00	0.1	4.8	Paved & Earthen	Good	0.0
114500	114600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.70	Paved & Earthen	Good	0.0
114500	114600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4	Paved & Earthen	Good	0.0
114600	114700	Inner lane	Flexible	POOR	0.66	0.00	0.00	0.00	0.00	0.1	3.40	Paved & Earthen	Good	0.0
114600	114700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.1	Paved & Earthen	Good	0.0
114700	114800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.00	Paved & Earthen	Good	0.0
114700	114800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	2.8	Paved & Earthen	Good	0.0
114800	114900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.30	Paved & Earthen	Good	0.0
114800	114900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0
114900	115000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	4.10	Paved & Earthen	Good	0.0
114900	115000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.00	0.1	3.9	Paved & Earthen	Good	0.0

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage										Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
115000	114900	Inner lane	115000.000	114900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
115000	114900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114900	114800	Inner lane	114900.000	114800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	20.56	5.9	0.00	0.0	3.25	0.9	0.00	0.0	0.00	0.0	23.8	6.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114900	114800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114800	114700	Inner lane	114800.000	114700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	45.23	12.9	0.00	0.0	1.52	0.4	3.80	1.1	0.00	0.0	50.6	14.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114800	114700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114700	114600	Inner lane	114700.000	114600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	12.36	3.5	0.00	0.0	2.53	0.7	2.02	0.6	0.00	0.0	16.9	4.8	0	0.0	0	0.0	0	0.0	0.00	0.0	1.25	0.4	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114700	114600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114600	114500	Inner lane	114600.000	114500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	25.68	7.3	0.00	0.0	1.20	0.3	0.00	0.0	0.00	0.0	26.9	7.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114600	114500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114500	114400	Inner lane	114500.000	114400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	38.35	11.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114500	114400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114400	114300	Inner lane	114400.000	114300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	12.20	3.5	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114400	114300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114300	114200	Inner lane	114300.000	114200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	4.61	1.3	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114300	114200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114200	114100	Inner lane	114200.000	114100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114200	114100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114100	114000	Inner lane	114100.000	114000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	3.15	0.9	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114100	114000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114000	113900	Inner lane	114000.000	113900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
114000	113900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113900	113800	Inner lane	113900.000	113800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	3.8	1.1	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113900	113800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113800	113700	Inner lane	113800.000	113700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	2.95	0.8	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113800	113700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113700	113600	Inner lane	113700.000	113600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113700	113600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113600	113500	Inner lane	113600.000	113500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	8.56	2.4	0.00	0.0	0.00	0.0	8.6	2.4	0	0.0	3.57	1.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113600	113500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113500	113400	Inner lane	113500.000	113400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.25	1.5	0.00	0.0	2.23	0.6	0.00	0.0	0.00	0.0	7.5	2.1	0	0.0	2.58	0.7	0	0.0	0.00	0.0	2.31	0.7	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113500	113400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113400	113300	Inner lane	113400.000	113300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	25.87	7.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	25.9	7.4	0	0.0	3.55	1.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113400	113300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113300	113200	Inner lane	113300.000	113200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	27.45	7.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	27.5	7.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113300	113200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113200	113100	Inner lane	113200.000	113100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113200	113100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113100	113000	Inner lane	113100.000	113000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113100	113000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113000	112900	Inner lane	113000.000	112900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
113000	112900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112900	112800	Inner lane	112900.000	112800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	4.85	1.4	0.00	0.0	0.00	0.0	4.9	1.4	0	0.0	0	0.0	0	0.0	0.00	0.0	2.36	0.7	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112900	112800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112800	112700	Inner lane	112800.000	112700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.22	3.2	0.00	0.0	0.00	0.0	1.53	0.4	0.00	0.0	12.8	3.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112800	112700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112700	112600	Inner lane	112700.000	112600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112700	112600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112600	112500	Inner lane	112600.000	112500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112600	112500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112500	112400	Inner lane	112500.000	112400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.33	0.7	0.00	0.0	1.25	0.4	0.00	0.0	0.00	0.0	3.6	1.0	0	0.0	2.35	0.7	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112500	112400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112400	112300	Inner lane	112400.000	112300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	1.02	0.3	0.00	0.0	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	6.23	1.8	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112400	112300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112300	112200	Inner lane	112300.000	112200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	5.59	1.6	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112300	112200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112200	112100	Inner lane	112200.000	112100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	5.25	1.5	0	0.0	0.00	0.0	2.55	0.7	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112200	112100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112100	112000	Inner lane	112100.000	112000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112100	112000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112000	111900	Inner lane	112000.000	111900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
112000	111900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
108700	108600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108600	108500	Inner lane	108600.000	108500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.68	1.1	0.00	0.0	4.27	1.2	0.00	0.0	0.00	0.0	8.0	2.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108600	108500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108500	108400	Inner lane	108500.000	108400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108500	108400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108400	108300	Inner lane	108400.000	108300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.25	0.9	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	2.54	0.7	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108400	108300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108300	108200	Inner lane	108300.000	108200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	4.96	1.4	0.00	0.0	0.00	0.0	5.0	1.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108300	108200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108200	108100	Inner lane	108200.000	108100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	2.33	0.7	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108200	108100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108100	108000	Inner lane	108100.000	108000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108100	108000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	1.83	0.5	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108000	107900	Inner lane	108000.000	107900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
108000	107900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107900	107800	Inner lane	107900.000	107800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.47	1.3	0.00	0.0	2.95	0.8	0.00	0.0	0.00	0.0	7.4	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107900	107800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107800	107700	Inner lane	107800.000	107700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107800	107700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107700	107600	Inner lane	107700.000	107600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.16	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107700	107600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107600	107500	Inner lane	107600.000	107500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.10	0.9	0.00	0.0	0.00	0.0	3.1	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107600	107500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107500	107400	Inner lane	107500.000	107400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.52	1.0	0.00	0.0	14.30	4.1	0.00	0.0	0.00	0.0	17.8	5.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107500	107400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107400	107300	Inner lane	107400.000	107300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	6.27	1.8	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107400	107300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107300	107200	Inner lane	107300.000	107200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107300	107200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107200	107100	Inner lane	107200.000	107100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107200	107100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107100	107000	Inner lane	107100.000	107000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107100	107000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107000	106900	Inner lane	107000.000	106900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
107000	106900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106900	106800	Inner lane	106900.000	106800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106900	106800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106800	106700	Inner lane	106800.000	106700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106800	106700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106700	106600	Inner lane	106700.000	106600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106700	106600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106600	106500	Inner lane	106600.000	106500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106600	106500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106500	106400	Inner lane	106500.000	106400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106500	106400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106400	106300	Inner lane	106400.000	106300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106400	106300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106300	106200	Inner lane	106300.000	106200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	15.62	4.5	0.0	0.0	0.0	0.0	0.100	
106300	106200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106200	106100	Inner lane	106200.000	106100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106200	106100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106100	106000	Inner lane	106100.000	106000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106100	106000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.21	0.6	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106000	105900	Inner lane	106000.000	105900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
106000	105900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	8.96	2.6	0.00	0.0	0.00	0.0	9.0	2.6	0	0.0	6.95	2.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105900	105800	Inner lane	105900.000	105800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	27.68	7.9	0.00	0.0	2.54	0.7	0.00	0.0	0.00	0.0	30.2	8.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105900	105800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.85	1.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.9	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105800	105700	Inner lane	105800.000	105700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105800	105700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105700	105600	Inner lane	105700.000	105600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105700	105600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105600	105500	Inner lane	105600.000	105500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	16.24	4.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	16.2	4.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
105600	105500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
102300	102200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102200	102100	Inner lane	102200.000	102100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.33	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102200	102100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102100	102000	Inner lane	102100.000	102000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102100	102000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102000	101900	Inner lane	102000.000	101900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
102000	101900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101900	101800	Inner lane	101900.000	101800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101900	101800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101800	101700	Inner lane	101800.000	101700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101800	101700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101700	101600	Inner lane	101700.000	101600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	1.24	0.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.2	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101700	101600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.92	0.3	0.00	0.0	0.00	0.0	0.9	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101600	101500	Inner lane	101600.000	101500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101600	101500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101500	101400	Inner lane	101500.000	101400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101500	101400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101400	101300	Inner lane	101400.000	101300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101400	101300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101300	101200	Inner lane	101300.000	101200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	6.93	2.0	0.00	0.0	0.00	0.0	6.9	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101300	101200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101200	101100	Inner lane	101200.000	101100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101200	101100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101100	101000	Inner lane	101100.000	101000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.12	0.9	0.00	0.0	0.00	0.0	3.1	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	2.54	0.7	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101100	101000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101000	100900	Inner lane	101000.000	100900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
101000	100900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100900	100800	Inner lane	100900.000	100800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	14.25	4.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	14.3	4.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100900	100800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100800	100700	Inner lane	100800.000	100700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	16.33	4.7	6.30	1.8	1.20	0.3	2.42	0.7	0.00	0.0	26.3	7.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	1.5	0.4	0.100	
100800	100700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100700	100600	Inner lane	100700.000	100600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	26.98	7.7	0.00	0.0	2.65	0.8	3.85	1.1	0.00	0.0	33.5	9.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100700	100600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100600	100500	Inner lane	100600.000	100500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100600	100500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100500	100400	Inner lane	100500.000	100400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100500	100400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100400	100300	Inner lane	100400.000	100300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	26.32	7.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	26.3	7.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100400	100300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100300	100200	Inner lane	100300.000	100200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	35.83	10.2	0.00	0.0	4.68	1.3	0.00	0.0	0.00	0.0	40.5	11.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100300	100200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100200	100100	Inner lane	100200.000	100100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	16.24	4.6	0.00	0.0	2.43	0.7	0.00	0.0	0.00	0.0	18.7	5.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100200	100100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100100	100000	Inner lane	100100.000	100000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.52	1.9	0.00	0.0	2.53	0.7	0.00	0.0	0.00	0.0	9.1	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100100	100000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100000	99900	Inner lane	100000.000	99900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	27.45	7.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	27.5	7.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
100000	99900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99900	99800	Inner lane	99900.000	99800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	16.21	4.6	0.00	0.0	2.51	0.7	0.00	0.0	0.00	0.0	18.7	5.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99900	99800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99800	99700	Inner lane	99800.000	99700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99800	99700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99700	99600	Inner lane	99700.000	99600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	13.24	3.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	13.2	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99700	99600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99600	99500	Inner lane	99600.000	99500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99600	99500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99500	99400	Inner lane	99500.000	99400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99500	99400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99400	99300	Inner lane	99400.000	99300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	38.56	11.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	38.6	11.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99400	99300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.69	1.1	0.00	0.0	0.87	0.2	7.51	2.1	0.00	0.0	12.1	3.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99300	99200	Inner lane	99300.000	99200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	25.23	7.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	25.2	7.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99300	99200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	4.6	1.3	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
99200	99100	Inner lane	99200.000	99100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	34.29	9.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	34.3

NH-33_Hazaribagh-Ranchi _Pavement Distresses																																							
Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
From	To									Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																									
										Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	
95900	95800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.12	0.3	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.34	0.1	0.00	0.0	0.0	0.0	0.100	
95800	95700	Inner lane	95800.000	95700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.85	2.8	0.00	0.0	4.20	1.2	0.00	0.0	0.00	0.0	14.1	4.0	0	0.0	8.33	2.4	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95800	95700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	5.23	1.5	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95700	95600	Inner lane	95700.000	95600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95700	95600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.99	0.3	0.00	0.0	0.0	0.0	0.100	
95600	95500	Inner lane	95600.000	95500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95600	95500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95500	95400	Inner lane	95500.000	95400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95500	95400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95400	95300	Inner lane	95400.000	95300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	2.30	0.7	0.00	0.0	0.0	0.0	0.100	
95400	95300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95300	95200	Inner lane	95300.000	95200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	4.50	1.3	0.00	0.0	0.0	0.0	0.100	
95300	95200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95200	95100	Inner lane	95200.000	95100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95200	95100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95100	95000	Inner lane	95100.000	95000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	1.02	0.3	0.00	0.0	0.0	0.0	0.100	
95100	95000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95000	94900	Inner lane	95000.000	94900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.32	0.9	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
95000	94900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94900	94800	Inner lane	94900.000	94800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.23	0.1	0.00	0.0	0.00	0.0	0.2	0.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94900	94800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	1.32	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94800	94700	Inner lane	94800.000	94700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	4.15	1.2	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94800	94700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94700	94600	Inner lane	94700.000	94600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.35	0.1	0.00	0.0	1.25	0.4	0.00	0.0	0.00	0.0	1.6	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94700	94600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94600	94500	Inner lane	94600.000	94500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.31	0.7	0.00	0.0	2.66	0.8	0.00	0.0	0.00	0.0	5.0	1.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94600	94500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94500	94400	Inner lane	94500.000	94400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.28	0.4	0.00	0.0	0.00	0.0	1.3	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94500	94400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.61	0.2	0.00	0.0	0.6	0.2	0	0.0	1.46	0.4	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94400	94300	Inner lane	94400.000	94300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.06	0.9	0.00	0.0	2.03	0.6	0.00	0.0	0.00	0.0	5.1	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94400	94300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	1.17	0.3	2.96	0.8	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94300	94200	Inner lane	94300.000	94200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94300	94200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94200	94100	Inner lane	94200.000	94100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.06	0.3	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94200	94100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94100	94000	Inner lane	94100.000	94000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94100	94000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94000	93900	Inner lane	94000.000	93900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.23	0.4	0.00	0.0	0.00	0.0	1.2	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.86	0.2	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
94000	93900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93900	93800	Inner lane	93900.000	93800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93900	93800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93800	93700	Inner lane	93800.000	93700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93800	93700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93700	93600	Inner lane	93700.000	93600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93700	93600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93600	93500	Inner lane	93600.000	93500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.12	0.0	0.00	0.0	0.0	0.0	0.100	
93600	93500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93500	93400	Inner lane	93500.000	93400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93500	93400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	2.85	0.8	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93400	93300	Inner lane	93400.000	93300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93400	93300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93300	93200	Inner lane	93300.000	93200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93300	93200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93200	93100	Inner lane	93200.000	93100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93200	93100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.23	0.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93100	93000	Inner lane	93100.000	93000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	1.03	0.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93100	93000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93000	92900	Inner lane	93000.000	92900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
93000	92900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92900	92800	Inner lane	92900.000	92800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92900	92800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
92800	92700	Inner lane	92800.000	92700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-

| NH-33_Hazaribagh-Ranchi _Pavement Distresses | | |

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
83100	83000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.86	0.2	0.00	0.0	0.00	0.0	0.9	0.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
83000	82900	Inner lane	83000.000	82900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.23	1.8	0.00	0.0	2.14	0.6	0.00	0.0	0.00	0.0	8.4	2.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
83000	82900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82900	82800	Inner lane	82900.000	82800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.54	0.4	0.00	0.0	0.00	0.0	1.5	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82900	82800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82800	82700	Inner lane	82800.000	82700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82800	82700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.65	1.0	0.00	0.0	0.00	0.0	3.7	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82700	82600	Inner lane	82700.000	82600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82700	82600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.63	0.8	0.00	0.0	0.00	0.0	2.6	0.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82600	82500	Inner lane	82600.000	82500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82600	82500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	4.12	1.2	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82500	82400	Inner lane	82500.000	82400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82500	82400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82400	82300	Inner lane	82400.000	82300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.02	0.3	0.00	0.0	0.00	0.0	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82400	82300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82300	82200	Inner lane	82300.000	82200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.85	0.2	0.00	0.0	0.00	0.0	0.9	0.2	0	0.0	0	0.0	5.45	1.6	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82300	82200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82200	82100	Inner lane	82200.000	82100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82200	82100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82100	82000	Inner lane	82100.000	82000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82100	82000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	1.32	0.4	0.00	0.0	1.3	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82000	81900	Inner lane	82000.000	81900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
82000	81900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81900	81800	Inner lane	81900.000	81800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81900	81800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81800	81700	Inner lane	81800.000	81700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0.56	0.2	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81800	81700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81700	81600	Inner lane	81700.000	81600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81700	81600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81600	81500	Inner lane	81600.000	81500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81600	81500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81500	81400	Inner lane	81500.000	81400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81500	81400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81400	81300	Inner lane	81400.000	81300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81400	81300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81300	81200	Inner lane	81300.000	81200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81300	81200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81200	81100	Inner lane	81200.000	81100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81200	81100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81100	81000	Inner lane	81100.000	81000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81100	81000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81000	80900	Inner lane	81000.000	80900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
81000	80900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80900	80800	Inner lane	80900.000	80800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80900	80800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.18	0.6	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80800	80700	Inner lane	80800.000	80700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80800	80700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	5.84	1.7	0.00	0.0	0.00	0.0	5.8	1.7	0	0.0	0	0.0	4.16	1.2	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80700	80600	Inner lane	80700.000	80600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80700	80600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.12	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80600	80500	Inner lane	80600.000	80500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.13	0.6	0.00	0.0	1.18	0.3	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	10.52	3.0	0.00	0.0	0.0	0.0	0.100	
80600	80500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80500	80400	Inner lane	80500.000	80400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.85	1.4	0.00	0.0	2.05	0.6	0.00	0.0	0.00	0.0	6.9	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80500	80400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.32	0.4	0.54	0.2	0.00	0.0	1.9	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80400	80300	Inner lane	80400.000	80300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.23	0.6	0.00	0.0	1.01	0.3	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80400	80300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.59	0.7	0.00	0.0	0.00	0.0	2.6	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80300	80200	Inner lane	80300.000	80200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	16.33	4.7	0.00	0.0	6.79	1.9	0.00	0.0	0.00	0.0	23.1	6.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80300	80200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80200	80100	Inner lane	80200.000	80100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.58	1.3	3.15	0.9	2.33	0.7	0.00	0.0	0.00	0.0	10.1	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80200	80100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80100	80000	Inner lane	80100.000	80000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	8.84	2.5	1.22	0.3	3.12	0.9	0.00	0.0	0.00	0.0	13.2	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80100	80000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
80000	79900	Inner lane	80000.000	79900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.15	2.0	0.89	0.3	0.00	0.0	0.00	0.0	0.00	0.0

NH-33_Hazaribagh-Ranchi _Pavement Distresses																																										
Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Cracking		Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
From	To									Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks																											
										Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
76700	76600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.34	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76600	76500	Inner lane	76600.000	76500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	4.32	1.2	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76600	76500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76500	76400	Inner lane	76500.000	76400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.24	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76500	76400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76400	76300	Inner lane	76400.000	76300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.12	1.2	0.00	0.0	4.85	1.4	0.00	0.0	0.00	0.0	9.0	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76400	76300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76300	76200	Inner lane	76300.000	76200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.83	1.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.8	1.1	0	0.0	7.48	2.1	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76300	76200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76200	76100	Inner lane	76200.000	76100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.15	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76200	76100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76100	76000	Inner lane	76100.000	76000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.36	1.0	0.00	0.0	1.16	0.3	0.72	0.2	0.00	0.0	5.2	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76100	76000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76000	75900	Inner lane	76000.000	75900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.24	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	12.26	3.5	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
76000	75900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	4.63	1.3	2.87	0.8	0.00	0.0	0.00	0.0	7.5	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75900	75800	Inner lane	75900.000	75800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	13.16	3.8	0.00	0.0	4.22	1.2	0.00	0.0	0.00	0.0	17.4	5.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75900	75800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75800	75700	Inner lane	75800.000	75700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	8.16	2.3	0.00	0.0	0.00	0.0	8.2	2.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75800	75700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.61	0.7	0.00	0.0	1.13	0.3	0.56	0.2	0.00	0.0	4.3	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.3	0.1	0.100	
75700	75600	Inner lane	75700.000	75600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.33	1.8	0.00	0.0	4.73	1.4	0.00	0.0	0.00	0.0	11.1	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75700	75600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75600	75500	Inner lane	75600.000	75500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	24.29	6.9	1.32	0.4	8.14	2.3	0.00	0.0	0.00	0.0	33.8	9.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0.100	
75600	75500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.97	1.4	0.00	0.0	2.66	0.8	1.13	0.3	0.00	0.0	8.8	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75500	75400	Inner lane	75500.000	75400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	39.56	11.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	39.6	11.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75500	75400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.95	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75400	75300	Inner lane	75400.000	75300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	13.45	3.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	13.5	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75400	75300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.73	0.5	0.00	0.0	0.00	0.0	1.7	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75300	75200	Inner lane	75300.000	75200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.22	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75300	75200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75200	75100	Inner lane	75200.000	75100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.22	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	4.16	1.2	0.100	
75200	75100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.20	0.1	0.00	0.0	0.2	0.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75100	75000	Inner lane	75100.000	75000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.96	2.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.0	2.3	0	0.0	0	0.0	7.41	2.1	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75100	75000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75000	74900	Inner lane	75000.000	74900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	13.22	3.8	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
75000	74900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74900	74800	Inner lane	74900.000	74800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	1.26	0.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.3	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74900	74800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74800	74700	Inner lane	74800.000	74700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74800	74700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74700	74600	Inner lane	74700.000	74600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.88	1.1	0.00	0.0	0.00	0.0	3.9	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74700	74600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.35	0.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.4	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74600	74500	Inner lane	74600.000	74500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.23	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74600	74500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.34	0.1	0.00	0.0	0.3	0.1	0	0.0	3.12	0.9	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74500	74400	Inner lane	74500.000	74400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.38	1.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.4	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74500	74400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.86	0.8	3.51	1.0	0.00	0.0	0.00	0.0	0.00	0.0	6.4	1.8	0	0.0	4.16	1.2	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74400	74300	Inner lane	74400.000	74300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.12	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.1	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74400	74300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.39	0.7	0.00	0.0	0.00	0.0	2.4	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74300	74200	Inner lane	74300.000	74200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.33	1.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.3	1.0	0	0.0	0	0.0	2.57	0.7	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74300	74200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	1.02	0.3	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74200	74100	Inner lane	74200.000	74100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	2.10	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	7.86	2.2	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74200	74100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74100	74000	Inner lane	74100.000	74000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.16	0.3	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	5.25	1.5	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74100	74000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.15	0.9	0.00	0.0	3.82	1.1	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
74000	73900	Inner lane	74000.000	73900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	1.13	0.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	4.15	1.2	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	2.25	0.6	0.100	
74000	73900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	7.94	2.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.9	2.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73900	73800	Inner lane	73900.000	73800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.12	0.6	0.00	0.0	0.86	0.2	0.00	0.0	0.00	0.0	3.0	0.9	0	0.0	0	0.0	12.36	3.5	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	3.39	1.0	0.100	
73900	73800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.19	1.2	0.00	0.0	1.09	0.3	0.00	0.0	0.00	0.0	5.3	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73800	73700	Inner lane	73800.000	73700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	30.22	8.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	30.2	8.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73800	73700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.98	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73700	73600	Inner lane	73700.000	73600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	28.36	8.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	28.4	8.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73700	73600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.39	1.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.4	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
73600	73500	Inner lane	73600.000	73500.000	NH-33_NSV	27-Apr-2023	H

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
70300	70200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	13.00	3.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	13.0	3.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70200	70100	Inner lane	70200.000	70100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	21.13	6.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	21.1	6.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70200	70100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	15.26	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.3	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70100	70000	Inner lane	70100.000	70000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.02	3.1	0.00	0.0	6.23	1.8	0.00	0.0	0.00	0.0	17.3	4.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70100	70000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.25	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.3	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70000	69900	Inner lane	70000.000	69900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	8.23	2.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.2	2.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
70000	69900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.69	1.1	0.00	0.0	0.00	0.0	3.7	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69900	69800	Inner lane	69900.000	69800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.12	0.9	0.00	0.0	0.00	0.0	3.1	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69900	69800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.15	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.2	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69800	69700	Inner lane	69800.000	69700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	5.80	1.7	0.00	0.0	0.00	0.0	5.8	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69800	69700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.23	0.6	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69700	69600	Inner lane	69700.000	69600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.14	0.6	0.00	0.0	11.18	3.2	0.00	0.0	0.00	0.0	13.3	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69700	69600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.25	0.6	0.00	0.0	4.69	1.3	0.00	0.0	0.00	0.0	6.9	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69600	69500	Inner lane	69600.000	69500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	6.12	1.7	0.00	0.0	0.00	0.0	6.1	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69600	69500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.87	1.1	0.00	0.0	5.69	1.6	0.00	0.0	0.00	0.0	9.6	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69500	69400	Inner lane	69500.000	69400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	14.53	4.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	14.5	4.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69500	69400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.84	2.0	0.00	0.0	8.35	2.4	0.00	0.0	0.00	0.0	15.2	4.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69400	69300	Inner lane	69400.000	69300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	19.86	5.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	19.9	5.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69400	69300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.25	0.6	0.00	0.0	6.97	2.0	0.00	0.0	0.00	0.0	9.2	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69300	69200	Inner lane	69300.000	69200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	15.24	4.4	0.00	0.0	3.18	0.9	0.00	0.0	0.00	0.0	18.4	5.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69300	69200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	8.44	2.4	0.00	0.0	5.32	1.5	0.00	0.0	0.00	0.0	13.8	3.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69200	69100	Inner lane	69200.000	69100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	12.18	3.5	0.00	0.0	5.16	1.5	0.00	0.0	0.00	0.0	17.3	5.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69200	69100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.20	1.8	0.00	0.0	7.41	2.1	0.00	0.0	0.00	0.0	13.6	3.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69100	69000	Inner lane	69100.000	69000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.15	2.0	0.00	0.0	9.28	2.7	0.00	0.0	0.00	0.0	16.4	4.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69100	69000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	7.46	2.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.5	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69000	68900	Inner lane	69000.000	68900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	11.13	3.2	0.00	0.0	0.00	0.0	11.1	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
69000	68900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.38	1.3	0.00	0.0	6.14	1.8	0.00	0.0	0.00	0.0	10.5	3.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68900	68800	Inner lane	68900.000	68800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	10.19	2.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	10.2	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68900	68800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.29	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68800	68700	Inner lane	68800.000	68700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	13.67	3.9	0.00	0.0	6.64	1.9	0.00	0.0	0.00	0.0	20.3	5.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68800	68700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	5.23	1.5	0.00	0.0	0.00	0.0	5.2	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68700	68600	Inner lane	68700.000	68600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.62	1.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.6	1.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68700	68600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	7.41	2.1	0.00	0.0	0.00	0.0	7.4	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68600	68500	Inner lane	68600.000	68500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	8.23	2.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.2	2.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68600	68500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.19	1.2	0.00	0.0	3.29	0.9	0.56	0.2	0.00	0.0	8.0	2.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68500	68400	Inner lane	68500.000	68400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	12.31	3.5	0.00	0.0	2.12	0.6	0.00	0.0	0.00	0.0	14.4	4.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68500	68400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.26	0.9	0.00	0.0	1.19	0.3	4.16	1.2	0.00	0.0	8.6	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68400	68300	Inner lane	68400.000	68300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	3.33	1.0	0.00	0.0	0.00	0.0	3.3	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68400	68300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.32	1.8	0.00	0.0	2.48	0.7	0.00	0.0	0.00	0.0	8.8	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68300	68200	Inner lane	68300.000	68200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	4.23	1.2	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68300	68200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.13	0.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68200	68100	Inner lane	68200.000	68100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.65	1.3	0.00	0.0	5.18	1.5	0.00	0.0	0.00	0.0	9.8	2.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68200	68100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.25	0.6	0.00	0.0	0.00	0.0	2.3	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68100	68000	Inner lane	68100.000	68000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	2.85	0.8	0.00	0.0	0.00	0.0	2.9	0.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68100	68000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.16	0.9	0.00	0.0	0.00	0.0	3.2	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68000	67900	Inner lane	68000.000	67900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.28	2.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.3	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
68000	67900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.15	0.3	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67900	67800	Inner lane	67900.000	67800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.32	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67900	67800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67800	67700	Inner lane	67800.000	67700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.13	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.1	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67800	67700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67700	67600	Inner lane	67700.000	67600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.18	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67700	67600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.02	0.3	0.00	0.0	2.25	0.6	0.23	0.1	0.00	0.0	3.5	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67600	67500	Inner lane	67600.000	67500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.69	1.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.7	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67600	67500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67500	67400	Inner lane	67500.000	67400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67500	67400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.02	0.3	0.00	0.0	0.00	0.0	1.0	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67400	67300	Inner lane	67400.000	67300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67400	67300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67300	67200	Inner lane	67300.000	67200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.23	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67300	67200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67200	67100	Inner lane	67200.000	67100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.30	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67200	67100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67100	67000	Inner lane	67100.000	67000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	1.95	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.0	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
67100	67000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0

NH-33_Hazaribagh-Ranchi _Pavement Distresses

Chainage										Cracks										Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																			
From	To				Survey Name	Survey Date	Direction	Side	Lane Information	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
63900	63800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.23	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63800	63700	Inner lane	63800.000	63700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.86	1.1	0.00	0.0	3.18	0.9	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63800	63700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.15	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.2	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63700	63600	Inner lane	63700.000	63600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.24	2.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.2	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63700	63600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.20	0.9	0.00	0.0	4.18	1.2	0.00	0.0	0.00	0.0	7.4	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63600	63500	Inner lane	63600.000	63500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.58	1.0	0.00	0.0	5.26	1.5	0.00	0.0	0.00	0.0	8.8	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63600	63500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.39	1.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.4	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63500	63400	Inner lane	63500.000	63400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.21	0.9	0.00	0.0	2.16	0.6	0.00	0.0	0.00	0.0	5.4	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	3.28	0.9	0.00	0.0	0.0	0.0	0.100	
63500	63400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.27	0.9	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63400	63300	Inner lane	63400.000	63300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.24	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.2	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63400	63300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.21	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63300	63200	Inner lane	63300.000	63200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.56	0.4	0.00	0.0	0.00	0.0	1.6	0.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63300	63200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.12	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63200	63100	Inner lane	63200.000	63100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.18	1.2	0.00	0.0	2.63	0.8	0.00	0.0	0.00	0.0	6.8	1.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63200	63100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63100	63000	Inner lane	63100.000	63000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.09	1.2	0.00	0.0	5.03	1.4	0.00	0.0	0.00	0.0	9.1	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63100	63000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	5.96	1.7	0.00	0.0	3.47	1.0	0.00	0.0	0.00	0.0	9.4	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63000	62900	Inner lane	63000.000	62900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.82	1.1	0.00	0.0	2.02	0.6	0.00	0.0	0.00	0.0	5.8	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
63000	62900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.14	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62900	62800	Inner lane	62900.000	62800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62900	62800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.16	0.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62800	62700	Inner lane	62800.000	62700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.26	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62800	62700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.15	0.9	0.00	0.0	0.18	0.1	0.00	0.0	0.00	0.0	3.3	1.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62700	62600	Inner lane	62700.000	62600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.18	0.9	0.00	0.0	3.05	0.9	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62700	62600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.25	0.6	0.00	0.0	4.15	1.2	0.00	0.0	0.00	0.0	6.4	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62600	62500	Inner lane	62600.000	62500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.49	2.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.5	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62600	62500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.35	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.4	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62500	62400	Inner lane	62500.000	62400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.26	1.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.3	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62500	62400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.15	0.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.2	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62400	62300	Inner lane	62400.000	62300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62400	62300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.26	0.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.3	0.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62300	62200	Inner lane	62300.000	62200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.18	2.6	0.00	0.0	4.94	1.4	0.00	0.0	0.00	0.0	14.1	4.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62300	62200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.54	1.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.5	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62200	62100	Inner lane	62200.000	62100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.95	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62200	62100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.20	0.9	0.00	0.0	13.22	3.8	0.00	0.0	0.00	0.0	16.4	4.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62100	62000	Inner lane	62100.000	62000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.47	1.0	0.56	0.2	2.26	0.6	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62100	62000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	8.88	2.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.9	2.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62000	61900	Inner lane	62000.000	61900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	22.31	6.4	0.00	0.0	1.18	0.3	0.00	0.0	0.00	0.0	23.5	6.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
62000	61900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	16.52	4.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	16.5	4.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61900	61800	Inner lane	61900.000	61800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	12.57	3.6	0.00	0.0	2.20	0.6	0.15	0.0	0.00	0.0	14.9	4.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61900	61800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.25	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.3	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61800	61700	Inner lane	61800.000	61700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	5.68	1.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.7	1.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61800	61700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	11.25	3.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.3	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61700	61600	Inner lane	61700.000	61600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	15.46	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.5	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61700	61600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	14.29	4.1	0.00	0.0	3.58	1.0	0.00	0.0	0.00	0.0	17.9	5.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61600	61500	Inner lane	61600.000	61500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	10.14	2.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	10.1	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61600	61500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	13.22	3.8	0.00	0.0	2.19	0.6	0.00	0.0	0.00	0.0	15.4	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61500	61400	Inner lane	61500.000	61400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	14.63	4.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	14.6	4.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61500	61400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	10.30	2.9	0.00	0.0	3.16	0.9	0.00	0.0	0.00	0.0	13.5	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61400	61300	Inner lane	61400.000	61300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	8.14	2.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.1	2.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61400	61300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.18	2.6	0.00	0.0	1.10	0.3	0.00	0.0	0.00	0.0	10.3	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61300	61200	Inner lane	61300.000	61200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.84	2.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.8	2.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61300	61200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	8.49	2.4	0.00	0.0	5.28	1.5	0.00	0.0	0.00	0.0	13.8	3.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61200	61100	Inner lane	61200.000	61100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.67	2.8	0.00	0.0	3.49	1.0	0.00	0.0	0.00	0.0	13.2	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61200	61100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	13.29	3.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	13.3	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61100	61000	Inner lane	61100.000	61000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.27	3.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.3	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61100	61000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.25	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.3	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61000	60900	Inner lane	61000.000	60900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.34	3.2	0.00	0.0	2.48	0.7	0.00	0.0	0.00	0.0	13.8	3.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
61000	60900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	15.49	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.5	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
60900	60800	Inner lane	60900.000	60800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.10	3.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.1	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
60900	60800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	16.27	4.6	0.00	0.0	3.15	0.9	0.00	0.0	0.00	0.0	19.4	5.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
60800	60700	Inner lane	60800.000	60700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	15.44	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.4

NH-33_Hazaribagh-Ranchi _Pavement Distresses																																									
Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks												Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
57500	57400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.85	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.9	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57400	57300	Inner lane	57400.000	57300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.77	1.4	0.00	0.0	1.13	0.3	0.00	0.0	0.00	0.0	5.9	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57400	57300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.28	1.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.3	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57300	57200	Inner lane	57300.000	57200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.32	2.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.3	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57300	57200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	5.10	1.5	0.00	0.0	2.14	0.6	0.00	0.0	0.00	0.0	7.2	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57200	57100	Inner lane	57200.000	57100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.41	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.4	0.7	0	0.0	3.45	1.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57200	57100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57100	57000	Inner lane	57100.000	57000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.35	0.7	0.00	0.0	1.79	0.5	0.00	0.0	0.00	0.0	4.1	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57100	57000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	12.33	3.5	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	12.3	3.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57000	56900	Inner lane	57000.000	56900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	14.61	4.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	14.6	4.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
57000	56900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.32	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56900	56800	Inner lane	56900.000	56800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56900	56800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56800	56700	Inner lane	56800.000	56700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.18	0.3	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	12.54	3.6	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56800	56700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	5.86	1.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	5.9	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56700	56600	Inner lane	56700.000	56600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56700	56600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56600	56500	Inner lane	56600.000	56500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56600	56500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.58	1.3	0.00	0.0	2.13	0.6	0.00	0.0	0.00	0.0	6.7	1.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56500	56400	Inner lane	56500.000	56400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.51	2.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.5	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56500	56400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	16.95	4.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	17.0	4.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56400	56300	Inner lane	56400.000	56300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	14.20	4.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	14.2	4.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56400	56300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	8.96	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.0	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56300	56200	Inner lane	56300.000	56200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.34	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.3	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56300	56200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.38	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.4	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56200	56100	Inner lane	56200.000	56100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	11.24	3.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.2	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56200	56100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.23	2.6	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.2	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56100	56000	Inner lane	56100.000	56000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.12	1.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.1	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56100	56000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	11.36	3.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	11.4	3.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56000	55900	Inner lane	56000.000	55900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	8.51	2.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	8.5	2.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
56000	55900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	7.43	2.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.4	2.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55900	55800	Inner lane	55900.000	55800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	10.15	2.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	10.2	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55900	55800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.23	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.2	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55800	55700	Inner lane	55800.000	55700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.46	2.1	0.00	0.0	2.31	0.7	0.00	0.0	0.00	0.0	9.8	2.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55800	55700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.32	0.9	0.00	0.0	1.67	0.5	0.00	0.0	0.00	0.0	5.0	1.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55700	55600	Inner lane	55700.000	55600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	9.35	2.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.4	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55700	55600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	10.23	2.9	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	10.2	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55600	55500	Inner lane	55600.000	55500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	7.21	2.1	0.00	0.0	3.36	1.0	0.00	0.0	0.00	0.0	10.6	3.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55600	55500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	4.53	1.3	0.00	0.0	0.00	0.0	4.5	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55500	55400	Inner lane	55500.000	55400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.36	1.8	0.00	0.0	3.74	1.1	0.00	0.0	0.00	0.0	10.1	2.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55500	55400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	9.68	2.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	9.7	2.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55400	55300	Inner lane	55400.000	55300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55400	55300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55300	55200	Inner lane	55300.000	55200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55300	55200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.15	0.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	1.2	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55200	55100	Inner lane	55200.000	55100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	4.39	1.3	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	4.4	1.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55200	55100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	16.54	4.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	16.5	4.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55100	55000	Inner lane	55100.000	55000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.31	1.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55100	55000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	13.47	3.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	13.5	3.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55000	54900	Inner lane	55000.000	54900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	15.24	4.4	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	15.2	4.4	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
55000	54900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.61	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.6	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54900	54800	Inner lane	54900.000	54800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.19	0.9	0.00	0.0	6.35	1.8	0.00	0.0	0.00	0.0	9.5	2.7	0	0.0	11.2	3.2	1.25	0.4	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54900	54800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	7.83	2.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.8	2.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54800	54700	Inner lane	54800.000	54700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.98	2.0	0.00	0.0	2.34	0.7	0.00	0.0	0.00	0.0	9.3	2.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54800	54700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	8.32	2.4	0.00	0.0	2.15	0.6	0.00	0.0	0.00	0.0	10.5	3.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54700	54600	Inner lane	54700.000	54600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	1.12	0.3	0.00	0.0	0.00	0.0	1.1	0.3	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54700	54600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.12	1.2	0.00	0.0	2.85	0.8	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54600	54500	Inner lane	54600.000	54500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	3.20	0.9	0.00	0.0	3.16	0.9	0.00	0.0	0.00	0.0	6.4	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54600	54500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.75	1.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	3.8	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54500	54400	Inner lane	54500.000	54400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	6.98	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	7.0	2.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54500	54400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.12	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
54400	54300	Inner lane	54400.000	54300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	2.37

NH-33_Hazaribagh-Ranchi _Pavement Distresses																																							
Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks												Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
51100	51000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	17.53	5.0	0.00	0.0	2.81	0.8	0.00	0.0	0.00	0.0	20.3	5.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
51000	50900	Inner lane	51000.000	50900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
51000	50900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50900	50800	Inner lane	50900.000	50800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50900	50800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50800	50700	Inner lane	50800.000	50700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50800	50700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50700	50600	Inner lane	50700.000	50600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50700	50600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50600	50500	Inner lane	50600.000	50500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50600	50500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50500	50400	Inner lane	50500.000	50400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50500	50400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50400	50300	Inner lane	50400.000	50300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50400	50300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.25	0.9	0.00	0.0	2.87	0.8	0.00	0.0	0.00	0.0	6.1	1.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50300	50200	Inner lane	50300.000	50200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50300	50200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50200	50100	Inner lane	50200.000	50100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50200	50100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50100	50000	Inner lane	50100.000	50000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50100	50000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50000	49900	Inner lane	50000.000	49900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
50000	49900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49900	49800	Inner lane	49900.000	49800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49900	49800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49800	49700	Inner lane	49800.000	49700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49800	49700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49700	49600	Inner lane	49700.000	49600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49700	49600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49600	49500	Inner lane	49600.000	49500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49600	49500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49500	49400	Inner lane	49500.000	49400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49500	49400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49400	49300	Inner lane	49400.000	49300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49300	49200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49300	49200	Inner lane	49300.000	49200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49200	49100	Inner lane	49200.000	49100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49200	49100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49100	49000	Inner lane	49100.000	49000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49100	49000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49000	48900	Inner lane	49000.000	48900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
49000	48900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.38	0.7	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	2.4	0.7	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48900	48800	Inner lane	48900.000	48800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48900	48800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48800	48700	Inner lane	48800.000	48700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48800	48700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48700	48600	Inner lane	48700.000	48600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48700	48600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48600	48500	Inner lane	48600.000	48500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48600	48500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48500	48400	Inner lane	48500.000	48400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48500	48400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48400	48300	Inner lane	48400.000	48300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48400	48300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48300	48200	Inner lane	48300.000	48200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48300	48200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48200	48100	Inner lane	48200.000	48100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48200	48100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48100	48000	Inner lane	48100.000	48000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48100	48000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48000	47900	Inner lane	48000.000	47900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
48000	47900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00

NH-33_Hazaribagh-Ranchi _Pavement Distresses																																							
Chainage					Survey Name	Survey Date	Direction	Side	Lane Information	Cracks												Pothole		Ravelling		Patching		Shoving		Bleeding		Edge Crack/Break		Delamination/ Slippage		Corrugation		Settlements		Length (mts)	Remarks
										Alligator Cracking		Block/Reflection		Longitudinal Cracks		Transverse Cracks		Unclassified Cracks		Cracking																					
From	To									Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Total Area (sqm)	Total Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Length	Effected Length Percentage	Area (sqm)	Area (%)	Area (sqm)	Area (%)	Area (sqm)	Area (%)		
44700	44600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44600	44500	Inner lane	44600.000	44500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44600	44500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	3.25	0.9	1.89	0.5	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44500	44400	Inner lane	44500.000	44400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44500	44400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.12	0.9	0.00	0.0	0.00	0.0	3.1	0.9	0	0.0	4.98	1.4	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44400	44300	Inner lane	44400.000	44300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44400	44300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	3.98	1.1	0.00	0.0	0.00	0.0	4.0	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44300	44200	Inner lane	44300.000	44200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44300	44200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.67	1.3	0.00	0.0	2.14	0.6	0.00	0.0	0.00	0.0	6.8	1.9	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44200	44100	Inner lane	44200.000	44100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44200	44100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	6.98	2.0	0.00	0.0	2.18	0.6	0.00	0.0	0.00	0.0	9.2	2.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44100	44000	Inner lane	44100.000	44000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44100	44000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	2.11	0.6	0.00	0.0	0.00	0.0	2.1	0.6	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44000	43900	Inner lane	44000.000	43900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
44000	43900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	3.56	1.0	0.00	0.0	1.89	0.5	0.85	0.2	0.00	0.0	6.3	1.8	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43900	43800	Inner lane	43900.000	43800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43900	43800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43800	43700	Inner lane	43800.000	43700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43800	43700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43700	43600	Inner lane	43700.000	43600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43700	43600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.67	0.8	0.00	0.0	1.52	0.4	0.00	0.0	0.00	0.0	4.2	1.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43600	43500	Inner lane	43600.000	43500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43600	43500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	4.25	1.2	0.00	0.0	3.52	1.0	0.00	0.0	0.00	0.0	7.8	2.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.87	0.2	0.00	0.0	0.0	0.0	0.100	
43500	43400	Inner lane	43500.000	43400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43500	43400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	1.25	0.4	0.00	0.0	3.12	0.9	0.78	0.2	0.00	0.0	5.2	1.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43400	43300	Inner lane	43400.000	43300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43400	43300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.78	0.2	0.00	0.0	0.00	0.0	0.8	0.2	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43300	43200	Inner lane	43300.000	43200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43300	43200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43200	43100	Inner lane	43200.000	43100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43200	43100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43100	43000	Inner lane	43100.000	43000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43100	43000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43000	42900	Inner lane	43000.000	42900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
43000	42900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	1.82	0.5	0.00	0.0	0.00	0.0	1.8	0.5	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42900	42800	Inner lane	42900.000	42800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42900	42800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	2.89	0.8	0.00	0.0	0.98	0.3	0.00	0.0	0.00	0.0	3.9	1.1	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42800	42700	Inner lane	42800.000	42700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42800	42700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42700	42600	Inner lane	42700.000	42600.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42700	42600	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42600	42500	Inner lane	42600.000	42500.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42600	42500	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42500	42400	Inner lane	42500.000	42400.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42500	42400	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42400	42300	Inner lane	42400.000	42300.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42400	42300	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42300	42200	Inner lane	42300.000	42200.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42300	42200	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42200	42100	Inner lane	42200.000	42100.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42200	42100	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42100	42000	Inner lane	42100.000	42000.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42100	42000	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42000	41900	Inner lane	42000.000	41900.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
42000	41900	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41900	41800	Inner lane	41900.000	41800.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41900	41800	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41800	41700	Inner lane	41800.000	41700.000	NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Inner lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.100	
41800	41700	Outer lane			NH-33_NSV	27-Apr-2023	Hazaribagh-Ranchi	RHS	Outer lane	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi																														
Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
115000	114900	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
115000	114900	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114900	114800	Inner lane	6.804	1.7	1.7	Fair	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
114900	114800	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114800	114700	Inner lane	14.443	1.0	1.0	Poor	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
114800	114700	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114700	114600	Inner lane	4.830	2.1	2.1	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
114700	114600	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114600	114500	Inner lane	7.680	1.5	1.5	Fair	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
114600	114500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114500	114400	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
114500	114400	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114400	114300	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114400	114300	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114300	114200	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
114300	114200	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114200	114100	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114200	114100	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114100	114000	Inner lane	0.000	3.0	3.0	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
114100	114000	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
114000	113900	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
114000	113900	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113900	113800	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.09	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
113900	113800	Outer lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
113800	113700	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.84	2.2	1.7	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
113800	113700	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113700	113600	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113700	113600	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113600	113500	Inner lane	2.446	2.6	2.6	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	1.02	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
113600	113500	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113500	113400	Inner lane	2.137	2.6	2.6	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.74	2.3	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
113500	113400	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113400	113300	Inner lane	7.390	1.6	1.6	Fair	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.01	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
113400	113300	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113300	113200	Inner lane	7.843	1.5	1.5	Fair	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
113300	113200	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113200	113100	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113200	113100	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113100	113000	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113100	113000	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113000	112900	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
113000	112900	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112900	112800	Inner lane	1.386	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
112900	112800	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112800	112700	Inner lane	3.644	2.3	2.3	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
112800	112700	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112700	112600	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112700	112600	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112600	112500	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112600	112500	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112500	112400	Inner lane	1.021	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.67	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
112500	112400	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112400	112300	Inner lane	0.291	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112400	112300	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112300	112200	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112300	112200	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112200	112100	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	1.50	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
112200	112100	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112100	112000	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112100	112000	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112000	111900	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
112000	111900	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111900	111800	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.67	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
111900	111800	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111800	111700	Inner lane	0.664	2.9	2.9	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111800	111700	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111700	111600	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111700	111600	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111600	111500	Inner lane	0.346	2.9	2.9	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.93	2.2	1.6	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
111600	111500	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111500	111400	Inner lane	2.697	2.5	2.5	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
111500	111400	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.35	2.7	2.0	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111400	111300	Inner lane	2.669	2.5	2.5	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.64	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.36	1.7	1.7	Fair	0.00	3.0	2.3	Good	2.0	Good
111400	111300	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111300	111200	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111300	111200	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111200	111100	Inner lane	1.409	2.8	2.8	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.37	2.7	2.0	Fair	0.00	3.0	2.3	Good	0.91	1.2	1.2	Fair	0.00	3.0	2.3	Good	2.0	Good
111200	111100	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111100	111000	Inner lane	0.926	2.8	2.8	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111100	111000	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
111000	110900	Inner lane	0.063	3.0	3.0	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
111000	110900	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
110900	110800	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110900	110800	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110800	110700	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110800	110700	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110700	110600	Inner lane	2.446	2.6	2.6	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
110700	110600	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110600	110500	Inner lane	0.357	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110600	110500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110500	110400	Inner lane	10.351	1.0	1.0	Poor	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
110500	110400	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110400	110300	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.21	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
110400	110300	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110300	110200	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
110300	110200	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110200	110100	Inner lane	0.791	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.47	1.6	1.6	Fair	0.00	3.0	2.3	Good	2.2	Good
110200	110100	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110100	110000	Inner lane	0.989	2.8	2.8	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.64	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
110100	110000	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
110000	109900	Inner lane	10.103	1.0	1.0	Poor	6.8	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
110000	109900	Outer lane	0.000	3.0	3.0	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
109900	109800	Inner lane	3.883	2.3	2.3	Good	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	5.20	1.6	1.2	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
109900	109800	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109800	109700	Inner lane	4.631	2.2	2.2	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
109800	109700	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109700	109600	Inner lane	14.726	1.0	1.0	Poor	7.6	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
109700	109600	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109600	109500	Inner lane	8.554	1.4	1.4	Fair	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	1.63	1.0	1.0	Poor	0.00	3.0	2.3	Good	1.8	Fair
109600	109500	Outer lane	0.057	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109500	109400	Inner lane	3.326	2.4	2.4	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
109500	109400	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109400	109300	Inner lane	3.900	2.3	2.3	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.29	1.8	1.8	Fair	0.00	3.0	2.3	Good	2.1	Good
109400	109300	Outer lane	0.243	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109300	109200	Inner lane	7.574	1.5	1.5	Fair	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
109300	109200	Outer lane	0.311	2.9	2.9	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109200	109100	Inner lane	3.157	2.4	2.4	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	2.61	1.8	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
109200	109100	Outer lane	0.354	2.9	2.9	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109100	109000	Inner lane	0.609	2.9	2.9	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	2.16	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
109100	109000	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109000	108900	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
109000	108900	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108900	108800	Inner lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
108900	108800	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108800	108700	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108800	108700	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108700	108600	Inner lane	2.351	2.6	2.6	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
108700	108600	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108600	108500	Inner lane	2.271	2.6	2.6	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
108600	108500	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108500	108400	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108500	108400	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108400	108300	Inner lane	0.929	2.8	2.8	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.73	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
108400	108300	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108300	108200	Inner lane	1.417	2.7	2.7	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
108300	108200	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108200	108100	Inner lane	0.666	2.9	2.9	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108200	108100	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108100	108000	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108100	108000	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108000	107900	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
108000	107900	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107900	107800	Inner lane	2.120	2.6	2.6	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107900	107800	Outer lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107800	107700	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107800	107700	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107700	107600	Inner lane	0.903	2.8	2.8	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107700	107600	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107600	107500	Inner lane	0.886	2.8	2.8	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107600	107500	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107500	107400	Inner lane	5.091	2.0	2.0	Fair	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
107500	107400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107400	107300	Inner lane	1.791	2.7	2.7	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107400	107300	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107300	107200	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107300	107200	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107200	107100	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107200	107100	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107100	107000	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
107100	107000	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107000	106900	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
107000	106900	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106900	106800	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106900	106800	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106800	106700	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
106800	106700	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106700	106600	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
106700	106600	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106600	106500	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106600	106500	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106500	106400	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
106500	106400	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106400	106300	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106400	106300	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106300	106200	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106300	106200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106200	106100	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106200	106100	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106100	106000	Inner lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
106100	106000	Outer lane	0.631	2.9	2.9	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
106000	105900	Inner lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
106000	105900	Outer lane	2.560	2.5	2.5	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	1.99	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
105900	105800	Inner lane	8.634	1.4	1.4	Fair	9.1	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
105900	105800	Outer lane	1.100	2.8	2.8	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
105800	105700	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
105800	105700	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105700	105600	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105700	105600	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105600	105500	Inner lane	4.640	2.2	2.2	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
105600	105500	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105500	105400	Inner lane	4.083	2.3	2.3	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
105500	105400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105400	105300	Inner lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105400	105300	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105300	105200	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105300	105200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105200	105100	Inner lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105200	105100	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105100	105000	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105100	105000	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
105000	104900	Inner lane	4.120	2.3	2.3	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
105000	104900	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104900	104800	Inner lane	0.897	2.8	2.8	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.68	1.4	1.4	Fair	0.00	3.0	2.3	Good	2.1	Good
104900	104800	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104800	104700	Inner lane	2.751	2.5	2.5	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
104800	104700	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104700	104600	Inner lane	7.591	1.5	1.5	Fair	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	4.08	1.0	1.0	Poor	0.00	3.0	2.3	Good	1.9	Fair
104700	104600	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104600	104500	Inner lane	7.020	1.6	1.6	Fair	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
104600	104500	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104500	104400	Inner lane	4.106	2.3	2.3	Good	6.4	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	3.15	1.0	1.0	Poor	0.00	3.0	2.3	Good	1.9	Fair
104500	104400	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104400	104300	Inner lane	3.443	2.4	2.4	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
104400	104300	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104300	104200	Inner lane	1.246	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104300	104200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104200	104100	Inner lane	17.171	1.0	1.0	Poor	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	7.05	1.0	1.0	Poor	0.00	3.0	2.3	Good	1.8	Fair
104200	104100	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
104100	104000	Inner lane	8.746	1.3	1.3	Fair	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	3.43	1.8	1.3	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
104100	104000	Outer lane	0.000	3.0	3.0	Good	7	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
104000	103900	Inner lane	8.714	1.3	1.3	Fair	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
104000	103900	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103900	103800	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103900	103800	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103800	103700	Inner lane	0.880	2.8	2.8	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
103800	103700	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103700	103600	Inner lane	9.966	1.1	1.1	Fair	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
103700	103600	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103600	103500	Inner lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103600	103500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103500	103400	Inner lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103500	103400	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103400	103300	Inner lane	1.046	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103400	103300	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103300	103200	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103300	103200	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103200	103100	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103200	103100	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103100	103000	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103100	103000	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
103000	102900	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
103000	102900	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102900	102800	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102900	102800	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102800	102700	Inner lane	7.323	1.6	1.6	Fair	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
102800	102700	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102700	102600	Inner lane	5.817	1.9	1.9	Fair	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
102700	102600	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
102600	102500	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
102600	102500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102500	102400	Inner lane	5.189	2.0	2.0	Fair	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
102500	102400	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102400	102300	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102400	102300	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102300	102200	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102300	102200	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102200	102100	Inner lane	0.666	2.9	2.9	Good	6.4	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
102200	102100	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102100	102000	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102100	102000	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102000	101900	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
102000	101900	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101900	101800	Inner lane	0.000	3.0	3.0	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101900	101800	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101800	101700	Inner lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101800	101700	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101700	101600	Inner lane	0.354	2.9	2.9	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101700	101600	Outer lane	0.263	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101600	101500	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101600	101500	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101500	101400	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101500	101400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101400	101300	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101400	101300	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101300	101200	Inner lane	1.980	2.6	2.6	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101300	101200	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101200	101100	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101200	101100	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101100	101000	Inner lane	0.891	2.8	2.8	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
101100	101000	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101000	100900	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
101000	100900	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100900	100800	Inner lane	4.071	2.3	2.3	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
100900	100800	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100800	100700	Inner lane	7.500	1.6	1.6	Fair	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.43	2.6	1.9	Fair	2.1	Good
100800	100700	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100700	100600	Inner lane	9.566	1.2	1.2	Fair	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
100700	100600	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100600	100500	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100600	100500	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100500	100400	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100500	100400	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100400	100300	Inner lane	7.520	1.6	1.6	Fair	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
100400	100300	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100300	100200	Inner lane	11.574	1.0	1.0	Poor	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
100300	100200	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100200	100100	Inner lane	5.334	1.9	1.9	Fair	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
100200	100100	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100100	100000	Inner lane	2.586	2.5	2.5	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
100100	100000	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
100000	99900	Inner lane	7.843	1.5	1.5	Fair	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
100000	99900	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99900	99800	Inner lane	5.349	1.9	1.9	Fair	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
99900	99800	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99800	99700	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99800	99700	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99700	99600	Inner lane	3.783	2.3	2.3	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
99700	99600	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99600	99500	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99600	99500	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99500	99400	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99500	99400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99400	99300	Inner lane	11.017	1.0	1.0	Poor	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
99400	99300	Outer lane	3.449	2.4	2.4	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
99300	99200	Inner lane	7.209	1.6	1.6	Fair	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
99300	99200	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	1.31	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
99200	99100	Inner lane	9.797	1.1	1.1	Fair	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
99200	99100	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99100	99000	Inner lane	19.771	1.0	1.0	Poor	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
99100	99000	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
99000	98900	Inner lane	17.689	1.0	1.0	Poor	11.4	1.0	1.0	Poor	0.000	3.0	1.5	Fair	4.63	1.6	1.2	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	1.7	Fair
99000	98900	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98900	98800	Inner lane	0.000	3.0	3.0	Good	10.6	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
98900	98800	Outer lane	3.929	2.3	2.3	Good	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
98800	98700	Inner lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98800	98700	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
98700	98600	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98700	98600	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98600	98500	Inner lane	2.723	2.5	2.5	Good	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
98600	98500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98500	98400	Inner lane	0.749	2.9	2.9	Good	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
98500	98400	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98400	98300	Inner lane	0.000	3.0	3.0	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
98400	98300	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98300	98200	Inner lane	0.300	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98300	98200	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98200	98100	Inner lane	1.334	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.63	1.5	1.5	Fair	0.00	3.0	2.3	Good	2.1	Good
98200	98100	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98100	98000	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98100	98000	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
98000	97900	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	3.81	1.7	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
98000	97900	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97900	97800	Inner lane	3.877	2.3	2.3	Good	9.1	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
97900	97800	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97800	97700	Inner lane	4.811	2.1	2.1	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
97800	97700	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97700	97600	Inner lane	0.751	2.9	2.9	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97700	97600	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97600	97500	Inner lane	3.071	2.5	2.5	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97600	97500	Outer lane	0.000	3.0	3.0	Good	7	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97500	97400	Inner lane	4.446	2.2	2.2	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97500	97400	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97400	97300	Inner lane	0.726	2.9	2.9	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97400	97300	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97300	97200	Inner lane	0.649	2.9	2.9	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
97300	97200	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97200	97100	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97200	97100	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97100	97000	Inner lane	0.951	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97100	97000	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97000	96900	Inner lane	0.294	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
97000	96900	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96900	96800	Inner lane	2.280	2.6	2.6	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
96900	96800	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96800	96700	Inner lane	0.974	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96800	96700	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96700	96600	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96700	96600	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96600	96500	Inner lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	6.63	1.4	1.1	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
96600	96500	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96500	96400	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	5.47	1.6	1.2	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
96500	96400	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96400	96300	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	5.18	1.6	1.2	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
96400	96300	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.57	2.5	1.9	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
96300	96200	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96300	96200	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96200	96100	Inner lane	9.257	1.2	1.2	Fair	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
96200	96100	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96100	96000	Inner lane	2.640	2.5	2.5	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	4.65	1.6	1.2	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
96100	96000	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
96000	95900	Inner lane	3.786	2.3	2.3	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
96000	95900	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.18	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
95900	95800	Inner lane	2.923	2.5	2.5	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	3.15	1.8	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
95900	95800	Outer lane	0.320	2.9	2.9	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95800	95700	Inner lane	4.014	2.3	2.3	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	2.38	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
95800	95700	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	1.49	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
95700	95600	Inner lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95700	95600	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95600	95500	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95600	95500	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95500	95400	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
95500	95400	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95400	95300	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95400	95300	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95300	95200	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95300	95200	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95200	95100	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95200	95100	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95100	95000	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
95100	95000	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
95000	94900	Inner lane	0.949	2.8	2.8	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
95000	94900	Outer lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94900	94800	Inner lane	0.066	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94900	94800	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.38	2.7	2.0	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94800	94700	Inner lane	1.186	2.8	2.8	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94800	94700	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94700	94600	Inner lane	0.457	2.9	2.9	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94700	94600	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94600	94500	Inner lane	1.420	2.7	2.7	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94600	94500	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94500	94400	Inner lane	0.366	2.9	2.9	Good	7.6	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
94500	94400	Outer lane	0.174	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.42	2.6	2.0	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94400	94300	Inner lane	1.454	2.7	2.7	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94400	94300	Outer lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.33	2.7	2.0	Good	0.85	2.2	1.7	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
94300	94200	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94300	94200	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94200	94100	Inner lane	0.303	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
94200	94100	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94100	94000	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94100	94000	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
94000	93900	Inner lane	0.351	2.9	2.9	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.25	1.9	1.9	Fair	0.00	3.0	2.3	Good	2.2	Good
94000	93900	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93900	93800	Inner lane	0.000	3.0	3.0	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
93900	93800	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93800	93700	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
93800	93700	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93700	93600	Inner lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
93700	93600	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93600	93500	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93600	93500	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93500	93400	Inner lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93500	93400	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.81	2.3	1.7	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
93400	93300	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93400	93300	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93300	93200	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93300	93200	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93200	93100	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93200	93100	Outer lane	0.000	3.0	3.0	Good	1.8	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.07	2.9	2.2	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93100	93000	Inner lane	0.294	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93100	93000	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93000	92900	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
93000	92900	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92900	92800	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92900	92800	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92800	92700	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92800	92700	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92700	92600	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92700	92600	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92600	92500	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92600	92500	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92500	92400	Inner lane	0.000	3.0	3.0	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
92500	92400	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92400	92300	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
92400	92300	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92300	92200	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92300	92200	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92200	92100	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92200	92100	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92100	92000	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92100	92000	Outer lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92000	91900	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
92000	91900	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91900	91800	Inner lane	9.531	1.2	1.2	Fair	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
91900	91800	Outer lane	0.274	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91800	91700	Inner lane	12.357	1.0	1.0	Poor	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
91800	91700	Outer lane	0.000	3.0	3.0	Good	1.8	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91700	91600	Inner lane	7.329	1.6	1.6	Fair	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
91700	91600	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91600	91500	Inner lane	5.894	1.8	1.8	Fair	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
91600	91500	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91500	91400	Inner lane	4.066	2.3	2.3	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
91500	91400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91400	91300	Inner lane	4.643	2.2	2.2	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
91400	91300	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91300	91200	Inner lane	7.709	1.5	1.5	Fair	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
91300	91200	Outer lane	0.291	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91200	91100	Inner lane	11.303	1.0	1.0	Poor	7.6	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
91200	91100	Outer lane	0.809	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91100	91000	Inner lane	5.806	1.9	1.9	Fair	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
91100	91000	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
91000	90900	Inner lane	11.771	1.0	1.0	Poor	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
91000	90900	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	6.32	1.5	1.1	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
90900	90800	Inner lane	9.117	1.3	1.3	Fair	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.92	2.1	1.6	Fair	2.0	Good
90900	90800	Outer lane	0.000	3.0	3.0	Good	1.8	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90800	90700	Inner lane	9.383	1.2	1.2	Fair	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	1.01	2.0	1.5	Fair	6.61	1.4	1.1	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	1.8	Fair
90800	90700	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90700	90600	Inner lane	7.420	1.6	1.6	Fair	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
90700	90600	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90600	90500	Inner lane	3.634	2.4	2.4	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.38	2.7	2.0	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
90600	90500	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90500	90400	Inner lane	4.637	2.2	2.2	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
90500	90400	Outer lane	0.000	3.0	3.0	Good	1.8	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90400	90300	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	8.87	1.2	0.9	Poor	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
90400	90300	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90300	90200	Inner lane	1.603	2.7	2.7	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
90300	90200	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90200	90100	Inner lane	1.309	2.8	2.8	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
90200	90100	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90100	90000	Inner lane	0.631	2.9	2.9	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
90100	90000	Outer lane	0.329	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
90000	89900	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
90000	89900	Outer lane	0.000	3.0	3.0	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89900	89800	Inner lane	4.351	2.2	2.2	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89900	89800	Outer lane	0.000	3.0	3.0	Good	1.9	2.7	2.7	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89800	89700	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89800	89700	Outer lane	0.000	3.0	3.0	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89700	89600	Inner lane	2.523	2.6	2.6	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
89700	89600	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89600	89500	Inner lane	3.234	2.4	2.4	Good	6.4	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89600	89500	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89500	89400	Inner lane	1.577	2.7	2.7	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89500	89400	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89400	89300	Inner lane	5.103	2.0	2.0	Fair	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89400	89300	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89300	89200	Inner lane	3.934	2.3	2.3	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89300	89200	Outer lane	0.000	3.0	3.0	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89200	89100	Inner lane	5.494	1.9	1.9	Fair	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
89200	89100	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89100	89000	Inner lane	6.954	1.7	1.7	Fair	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
89100	89000	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
89000	88900	Inner lane	2.471	2.6	2.6	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
89000	88900	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88900	88800	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88900	88800	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88800	88700	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88800	88700	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88700	88600	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88700	88600	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88600	88500	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88600	88500	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88500	88400	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88500	88400	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88400	88300	Inner lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88400	88300	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88300	88200	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88300	88200	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88200	88100	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88200	88100	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88100	88000	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88100	88000	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88000	87900	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
88000	87900	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87900	87800	Inner lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87900	87800	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87800	87700	Inner lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87800	87700	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87700	87600	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87700	87600	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87600	87500	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	4.11	1.7	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
87600	87500	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87500	87400	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87500	87400	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87400	87300	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87400	87300	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87300	87200	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87300	87200	Outer lane	5.100	2.0	2.0	Fair	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.23	2.0	1.5	Fair	2.12	1.9	1.4	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
87200	87100	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87200	87100	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	1.46	2.0	1.5	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
87100	87000	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87100	87000	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87000	86900	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
87000	86900	Outer lane	0.000	3.0	3.0	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.65	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86900	86800	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86900	86800	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86800	86700	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86800	86700	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	3.53	1.8	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
86700	86600	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86700	86600	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	2.92	1.8	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
86600	86500	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86600	86500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	2.44	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
86500	86400	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86500	86400	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.63	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
86400	86300	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
86400	86300	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86300	86200	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86300	86200	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86200	86100	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86200	86100	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86100	86000	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86100	86000	Outer lane	0.669	2.9	2.9	Good	2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
86000	85900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
86000	85900	Outer lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85900	85800	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85900	85800	Outer lane	0.000	**3.0**	**3.0**	Good	2.3	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85800	85700	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85800	85700	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85700	85600	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85700	85600	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85600	85500	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	4.63	1.6	1.2	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
85600	85500	Outer lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	1.62	1.9	1.5	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
85500	85400	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85500	85400	Outer lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85400	85300	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85400	85300	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85300	85200	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85300	85200	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85200	85100	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85200	85100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85100	85000	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85100	85000	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85000	84900	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
85000	84900	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84900	84800	Inner lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84900	84800	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84800	84700	Inner lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84800	84700	Outer lane	1.489	**2.7**	**2.7**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84700	84600	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84700	84600	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.64	2.4	1.8	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.06	2.9	2.2	Good	2.3	Good
84600	84500	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84600	84500	Outer lane	2.791	**2.5**	**2.5**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84500	84400	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84500	84400	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84400	84300	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84400	84300	Outer lane	0.931	**2.8**	**2.8**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84300	84200	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84300	84200	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84200	84100	Inner lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84200	84100	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84100	84000	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84100	84000	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
84000	83900	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
84000	83900	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83900	83800	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83900	83800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83800	83700	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83800	83700	Outer lane	0.000	**3.0**	**3.0**	Good	7.9	**1.5**	**1.5**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
83700	83600	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83700	83600	Outer lane	0.000	**3.0**	**3.0**	Good	7.7	**1.5**	**1.5**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83600	83500	Inner lane	0.000	**3.0**	**3.0**	Good	5.7	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83600	83500	Outer lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83500	83400	Inner lane	3.786	**2.3**	**2.3**	Good	7.6	**1.5**	**1.5**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
83500	83400	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83400	83300	Inner lane	2.891	**2.5**	**2.5**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
83400	83300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83300	83200	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83300	83200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83200	83100	Inner lane	0.000	**3.0**	**3.0**	Good	11.3	**1.0**	**1.0**	Poor	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
83200	83100	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83100	83000	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
83100	83000	Outer lane	0.246	**3.0**	**3.0**	Good	2.2	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
83000	82900	Inner lane	2.391	**2.6**	**2.6**	Good	12.2	**1.0**	**1.0**	Poor	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
83000	82900	Outer lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82900	82800	Inner lane	0.440	**2.9**	**2.9**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
82900	82800	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82800	82700	Inner lane	0.000	**3.0**	**3.0**	Good	10.2	**1.0**	**1.0**	Poor	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
82800	82700	Outer lane	1.043	**2.8**	**2.8**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
82700	82600	Inner lane	0.000	**3.0**	**3.0**	Good	15.05	**1.0**	**1.0**	Poor	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
82700	82600	Outer lane	0.751	**2.9**	**2.9**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
82600	82500	Inner lane	0.000	**3.0**	**3.0**	Good	8.5	**1.4**	**1.4**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
82600	82500	Outer lane	1.177	**2.8**	**2.8**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82500	82400	Inner lane	0.000	**3.0**	**3.0**	Good	13.9	**1.0**	**1.0**	Poor	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
82500	82400	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82400	82300	Inner lane	0.291	**3.0**	**3.0**	Good	7.1	**1.6**	**1.6**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
82400	82300	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82300	82200	Inner lane	0.243	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	1.56	1.9	1.5	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
82300	82200	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82200	82100	Inner lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82200	82100	Outer lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82100	82000	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82100	82000	Outer lane	0.377	**2.9**	**2.9**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82000	81900	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
82000	81900	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81900	81800	Inner lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
81900	81800	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81800	81700	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.16	2.9	2.1	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81800	81700	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81700	81600	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81700	81600	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81600	81500	Inner lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
81600	81500	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81500	81400	Inner lane	0.000	3.0	3.0	Good	13.3	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81500	81400	Outer lane	0.000	3.0	3.0	Good	7.9	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81400	81300	Inner lane	0.000	3.0	3.0	Good	8.9	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81400	81300	Outer lane	0.000	3.0	3.0	Good	12.7	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81300	81200	Inner lane	0.000	3.0	3.0	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
81300	81200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81200	81100	Inner lane	0.000	3.0	3.0	Good	8	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81200	81100	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81100	81000	Inner lane	0.000	3.0	3.0	Good	9.6	1.2	1.2	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81100	81000	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
81000	80900	Inner lane	0.000	3.0	3.0	Good	8.5	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
81000	80900	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80900	80800	Inner lane	0.000	3.0	3.0	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
80900	80800	Outer lane	0.623	2.9	2.9	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80800	80700	Inner lane	0.000	3.0	3.0	Good	10.1	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80800	80700	Outer lane	1.669	2.7	2.7	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	1.19	2.0	1.5	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80700	80600	Inner lane	0.000	3.0	3.0	Good	12.9	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80700	80600	Outer lane	0.606	2.9	2.9	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80600	80500	Inner lane	0.946	2.8	2.8	Good	11.5	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80600	80500	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80500	80400	Inner lane	1.971	2.7	2.7	Good	7.1	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80500	80400	Outer lane	0.531	2.9	2.9	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80400	80300	Inner lane	0.926	2.8	2.8	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
80400	80300	Outer lane	0.740	2.9	2.9	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80300	80200	Inner lane	6.606	1.7	1.7	Fair	9.8	1.1	1.1	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
80300	80200	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80200	80100	Inner lane	2.874	2.5	2.5	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80200	80100	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80100	80000	Inner lane	3.766	2.3	2.3	Good	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80100	80000	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
80000	79900	Inner lane	2.297	2.6	2.6	Good	6.1	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
80000	79900	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79900	79800	Inner lane	0.294	3.0	3.0	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79900	79800	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79800	79700	Inner lane	0.000	3.0	3.0	Good	7.6	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79800	79700	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79700	79600	Inner lane	0.529	2.9	2.9	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79700	79600	Outer lane	0.000	3.0	3.0	Good	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79600	79500	Inner lane	3.117	2.4	2.4	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.53	2.5	1.9	Fair	0.00	3.0	3.0	Good	1.10	2.0	1.5	Fair	2.1	Good
79600	79500	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79500	79400	Inner lane	3.337	2.4	2.4	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
79500	79400	Outer lane	0.000	3.0	3.0	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79400	79300	Inner lane	0.663	2.9	2.9	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79400	79300	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79300	79200	Inner lane	0.000	3.0	3.0	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.64	1.5	1.5	Fair	0.00	3.0	2.3	Good	2.1	Good
79300	79200	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79200	79100	Inner lane	1.823	2.7	2.7	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.25	2.8	2.1	Good	0.92	1.2	1.2	Fair	0.00	3.0	2.3	Good	2.0	Good
79200	79100	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79100	79000	Inner lane	0.051	3.0	3.0	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
79100	79000	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
79000	78900	Inner lane	4.157	2.3	2.3	Good	8.3	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
79000	78900	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
78900	78800	Inner lane	2.531	2.5	2.5	Good	6.8	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78900	78800	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
78800	78700	Inner lane	2.743	2.5	2.5	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	6.01	1.5	1.1	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
78800	78700	Outer lane	1.806	2.7	2.7	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78700	78600	Inner lane	1.183	2.8	2.8	Good	12	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
78700	78600	Outer lane	1.177	2.8	2.8	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.83	2.3	1.7	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78600	78500	Inner lane	0.623	2.9	2.9	Good	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78600	78500	Outer lane	2.283	2.6	2.6	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78500	78400	Inner lane	2.420	2.6	2.6	Good	8.2	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78500	78400	Outer lane	1.434	2.7	2.7	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78400	78300	Inner lane	1.809	2.7	2.7	Good	7.3	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78400	78300	Outer lane	1.391	2.8	2.8	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	1.11	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78300	78200	Inner lane	1.246	2.8	2.8	Good	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
78300	78200	Outer lane	2.831	2.5	2.5	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78200	78100	Inner lane	1.214	2.8	2.8	Good	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78200	78100	Outer lane	0.754	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
78100	78000	Inner lane	1.209	2.8	2.8	Good	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
78100	78000	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
78000	77900	Inner lane	0.920	2.8	2.8	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	4.41	1.7	1.2	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
78000	77900	Outer lane	0.643	2.9	2.9	Good	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77900	77800	Inner lane	1.780	2.7	2.7	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	6.93	1.4	1.1	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
77900	77800	Outer lane	2.154	2.6	2.6	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77800	77700	Inner lane	1.926	2.7	2.7	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77800	77700	Outer lane	0.660	2.9	2.9	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
77700	77600	Inner lane	2.920	2.5	2.5	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77700	77600	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
77600	77500	Inner lane	1.509	2.7	2.7	Good	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	2.47	1.9	1.4	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
77600	77500	Outer lane	0.600	2.9	2.9	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77500	77400	Inner lane	0.000	3.0	3.0	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77500	77400	Outer lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
77400	77300	Inner lane	0.629	2.9	2.9	Good	8.7	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
77400	77300	Outer lane	1.229	2.8	2.8	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77300	77200	Inner lane	0.991	2.8	2.8	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77300	77200	Outer lane	0.609	2.9	2.9	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
77200	77100	Inner lane	0.329	2.9	2.9	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77200	77100	Outer lane	0.471	2.9	2.9	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
77100	77000	Inner lane	1.909	2.7	2.7	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
77100	77000	Outer lane	0.669	2.9	2.9	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
77000	76900	Inner lane	6.649	1.7	1.7	Fair	6.6	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
77000	76900	Outer lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76900	76800	Inner lane	5.617	1.9	1.9	Fair	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
76900	76800	Outer lane	0.917	2.8	2.8	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76800	76700	Inner lane	1.186	2.8	2.8	Good	7.9	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
76800	76700	Outer lane	2.760	2.5	2.5	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76700	76600	Inner lane	1.894	2.7	2.7	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
76700	76600	Outer lane	0.669	2.9	2.9	Good	6.1	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76600	76500	Inner lane	0.000	3.0	3.0	Good	6.2	1.8	1.8	Fair	0.000	3.0	1.5	Fair	1.23	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
76600	76500	Outer lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76500	76400	Inner lane	0.926	2.8	2.8	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76500	76400	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76400	76300	Inner lane	2.563	2.5	2.5	Good	8.3	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
76400	76300	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76300	76200	Inner lane	1.094	2.8	2.8	Good	10.5	1.0	1.0	Poor	0.000	3.0	1.5	Fair	2.14	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
76300	76200	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76200	76100	Inner lane	0.614	2.9	2.9	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
76200	76100	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76100	76000	Inner lane	1.497	2.7	2.7	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
76100	76000	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
76000	75900	Inner lane	0.926	2.8	2.8	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	3.50	1.8	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
76000	75900	Outer lane	2.143	2.6	2.6	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75900	75800	Inner lane	4.966	2.1	2.1	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
75900	75800	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75800	75700	Inner lane	2.331	2.6	2.6	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
75800	75700	Outer lane	1.229	2.8	2.8	Good	2.4	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.07	2.9	2.2	Good	2.4	Good
75700	75600	Inner lane	3.160	2.4	2.4	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
75700	75600	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75600	75500	Inner lane	9.643	1.2	1.2	Fair	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.64	2.4	1.8	Fair	1.9	Fair
75600	75500	Outer lane	2.503	2.6	2.6	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
75500	75400	Inner lane	11.303	1.0	1.0	Poor	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Fair
75500	75400	Outer lane	1.986	2.6	2.6	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
75400	75300	Inner lane	3.843	2.3	2.3	Good	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
75400	75300	Outer lane	0.494	2.9	2.9	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75300	75200	Inner lane	1.206	2.8	2.8	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
75300	75200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75200	75100	Inner lane	0.920	2.8	2.8	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
75200	75100	Outer lane	0.057	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75100	75000	Inner lane	2.274	2.6	2.6	Good	7	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	2.12	1.9	1.4	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
75100	75000	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
75000	74900	Inner lane	0.000	3.0	3.0	Good	9.6	1.2	1.2	Fair	0.000	3.0	1.5	Fair	3.78	1.7	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
75000	74900	Outer lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74900	74800	Inner lane	0.360	2.9	2.9	Good	8.1	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74900	74800	Outer lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74800	74700	Inner lane	0.000	3.0	3.0	Good	8.6	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74800	74700	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74700	74600	Inner lane	1.109	2.8	2.8	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74700	74600	Outer lane	0.386	2.9	2.9	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74600	74500	Inner lane	1.209	2.8	2.8	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74600	74500	Outer lane	0.097	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.89	2.2	1.7	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74500	74400	Inner lane	0.966	2.8	2.8	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74500	74400	Outer lane	1.820	2.7	2.7	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	1.19	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74400	74300	Inner lane	1.463	2.7	2.7	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74400	74300	Outer lane	0.683	2.9	2.9	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74300	74200	Inner lane	0.951	2.8	2.8	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.73	2.3	1.8	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74300	74200	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.29	2.7	2.1	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74200	74100	Inner lane	0.600	2.9	2.9	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	2.25	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74200	74100	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
74100	74000	Inner lane	0.331	2.9	2.9	Good	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	1.50	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74100	74000	Outer lane	1.991	2.6	2.6	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
74000	73900	Inner lane	0.323	2.9	2.9	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	1.19	2.0	1.5	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
74000	73900	Outer lane	2.269	2.6	2.6	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73900	73800	Inner lane	0.851	2.9	2.9	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	3.53	1.8	1.3	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
73900	73800	Outer lane	1.509	2.7	2.7	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73800	73700	Inner lane	8.634	1.4	1.4	Fair	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
73800	73700	Outer lane	1.994	2.6	2.6	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73700	73600	Inner lane	8.103	1.4	1.4	Fair	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
73700	73600	Outer lane	0.969	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73600	73500	Inner lane	8.900	1.3	1.3	Fair	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
73600	73500	Outer lane	2.246	2.6	2.6	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73500	73400	Inner lane	8.809	1.3	1.3	Fair	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
73500	73400	Outer lane	1.783	2.7	2.7	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73400	73300	Inner lane	4.711	2.2	2.2	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
73400	73300	Outer lane	1.420	2.7	2.7	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73300	73200	Inner lane	3.743	2.3	2.3	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73300	73200	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73200	73100	Inner lane	2.137	2.6	2.6	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73200	73100	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73100	73000	Inner lane	2.054	2.6	2.6	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
73100	73000	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
73000	72900	Inner lane	6.931	1.7	1.7	Fair	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
73000	72900	Outer lane	0.383	2.9	2.9	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
72900	72800	Inner lane	1.214	2.8	2.8	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72900	72800	Outer lane	0.891	2.8	2.8	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72800	72700	Inner lane	4.651	2.2	2.2	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
72800	72700	Outer lane	1.189	2.8	2.8	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72700	72600	Inner lane	5.466	1.9	1.9	Fair	7.1	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
72700	72600	Outer lane	5.563	1.9	1.9	Fair	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
72600	72500	Inner lane	4.586	2.2	2.2	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
72600	72500	Outer lane	6.383	1.8	1.8	Fair	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
72500	72400	Inner lane	3.509	2.4	2.4	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	1.81	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
72500	72400	Outer lane	1.806	2.7	2.7	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72400	72300	Inner lane	3.451	2.4	2.4	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72400	72300	Outer lane	0.540	2.9	2.9	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
72300	72200	Inner lane	3.749	2.3	2.3	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	1.18	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
72300	72200	Outer lane	1.189	2.8	2.8	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
72200	72100	Inner lane	2.814	2.5	2.5	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72200	72100	Outer lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72100	72000	Inner lane	3.220	2.4	2.4	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.87	2.2	1.7	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
72100	72000	Outer lane	1.017	2.8	2.8	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
72000	71900	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
72000	71900	Outer lane	1.903	2.7	2.7	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71900	71800	Inner lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	1.31	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71900	71800	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71800	71700	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71800	71700	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71700	71600	Inner lane	2.437	2.6	2.6	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	1.81	1.9	1.4	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
71700	71600	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71600	71500	Inner lane	6.337	1.8	1.8	Fair	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
71600	71500	Outer lane	0.000	3.0	3.0	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71500	71400	Inner lane	6.549	1.7	1.7	Fair	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
71500	71400	Outer lane	4.029	2.3	2.3	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71400	71300	Inner lane	8.126	1.4	1.4	Fair	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
71400	71300	Outer lane	4.026	2.3	2.3	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71300	71200	Inner lane	3.843	2.3	2.3	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71300	71200	Outer lane	1.474	2.7	2.7	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71200	71100	Inner lane	1.223	2.8	2.8	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71200	71100	Outer lane	2.709	2.5	2.5	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71100	71000	Inner lane	3.209	2.4	2.4	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71100	71000	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
71000	70900	Inner lane	2.106	2.6	2.6	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
71000	70900	Outer lane	2.957	2.5	2.5	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70900	70800	Inner lane	3.791	2.3	2.3	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70900	70800	Outer lane	0.614	2.9	2.9	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
70800	70700	Inner lane	2.354	2.6	2.6	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70800	70700	Outer lane	2.460	2.6	2.6	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70700	70600	Inner lane	2.066	2.6	2.6	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70700	70600	Outer lane	1.634	2.7	2.7	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70600	70500	Inner lane	5.214	2.0	2.0	Fair	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
70600	70500	Outer lane	1.846	2.7	2.7	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70500	70400	Inner lane	3.811	2.3	2.3	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
70500	70400	Outer lane	0.969	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
70400	70300	Inner lane	5.423	1.9	1.9	Fair	6.2	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
70400	70300	Outer lane	3.643	2.3	2.3	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
70300	70200	Inner lane	3.097	2.4	2.4	Good	9.1	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
70300	70200	Outer lane	3.714	2.3	2.3	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70200	70100	Inner lane	6.037	1.8	1.8	Fair	6.1	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
70200	70100	Outer lane	4.360	2.2	2.2	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
70100	70000	Inner lane	4.929	2.1	2.1	Good	8	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
70100	70000	Outer lane	2.643	2.5	2.5	Good	8.2	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
70000	69900	Inner lane	2.351	2.6	2.6	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
70000	69900	Outer lane	1.054	2.8	2.8	Good	8.3	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69900	69800	Inner lane	0.891	2.8	2.8	Good	6.2	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69900	69800	Outer lane	0.043	3.0	3.0	Good	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69800	69700	Inner lane	1.657	2.7	2.7	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69800	69700	Outer lane	0.637	2.9	2.9	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69700	69600	Inner lane	3.806	2.3	2.3	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69700	69600	Outer lane	1.983	2.6	2.6	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69600	69500	Inner lane	1.749	2.7	2.7	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69600	69500	Outer lane	2.731	2.5	2.5	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69500	69400	Inner lane	4.151	2.3	2.3	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69500	69400	Outer lane	4.340	2.2	2.2	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
69400	69300	Inner lane	5.674	1.9	1.9	Fair	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69400	69300	Outer lane	2.634	2.5	2.5	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69300	69200	Inner lane	5.263	2.0	2.0	Fair	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69300	69200	Outer lane	3.931	2.3	2.3	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69200	69100	Inner lane	4.954	2.1	2.1	Good	8.4	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
69200	69100	Outer lane	3.889	2.3	2.3	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69100	69000	Inner lane	4.694	2.2	2.2	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
69100	69000	Outer lane	2.131	2.6	2.6	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69000	68900	Inner lane	3.180	2.4	2.4	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
69000	68900	Outer lane	3.006	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68900	68800	Inner lane	2.911	2.5	2.5	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
68900	68800	Outer lane	0.654	2.9	2.9	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
68800	68700	Inner lane	5.803	1.9	1.9	Fair	15.5	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.0	Good
68800	68700	Outer lane	1.494	2.7	2.7	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68700	68600	Inner lane	1.891	2.7	2.7	Good	12.3	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
68700	68600	Outer lane	2.117	2.6	2.6	Good	6.7	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
68600	68500	Inner lane	2.351	2.6	2.6	Good	8.5	1.4	1.4	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
68600	68500	Outer lane	2.297	2.6	2.6	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68500	68400	Inner lane	4.123	2.3	2.3	Good	8.7	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
68500	68400	Outer lane	2.460	2.6	2.6	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68400	68300	Inner lane	0.951	2.8	2.8	Good	9.3	1.2	1.2	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
68400	68300	Outer lane	2.514	2.6	2.6	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68300	68200	Inner lane	1.209	2.8	2.8	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68300	68200	Outer lane	0.323	2.9	2.9	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68200	68100	Inner lane	2.809	2.5	2.5	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
68200	68100	Outer lane	0.643	2.9	2.9	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
68100	68000	Inner lane	0.814	2.9	2.9	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68100	68000	Outer lane	0.903	2.8	2.8	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68000	67900	Inner lane	2.651	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
68000	67900	Outer lane	0.329	2.9	2.9	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67900	67800	Inner lane	1.806	2.7	2.7	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67900	67800	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67800	67700	Inner lane	1.466	2.7	2.7	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67800	67700	Outer lane	0.000	3.0	3.0	Good	2.2	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67700	67600	Inner lane	1.766	2.7	2.7	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67700	67600	Outer lane	1.000	2.8	2.8	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67600	67500	Inner lane	1.054	2.8	2.8	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67600	67500	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67500	67400	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67500	67400	Outer lane	0.291	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67400	67300	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67400	67300	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67300	67200	Inner lane	0.637	2.9	2.9	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67300	67200	Outer lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67200	67100	Inner lane	0.943	2.8	2.8	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67200	67100	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67100	67000	Inner lane	0.557	2.9	2.9	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67100	67000	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
67000	66900	Inner lane	0.923	2.8	2.8	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
67000	66900	Outer lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66900	66800	Inner lane	1.191	2.8	2.8	Good	10.1	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
66900	66800	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66800	66700	Inner lane	0.931	2.8	2.8	Good	10.4	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
66800	66700	Outer lane	0.900	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66700	66600	Inner lane	1.197	2.8	2.8	Good	8.9	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
66700	66600	Outer lane	1.397	2.8	2.8	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66600	66500	Inner lane	0.617	2.9	2.9	Good	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66600	66500	Outer lane	0.189	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66500	66400	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66500	66400	Outer lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66400	66300	Inner lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66400	66300	Outer lane	4.649	2.2	2.2	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66300	66200	Inner lane	1.854	2.7	2.7	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66300	66200	Outer lane	4.671	2.2	2.2	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
66200	66100	Inner lane	2.120	2.6	2.6	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66200	66100	Outer lane	3.691	2.3	2.3	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66100	66000	Inner lane	1.277	2.8	2.8	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66100	66000	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
66000	65900	Inner lane	1.114	2.8	2.8	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
66000	65900	Outer lane	0.000	3.0	3.0	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
65900	65800	Inner lane	0.946	2.8	2.8	Good	2.3	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
65900	65800	Outer lane	1.417	2.7	2.7	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65800	65700	Inner lane	0.977	2.8	2.8	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.64	2.4	1.8	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65800	65700	Outer lane	1.209	2.8	2.8	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
65700	65600	Inner lane	0.900	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
65700	65600	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
65600	65500	Inner lane	2.123	2.6	2.6	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65600	65500	Outer lane	3.563	2.4	2.4	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65500	65400	Inner lane	2.300	2.6	2.6	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65500	65400	Outer lane	1.337	2.8	2.8	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65400	65300	Inner lane	2.331	2.6	2.6	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65400	65300	Outer lane	6.163	1.8	1.8	Fair	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
65300	65200	Inner lane	1.277	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
65300	65200	Outer lane	7.246	1.6	1.6	Fair	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
65200	65100	Inner lane	1.897	2.7	2.7	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65200	65100	Outer lane	5.774	1.9	1.9	Fair	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
65100	65000	Inner lane	3.191	2.4	2.4	Good	7.1	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
65100	65000	Outer lane	1.791	2.7	2.7	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
65000	64900	Inner lane	1.197	2.8	2.8	Good	7.3	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
65000	64900	Outer lane	0.926	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
64900	64800	Inner lane	1.906	2.7	2.7	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64900	64800	Outer lane	2.331	2.6	2.6	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64800	64700	Inner lane	1.534	2.7	2.7	Good	7.7	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64800	64700	Outer lane	2.111	2.6	2.6	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64700	64600	Inner lane	1.197	2.8	2.8	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64700	64600	Outer lane	0.937	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
64600	64500	Inner lane	1.340	2.8	2.8	Good	6.5	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64600	64500	Outer lane	0.643	2.9	2.9	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
64500	64400	Inner lane	3.094	2.4	2.4	Good	7.8	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64500	64400	Outer lane	1.554	2.7	2.7	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64400	64300	Inner lane	0.994	2.8	2.8	Good	9.6	1.2	1.2	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64400	64300	Outer lane	1.131	2.8	2.8	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64300	64200	Inner lane	0.871	2.8	2.8	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
64300	64200	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
64200	64100	Inner lane	1.963	2.7	2.7	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64200	64100	Outer lane	1.389	2.8	2.8	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64100	64000	Inner lane	1.054	2.8	2.8	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
64100	64000	Outer lane	1.177	2.8	2.8	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64000	63900	Inner lane	2.140	2.6	2.6	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
64000	63900	Outer lane	2.051	2.6	2.6	Good	6.2	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
63900	63800	Inner lane	0.909	2.8	2.8	Good	7.4	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
63900	63800	Outer lane	1.780	2.7	2.7	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63800	63700	Inner lane	2.011	2.6	2.6	Good	6.8	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
63800	63700	Outer lane	2.614	2.5	2.5	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63700	63600	Inner lane	2.069	2.6	2.6	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63700	63600	Outer lane	2.109	2.6	2.6	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63600	63500	Inner lane	2.526	2.6	2.6	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63600	63500	Outer lane	1.254	2.8	2.8	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63500	63400	Inner lane	1.534	2.7	2.7	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63500	63400	Outer lane	0.934	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
63400	63300	Inner lane	1.497	2.7	2.7	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63400	63300	Outer lane	0.631	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
63300	63200	Inner lane	0.446	2.9	2.9	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63300	63200	Outer lane	0.606	2.9	2.9	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63200	63100	Inner lane	1.946	2.7	2.7	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63200	63100	Outer lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
63100	63000	Inner lane	2.606	2.5	2.5	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63100	63000	Outer lane	2.694	2.5	2.5	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63000	62900	Inner lane	1.669	2.7	2.7	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
63000	62900	Outer lane	0.611	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
62900	62800	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62900	62800	Outer lane	0.331	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
62800	62700	Inner lane	0.646	2.9	2.9	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
62800	62700	Outer lane	0.951	2.8	2.8	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
62700	62600	Inner lane	1.780	2.7	2.7	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62700	62600	Outer lane	1.829	2.7	2.7	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62600	62500	Inner lane	2.140	2.6	2.6	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62600	62500	Outer lane	1.814	2.7	2.7	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62500	62400	Inner lane	1.503	2.7	2.7	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62500	62400	Outer lane	0.614	2.9	2.9	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
62400	62300	Inner lane	0.000	3.0	3.0	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62400	62300	Outer lane	0.931	2.8	2.8	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62300	62200	Inner lane	4.034	2.3	2.3	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
62300	62200	Outer lane	1.297	2.8	2.8	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62200	62100	Inner lane	1.986	2.6	2.6	Good	7.3	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
62200	62100	Outer lane	4.691	2.2	2.2	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62100	62000	Inner lane	1.797	2.7	2.7	Good	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
62100	62000	Outer lane	2.537	2.5	2.5	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
62000	61900	Inner lane	6.711	1.7	1.7	Fair	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
62000	61900	Outer lane	4.720	2.2	2.2	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61900	61800	Inner lane	4.263	2.2	2.2	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
61900	61800	Outer lane	2.643	2.5	2.5	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61800	61700	Inner lane	1.623	2.7	2.7	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61800	61700	Outer lane	3.214	2.4	2.4	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61700	61600	Inner lane	4.417	2.2	2.2	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61700	61600	Outer lane	5.106	2.0	2.0	Fair	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
61600	61500	Inner lane	2.897	2.5	2.5	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61600	61500	Outer lane	4.403	2.2	2.2	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61500	61400	Inner lane	4.180	2.3	2.3	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61500	61400	Outer lane	3.846	2.3	2.3	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61400	61300	Inner lane	2.326	2.6	2.6	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61400	61300	Outer lane	2.937	2.5	2.5	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61300	61200	Inner lane	2.240	2.6	2.6	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
61300	61200	Outer lane	3.934	2.3	2.3	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61200	61100	Inner lane	3.760	2.3	2.3	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
61200	61100	Outer lane	3.797	2.3	2.3	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
61100	61000	Inner lane	3.220	2.4	2.4	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61100	61000	Outer lane	2.643	2.5	2.5	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
61000	60900	Inner lane	3.949	2.3	2.3	Good	6.8	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
61000	60900	Outer lane	4.426	2.2	2.2	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60900	60800	Inner lane	3.171	2.4	2.4	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60900	60800	Outer lane	5.549	1.9	1.9	Fair	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60800	60700	Inner lane	4.411	2.2	2.2	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60800	60700	Outer lane	5.414	1.9	1.9	Fair	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60700	60600	Inner lane	4.651	2.2	2.2	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60700	60600	Outer lane	3.529	2.4	2.4	Good	2.1	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60600	60500	Inner lane	4.354	2.2	2.2	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60600	60500	Outer lane	2.443	2.6	2.6	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60500	60400	Inner lane	3.906	2.3	2.3	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60500	60400	Outer lane	5.020	2.0	2.0	Fair	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60400	60300	Inner lane	3.706	2.3	2.3	Good	7.1	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60400	60300	Outer lane	2.354	2.6	2.6	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60300	60200	Inner lane	2.677	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60300	60200	Outer lane	2.117	2.6	2.6	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60200	60100	Inner lane	1.763	2.7	2.7	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
60200	60100	Outer lane	2.466	2.6	2.6	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60100	60000	Inner lane	2.977	2.5	2.5	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60100	60000	Outer lane	1.803	2.7	2.7	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60000	59900	Inner lane	2.351	2.6	2.6	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
60000	59900	Outer lane	2.823	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59900	59800	Inner lane	1.780	2.7	2.7	Good	7.2	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
59900	59800	Outer lane	2.211	2.6	2.6	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59800	59700	Inner lane	2.700	2.5	2.5	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59800	59700	Outer lane	2.923	2.5	2.5	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59700	59600	Inner lane	2.406	2.6	2.6	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59700	59600	Outer lane	2.857	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59600	59500	Inner lane	6.909	1.7	1.7	Fair	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
59600	59500	Outer lane	4.629	2.2	2.2	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
59500	59400	Inner lane	3.086	2.4	2.4	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59500	59400	Outer lane	3.546	2.4	2.4	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59400	59300	Inner lane	4.651	2.2	2.2	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59400	59300	Outer lane	3.791	2.3	2.3	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59300	59200	Inner lane	3.360	2.4	2.4	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
59300	59200	Outer lane	2.860	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59200	59100	Inner lane	1.597	2.7	2.7	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59200	59100	Outer lane	1.997	2.6	2.6	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59100	59000	Inner lane	1.214	2.8	2.8	Good	5.2	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59100	59000	Outer lane	0.671	2.9	2.9	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
59000	58900	Inner lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
59000	58900	Outer lane	1.869	2.7	2.7	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58900	58800	Inner lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58900	58800	Outer lane	0.900	2.8	2.8	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58800	58700	Inner lane	0.786	2.9	2.9	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58800	58700	Outer lane	0.991	2.8	2.8	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58700	58600	Inner lane	0.323	2.9	2.9	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58700	58600	Outer lane	0.694	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58600	58500	Inner lane	0.274	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58600	58500	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.45	2.6	2.0	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58500	58400	Inner lane	2.851	2.5	2.5	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58500	58400	Outer lane	2.697	2.5	2.5	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58400	58300	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58400	58300	Outer lane	0.697	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58300	58200	Inner lane	0.860	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58300	58200	Outer lane	0.689	2.9	2.9	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58200	58100	Inner lane	0.980	2.8	2.8	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58200	58100	Outer lane	0.466	2.9	2.9	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.10	2.9	2.2	Good	2.3	Good
58100	58000	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58100	58000	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
58000	57900	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
58000	57900	Outer lane	0.946	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
57900	57800	Inner lane	1.620	2.7	2.7	Good	6.3	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
57900	57800	Outer lane	2.814	2.5	2.5	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57800	57700	Inner lane	2.411	2.6	2.6	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57800	57700	Outer lane	1.786	2.7	2.7	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57700	57600	Inner lane	1.263	2.8	2.8	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57700	57600	Outer lane	1.586	2.7	2.7	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57600	57500	Inner lane	0.934	2.8	2.8	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57600	57500	Outer lane	1.189	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
57500	57400	Inner lane	1.537	2.7	2.7	Good	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
57500	57400	Outer lane	1.957	2.7	2.7	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57400	57300	Inner lane	1.686	2.7	2.7	Good	7.7	1.5	1.5	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
57400	57300	Outer lane	1.223	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
57300	57200	Inner lane	2.091	2.6	2.6	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57300	57200	Outer lane	2.069	2.6	2.6	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57200	57100	Inner lane	0.689	2.9	2.9	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.99	2.1	1.6	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
57200	57100	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
57100	57000	Inner lane	1.183	2.8	2.8	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57100	57000	Outer lane	3.523	2.4	2.4	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
57000	56900	Inner lane	4.174	2.3	2.3	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
57000	56900	Outer lane	1.806	2.7	2.7	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56900	56800	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56900	56800	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
56800	56700	Inner lane	0.337	2.9	2.9	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	3.58	1.7	1.3	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
56800	56700	Outer lane	1.674	2.7	2.7	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
56700	56600	Inner lane	0.000	3.0	3.0	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56700	56600	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
56600	56500	Inner lane	0.000	3.0	3.0	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56600	56500	Outer lane	1.917	2.7	2.7	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56500	56400	Inner lane	2.717	2.5	2.5	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56500	56400	Outer lane	4.843	2.1	2.1	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56400	56300	Inner lane	4.057	2.3	2.3	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56400	56300	Outer lane	2.560	2.5	2.5	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56300	56200	Inner lane	0.669	2.9	2.9	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56300	56200	Outer lane	1.823	2.7	2.7	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56200	56100	Inner lane	3.211	2.4	2.4	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56200	56100	Outer lane	2.637	2.5	2.5	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56100	56000	Inner lane	1.749	2.7	2.7	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56100	56000	Outer lane	3.246	2.4	2.4	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56000	55900	Inner lane	2.431	2.6	2.6	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
56000	55900	Outer lane	2.123	2.6	2.6	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55900	55800	Inner lane	2.900	2.5	2.5	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55900	55800	Outer lane	1.780	2.7	2.7	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55800	55700	Inner lane	2.791	2.5	2.5	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55800	55700	Outer lane	1.426	2.7	2.7	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55700	55600	Inner lane	2.671	2.5	2.5	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55700	55600	Outer lane	2.923	2.5	2.5	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55600	55500	Inner lane	3.020	2.5	2.5	Good	5	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
55600	55500	Outer lane	1.294	2.8	2.8	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55500	55400	Inner lane	2.886	2.5	2.5	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55500	55400	Outer lane	2.766	2.5	2.5	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55400	55300	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55400	55300	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55300	55200	Inner lane	0.000	3.0	3.0	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55300	55200	Outer lane	0.329	2.9	2.9	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
55200	55100	Inner lane	1.254	2.8	2.8	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55200	55100	Outer lane	4.726	2.2	2.2	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55100	55000	Inner lane	1.803	2.7	2.7	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55100	55000	Outer lane	3.849	2.3	2.3	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55000	54900	Inner lane	4.354	2.2	2.2	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
55000	54900	Outer lane	0.746	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
54900	54800	Inner lane	2.726	2.5	2.5	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	3.20	1.8	1.3	Fair	0.36	2.7	2.0	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
54900	54800	Outer lane	2.237	2.6	2.6	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54800	54700	Inner lane	2.663	2.5	2.5	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54800	54700	Outer lane	2.991	2.5	2.5	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54700	54600	Inner lane	0.320	2.9	2.9	Good	4.5	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54700	54600	Outer lane	1.991	2.6	2.6	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54600	54500	Inner lane	1.817	2.7	2.7	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54600	54500	Outer lane	1.071	2.8	2.8	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
54500	54400	Inner lane	1.994	2.6	2.6	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54500	54400	Outer lane	0.606	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
54400	54300	Inner lane	1.497	2.7	2.7	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54400	54300	Outer lane	2.814	2.5	2.5	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54300	54200	Inner lane	2.989	2.5	2.5	Good	5.3	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
54300	54200	Outer lane	2.157	2.6	2.6	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54200	54100	Inner lane	3.223	2.4	2.4	Good	8.9	1.3	1.3	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
54200	54100	Outer lane	4.640	2.2	2.2	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
54100	54000	Inner lane	4.503	2.2	2.2	Good	7.3	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
54100	54000	Outer lane	2.069	2.6	2.6	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54000	53900	Inner lane	3.620	2.4	2.4	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
54000	53900	Outer lane	8.191	1.4	1.4	Fair	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
53900	53800	Inner lane	4.651	2.2	2.2	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
53900	53800	Outer lane	8.637	1.4	1.4	Fair	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
53800	53700	Inner lane	7.331	1.6	1.6	Fair	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
53800	53700	Outer lane	7.086	1.6	1.6	Fair	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
53700	53600	Inner lane	5.246	2.0	2.0	Fair	5.5	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
53700	53600	Outer lane	2.103	2.6	2.6	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53600	53500	Inner lane	1.191	2.8	2.8	Good	5.6	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53600	53500	Outer lane	5.383	1.9	1.9	Fair	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
53500	53400	Inner lane	2.440	2.6	2.6	Good	7.5	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
53500	53400	Outer lane	2.637	2.5	2.5	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53400	53300	Inner lane	0.917	2.8	2.8	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53400	53300	Outer lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53300	53200	Inner lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53300	53200	Outer lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53200	53100	Inner lane	0.000	3.0	3.0	Good	4.8	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
53200	53100	Outer lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53100	53000	Inner lane	0.351	2.9	2.9	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53100	53000	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53000	52900	Inner lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
53000	52900	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52900	52800	Inner lane	0.929	2.8	2.8	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52900	52800	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
52800	52700	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52800	52700	Outer lane	3.551	2.4	2.4	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52700	52600	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52700	52600	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52600	52500	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52600	52500	Outer lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52500	52400	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52500	52400	Outer lane	3.863	2.3	2.3	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52400	52300	Inner lane	0.000	3.0	3.0	Good	4.2	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52400	52300	Outer lane	3.166	2.4	2.4	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52300	52200	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52300	52200	Outer lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52200	52100	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52200	52100	Outer lane	0.000	3.0	3.0	Good	6	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.33	2.7	2.0	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52100	52000	Inner lane	0.000	3.0	3.0	Good	7.1	1.6	1.6	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52100	52000	Outer lane	1.103	2.8	2.8	Good	6.2	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
52000	51900	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
52000	51900	Outer lane	4.934	2.1	2.1	Good	6.9	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.1	Good
51900	51800	Inner lane	0.000	3.0	3.0	Good	5.7	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51900	51800	Outer lane	5.206	2.0	2.0	Fair	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
51800	51700	Inner lane	0.000	3.0	3.0	Good	5.8	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51800	51700	Outer lane	4.211	2.2	2.2	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
51700	51600	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51700	51600	Outer lane	1.863	2.7	2.7	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51600	51500	Inner lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51600	51500	Outer lane	1.537	2.7	2.7	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51500	51400	Inner lane	0.000	3.0	3.0	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51500	51400	Outer lane	2.160	2.6	2.6	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51400	51300	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51400	51300	Outer lane	2.651	2.5	2.5	Good	4.9	2.1	2.1	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51300	51200	Inner lane	0.000	3.0	3.0	Good	4.7	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51300	51200	Outer lane	2.697	2.5	2.5	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51200	51100	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51200	51100	Outer lane	2.751	2.5	2.5	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
51100	51000	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51100	51000	Outer lane	5.811	1.9	1.9	Fair	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
51000	50900	Inner lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
51000	50900	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50900	50800	Inner lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
50900	50800	Outer lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50800	50700	Inner lane	0.000	3.0	3.0	Good	4.4	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50800	50700	Outer lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50700	50600	Inner lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50700	50600	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50600	50500	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50600	50500	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50500	50400	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50500	50400	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50400	50300	Inner lane	0.000	3.0	3.0	Good	2.7	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50400	50300	Outer lane	1.749	2.7	2.7	Good	4.3	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
50300	50200	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50300	50200	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50200	50100	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50200	50100	Outer lane	0.000	3.0	3.0	Good	2.8	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50100	50000	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50100	50000	Outer lane	0.000	3.0	3.0	Good	2.6	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50000	49900	Inner lane	0.000	3.0	3.0	Good	3.3	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
50000	49900	Outer lane	0.000	3.0	3.0	Good	2.9	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49900	49800	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49900	49800	Outer lane	0.000	3.0	3.0	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49800	49700	Inner lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49800	49700	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49700	49600	Inner lane	0.000	3.0	3.0	Good	5.4	1.9	1.9	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
49700	49600	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49600	49500	Inner lane	0.000	3.0	3.0	Good	6.6	1.7	1.7	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
49600	49500	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49500	49400	Inner lane	0.000	3.0	3.0	Good	5.1	2.0	2.0	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
49500	49400	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49400	49300	Inner lane	0.000	3.0	3.0	Good	4.6	2.2	2.2	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
49400	49300	Outer lane	0.000	3.0	3.0	Good	3	2.5	2.5	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49300	49200	Inner lane	0.000	3.0	3.0	Good	5.9	1.8	1.8	Fair	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
49300	49200	Outer lane	0.000	3.0	3.0	Good	3.7	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49200	49100	Inner lane	0.000	3.0	3.0	Good	3.5	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49200	49100	Outer lane	0.000	3.0	3.0	Good	3.6	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49100	49000	Inner lane	0.000	3.0	3.0	Good	4.1	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49100	49000	Outer lane	0.000	3.0	3.0	Good	3.2	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.17	2.9	2.1	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49000	48900	Inner lane	0.000	3.0	3.0	Good	4	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
49000	48900	Outer lane	0.680	2.9	2.9	Good	3.1	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48900	48800	Inner lane	0.000	3.0	3.0	Good	11.6	1.0	1.0	Poor	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
48900	48800	Outer lane	0.000	3.0	3.0	Good	3.4	2.4	2.4	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48800	48700	Inner lane	0.000	3.0	3.0	Good	3.9	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48800	48700	Outer lane	0.000	3.0	3.0	Good	2.5	2.6	2.6	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48700	48600	Inner lane	0.000	3.0	3.0	Good	3.8	2.3	2.3	Good	0.000	3.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements			Final rating	Overall Condition
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		
48700	48600	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48600	48500	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
48600	48500	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48500	48400	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48500	48400	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48400	48300	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48400	48300	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48300	48200	Inner lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48300	48200	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48200	48100	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48200	48100	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48100	48000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48100	48000	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48000	47900	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
48000	47900	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47900	47800	Inner lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
47900	47800	Outer lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47800	47700	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
47800	47700	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47700	47600	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
47700	47600	Outer lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47600	47500	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47600	47500	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47500	47400	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47500	47400	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47400	47300	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47400	47300	Outer lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47300	47200	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47300	47200	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47200	47100	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47200	47100	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47100	47000	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
47100	47000	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47000	46900	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
47000	46900	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46900	46800	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46900	46800	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46800	46700	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46800	46700	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
46700	46600	Inner lane	0.000	**3.0**	**3.0**	Good	7.3	**1.6**	**1.6**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
46700	46600	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46600	46500	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46600	46500	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46500	46400	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46500	46400	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46400	46300	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46400	46300	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46300	46200	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
46300	46200	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46200	46100	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46200	46100	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46100	46000	Inner lane	0.000	**3.0**	**3.0**	Good	5	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
46100	46000	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46000	45900	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
46000	45900	Outer lane	0.000	**3.0**	**3.0**	Good	2.4	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45900	45800	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45900	45800	Outer lane	0.000	**3.0**	**3.0**	Good	2.2	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45800	45700	Inner lane	0.000	**3.0**	**3.0**	Good	2.5	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45800	45700	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45700	45600	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45700	45600	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45600	45500	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45600	45500	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45500	45400	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45500	45400	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45400	45300	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45400	45300	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45300	45200	Inner lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45300	45200	Outer lane	0.000	**3.0**	**3.0**	Good	4	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45200	45100	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45200	45100	Outer lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45100	45000	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45100	45000	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45000	44900	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
45000	44900	Outer lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44900	44800	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44900	44800	Outer lane	2.031	**2.6**	**2.6**	Good	2.5	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44800	44700	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44800	44700	Outer lane	0.926	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44700	44600	Inner lane	0.000	**3.0**	**3.0**	Good	6.6	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44700	44600	Outer lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44600	44500	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44600	44500	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.93	2.2	1.6	Fair	0.54	2.5	1.9	Fair	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good

Summary of Pavement Distresses : NH-33_Hazaribagh-Ranchi

Chainage		Lane		Cracks				Rutting				Pothole				Ravelling				Patching				Shoving				Settlements				
From	To			Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition		Rating	Weighted Rating value	Condition	Final rating	Overall Condition
44500	44400	Inner lane	0.000	**3.0**	**3.0**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44500	44400	Outer lane	0.891	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	1.42	2.0	1.5	Fair	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
44400	44300	Inner lane	0.000	**3.0**	**3.0**	Good	3.9	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44400	44300	Outer lane	1.137	**2.8**	**2.8**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44300	44200	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44300	44200	Outer lane	1.946	**2.7**	**2.7**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44200	44100	Inner lane	0.000	**3.0**	**3.0**	Good	4.6	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44200	44100	Outer lane	2.617	**2.5**	**2.5**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44100	44000	Inner lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44100	44000	Outer lane	0.603	**2.9**	**2.9**	Good	4.1	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
44000	43900	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
44000	43900	Outer lane	1.800	**2.7**	**2.7**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43900	43800	Inner lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43900	43800	Outer lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43800	43700	Inner lane	0.000	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43800	43700	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43700	43600	Inner lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43700	43600	Outer lane	1.197	**2.8**	**2.8**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43600	43500	Inner lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43600	43500	Outer lane	2.220	**2.6**	**2.6**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43500	43400	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43500	43400	Outer lane	1.471	**2.7**	**2.7**	Good	2.3	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43400	43300	Inner lane	0.000	**3.0**	**3.0**	Good	4.4	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43400	43300	Outer lane	0.223	**3.0**	**3.0**	Good	3.8	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43300	43200	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43300	43200	Outer lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43200	43100	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43200	43100	Outer lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43100	43000	Inner lane	0.000	**3.0**	**3.0**	Good	5.6	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
43100	43000	Outer lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43000	42900	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
43000	42900	Outer lane	0.520	**2.9**	**2.9**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42900	42800	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42900	42800	Outer lane	1.106	**2.8**	**2.8**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42800	42700	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42800	42700	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42700	42600	Inner lane	0.000	**3.0**	**3.0**	Good	6	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42700	42600	Outer lane	0.000	**3.0**	**3.0**	Good	3.4	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42600	42500	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42600	42500	Outer lane	0.000	**3.0**	**3.0**	Good	5.1	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42500	42400	Inner lane	0.000	**3.0**	**3.0**	Good	5.4	**1.9**	**1.9**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42500	42400	Outer lane	0.000	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42400	42300	Inner lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42400	42300	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42300	42200	Inner lane	0.000	**3.0**	**3.0**	Good	4.5	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42300	42200	Outer lane	0.000	**3.0**	**3.0**	Good	3.3	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42200	42100	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
42200	42100	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42100	42000	Inner lane	0.000	**3.0**	**3.0**	Good	2.1	**2.6**	**2.6**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42100	42000	Outer lane	0.000	**3.0**	**3.0**	Good	2.7	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42000	41900	Inner lane	0.000	**3.0**	**3.0**	Good	2.6	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
42000	41900	Outer lane	0.000	**3.0**	**3.0**	Good	2.9	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41900	41800	Inner lane	0.000	**3.0**	**3.0**	Good	3.5	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41900	41800	Outer lane	0.000	**3.0**	**3.0**	Good	3.1	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41800	41700	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41800	41700	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41700	41600	Inner lane	0.000	**3.0**	**3.0**	Good	4.3	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41700	41600	Outer lane	0.243	**3.0**	**3.0**	Good	4.7	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
41600	41500	Inner lane	0.000	**3.0**	**3.0**	Good	8.4	**1.4**	**1.4**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
41600	41500	Outer lane	0.000	**3.0**	**3.0**	Good	3.7	**2.3**	**2.3**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41500	41400	Inner lane	0.000	**3.0**	**3.0**	Good	6.1	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
41500	41400	Outer lane	0.737	**2.9**	**2.9**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41400	41300	Inner lane	0.000	**3.0**	**3.0**	Good	8	**1.5**	**1.5**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
41400	41300	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41300	41200	Inner lane	0.000	**3.0**	**3.0**	Good	4.8	**2.1**	**2.1**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
41300	41200	Outer lane	0.000	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41200	41100	Inner lane	0.000	**3.0**	**3.0**	Good	6.2	**1.8**	**1.8**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
41200	41100	Outer lane	0.186	**3.0**	**3.0**	Good	3	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41100	41000	Inner lane	0.000	**3.0**	**3.0**	Good	3.2	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41100	41000	Outer lane	0.000	**3.0**	**3.0**	Good	6.9	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
41000	40900	Inner lane	0.000	**3.0**	**3.0**	Good	3.6	**2.4**	**2.4**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
41000	40900	Outer lane	0.000	**3.0**	**3.0**	Good	8.2	**1.4**	**1.4**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
40900	40800	Inner lane	0.000	**3.0**	**3.0**	Good	5.3	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
40900	40800	Outer lane	0.757	**2.9**	**2.9**	Good	7.3	**1.6**	**1.6**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.2	Good
40800	40700	Inner lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
40800	40700	Outer lane	0.223	**3.0**	**3.0**	Good	6.7	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
40700	40600	Inner lane	0.000	**3.0**	**3.0**	Good	4.2	**2.2**	**2.2**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good
40700	40600	Outer lane	0.000	**3.0**	**3.0**	Good	6.5	**1.7**	**1.7**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
40600	40500	Inner lane	0.000	**3.0**	**3.0**	Good	5.2	**2.0**	**2.0**	Fair	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.3	Good
40600	40500	Outer lane	0.000	**3.0**	**3.0**	Good	2.8	**2.5**	**2.5**	Good	0.000	**3.0**	**1.5**	Fair	0.00	3.0	2.3	Good	0.00	3.0	2.3	Good	0.00	3.0	3.0	Good	0.00	3.0	2.3	Good	2.4	Good

NH-33_Hazaribagh-Ranchi _Road and Pavement Condition Survey															
Road Name: NH-33_Hazaribagh-Ranchi															Date:26-04-2023
Direction :RHS															
Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth			Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]				
115000	114900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4		Paved & Earthen	Good	0.0
115000	114900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
114900	114800	Inner lane	Flexible	Fair	6.80	0.00	0.00	0.00	0.0	0.1	6.7		Paved & Earthen	Good	0.0
114900	114800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7		Paved & Earthen	Good	0.0
114800	114700	Inner lane	Flexible	GOOD	14.44	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
114800	114700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5		Paved & Earthen	Good	0.0
114700	114600	Inner lane	Flexible	Fair	4.83	0.00	0.00	0.00	0.0	0.1	4.2		Paved & Earthen	Good	0.0
114700	114600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7		Paved & Earthen	Good	0.0
114600	114500	Inner lane	Flexible	Fair	7.68	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
114600	114500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6		Paved & Earthen	Good	0.0
114500	114400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.9		Paved & Earthen	Good	0.0
114500	114400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
114400	114300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
114400	114300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
114300	114200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
114300	114200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.3		Paved & Earthen	Good	0.0
114200	114100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
114200	114100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
114100	114000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.9		Paved & Earthen	Good	0.0
114100	114000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
114000	113900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1		Paved & Earthen	Good	0.0
114000	113900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
113900	113800	Inner lane	Flexible	GOOD	0.00	1.09	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
113900	113800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7		Paved & Earthen	Good	0.0
113800	113700	Inner lane	Flexible	GOOD	0.00	0.84	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
113800	113700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
113700	113600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.7		Paved & Earthen	Good	0.0
113700	113600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
113600	113500	Inner lane	Flexible	Fair	2.45	1.02	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
113600	113500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
113500	113400	Inner lane	Flexible	GOOD	2.14	0.74	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
113500	113400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7		Paved & Earthen	Good	0.0
113400	113300	Inner lane	Flexible	GOOD	7.39	1.01	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
113400	113300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
113300	113200	Inner lane	Flexible	Fair	7.84	0.00	0.00	0.00	0.0	0.1	4.7		Paved & Earthen	Good	0.0
113300	113200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
113200	113100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
113200	113100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0
113100	113000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
113100	113000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1		Paved & Earthen	Good	0.0
113000	112900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
113000	112900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
112900	112800	Inner lane	Flexible	GOOD	1.39	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
112900	112800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3		Paved & Earthen	Good	0.0
112800	112700	Inner lane	Flexible	GOOD	3.64	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
112800	112700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
112700	112600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2		Paved & Earthen	Good	0.0
112700	112600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2		Paved & Earthen	Good	0.0
112600	112500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
112600	112500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
112500	112400	Inner lane	Flexible	POOR	1.02	0.67	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
112500	112400	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
112400	112300	Inner lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
112400	112300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
112300	112200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
112300	112200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
112200	112100	Inner lane	Flexible	GOOD	0.00	1.50	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
112200	112100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
112100	112000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
112100	112000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
112000	111900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
112000	111900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
111900	111800	Inner lane	Flexible	GOOD	0.00	0.67	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
111900	111800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
111800	111700	Inner lane	Flexible	GOOD	0.66	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
111800	111700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
111700	111600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
111700	111600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
111600	111500	Inner lane	Flexible	GOOD	0.35	0.93	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
111600	111500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
111500	111400	Inner lane	Flexible	GOOD	2.70	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
111500	111400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.4	0.1	2.4	Paved & Earthen	Good	0.0
111400	111300	Inner lane	Flexible	GOOD	2.67	0.64	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
111400	111300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
111300	111200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
111300	111200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
111200	111100	Inner lane	Flexible	GOOD	1.41	0.37	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
111200	111100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
111100	111000	Inner lane	Flexible	Fair	0.93	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
111100	111000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
111000	110900	Inner lane	Flexible	POOR	0.06	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
111000	110900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
110900	110800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
110900	110800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
110800	110700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
110800	110700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
110700	110600	Inner lane	Flexible	Fair	2.45	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
110700	110600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
110600	110500	Inner lane	Flexible	GOOD	0.36	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
110600	110500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
110500	110400	Inner lane	Flexible	Fair	10.35	0.00	0.00	0.00	0.0	0.1	7.5	Paved & Earthen	Good	0.0
110500	110400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
110400	110300	Inner lane	Flexible	GOOD	0.00	1.21	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
110400	110300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
110300	110200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
110300	110200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
110200	110100	Inner lane	Flexible	GOOD	0.79	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
110200	110100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
110100	110000	Inner lane	Flexible	Fair	0.99	0.64	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
110100	110000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
110000	109900	Inner lane	Flexible	POOR	10.10	0.00	0.00	0.00	0.0	0.1	6.8	Paved & Earthen	Good	0.0
110000	109900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
109900	109800	Inner lane	Flexible	Fair	3.88	0.00	0.00	0.00	5.2	0.1	6.7	Paved & Earthen	Good	0.0
109900	109800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
109800	109700	Inner lane	Flexible	Fair	4.63	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
109800	109700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
109700	109600	Inner lane	Flexible	Fair	14.73	0.00	0.00	0.00	0.0	0.1	7.6	Paved & Earthen	Good	0.0
109700	109600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
109600	109500	Inner lane	Flexible	POOR	8.55	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
109600	109500	Outer lane	Flexible	Fair	0.06	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
109500	109400	Inner lane	Flexible	GOOD	3.33	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
109500	109400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
109400	109300	Inner lane	Flexible	Fair	3.90	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
109400	109300	Outer lane	Flexible	Fair	0.24	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
109300	109200	Inner lane	Flexible	GOOD	7.57	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
109300	109200	Outer lane	Flexible	GOOD	0.31	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
109200	109100	Inner lane	Flexible	POOR	3.16	2.61	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
109200	109100	Outer lane	Flexible	POOR	0.35	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
109100	109000	Inner lane	Flexible	Fair	0.61	2.16	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
109100	109000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
109000	108900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
109000	108900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
108900	108800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
108900	108800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
108800	108700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
108800	108700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
108700	108600	Inner lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
108700	108600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
108600	108500	Inner lane	Flexible	GOOD	2.27	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
108600	108500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
108500	108400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
108500	108400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
108400	108300	Inner lane	Flexible	GOOD	0.93	0.73	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
108400	108300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
108300	108200	Inner lane	Flexible	GOOD	1.42	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
108300	108200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
108200	108100	Inner lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
108200	108100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
108100	108000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
108100	108000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
108000	107900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
108000	107900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
107900	107800	Inner lane	Flexible	GOOD	2.12	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
107900	107800	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
107800	107700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
107800	107700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
107700	107600	Inner lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
107700	107600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
107600	107500	Inner lane	Flexible	POOR	0.89	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
107600	107500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
107500	107400	Inner lane	Flexible	GOOD	5.09	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
107500	107400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
107400	107300	Inner lane	Flexible	GOOD	1.79	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
107400	107300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
107300	107200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
107300	107200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
107200	107100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
107200	107100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
107100	107000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
107100	107000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
107000	106900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
107000	106900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
106900	106800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
106900	106800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
106800	106700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
106800	106700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
106700	106600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
106700	106600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9	Paved & Earthen	Good	0.0
106600	106500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
106600	106500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
106500	106400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
106500	106400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
106400	106300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
106400	106300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
106300	106200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
106300	106200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
106200	106100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
106200	106100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
106100	106000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
106100	106000	Outer lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
106000	105900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
106000	105900	Outer lane	Flexible	GOOD	2.56	1.99	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
105900	105800	Inner lane	Flexible	GOOD	8.63	0.00	0.00	0.00	0.0	0.1	9.1	Paved & Earthen	Good	0.0
105900	105800	Outer lane	Flexible	GOOD	1.10	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
105800	105700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
105800	105700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
105700	105600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
105700	105600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
105600	105500	Inner lane	Flexible	Fair	4.64	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
105600	105500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
105500	105400	Inner lane	Flexible	GOOD	4.08	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
105500	105400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
105400	105300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
105400	105300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
105300	105200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
105300	105200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
105200	105100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
105200	105100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
105100	105000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
105100	105000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
105000	104900	Inner lane	Flexible	GOOD	4.12	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
105000	104900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
104900	104800	Inner lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
104900	104800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
104800	104700	Inner lane	Flexible	GOOD	2.75	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
104800	104700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
104700	104600	Inner lane	Flexible	Fair	7.59	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
104700	104600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
104600	104500	Inner lane	Flexible	Fair	7.02	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
104600	104500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
104500	104400	Inner lane	Flexible	GOOD	4.11	0.00	0.00	0.00	0.0	0.1	6.4	Paved & Earthen	Good	0.0
104500	104400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
104400	104300	Inner lane	Flexible	Fair	3.44	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
104400	104300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
104300	104200	Inner lane	Flexible	GOOD	1.25	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
104300	104200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
104200	104100	Inner lane	Flexible	GOOD	17.17	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
104200	104100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
104100	104000	Inner lane	Flexible	Fair	8.75	0.00	0.00	0.00	3.4	0.1	4.7	Paved & Earthen	Good	0.0
104100	104000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	7	Paved & Earthen	Good	0.0
104000	103900	Inner lane	Flexible	Fair	8.71	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
104000	103900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
103900	103800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
103900	103800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
103800	103700	Inner lane	Flexible	GOOD	0.88	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
103800	103700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
103700	103600	Inner lane	Flexible	Fair	9.97	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
103700	103600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
103600	103500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
103600	103500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
103500	103400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
103500	103400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
103400	103300	Inner lane	Flexible	Fair	1.05	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
103400	103300	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
103300	103200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
103300	103200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
103200	103100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
103200	103100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
103100	103000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
103100	103000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
103000	102900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
103000	102900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
102900	102800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
102900	102800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
102800	102700	Inner lane	Flexible	GOOD	7.32	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
102800	102700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
102700	102600	Inner lane	Flexible	GOOD	5.82	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
102700	102600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
102600	102500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
102600	102500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
102500	102400	Inner lane	Flexible	GOOD	5.19	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
102500	102400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
102400	102300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
102400	102300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
102300	102200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
102300	102200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
102200	102100	Inner lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	6.4	Paved & Earthen	Good	0.0
102200	102100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
102100	102000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
102100	102000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
102000	101900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
102000	101900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
101900	101800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
101900	101800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
101800	101700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
101800	101700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
101700	101600	Inner lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
101700	101600	Outer lane	Flexible	GOOD	0.26	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
101600	101500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
101600	101500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
101500	101400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
101500	101400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
101400	101300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
101400	101300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
101300	101200	Inner lane	Flexible	GOOD	1.98	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
101300	101200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
101200	101100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
101200	101100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
101100	101000	Inner lane	Flexible	Fair	0.89	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
101100	101000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
101000	100900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
101000	100900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
100900	100800	Inner lane	Flexible	GOOD	4.07	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
100900	100800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
100800	100700	Inner lane	Flexible	Fair	7.50	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
100800	100700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
100700	100600	Inner lane	Flexible	POOR	9.57	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
100700	100600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
100600	100500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
100600	100500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
100500	100400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
100500	100400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
100400	100300	Inner lane	Flexible	GOOD	7.52	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
100400	100300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
100300	100200	Inner lane	Flexible	GOOD	11.57	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
100300	100200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
100200	100100	Inner lane	Flexible	GOOD	5.33	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
100200	100100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
100100	100000	Inner lane	Flexible	Fair	2.59	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
100100	100000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9	Paved & Earthen	Good	0.0
100000	99900	Inner lane	Flexible	Fair	7.84	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
100000	99900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9	Paved & Earthen	Good	0.0
99900	99800	Inner lane	Flexible	GOOD	5.35	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
99900	99800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
99800	99700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
99800	99700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
99700	99600	Inner lane	Flexible	GOOD	3.78	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
99700	99600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
99600	99500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
99600	99500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
99500	99400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
99500	99400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
99400	99300	Inner lane	Flexible	GOOD	11.02	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
99400	99300	Outer lane	Flexible	POOR	3.45	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
99300	99200	Inner lane	Flexible	GOOD	7.21	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
99300	99200	Outer lane	Flexible	GOOD	0.00	1.31	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
99200	99100	Inner lane	Flexible	Fair	9.80	0.00	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
99200	99100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
99100	99000	Inner lane	Flexible	Fair	19.77	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0
99100	99000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
99000	98900	Inner lane	Flexible	Fair	17.69	4.63	0.00	0.00	0.0	0.1	11.4	Paved & Earthen	Good	0.0
99000	98900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
98900	98800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	10.6	Paved & Earthen	Good	0.0
98900	98800	Outer lane	Flexible	Fair	3.93	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
98800	98700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
98800	98700	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
98700	98600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
98700	98600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
98600	98500	Inner lane	Flexible	GOOD	2.72	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
98600	98500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
98500	98400	Inner lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
98500	98400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
98400	98300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
98400	98300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
98300	98200	Inner lane	Flexible	GOOD	0.30	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
98300	98200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
98200	98100	Inner lane	Flexible	GOOD	1.33	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
98200	98100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
98100	98000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
98100	98000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
98000	97900	Inner lane	Flexible	GOOD	0.00	3.81	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
98000	97900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
97900	97800	Inner lane	Flexible	GOOD	3.88	0.00	0.00	0.00	0.0	0.1	9.1	Paved & Earthen	Good	0.0
97900	97800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
97800	97700	Inner lane	Flexible	GOOD	4.81	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
97800	97700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
97700	97600	Inner lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
97700	97600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
97600	97500	Inner lane	Flexible	GOOD	3.07	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
97600	97500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	7	Paved & Earthen	Good	0.0
97500	97400	Inner lane	Flexible	GOOD	4.45	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
97500	97400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
97400	97300	Inner lane	Flexible	GOOD	0.73	0.00	0.00	0.00	0.0	0.1	2	Paved & Earthen	Good	0.0
97400	97300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
97300	97200	Inner lane	Flexible	GOOD	0.65	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
97300	97200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
97200	97100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
97200	97100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
97100	97000	Inner lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
97100	97000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
97000	96900	Inner lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
97000	96900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
96900	96800	Inner lane	Flexible	GOOD	2.28	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
96900	96800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
96800	96700	Inner lane	Flexible	GOOD	0.97	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
96800	96700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
96700	96600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
96700	96600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
96600	96500	Inner lane	Flexible	GOOD	0.00	6.63	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
96600	96500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
96500	96400	Inner lane	Flexible	GOOD	0.00	5.47	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
96500	96400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
96400	96300	Inner lane	Flexible	GOOD	0.00	5.18	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
96400	96300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.6	0.1	2.7	Paved & Earthen	Good	0.0
96300	96200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
96300	96200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
96200	96100	Inner lane	Flexible	GOOD	9.26	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
96200	96100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
96100	96000	Inner lane	Flexible	GOOD	2.64	4.65	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
96100	96000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
96000	95900	Inner lane	Flexible	GOOD	3.79	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
96000	95900	Outer lane	Flexible	POOR	0.00	1.18	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
95900	95800	Inner lane	Flexible	GOOD	2.92	3.15	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
95900	95800	Outer lane	Flexible	GOOD	0.32	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
95800	95700	Inner lane	Flexible	GOOD	4.01	2.38	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
95800	95700	Outer lane	Flexible	GOOD	0.00	1.49	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
95700	95600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
95700	95600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
95600	95500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
95600	95500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
95500	95400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
95500	95400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
95400	95300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
95400	95300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
95300	95200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
95300	95200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
95200	95100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
95200	95100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
95100	95000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
95100	95000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
95000	94900	Inner lane	Flexible	POOR	0.95	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
95000	94900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
94900	94800	Inner lane	Flexible	GOOD	0.07	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
94900	94800	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.4	0.1	5	Paved & Earthen	Good	0.0
94800	94700	Inner lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
94800	94700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
94700	94600	Inner lane	Flexible	GOOD	0.46	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
94700	94600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
94600	94500	Inner lane	Flexible	GOOD	1.42	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
94600	94500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
94500	94400	Inner lane	Flexible	GOOD	0.37	0.00	0.00	0.00	0.0	0.1	7.6	Paved & Earthen	Good	0.0
94500	94400	Outer lane	Flexible	GOOD	0.17	0.42	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
94400	94300	Inner lane	Flexible	GOOD	1.45	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
94400	94300	Outer lane	Flexible	GOOD	0.00	0.33	0.00	0.00	0.8	0.1	5	Paved & Earthen	Good	0.0
94300	94200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
94300	94200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
94200	94100	Inner lane	Flexible	Fair	0.30	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
94200	94100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
94100	94000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
94100	94000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
94000	93900	Inner lane	Flexible	GOOD	0.35	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
94000	93900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
93900	93800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
93900	93800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
93800	93700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
93800	93700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
93700	93600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
93700	93600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
93600	93500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
93600	93500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
93500	93400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
93500	93400	Outer lane	Flexible	GOOD	0.00	0.81	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
93400	93300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
93400	93300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
93300	93200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
93300	93200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
93200	93100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
93200	93100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.1	0.1	1.8	Paved & Earthen	Good	0.0
93100	93000	Inner lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
93100	93000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
93000	92900	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
93000	92900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
92900	92800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
92900	92800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
92800	92700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
92800	92700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
92700	92600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
92700	92600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
92600	92500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
92600	92500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
92500	92400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
92500	92400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
92400	92300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
92400	92300	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
92300	92200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
92300	92200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
92200	92100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
92200	92100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
92100	92000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
92100	92000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth			Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]				
92000	91900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
92000	91900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
91900	91800	Inner lane	Flexible	GOOD	9.53	0.00	0.00	0.00	0.0	0.1	5.2		Paved & Earthen	Good	0.0
91900	91800	Outer lane	Flexible	GOOD	0.27	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
91800	91700	Inner lane	Flexible	Fair	12.36	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
91800	91700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.8		Paved & Earthen	Good	0.0
91700	91600	Inner lane	Flexible	GOOD	7.33	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
91700	91600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
91600	91500	Inner lane	Flexible	GOOD	5.89	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
91600	91500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
91500	91400	Inner lane	Flexible	GOOD	4.07	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
91500	91400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
91400	91300	Inner lane	Flexible	Fair	4.64	0.00	0.00	0.00	0.0	0.1	4.2		Paved & Earthen	Good	0.0
91400	91300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0
91300	91200	Inner lane	Flexible	GOOD	7.71	0.00	0.00	0.00	0.0	0.1	4.8		Paved & Earthen	Good	0.0
91300	91200	Outer lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
91200	91100	Inner lane	Flexible	Fair	11.30	0.00	0.00	0.00	0.0	0.1	7.6		Paved & Earthen	Good	0.0
91200	91100	Outer lane	Flexible	GOOD	0.81	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
91100	91000	Inner lane	Flexible	GOOD	5.81	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
91100	91000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0
91000	90900	Inner lane	Flexible	POOR	11.77	0.00	0.00	0.00	0.0	0.1	4.6		Paved & Earthen	Good	0.0
91000	90900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	6.3	0.1	2.5		Paved & Earthen	Good	0.0
90900	90800	Inner lane	Flexible	GOOD	9.12	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
90900	90800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.8		Paved & Earthen	Good	0.0
90800	90700	Inner lane	Flexible	GOOD	9.38	1.01	0.00	0.00	6.6	0.1	4.9		Paved & Earthen	Good	0.0
90800	90700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2		Paved & Earthen	Good	0.0
90700	90600	Inner lane	Flexible	GOOD	7.42	0.00	0.00	0.00	0.0	0.1	5.6		Paved & Earthen	Good	0.0
90700	90600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9		Paved & Earthen	Good	0.0
90600	90500	Inner lane	Flexible	Fair	3.63	0.00	0.00	0.00	0.4	0.1	5.6		Paved & Earthen	Good	0.0
90600	90500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9		Paved & Earthen	Good	0.0
90500	90400	Inner lane	Flexible	GOOD	4.64	0.00	0.00	0.00	0.0	0.1	5.5		Paved & Earthen	Good	0.0
90500	90400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.8		Paved & Earthen	Good	0.0
90400	90300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	8.9	0.1	5.1		Paved & Earthen	Good	0.0
90400	90300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1		Paved & Earthen	Good	0.0
90300	90200	Inner lane	Flexible	GOOD	1.60	0.00	0.00	0.00	0.0	0.1	4.8		Paved & Earthen	Good	0.0
90300	90200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9		Paved & Earthen	Good	0.0
90200	90100	Inner lane	Flexible	GOOD	1.31	0.00	0.00	0.00	0.0	0.1	5		Paved & Earthen	Good	0.0
90200	90100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1		Paved & Earthen	Good	0.0
90100	90000	Inner lane	Flexible	POOR	0.63	0.00	0.00	0.00	0.0	0.1	5.9		Paved & Earthen	Good	0.0
90100	90000	Outer lane	Flexible	POOR	0.33	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
90000	89900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1		Paved & Earthen	Good	0.0
90000	89900	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2		Paved & Earthen	Good	0.0
89900	89800	Inner lane	Flexible	GOOD	4.35	0.00	0.00	0.00	0.0	0.1	4.4		Paved & Earthen	Good	0.0
89900	89800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	1.9		Paved & Earthen	Good	0.0
89800	89700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
89800	89700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2		Paved & Earthen	Good	0.0
89700	89600	Inner lane	Flexible	Fair	2.52	0.00	0.00	0.00	0.0	0.1	5		Paved & Earthen	Good	0.0
89700	89600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1		Paved & Earthen	Good	0.0
89600	89500	Inner lane	Flexible	GOOD	3.23	0.00	0.00	0.00	0.0	0.1	6.4		Paved & Earthen	Good	0.0
89600	89500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
89500	89400	Inner lane	Flexible	GOOD	1.58	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
89500	89400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
89400	89300	Inner lane	Flexible	GOOD	5.10	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
89400	89300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
89300	89200	Inner lane	Flexible	GOOD	3.93	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
89300	89200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2	Paved & Earthen	Good	0.0
89200	89100	Inner lane	Flexible	GOOD	5.49	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0
89200	89100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
89100	89000	Inner lane	Flexible	Fair	6.95	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
89100	89000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
89000	88900	Inner lane	Flexible	Fair	2.47	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
89000	88900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
88900	88800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
88900	88800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
88800	88700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
88800	88700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
88700	88600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
88700	88600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
88600	88500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
88600	88500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
88500	88400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
88500	88400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
88400	88300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
88400	88300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
88300	88200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
88300	88200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
88200	88100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
88200	88100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
88100	88000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
88100	88000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
88000	87900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
88000	87900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
87900	87800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
87900	87800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
87800	87700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
87800	87700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
87700	87600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
87700	87600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
87600	87500	Inner lane	Flexible	GOOD	0.00	4.11	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
87600	87500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
87500	87400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
87500	87400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
87400	87300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
87400	87300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
87300	87200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
87300	87200	Outer lane	Flexible	GOOD	5.10	1.23	0.00	0.00	2.1	0.1	3.3	Paved & Earthen	Good	0.0
87200	87100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
87200	87100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	1.5	0.1	2.8	Paved & Earthen	Good	0.0
87100	87000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
87100	87000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
87000	86900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
87000	86900	Outer lane	Flexible	GOOD	0.00	0.65	0.00	0.00	0.0	0.1	2	Paved & Earthen	Good	0.0
86900	86800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
86900	86800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
86800	86700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
86800	86700	Outer lane	Flexible	GOOD	0.00	3.53	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
86700	86600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
86700	86600	Outer lane	Flexible	GOOD	0.00	2.92	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
86600	86500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
86600	86500	Outer lane	Flexible	GOOD	0.00	2.44	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
86500	86400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
86500	86400	Outer lane	Flexible	GOOD	0.00	0.63	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
86400	86300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
86400	86300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
86300	86200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
86300	86200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
86200	86100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
86200	86100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
86100	86000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
86100	86000	Outer lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	2	Paved & Earthen	Good	0.0
86000	85900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
86000	85900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
85900	85800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
85900	85800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
85800	85700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
85800	85700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
85700	85600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
85700	85600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
85600	85500	Inner lane	Flexible	POOR	0.00	4.63	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
85600	85500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	1.6	0.1	2.4	Paved & Earthen	Good	0.0
85500	85400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
85500	85400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
85400	85300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
85400	85300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
85300	85200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
85300	85200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
85200	85100	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
85200	85100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
85100	85000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
85100	85000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
85000	84900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
85000	84900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
84900	84800	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	6.5	Paved & Earthen	Good	0.0
84900	84800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
84800	84700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
84800	84700	Outer lane	Flexible	GOOD	1.49	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
84700	84600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
84700	84600	Outer lane	Flexible	GOOD	0.00	0.64	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
84600	84500	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
84600	84500	Outer lane	Flexible	POOR	2.79	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
84500	84400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
84500	84400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
84400	84300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
84400	84300	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
84300	84200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
84300	84200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
84200	84100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
84200	84100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
84100	84000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
84100	84000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
84000	83900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
84000	83900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
83900	83800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
83900	83800	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
83800	83700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
83800	83700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	7.9	Paved & Earthen	Good	0.0
83700	83600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
83700	83600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	7.7	Paved & Earthen	Good	0.0
83600	83500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
83600	83500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
83500	83400	Inner lane	Flexible	POOR	3.79	0.00	0.00	0.00	0.0	0.1	7.6	Paved & Earthen	Good	0.0
83500	83400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
83400	83300	Inner lane	Flexible	GOOD	2.89	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
83400	83300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
83300	83200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
83300	83200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
83200	83100	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	11.3	Paved & Earthen	Good	0.0
83200	83100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
83100	83000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
83100	83000	Outer lane	Flexible	GOOD	0.25	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
83000	82900	Inner lane	Flexible	Fair	2.39	0.00	0.00	0.00	0.0	0.1	12.2	Paved & Earthen	Good	0.0
83000	82900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
82900	82800	Inner lane	Flexible	GOOD	0.44	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
82900	82800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
82800	82700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	10.2	Paved & Earthen	Good	0.0
82800	82700	Outer lane	Flexible	GOOD	1.04	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
82700	82600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	15.05	Paved & Earthen	Good	0.0
82700	82600	Outer lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
82600	82500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	8.5	Paved & Earthen	Good	0.0
82600	82500	Outer lane	Flexible	GOOD	1.18	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
82500	82400	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	13.9	Paved & Earthen	Good	0.0
82500	82400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
82400	82300	Inner lane	Flexible	Fair	0.29	0.00	0.00	0.00	0.0	0.1	7.1	Paved & Earthen	Good	0.0
82400	82300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
82300	82200	Inner lane	Flexible	GOOD	0.24	0.00	0.00	0.00	1.6	0.1	4.2	Paved & Earthen	Good	0.0
82300	82200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
82200	82100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
82200	82100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
82100	82000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
82100	82000	Outer lane	Flexible	GOOD	0.38	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
82000	81900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
82000	81900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
81900	81800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
81900	81800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
81800	81700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.2	0.1	3.7	Paved & Earthen	Good	0.0
81800	81700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
81700	81600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
81700	81600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
81600	81500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
81600	81500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
81500	81400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	13.3	Paved & Earthen	Good	0.0
81500	81400	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	7.9	Paved & Earthen	Good	0.0
81400	81300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	8.9	Paved & Earthen	Good	0.0
81400	81300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	12.7	Paved & Earthen	Good	0.0
81300	81200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
81300	81200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
81200	81100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	8	Paved & Earthen	Good	0.0
81200	81100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
81100	81000	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	9.6	Paved & Earthen	Good	0.0
81100	81000	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
81000	80900	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	8.5	Paved & Earthen	Good	0.0
81000	80900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
80900	80800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
80900	80800	Outer lane	Flexible	GOOD	0.62	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
80800	80700	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	10.1	Paved & Earthen	Good	0.0
80800	80700	Outer lane	Flexible	GOOD	1.67	0.00	0.00	0.00	1.2	0.1	2.7	Paved & Earthen	Good	0.0
80700	80600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	12.9	Paved & Earthen	Good	0.0
80700	80600	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
80600	80500	Inner lane	Flexible	POOR	0.95	0.00	0.00	0.00	0.0	0.1	11.5	Paved & Earthen	Good	0.0
80600	80500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
80500	80400	Inner lane	Flexible	Fair	1.97	0.00	0.00	0.00	0.0	0.1	7.1	Paved & Earthen	Good	0.0
80500	80400	Outer lane	Flexible	GOOD	0.53	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
80400	80300	Inner lane	Flexible	POOR	0.93	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
80400	80300	Outer lane	Flexible	GOOD	0.74	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
80300	80200	Inner lane	Flexible	GOOD	6.61	0.00	0.00	0.00	0.0	0.1	9.8	Paved & Earthen	Good	0.0
80300	80200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
80200	80100	Inner lane	Flexible	GOOD	2.87	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0
80200	80100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
80100	80000	Inner lane	Flexible	GOOD	3.77	0.00	0.00	0.00	0.0	0.1	6.5	Paved & Earthen	Good	0.0
80100	80000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
80000	79900	Inner lane	Flexible	GOOD	2.30	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
80000	79900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
79900	79800	Inner lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
79900	79800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
79800	79700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	7.6	Paved & Earthen	Good	0.0
79800	79700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
79700	79600	Inner lane	Flexible	GOOD	0.53	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
79700	79600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	7.5	Paved & Earthen	Good	0.0
79600	79500	Inner lane	Flexible	GOOD	3.12	0.00	0.00	0.00	0.5	0.1	4.1	Paved & Earthen	Good	0.0
79600	79500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth			Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]				
79500	79400	Inner lane	Flexible	Fair	3.34	0.00	0.00	0.00	0.0	0.1	5.1		Paved & Earthen	Good	0.0
79500	79400	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0
79400	79300	Inner lane	Flexible	Fair	0.66	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
79400	79300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5		Paved & Earthen	Good	0.0
79300	79200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.6		Paved & Earthen	Good	0.0
79300	79200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3		Paved & Earthen	Good	0.0
79200	79100	Inner lane	Flexible	GOOD	1.82	0.00	0.00	0.00	0.3	0.1	4.6		Paved & Earthen	Good	0.0
79200	79100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
79100	79000	Inner lane	Flexible	GOOD	0.05	0.00	0.00	0.00	0.0	0.1	5.5		Paved & Earthen	Good	0.0
79100	79000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
79000	78900	Inner lane	Flexible	GOOD	4.16	0.00	0.00	0.00	0.0	0.1	8.3		Paved & Earthen	Good	0.0
79000	78900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2		Paved & Earthen	Good	0.0
78900	78800	Inner lane	Flexible	POOR	2.53	0.00	0.00	0.00	0.0	0.1	6.8		Paved & Earthen	Good	0.0
78900	78800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
78800	78700	Inner lane	Flexible	POOR	2.74	0.00	0.00	0.00	6.0	0.1	4.8		Paved & Earthen	Good	0.0
78800	78700	Outer lane	Flexible	GOOD	1.81	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
78700	78600	Inner lane	Flexible	POOR	1.18	0.00	0.00	0.00	0.0	0.1	12		Paved & Earthen	Good	0.0
78700	78600	Outer lane	Flexible	GOOD	1.18	0.83	0.00	0.00	0.0	0.1	4.2		Paved & Earthen	Good	0.0
78600	78500	Inner lane	Flexible	Fair	0.62	0.00	0.00	0.00	0.0	0.1	6.9		Paved & Earthen	Good	0.0
78600	78500	Outer lane	Flexible	GOOD	2.28	0.00	0.00	0.00	0.0	0.1	3.4		Paved & Earthen	Good	0.0
78500	78400	Inner lane	Flexible	Fair	2.42	0.00	0.00	0.00	0.0	0.1	8.2		Paved & Earthen	Good	0.0
78500	78400	Outer lane	Flexible	GOOD	1.43	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
78400	78300	Inner lane	Flexible	Fair	1.81	0.00	0.00	0.00	0.0	0.1	7.3		Paved & Earthen	Good	0.0
78400	78300	Outer lane	Flexible	GOOD	1.39	1.11	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
78300	78200	Inner lane	Flexible	Fair	1.25	0.00	0.00	0.00	0.0	0.1	6.7		Paved & Earthen	Good	0.0
78300	78200	Outer lane	Flexible	GOOD	2.83	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
78200	78100	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	6.5		Paved & Earthen	Good	0.0
78200	78100	Outer lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
78100	78000	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	6.5		Paved & Earthen	Good	0.0
78100	78000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
78000	77900	Inner lane	Flexible	POOR	0.92	0.00	0.00	0.00	4.4	0.1	5.2		Paved & Earthen	Good	0.0
78000	77900	Outer lane	Flexible	GOOD	0.64	0.00	0.00	0.00	0.0	0.1	5.5		Paved & Earthen	Good	0.0
77900	77800	Inner lane	Flexible	Fair	1.78	0.00	0.00	0.00	6.9	0.1	5.7		Paved & Earthen	Good	0.0
77900	77800	Outer lane	Flexible	GOOD	2.15	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
77800	77700	Inner lane	Flexible	GOOD	1.93	0.00	0.00	0.00	0.0	0.1	4.9		Paved & Earthen	Good	0.0
77800	77700	Outer lane	Flexible	GOOD	0.66	0.00	0.00	0.00	0.0	0.1	2.4		Paved & Earthen	Good	0.0
77700	77600	Inner lane	Flexible	GOOD	2.92	0.00	0.00	0.00	0.0	0.1	4.4		Paved & Earthen	Good	0.0
77700	77600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
77600	77500	Inner lane	Flexible	Fair	1.51	0.00	0.00	0.00	2.5	0.1	7.5		Paved & Earthen	Good	0.0
77600	77500	Outer lane	Flexible	GOOD	0.60	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
77500	77400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5		Paved & Earthen	Good	0.0
77500	77400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
77400	77300	Inner lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.0	0.1	8.7		Paved & Earthen	Good	0.0
77400	77300	Outer lane	Flexible	GOOD	1.23	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
77300	77200	Inner lane	Flexible	GOOD	0.99	0.00	0.00	0.00	0.0	0.1	4.2		Paved & Earthen	Good	0.0
77300	77200	Outer lane	Flexible	POOR	0.61	0.00	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
77200	77100	Inner lane	Flexible	POOR	0.33	0.00	0.00	0.00	0.0	0.1	5.2		Paved & Earthen	Good	0.0
77200	77100	Outer lane	Flexible	GOOD	0.47	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
77100	77000	Inner lane	Flexible	Fair	1.91	0.00	0.00	0.00	0.0	0.1	5.3		Paved & Earthen	Good	0.0
77100	77000	Outer lane	Flexible	Fair	0.67	0.00	0.00	0.00	0.0	0.1	3.4		Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
77000	76900	Inner lane	Flexible	GOOD	6.65	0.00	0.00	0.00	0.0	0.1	6.6	Paved & Earthen	Good	0.0
77000	76900	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
76900	76800	Inner lane	Flexible	POOR	5.62	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
76900	76800	Outer lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
76800	76700	Inner lane	Flexible	POOR	1.19	0.00	0.00	0.00	0.0	0.1	7.9	Paved & Earthen	Good	0.0
76800	76700	Outer lane	Flexible	Fair	2.76	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
76700	76600	Inner lane	Flexible	Fair	1.89	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
76700	76600	Outer lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
76600	76500	Inner lane	Flexible	Fair	0.00	1.23	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
76600	76500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
76500	76400	Inner lane	Flexible	Fair	0.93	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
76500	76400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
76400	76300	Inner lane	Flexible	POOR	2.56	0.00	0.00	0.00	0.0	0.1	8.3	Paved & Earthen	Good	0.0
76400	76300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
76300	76200	Inner lane	Flexible	POOR	1.09	2.14	0.00	0.00	0.0	0.1	10.5	Paved & Earthen	Good	0.0
76300	76200	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
76200	76100	Inner lane	Flexible	Fair	0.61	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
76200	76100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
76100	76000	Inner lane	Flexible	POOR	1.50	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
76100	76000	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
76000	75900	Inner lane	Flexible	Fair	0.93	3.50	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
76000	75900	Outer lane	Flexible	Fair	2.14	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
75900	75800	Inner lane	Flexible	Fair	4.97	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
75900	75800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
75800	75700	Inner lane	Flexible	Fair	2.33	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
75800	75700	Outer lane	Flexible	Fair	1.23	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
75700	75600	Inner lane	Flexible	GOOD	3.16	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
75700	75600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
75600	75500	Inner lane	Flexible	POOR	9.64	0.00	0.00	0.00	0.0	0.1	7.5	Paved & Earthen	Good	0.0
75600	75500	Outer lane	Flexible	GOOD	2.50	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
75500	75400	Inner lane	Flexible	POOR	11.30	0.00	0.00	0.00	0.0	0.1	6.5	Paved & Earthen	Good	0.0
75500	75400	Outer lane	Flexible	GOOD	1.99	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
75400	75300	Inner lane	Flexible	GOOD	3.84	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
75400	75300	Outer lane	Flexible	GOOD	0.49	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
75300	75200	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
75300	75200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
75200	75100	Inner lane	Flexible	Fair	0.92	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
75200	75100	Outer lane	Flexible	GOOD	0.06	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
75100	75000	Inner lane	Flexible	POOR	2.27	0.00	0.00	0.00	2.1	0.1	7	Paved & Earthen	Good	0.0
75100	75000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
75000	74900	Inner lane	Flexible	POOR	0.00	3.78	0.00	0.00	0.0	0.1	9.6	Paved & Earthen	Good	0.0
75000	74900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
74900	74800	Inner lane	Flexible	POOR	0.36	0.00	0.00	0.00	0.0	0.1	8.1	Paved & Earthen	Good	0.0
74900	74800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
74800	74700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	8.6	Paved & Earthen	Good	0.0
74800	74700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
74700	74600	Inner lane	Flexible	GOOD	1.11	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
74700	74600	Outer lane	Flexible	GOOD	0.39	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
74600	74500	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
74600	74500	Outer lane	Flexible	GOOD	0.10	0.89	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
74500	74400	Inner lane	Flexible	GOOD	0.97	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
74500	74400	Outer lane	Flexible	GOOD	1.82	1.19	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
74400	74300	Inner lane	Flexible	GOOD	1.46	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
74400	74300	Outer lane	Flexible	GOOD	0.68	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
74300	74200	Inner lane	Flexible	Fair	0.95	0.00	0.00	0.00	0.7	0.1	5.6	Paved & Earthen	Good	0.0
74300	74200	Outer lane	Flexible	Fair	0.00	0.29	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
74200	74100	Inner lane	Flexible	POOR	0.60	2.25	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
74200	74100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
74100	74000	Inner lane	Flexible	POOR	0.33	1.50	0.00	0.00	0.0	0.1	6.7	Paved & Earthen	Good	0.0
74100	74000	Outer lane	Flexible	GOOD	1.99	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
74000	73900	Inner lane	Flexible	GOOD	0.32	0.00	0.00	0.00	1.2	0.1	4.3	Paved & Earthen	Good	0.0
74000	73900	Outer lane	Flexible	GOOD	2.27	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
73900	73800	Inner lane	Flexible	POOR	0.85	0.00	0.00	0.00	3.5	0.1	4.6	Paved & Earthen	Good	0.0
73900	73800	Outer lane	Flexible	GOOD	1.51	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
73800	73700	Inner lane	Flexible	Fair	8.63	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
73800	73700	Outer lane	Flexible	GOOD	1.99	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
73700	73600	Inner lane	Flexible	Fair	8.10	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
73700	73600	Outer lane	Flexible	Fair	0.97	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
73600	73500	Inner lane	Flexible	Fair	8.90	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
73600	73500	Outer lane	Flexible	Fair	2.25	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
73500	73400	Inner lane	Flexible	Fair	8.81	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
73500	73400	Outer lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
73400	73300	Inner lane	Flexible	Fair	4.71	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
73400	73300	Outer lane	Flexible	GOOD	1.42	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
73300	73200	Inner lane	Flexible	Fair	3.74	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
73300	73200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
73200	73100	Inner lane	Flexible	Fair	2.14	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
73200	73100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
73100	73000	Inner lane	Flexible	Fair	2.05	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
73100	73000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
73000	72900	Inner lane	Flexible	GOOD	6.93	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
73000	72900	Outer lane	Flexible	GOOD	0.38	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
72900	72800	Inner lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
72900	72800	Outer lane	Flexible	GOOD	0.89	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
72800	72700	Inner lane	Flexible	GOOD	4.65	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
72800	72700	Outer lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
72700	72600	Inner lane	Flexible	GOOD	5.47	0.00	0.00	0.00	0.0	0.1	7.1	Paved & Earthen	Good	0.0
72700	72600	Outer lane	Flexible	GOOD	5.56	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
72600	72500	Inner lane	Flexible	Fair	4.59	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
72600	72500	Outer lane	Flexible	GOOD	6.38	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
72500	72400	Inner lane	Flexible	GOOD	3.51	1.81	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
72500	72400	Outer lane	Flexible	GOOD	1.81	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
72400	72300	Inner lane	Flexible	Fair	3.45	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
72400	72300	Outer lane	Flexible	GOOD	0.54	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
72300	72200	Inner lane	Flexible	Fair	3.75	1.18	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
72300	72200	Outer lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
72200	72100	Inner lane	Flexible	Fair	2.81	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
72200	72100	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
72100	72000	Inner lane	Flexible	Fair	3.22	0.87	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
72100	72000	Outer lane	Flexible	GOOD	1.02	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
72000	71900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
72000	71900	Outer lane	Flexible	GOOD	1.90	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
71900	71800	Inner lane	Flexible	GOOD	0.00	1.31	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
71900	71800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
71800	71700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
71800	71700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
71700	71600	Inner lane	Flexible	GOOD	2.44	1.81	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
71700	71600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
71600	71500	Inner lane	Flexible	GOOD	6.34	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
71600	71500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
71500	71400	Inner lane	Flexible	Fair	6.55	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
71500	71400	Outer lane	Flexible	GOOD	4.03	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
71400	71300	Inner lane	Flexible	Fair	8.13	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
71400	71300	Outer lane	Flexible	GOOD	4.03	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
71300	71200	Inner lane	Flexible	Fair	3.84	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
71300	71200	Outer lane	Flexible	Fair	1.47	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
71200	71100	Inner lane	Flexible	Fair	1.22	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
71200	71100	Outer lane	Flexible	GOOD	2.71	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
71100	71000	Inner lane	Flexible	Fair	3.21	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
71100	71000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
71000	70900	Inner lane	Flexible	Fair	2.11	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
71000	70900	Outer lane	Flexible	Fair	2.96	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
70900	70800	Inner lane	Flexible	Fair	3.79	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
70900	70800	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
70800	70700	Inner lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
70800	70700	Outer lane	Flexible	GOOD	2.46	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
70700	70600	Inner lane	Flexible	GOOD	2.07	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
70700	70600	Outer lane	Flexible	Fair	1.63	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
70600	70500	Inner lane	Flexible	GOOD	5.21	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
70600	70500	Outer lane	Flexible	GOOD	1.85	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
70500	70400	Inner lane	Flexible	POOR	3.81	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
70500	70400	Outer lane	Flexible	POOR	0.97	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
70400	70300	Inner lane	Flexible	Fair	5.42	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
70400	70300	Outer lane	Flexible	GOOD	3.64	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
70300	70200	Inner lane	Flexible	POOR	3.10	0.00	0.00	0.00	0.0	0.1	9.1	Paved & Earthen	Good	0.0
70300	70200	Outer lane	Flexible	GOOD	3.71	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
70200	70100	Inner lane	Flexible	GOOD	6.04	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
70200	70100	Outer lane	Flexible	GOOD	4.36	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
70100	70000	Inner lane	Flexible	Fair	4.93	0.00	0.00	0.00	0.0	0.1	8	Paved & Earthen	Good	0.0
70100	70000	Outer lane	Flexible	Fair	2.64	0.00	0.00	0.00	0.0	0.1	8.2	Paved & Earthen	Good	0.0
70000	69900	Inner lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
70000	69900	Outer lane	Flexible	GOOD	1.05	0.00	0.00	0.00	0.0	0.1	8.3	Paved & Earthen	Good	0.0
69900	69800	Inner lane	Flexible	GOOD	0.89	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
69900	69800	Outer lane	Flexible	GOOD	0.04	0.00	0.00	0.00	0.0	0.1	6.7	Paved & Earthen	Good	0.0
69800	69700	Inner lane	Flexible	GOOD	1.66	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
69800	69700	Outer lane	Flexible	GOOD	0.64	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
69700	69600	Inner lane	Flexible	GOOD	3.81	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
69700	69600	Outer lane	Flexible	GOOD	1.98	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
69600	69500	Inner lane	Flexible	GOOD	1.75	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
69600	69500	Outer lane	Flexible	GOOD	2.73	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0

Chainage (km)			Pavement Type[1]	Riding Quality								Shoulder Condition		
From	To	Lane			Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
69500	69400	Inner lane	Flexible	GOOD	4.15	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
69500	69400	Outer lane	Flexible	GOOD	4.34	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
69400	69300	Inner lane	Flexible	Fair	5.67	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
69400	69300	Outer lane	Flexible	GOOD	2.63	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
69300	69200	Inner lane	Flexible	GOOD	5.26	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
69300	69200	Outer lane	Flexible	GOOD	3.93	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
69200	69100	Inner lane	Flexible	GOOD	4.95	0.00	0.00	0.00	0.0	0.1	8.4	Paved & Earthen	Good	0.0
69200	69100	Outer lane	Flexible	GOOD	3.89	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
69100	69000	Inner lane	Flexible	Fair	4.69	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
69100	69000	Outer lane	Flexible	GOOD	2.13	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
69000	68900	Inner lane	Flexible	GOOD	3.18	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
69000	68900	Outer lane	Flexible	GOOD	3.01	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
68900	68800	Inner lane	Flexible	GOOD	2.91	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
68900	68800	Outer lane	Flexible	GOOD	0.65	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
68800	68700	Inner lane	Flexible	POOR	5.80	0.00	0.00	0.00	0.0	0.1	15.5	Paved & Earthen	Good	0.0
68800	68700	Outer lane	Flexible	Fair	1.49	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
68700	68600	Inner lane	Flexible	POOR	1.89	0.00	0.00	0.00	0.0	0.1	12.3	Paved & Earthen	Good	0.0
68700	68600	Outer lane	Flexible	Fair	2.12	0.00	0.00	0.00	0.0	0.1	6.7	Paved & Earthen	Good	0.0
68600	68500	Inner lane	Flexible	POOR	2.35	0.00	0.00	0.00	0.0	0.1	8.5	Paved & Earthen	Good	0.0
68600	68500	Outer lane	Flexible	POOR	2.30	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
68500	68400	Inner lane	Flexible	Fair	4.12	0.00	0.00	0.00	0.0	0.1	8.7	Paved & Earthen	Good	0.0
68500	68400	Outer lane	Flexible	GOOD	2.46	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
68400	68300	Inner lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.0	0.1	9.3	Paved & Earthen	Good	0.0
68400	68300	Outer lane	Flexible	GOOD	2.51	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
68300	68200	Inner lane	Flexible	POOR	1.21	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
68300	68200	Outer lane	Flexible	GOOD	0.32	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
68200	68100	Inner lane	Flexible	GOOD	2.81	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
68200	68100	Outer lane	Flexible	Fair	0.64	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
68100	68000	Inner lane	Flexible	Fair	0.81	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
68100	68000	Outer lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
68000	67900	Inner lane	Flexible	GOOD	2.65	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
68000	67900	Outer lane	Flexible	GOOD	0.33	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
67900	67800	Inner lane	Flexible	GOOD	1.81	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
67900	67800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
67800	67700	Inner lane	Flexible	GOOD	1.47	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
67800	67700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
67700	67600	Inner lane	Flexible	GOOD	1.77	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
67700	67600	Outer lane	Flexible	POOR	1.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
67600	67500	Inner lane	Flexible	POOR	1.05	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
67600	67500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
67500	67400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
67500	67400	Outer lane	Flexible	GOOD	0.29	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
67400	67300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
67400	67300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
67300	67200	Inner lane	Flexible	GOOD	0.64	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
67300	67200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
67200	67100	Inner lane	Flexible	GOOD	0.94	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
67200	67100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
67100	67000	Inner lane	Flexible	GOOD	0.56	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
67100	67000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth			Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]				
67000	66900	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.0	0.1	4.6		Paved & Earthen	Good	0.0
67000	66900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.8		Paved & Earthen	Good	0.0
66900	66800	Inner lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	10.1		Paved & Earthen	Good	0.0
66900	66800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
66800	66700	Inner lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	10.4		Paved & Earthen	Good	0.0
66800	66700	Outer lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
66700	66600	Inner lane	Flexible	Fair	1.20	0.00	0.00	0.00	0.0	0.1	8.9		Paved & Earthen	Good	0.0
66700	66600	Outer lane	Flexible	GOOD	1.40	0.00	0.00	0.00	0.0	0.1	5.3		Paved & Earthen	Good	0.0
66600	66500	Inner lane	Flexible	Fair	0.62	0.00	0.00	0.00	0.0	0.1	6.5		Paved & Earthen	Good	0.0
66600	66500	Outer lane	Flexible	GOOD	0.19	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
66500	66400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3		Paved & Earthen	Good	0.0
66500	66400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
66400	66300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
66400	66300	Outer lane	Flexible	GOOD	4.65	0.00	0.00	0.00	0.0	0.1	3.4		Paved & Earthen	Good	0.0
66300	66200	Inner lane	Flexible	GOOD	1.85	0.00	0.00	0.00	0.0	0.1	5.3		Paved & Earthen	Good	0.0
66300	66200	Outer lane	Flexible	GOOD	4.67	0.00	0.00	0.00	0.0	0.1	3.7		Paved & Earthen	Good	0.0
66200	66100	Inner lane	Flexible	Fair	2.12	0.00	0.00	0.00	0.0	0.1	5.1		Paved & Earthen	Good	0.0
66200	66100	Outer lane	Flexible	GOOD	3.69	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
66100	66000	Inner lane	Flexible	GOOD	1.28	0.00	0.00	0.00	0.0	0.1	4.4		Paved & Earthen	Good	0.0
66100	66000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3		Paved & Earthen	Good	0.0
66000	65900	Inner lane	Flexible	GOOD	1.11	0.00	0.00	0.00	0.0	0.1	4.7		Paved & Earthen	Good	0.0
66000	65900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.3		Paved & Earthen	Good	0.0
65900	65800	Inner lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.0	0.1	2.3		Paved & Earthen	Good	0.0
65900	65800	Outer lane	Flexible	GOOD	1.42	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
65800	65700	Inner lane	Flexible	GOOD	0.98	0.00	0.00	0.00	0.6	0.1	2.8		Paved & Earthen	Good	0.0
65800	65700	Outer lane	Flexible	GOOD	1.21	0.00	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
65700	65600	Inner lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
65700	65600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
65600	65500	Inner lane	Flexible	GOOD	2.12	0.00	0.00	0.00	0.0	0.1	4.3		Paved & Earthen	Good	0.0
65600	65500	Outer lane	Flexible	GOOD	3.56	0.00	0.00	0.00	0.0	0.1	3		Paved & Earthen	Good	0.0
65500	65400	Inner lane	Flexible	GOOD	2.30	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
65500	65400	Outer lane	Flexible	GOOD	1.34	0.00	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
65400	65300	Inner lane	Flexible	GOOD	2.33	0.00	0.00	0.00	0.0	0.1	4.8		Paved & Earthen	Good	0.0
65400	65300	Outer lane	Flexible	Fair	6.16	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
65300	65200	Inner lane	Flexible	GOOD	1.28	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
65300	65200	Outer lane	Flexible	GOOD	7.25	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
65200	65100	Inner lane	Flexible	GOOD	1.90	0.00	0.00	0.00	0.0	0.1	5.7		Paved & Earthen	Good	0.0
65200	65100	Outer lane	Flexible	GOOD	5.77	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
65100	65000	Inner lane	Flexible	GOOD	3.19	0.00	0.00	0.00	0.0	0.1	7.1		Paved & Earthen	Good	0.0
65100	65000	Outer lane	Flexible	POOR	1.79	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
65000	64900	Inner lane	Flexible	POOR	1.20	0.00	0.00	0.00	0.0	0.1	7.3		Paved & Earthen	Good	0.0
65000	64900	Outer lane	Flexible	Fair	0.93	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
64900	64800	Inner lane	Flexible	Fair	1.91	0.00	0.00	0.00	0.0	0.1	5.4		Paved & Earthen	Good	0.0
64900	64800	Outer lane	Flexible	GOOD	2.33	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
64800	64700	Inner lane	Flexible	GOOD	1.53	0.00	0.00	0.00	0.0	0.1	7.7		Paved & Earthen	Good	0.0
64800	64700	Outer lane	Flexible	GOOD	2.11	0.00	0.00	0.00	0.0	0.1	3.4		Paved & Earthen	Good	0.0
64700	64600	Inner lane	Flexible	GOOD	1.20	0.00	0.00	0.00	0.0	0.1	7.2		Paved & Earthen	Good	0.0
64700	64600	Outer lane	Flexible	GOOD	0.94	0.00	0.00	0.00	0.0	0.1	3.2		Paved & Earthen	Good	0.0
64600	64500	Inner lane	Flexible	Fair	1.34	0.00	0.00	0.00	0.0	0.1	6.5		Paved & Earthen	Good	0.0
64600	64500	Outer lane	Flexible	GOOD	0.64	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
64500	64400	Inner lane	Flexible	POOR	3.09	0.00	0.00	0.00	0.0	0.1	7.8	Paved & Earthen	Good	0.0
64500	64400	Outer lane	Flexible	GOOD	1.55	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
64400	64300	Inner lane	Flexible	Fair	0.99	0.00	0.00	0.00	0.0	0.1	9.6	Paved & Earthen	Good	0.0
64400	64300	Outer lane	Flexible	GOOD	1.13	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
64300	64200	Inner lane	Flexible	Fair	0.87	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
64300	64200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
64200	64100	Inner lane	Flexible	GOOD	1.96	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
64200	64100	Outer lane	Flexible	GOOD	1.39	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
64100	64000	Inner lane	Flexible	GOOD	1.05	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
64100	64000	Outer lane	Flexible	GOOD	1.18	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
64000	63900	Inner lane	Flexible	GOOD	2.14	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
64000	63900	Outer lane	Flexible	GOOD	2.05	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
63900	63800	Inner lane	Flexible	Fair	0.91	0.00	0.00	0.00	0.0	0.1	7.4	Paved & Earthen	Good	0.0
63900	63800	Outer lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
63800	63700	Inner lane	Flexible	GOOD	2.01	0.00	0.00	0.00	0.0	0.1	6.8	Paved & Earthen	Good	0.0
63800	63700	Outer lane	Flexible	GOOD	2.61	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
63700	63600	Inner lane	Flexible	GOOD	2.07	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
63700	63600	Outer lane	Flexible	GOOD	2.11	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
63600	63500	Inner lane	Flexible	Fair	2.53	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
63600	63500	Outer lane	Flexible	Fair	1.25	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
63500	63400	Inner lane	Flexible	GOOD	1.53	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
63500	63400	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
63400	63300	Inner lane	Flexible	GOOD	1.50	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
63400	63300	Outer lane	Flexible	GOOD	0.63	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
63300	63200	Inner lane	Flexible	GOOD	0.45	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
63300	63200	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
63200	63100	Inner lane	Flexible	GOOD	1.95	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
63200	63100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
63100	63000	Inner lane	Flexible	GOOD	2.61	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
63100	63000	Outer lane	Flexible	GOOD	2.69	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
63000	62900	Inner lane	Flexible	POOR	1.67	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
63000	62900	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
62900	62800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
62900	62800	Outer lane	Flexible	GOOD	0.33	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
62800	62700	Inner lane	Flexible	Fair	0.65	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
62800	62700	Outer lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
62700	62600	Inner lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
62700	62600	Outer lane	Flexible	GOOD	1.83	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
62600	62500	Inner lane	Flexible	GOOD	2.14	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
62600	62500	Outer lane	Flexible	GOOD	1.81	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
62500	62400	Inner lane	Flexible	Fair	1.50	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
62500	62400	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
62400	62300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
62400	62300	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
62300	62200	Inner lane	Flexible	GOOD	4.03	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
62300	62200	Outer lane	Flexible	GOOD	1.30	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
62200	62100	Inner lane	Flexible	Fair	1.99	0.00	0.00	0.00	0.0	0.1	7.3	Paved & Earthen	Good	0.0
62200	62100	Outer lane	Flexible	GOOD	4.69	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
62100	62000	Inner lane	Flexible	Fair	1.80	0.00	0.00	0.00	0.0	0.1	7.5	Paved & Earthen	Good	0.0
62100	62000	Outer lane	Flexible	GOOD	2.54	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
62000	61900	Inner lane	Flexible	Fair	6.71	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
62000	61900	Outer lane	Flexible	GOOD	4.72	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
61900	61800	Inner lane	Flexible	Fair	4.26	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
61900	61800	Outer lane	Flexible	GOOD	2.64	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
61800	61700	Inner lane	Flexible	POOR	1.62	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
61800	61700	Outer lane	Flexible	GOOD	3.21	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
61700	61600	Inner lane	Flexible	POOR	4.42	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
61700	61600	Outer lane	Flexible	POOR	5.11	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
61600	61500	Inner lane	Flexible	GOOD	2.90	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
61600	61500	Outer lane	Flexible	GOOD	4.40	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
61500	61400	Inner lane	Flexible	GOOD	4.18	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
61500	61400	Outer lane	Flexible	GOOD	3.85	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
61400	61300	Inner lane	Flexible	GOOD	2.33	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
61400	61300	Outer lane	Flexible	GOOD	2.94	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
61300	61200	Inner lane	Flexible	Fair	2.24	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
61300	61200	Outer lane	Flexible	GOOD	3.93	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
61200	61100	Inner lane	Flexible	GOOD	3.76	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
61200	61100	Outer lane	Flexible	GOOD	3.80	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
61100	61000	Inner lane	Flexible	GOOD	3.22	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
61100	61000	Outer lane	Flexible	GOOD	2.64	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
61000	60900	Inner lane	Flexible	GOOD	3.95	0.00	0.00	0.00	0.0	0.1	6.8	Paved & Earthen	Good	0.0
61000	60900	Outer lane	Flexible	GOOD	4.43	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
60900	60800	Inner lane	Flexible	GOOD	3.17	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
60900	60800	Outer lane	Flexible	GOOD	5.55	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
60800	60700	Inner lane	Flexible	GOOD	4.41	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
60800	60700	Outer lane	Flexible	GOOD	5.41	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
60700	60600	Inner lane	Flexible	GOOD	4.65	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
60700	60600	Outer lane	Flexible	GOOD	3.53	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
60600	60500	Inner lane	Flexible	GOOD	4.35	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
60600	60500	Outer lane	Flexible	GOOD	2.44	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
60500	60400	Inner lane	Flexible	GOOD	3.91	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
60500	60400	Outer lane	Flexible	GOOD	5.02	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
60400	60300	Inner lane	Flexible	GOOD	3.71	0.00	0.00	0.00	0.0	0.1	7.1	Paved & Earthen	Good	0.0
60400	60300	Outer lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
60300	60200	Inner lane	Flexible	GOOD	2.68	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
60300	60200	Outer lane	Flexible	GOOD	2.12	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
60200	60100	Inner lane	Flexible	GOOD	1.76	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
60200	60100	Outer lane	Flexible	GOOD	2.47	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
60100	60000	Inner lane	Flexible	GOOD	2.98	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
60100	60000	Outer lane	Flexible	GOOD	1.80	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
60000	59900	Inner lane	Flexible	GOOD	2.35	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
60000	59900	Outer lane	Flexible	GOOD	2.82	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
59900	59800	Inner lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.0	0.1	7.2	Paved & Earthen	Good	0.0
59900	59800	Outer lane	Flexible	GOOD	2.21	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
59800	59700	Inner lane	Flexible	GOOD	2.70	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
59800	59700	Outer lane	Flexible	GOOD	2.92	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
59700	59600	Inner lane	Flexible	Fair	2.41	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
59700	59600	Outer lane	Flexible	POOR	2.86	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
59600	59500	Inner lane	Flexible	GOOD	6.91	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
59600	59500	Outer lane	Flexible	GOOD	4.63	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
59500	59400	Inner lane	Flexible	GOOD	3.09	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
59500	59400	Outer lane	Flexible	GOOD	3.55	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
59400	59300	Inner lane	Flexible	GOOD	4.65	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
59400	59300	Outer lane	Flexible	GOOD	3.79	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
59300	59200	Inner lane	Flexible	Fair	3.36	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
59300	59200	Outer lane	Flexible	GOOD	2.86	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
59200	59100	Inner lane	Flexible	Fair	1.60	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0
59200	59100	Outer lane	Flexible	GOOD	2.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
59100	59000	Inner lane	Flexible	Fair	1.21	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
59100	59000	Outer lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
59000	58900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
59000	58900	Outer lane	Flexible	GOOD	1.87	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58900	58800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
58900	58800	Outer lane	Flexible	GOOD	0.90	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
58800	58700	Inner lane	Flexible	GOOD	0.79	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
58800	58700	Outer lane	Flexible	GOOD	0.99	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58700	58600	Inner lane	Flexible	GOOD	0.32	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
58700	58600	Outer lane	Flexible	GOOD	0.69	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58600	58500	Inner lane	Flexible	GOOD	0.27	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58600	58500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.4	0.1	3.5	Paved & Earthen	Good	0.0
58500	58400	Inner lane	Flexible	GOOD	2.85	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
58500	58400	Outer lane	Flexible	GOOD	2.70	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
58400	58300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
58400	58300	Outer lane	Flexible	GOOD	0.70	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58300	58200	Inner lane	Flexible	GOOD	0.86	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
58300	58200	Outer lane	Flexible	GOOD	0.69	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
58200	58100	Inner lane	Flexible	GOOD	0.98	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
58200	58100	Outer lane	Flexible	GOOD	0.47	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
58100	58000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
58100	58000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
58000	57900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
58000	57900	Outer lane	Flexible	GOOD	0.95	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
57900	57800	Inner lane	Flexible	POOR	1.62	0.00	0.00	0.00	0.0	0.1	6.3	Paved & Earthen	Good	0.0
57900	57800	Outer lane	Flexible	GOOD	2.81	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
57800	57700	Inner lane	Flexible	POOR	2.41	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
57800	57700	Outer lane	Flexible	POOR	1.79	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
57700	57600	Inner lane	Flexible	POOR	1.26	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
57700	57600	Outer lane	Flexible	GOOD	1.59	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
57600	57500	Inner lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
57600	57500	Outer lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
57500	57400	Inner lane	Flexible	Fair	1.54	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
57500	57400	Outer lane	Flexible	Fair	1.96	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
57400	57300	Inner lane	Flexible	Fair	1.69	0.00	0.00	0.00	0.0	0.1	7.7	Paved & Earthen	Good	0.0
57400	57300	Outer lane	Flexible	GOOD	1.22	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
57300	57200	Inner lane	Flexible	GOOD	2.09	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
57300	57200	Outer lane	Flexible	GOOD	2.07	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
57200	57100	Inner lane	Flexible	GOOD	0.69	0.99	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
57200	57100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
57100	57000	Inner lane	Flexible	Fair	1.18	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
57100	57000	Outer lane	Flexible	GOOD	3.52	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0

Chainage (km)													Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth			Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]				
57000	56900	Inner lane	Flexible	Fair	4.17	0.00	0.00	0.00	0.0	0.1	4.9		Paved & Earthen	Good	0.0
57000	56900	Outer lane	Flexible	GOOD	1.81	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
56900	56800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.7		Paved & Earthen	Good	0.0
56900	56800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
56800	56700	Inner lane	Flexible	GOOD	0.34	3.58	0.00	0.00	0.0	0.1	4.4		Paved & Earthen	Good	0.0
56800	56700	Outer lane	Flexible	GOOD	1.67	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
56700	56600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.3		Paved & Earthen	Good	0.0
56700	56600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6		Paved & Earthen	Good	0.0
56600	56500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
56600	56500	Outer lane	Flexible	Fair	1.92	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
56500	56400	Inner lane	Flexible	GOOD	2.72	0.00	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
56500	56400	Outer lane	Flexible	GOOD	4.84	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
56400	56300	Inner lane	Flexible	GOOD	4.06	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
56400	56300	Outer lane	Flexible	GOOD	2.56	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
56300	56200	Inner lane	Flexible	GOOD	0.67	0.00	0.00	0.00	0.0	0.1	4.6		Paved & Earthen	Good	0.0
56300	56200	Outer lane	Flexible	GOOD	1.82	0.00	0.00	0.00	0.0	0.1	3.8		Paved & Earthen	Good	0.0
56200	56100	Inner lane	Flexible	GOOD	3.21	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
56200	56100	Outer lane	Flexible	GOOD	2.64	0.00	0.00	0.00	0.0	0.1	3.4		Paved & Earthen	Good	0.0
56100	56000	Inner lane	Flexible	Fair	1.75	0.00	0.00	0.00	0.0	0.1	4.8		Paved & Earthen	Good	0.0
56100	56000	Outer lane	Flexible	GOOD	3.25	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
56000	55900	Inner lane	Flexible	GOOD	2.43	0.00	0.00	0.00	0.0	0.1	4.1		Paved & Earthen	Good	0.0
56000	55900	Outer lane	Flexible	GOOD	2.12	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
55900	55800	Inner lane	Flexible	GOOD	2.90	0.00	0.00	0.00	0.0	0.1	3.6		Paved & Earthen	Good	0.0
55900	55800	Outer lane	Flexible	GOOD	1.78	0.00	0.00	0.00	0.0	0.1	2.6		Paved & Earthen	Good	0.0
55800	55700	Inner lane	Flexible	GOOD	2.79	0.00	0.00	0.00	0.0	0.1	3.7		Paved & Earthen	Good	0.0
55800	55700	Outer lane	Flexible	GOOD	1.43	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
55700	55600	Inner lane	Flexible	GOOD	2.67	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
55700	55600	Outer lane	Flexible	GOOD	2.92	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
55600	55500	Inner lane	Flexible	GOOD	3.02	0.00	0.00	0.00	0.0	0.1	5		Paved & Earthen	Good	0.0
55600	55500	Outer lane	Flexible	GOOD	1.29	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
55500	55400	Inner lane	Flexible	GOOD	2.89	0.00	0.00	0.00	0.0	0.1	4.6		Paved & Earthen	Good	0.0
55500	55400	Outer lane	Flexible	GOOD	2.77	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
55400	55300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.1		Paved & Earthen	Good	0.0
55400	55300	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
55300	55200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.3		Paved & Earthen	Good	0.0
55300	55200	Outer lane	Flexible	GOOD	0.33	0.00	0.00	0.00	0.0	0.1	2.8		Paved & Earthen	Good	0.0
55200	55100	Inner lane	Flexible	GOOD	1.25	0.00	0.00	0.00	0.0	0.1	4		Paved & Earthen	Good	0.0
55200	55100	Outer lane	Flexible	GOOD	4.73	0.00	0.00	0.00	0.0	0.1	2.5		Paved & Earthen	Good	0.0
55100	55000	Inner lane	Flexible	GOOD	1.80	0.00	0.00	0.00	0.0	0.1	2.7		Paved & Earthen	Good	0.0
55100	55000	Outer lane	Flexible	GOOD	3.85	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
55000	54900	Inner lane	Flexible	GOOD	4.35	0.00	0.00	0.00	0.0	0.1	3.9		Paved & Earthen	Good	0.0
55000	54900	Outer lane	Flexible	GOOD	0.75	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0
54900	54800	Inner lane	Flexible	GOOD	2.73	3.20	0.00	0.00	0.4	0.1	4.2		Paved & Earthen	Good	0.0
54900	54800	Outer lane	Flexible	GOOD	2.24	0.00	0.00	0.00	0.0	0.1	2.9		Paved & Earthen	Good	0.0
54800	54700	Inner lane	Flexible	GOOD	2.66	0.00	0.00	0.00	0.0	0.1	3.5		Paved & Earthen	Good	0.0
54800	54700	Outer lane	Flexible	GOOD	2.99	0.00	0.00	0.00	0.0	0.1	3.3		Paved & Earthen	Good	0.0
54700	54600	Inner lane	Flexible	GOOD	0.32	0.00	0.00	0.00	0.0	0.1	4.5		Paved & Earthen	Good	0.0
54700	54600	Outer lane	Flexible	GOOD	1.99	0.00	0.00	0.00	0.0	0.1	2.6		Paved & Earthen	Good	0.0
54600	54500	Inner lane	Flexible	GOOD	1.82	0.00	0.00	0.00	0.0	0.1	5.9		Paved & Earthen	Good	0.0
54600	54500	Outer lane	Flexible	GOOD	1.07	0.00	0.00	0.00	0.0	0.1	3.1		Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
54500	54400	Inner lane	Flexible	Fair	1.99	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
54500	54400	Outer lane	Flexible	GOOD	0.61	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
54400	54300	Inner lane	Flexible	GOOD	1.50	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
54400	54300	Outer lane	Flexible	GOOD	2.81	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
54300	54200	Inner lane	Flexible	GOOD	2.99	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
54300	54200	Outer lane	Flexible	GOOD	2.16	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
54200	54100	Inner lane	Flexible	GOOD	3.22	0.00	0.00	0.00	0.0	0.1	8.9	Paved & Earthen	Good	0.0
54200	54100	Outer lane	Flexible	GOOD	4.64	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
54100	54000	Inner lane	Flexible	GOOD	4.50	0.00	0.00	0.00	0.0	0.1	7.3	Paved & Earthen	Good	0.0
54100	54000	Outer lane	Flexible	GOOD	2.07	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
54000	53900	Inner lane	Flexible	GOOD	3.62	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
54000	53900	Outer lane	Flexible	GOOD	8.19	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
53900	53800	Inner lane	Flexible	GOOD	4.65	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
53900	53800	Outer lane	Flexible	GOOD	8.64	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
53800	53700	Inner lane	Flexible	GOOD	7.33	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
53800	53700	Outer lane	Flexible	POOR	7.09	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
53700	53600	Inner lane	Flexible	GOOD	5.25	0.00	0.00	0.00	0.0	0.1	5.5	Paved & Earthen	Good	0.0
53700	53600	Outer lane	Flexible	Fair	2.10	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
53600	53500	Inner lane	Flexible	GOOD	1.19	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
53600	53500	Outer lane	Flexible	GOOD	5.38	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
53500	53400	Inner lane	Flexible	GOOD	2.44	0.00	0.00	0.00	0.0	0.1	7.5	Paved & Earthen	Good	0.0
53500	53400	Outer lane	Flexible	GOOD	2.64	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
53400	53300	Inner lane	Flexible	GOOD	0.92	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
53400	53300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
53300	53200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
53300	53200	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
53200	53100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
53200	53100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
53100	53000	Inner lane	Flexible	Fair	0.35	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
53100	53000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
53000	52900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
53000	52900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
52900	52800	Inner lane	Flexible	Fair	0.93	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
52900	52800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
52800	52700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
52800	52700	Outer lane	Flexible	GOOD	3.55	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
52700	52600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
52700	52600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
52600	52500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
52600	52500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
52500	52400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
52500	52400	Outer lane	Flexible	GOOD	3.86	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
52400	52300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
52400	52300	Outer lane	Flexible	GOOD	3.17	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
52300	52200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
52300	52200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
52200	52100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
52200	52100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.3	0.1	6	Paved & Earthen	Good	0.0
52100	52000	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	7.1	Paved & Earthen	Good	0.0
52100	52000	Outer lane	Flexible	GOOD	1.10	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
52000	51900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
52000	51900	Outer lane	Flexible	Fair	4.93	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
51900	51800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.7	Paved & Earthen	Good	0.0
51900	51800	Outer lane	Flexible	GOOD	5.21	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
51800	51700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.8	Paved & Earthen	Good	0.0
51800	51700	Outer lane	Flexible	GOOD	4.21	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
51700	51600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
51700	51600	Outer lane	Flexible	GOOD	1.86	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
51600	51500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
51600	51500	Outer lane	Flexible	GOOD	1.54	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
51500	51400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
51500	51400	Outer lane	Flexible	GOOD	2.16	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
51400	51300	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
51400	51300	Outer lane	Flexible	GOOD	2.65	0.00	0.00	0.00	0.0	0.1	4.9	Paved & Earthen	Good	0.0
51300	51200	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
51300	51200	Outer lane	Flexible	GOOD	2.70	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
51200	51100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
51200	51100	Outer lane	Flexible	Fair	2.75	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
51100	51000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
51100	51000	Outer lane	Flexible	GOOD	5.81	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
51000	50900	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
51000	50900	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
50900	50800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
50900	50800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
50800	50700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
50800	50700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
50700	50600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
50700	50600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
50600	50500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
50600	50500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
50500	50400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
50500	50400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
50400	50300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
50400	50300	Outer lane	Flexible	GOOD	1.75	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
50300	50200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
50300	50200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
50200	50100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
50200	50100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
50100	50000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
50100	50000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
50000	49900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
50000	49900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
49900	49800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
49900	49800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
49800	49700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
49800	49700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
49700	49600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
49700	49600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
49600	49500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.6	Paved & Earthen	Good	0.0
49600	49500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
49500	49400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
49500	49400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
49400	49300	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
49400	49300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
49300	49200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.9	Paved & Earthen	Good	0.0
49300	49200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
49200	49100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
49200	49100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
49100	49000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
49100	49000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.2	0.1	3.2	Paved & Earthen	Good	0.0
49000	48900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
49000	48900	Outer lane	Flexible	GOOD	0.68	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
48900	48800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	11.6	Paved & Earthen	Good	0.0
48900	48800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
48800	48700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
48800	48700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
48700	48600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
48700	48600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
48600	48500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
48600	48500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
48500	48400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
48500	48400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
48400	48300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
48400	48300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
48300	48200	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
48300	48200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
48200	48100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
48200	48100	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
48100	48000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
48100	48000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
48000	47900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
48000	47900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
47900	47800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
47900	47800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
47800	47700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
47800	47700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
47700	47600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
47700	47600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
47600	47500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
47600	47500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
47500	47400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
47500	47400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
47400	47300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
47400	47300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
47300	47200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
47300	47200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
47200	47100	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
47200	47100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
47100	47000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
47100	47000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
47000	46900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
47000	46900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
46900	46800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
46900	46800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
46800	46700	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
46800	46700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
46700	46600	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	7.3	Paved & Earthen	Good	0.0
46700	46600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
46600	46500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
46600	46500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
46500	46400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
46500	46400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
46400	46300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
46400	46300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
46300	46200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
46300	46200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
46200	46100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
46200	46100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
46100	46000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5	Paved & Earthen	Good	0.0
46100	46000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
46000	45900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
46000	45900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.4	Paved & Earthen	Good	0.0
45900	45800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
45900	45800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.2	Paved & Earthen	Good	0.0
45800	45700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
45800	45700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
45700	45600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
45700	45600	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0
45600	45500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
45600	45500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
45500	45400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
45500	45400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
45400	45300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
45400	45300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
45300	45200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
45300	45200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4	Paved & Earthen	Good	0.0
45200	45100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
45200	45100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
45100	45000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
45100	45000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
45000	44900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
45000	44900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
44900	44800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
44900	44800	Outer lane	Flexible	GOOD	2.03	0.00	0.00	0.00	0.0	0.1	2.5	Paved & Earthen	Good	0.0
44800	44700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
44800	44700	Outer lane	Flexible	GOOD	0.93	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
44700	44600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.6	Paved & Earthen	Good	0.0
44700	44600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
44600	44500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
44600	44500	Outer lane	Flexible	GOOD	0.00	0.93	0.00	0.00	0.5	0.1	3.5	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
44500	44400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
44500	44400	Outer lane	Flexible	GOOD	0.89	1.42	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
44400	44300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.9	Paved & Earthen	Good	0.0
44400	44300	Outer lane	Flexible	GOOD	1.14	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
44300	44200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
44300	44200	Outer lane	Flexible	GOOD	1.95	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
44200	44100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.6	Paved & Earthen	Good	0.0
44200	44100	Outer lane	Flexible	GOOD	2.62	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
44100	44000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
44100	44000	Outer lane	Flexible	GOOD	0.60	0.00	0.00	0.00	0.0	0.1	4.1	Paved & Earthen	Good	0.0
44000	43900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
44000	43900	Outer lane	Flexible	Fair	1.80	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
43900	43800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
43900	43800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
43800	43700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
43800	43700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
43700	43600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
43700	43600	Outer lane	Flexible	GOOD	1.20	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
43600	43500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.5	Paved & Earthen	Good	0.0
43600	43500	Outer lane	Flexible	GOOD	2.22	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
43500	43400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
43500	43400	Outer lane	Flexible	GOOD	1.47	0.00	0.00	0.00	0.0	0.1	2.3	Paved & Earthen	Good	0.0
43400	43300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.4	Paved & Earthen	Good	0.0
43400	43300	Outer lane	Flexible	GOOD	0.22	0.00	0.00	0.00	0.0	0.1	3.8	Paved & Earthen	Good	0.0
43300	43200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
43300	43200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
43200	43100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
43200	43100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
43100	43000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.6	Paved & Earthen	Good	0.0
43100	43000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
43000	42900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
43000	42900	Outer lane	Flexible	GOOD	0.52	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
42900	42800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
42900	42800	Outer lane	Flexible	GOOD	1.11	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
42800	42700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
42800	42700	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
42700	42600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6	Paved & Earthen	Good	0.0
42700	42600	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.4	Paved & Earthen	Good	0.0
42600	42500	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
42600	42500	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.1	Paved & Earthen	Good	0.0
42500	42400	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.4	Paved & Earthen	Good	0.0
42500	42400	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
42400	42300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0
42400	42300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
42300	42200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.5	Paved & Earthen	Good	0.0
42300	42200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.3	Paved & Earthen	Good	0.0
42200	42100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
42200	42100	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
42100	42000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.1	Paved & Earthen	Good	0.0
42100	42000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.7	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
42000	41900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.6	Paved & Earthen	Good	0.0
42000	41900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.9	Paved & Earthen	Good	0.0
41900	41800	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.5	Paved & Earthen	Good	0.0
41900	41800	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.1	Paved & Earthen	Good	0.0
41800	41700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
41800	41700	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
41700	41600	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	4.3	Paved & Earthen	Good	0.0
41700	41600	Outer lane	Flexible	Fair	0.24	0.00	0.00	0.00	0.0	0.1	4.7	Paved & Earthen	Good	0.0
41600	41500	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	8.4	Paved & Earthen	Good	0.0
41600	41500	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	3.7	Paved & Earthen	Good	0.0

Chainage (km)												Shoulder Condition		
From	To	Lane	Pavement Type[1]	Riding Quality	Cracking %	Raveling (%)	Edge Break length in (m)	Pot holes (%)	Patching (%)	Rut depth		Shoulder Type[4]	Condition[5]	Material Loss[6]/ Corrugations (%)
										Length	depth[3]			
41500	41400	Inner lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	6.1	Paved & Earthen	Good	0.0
41500	41400	Outer lane	Flexible	GOOD	0.74	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
41400	41300	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	8	Paved & Earthen	Good	0.0
41400	41300	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
41300	41200	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.8	Paved & Earthen	Good	0.0
41300	41200	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
41200	41100	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.2	Paved & Earthen	Good	0.0
41200	41100	Outer lane	Flexible	GOOD	0.19	0.00	0.00	0.00	0.0	0.1	3	Paved & Earthen	Good	0.0
41100	41000	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.2	Paved & Earthen	Good	0.0
41100	41000	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	6.9	Paved & Earthen	Good	0.0
41000	40900	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	3.6	Paved & Earthen	Good	0.0
41000	40900	Outer lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	8.2	Paved & Earthen	Good	0.0
40900	40800	Inner lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	5.3	Paved & Earthen	Good	0.0
40900	40800	Outer lane	Flexible	GOOD	0.76	0.00	0.00	0.00	0.0	0.1	7.3	Paved & Earthen	Good	0.0
40800	40700	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0
40800	40700	Outer lane	Flexible	GOOD	0.22	0.00	0.00	0.00	0.0	0.1	6.7	Paved & Earthen	Good	0.0
40700	40600	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	4.2	Paved & Earthen	Good	0.0
40700	40600	Outer lane	Flexible	Fair	0.00	0.00	0.00	0.00	0.0	0.1	6.5	Paved & Earthen	Good	0.0
40600	40500	Inner lane	Flexible	GOOD	0.00	0.00	0.00	0.00	0.0	0.1	5.2	Paved & Earthen	Good	0.0
40600	40500	Outer lane	Flexible	POOR	0.00	0.00	0.00	0.00	0.0	0.1	2.8	Paved & Earthen	Good	0.0

Annexure – 6.3

- Pavement Visual condition Survey

NH-33_Hazaribagh-Ranchi _Road and Pavement Condition Visual Survey

Road Name: NH-33_Hazaribagh-Ranchi **05-11-2023**

CHAINAGE		PAVEMENT CONDITION	
FROM	TO	LHS	RHS
41+600	42+000	GOOD	GOOD
42+000	43+000	GOOD	GOOD
43+000	44+000	FAIR	GOOD
44+000	45+000	FAIR	GOOD
45+000	46+000	FAIR	GOOD
46+000	47+000	GOOD	GOOD
47+000	48+000	GOOD	GOOD
48+000	49+000	GOOD	GOOD
49+000	50+000	GOOD	GOOD
50+000	51+000	GOOD	GOOD
51+000	52+000	FAIR	FAIR
52+000	53+000	FAIR	FAIR
53+000	54+000	GOOD	GOOD
54+000	55+000	FAIR	GOOD
55+000	56+000	GOOD	GOOD
56+000	57+000	GOOD	GOOD
57+000	58+000	GOOD	GOOD
58+000	59+000	FAIR	GOOD
59+000	60+000	GOOD	GOOD
60+000	61+000	GOOD	GOOD
61+000	62+000	GOOD	GOOD
62+000	63+000	GOOD	GOOD
63+000	64+000	FAIR	GOOD
64+000	65+000	GOOD	GOOD
65+000	66+000	FAIR	GOOD
66+000	67+000	GOOD	GOOD
67+000	68+000	GOOD	GOOD
68+000	69+000	FAIR	GOOD
69+000	70+000	GOOD	GOOD
70+000	71+000	FAIR	GOOD
71+000	72+000	FAIR	GOOD
72+000	73+000	GOOD	GOOD
73+000	74+000	GOOD	GOOD
74+000	75+000	FAIR	GOOD
75+000	76+000	GOOD	GOOD
76+000	77+000	GOOD	GOOD
77+000	78+000	GOOD	GOOD
78+000	79+000	GOOD	GOOD
79+000	80+000	GOOD	GOOD

CHAINAGE		PAVEMENT CONDITION	
FROM	TO	LHS	RHS
80+000	81+000	GOOD	GOOD
81+000	82+000	GOOD	GOOD
82+000	83+000	GOOD	GOOD
83+000	84+000	GOOD	GOOD
84+000	85+000	GOOD	GOOD
85+000	86+000	GOOD	GOOD
86+000	87+000	FAIR	GOOD
87+000	88+000	GOOD	GOOD
88+000	89+000	GOOD	GOOD
89+000	90+000	GOOD	GOOD
90+000	91+000	GOOD	GOOD
91+000	92+000	GOOD	GOOD
92+000	93+000	GOOD	GOOD
93+000	94+000	GOOD	GOOD
94+000	95+000	GOOD	GOOD
95+000	96+000	GOOD	GOOD
96+000	97+000	GOOD	GOOD
97+000	98+000	GOOD	GOOD
98+000	99+000	GOOD	GOOD
99+000	100+000	GOOD	GOOD
100+000	101+000	GOOD	GOOD
101+000	102+000	GOOD	GOOD
102+000	103+000	GOOD	GOOD
103+000	104+000	GOOD	GOOD
104+000	105+000	GOOD	FAIR
105+000	106+000	GOOD	GOOD
106+000	107+000	GOOD	GOOD
107+000	108+000	GOOD	GOOD
108+000	109+000	GOOD	GOOD
109+000	110+000	GOOD	GOOD
110+000	111+000	GOOD	FAIR
111+000	112+000	GOOD	GOOD
112+000	113+000	GOOD	GOOD
113+000	114+000	GOOD	GOOD
114+000	115+050	GOOD	FAIR

Annexure – 6.4

- FWD data and Analysis

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Moduli Ranges (Mpa)		Granual E Moduli (Mpa)		Subgrade E Moduli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	15th Percentile E Value (Mpa)			Obtained Strains (through IITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bitumino us	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
1	40.517	4/30/2023 13:01	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21373	0.18155	0.16673	0.13396	0.11142	0.07198	0.05578	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	499.8	100.0	1.27	3141.5	371.1	77.1	1	2765.0	367.1	77.1	0.0001091	0.0001798	211.6	1345.5	211.6	24	NO		3000
2	40.522	4/29/2023 13:37	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.33767	0.26971	0.21704	0.15631	0.11825	0.06639	0.05032	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	1268.3	486.1	100.0	1.34	1696.3	362.0	77.1												
3	40.754	4/30/2023 13:02	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20942	0.15090	0.12097	0.09501	0.05696	0.04419	0.01686	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	498.5	100.0	1.27	3181.9	370.2	77.1												
4	41.006	4/29/2023 13:39	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.11450	0.07515	0.06682	0.05517	0.04201	0.02937	0.00506	41.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2451.1	496.3	100.0	1.34	3278.3	368.8	77.1												
5	41.025	4/30/2023 13:04	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29123	0.21053	0.16942	0.13451	0.08707	0.06689	0.03177	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2454.8	497.8	100.0	1.27	3124.4	369.8	77.1												
6	41.265	4/30/2023 13:05	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10150	0.08143	0.07212	0.06297	0.05452	0.04046	0.02960	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2452.3	497.8	99.9	1.27	3121.2	369.8	77.0												
7	41.506	4/30/2023 13:06	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.18296	0.14349	0.11747	0.09623	0.05995	0.03997	0.01558	41.2	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	499.3	100.0	1.34	3338.8	370.7	77.1	2	2352.2	334.5	77.1	0.0001238	0.0001925	148.6	987.4	148.6	24	NO		3000
8	41.506	4/29/2023 13:41	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30425	0.24415	0.20267	0.14429	0.10397	0.06344	0.05131	40.2	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	2035.7	497.6	100.0	1.27	2591.0	369.6	77.1												
9	41.715	4/30/2023 13:07	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.33418	0.28240	0.23913	0.18413	0.13894	0.07871	0.05289	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	1285.4	303.0	100.0	1.27	1636.0	229.9	77.1												
10	42.001	4/30/2023 13:08	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19903	0.16802	0.15393	0.12071	0.09159	0.04685	0.03322	40.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2491.4	497.3	100.0	1.27	3171.0	369.4	77.1												
11	42.016	4/29/2023 13:42	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.24415	0.18998	0.15472	0.11066	0.08367	0.04787	0.03750	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2464.6	498.0	99.9	1.34	3296.4	369.9	77.0												
12	42.254	4/30/2023 13:09	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25965	0.19213	0.15940	0.11475	0.08720	0.04948	0.03637	40.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	499.3	100.0	1.27	3174.2	370.7	77.1												
13	42.500	4/30/2023 13:10	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30818	0.22216	0.16330	0.10290	0.06671	0.03281	0.02002	40.2	37.1	GOOD	10	1250	2500	250	500	75	100	200	450	2484.1	499.0	100.0	1.27	3161.7	370.6	77.1	3	3144.6	369.5	77.0	0.0001015	0.0001739	251.1	1565.2	251.1	24	NO		3000
14	42.512	4/29/2023 13:43	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.33943	0.25810	0.20009	0.13835	0.09471	0.04294	0.02504	41.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2467.0	497.8	100.0	1.34	3299.6	369.8	77.1												
15	42.756	4/30/2023 13:11	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27522	0.19558	0.15428	0.11290	0.08906	0.05487	0.03866	40.2	37.0	GOOD	10	1250	2500	250	500	75	100	200	450	2441.3	500.0	100.0	1.27	3107.2	371.2	77.1												
16	43.002	4/29/2023 13:44	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.16219	0.10099	0.07818	0.07171	0.06549	0.04340	0.03216	41.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	500.0	99.7	1.34	3330.6	371.2	76.8												
17	43.015	4/30/2023 13:12	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27476	0.22390	0.16184	0.11317	0.08313	0.04488	0.03106	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	496.3	100.0	1.27	3180.4	368.8	77.1												
18	43.245	4/30/2023 13:13	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22020	0.16807	0.13644	0.10122	0.08118	0.04446	0.03425	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2480.4	498.3	100.0	1.27	3157.0	370.1	77.1												
19	43.501	4/29/2023 13:46	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.23348	0.17535	0.16299	0.11943	0.08852	0.04279	0.02725	41.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2454.8	497.3	100.0	1.34	3283.3	369.4	77.1	4	3160.3	369.1	77.0	0.0001013	0.0001737	251.9	1573.4	251.9	24	NO		3000
20	43.509	4/30/2023 13:14	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22948	0.12730	0.09124	0.07287	0.04706	0.03610	0.01572	40.2	37.9	GOOD	10	1250	2500	250	500	75	100	200	450	2492.7	493.4	100.0	1.27	3172.6	366.9	77.1												
21	43.744	4/30/2023 13:16	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22326	0.17969	0.14487	0.10665	0.07212	0.03533	0.02602	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	498.8	99.9	1.27	3169.5	370.4	77.0												
22	44.007	4/29/2023 13:47	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.14605	0.11641	0.10633	0.08866	0.07478	0.05294	0.04094	41.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2469.5	497.3	100.0	1.34	3302.9	369.4	77.1												
23	44.021	4/30/2023 13:17	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.14058	0.11432	0.10189	0.07467	0.05937	0.03490	0.02725	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2492.7	499.8	99.9	1.27	3172.6	371.1	77.0												
24	44.255	4/30/2023 13:18	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26162	0.15339	0.11154	0.08504	0.08117	0.04736	0.04032	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2418.1	500.0	100.0	1.27	3077.7	371.2	77.1												
25	44.521	4/29/2023 13:48	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.30541	0.20614	0.15436	0.11720	0.07048	0.04995	0.02095	41.2	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	2485.3	497.1	100.0	1.34	3324.1	369.3	77.1												
26	44.548	4/30/2023 13:19	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19534	0.10931	0.08038	0.06118	0.04013	0.03210	0.01023	40.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	496.3	100.0	1.27	3177.2	368.8	77.1	5	3084.0	369.4	77.1	0.0001026	0.0001746	244.8	1537.0	244.8	24	NO		3000
27	44.745	4/30/2023 13:20	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27683	0.18596	0.13724	0.09780	0.06899	0.04048	0.02574	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2449.9	498.0	100.0	1.27	3118.2	369.9	77.1												
28	45.001	4/30/2023 13:21	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.16539	0.09609	0.07588	0.05705	0.03836	0.02742	0.01066	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2425.5	498.5	100.0	1.27	3087.1	370.2	77.1												
29	45.003	4/29/2023 13:49	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.21525	0.13652	0.10044	0.07577	0.04197	0.02439	0.01638	41.2	37.1	GOOD	10	1250	2500	250	500	75	100	200	450	2402.2	499.3	100.0	1.34	3212.9	370.7	77.1												
30	45.265	4/30/2023 13:22	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21852	0.12635	0.10585	0.07678	0.06262	0.03590	0.03217	40.2	37.1	GOOD	10	1250	2500	250	500	75	100	200	450	2419.4	497.8	100.0	1.27	3079.4	369.8	77.1												
31	45.500	4/30/2023 13:24	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.14804	0.06344	0.04927	0.04220	0.03240	0.02471	0.00533	41.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2456.0	497.3	100.0	1.34	3284.9	369.4	77.1	6	2748.4	368.4	77.1	0.0001093	0.0001798	211.2	1345.5	211.2	24	NO		3000
32	45.500	4/29/2023 13:51	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26439	0.19452	0.17284	0.12404	0.09675	0.05865	0.04224	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2441.3	493.4	100.0	1.27	3107.2	366.9	77.1												
33	45.766	4/30/2023 13:25	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.31765	0.25645	0.20943	0.15792	0.11903	0.07082	0.04682	40.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	1313.5	497.6	100.0	1.27	1671.8	369.6	77.1												
34	46.005	4/30/2023 13:26	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26149	0.21505	0.18224	0.14455	0.11456	0.07327	0.04985	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2473.1	498.0	100.0	1.27	3147.7	369.9	77.1												
35	46.023	4/29/2023 13:52	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.09413	0.07181	0.05791	0.04194	0.03697	0.03010	0.02305	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2445.0	498.8	100.0	1.34	3270.2	370.4	77.1												
36	46.262	4/30/2023 13:27	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20815	0.17567	0.15229	0.12451	0.10071	0.06732	0.04701	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	496.6	100.0	1.27	3174.2	369.0	77.1												
37	46.526	4/30/2023 13:28	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.16891	0.13957	0.12361	0.09640	0.08175	0.06109	0.03958	40.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2489.0	499.8	100.0	1.27	3167.9	371.1	77.1	7	3149.2	366.6	77.0	0.0001018	0.0001742	247.9	1553.0	247.9	24	NO		3000
38	46.536	4/29/2023 13:53	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.13485	0.06310	0.04347	0.04000	0.03286	0.02671	0.00388	41.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2482.9	494.1	100.0	1.34	3320.9	367.3	77.1												
39	46.757	4/30/2023 13:29	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.18749	0.16214	0.14529	0.12187	0.10472	0.07057	0.05137	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2480.4	499.5	99.7	1.27	3157.0	370.9	76.8												
40	47.004	4/30/2023 13:30	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.11998	0.10380	0.09504	0.08123	0.07286	0.05875	0.04410	40.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	499.3	100.0	1.27	3177.2	370.7	77.1												
41	47.009	4/29/2023 13:55	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.08923	0.05648	0.04797	0.04427	0.03570	0.02799	0.00258	41.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	489.5	100.0	1.34	3343.7	364.3	77.1												
42	47.277	4/30/2023 13:31	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19563	0.15598	0.13158	0.10517	0.08380	0.05737	0.04132	40.2	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2456.0	499.8	100.0	1.27	3125.9	371.1	77.1												
43	47.502	4/30/2023 14:14	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08961	0.06790	0.05894	0.05264	0.04840	0.03748	0.03014	40.2	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	499.3	100.0	1.27	3164.9	370.7	77.1	8	3163.3	369.7	77.1	0.0001012	0.0001735	252.7	1581.6	252.7	24	NO		3000
44	47.507	4/29/2023 14:31	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.10474	0.06513	0.05939	0.05479	0.04259	0.03364	0.00422	41.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2430.4	499.0	100.0	1.34	3250.6	370.6	77.1												
45	47.752	4/30/2023 14:14	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08725	0.07733	0.07252	0.05367	0.04654	0.03776	0.02996	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2481.7	498.8	100.0	1.27	3158.6	370.4	77.1												
46	48.000	4/30/2023 14:15	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08560	0.06443	0.06277	0.05382	0.04481	0.03653	0.02971	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	498.3	100.0	1.27	3180.4	370.1	77.1												
47	48.000	4/29/2023 14:31	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.10331	0.06448	0.06090	0.05457	0.04189	0.03289	0.00326	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	496.1	100.0	1.34	3343.7	368.6	77.1												
48	48.256	4/30/2023 14:16	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.17195	0.12759	0.11332	0.09324	0.07959	0.05784	0.04272	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	498.3	99.9	1.27	3180.4	370.1	77.0												
49	48.523	4/30/2023 14:17	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.14260	0.10944	0.09147	0.07235	0.06230	0.05350	0.03725	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2489.0	498.0	99.9	1.27	3167.9	369.9	77.0	9	3162.5	366.6	77.0	0.0001015	0.0001740	249.9	1561.1	249.9	24	NO		3000
50	48.530	4/29/2023 14:33	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.07506	0.04900	0.04006	0.03811	0.03035	0.02435	0.00251	41.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	484.6	100.0	1.34	3335.6	361.0	77.1												
51	48.769	4/30/2023 14:18	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08383	0.06305	0.05884	0.04778	0.04510	0.03858	0.02902	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2492.7	497.3	99.9	1.27	3172.6	369.4	77.0												
52	49.002	4/30/2023 14:19	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.15903	0.11270	0.08435	0.05842	0.04234	0.02754	0.02080	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2475.6	499.3	100.0	1.27	3150.9	370.7	77.1												
53	49.055	4/29/2023 14:34	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.12098	0.05883	0.03927	0.03058	0.02113	0.01593	0.00427	41.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	499.0	100.0	1.34	3312.7	370.6	77.1												
54	49.265	4/30/2023 14:20	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.11245	0.08369	0.06603	0.05655	0.03996	0.03012	0.01579	40.2	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2487.8	495.8	100.0	1.27	3166.4	368.4	77.1												
55	49.500	4/29/2023 14:35	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.16174	0.09181	0.06682	0.05465	0.03887	0.02983	0.00554	41.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2369.3	497.8	100.0	1.34	3168.9	369.8	77.1	10	3112.7	369.6	77.1	0.0001021	0.0001742	247.5	1553.0	247.5	24	NO		3000
56	49.512	4/30/2023 14:21	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10936	0.08370	0.07045	0.05843	0.04881	0.03673	0.02998	40.2	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2432.8	499.0	100.0	1.27	3096.4	370.6	77.1												
57	49.759	4/30/2023 14:23	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.09559	0.07870	0.06700	0.05244	0.04757	0.03224	0.02791	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2467.0	497.6	99.9	1.27	3139.9	369.6	77.0												
58	50.003	4/30/2023 14:24	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.09143	0.06681	0.05811	0.05124	0.04365	0.03333	0.02678	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2449.9	498.3	100.0	1.27	3118.2	370.1	77.1												
59	50.005	4/29/2023 14:36	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.11037	0.07824	0.06247	0.04829	0.04049	0.02619	0.02449	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2462.1	498.8	100.0	1.34	3293.0	370.4	77.1												
60	50.274	4/30/2023 14:25	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10021	0.08257	0.07246	0.06166	0.05163	0.03657	0.02799	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2469.5	497.6	100.0	1.27	3143.1	369.6	77.1												
61	50.518	4/29/2023 14:38	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.07118	0.04572	0.03402	0.03313	0.02799	0.02291	0.00217	41.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2495.1	498.0	100.0	1.34	3337.2	369.9	77.1	11	3164.8	369.9	76.8	0.0001011	0.0001737	253.6	1573.4	253.6	24	NO		3000
62	50.533	4/30/2023 14:26	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.07742	0.05776	0.04952	0.04209	0.03643	0.02767	0.02185	40.2	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	498.3	99.7	1.27	3181.9	370.1	76.8												
63	50.780	4/30/2023 14:27	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.07748	0.06068	0.05418	0.04759	0.04162	0.03258	0.02674	40.2	37.8	GOOD	10	1250	2500	250	500	75	100	200	450	2475.6	499.0	99.9	1.27	3150.9	370.6	77.0												
64	51.004	4/30/2023 14:28	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12145	0.09472	0.08027	0.06143	0.05049	0.03574	0.02562	40.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	500.0	99.9	1.27	3169.5	371.2	77.0												
65	51.006	4/29/2023 14:39	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.12990	0.08462	0.07073	0.06139	0.04903	0.03493	0.02298	41.2	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2469.5	497.8	100.0	1.34	3302.9	369.8	77.1												
66	51.258	4/30/2023 14:29	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19593	0.14500	0.11303	0.08126	0.06184	0.03925	0.02807	40.2	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2497.6	499.8	99.7	1.27	3178.9	371.1	76.8												
67	51.524	4/30/2023 14:31	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08839	0.06008	0.04675	0.03984	0.03023	0.02237	0.00247	40.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2480.4	499.3	100.0	1.27	3157.0	370.7	77.1	12	3146.9	369.4	77.1	0.0001015	0.0001737	250.9	1573.4	250.9	24

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Moduli Ranges (Mpa)		Granual E Moduli (Mpa)		Subgrade E Moduli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	15th Percentile E Value (Mpa)			Obtained Strains (through IITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bitumino us	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
113	59.017	4/30/2023 15:04	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.16418	0.10582	0.07583	0.05130	0.03708	0.02216	0.01369	40.2	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	499.5	99.8	1.27	3152.4	370.9	76.9												
114	59.257	4/30/2023 15:05	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21495	0.16409	0.13106	0.09438	0.06977	0.03771	0.02472	40.2	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	498.0	100.0	1.27	3164.9	369.9	77.1												
115	59.514	4/30/2023 15:06	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10415	0.07395	0.06881	0.05264	0.04309	0.02919	0.02087	40.5	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2480.4	497.1	100.0	1.29	3203.9	369.3	77.1	20	2860.6	369.7	77.1	0.0001068	0.0001779	223.3	1411.9	223.3	24	NO		3000
116	59.516	4/29/2023 15:02	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.27977	0.22591	0.15611	0.10379	0.08034	0.05247	0.01664	41.4	38.5	GOOD	10	1250	2500	250	500	75	100	200	450	2413.2	498.8	100.0	1.35	3260.3	370.4	77.1												
117	59.762	4/30/2023 15:07	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12937	0.07663	0.07443	0.05484	0.04075	0.02857	0.01923	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2474.3	499.8	100.0	1.29	3196.0	371.1	77.1												
118	60.001	4/30/2023 15:08	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20158	0.14466	0.11777	0.07390	0.05769	0.03383	0.02086	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2380.3	499.8	100.0	1.29	3074.6	371.1	77.1												
119	60.003	4/29/2023 15:03	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.39414	0.29299	0.22653	0.14250	0.10446	0.05926	0.03500	41.4	38.6	GOOD	10	1250	2500	250	500	75	100	200	450	1642.2	500.0	100.0	1.35	2218.7	371.2	77.1												
120	60.263	4/30/2023 15:09	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19186	0.13010	0.10598	0.06826	0.05005	0.03303	0.02320	40.5	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2451.1	498.0	99.9	1.29	3166.1	369.9	77.0												
121	60.509	4/29/2023 15:04	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.20385	0.11417	0.07987	0.05962	0.03822	0.02902	0.01565	41.4	38.5	GOOD	10	1250	2500	250	500	75	100	200	450	2473.1	496.3	100.0	1.35	3341.2	368.8	77.1	21	3024.4	367.9	77.0	0.0001039	0.0001758	237.0	1490.0	237.0	24	NO		3000
122	60.518	4/30/2023 15:10	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.24936	0.19842	0.16230	0.12115	0.09204	0.05975	0.04537	40.5	37.0	GOOD	10	1250	2500	250	500	75	100	200	450	2487.8	493.6	99.9	1.29	3213.5	367.0	77.0												
123	60.776	4/30/2023 15:11	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.32039	0.21051	0.19555	0.11493	0.08583	0.05044	0.03182	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2489.0	496.3	100.0	1.29	3215.0	368.8	77.1												
124	61.008	4/30/2023 15:12	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.37687	0.26197	0.20528	0.14692	0.10512	0.05905	0.03997	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1913.5	497.8	100.0	1.29	2471.6	369.8	77.1												
125	61.013	4/29/2023 15:06	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.29805	0.20315	0.15292	0.10985	0.06977	0.03625	0.02642	41.4	38.4	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	500.0	99.9	1.35	3359.5	371.2	77.0												
126	61.259	4/30/2023 15:13	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.17804	0.11144	0.08529	0.06620	0.04214	0.02947	0.01632	40.5	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2484.1	495.4	100.0	1.29	3208.7	368.2	77.1												
127	61.507	4/30/2023 15:14	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25834	0.20431	0.17531	0.13784	0.10506	0.06317	0.04059	40.5	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	499.3	100.0	1.29	3221.3	370.7	77.1	22	3023.9	367.7	77.1	0.0001039	0.0001758	237.0	1490.0	237.0	24	NO		3000
128	61.516	4/29/2023 15:07	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.29189	0.18905	0.12745	0.11915	0.10267	0.06238	0.03653	41.0	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	498.5	100.0	1.32	3291.9	370.2	77.1												
129	61.756	4/30/2023 15:16	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30383	0.21031	0.17538	0.12176	0.08289	0.04044	0.02180	40.5	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	491.2	100.0	1.29	3216.6	365.4	77.1												
130	62.004	4/30/2023 15:17	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25539	0.14046	0.09291	0.07089	0.04356	0.02998	0.01874	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2489.0	498.0	100.0	1.29	3215.0	369.9	77.1												
131	62.014	4/29/2023 15:08	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.25379	0.13206	0.08107	0.05392	0.03321	0.02276	0.02182	40.1	35.1	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	495.8	100.0	1.27	3161.7	368.4	77.1												
132	62.262	4/30/2023 15:18	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.31461	0.25945	0.20571	0.14138	0.10913	0.06744	0.04053	40.5	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2021.0	499.3	100.0	1.29	2610.5	370.7	77.1												
133	62.510	4/30/2023 15:19	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.36227	0.27661	0.23356	0.17430	0.13167	0.08133	0.05404	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1274.4	325.0	100.0	1.29	1646.1	246.8	77.1	23	1638.6	232.1	77.1	0.0001762	0.0002329	51.3	416.3	51.3	24	NO		3000
134	62.514	4/30/2023 15:10	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.12251	0.08767	0.06774	0.04569	0.03531	0.02308	0.01805	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2485.3	499.3	100.0	1.27	3147.8	370.7	77.1												
135	62.766	4/30/2023 15:20	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.15751	0.09464	0.07040	0.05199	0.02894	0.02652	0.01887	40.5	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	2491.4	498.8	99.9	1.29	3218.1	370.4	77.0												
136	63.005	4/30/2023 15:21	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29983	0.22919	0.19598	0.15159	0.11211	0.06701	0.04260	40.5	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2388.8	493.6	100.0	1.29	3085.6	367.0	77.1												
137	63.009	4/29/2023 15:11	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.28482	0.19691	0.15030	0.09412	0.05874	0.02922	0.01823	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	497.8	100.0	1.27	3149.4	369.8	77.1												
138	63.261	4/30/2023 15:22	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.48410	0.37067	0.28922	0.19353	0.13371	0.06880	0.03795	40.5	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	250.2	100.0	1.29	1616.2	188.0	77.1												
139	63.508	4/29/2023 15:12	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.37696	0.25649	0.19521	0.12643	0.08350	0.04306	0.02861	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2377.8	498.3	100.0	1.27	3011.6	370.1	77.1	24	2191.1	324.6	77.1	0.0001303	0.0001976	129.4	877.0	129.4	24	NO		3000
140	63.518	4/30/2023 15:24	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.42095	0.29970	0.24471	0.17991	0.13252	0.07739	0.05062	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1257.3	255.1	100.0	1.29	1624.0	192.0	77.1												
141	63.761	4/30/2023 15:25	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29584	0.17867	0.12396	0.08773	0.04868	0.03388	0.02028	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2453.6	499.0	99.9	1.29	3169.3	370.6	77.0												
142	64.003	4/30/2023 15:26	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34022	0.25471	0.19855	0.14719	0.10472	0.06142	0.04120	40.5	37.3	GOOD	10	1250	2500	250	500	75	100	200	450	1842.6	498.8	100.0	1.29	2380.1	370.4	77.1												
143	64.013	4/29/2023 15:14	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.29055	0.20380	0.15382	0.09854	0.06340	0.03160	0.02177	40.1	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	2484.1	496.3	100.0	1.27	3146.3	368.8	77.1												
144	64.254	4/30/2023 15:27	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30373	0.23829	0.19815	0.14575	0.11425	0.06907	0.04605	40.5	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	1928.2	500.0	100.0	1.29	2490.6	371.2	77.1												
145	64.504	4/30/2023 15:28	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27042	0.17354	0.12621	0.09490	0.05663	0.04000	0.02438	40.5	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	498.5	100.0	1.29	3229.2	370.2	77.1	25	1622.5	188.5	75.5	0.0001931	0.0002478	36.2	314.3	36.2	24	NO		3000
146	64.521	4/29/2023 15:15	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.47157	0.27597	0.18825	0.12786	0.06368	0.04114	0.03974	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2429.1	496.1	100.0	1.27	3076.6	368.6	77.1												
147	64.767	4/30/2023 15:29	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.28741	0.19829	0.16705	0.11994	0.09211	0.05804	0.04007	40.5	37.7	GOOD	10	1250	2500	250	500	75	100	200	450	2445.0	499.5	100.0	1.29	3158.2	370.9	77.1												
148	65.015	4/30/2023 15:30	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.49979	0.37949	0.32010	0.23662	0.18160	0.10746	0.06723	40.5	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	250.2	92.6	1.29	1617.7	188.0	70.7												
149	65.028	4/29/2023 15:17	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.25200	0.17232	0.12881	0.07841	0.05352	0.03669	0.02218	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2481.7	499.3	100.0	1.27	3143.2	370.7	77.1												
150	65.260	4/30/2023 15:31	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.48235	0.35403	0.28738	0.20722	0.14852	0.08300	0.05527	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1257.3	251.0	100.0	1.29	1624.0	188.7	77.1												
151	65.517	4/29/2023 15:18	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.40580	0.30062	0.24038	0.16850	0.11800	0.06834	0.04563	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1270.8	339.9	100.0	1.27	1609.5	258.1	77.1	26	1617.3	188.4	75.9	0.0001935	0.0002473	36.0	317.1	36.0	24	NO		3000
152	65.518	4/30/2023 15:32	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.52761	0.40234	0.33838	0.25200	0.18587	0.10406	0.06297	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1256.1	250.0	96.7	1.29	1622.5	187.9	74.3												
153	65.764	4/30/2023 15:33	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.38312	0.29090	0.26556	0.20130	0.15683	0.09587	0.06237	40.5	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	1281.8	251.2	100.0	1.29	1655.7	188.8	77.1												
154	66.004	4/30/2023 15:35	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.33267	0.21722	0.16357	0.12396	0.07421	0.04499	0.02548	40.5	37.5	GOOD	10	1250	2500	250	500	75	100	200	450	2364.4	494.1	100.0	1.29	3054.1	367.3	77.1												
155	66.005	4/29/2023 15:19	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.24373	0.16347	0.12158	0.08208	0.05857	0.03287	0.02324	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	2407.1	496.8	100.0	1.27	3048.7	369.1	77.1												
156	66.253	4/30/2023 15:36	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.48578	0.36727	0.29537	0.21564	0.15324	0.08422	0.05003	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1261.0	250.2	100.0	1.29	1628.8	188.0	77.1	27	1627.7	188.6	77.1	0.0001926	0.0002448	36.5	332.1	36.5	24	NO		3000
157	66.512	4/30/2023 15:37	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21871	0.14215	0.10635	0.08218	0.05236	0.03653	0.01294	40.5	37.2	GOOD	10	1250	2500	250	500	75	100	200	450	2490.2	495.1	100.0	1.29	3216.6	368.0	77.1												
158	66.535	4/29/2023 15:20	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.38149	0.26840	0.20209	0.13688	0.09297	0.04947	0.03473	40.1	35.2	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	499.0	100.0	1.27	3137.0	370.6	77.1												
159	66.762	4/30/2023 15:38	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29930	0.18154	0.13208	0.09500	0.04964	0.02887	0.01598	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	2481.7	494.1	99.9	1.29	3205.6	367.3	77.0												
160	67.008	4/30/2023 15:39	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30328	0.20931	0.20322	0.15889	0.12217	0.07015	0.04082	40.5	37.6	GOOD	10	1250	2500	250	500	75	100	200	450	2405.9	495.6	100.0	1.29	3107.7	368.3	77.1												
161	67.024	4/29/2023 15:22	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.34311	0.27302	0.23984	0.17735	0.12834	0.06313	0.03183	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1531.0	319.9	100.0	1.27	1939.1	242.9	77.1												
162	67.260	4/30/2023 15:40	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45056	0.33827	0.26041	0.18700	0.13163	0.06818	0.04054	40.5	37.4	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	251.0	100.0	1.29	1617.7	188.7	77.1												
163	67.496	4/30/2023 16:33	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34511	0.25983	0.20352	0.13888	0.09840	0.05492	0.03248	38.5	35.2	GOOD	10	1250	2500	250	500	75	100	200	450	2446.2	496.6	100.0	1.17	2869.3	369.0	77.1	28	1572.0	243.0	77.1	0.0001766	0.0002323	52.6	421.2	52.6	24	NO		3000
164	67.533	4/29/2023 15:23	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.53140	0.39016	0.29889	0.20245	0.14154	0.08000	0.05455	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1268.3	250.5	100.0	1.27	1606.4	188.3	77.1												
165	67.753	4/30/2023 16:33	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34163	0.26463	0.21263	0.13592	0.10156	0.05654	0.03378	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2423.0	498.0	100.0	1.17	2842.1	369.9	77.1												
166	68.000	4/30/2023 16:34	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.33828	0.25912	0.21217	0.13539	0.09965	0.05539	0.03348	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2437.7	495.4	100.0	1.17	2859.3	368.2	77.1												
167	68.005	4/29/2023 15:24	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.30139	0.17469	0.12106	0.11426	0.07735	0.03960	0.02434	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2440.1	499.8	100.0	1.27	3090.5	371.1	77.1												
168	68.271	4/30/2023 16:35	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.37642	0.29937	0.23219	0.16848	0.12741	0.07753	0.05182	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	344.1	100.0	1.17	1469.0	261.3	77.1												
169	68.508	4/29/2023 15:26	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.28327	0.21420	0.17850	0.13200	0.10462	0.06311	0.04131	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2462.1	495.8	100.0	1.27	3118.4	368.4	77.1	29	2447.6	324.4	77.1	0.0001229	0.0001925	147.8	987.4	147.8	24	NO		3000
170	68.513	4/30/2023 16:36	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.41900	0.32225	0.26591	0.19502	0.14552	0.08299	0.05059	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1257.3	255.6	99.9	1.17	1474.8	192.4	77.0												
171	68.766	4/30/2023 16:37	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19303	0.15894	0.13936	0.11234	0.09110	0.06093	0.04115	38.5	35.8	GOOD	10	1250	2500	250	500	75	100	200	450	2482.9	497.1	100.0	1.17	2912.4	369.3	77.1												
172	69.001	4/30/2023 16:38	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.15469	0.11812	0.09839	0.06268	0.05377	0.03929	0.02654	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2464.6	498.8	100.0	1.17	2890.9	370.4	77.1												
173	69.009	4/29/2023 15:27	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.21295	0.16198	0.13413	0.10375	0.08256	0.05285	0.03708	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	497.6	100.0	1.27	3137.0	369.6	77.1												
174	69.260	4/30/2023 16:39	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25933	0.20922	0.18369	0.14778	0.12342	0.08275	0.05998	38.5	35.2	GOOD	10	1250	2500	250	500	75	100	200	450	2363.1	496.1	100.0	1.17	2771.8	368.6	77.1												
175	69.512	4/29/2023 15:28	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.51385	0.41312	0.36047	0.24288	0.18249	0.10427	0.06454	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1254.9	250.0	93.4	1.27	1589.4	187.9	71.4	30	1474.1	189.1	75.5	0.0002037	0.0002536	31.9	283.0	31.9	24	NO		3000
176	69.515	4/30/2023 16:40	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.35965	0.29033	0.25196	0.18857	0.14876	0.09276	0.06166	38.5	35.8	GOOD	10	1250	2500	250	500	75	100	200	450	1265.9	252.9	100.0	1.17	1484.9	190.2	77.1												
177	69.766	4/30/2023 16:41	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.44799	0.28913	0.26211	0.19024	0.13305	0.06950	0.04638	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1254.9	266.4	100.0	1.17	1472.0	201.0	77.1												
178	70.009	4/29/2023 15:30	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.31608	0.23761	0.18860	0.12534	0.08666	0.05130	0.03304	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	496.3	100.0	1.27	3164.9	368.8	77.1												
179	70.009	4/30/2023 16:42	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30933	0.24175	0.19907	0.14578	0.10911	0.06241	0.03676	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	2277.6	494.9	100.0	1.17	2671.6	367.8	77.1												
180	70.265	4/30/2023 16:44	NH-33_HAZARIBAGH-RANCHI	LHS OUTER

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Moduli Ranges (Mpa)		Granual E Moduli (Mpa)		Subgrade E Moduli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	15th Percentile E Value (Mpa)			Obtained Strains (through IITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bitumino us	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
225	77.754	4/30/2023 17:16	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34468	0.27048	0.22036	0.15817	0.11606	0.06604	0.03932	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1526.1	485.3	100.0	1.17	1790.1	361.5	77.1												
226	78.009	4/30/2023 17:17	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.63123	0.47595	0.37843	0.26620	0.17885	0.09510	0.05744	38.5	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1272.0	250.0	99.3	1.17	1492.0	187.9	76.5												
227	78.046	4/29/2023 15:52	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.53757	0.41629	0.33367	0.24345	0.17584	0.09643	0.05720	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1261.0	252.4	99.7	1.27	1597.1	189.8	76.8												
228	78.261	4/30/2023 17:18	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.31223	0.23690	0.19558	0.14197	0.10406	0.05972	0.03683	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	2364.4	492.2	100.0	1.17	2773.4	366.1	77.1												
229	78.509	4/30/2023 17:19	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34738	0.22707	0.16995	0.14655	0.12754	0.07378	0.04749	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1551.8	499.0	100.0	1.17	1820.2	370.6	77.1	39	1480.9	216.1	77.1	0.0001919	0.0002429	40.1	344.0	40.1	24	NO		3000
230	78.524	4/29/2023 15:53	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.49210	0.38065	0.31036	0.20181	0.13983	0.07325	0.04365	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1253.7	250.7	100.0	1.27	1587.9	188.4	77.1												
231	78.777	4/30/2023 17:21	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.35829	0.27288	0.22165	0.16923	0.12666	0.07492	0.05038	38.5	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1272.0	371.0	100.0	1.17	1492.0	281.3	77.1												
232	79.000	4/30/2023 17:22	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.46452	0.35624	0.27693	0.18370	0.11953	0.05823	0.03628	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1259.8	297.2	100.0	1.17	1477.7	225.3	77.1												
233	79.058	4/29/2023 15:55	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.35702	0.20716	0.13526	0.09021	0.04512	0.02966	0.02593	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2481.7	499.5	100.0	1.27	3143.2	370.9	77.1												
234	79.274	4/30/2023 17:23	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.39696	0.30234	0.24805	0.17298	0.12475	0.06901	0.04316	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1263.4	318.2	100.0	1.17	1481.9	241.6	77.1												
235	79.509	4/30/2023 17:24	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.28833	0.19964	0.13940	0.09336	0.07772	0.05362	0.03256	38.5	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	499.5	100.0	1.17	2932.4	370.9	77.1	40	1569.3	188.7	76.9	0.0001966	0.0002474	34.7	316.6	34.7	24	NO		3000
236	79.526	4/29/2023 15:56	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.29393	0.18650	0.11469	0.09183	0.05678	0.03255	0.03059	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	498.3	100.0	1.27	3158.7	370.1	77.1												
237	79.762	4/30/2023 17:25	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26283	0.21708	0.18591	0.13787	0.11187	0.07220	0.04797	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2456.0	499.8	99.9	1.17	2880.8	371.1	77.0												
238	80.008	4/30/2023 17:26	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25385	0.20286	0.18239	0.16197	0.13051	0.08561	0.06170	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	2446.2	497.1	100.0	1.17	2869.3	369.3	77.1												
239	80.041	4/29/2023 15:57	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.40963	0.27680	0.25697	0.21900	0.17213	0.10574	0.06587	40.1	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1258.6	251.2	99.6	1.27	1594.1	188.8	76.7												
240	80.266	4/30/2023 17:27	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.53033	0.39488	0.31862	0.23038	0.16087	0.08104	0.05132	38.5	35.2	GOOD	10	1250	2500	250	500	75	100	200	450	1274.4	250.5	99.9	1.17	1494.8	188.3	77.0												
241	80.505	4/30/2023 17:28	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.42608	0.32876	0.26783	0.20532	0.15160	0.08043	0.05149	38.5	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1289.1	250.0	100.0	1.17	1512.1	187.9	77.1	41	1489.8	188.6	77.1	0.0002025	0.0002503	32.4	300.3	32.4	24	NO		3000
242	80.540	4/29/2023 15:59	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.19683	0.18537	0.09604	0.04975	0.03837	0.02590	0.01891	40.1	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	497.8	100.0	1.27	3164.9	369.8	77.1												
243	80.769	4/29/2023 17:29	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.52227	0.40541	0.31176	0.19994	0.14182	0.08056	0.05334	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1261.0	251.7	100.0	1.17	1479.1	189.2	77.1												
244	81.008	4/30/2023 17:30	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.36365	0.29043	0.24586	0.18479	0.14332	0.08678	0.05811	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1273.2	262.2	100.0	1.17	1493.4	197.7	77.1												
245	81.062	4/29/2023 16:00	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.31311	0.20334	0.14996	0.11616	0.06893	0.04387	0.02260	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2409.6	495.6	100.0	1.27	3051.9	368.3	77.1												
246	81.256	4/30/2023 17:31	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.44864	0.34415	0.28969	0.20746	0.14755	0.07698	0.04734	38.5	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1284.2	251.2	100.0	1.17	1506.3	188.8	77.1												
247	81.532	4/30/2023 17:32	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30991	0.23208	0.19348	0.15034	0.11769	0.08153	0.05960	38.5	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1330.6	500.0	99.9	1.17	1560.8	371.2	77.0	42	1495.2	196.4	77.0	0.0001988	0.0002480	34.7	313.1	34.7	24	NO		3000
248	81.536	4/29/2023 16:01	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.24107	0.16448	0.13907	0.10903	0.08205	0.05123	0.03635	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	498.8	99.9	1.27	3161.7	370.4	77.0												
249	81.763	4/30/2023 17:34	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30417	0.22202	0.17070	0.11481	0.08059	0.04272	0.02751	38.5	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2496.3	497.6	100.0	1.17	2928.1	369.6	77.1												
250	82.003	4/30/2023 17:35	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.39557	0.30836	0.25085	0.18050	0.13263	0.07711	0.04904	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1283.0	270.0	100.0	1.17	1504.9	203.9	77.1												
251	82.056	4/29/2023 16:02	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.44738	0.34057	0.27603	0.20110	0.14290	0.07393	0.04480	40.1	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1268.3	251.2	100.0	1.27	1606.4	188.8	77.1												
252	82.261	4/30/2023 17:36	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.41970	0.33189	0.26620	0.18684	0.13271	0.07534	0.04841	38.5	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1250.0	263.7	100.0	1.17	1466.2	198.9	77.1												
253	82.513	4/30/2023 17:37	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.34808	0.25837	0.19937	0.13135	0.09332	0.05627	0.03905	38.5	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	497.8	100.0	1.17	2916.7	369.8	77.1	43	1471.9	188.0	73.3	0.0002045	0.0002581	31.5	261.3	31.5	24	NO		3000
254	82.514	4/29/2023 16:04	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.45465	0.36349	0.29681	0.21737	0.16313	0.09351	0.05771	40.1	35.8	GOOD	10	1250	2500	250	500	75	100	200	450	1262.2	250.2	99.8	1.27	1598.7	188.0	76.9												
255	82.764	4/30/2023 17:38	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.64051	0.49494	0.40046	0.29393	0.21267	0.11889	0.07031	38.5	35.8	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	250.0	83.7	1.17	1467.6	187.9	63.1												
256	83.003	4/30/2023 17:39	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45923	0.35411	0.29196	0.22386	0.16611	0.09065	0.06189	38.5	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1256.1	250.7	100.0	1.17	1473.4	188.4	77.1												
257	83.063	4/29/2023 16:05	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.62614	0.47178	0.37419	0.25953	0.17550	0.09143	0.05265	40.1	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1253.7	250.2	99.5	1.27	1587.9	188.0	76.7												
258	83.271	4/30/2023 17:40	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.40147	0.30569	0.24882	0.18230	0.13072	0.07306	0.04697	38.5	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1269.6	267.4	100.0	1.17	1489.2	201.8	77.1												
259	83.514	4/29/2023 16:06	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.42981	0.33821	0.28544	0.22156	0.18093	0.12576	0.08979	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	1253.7	250.0	82.0	1.27	1587.9	187.9	61.7	44	1468.3	187.9	61.4	0.0002060	0.0002831	30.7	171.8	30.7	24	NO		3000
260	83.517	4/30/2023 17:41	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45052	0.35968	0.29769	0.22552	0.17415	0.10826	0.07215	38.5	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	250.0	90.5	1.17	1469.0	187.9	69.0												
261	83.756	4/30/2023 17:42	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.39695	0.29926	0.23670	0.16865	0.11902	0.06942	0.04503	38.5	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1269.6	341.6	100.0	1.17	1489.2	259.4	77.1												
262	84.002	4/30/2023 17:43	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45501	0.35374	0.29901	0.22527	0.16821	0.10377	0.06838	38.5	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1250.0	250.5	97.2	1.17	1466.2	188.3	74.7												
263	84.023	4/29/2023 16:08	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.52004	0.41685	0.33325	0.23918	0.18287	0.11947	0.08193	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	250.0	80.9	1.27	1584.7	187.9	60.7												
264	84.261	4/30/2023 17:44	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.42857	0.33705	0.27870	0.21074	0.15944	0.09543	0.05856	38.5	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	1264.7	250.2	100.0	1.17	1483.5	188.0	77.1												
265	84.505	4/30/2023 17:45	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.36163	0.28407	0.23409	0.17573	0.13185	0.07932	0.05165	38.5	35.3	GOOD	10	1250	2500	250	500	75	100	200	450	1253.7	311.1	100.0	1.17	1470.6	236.1	77.1	45	1451.8	197.2	76.9	0.0002018	0.0002497	33.5	303.6	33.5	24	NO		3000
266	84.547	4/29/2023 16:09	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.38016	0.28500	0.23207	0.17472	0.12467	0.07286	0.04903	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	327.2	100.0	1.27	1586.2	248.5	77.1												
267	84.752	4/30/2023 17:46	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.44460	0.32156	0.25390	0.17676	0.12529	0.07179	0.04781	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	265.4	99.9	1.11	1395.6	200.2	77.0												
268	85.004	4/30/2023 17:47	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.32744	0.29086	0.25475	0.18972	0.16308	0.11026	0.07527	37.4	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	1462.6	250.2	99.5	1.11	1629.8	188.0	76.7												
269	85.027	4/29/2023 16:10	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.44067	0.32061	0.23979	0.15773	0.10407	0.05346	0.03678	40.1	35.6	GOOD	10	1250	2500	250	500	75	100	200	450	2267.8	499.3	100.0	1.27	2872.3	370.7	77.1												
270	85.269	4/30/2023 17:49	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12493	0.09225	0.07524	0.05939	0.04449	0.02898	0.02092	37.4	34.2	GOOD	10	1250	2500	250	500	75	100	200	450	2401.0	500.0	100.0	1.11	2675.5	371.2	77.1												
271	85.753	4/30/2023 17:50	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.36140	0.28607	0.25287	0.19211	0.15419	0.09992	0.07284	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	1257.3	250.5	100.0	1.11	1401.1	188.3	77.1	46	1399.0	188.7	74.8	0.0002099	0.0002583	29.7	260.4	29.7	24	NO		3000
272	86.004	4/30/2023 17:51	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.59233	0.46662	0.32053	0.23449	0.18083	0.11166	0.07014	37.4	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	1259.8	251.2	89.5	1.11	1403.9	188.8	68.1												
273	86.061	4/29/2023 16:12	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.48313	0.37605	0.31261	0.21232	0.15251	0.08246	0.04855	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1307.4	252.0	100.0	1.27	1655.9	189.5	77.1												
274	86.257	4/30/2023 17:52	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.39741	0.30887	0.25654	0.19056	0.14015	0.07702	0.04641	37.4	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	1250.0	254.2	100.0	1.11	1392.9	191.3	77.1												
275	86.505	4/30/2023 17:53	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.32236	0.22156	0.16039	0.15356	0.12227	0.07213	0.04026	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2365.6	491.2	100.0	1.11	2636.1	365.4	77.1												
276	86.516	4/29/2023 16:13	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.27939	0.19343	0.16863	0.13436	0.10144	0.05230	0.02919	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	2493.9	493.4	100.0	1.27	3158.7	366.9	77.1												
277	86.757	4/30/2023 17:54	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.40555	0.30638	0.24807	0.17942	0.12947	0.07070	0.04037	37.4	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	1261.0	276.4	100.0	1.11	1405.2	209.0	77.1	47	1395.3	188.3	71.7	0.0002107	0.0002644	29.3	234.2	29.3	24	NO		3000
278	87.005	4/30/2023 17:55	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.28991	0.23802	0.20096	0.14687	0.12163	0.07314	0.04551	37.4	34.2	GOOD	10	1250	2500	250	500	75	100	200	450	2261.7	499.3	100.0	1.11	2520.3	370.7	77.1												
279	87.063	4/29/2023 16:15	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.32464	0.25307	0.21124	0.16546	0.12478	0.06882	0.04004	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1538.4	437.7	100.0	1.27	1948.5	329.0	77.1												
280	87.254	4/30/2023 17:57	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.43116	0.34248	0.28324	0.21240	0.15735	0.09075	0.05669	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1252.4	250.7	100.0	1.11	1395.6	188.4	77.1												
281	87.511	4/30/2023 17:58	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.36404	0.30047	0.25922	0.20151	0.15428	0.09860	0.06877	37.4	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	252.4	99.9	1.11	1394.3	189.8	77.0												
282	87.513	4/29/2023 16:16	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.74255	0.57303	0.46477	0.33030	0.23428	0.13192	0.07998	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1259.8	250.0	75.1	1.27	1595.6	187.9	55.8												
283	87.773	4/30/2023 17:59	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30915	0.22626	0.21614	0.16553	0.12930	0.07762	0.04784	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1561.6	435.0	100.0	1.11	1740.2	327.1	77.1	48	1393.9	187.9	55.9	0.0002125	0.0003003	28.4	131.5	28.4	24	NO		3000
284	88.003	4/30/2023 18:00	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.46496	0.37355	0.32430	0.25680	0.20648	0.13534	0.09630	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	250.2	75.3	1.11	1394.3	187.9	56.0												
285	88.050	4/29/2023 16:17	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.60500	0.49682	0.41435	0.30656	0.22807	0.13767	0.09216	40.1	35.4	GOOD	10	1250	2500	250	500	75	100	200	450	1253.7	250.0	75.0	1.27	1587.9	187.9	55.7												
286	88.263	4/30/2023 18:01	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.38192	0.32123	0.28146	0.20440	0.16446	0.10371	0.06221	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	1250.0	250.5	99.4	1.11	1392.9	188.3	76.6												
287	88.504	4/30/2023 18:02	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.48081	0.37647	0.31746	0.23760	0.17474	0.09879	0.06198	37.4	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	1254.9	251.0	98.7	1.11	1398.4	188.7	76.0												
288	88.515	4/29/2023 16:19	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.61813	0.48003	0.39389	0.27725	0.19063	0.09585	0.05337	40.1	35.7	GOOD	10	1250	2500	250	500	75	100	200	450	1250.0	251.0	99.7	1.27	1583.2	188.7	76.8												
289	88.772	4/30/2023 18:03	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45598	0.30038	0.29705	0.21736	0.15767	0.09129	0.05905	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1287.9	252.0	99.9	1.11	1435.2	189.5	77.0	49	1426.0	188.0	74.7	0.0002080	0.0002575	30.3	264.0	30.3	24	NO		3000
290	89.003	4/30/2023 18:04	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30109	0.25812	0.22209	0.15893	0.12402	0.07404	0.04409	37.4	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	1564.0	438.9	100.0	1.11	1742.8	329.9	77.1												
291	89.053	4/29/2023 16:20	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.29299	0.23779	0.20216	0.14925	0.11349	0.06292	0.03678	40.1	35.5	GOOD	10	1250	2500	250	500	75	100	200	450	2353.4	497.1	100.0	1.27	2980.7	369.3	77.1												
292	89.255	4/30/2023 18:05	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Moduli Ranges (Mpa)		Granual E Moduli (Mpa)		Subgrade E Moduli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	15th Percentile E Value (Mpa)			Obtained Strains (through IITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bitumino us	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
337	96.757	4/30/2023 19:45	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22974	0.19430	0.15146	0.13443	0.09061	0.05923	0.04560	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2467.0	498.3	100.0	1.11	2749.1	370.1	77.1	57	2659.9	369.6	77.1	0.0001111	0.0001810	203.8	1305.5	203.8	24	NO		3000
338	97.003	4/30/2023 19:46	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22478	0.17367	0.15328	0.11271	0.09602	0.05870	0.04495	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2492.7	499.5	100.0	1.11	2777.7	370.9	77.1												
339	97.032	4/29/2023 16:46	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.27436	0.17501	0.12468	0.10172	0.06327	0.04381	0.01548	39.5	34.1	GOOD	10	1250	2500	250	500	75	100	200	450	2457.2	498.8	100.0	1.23	3022.9	370.4	77.1												
340	97.256	4/30/2023 19:47	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29044	0.23630	0.19364	0.13823	0.10868	0.06722	0.04475	37.4	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	2146.9	498.3	100.0	1.11	2392.4	370.1	77.1												
341	97.502	4/30/2023 19:47	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.28381	0.23005	0.18654	0.13833	0.10643	0.06604	0.04442	37.4	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	2478.0	495.1	100.0	1.11	2761.4	368.0	77.1												
342	97.519	4/29/2023 16:47	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.27960	0.17549	0.12979	0.12034	0.09535	0.05555	0.03716	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	499.0	100.0	1.23	3047.0	370.6	77.1												
343	97.753	4/30/2023 19:49	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22241	0.17497	0.14574	0.10632	0.08537	0.06186	0.04508	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2409.6	499.0	99.9	1.11	2685.1	370.6	77.0	58	2706.5	369.9	77.0	0.0001100	0.0001803	208.7	1328.7	208.7	24	NO		3000
344	98.000	4/30/2023 19:49	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22027	0.14411	0.10682	0.08560	0.06142	0.04483	0.01172	37.4	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2435.2	499.8	100.0	1.11	2713.7	371.1	77.1												
345	98.025	4/29/2023 16:48	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.12174	0.06842	0.06583	0.05409	0.04158	0.03512	0.00533	39.5	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	495.1	100.0	1.23	3075.5	368.0	77.1												
346	98.256	4/30/2023 19:50	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.11851	0.10234	0.09017	0.07221	0.06113	0.04373	0.03143	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2452.3	499.3	99.9	1.11	2732.7	370.7	77.0												
347	98.529	4/29/2023 16:50	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.36903	0.25299	0.19027	0.13689	0.09467	0.05418	0.04482	39.5	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	2467.0	499.0	100.0	1.23	3035.0	370.6	77.1												
348	98.545	4/30/2023 19:51	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12538	0.09034	0.07029	0.06077	0.04643	0.03196	0.00620	37.4	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	499.0	100.0	1.11	2784.5	370.6	77.1												
349	98.756	4/30/2023 19:52	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12258	0.10576	0.09643	0.07060	0.06256	0.04831	0.03286	37.4	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	499.5	100.0	1.11	2750.4	370.9	77.1	59	2410.1	369.9	77.1	0.0001168	0.0001852	182.5	1176.6	182.5	24	NO		3000
350	99.000	4/30/2023 19:52	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12364	0.09138	0.07040	0.05995	0.05523	0.04832	0.03267	34.7	31.1	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	499.8	100.0	0.99	2435.8	371.1	77.1												
351	99.040	4/29/2023 16:51	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.06236	0.05376	0.04726	0.03770	0.03489	0.02922	0.02267	39.5	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	2482.9	498.5	100.0	1.23	3054.5	370.2	77.1												
352	99.260	4/30/2023 19:53	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10396	0.06769	0.05193	0.04159	0.03011	0.02369	0.00596	34.7	31.5	GOOD	10	1250	2500	250	500	75	100	200	450	2452.3	496.6	100.0	0.99	2420.1	369.0	77.1												
353	99.510	4/30/2023 19:54	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.10703	0.07851	0.05928	0.05083	0.03421	0.02432	0.00519	34.7	31.8	GOOD	10	1250	2500	250	500	75	100	200	450	2412.0	499.3	100.0	0.99	2380.3	370.7	77.1												
354	99.523	4/29/2023 16:52	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.16848	0.10052	0.07418	0.05526	0.03717	0.02793	0.00755	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2420.6	499.8	100.0	1.23	2977.9	371.1	77.1												
355	99.762	4/30/2023 19:56	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19947	0.13894	0.10839	0.08599	0.05807	0.04104	0.01178	34.7	31.1	GOOD	10	1250	2500	250	500	75	100	200	450	2421.8	496.3	100.0	0.99	2390.0	368.8	77.1	60	2386.7	367.9	77.1	0.0001177	0.0001860	178.6	1153.8	178.6	24	NO		3000
356	100.019	4/30/2023 19:57	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26424	0.20679	0.17731	0.13305	0.10085	0.06171	0.04316	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2408.4	499.0	100.0	0.99	2376.7	370.6	77.1												
357	100.034	4/29/2023 16:53	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.11210	0.07289	0.05492	0.04090	0.02655	0.01913	0.00504	39.5	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2471.9	491.0	100.0	1.23	3041.0	365.3	77.1												
358	100.266	4/30/2023 19:58	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.14452	0.10553	0.09235	0.07732	0.05786	0.03553	0.02776	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2497.6	498.3	99.9	0.99	2464.8	370.1	77.0												
359	100.522	4/30/2023 19:59	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22711	0.14609	0.11679	0.09001	0.07952	0.05679	0.04112	34.7	31.7	GOOD	10	1250	2500	250	500	75	100	200	450	2467.0	497.3	100.0	0.99	2434.6	369.4	77.1												
360	100.554	4/29/2023 16:55	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.09604	0.06263	0.04508	0.03872	0.02718	0.02053	0.00486	39.5	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	2436.5	498.3	100.0	1.23	2997.4	370.1	77.1												
361	100.762	4/30/2023 20:01	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.26212	0.18453	0.14375	0.12205	0.11302	0.07201	0.04734	34.7	31.7	GOOD	10	1250	2500	250	500	75	100	200	450	2473.1	500.0	100.0	0.99	2440.6	371.2	77.1	61	2429.4	368.6	77.1	0.0001166	0.0001851	182.5	1179.4	182.5	24	NO		3000
362	101.022	4/30/2023 20:02	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.17229	0.10536	0.08155	0.06506	0.04371	0.03075	0.00809	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2491.4	498.0	100.0	0.99	2458.7	369.9	77.1												
363	101.024	4/29/2023 16:57	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.14866	0.09794	0.07435	0.05566	0.03796	0.02910	0.00886	39.5	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2469.5	496.1	100.0	1.23	3038.0	368.6	77.1												
364	101.268	4/30/2023 20:03	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.17654	0.12780	0.10602	0.07667	0.05590	0.03526	0.02582	34.7	31.5	GOOD	10	1250	2500	250	500	75	100	200	450	2457.2	499.5	100.0	0.99	2424.9	370.9	77.1												
365	101.502	4/29/2023 16:58	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.11690	0.07761	0.07281	0.03858	0.03398	0.02440	0.01767	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	498.3	99.9	1.23	3074.1	370.1	77.0												
366	101.513	4/30/2023 20:05	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.14386	0.09785	0.06956	0.05275	0.03144	0.02030	0.00819	34.7	31.7	GOOD	10	1250	2500	250	500	75	100	200	450	2463.3	496.1	100.0	0.99	2430.9	368.6	77.1												
367	101.779	4/30/2023 20:06	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.12453	0.07441	0.06120	0.04957	0.03621	0.02506	0.02005	34.7	31.5	GOOD	10	1250	2500	250	500	75	100	200	450	2475.6	496.6	100.0	0.99	2443.1	369.0	77.1	62	2421.0	368.4	77.1	0.0001168	0.0001853	181.8	1173.7	181.8	24	NO		3000
368	102.006	4/30/2023 20:07	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.22115	0.18453	0.15795	0.12229	0.09739	0.05866	0.03586	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2408.4	498.3	100.0	0.99	2376.7	370.1	77.1												
369	102.029	4/29/2023 16:59	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.16010	0.11677	0.09491	0.06401	0.04741	0.02975	0.01840	39.5	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	496.8	100.0	1.23	3036.4	369.1	77.1												
370	102.258	4/30/2023 20:08	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21860	0.14262	0.10466	0.07829	0.05601	0.04789	0.02990	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	499.0	100.0	0.99	2435.8	370.6	77.1												
371	102.503	4/30/2023 20:09	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.19099	0.12671	0.09666	0.07358	0.04705	0.03446	0.01098	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2479.2	493.4	100.0	0.99	2446.6	366.9	77.1												
372	102.518	4/29/2023 17:01	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.17395	0.13108	0.10807	0.07174	0.05304	0.03172	0.02142	39.5	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	2487.8	498.0	100.0	1.23	3060.5	369.9	77.1												
373	102.768	4/30/2023 20:11	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20063	0.15247	0.12815	0.09584	0.07602	0.05045	0.03691	34.7	31.5	GOOD	10	1250	2500	250	500	75	100	200	450	2413.2	499.0	100.0	0.99	2381.5	370.6	77.1	63	2228.4	368.6	77.0	0.0001218	0.0001889	165.8	1075.6	165.8	24	NO		3000
374	103.003	4/29/2023 17:02	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.11744	0.07557	0.05607	0.04252	0.02711	0.02266	0.00643	39.5	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	2453.6	496.6	100.0	1.23	3018.5	369.0	77.1												
375	103.012	4/30/2023 20:12	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.13143	0.09050	0.06650	0.05233	0.03506	0.02378	0.00746	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2498.8	499.5	100.0	0.99	2466.0	370.9	77.1												
376	103.261	4/30/2023 20:13	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08551	0.05586	0.05043	0.03826	0.03029	0.02053	0.01606	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2421.8	499.5	99.9	0.99	2390.0	370.9	77.0												
377	103.510	4/30/2023 20:15	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20675	0.18148	0.16364	0.12958	0.10796	0.07527	0.04882	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2445.0	499.5	99.9	0.99	2412.9	370.9	77.0												
378	103.523	4/29/2023 17:03	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.32259	0.25358	0.20230	0.15207	0.11370	0.07022	0.05078	39.5	34.5	GOOD	10	1250	2500	250	500	75	100	200	450	1438.2	494.6	100.0	1.23	1769.3	367.6	77.1												
379	103.757	4/30/2023 20:23	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.09146	0.08414	0.05619	0.05428	0.05117	0.03416	0.00892	34.7	31.7	GOOD	10	1250	2500	250	500	75	100	200	450	2478.0	499.8	99.8	0.99	2445.4	371.1	76.9	64	2445.1	368.0	77.0	0.0001163	0.0001850	183.3	1182.3	183.3	24	NO		3000
380	104.015	4/29/2023 17:05	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.09376	0.05464	0.03719	0.03510	0.03121	0.02647	0.00247	39.5	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	2486.6	489.5	100.0	1.23	3059.1	364.3	77.1												
381	104.018	4/30/2023 20:24	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.15837	0.12611	0.09261	0.07826	0.05587	0.03953	0.00848	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2476.8	499.5	100.0	0.99	2444.2	370.9	77.1												
382	104.263	4/30/2023 20:25	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.31000	0.23795	0.19548	0.12866	0.09571	0.05901	0.03570	34.7	31.9	GOOD	10	1250	2500	250	500	75	100	200	450	2500.0	497.1	100.0	0.99	2467.1	369.3	77.1												
383	104.516	4/30/2023 20:26	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25818	0.19355	0.14870	0.08679	0.06149	0.03245	0.02413	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2478.0	497.8	100.0	0.99	2445.4	369.8	77.1												
384	104.539	4/29/2023 17:06	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.17833	0.10408	0.09209	0.07873	0.05485	0.03557	0.02737	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2491.4	499.8	100.0	1.23	3065.0	371.1	77.1												
385	104.753	4/30/2023 20:28	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.47060	0.29479	0.20387	0.15008	0.08583	0.05247	0.03961	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2470.7	498.5	100.0	0.99	2438.2	370.2	77.1	65	2131.9	321.4	77.0	0.0001327	0.0001996	123.3	837.9	123.3	24	NO		3000
386	105.002	4/30/2023 20:29	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.45802	0.34341	0.28898	0.20222	0.15097	0.08825	0.05517	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	1251.2	250.5	99.8	0.99	1234.8	188.3	76.9												
387	105.025	4/29/2023 17:07	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.10352	0.05324	0.04306	0.03736	0.02820	0.02308	0.00343	39.5	34.3	GOOD	10	1250	2500	250	500	75	100	200	450	2479.2	495.8	100.0	1.23	3050.0	368.4	77.1												
388	105.267	4/30/2023 20:30	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.23515	0.19441	0.16295	0.11136	0.09043	0.05861	0.03993	34.7	31.2	GOOD	10	1250	2500	250	500	75	100	200	450	2492.7	496.3	100.0	0.99	2459.9	368.8	77.1												
389	105.508	4/30/2023 20:31	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.08379	0.06693	0.05209	0.04903	0.03973	0.03181	0.00323	34.7	31.7	GOOD	10	1250	2500	250	500	75	100	200	450	2463.3	491.7	100.0	0.99	2430.9	365.7	77.1												
390	105.523	4/29/2023 17:08	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.19031	0.14161	0.11693	0.09313	0.06978	0.04470	0.03280	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2468.2	494.1	100.0	1.23	3036.4	367.3	77.1												
391	105.751	4/30/2023 20:32	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.21063	0.16730	0.13266	0.10469	0.07762	0.04322	0.02469	34.7	31.2	GOOD	10	1250	2500	250	500	75	100	200	450	2482.9	499.0	100.0	0.99	2450.3	370.6	77.1	66	1824.9	339.7	77.1	0.0001398	0.0002028	115.0	779.6	115.0	24	NO		3000
392	106.010	4/30/2023 20:34	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.30758	0.17432	0.12687	0.09181	0.06310	0.05136	0.03389	34.7	31.2	GOOD	10	1250	2500	250	500	75	100	200	450	2265.4	500.0	100.0	0.99	2235.6	371.2	77.1												
393	106.035	4/29/2023 17:10	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.42053	0.31863	0.24859	0.16858	0.11700	0.06479	0.04230	39.5	34.7	GOOD	10	1250	2500	250	500	75	100	200	450	1296.4	329.2	100.0	1.23	1594.9	250.0	77.1												
394	106.263	4/30/2023 20:35	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.25642	0.20316	0.17609	0.13535	0.10368	0.06493	0.04189	34.7	31.3	GOOD	10	1250	2500	250	500	75	100	200	450	2469.5	497.6	99.9	0.99	2437.0	369.6	77.0												
395	106.516	4/30/2023 20:36	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.29265	0.21349	0.19525	0.14888	0.11932	0.07831	0.05469	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	1926.9	497.8	100.0	0.99	1901.6	369.8	77.1												
396	106.547	4/29/2023 17:11	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.47317	0.25843	0.17802	0.12066	0.06887	0.04842	0.03960	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2456.0	499.3	100.0	1.23	3021.4	370.7	77.1												
397	106.760	4/30/2023 20:37	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.32579	0.26100	0.22268	0.16156	0.12349	0.07660	0.04515	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	1335.5	412.0	100.0	0.99	1317.9	310.9	77.1	67	2016.1	355.8	77.1	0.0001302	0.0001953	139.3	924.8	139.3	24	NO		3000
398	107.005	4/29/2023 17:12	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.23431	0.13846	0.10718	0.08267	0.05225	0.03925	0.01942	39.5	34.6	GOOD	10	1250	2500	250	500	75	100	200	450	2454.8	499.3	100.0	1.23	3019.9	370.7	77.1												
399	107.010	4/30/2023 20:38	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27974	0.22508	0.19237	0.14867	0.11511	0.07219	0.04794	34.7	31.3	GOOD	10	1250	2500	250	500	75	100	200	450	2278.8	499.8	100.0	0.99	2248.8	371.1	77.1												
400	107.262	4/30/2023 20:39	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.32789	0.24546	0.19785	0.14312	0.10240	0.05630	0.03320	34.7	31.5	GOOD	10	1250	2500	250	500	75	100	200	450	2401.0	500.0	100.0	0.99	2369.4	371.2	77.1												
401	107.514	4/30/2023 20:40	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.27118	0.20460	0.14751	0.10488	0.09635	0.04182	0.02776	34.7	31.4	GOOD	10	1250	2500	250	500	75	100	200	450	2396.1	500.0	100.0	0.99	2364.6	371.2	77.1												
402	107.515	4/29/2023 17:13	NH-33_HAZARIBAGH-RANCHI	LHS INNER	40	0.51727	0.31081	0.21961	0.15936	0.08720	0.04999	0.04865	39.5	34.4	GOOD	10	1250	2500	250	500	75	100	200	450	2434.0	499.3	100.0	1.23	2994.4	370.7	77.1												
403	107.775	4/30/2023 20:42	NH-33_HAZARIBAGH-RANCHI	LHS OUTER	40	0.20411	0.13842	0.12482	0.09984	0.07580	0.04784	0.03571	34.7	31.6	GOOD	10	1250	2500	250	500	75	100	200	450	2471.9	499.8	99.9	0.99	2439.4	371.1	77.0	68	2443.0	369.1	77.0	0.0001162	0.0001849	184.0	1185.2	184.0	24

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Modulli Ranges (Mpa)		Granual E Modulli (Mpa)		Subgrade E Modulli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	Existing Chainage		Total Length(Km)	Average Crust Thickness (mm)		15th Percentile E Value (Mpa)			Obtained Strains (through ITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bituminous	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		From	To		Bituminous	Granular Layer	Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
1	115.000	4/29/2023 9:15	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.15575	0.12170	0.10296	0.07790	0.06647	0.04270	0.03402	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2490.2	499.8	100.0	1.06	2627.2	371.1	77.1	1	115.000	114.000	1.000	200.000	420.000	2182.9	365.4	77.1	0.0001245	0.0002032	154.9	772.7	154.9	24	NO		3000
2	115.000	4/30/2023 6:53	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.09510	0.07551	0.05802	0.05038	0.03676	0.02740	0.01319	32.2	29.8	GOOD	10	1250	2500	250	500	75	100	200	420	2487.8	498.0	99.9	0.89	2203.5	369.9	77.0																		
3	114.758	4/30/2023 6:55	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.13094	0.08676	0.06254	0.05131	0.03344	0.02495	0.02455	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	2457.2	496.1	100.0	0.89	2176.4	368.6	77.1																		
4	114.510	4/30/2023 6:56	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15150	0.12335	0.11816	0.08368	0.07137	0.05112	0.03458	32.2	28.5	GOOD	10	1250	2500	250	500	75	100	200	420	2490.2	497.6	100.0	0.89	2205.7	369.6	77.1																		
5	114.504	4/29/2023 9:20	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.09088	0.04721	0.04354	0.03632	0.02802	0.02193	0.00202	36.2	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2497.6	476.8	100.0	1.06	2635.0	355.8	77.1																		
6	114.243	4/30/2023 6:57	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.14720	0.10505	0.07183	0.05643	0.04139	0.02556	0.00662	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2467.0	499.3	100.0	0.89	2185.1	370.7	77.1																		
7	114.000	4/29/2023 6:58	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.13534	0.08977	0.06575	0.05936	0.05165	0.03523	0.02755	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2439.4	499.8	100.0	0.89	2152.7	371.1	77.1	2	114.000	113.009	0.991	200.000	420.000	2195.7	368.7	77.0	0.0001242	0.0002117	155.6	641.7	155.6	24	NO		3000
8	114.000	4/29/2023 9:20	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.08608	0.04832	0.04007	0.03610	0.02422	0.02190	0.00185	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2394.9	498.0	100.0	1.06	2526.7	369.9	77.1																		
9	113.748	4/30/2023 6:59	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.08056	0.07071	0.06096	0.05379	0.04701	0.03696	0.02932	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2495.1	495.8	100.0	0.89	2210.0	368.4	77.1																		
10	113.512	4/29/2023 9:22	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.08325	0.05880	0.04980	0.04589	0.04332	0.03287	0.02715	36.2	32.5	GOOD	10	1250	2500	250	500	75	100	200	420	2487.8	498.8	99.8	1.06	2624.7	370.4	76.9																		
11	113.494	4/30/2023 7:00	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18385	0.15579	0.13960	0.11077	0.09314	0.06285	0.04461	32.2	28.8	GOOD	10	1250	2500	250	500	75	100	200	420	2495.1	496.3	100.0	0.89	2210.0	368.8	77.1																		
12	113.245	4/30/2023 7:01	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.13690	0.11047	0.10710	0.08650	0.05822	0.04199	0.00848	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	2496.3	500.0	100.0	0.89	2211.1	371.2	77.1																		
13	113.009	4/29/2023 9:23	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.09009	0.05365	0.04659	0.04659	0.04037	0.03741	0.02925	0.02040	36.2	32.2	GOOD	10	1250	2500	250	500	75	100	200	420	2457.2	500.0	100.0	1.06	2582.4	371.2	77.1	3	113.009	112.014	0.995	200.000	420.000	2190.0	366.1	77.0	0.0001241	0.0002030	156.4	776.1	156.4	24	NO		3000
14	113.009	4/30/2023 7:02	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15849	0.11888	0.08882	0.07286	0.04947	0.03402	0.00827	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2474.3	495.6	100.0	0.89	2191.6	368.3	77.1																		
15	112.749	4/30/2023 7:03	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18387	0.15783	0.13596	0.11131	0.08965	0.06148	0.04509	32.2	28.8	GOOD	10	1250	2500	250	500	75	100	200	420	2489.0	500.0	99.8	0.89	2204.6	371.2	76.9																		
16	112.515	4/29/2023 9:25	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.15015	0.10869	0.08924	0.07447	0.05314	0.03937	0.00445	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2436.5	482.4	100.0	1.06	2570.6	359.5	77.1																		
17	112.509	4/30/2023 7:05	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.10462	0.07459	0.06153	0.05532	0.04521	0.03362	0.02383	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2492.7	499.3	99.9	0.89	2207.9	370.7	77.0																		
18	112.239	4/30/2023 7:06	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17447	0.12811	0.12328	0.10394	0.08851	0.06548	0.05109	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2467.0	497.1	99.9	0.89	2185.1	369.3	77.0																		
19	112.014	4/30/2023 7:07	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.13728	0.10983	0.09237	0.06889	0.05473	0.03663	0.02523	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2484.1	497.1	100.0	0.89	2200.3	369.3	77.1	4	112.014	111.005	1.009	200.000	420.000	2166.4	369.7	77.1	0.0001242	0.0002028	157.4	779.6	157.4	24	NO		3000
20	112.002	4/29/2023 9:26	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.26782	0.19210	0.14957	0.10851	0.07959	0.04718	0.03224	36.2	32.7	GOOD	10	1250	2500	250	500	75	100	200	420	2386.4	499.8	100.0	1.06	2517.7	371.1	77.1																		
21	111.744	4/30/2023 7:08	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.10054	0.07136	0.05539	0.04643	0.04115	0.02867	0.02272	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2446.2	500.0	100.0	0.89	2166.7	371.2	77.1																		
22	111.500	4/29/2023 9:28	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.08461	0.06240	0.05376	0.04505	0.03434	0.02642	0.00466	36.2	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2473.1	498.3	100.0	1.06	2609.2	370.1	77.1																		
23	111.490	4/30/2023 7:09	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18949	0.13958	0.09824	0.08768	0.05881	0.05609	0.03839	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2491.4	499.8	100.0	0.89	2206.7	371.1	77.1																		
24	111.256	4/30/2023 7:10	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18399	0.14887	0.11484	0.10232	0.09129	0.07211	0.05211	32.2	28.2	GOOD	10	1250	2500	250	500	75	100	200	420	2445.0	498.0	100.0	0.89	2165.6	369.9	77.1																		
25	111.005	4/29/2023 9:29	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.38618	0.22348	0.19256	0.16539	0.12107	0.06906	0.05037	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2306.2	493.2	100.0	1.06	1378.1	366.7	77.1	5	111.005	110.037	0.968	200.000	420.000	1974.4	367.8	77.0	0.0001303	0.0002076	141.4	701.1	141.4	24	NO		3000
26	111.005	4/30/2023 7:11	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20530	0.16077	0.13781	0.11327	0.07907	0.05622	0.01022	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2453.6	499.8	99.9	0.89	2173.2	371.1	77.0																		
27	110.755	4/30/2023 7:12	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19381	0.14850	0.14249	0.11124	0.09041	0.06268	0.04743	32.2	28.5	GOOD	10	1250	2500	250	500	75	100	200	420	2497.6	496.6	100.0	0.89	2212.2	369.0	77.1																		
28	110.519	4/30/2023 7:13	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.13330	0.10380	0.08184	0.07348	0.05363	0.03710	0.00407	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2491.4	495.4	100.0	0.89	2206.7	368.2	77.1																		
29	110.500	4/29/2023 9:30	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.30265	0.19855	0.15035	0.10818	0.05869	0.03501	0.01610	36.2	32.2	GOOD	10	1250	2500	250	500	75	100	200	420	2460.9	497.8	100.0	1.06	2596.3	369.8	77.1																		
30	110.266	4/30/2023 7:14	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.10422	0.07607	0.06175	0.04897	0.03262	0.03096	0.02280	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	2498.8	495.4	99.8	0.89	2213.3	368.2	76.9																		
31	110.037	4/30/2023 7:15	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.21620	0.13737	0.10318	0.08343	0.05745	0.04236	0.01008	32.2	28.5	GOOD	10	1250	2500	250	500	75	100	200	420	2484.1	498.8	100.0	0.89	2200.3	370.4	77.1	6	110.037	109.023	1.015	200.000	420.000	1897.9	189.8	77.0	0.0001765	0.0002493	44.9	305.8	44.9	24	NO		3000
32	110.023	4/29/2023 9:37	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.29738	0.19168	0.13893	0.10449	0.05694	0.04376	0.01909	36.2	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2470.7	499.5	99.9	1.06	2606.7	370.9	77.0																		
33	109.744	4/30/2023 7:17	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20557	0.15357	0.10688	0.09038	0.07686	0.06199	0.03802	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2500.0	495.6	100.0	0.89	2214.3	368.3	77.1																		
34	109.509	4/29/2023 9:38	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.57033	0.42079	0.32434	0.20218	0.13106	0.06941	0.05920	36.2	32.5	GOOD	10	1250	2500	250	500	75	100	200	420	1250.0	250.2	99.9	1.06	1318.8	188.0	77.0																		
35	109.500	4/30/2023 7:18	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.14548	0.13187	0.11667	0.08817	0.07691	0.06326	0.04281	32.2	28.2	GOOD	10	1250	2500	250	500	75	100	200	420	2482.9	498.5	99.8	0.89	2199.2	370.2	76.9																		
36	109.244	4/30/2023 7:19	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.06785	0.04906	0.04112	0.03958	0.03272	0.02827	0.00183	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2360.7	253.2	100.0	0.89	2091.0	190.4	77.1																		
37	109.023	4/29/2023 9:40	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.35996	0.21272	0.09337	0.07268	0.04870	0.05150	0.03886	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2500.0	498.3	100.0	1.06	2637.6	370.1	77.1	7	109.023	108.020	1.003	200.000	420.000	2183.2	367.7	77.0	0.0001241	0.0002029	156.9	777.8	156.9	24	NO		3000
38	109.010	4/30/2023 7:20	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17742	0.16149	0.14948	0.09942	0.08572	0.06206	0.03831	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2470.7	498.3	99.9	0.89	2188.4	370.1	77.0																		
39	108.745	4/30/2023 7:21	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23787	0.18760	0.16143	0.12829	0.09889	0.06106	0.04302	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2490.2	497.1	100.0	0.89	2205.7	369.3	77.1																		
40	108.528	4/30/2023 9:41	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.10481	0.07077	0.05231	0.04651	0.02617	0.02260	0.00460	36.2	32.5	GOOD	10	1250	2500	250	500	75	100	200	420	2498.8	487.3	100.0	1.06	2636.3	362.8	77.1																		
41	108.485	4/30/2023 7:23	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.09379	0.07677	0.06505	0.04882	0.03791	0.02526	0.01743	32.2	28.2	GOOD	10	1250	2500	250	500	75	100	200	420	2447.5	499.8	99.9	0.89	2167.8	371.1	77.0																		
42	108.241	4/30/2023 7:24	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.10743	0.07384	0.05673	0.04758	0.03506	0.02728	0.01153	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2471.9	497.6	100.0	0.89	2189.4	369.6	77.1																		
43	108.020	4/30/2023 7:25	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.09884	0.07001	0.05015	0.04003	0.03086	0.02069	0.00354	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	2490.2	498.3	100.0	0.89	2205.7	370.1	77.1	8	108.020	107.016	1.004	200.000	420.000	2166.7	369.3	77.1	0.0001243	0.0002028	156.9	779.6	156.9	24	NO		3000
44	108.014	4/29/2023 9:42	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.22933	0.17711	0.14823	0.10737	0.07878	0.04292	0.02772	36.2	32.1	GOOD	10	1250	2500	250	500	75	100	200	420	2481.7	496.6	99.9	1.06	2618.3	369.0	77.0																		
45	107.737	4/30/2023 7:26	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17631	0.14820	0.13077	0.10837	0.08903	0.06366	0.04300	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2467.0	499.8	100.0	0.89	2185.1	371.1	77.1																		
46	107.501	4/29/2023 9:44	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.17842	0.11006	0.08486	0.06489	0.04082	0.02776	0.00792	36.2	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2480.4	499.8	100.0	1.06	2616.9	371.1	77.1																		
47	107.493	4/30/2023 7:27	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15927	0.10941	0.08512	0.07068	0.05135	0.03379	0.00601	32.2	28.3	GOOD	10	1250	2500	250	500	75	100	200	420	2383.9	497.3	100.0	0.89	2111.5	369.4	77.1																		
48	107.231	4/30/2023 7:29	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15323	0.10493	0.10184	0.06359	0.06150	0.03683	0.02551	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2492.7	498.5	100.0	0.89	2207.9	370.2	77.1																		
49	107.016	4/29/2023 9:45	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.21887	0.14041	0.10515	0.08140	0.04778	0.03525	0.00867	36.2	32.3	GOOD	10	1250	2500	250	500	75	100	200	420	2437.7	499.8	100.0	1.06	2571.8	371.1	77.1	9	107.016	106.057	0.959	200.000	420.000	1328.2	319.0	77.1	0.0001685	0.0002370	73.0	384.6	73.0	24	NO		3000
50	107.000	4/30/2023 7:30	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20743	0.13375	0.10047	0.07705	0.04715	0.03135	0.01075	32.2	28.9	GOOD	10	1250	2500	250	500	75	100	200	420	2387.6	498.8	100.0	0.89	2114.8	370.4	77.1																		
51	106.760	4/30/2023 7:31	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20133	0.15283	0.12279	0.10046	0.06510	0.04146	0.01000	32.2	28.5	GOOD	10	1250	2500	250	500	75	100	200	420	2463.3	486.6	100.0	0.89	2181.8	362.3	77.1																		
52	106.511	4/29/2023 9:46	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.38900	0.23565	0.17532	0.16777	0.12165	0.06717	0.04680	36.2	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	1320.9	499.3	100.0	1.06	1393.6	370.7	77.1																		
53	106.507	4/30/2023 7:32	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.42158	0.32770	0.27209	0.19878	0.14521	0.07800	0.04556	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	1278.1	251.2	99.9	0.89	1132.1	188.8	77.0																		
54	106.264	4/30/2023 7:33	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25371	0.19096	0.18003	0.13792	0.10338	0.06762	0.03513	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	2497.6	490.5	100.0	0.89	2212.2	364.9	77.1																		
55	106.057	4/29/2023 9:48	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.47442	0.36541	0.29019	0.20487	0.13531	0.05453	0.03791	36.2	32.5	GOOD	10	1250	2500	250	500	75	100	200	420	1265.9	263.6	100.0	1.06	1335.6	198.3	77.1	10	106.057	105.000	1.057	200.000	420.000	1315.7	197.5	77.1	0.0002136	0.0002719	29.2	206.3	29.2	24	NO		3000
56	106.029	4/30/2023 7:34	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.42226	0.31237	0.24968	0.17924	0.13098	0.07111	0.03910	32.2	28.7	GOOD	10	1250	2500	250	500	75	100	200	420	1284.2	252.4	100.0	0.89	1137.5	189.8	77.1																		
57	105.745	4/30/2023 7:35	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23781	0.19894	0.16880	0.13170	0.10195	0.05934	0.03478	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2459.7	499.3	100.0	0.89	2178.6	370.7	77.1																		
58	105.523	4/29/2023 9:49	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.18784	0.14913	0.11317	0.09657	0.05498	0.03777	0.01346	36.2	32.5	GOOD	10	1250	2500	250	500	75	100	200	420	2445.0	499.3	100.0	1.06	2579.5	370.7	77.1																		
59	105.513	4/30/2023 7:36	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17335	0.14256	0.12572	0.10193	0.07984	0.05025	0.03300	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2489.0	499.8	100.0	0.89	2204.6	371.1	77.1																		
60	105.250	4/30/2023 7:37	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25601	0.21833	0.19034	0.13186	0.10832	0.06421	0.03946	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2498.8	494.4	100.0	0.89	2213.3	367.5	77.1																		
61	105.009	4/30/2023 7:38	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17932	0.15808	0.14257	0.11804	0.09902	0.06867	0.04706	32.2	28.4	GOOD	10	1250	2500	250	500	75	100	200	420	2489.0	499.0	100.0	0.89	2204.6	370.6	77.1																		
62	105.000	4/29/2023 9:51	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.35545	0.28257	0.27006	0.21574	0.16428	0.09738	0.06782	36.2	32.8	GOOD	10	1250	2500	250	500	75	100	200	420	1280.5	251.7	100.0	1.06	1351.0	189.2	77.1	11	105.000	104.030	0.971	200.000	420.000	1345.8	189.1	77.1	0.0002150	0.0002730	28.0	202.6	28.0	24	NO		3000
63	105.000	4/30/2023 7:40	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.34661	0.30233	0.26502	0.20912	0.16518	0.09678	0.07559	36.2	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	1303.8	251.0	100.0	1.06	1375.5	188.7	77.1																		
64	104.757	4/30/2023 7:40	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19593	0.15563	0.12124	0.09922	0.06656	0.04496	0.01018	32.2	28.6	GOOD	10	1250	2500	250	500	75	100	200	420	2478.0	497.8	100.0	0.89	2194.8	369.8	77.1																		
65	104.535	4/29/2023 9:53	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.42079	0.28361	0.22272	0.21031	0.14798	0.07074	0.04497	36.2	32.3	GOOD	10

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Modulli Ranges (Mpa)		Granual E Modulli (Mpa)		Subgrade E Modulli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	Existing Chainage		Total Length(Km)	Average Crust Thickness (mm)		15th Percentile E Value (Mpa)			Obtained Strains (through ITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bituminous	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		From	To		Bituminous	Granular Layer	Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
132	93.508	4/30/2023 8:49	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19664	0.15989	0.13499	0.10514	0.07948	0.05183	0.03588	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	2457.2	495.4	100.0	1.12	2763.6	368.2	77.1																	
133	93.255	4/30/2023 8:50	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18288	0.12199	0.10402	0.09248	0.07199	0.04507	0.03245	37.6	35.5	GOOD	10	1250	2500	250	500	75	100	200	420	2485.3	498.8	100.0	1.12	2795.2	370.4	77.1																	
134	93.010	4/29/2023 10:57	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.23782	0.16751	0.12963	0.10675	0.07253	0.05073	0.01183	36.6	32.6	GOOD	10	1250	2500	250	500	75	100	200	420	2474.3	496.1	100.0	1.07	2658.1	368.6	77.1	23	93.010	92.009	1.001	200.000	420.000	1392.1	187.9	64.8	0.0002129	0.0002971	28.2	138.0	28.2	24	NO	3000
135	93.007	4/30/2023 8:51	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.24820	0.18446	0.14406	0.11944	0.08759	0.06535	0.02316	37.6	35.8	GOOD	10	1250	2500	250	500	75	100	200	420	2473.1	498.8	100.0	1.12	2781.5	370.4	77.1																	
136	92.746	4/30/2023 8:52	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.50769	0.38926	0.31426	0.22653	0.16446	0.09628	0.06068	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	1251.2	250.0	99.7	1.12	1407.2	187.9	76.8																	
137	92.529	4/30/2023 8:54	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.47870	0.39214	0.33162	0.22918	0.17958	0.12410	0.07735	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	1253.7	250.0	86.2	1.12	1410.0	187.9	65.3																	
138	92.523	4/29/2023 10:58	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.46470	0.38170	0.32582	0.24992	0.18950	0.11596	0.08125	36.6	32.7	GOOD	10	1250	2500	250	500	75	100	200	420	1257.3	250.2	83.8	1.07	1350.7	188.0	63.2																	
139	92.244	4/30/2023 8:55	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.55491	0.40500	0.34943	0.24219	0.17092	0.09611	0.05928	37.6	35.1	GOOD	10	1250	2500	250	500	75	100	200	420	1250.0	250.2	99.9	1.12	1405.9	188.0	77.0																	
140	92.009	4/29/2023 11:00	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.21562	0.14849	0.11545	0.09388	0.06644	0.04978	0.01159	36.6	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2446.2	496.8	100.0	1.07	2627.9	369.1	77.1	24	92.009	91.009	1.000	200.000	420.000	1687.9	327.8	77.0	0.0001487	0.0002234	96.7	502.8	96.7	24	NO	3000
141	92.008	4/30/2023 8:56	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.16507	0.14848	0.13453	0.10273	0.08909	0.06392	0.04289	37.6	35.6	GOOD	10	1250	2500	250	500	75	100	200	420	2500.0	499.5	99.9	1.12	2811.7	370.9	77.0																	
142	91.746	4/30/2023 8:57	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.26486	0.18088	0.13142	0.10233	0.08816	0.06567	0.04463	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	2366.8	499.8	100.0	1.12	2661.9	371.1	77.1																	
143	91.531	4/29/2023 11:01	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.29278	0.22370	0.20666	0.16416	0.13569	0.08774	0.05839	36.6	32.8	GOOD	10	1250	2500	250	500	75	100	200	420	1647.1	470.9	100.0	1.07	1769.5	351.8	77.1																	
144	91.509	4/30/2023 8:58	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15184	0.11071	0.09131	0.08060	0.06040	0.04672	0.01383	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	2490.2	498.8	99.9	1.12	2800.7	370.4	77.0																	
145	91.258	4/30/2023 8:59	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.34179	0.26628	0.22727	0.17317	0.13673	0.09378	0.06524	37.6	35.7	GOOD	10	1250	2500	250	500	75	100	200	420	1283.0	336.8	100.0	1.12	1443.0	255.8	77.1																	
146	91.009	4/29/2023 11:03	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.43287	0.39910	0.28695	0.20159	0.18452	0.08977	0.05022	36.6	32.3	GOOD	10	1250	2500	250	500	75	100	200	420	1250.0	252.4	99.9	1.07	1342.9	189.8	77.0	25	91.009	90.008	1.001	200.000	420.000	2319.8	322.9	77.1	0.0001276	0.0002081	133.7	693.5	133.7	24	NO	3000
147	91.007	4/30/2023 9:01	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33882	0.20536	0.17330	0.16823	0.12665	0.07017	0.04529	37.6	35.4	GOOD	10	1250	2500	250	500	75	100	200	420	2352.2	499.3	100.0	1.12	2645.5	370.7	77.1																	
148	90.739	4/30/2023 9:02	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.24580	0.18611	0.16463	0.12667	0.09774	0.05752	0.03500	37.6	35.3	GOOD	10	1250	2500	250	500	75	100	200	420	2493.9	500.0	100.0	1.12	2804.9	371.2	77.1																	
149	90.505	4/30/2023 9:03	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23925	0.17831	0.14104	0.11450	0.07525	0.05002	0.01405	37.6	35.5	GOOD	10	1250	2500	250	500	75	100	200	420	2486.6	494.1	100.0	1.12	2796.7	367.3	77.1																	
150	90.476	4/29/2023 11:04	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.28371	0.18923	0.14439	0.10778	0.05978	0.03332	0.01582	36.6	32.3	GOOD	10	1250	2500	250	500	75	100	200	420	2492.7	498.5	100.0	1.07	2677.9	370.2	77.1																	
151	90.244	4/30/2023 9:04	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.24460	0.20194	0.16949	0.12732	0.09770	0.05724	0.03559	37.6	35.7	GOOD	10	1250	2500	250	500	75	100	200	420	2474.3	500.0	100.0	1.12	2782.8	371.2	77.1																	
152	90.008	4/30/2023 9:05	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18278	0.14025	0.11857	0.08982	0.06972	0.04045	0.02480	37.6	35.5	GOOD	10	1250	2500	250	500	75	100	200	420	2413.2	498.5	100.0	1.12	2714.1	370.2	77.1	26	90.008	89.007	1.001	200.000	420.000	1478.5	272.4	76.8	0.0001737	0.0002439	59.2	337.7	59.2	24	NO	3000
153	90.003	4/29/2023 11:06	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.17417	0.13283	0.10754	0.08398	0.06321	0.03719	0.02380	36.6	32.7	GOOD	10	1250	2500	250	500	75	100	200	420	2372.9	497.8	99.9	1.07	2549.2	369.8	77.0																	
154	89.752	4/30/2023 9:06	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.22168	0.13096	0.09458	0.06927	0.04090	0.02611	0.01272	37.6	35.5	GOOD	10	1250	2500	250	500	75	100	200	420	2500.0	497.3	100.0	1.12	2811.7	369.4	77.1																	
155	89.523	4/30/2023 9:08	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.36410	0.23472	0.22483	0.17426	0.12967	0.07713	0.05097	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	1262.2	397.1	100.0	1.21	1523.3	300.3	77.1																	
156	89.495	4/29/2023 11:08	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.40412	0.32749	0.28953	0.23720	0.16831	0.09858	0.06019	36.6	32.8	GOOD	10	1250	2500	250	500	75	100	200	420	1251.2	251.2	99.2	1.07	1344.2	188.8	76.4																	
157	89.251	4/30/2023 9:09	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28528	0.17266	0.12645	0.09704	0.06322	0.04136	0.02066	39.1	36.6	GOOD	10	1250	2500	250	500	75	100	200	420	2463.3	496.3	100.0	1.21	2972.8	368.8	77.1																	
158	89.007	4/30/2023 9:10	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31165	0.18487	0.13789	0.10463	0.06337	0.03997	0.02023	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	2463.3	499.5	100.0	1.21	2972.8	370.9	77.1	27	89.007	88.017	0.990	200.000	420.000	1801.2	322.1	77.0	0.0001454	0.0002214	99.8	523.7	99.8	24	NO	3000
159	89.001	4/29/2023 11:09	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.25404	0.15391	0.14921	0.11010	0.07997	0.04635	0.03030	36.6	32.4	GOOD	10	1250	2500	250	500	75	100	200	420	2449.9	495.4	100.0	1.07	2631.9	368.2	77.1																	
160	88.738	4/30/2023 9:11	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.38016	0.31390	0.26962	0.21180	0.16865	0.10177	0.06064	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	1278.1	250.5	99.7	1.21	1542.5	188.3	76.8																	
161	88.509	4/29/2023 11:11	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.25900	0.17636	0.16094	0.12938	0.09636	0.05589	0.03506	36.8	33.7	GOOD	10	1250	2500	250	500	75	100	200	420	2453.6	497.1	100.0	1.08	2660.0	369.3	77.1																	
162	88.496	4/30/2023 9:12	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23723	0.19501	0.16862	0.13445	0.10421	0.06228	0.04261	39.1	36.6	GOOD	10	1250	2500	250	500	75	100	200	420	2493.9	493.2	100.0	1.21	3009.7	366.7	77.1																	
163	88.248	4/30/2023 9:13	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31613	0.21052	0.20047	0.16112	0.12860	0.08532	0.05752	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	1564.0	499.0	100.0	1.21	1887.5	370.6	77.1																	
164	88.017	4/30/2023 9:14	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30840	0.24193	0.22386	0.17929	0.14478	0.09609	0.06697	39.1	36.6	GOOD	10	1250	2500	250	500	75	100	200	420	1641.0	359.2	100.0	1.21	1980.4	272.6	77.1	28	88.017	87.025	0.992	200.000	420.000	1361.8	194.9	76.6	0.0002109	0.0002713	29.8	208.4	29.8	24	NO	3000
165	88.009	4/29/2023 11:12	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.40682	0.31831	0.25987	0.19738	0.15499	0.09833	0.06513	36.8	33.5	GOOD	10	1250	2500	250	500	75	100	200	420	1256.1	250.0	99.6	1.08	1361.8	187.9	76.7																	
166	87.751	4/30/2023 9:15	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.21338	0.18376	0.16351	0.13368	0.11129	0.07720	0.05576	39.1	36.7	GOOD	10	1250	2500	250	500	75	100	200	420	2487.8	497.8	100.0	1.21	3002.4	369.8	77.1																	
167	87.571	4/30/2023 9:16	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19189	0.16656	0.15194	0.11532	0.09696	0.06835	0.04678	39.1	36.8	GOOD	10	1250	2500	250	500	75	100	200	420	2496.3	500.0	100.0	1.21	3012.6	371.2	77.1																	
168	87.504	4/30/2023 11:14	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.26676	0.23700	0.24855	0.17945	0.14155	0.09052	0.05903	36.8	33.4	GOOD	10	1250	2500	250	500	75	100	200	420	1256.1	261.7	100.0	1.08	1361.8	197.3	77.1																	
169	87.253	4/30/2023 9:17	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32154	0.25790	0.22410	0.17323	0.15249	0.11048	0.08231	39.1	36.5	GOOD	10	1250	2500	250	500	75	100	200	420	1346.5	348.0	98.9	1.21	1625.0	264.2	76.1																	
170	87.025	4/30/2023 9:19	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.14349	0.11391	0.11090	0.08596	0.07017	0.05378	0.03311	39.1	36.5	GOOD	10	1250	2500	250	500	75	100	200	420	2470.7	500.0	100.0	1.21	2981.7	371.2	77.1	29	87.025	86.023	1.002	200.000	420.000	2653.0	369.3	77.1	0.0001121	0.0001932	197.3	971.3	197.3	24	NO	3000
171	87.012	4/29/2023 11:15	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.32014	0.25239	0.19987	0.14114	0.09529	0.05100	0.02957	36.8	33.5	GOOD	10	1250	2500	250	500	75	100	200	420	2496.3	497.8	100.0	1.08	2706.3	369.8	77.1																	
172	86.750	4/30/2023 9:20	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19212	0.16318	0.14290	0.11447	0.09152	0.06026	0.03973	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	2451.1	497.1	100.0	1.21	2958.1	369.3	77.1																	
173	86.505	4/30/2023 9:21	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18980	0.15772	0.13507	0.10163	0.08020	0.04875	0.02880	39.1	36.2	GOOD	10	1250	2500	250	500	75	100	200	420	2451.1	497.1	100.0	1.21	2958.1	369.3	77.1																	
174	86.489	4/29/2023 11:16	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.34790	0.27909	0.17128	0.13777	0.12430	0.06327	0.03137	36.8	33.8	GOOD	10	1250	2500	250	500	75	100	200	420	2299.6	499.8	100.0	1.08	2493.0	371.1	77.1																	
175	86.249	4/30/2023 9:22	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19416	0.16003	0.14572	0.11760	0.09589	0.06387	0.04311	39.1	36.8	GOOD	10	1250	2500	250	500	75	100	200	420	2498.8	497.3	100.0	1.21	3015.6	369.4	77.1																	
176	86.023	4/30/2023 9:23	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28388	0.20541	0.16408	0.16074	0.13007	0.08721	0.06051	39.1	36.3	GOOD	10	1250	2500	250	500	75	100	200	420	2303.3	499.3	100.0	1.21	2779.7	370.7	77.1	30	86.023	85.038	0.986	200.000	420.000	2002.8	269.4	77.0	0.0001492	0.0002273	82.5	464.8	82.5	24	NO	3000
177	86.010	4/29/2023 11:24	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.58550	0.47379	0.38449	0.26917	0.17574	0.08105	0.05054	36.8	33.6	GOOD	10	1250	2500	250	500	75	100	200	420	1261.0	250.0	99.9	1.08	1367.1	187.9	77.0																	
178	85.750	4/30/2023 9:24	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.21848	0.18352	0.16242	0.13609	0.11160	0.07581	0.05406	39.1	36.7	GOOD	10	1250	2500	250	500	75	100	200	420	2471.9	496.8	100.0	1.21	2983.2	369.1	77.1																	
179	85.258	4/30/2023 9:25	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18772	0.15253	0.12615	0.09134	0.06855	0.03844	0.02177	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	420	2452.3	497.8	99.9	1.21	2959.5	369.8	77.0																	
180	85.038	4/29/2023 11:26	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.40338	0.31374	0.25456	0.18844	0.13811	0.07906	0.05092	36.8	33.5	GOOD	10	1250	2500	250	500	75	100	200	420	1269.6	256.1	100.0	1.08	1376.4	192.8	77.1	31	85.038	84.031	1.007	200.000	410.000	1476.6	191.7	77.1	0.0002034	0.0002715	32.1	207.7	32.1	24	NO	3000
181	85.030	4/30/2023 9:26	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23032	0.18695	0.16042	0.11706	0.09212	0.06010	0.04142	39.1	36.3	GOOD	10	1250	2500	250	500	75	100	200	420	2496.3	499.5	100.0	1.21	3012.6	370.9	77.1																	
182	84.751	4/30/2023 9:27	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.38933	0.30790	0.25589	0.18973	0.14323	0.08330	0.05398	39.1	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	1274.4	252.9	100.0	1.21	1538.0	190.2	77.1																	
183	84.515	4/30/2023 9:29	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30742	0.24739	0.20739	0.16185	0.12657	0.08175	0.05396	39.1	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	1549.4	478.7	100.0	1.21	1869.9	357.1	77.1																	
184	84.496	4/29/2023 11:27	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.24904	0.18993	0.15627	0.11601	0.08657	0.05493	0.03900	36.8	33.7	GOOD	10	1250	2500	250	500	75	100	200	400	2497.6	498.8	100.0	1.08	2707.7	370.4	77.1																	
185	84.250	4/30/2023 9:30	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.40898	0.31420	0.25734	0.18964	0.14053	0.08430	0.05426	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1251.2	255.4	100.0	1.21	1510.0	192.2	77.1																	
186	84.031	4/30/2023 9:31	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.47388	0.36435	0.30040	0.22231	0.17059	0.10994	0.07605	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1265.9	250.2	93.1	1.21	1527.7	188.0	72.7	32	84.031	83.031	1.000	200.000	400.000	1493.5	193.9	75.6	0.0002017	0.0002788	32.8	184.2	32.8	24	NO	3000
187	84.018	4/29/2023 11:28	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.38998	0.24075	0.17954	0.13317	0.08039	0.05219	0.02719	36.8	33.5	GOOD	10	1250	2500	250	500	75	100	200	400	2379.0	499.8	100.0	1.08	2579.1	371.1	77.1																	
188	83.751	4/30/2023 9:32	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.38358	0.28578	0.23024	0.16526	0.12187	0.06907	0.04894	39.1	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1258.6	394.4	100.0	1.21	1518.9	298.3	77.1																	
189	83.517	4/29/2023 11:29	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.39517	0.29669	0.23297	0.16256	0.11178	0.06171	0.03915	36.8	33.4	GOOD	10	1250	2500	250	500	75	100	200	400	1307.4	482.2	100.0	1.08	1417.4	359.4	77.1																	
190	83.514	4/30/2023 9:33	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.39543	0.31689	0.25750	0.19867	0.14239	0.06717	0.03475	39.1	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1292.8	260.0	100.0	1.21	1560.2	195.9	77.1																	
191	83.245	4/30/2023 9:34	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.42082	0.32239	0.24882	0.15597	0.09547	0.04980	0.02177	39.1	36.8	GOOD	10	1250	2500	250	500	75	100	200	400	2451.1	498.0	100.0	1.21	2958.1	369.9	77.1																	
192	83.031	4/30/2023 9:35	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25939	0.20846	0.17939	0.13416	0.10757	0.06694	0.04599	39.1	36.8	GOOD	10	1250	2500	250	500	75	100	200	400	2446.2	498.5	100.0	1.21	2952.2	370.2	77.1	33	83.031	82.028	1.003	200.000	400.000	2207.2	359.7	77.1	0.0001254	0.0002130	149.2	624.1	149.2	24	NO	3000
193	83.000	4/29/2023 11:31	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.33987	0.20020	0.18283	0.14093	0.10501	0.05904	0.03928	36.8	33.5	GOOD	10	1250	2500	250	500	75	100	200	400	2496.3	497.8	100.0	1.08	2706.3	369.8	77.1																	
194	82.751	4/30/2023 9:36	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.14781	0.10719	0.08638	0.06062	0.04878	0.03080	0.02270	39.1	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	2465.8	492.7	100.0	1.21	2975.8	366.4	77.1																	
195	82.515	4/29/2023 11:32	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.33770	0.21088	0.15435	0.11152	0.06155	0.03716	0.02030	36.8	33.6	GOOD	10	1250	2500	250	500	75	100	200	400	2447.5	497.1	100.0	1.08	2653.4	369.3	77.1																	
196	82.513	4/30/2023 9:37	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31404	0.25438	0.21557	0.16627	0.13489	0.08834	0.06187	39.1	36.2	GOOD	10	1250	2500	250	500	75	100	200	400	1263.4	453.1	100.0	1.21	1524.7	339

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Modulli Ranges (Mpa)		Granual E Modulli (Mpa)		Subgrade E Modulli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	Existing Chainage		Total Length(Km)	Average Crust Thickness (mm)		15th Percentile E Value (Mpa)			Obtained Strains (through ITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bituminous	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		From	To		Bituminous	Granular Layer	Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
263	71.251	4/30/2023 10:30	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.21371	0.16495	0.14564	0.11764	0.09954	0.07063	0.04493	39.8	36.9	GOOD	10	1250	2500	250	500	75	100	200	400	2493.9	499.5	99.8	1.25	3112.9	370.9	76.9																		
264	71.016	4/30/2023 10:31	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.27938	0.21538	0.16948	0.12404	0.09054	0.05067	0.03132	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	2425.5	499.0	100.0	1.25	3027.5	370.6	77.1	45	71.016	69.997	1.020	200.000	400.000	1472.7	337.9	77.1	0.0001567	0.0002386	88.6	373.1	88.6	24	NO		3000
265	71.008	4/29/2023 12:08	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.38367	0.28800	0.24652	0.17618	0.12797	0.06873	0.03734	38.5	36.1	GOOD	10	1250	2500	250	500	75	100	200	400	1256.1	319.9	100.0	1.17	1473.4	242.9	77.1																		
266	70.746	4/30/2023 10:32	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30338	0.23266	0.19014	0.14027	0.10530	0.06491	0.04000	39.8	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	2354.6	497.6	100.0	1.25	2939.0	369.6	77.1																		
267	70.510	4/29/2023 12:09	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.37593	0.23499	0.17676	0.13881	0.12389	0.08706	0.05928	38.5	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1253.7	498.0	99.9	1.17	1470.6	369.9	77.0																		
268	70.506	4/30/2023 10:33	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.26626	0.19068	0.13100	0.12774	0.10273	0.06560	0.04247	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	2498.8	498.5	100.0	1.25	3119.0	370.2	77.1																		
269	70.241	4/30/2023 10:34	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.29645	0.22665	0.18948	0.13376	0.10739	0.07006	0.04420	39.8	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	2476.8	497.6	100.0	1.25	3091.5	369.6	77.1																		
270	69.997	4/30/2023 10:35	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.48917	0.35037	0.27206	0.18428	0.12020	0.05088	0.02960	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1263.4	266.4	100.0	1.25	1577.0	201.0	77.1	46	69.997	69.005	0.992	200.000	400.000	1525.3	188.3	76.3	0.0002016	0.0002775	32.3	188.1	32.3	24	NO		3000
271	69.997	4/29/2023 12:11	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.54485	0.34175	0.24573	0.18852	0.15522	0.07343	0.04217	38.5	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	1317.2	250.0	100.0	1.17	1545.0	187.9	77.1																		
272	69.742	4/30/2023 10:37	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.60101	0.45029	0.34240	0.24307	0.16561	0.08647	0.04970	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1259.8	250.7	99.9	1.25	1572.5	188.4	77.0																		
273	69.526	4/30/2023 10:38	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.45661	0.32926	0.25088	0.17970	0.12594	0.06911	0.04786	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1258.6	268.8	100.0	1.25	1571.0	203.0	77.1																		
274	69.494	4/29/2023 12:12	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.59146	0.44525	0.37598	0.25571	0.18543	0.09987	0.06493	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1250.0	251.0	96.6	1.17	1466.2	188.7	74.2																		
275	69.259	4/30/2023 10:39	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.41912	0.29629	0.23389	0.16485	0.12071	0.07261	0.04625	39.8	36.1	GOOD	10	1250	2500	250	500	75	100	200	400	1272.0	361.9	100.0	1.25	1587.7	274.6	77.1																		
276	69.005	4/30/2023 10:40	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.60189	0.44359	0.35471	0.25059	0.16750	0.08026	0.04536	39.8	36.1	GOOD	10	1250	2500	250	500	75	100	200	400	1253.7	256.1	100.0	1.25	1564.9	192.8	77.1	47	69.005	68.040	0.965	200.000	400.000	1546.7	188.2	73.3	0.0002004	0.0002825	32.6	173.5	32.6	24	NO		3000
277	68.998	4/29/2023 12:13	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.43101	0.32745	0.27312	0.17742	0.13699	0.08555	0.04793	38.5	36.7	GOOD	10	1250	2500	250	500	75	100	200	400	1272.0	250.5	100.0	1.17	1492.0	188.3	77.1																		
278	68.736	4/30/2023 10:41	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.63746	0.48945	0.38933	0.25441	0.18323	0.10498	0.05663	39.8	36.7	GOOD	10	1250	2500	250	500	75	100	200	400	1254.9	250.5	99.6	1.25	1566.4	188.3	76.7																		
279	68.512	4/29/2023 12:14	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.12824	0.08517	0.06513	0.05433	0.03866	0.02899	0.00555	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2449.9	499.5	100.0	1.17	2873.7	370.9	77.1																		
280	68.512	4/30/2023 10:42	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17666	0.11360	0.09000	0.07104	0.04437	0.03025	0.01584	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	2489.0	499.3	99.8	1.25	3106.8	370.7	76.9																		
281	68.255	4/30/2023 10:43	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.55200	0.44061	0.35305	0.25306	0.19307	0.11721	0.07872	39.8	36.8	GOOD	10	1250	2500	250	500	75	100	200	400	1256.1	250.0	83.4	1.25	1567.9	187.9	62.9																		
282	68.040	4/30/2023 10:44	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.16302	0.12349	0.10111	0.07645	0.05643	0.03439	0.02573	39.8	36.2	GOOD	10	1250	2500	250	500	75	100	200	400	2484.1	493.4	100.0	1.25	3100.6	366.9	77.1	48	68.040	67.000	1.040	200.000	400.000	2563.3	324.3	77.1	0.0001214	0.0002114	149.0	645.8	149.0	24	NO		3000
283	68.002	4/29/2023 12:16	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.25133	0.17825	0.13724	0.08875	0.05954	0.02917	0.01798	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2491.4	499.8	100.0	1.17	2922.3	371.1	77.1																		
284	67.745	4/30/2023 10:46	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.34240	0.22101	0.16476	0.13075	0.12663	0.07656	0.05389	39.8	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	2425.5	500.0	100.0	1.25	3027.5	371.2	77.1																		
285	67.517	4/30/2023 10:47	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.24585	0.15640	0.12029	0.08914	0.05291	0.03636	0.01625	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2441.3	498.0	100.0	1.25	3047.2	369.9	77.1																		
286	67.497	4/29/2023 12:17	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.35280	0.19571	0.14093	0.10644	0.06468	0.04988	0.02685	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2468.2	499.3	99.9	1.17	2895.1	370.7	77.0																		
287	67.255	4/30/2023 10:48	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.40070	0.36319	0.28140	0.19495	0.13528	0.07627	0.04711	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1256.1	260.8	100.0	1.25	1567.9	196.6	77.1																		
288	67.000	4/29/2023 12:19	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.37923	0.27062	0.22095	0.15724	0.11136	0.06407	0.03798	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1564.0	495.6	100.0	1.17	1834.5	368.3	77.1	49	67.000	66.031	0.969	200.000	400.000	1542.9	188.7	77.0	0.0002001	0.0002751	32.9	195.7	32.9	24	NO		3000
289	66.999	4/30/2023 10:49	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.44140	0.35233	0.27484	0.19585	0.13947	0.07220	0.04391	39.8	36.8	GOOD	10	1250	2500	250	500	75	100	200	400	1261.0	263.2	100.0	1.25	1574.0	198.5	77.1																		
290	66.753	4/30/2023 10:50	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19249	0.14393	0.12196	0.09535	0.07497	0.04779	0.03042	39.8	36.7	GOOD	10	1250	2500	250	500	75	100	200	400	2434.0	499.0	100.0	1.25	3038.1	370.6	77.1																		
291	66.539	4/30/2023 10:52	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30937	0.24347	0.19339	0.13838	0.09794	0.05373	0.03639	39.8	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	2452.3	498.8	100.0	1.25	3060.9	370.4	77.1																		
292	66.503	4/30/2023 12:20	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.55447	0.43485	0.33703	0.22580	0.15946	0.08961	0.05085	38.5	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1263.4	251.2	99.9	1.17	1481.9	188.8	77.0																		
293	66.256	4/30/2023 10:53	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.51080	0.38159	0.31104	0.23145	0.18503	0.09727	0.06423	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	1252.4	250.5	99.9	1.25	1563.2	188.3	77.0																		
294	66.031	4/29/2023 12:21	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.17141	0.09783	0.07320	0.05603	0.03608	0.02604	0.00667	38.5	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2475.6	490.2	100.0	1.17	2903.8	364.7	77.1	50	66.031	65.009	1.022	200.000	400.000	2573.2	330.2	77.1	0.0001203	0.0002101	153.8	664.1	153.8	24	NO		3000
295	66.000	4/30/2023 10:54	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.26252	0.21204	0.17506	0.13405	0.10223	0.05996	0.03734	39.8	36.8	GOOD	10	1250	2500	250	500	75	100	200	400	2388.8	497.1	100.0	1.25	2981.7	369.3	77.1																		
296	65.743	4/30/2023 10:55	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.22763	0.17441	0.14130	0.10584	0.07981	0.04823	0.03210	39.8	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	2498.8	500.0	100.0	1.25	3119.0	371.2	77.1																		
297	65.519	4/30/2023 10:56	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.36554	0.28528	0.23418	0.18243	0.13978	0.08330	0.05443	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	1267.1	298.9	100.0	1.25	1581.6	226.7	77.1																		
298	65.491	4/29/2023 12:22	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.15306	0.12569	0.10750	0.08027	0.06422	0.04241	0.02831	38.5	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	2495.1	495.1	100.0	1.17	2926.7	368.0	77.1																		
299	65.264	4/30/2023 10:57	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32022	0.22842	0.18864	0.13523	0.10251	0.06420	0.04179	39.8	36.9	GOOD	10	1250	2500	250	500	75	100	200	400	2402.2	498.3	100.0	1.25	2998.4	370.1	77.1																		
300	65.009	4/30/2023 10:59	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19816	0.15947	0.14987	0.13983	0.11863	0.09562	0.01128	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2480.4	440.4	100.0	1.25	3096.0	330.9	77.1	51	65.009	64.023	0.986	200.000	400.000	1495.9	189.4	77.0	0.0002033	0.0002772	31.8	189.0	31.8	24	NO		3000
301	65.000	4/29/2023 12:24	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.51103	0.40206	0.30041	0.19799	0.12511	0.06978	0.04533	38.5	36.7	GOOD	10	1250	2500	250	500	75	100	200	400	1263.4	251.5	99.9	1.17	1481.9	189.1	77.0																		
302	64.751	4/30/2023 11:00	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.39887	0.31311	0.25898	0.18545	0.13644	0.08037	0.04730	39.8	36.0	GOOD	10	1250	2500	250	500	75	100	200	400	1254.9	252.9	100.0	1.25	1566.4	190.2	77.1																		
303	64.516	4/30/2023 11:01	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.29948	0.22692	0.18449	0.12725	0.09586	0.05491	0.03504	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2485.3	491.0	100.0	1.25	3102.1	365.3	77.1																		
304	64.508	4/29/2023 12:25	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.48036	0.37019	0.30215	0.19728	0.13498	0.07657	0.04727	38.5	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	1279.3	252.0	99.9	1.17	1500.6	189.5	77.0																		
305	64.242	4/30/2023 11:02	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19395	0.14802	0.11800	0.09172	0.06430	0.03497	0.02489	39.8	36.7	GOOD	10	1250	2500	250	500	75	100	200	400	2429.1	496.6	100.0	1.25	3032.0	369.0	77.1																		
306	64.023	4/29/2023 12:26	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.27324	0.18112	0.14546	0.09565	0.06421	0.03565	0.02454	39.2	37.0	GOOD	10	1250	2500	250	500	75	100	200	400	2489.0	499.3	99.9	1.21	3023.0	370.7	77.0	52	64.023	63.033	0.989	200.000	400.000	2847.9	368.7	77.0	0.0001087	0.0001982	209.3	865.0	209.3	24	NO		3000
307	64.007	4/30/2023 11:03	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20707	0.14996	0.12008	0.09158	0.07013	0.04505	0.03314	39.8	36.6	GOOD	10	1250	2500	250	500	75	100	200	400	2479.2	496.3	100.0	1.25	3094.5	368.8	77.1																		
308	63.745	4/30/2023 11:04	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28434	0.20783	0.14185	0.10828	0.07195	0.04299	0.02485	39.8	36.4	GOOD	10	1250	2500	250	500	75	100	200	400	2403.5	499.0	100.0	1.25	3000.0	370.6	77.1																		
309	63.539	4/29/2023 12:28	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.18546	0.12827	0.09474	0.06671	0.04487	0.02356	0.01726	39.6	37.4	GOOD	10	1250	2500	250	500	75	100	200	400	2497.6	496.1	99.9	1.24	3087.5	368.6	77.0																		
310	63.521	4/30/2023 11:06	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.17597	0.11713	0.09870	0.07529	0.04743	0.03509	0.01116	39.8	36.5	GOOD	10	1250	2500	250	500	75	100	200	400	2500.0	498.5	100.0	1.25	3120.5	370.2	77.1																		
311	63.248	4/30/2023 11:07	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30475	0.25321	0.20988	0.15402	0.11697	0.06916	0.04420	39.8	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	1915.9	499.3	100.0	1.25	2391.4	370.7	77.1																		
312	63.033	4/29/2023 12:29	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.39873	0.29117	0.22536	0.13554	0.08905	0.04158	0.02641	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	400	2424.2	498.5	100.0	1.24	2996.7	370.2	77.1	53	63.033	62.033	1.001	200.000	400.000	2638.3	323.5	77.0	0.0001197	0.0002100	153.6	665.5	153.6	24	NO		3000
313	63.020	4/30/2023 11:08	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.36753	0.31734	0.26053	0.20276	0.16246	0.10933	0.06831	39.8	36.3	GOOD	10	1250	2500	250	500	75	100	200	400	1252.4	254.2	99.7	1.25	1563.2	191.3	76.8																		
314	62.765	4/30/2023 11:09	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.22024	0.16423	0.13156	0.09242	0.06670	0.03544	0.02033	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	2424.2	499.8	100.0	1.39	3359.5	371.1	77.1																		
315	62.519	4/30/2023 12:30	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25349	0.13521	0.10798	0.10204	0.06471	0.03722	0.02977	39.6	37.7	GOOD	10	1250	2500	250	500	75	100	200	400	2482.9	495.1	100.0	1.24	3069.3	368.0	77.1																		
316	62.510	4/30/2023 11:10	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23921	0.13994	0.10362	0.08508	0.05771	0.04123	0.01460	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	2388.8	498.0	100.0	1.39	3310.4	369.9	77.1																		
317	62.239	4/30/2023 11:11	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.38010	0.23019	0.16257	0.12844	0.10865	0.05567	0.03600	41.9	38.7	GOOD	10	1250	2500	250	500	75	100	200	400	2454.8	494.6	100.0	1.39	3401.9	367.6	77.1																		
318	62.033	4/29/2023 12:32	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.36360	0.29436	0.22857	0.15526	0.10998	0.05932	0.03596	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	400	1876.8	500.0	100.0	1.24	2320.0	371.2	77.1	54	62.033	61.030	1.002	200.000	400.000	1725.2	296.3	77.1	0.0001552	0.0002398	80.4	364.7	80.4	24	NO		3000
319	62.020	4/30/2023 11:12	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31131	0.24380	0.19811	0.14073	0.10676	0.06278	0.03787	41.9	38.7	GOOD	10	1250	2500	250	500	75	100	200	400	2440.1	499.3	100.0	1.39	3381.5	370.7	77.1																		
320	61.764	4/30/2023 11:14	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25559	0.19756	0.16231	0.12597	0.09852	0.06070	0.03906	41.9	38.1	GOOD	10	1250	2500	250	500	75	100	200	400	2442.6	498.3	100.0	1.39	3385.0	370.1	77.1																		
321	61.525	4/29/2023 12:33	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.45074	0.34695	0.28334	0.19571	0.14612	0.08848	0.06269	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	400	1263.4	251.2	100.0	1.24	1561.8	188.8	77.1																		
322	61.511	4/30/2023 11:15	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32177	0.25135	0.22214	0.16236	0.13015	0.08380	0.05275	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	400	1284.2	442.1	100.0	1.39	1779.7	332.1	77.1																		
323	61.240	4/30/2023 11:16	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.21681	0.13694	0.09891	0.07415	0.04497	0.03056	0.01500	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	2440.1	497.6	100.0	1.39	3381.5	369.6	77.1																		
324	61.030	4/29/2023 12:34	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.24712	0.13279	0.09953	0.08493	0.05657	0.02940	0.02029	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	400	2434.0	496.6	100.0	1.24	3008.8	369.0	77.1	55	61.030	60.037	0.993	200.000	400.000	2649.7	322.5	77.1	0.0001195	0.0002099	154.0	667.0	154.0	24	NO		3000
325	61.007	4/30/2023 11:17	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.34206	0.26262	0.19963	0.12985	0.09265	0.05525	0.03556	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	400	2465.8	498.8	100.0	1.39	3417.1	370.4	77.1																		
326	60.748	4/30/2023 11:22	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.12601	0.09373	0.07854	0.06050	0.04598	0.02743	0.01786	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	400	2475.6	499.3	100.0	1.39	3430.7	370.7	77.1																		
327	60.508	4/30/2023 11:23	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.18625	0.14710	0.12207	0.08113	0.06266	0.03786	0.02473	41.9	38.3	GOOD	10	1250

E-Values & Remaining Life Analysis:

S.No	Chainage (km)	Date & Time	Section	Lane	KN	0 (mm)	200 (mm)	300 (mm)	450 (mm)	600 (mm)	900 (mm)	1500 (mm)	Temperatures (oC)		Pavement Condition	4-Days Soaked CBR (%)	BT E Modulli Ranges (Mpa)		Granual E Modulli (Mpa)		Subgrade E Modulli (Mpa)		Crust Thickness (mm)		Field Moduli (Mpa)			Lemda	Field Moduli After Temp. & Winter Seasonal Correction			S.No	Existing Chainage		Total Length(Km)	Average Crust Thickness (mm)		15th Percentile E Value (Mpa)			Obtained Strains (through ITPAVE)		Remaining Life of Exisitng Pavement (msa)			Design Traffic (MSA)	Overlay Required or Not	Total thickness (mm)	E Value (Mpa)
					Load	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)	Asphalt	Air			lower Bound	Upper Bound	lower Bound	Upper Bound	lower Bound	Upper Bound	Bituminous	Granular Layer	E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		E1 (Bituminous Layer)	E2 (Granular Layer)	E3 (Subgrade)		From	To		Bituminous	Granular Layer	Bituminous Layer	Granular Layer	Subgrade	Fatigue Strain	Rutting Strain	Fatigue Residual Life	Rutting Residual Life	Remaining life				
334	59.495	4/29/2023 12:38	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.41217	0.22663	0.22306	0.13792	0.08821	0.04678	0.02854	39.6	37.4	GOOD	10	1250	2500	250	500	75	100	200	400	2423.0	495.1	100.0	1.24	3995.2	368.0	77.1																		
335	59.262	4/30/2023 11:29	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28490	0.19811	0.11455	0.08314	0.06570	0.03934	0.02481	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	400	2425.5	495.4	100.0	1.39	3361.3	368.2	77.1																		
336	59.021	4/29/2023 12:40	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.37032	0.25548	0.22380	0.15650	0.11052	0.06191	0.04053	39.6	37.1	GOOD	10	1250	2500	250	500	75	100	200	400	1604.3	491.4	100.0	1.24	1983.2	365.5	77.1	57	59.021	58.041	0.980	200.000	400.000	2716.2	367.0	77.1	0.0001117	0.0002009	196.0	813.6	196.0	24	NO	3000
337	59.012	4/30/2023 11:30	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.29592	0.17806	0.14021	0.10806	0.06735	0.04574	0.02114	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	400	2457.2	497.8	100.0	1.39	3405.2	369.8	77.1																		
338	58.745	4/30/2023 11:31	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28677	0.19248	0.18288	0.14008	0.10636	0.07056	0.05239	41.9	38.8	GOOD	10	1250	2500	250	500	75	100	200	400	2467.0	497.3	100.0	1.39	3418.8	369.4	77.1																		
339	58.516	4/30/2023 11:33	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19119	0.15128	0.12258	0.08811	0.06718	0.04384	0.02918	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	400	2467.0	494.4	100.0	1.39	3418.8	367.5	77.1																		
340	58.511	4/29/2023 12:41	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.35634	0.21794	0.18591	0.14197	0.10887	0.06408	0.04606	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	400	2394.9	499.0	100.0	1.24	2960.5	370.6	77.1																		
341	58.263	4/30/2023 11:34	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.27606	0.16766	0.12694	0.09668	0.05722	0.03785	0.01893	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	400	2496.3	498.8	100.0	1.39	3459.4	370.4	77.1																		
342	58.041	4/29/2023 12:42	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.41283	0.32569	0.25593	0.17560	0.12646	0.06896	0.03660	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	400	1250.0	263.9	100.0	1.24	1545.2	199.0	77.1	58	58.041	57.042	0.999	200.000	400.000	1696.9	307.0	77.1	0.0001539	0.0002382	84.2	375.9	84.2	24	NO	3000
343	58.012	4/30/2023 11:35	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.20864	0.12583	0.08985	0.06169	0.03350	0.02086	0.01575	41.9	38.2	GOOD	10	1250	2500	250	500	75	100	200	400	2493.9	494.6	100.0	1.39	3456.1	367.6	77.1																		
344	57.751	4/30/2023 11:36	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.14606	0.11322	0.09397	0.08116	0.06282	0.05980	0.04381	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	400	2500.0	499.8	100.0	1.39	3464.5	371.1	77.1																		
345	57.523	4/30/2023 11:37	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25811	0.15863	0.11822	0.09284	0.09062	0.05201	0.03469	41.9	38.7	GOOD	10	1250	2500	250	500	75	100	200	400	2489.0	497.1	100.0	1.39	3449.3	369.3	77.1																		
346	57.491	4/29/2023 12:43	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.34911	0.24507	0.20546	0.14288	0.10438	0.06662	0.04036	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	400	2275.2	498.0	100.0	1.24	2812.5	369.9	77.1																		
347	57.262	4/30/2023 11:39	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.39101	0.28913	0.23076	0.16004	0.11660	0.06177	0.03887	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	1261.0	458.0	100.0	1.39	1747.5	343.0	77.1																		
348	57.042	4/29/2023 12:45	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.59818	0.38664	0.31219	0.19567	0.13449	0.06594	0.04389	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	400	1294.0	252.7	100.0	1.24	1599.6	190.0	77.1	59	57.042	56.024	1.018	200.000	400.000	1586.0	192.1	77.1	0.0001956	0.0002720	35.1	206.0	35.1	24	NO	3000
349	57.022	4/30/2023 11:40	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25184	0.20511	0.17849	0.13872	0.11256	0.07379	0.05046	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	400	2470.7	497.8	100.0	1.39	3423.9	369.8	77.1																		
350	56.745	4/30/2023 11:41	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.41183	0.32868	0.26119	0.18249	0.13619	0.07449	0.04489	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	400	1251.2	256.1	99.9	1.39	1733.9	192.8	77.0																		
351	56.522	4/29/2023 12:46	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.52590	0.37455	0.28822	0.18327	0.11602	0.05781	0.04193	39.6	37.3	GOOD	10	1250	2500	250	500	75	100	200	400	1250.0	283.0	100.0	1.24	1545.2	214.2	77.1																		
352	56.518	4/30/2023 11:42	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.27101	0.20490	0.16973	0.12289	0.08832	0.05140	0.03457	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	2498.8	500.0	100.0	1.39	3462.9	371.2	77.1																		
353	56.255	4/30/2023 11:44	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.36643	0.28588	0.22692	0.16306	0.11484	0.06404	0.04104	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	400	1264.7	463.6	100.0	1.39	1752.6	346.8	77.1																		
354	56.024	4/29/2023 12:48	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.23355	0.18630	0.13240	0.09561	0.06606	0.03709	0.02201	39.6	37.7	GOOD	10	1250	2500	250	500	75	100	200	400	2469.5	499.0	99.9	1.24	3052.7	370.6	77.0	60	56.024	55.018	1.006	200.000	400.000	3042.5	369.1	77.1	0.0001049	0.0001946	227.2	940.0	227.2	24	NO	3000
355	56.016	4/30/2023 11:45	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.23480	0.17847	0.14459	0.10152	0.07159	0.03920	0.02745	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	400	2490.2	498.0	100.0	1.39	3450.9	369.9	77.1																		
356	55.754	4/30/2023 11:46	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.22889	0.18731	0.15865	0.11905	0.09224	0.05827	0.03779	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	400	2474.3	499.8	100.0	1.39	3428.9	371.1	77.1																		
357	55.528	4/30/2023 11:47	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28792	0.23718	0.18800	0.12505	0.10637	0.06893	0.04446	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	400	2489.0	499.8	100.0	1.39	3449.3	371.1	77.1																		
358	55.508	4/29/2023 12:49	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.35515	0.26037	0.20205	0.13277	0.09573	0.05151	0.02880	39.6	37.1	GOOD	10	1250	2500	250	500	75	100	200	400	2436.5	495.8	100.0	1.24	3011.9	368.4	77.1																		
359	55.251	4/30/2023 11:48	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30236	0.18271	0.13335	0.09966	0.05770	0.03515	0.02642	41.9	38.7	GOOD	10	1250	2500	250	500	75	100	200	400	2458.5	497.1	100.0	1.39	3407.0	369.3	77.1																		
360	55.018	4/29/2023 12:50	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.32071	0.22769	0.17790	0.13369	0.10168	0.06100	0.04490	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	400	2468.2	498.3	100.0	1.24	3051.1	370.1	77.1	61	55.018	54.017	1.001	200.000	420.000	2676.5	322.8	77.1	0.0001182	0.0002006	159.3	819.1	159.3	24	NO	3000
361	55.015	4/30/2023 11:49	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32862	0.24130	0.18505	0.13239	0.09798	0.05829	0.03947	41.9	38.2	GOOD	10	1250	2500	250	500	75	100	200	400	2401.0	494.6	100.0	1.39	3327.3	367.6	77.1																		
362	54.764	4/30/2023 11:51	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28026	0.18974	0.16333	0.11987	0.08326	0.04766	0.02920	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	2469.5	495.4	100.0	1.39	3422.2	368.2	77.1																		
363	54.518	4/30/2023 11:52	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28926	0.23016	0.19050	0.13263	0.10039	0.06001	0.03554	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	2500.0	498.0	100.0	1.39	3464.5	369.9	77.1																		
364	54.509	4/29/2023 12:52	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.50075	0.39487	0.31928	0.21847	0.15227	0.07880	0.04780	39.6	37.7	GOOD	10	1250	2500	250	500	75	100	200	430	1256.1	250.7	100.0	1.24	1552.8	188.4	77.1																		
365	54.254	4/30/2023 11:53	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30921	0.22690	0.16116	0.10147	0.08895	0.05374	0.02010	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	2449.9	497.1	100.0	1.39	3395.1	369.3	77.1																		
366	54.017	4/29/2023 12:53	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.39763	0.29835	0.22287	0.14404	0.10945	0.06489	0.04436	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	430	1322.1	484.1	100.0	1.24	1634.3	360.7	77.1	62	54.017	53.027	0.990	200.000	430.000	1617.3	253.4	77.1	0.0001713	0.0002381	57.8	376.6	57.8	24	NO	3000
367	54.010	4/30/2023 11:54	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33037	0.18537	0.14302	0.10909	0.06447	0.05211	0.03799	41.9	38.2	GOOD	10	1250	2500	250	500	75	100	200	430	2458.5	495.6	100.0	1.39	3407.0	368.3	77.1																		
368	53.756	4/30/2023 11:55	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33938	0.29365	0.24835	0.18994	0.14700	0.08656	0.05593	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	430	1302.5	268.8	100.0	1.39	1805.0	203.0	77.1																		
369	53.515	4/30/2023 11:56	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.15298	0.08710	0.06128	0.04007	0.02985	0.01839	0.01321	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	2480.4	498.3	100.0	1.39	3437.4	370.1	77.1																		
370	53.494	4/29/2023 12:54	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.42248	0.31337	0.24146	0.16619	0.11730	0.06173	0.03526	39.6	37.2	GOOD	10	1250	2500	250	500	75	100	200	430	1267.1	356.1	100.0	1.24	1566.3	270.3	77.1																		
371	53.253	4/30/2023 11:57	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.19321	0.12903	0.09448	0.07491	0.04752	0.04546	0.02919	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	430	2473.1	499.5	99.9	1.39	3427.2	370.9	77.0																		
372	53.027	4/29/2023 12:56	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.29647	0.17458	0.13218	0.10030	0.06317	0.04173	0.02517	39.6	37.8	GOOD	10	1250	2500	250	500	75	100	200	430	2487.8	497.6	100.0	1.24	3075.3	369.6	77.1	63	53.027	52.040	0.987	200.000	430.000	2741.7	324.1	74.9	0.0001163	0.0001976	166.2	877.0	166.2	24	NO	3000
373	53.018	4/30/2023 11:59	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33242	0.24896	0.17227	0.09477	0.05815	0.03638	0.02087	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	430	2468.2	497.3	100.0	1.39	3420.4	369.4	77.1																		
374	52.742	4/30/2023 12:00	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32471	0.24665	0.19586	0.14654	0.10733	0.06260	0.04293	41.9	38.2	GOOD	10	1250	2500	250	500	75	100	200	430	2277.6	499.8	100.0	1.39	3156.3	371.1	77.1																		
375	52.525	4/29/2023 12:57	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.23923	0.18514	0.14663	0.09374	0.06555	0.03550	0.01963	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	430	2492.7	498.0	100.0	1.24	3081.4	369.9	77.1																		
376	52.504	4/30/2023 12:01	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33423	0.22457	0.16583	0.12799	0.08151	0.05172	0.03400	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	1256.1	250.2	90.3	1.39	1740.7	188.0	68.8																		
377	52.248	4/30/2023 12:02	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.41383	0.24489	0.17159	0.11869	0.05841	0.03175	0.03005	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	430	2385.1	498.0	99.9	1.39	3305.3	369.9	77.0																		
378	52.040	4/30/2023 12:03	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.28519	0.21622	0.18372	0.14072	0.11654	0.08306	0.05852	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	2129.8	499.8	100.0	1.39	2951.5	371.1	77.1	64	52.040	51.025	1.015	200.000	430.000	1707.8	296.6	77.1	0.0001549	0.0002247	81.7	489.7	81.7	24	NO	3000
379	52.016	4/29/2023 13:00	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.53720	0.35530	0.27522	0.17835	0.14597	0.08373	0.05112	39.6	37.2	GOOD	10	1250	2500	250	500	75	100	200	430	1256.1	251.7	100.0	1.24	1552.8	189.2	77.1																		
380	51.738	4/30/2023 12:05	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.29805	0.20959	0.18101	0.12038	0.08566	0.03907	0.03039	41.9	38.8	GOOD	10	1250	2500	250	500	75	100	200	430	2487.8	499.3	100.0	1.39	3447.6	370.7	77.1																		
381	51.513	4/30/2023 12:06	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.32493	0.20345	0.17190	0.12003	0.08194	0.04135	0.02968	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	2460.9	495.6	100.0	1.39	3410.3	368.3	77.1																		
382	51.499	4/29/2023 13:02	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.39131	0.24060	0.15269	0.12550	0.07405	0.04772	0.02026	39.6	37.7	GOOD	10	1250	2500	250	500	75	100	200	430	2266.6	498.0	100.0	1.24	2801.9	369.9	77.1																		
383	51.248	4/30/2023 12:07	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.45201	0.29047	0.24297	0.16075	0.11106	0.05998	0.03908	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	1269.6	442.6	100.0	1.39	1759.4	332.4	77.1																		
384	51.025	4/29/2023 13:03	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.45603	0.27955	0.26145	0.18087	0.13852	0.08615	0.05998	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	430	1256.1	260.5	100.0	1.24	1552.8	196.3	77.1	65	51.025	50.026	0.999	200.000	430.000	1697.6	269.5	77.1	0.0001760	0.0002412	50.0	355.2	50.0	24	NO	3000
385	51.013	4/30/2023 12:08	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.38707	0.28265	0.22275	0.16192	0.12093	0.07418	0.05171	41.9	38.7	GOOD	10	1250	2500	250	500	75	100	200	430	1259.8	388.3	100.0	1.39	1745.8	293.9	77.1																		
386	50.736	4/30/2023 12:09	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.25726	0.18685	0.15068	0.10831	0.08080	0.05040	0.03311	41.9	38.4	GOOD	10	1250	2500	250	500	75	100	200	430	2487.8	500.0	100.0	1.39	3447.6	371.2	77.1																		
387	50.527	4/29/2023 13:05	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.39598	0.24448	0.14965	0.12686	0.08053	0.05065	0.03366	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	430	2408.4	496.3	100.0	1.24	2977.2	368.8	77.1																		
388	50.508	4/30/2023 12:10	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.30494	0.21602	0.17701	0.13319	0.09842	0.05842	0.03996	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	2424.2	498.8	100.0	1.39	3269.5	370.4	77.1																		
389	50.252	4/30/2023 12:12	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.33231	0.24587	0.18842	0.13651	0.09866	0.05815	0.03738	41.9	38.5	GOOD	10	1250	2500	250	500	75	100	200	430	2432.8	494.9	100.0	1.39	3371.4	367.8	77.1																		
390	50.026	4/29/2023 13:06	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.44698	0.33352	0.26279	0.16965	0.13626	0.07918	0.05303	39.6	37.3	GOOD	10	1250	2500	250	500	75	100	200	430	1264.7	258.1	100.0	1.24	1563.4	194.4	77.1	66	50.026	49.023	1.003	200.000	430.000	1561.5	272.4	77.1	0.0001687	0.0002352	63.3	398.1	63.3	24	NO	3000
391	50.019	4/30/2023 12:13	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31788	0.24356	0.19886	0.14649	0.10777	0.06648	0.04648	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	1823.1	497.3	100.0	1.39	2526.5	369.4	77.1																		
392	49.750	4/30/2023 12:14	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.35519	0.25167	0.21350	0.15493	0.11798	0.07181	0.04889	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	1268.3	496.6	100.0	1.39	1757.6	369.0	77.1																		
393	49.533	4/29/2023 13:07	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.44113	0.31796	0.24569	0.14945	0.11515	0.07060	0.04883	39.6	37.5	GOOD	10	1250	2500	250	500	75	100	200	430	1258.6	394.4	100.0	1.24	1555.8	298.3	77.1																		
394	49.509	4/30/2023 12:15	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.31897	0.23601	0.19201	0.14426	0.10814	0.06691	0.04524	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	1952.6	496.8	100.0	1.39	2705.9	369.1	77.1																		
395	49.229	4/30/2023 12:16	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.29402	0.20039	0.15755	0.13345	0.12503	0.07787	0.04758	41.9	38.6	GOOD	10	1250	2500	250	500	75	100	200	430	2462.1	498.5	100.0	1.39	3412.0	370.2	77.1																		
396	49.023	4/29/2023 13:09	NH-33_Hazaribagh-Ranchi	RHS INNER	40	0.43466	0.24802	0.13838	0.10099	0.04965	0.03527	0.02906	39.6	37.6	GOOD	10	1250	2500	250	500	75	100	200	430	2473.1	497.8	100.0	1.24	3057.2	369.8	77.1	67	49.023	48.041	0.982	200.000	430.000	1690.9	305.4	77.1	0.0001535	0.0002232	85.3	504.8	85.3	24	NO	3000
397	49.020	4/30/2023 12:17	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.45065	0.26691	0.18472	0.16696	0.12800	0.06656	0.04010	41.9	38.3	GOOD	10	1250	2500	250	500	75	100	200	430	1253.7	436.5	100.0	1.39	1737.4	328.2	77.1																		
398	48.761	4/30/2023 12:18	NH-33_Hazaribagh-Ranchi	RHS OUTER	40	0.22338	0.14355	0.11169	0.10046	0.08487	0.05118	0.03619	41.9	38.3	GOOD	10	1250	2500	250	500

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PUNE SHOLAPUR ROAD DEVELOPMENT COMPANY LIMITED

Four laning of Pune-Solapur section of NH-9
km 150+050 to km 252+200 in the state of Maharashtra
under NHDP Phase III on DBFOT basis

PROJECT DUE DILIGENCE FOR CLUSTER #1

FINAL REPORT

by

LSI ENGINEERING & CONSULTANTS LIMITED

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DISCLAIMER AND CONSENT FOR USE

This report has been prepared solely for the use by IL&FS Transportation Networks Ltd. (referred to as "Client"), for and in connection with assessment of O&M and Major Maintenance requirement. In preparing this report, LSI Engineering & Consultants Pvt. Ltd. has relied on data and information provided by the Client and M/s Pune Sholapur Road Development Company Limited which LSI Engineering & Consultants Pvt. Ltd. has assumed to be accurate, complete, reliable and correct.

LSI Engineering & Consultants Pvt. Ltd. has prepared this report in accordance with the instructions of client, for the client's sole and specific use.

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Chapter 1: Executive Summary

The Pune Sholapur Highway being managed by PSRDCL (An ITNL Group SPV) and the Company has mandated LSI Engineering & Consultants Ltd. to undertake detailed Technical Due Diligence of the Asset and advise the Company on Future Major Maintenance & O&M Costs.

In this regard, LSI has undertaken detailed study of the Project Highway including the study of existing & past secondary data as well as undertaking certain Field Investigations such as Condition Survey, Trial Pits, FWD Tests, etc.

Based on the detailed Analysis of data collected and field investigations conducted, the following is being concluded:

1.1 Major Maintenance:

a. The Pavement has been designed for a life of 10 years only and at some stage an additional 50mm DBM would be required to strengthen the pavement to meet the Design Traffic as stipulated at the time of conducting pavement design.

b. The FWD Data also suggest that the Pavement is nearing its design life

c. In the balance 13 years of Concession, two major overlay would be required in order to ensure reasonable quality of Service.

d. As the actual traffic has been lower than the estimated traffic, resulting in the extension of concession period by 4 years, immediate requirement of strengthening is not considered except for few stretches where Rutting has occurred.

e. It would therefore be necessary to strategically provide two or three overlay in such a manner so that immediate DBM requirement is eliminated.

f. Considering the above strategy, a Major Maintenance Plan has been recommended.

g. The Cost of such Major Maintenance on Main Carriageway would be Rs. 414.78 Crores while the NPV @12% discounting Rate for the same shall be Rs. 170.68 Crs.

h. On Service Road an Overlay is required immediately which shall require 3.322km of DBM and 58.346 Kms of BC.

i. Subsequently in 2034 another overlay shall be required in the entire 83.050km length.

j. The Cost of immediate overlay and DBM shall be Rs. 24.12 Crs and the Cost of future overlay shall be 43.73 Crs. It is proposed that half of the initial Maintenance amounting to Rs. 12.06 Crs, is undertaken in the current Financial Year (FY 2023-24) and the remaining cost (Rs.12.06 Crs) is incurred in FY 2024-25.

k. Thus the total Major Maintenance Cost on Service Road shall be Rs. 67.85 Crs while the NPV of the same shall be Rs. 31.01 Crs at 12% discounting rates.

l. In addition to the Pavement, there is no Major Maintenance envisaged as the all the structures and assets are in good condition and can be taken care of as part of Routine Maintenance.

1.2 O&M Costs:

a. The O&M Costs has been estimated based on first principles and has been found comparable with the current costs being incurred by the Company.

b. The Total Cost of FY 2023-24 works out to be Rs. 15.34 Crores. However, only 50% of the costs for FY 2023-24 & FY 2035-36 has been considered for the purpose of this analysis for a period between Oct 2023 to Mar 2024 & Apr 2035 to September 2035. Thus the Total Cost to be incurred on O&M is estimated as Rs. 285.03 Crores (NPV@12% 130.33 Crores) for the period between FY2023-24 – FY2035-36, while considering a price escalation of 5%.

1.3 Overall Costs:

The Overall Costs of the Project O&M including Major Maintenance Cost has been estimated to be Rs. 746.87 Crs which includes Major Maintenance Works on Main Carriageway as well as Service Roads along with comprehensive O&M Costs up to the end of Concession Period (2036-37) starting from 2023-24. The NPV of the same at 12% Discounting Rate is Estimated to Rs. 351.06 Crs.

The summary of Overall Maintenance Costs till 2036-37 is summarised below which includes all the major components of Operations & Maintenance including Major Maintenance (Overlay) of Main Carriageway as well as Service Road:

ITNL PSRDCL PUNE SHOLAPUR HIGHWAY

TOTAL O&M COSTS INCLUDING MAJOR MAINTENANCE COSTS

(Rs. Crs.)

Sl. No	Description	Escalation Rate	FY-22 TO FY-36													Total (FY25-FY37)	NPV (FY25-FY37)
			FY24*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36*		@12%
1	SPV Cost	5%	0.46	0.97	1.02	1.07	1.13	1.18	1.24	1.31	1.37	1.44	1.51	1.59	0.83	15.13	6.92
2	Tolling Costs	5%	3.19	6.69	7.03	7.38	7.75	8.13	8.54	8.97	9.41	9.89	10.38	10.90	5.72	103.96	47.54
3	IE & Other Professional Fees	5%	0.16	0.34	0.35	0.37	0.39	0.41	0.43	0.45	0.47	0.50	0.52	0.55	0.29	5.22	2.39
4	Insurance	5%	0.53	1.11	1.17	1.23	1.29	1.35	1.42	1.49	1.57	1.64	1.73	1.81	0.95	17.29	7.91
5	Maint. Establishment	5%	0.51	1.07	1.12	1.18	1.24	1.30	1.37	1.43	1.51	1.58	1.66	1.74	0.92	16.63	7.61
6	Operating Expenses	5%	1.40	2.93	3.08	3.23	3.39	3.56	3.74	3.93	4.13	4.33	4.55	4.78	2.51	45.57	20.84
7	Routine Maintenance	5%	1.32	2.78	2.91	3.06	3.21	3.37	3.54	3.72	3.90	4.10	4.31	4.52	2.37	43.12	19.72
8	Power Charges & Electrical Maintenance	5%	1.17	2.45	2.57	2.70	2.84	2.98	3.13	3.29	3.45	3.62	3.80	3.99	2.10	38.10	17.42
TOTAL O&M COSTS (Excl Major Maintenance)			**8.74**	**18.34**	**19.26**	**20.22**	**21.24**	**22.30**	**23.41**	**24.58**	**25.81**	**27.10**	**28.46**	**29.88**	**15.69**	**285.03**	**130.33**
9	Major Maintenance Main Carriageway	5%	0.00	27.34	48.55	0.00	0.00	33.58	64.22	0.00	75.56	0.00	0.00	112.01	53.52	414.78	170.68
10	Major Maintenance Service Road	5%	12.06	12.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.87	21.87	67.85	31.01
GRAND TOTAL O&M COSTS (INCL. MAJOR MAINTENANCE & O&M)			**20.80**	**57.74**	**67.81**	**20.22**	**21.24**	**55.87**	**87.63**	**24.58**	**101.38**	**27.10**	**28.46**	**163.76**	**91.07**	**746.87**	**351.06**

Note: Above Costs are including GST

* 50% of the total Cost for FY2023-24 &235-36 has been considered and added in the Total & NPV

Chapter 2: Background

2.1 INTRODUCTION

National Highway No. 65 (Old NH 9) is one of the Major arteries of the road network system of the Country connecting the city of Peshwas, Pune with Solapur, the Second largest city of South Maharashtra. It traverses through four States viz., Maharashtra, Andhra Pradesh, Karnataka and Tamil Nādu. It connects a number of Major urban centers like Pune, Solapur, Hyderabad, etc. on its way to Machilipatnam. The start (km 0+000) of the Pune-Solapur Section of NH-65 is situated at Pune. Total Length of Highway 690 km.

Nearly 102.078 Km. long Project Highway section of NH-65, starts from Km. 150.050 near Bhima Nagar village on Pune side and traverses in a North-South direction and ends at 252.+200 near Solapur at Solapur by pass which is an existing 4 - lane divided toll road. In order to provide a better motorable road with improved level of service to the vehicular traffic, it was decided to augment the capacity of the Bhima Nagar (Km. 150.050) – Solapur (Km. 251.325) section of NH-65 in State of Maharashtra. The project highway was planned to be developed to four lane in most of the rural sections (Km 150+050 to km 235+000) while the urban section near Sholapur City including the Sholapur Bypass section was planned for widening to six lanes (Km 235+000 to Km 252+200). The above section is developed as partially access controlled toll-way.

This Project has been executed on the site, which is described in this report as per the development done in lines with the schedule – B & C of Concession agreement.

NHAI has appointed M/s K & J Projects Pvt. Limited as the Independent Consultant for the Project, and the scope includes performance and execution by the Concessionaire of all Design, Engineering, Financing, Procurement, Construction, Completion, Operation and Maintenance of the Project Highway. It includes Improvement, Operations, Maintenance, Rehabilitation and Strengthening of the Existing 2- lane road and widening it to a 4-lane divided Highway of Bhima Nagar-Solapur section of NH-65 from Km. 150.050 to Km. 252+200 in the State of Maharashtra on Design, Build, Finance Operate and Transfer (DBFOT) basis.

After completion of the project and undertaking Operation & Maintenance of the Project Highway post completion in 2013, the Company (PSRDCL) intends to transfer the asset to one of a Road INVIT Entity "Roadstar" and to this end the Company has mandated LSI Engineering & Consultants Ltd. to undertake detailed Technical Due

Diligence as well as the assessment of future Major Maintenance & O&M Costs by undertaking detailed Technical Evaluation of the Project Highway.

2.2 SCOPE OF SERVICES:

As mentioned above, LSI Engineering and Consultants ltd (LSIEC) has been mandated by Pune Sholapur Road development company limited (PSRDCL), to act as technical consultants for the preparation of the due diligence report for the project "design, engineering, construction, development, finance, operation and maintenance of 4 laning of Pune-Solapur section of NH-9 (new NH. 65) from km144.400 (new km 150.050) to km 249.000 (new km 252+200) in the state of Maharashtra".

The main objective of the study is to critically review the current status of project corridor including details pertaining to its construction and maintenance and to provide requisite technical information. The objective of the study can be broadly defined as follows:

2.2.1 Operations Phase:

- Undertake detailed reconnaissance to appreciate the Project corridor characteristics.
- Collection of relevant records and documents and critical review of same
- Undertake field investigations visual as well as test mentioned under asset condition assessment and to collect first-hand information on present condition of Project Road and establish the requirements for rehabilitation and up-gradation.
- Review of safety aspects.
- Undertake preliminary designs for immediate rehabilitation requirements based on condition assessment and Concession Agreement specifications.
- Prepare maintenance schedule for entire duration of concession period based on a technical analysis.
- Review and Preparation major maintenance cost schedule for the concession period.
- Study and highlight other relevant details like penalties, claims, petition, deviations etc. which may have impact on future maintenance and cost of project.

2.2.2 Asset Condition Assessment

- Assessment of road assets in conformance with specifications, standards and codes stipulated in Concession Agreement and O&M manual etc.
- A detailed inventory survey of road assets including main carriageway, structures, service roads, lightings, drains, road furniture including signage, MBCB, guard rails etc., other safety measures, toll collection infrastructure, buildings, plantation, vehicles and other objects. Comparison between requirement and actual availability at site on sampling basis based on the insurance of assets.
- Assessment of condition of the structures including but not limited to visual inspections of bearings, expansion joints, superstructure, substructures, foundations, associated components, pre-stress anchorages (if any)

2.2.3 Conducting following tests

- Trial pits for crust verification at every 15 kms
- Falling Weight Deflectometer (FWD) test of the stretch to ascertain the existing strength of the pavement. The frequency of the FWD will be as specified in the IRC.

2.2.4 Technical Analysis & Recommendations

- Assessment of condition of the road pavement including but not limited to visual inspections of the pavement, review as-built design and assess design assumptions and provide a detailed report thereon.
- Reviewing of test certificates & outcomes of past few years along with visual road condition
- Assessment of physical dimensions condition of the infrastructure to determine useful lives of the materials and equipment requiring rehabilitation and/or replacement.
- Critical review of Pavement Condition Survey to suggest the pavement condition and probable rehabilitation treatment.
- Preparation of detailed Pavement inspection report and analysis with chainages wise pavement condition and rectification strategies
- Pavement inspection report & rectification strategies to be provided in 100mtr interval for both MCW & SR (LHS & RHS side).

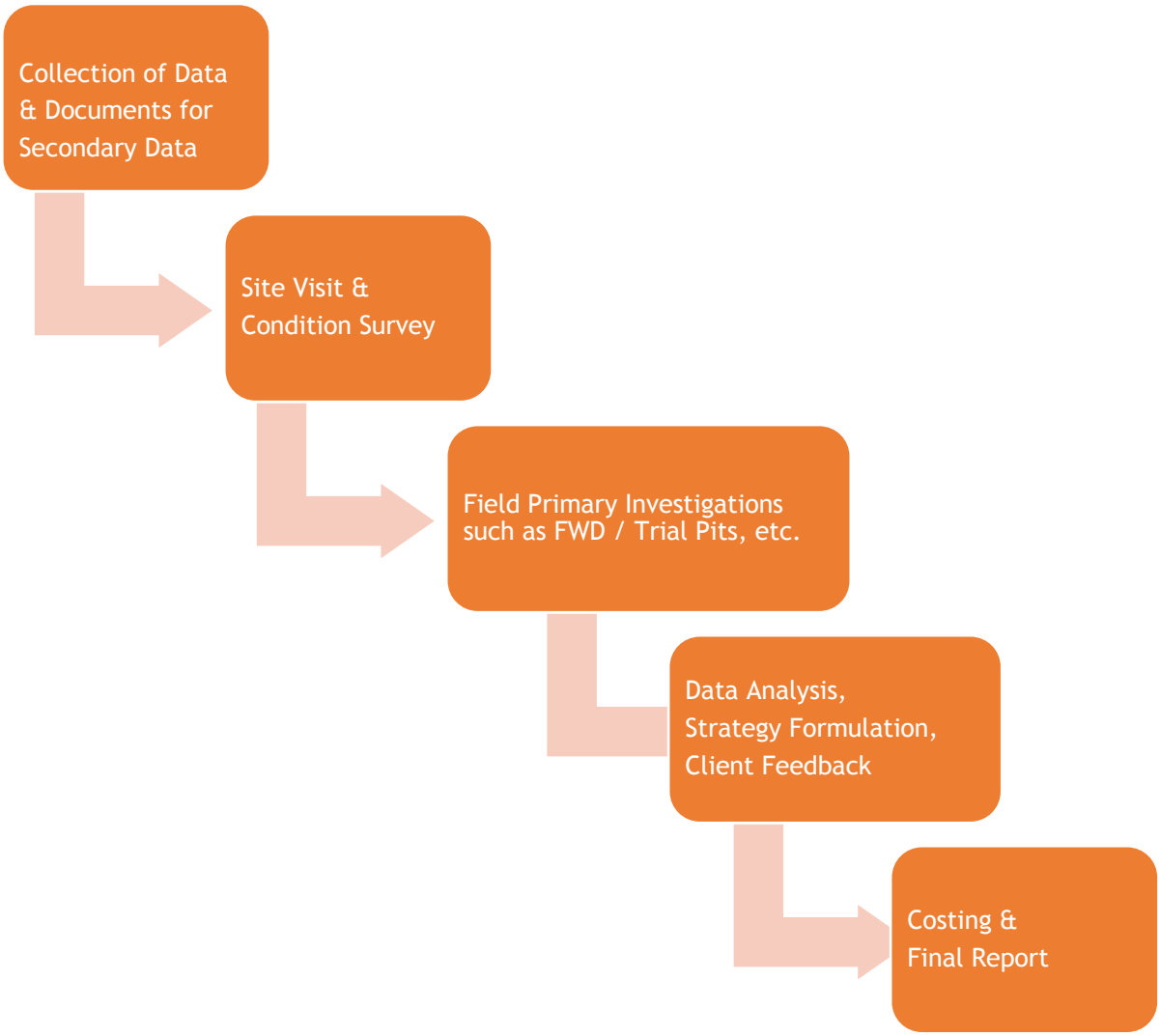
- In continuation to above point the existing Pavement need to be categorized as Good, Average, and Poor based on their estimated life span. For 5 years or more (Good), 2-5 years (Average), and less than 2 years (Poor).
- Recommendations for any major repair, rehabilitation and strengthening based on the condition survey and design reports.
- To provide a detailed photographic report of the infrastructure assets and its condition to withstand till end of concession period. Suggestion and cost evaluation for any additional repair/rectification /modification required.
- Determine the appropriate level and frequency of routine and major maintenance activities required to keep the road assets in good condition and to meet the performance and O&M standards, specifications, and requirements.
- Review the major maintenance work undertaken if any, and prepare projections for future.
- Major maintenance expenses (incl. any hand-back requirements), so as to ensure compliance with the terms of Concession Agreement
- Review of condition of SPV assets including ails equipment and vehicles etc.
- Review of past accidents reports, identification of black spots, deficiency of safety requirement if any and preparation of proposal to curb accidents and safety hazard to road users.
- Detailed major maintenance cost forecast along with estimation of costs towards handover requirements.
- Review availability of labour, material and machinery at the project site and provide an assessment of operational challenges involved, if any as well as estimated costs for these.

2.3 APPROACH AND METHODOOLGY

Our basic approach to the project is based on the fact that the operation and maintenance of the Project as conceived should be straightforward as long as the issues that arise from the complex interrelationships of the various players are well understood by all concerned. The understanding of the contracts and their implications, the respective roles of all parties concerned will be essential in the successful and smooth functioning of the Project, as these contractual relationships contain certain areas for potential conflict of interests.

Our approach to the project also will be to act similarly by providing sufficient details of the operation and maintenance phase and the relevant cost, of the Concessionaire.

The detailed methodology has already been captured in th Inception report submitted. The same can be broadly represented as below:

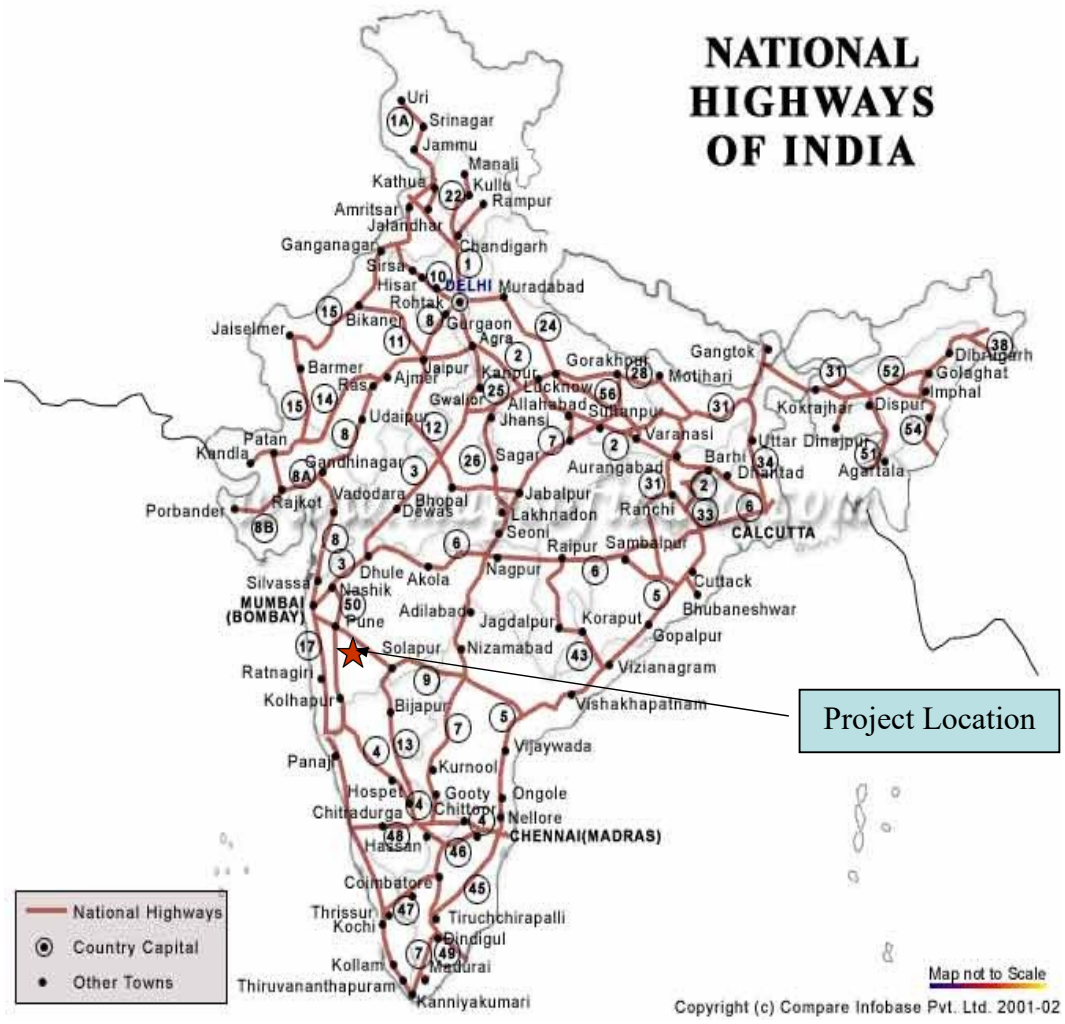


Chapter 3: Project Appreciation

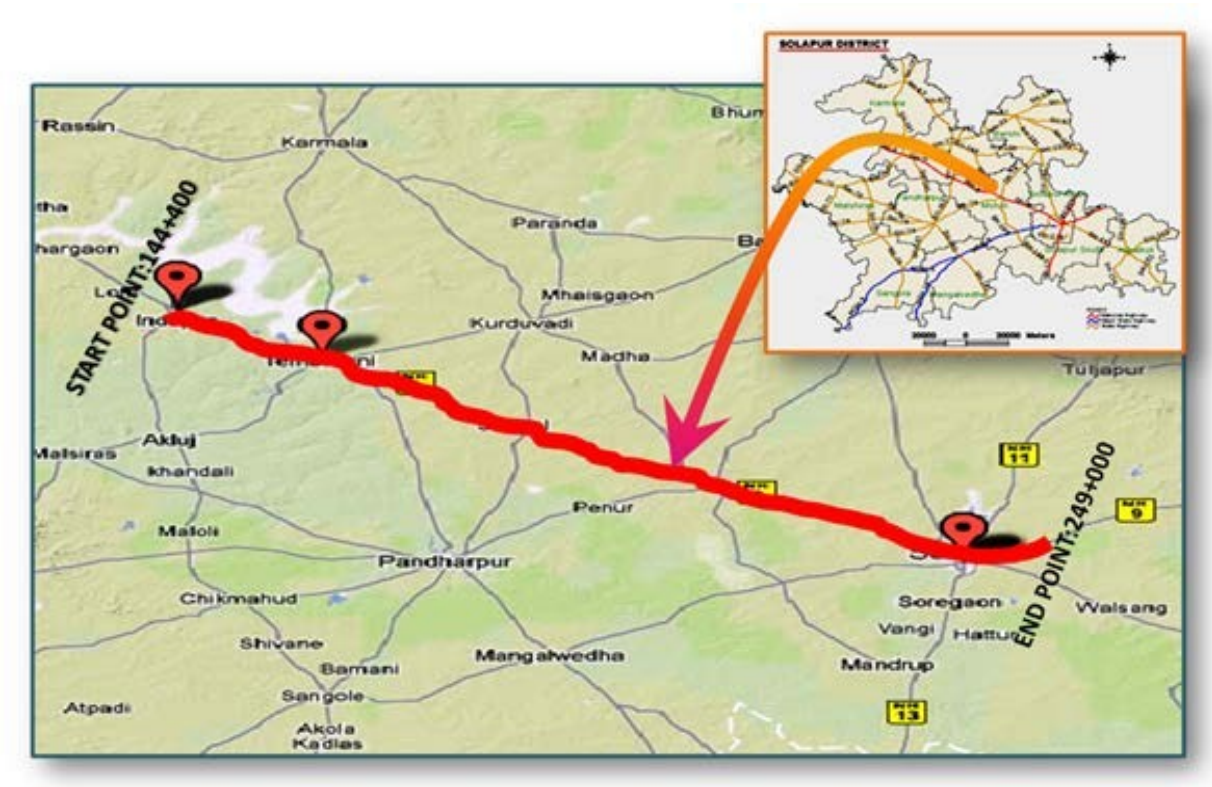
3.1 PROJECT BRIEF

Project Description:

The project is a 102.078 Km. long Project Highway section of NH-65, starts from Km. 150.050 near Bhima Nagar village on Pune side and traverses in a North-South direction and ends at 251.325 near Solapur at Solapur by pass which is an existing 4-lane divided toll road, which was chosen for implementation along with other DBFOT sections along this highway. The above section is developed as partially access controlled toll way, thus in order to provide a better motor able road with improved level of service to the vehicular traffic, it has been decided to augment the capacity of the Bhima Nagar (Km. 150.050) – Solapur (Km. 252.200) section of NH-65 in State of Maharashtra by widening the existing 2-lane to 4-lane divided carriageway facility. Concession Agreement dated 30-09-2009.



Location Map:



3.2 PROJECT DETAILS

The salient details of the contract dates of the project are mentioned here asunder.

Project	Design, Engineering, Construction, Development, Finance, Operation andMaintenance of the Existing 2-lane road and widening it to a 4-lane divided Highway of Bhima Nagar- Solapur section of NH-65 from Km.150.050 to Km. 251.325 in the State of Maharashtra on Design, Build, Finance, Operate and Transfer (DBOT) basis.
State	Maharashtra
National Highway No.	NH-09 (New NH – 65)
Section	Km. 150.050 to Km. 252.200 section on NH-65 (Bhima Nagar – Solapur)
Length of the Project	101.3 Km
Employer	National Highway Authority of India
Independent Consultant	M/s K & J Projects Pvt. Ltd.
Independent Auditor	M/s. Bansi S. Mehta & Co
Concessionaire	Pune- Sholapur Road Development Company Limited
Date of Award (LOA)	27-August-2009

Date of Concession Agreement	30th September 2009
Appointed Date	28th September 2011
Concession Period	19 years 295 days.
O&M Period (in Days)	6390
Construction Period	840 days.
Completion Date	3rd February 2016
Toll Commencement	31st August 2013

Other Features of the Project Highway:

Toll Plaza	2 Toll plazas located at: a) Varwade: TP-1 (Km 178+572) b) Swaleshwar TP-2 (Km 229+350)
Tolling System	Semi-automatic open toll collection System
O&M Contract	EMSL, ITNL and PSRDCL entered into a Novation Agreement on January 1, 2019; whereby ITNL novated all its rights and obligations as O&M Contractor for PSRDCLL; in favor of EMSL
Project Manager / O&M Contractor	Elsamex Maintenance Services Ltd (EMSL)
Toll Collection Contractor	EMSL is also entrusted the Toll Collection work on the Project Road
*O&M Fees (Year):	₹ 2,70,68,952/- (excluding tax) for the period from 1st April, 2020 up to 31st March 2021 with escalation@ 5% every year
*Toll Collection Fees (Year):	₹ 4,24,47,888/- (excluding tax) for the period from 1st April, 2020 up to 31st March 2021 with escalation@ 5% every year
DPR Consultant	Rites Ltd
Lead & Consortium Members of Banks	L&T finance

*Note: The figures are provided on the basis of the IE report on tolling and maintenance

The project has been developed as per the provisions of Schedule -B and C. The same is summarised below:

NH No. (New/ Old)	NH-65 (NH–9)	
Scheme/ Phase	O&M	
Mode of the Execution (BOT Toll/ BOT Annuity/ EPC/ HAM/ Item Rate/ Others)	DBOT (Design, Build, Finance, Operate and transfer (DBOT) basis	
No. of Lanes/ Configuration	Four Lanes (150+050 to 235+000) Six Lane (235+000 to 252+200)	
Length of the Project (in Km)	101.325 Km	
Total Project Cost (in Cr)	835 Crore (As per DPR)	
No. of Bypasses (Name of Town)	2 No's.	Tembhurni Bypass Sholapur Bypass
No. of Toll Plazas (Number and Location)	02 Nos.	Km. 178+572 Km. 229+350
No. of Major Bridges (Number and Location)	7 Bridges:	150+621 LHS 166+768 B/S 245+069 B/S 215+469 RHS 223+896 RHS 230+855 RHS 246+329 RHS
No. of VUP/LVUP (Numbers)	12 Nos.	
No. of ROB (Number and Location)	02 Nos.	Km. 187+ 929 Km 220+ 560
No. of GS (Number and Location)	01 Nos. (At Km. 215+990)	
No. of MNB (Number)	21 Nos.	
No. of Box/Slab/HPC (Number)	208 Nos.	
Carriageway Width (Six lane/Four lane)	12.50m (Six Lane) 8.75m (Four Lane)	
Design Speed	80 to 100 kmph	
Service Road	83.05 Km (both side)	
Slab / Box Culverts	142 Nos.	
Hume Pipe Culverts	66 Nos.	
Bus Bays	15 Nos.	
Bus Shelters	15 Nos.	
Rest Area	02 Nos.	Km 177+700 RHS Km 204+620 LHS
Pedestrian Underpass	12 Nos.	
Vehicular Underpass	11 Nos.	
Foot Over Bridge	04 Nos.	Km 152+400 (Not started) Km 161+822 (Functional) Km 240+400 (Functional) Km 245+750 (Functional)
Highway Lighting	In Working condition Street light poles: 900 No's High Mast: 38 No's.	
Automatic Traffic Counter cum Classifier	28	
Emergency Communications System (SOS)	101	
Variable Message Signs	-	
Closed Circuit Television Cameras	94	
Meteorological Stations	NA	

The configuration for the project to be developed is described as under:

The Road Width is developed as per the provisions of CA

Sr. No.	Description	Dimension
1	Carriageway width for Rural section	2 X 7.0 m
2	Carriageway width for Urban section	2 X 10.5 m
3	Paved Shoulders	2 X 1.50 m
4	Central Median Width	5.0 m
5	Earthen Shoulders	2 X 2 m

The pavement composition on the main carriageway and the Rehabilitation done as mentioned in the IE report is as given below:

S. No	Layer	New Carriage Way	Rehabilitation of Existing Carriageway
1	BC	50mm	50mm
2	DBM	125/130mm (in 2 layers)	Varies as per design and Profile Corrective Course (PCC)
3	WMM	250 mm (in 2 layers)	-
4	GSB	200mm	-
5	Sub grade	500Mm	-

The pavement composition on the service road and the Rehabilitation done as mentioned in the IE report is as

Sl. No	Layer	Thickness
1	BC	30 mm
2	DBM	50 mm
3	WMM	250 mm (in 2 Layers)
4	GSB	150 mm
5	Sub Grade	500mm

The pavement composition on the toll plaza as mentioned in the IE report is as

Sl. No	Layer	Thickness
1	PQC	340 mm
2	DLC	150 mm
3	GSB	200 mm

Based on VDF obtained from Traffic Survey by Traffic Expert of IE team and the AADT Furnished. In the Concessionaire's report, the revised Pavement Design recommendation would be as follows:

Vehicle Type	Km. 171	Km. 242	Adopted VDF in Design Recommendation
LCV	0.73	0.73	0.73

BUS	1.13	1.59	1.13
2 A	1.58	2.49	2.49
3 A	2.95	2.49	2.95
MAV	5.47	4.73	5.47

Section	Overall Design Traffic*	Design Traffic for Stage - 1	Design period for Stage - 1	Construction Thickness (mm)				
				First Stage			Second Stage	
				BC	WMM	GSB	BC	DBM
HS-A (Km.150.400 to214.600)	140	100	2012-2023	50	130	200	50	50
HS-B (Km.214.600 to 246.610)	94	90	2012-2026	50	125	200	50	50
HS-C (Km.246.610 to 251.325)	140	100	2012-2023	50	130	200	50	50

** For20 years MSA (2012-2032)*

Notes:

1. The tables are taken from the latest IE report made available by the client, hence the assumed figures are considered as correct.

2. The second stage construction (to extend the pavement's life up to the end of operation period of 20 years) will be taken up in the year 2024 for HS-A & HS-C and 2027for HS-B, when about 70% of the pavement life designed in first stage will be consumed

STRUCTURES/JUNCTIONS

The summarized details of Structures/Junctions developed along with the description of the structure, are as tabulated below:

S. No	Descriptions	Unit	Total	Remarks
1	Major Bridges	Nos	7	
2	Minor Bridges	Nos	21	
3	Culverts			
a	Pipe Culverts	Nos	142	

b	Box/Slab Culverts	Nos	62 + 4	4 Box Culverts are under COS
4	Underpasses			
a	Vehicular Underpass	Nos	11	
b	Pedestrian Underpass	Nos	12	
5	ROB	Nos	2	
6	Grade Separator	Nos	1	
7	At Grade Intersections	Nos	28	

Major Bridges – 7 nos. of the major bridges were proposed as New Major Bridges and Widening for Existing Major bridges-

Sr. No	Design Chainage	Type of Crossing	Proposed structural configuration	Proposed structure type	Proposed Span Details
1	150+664	Bhīma River	New 3 Lane Bridge	PSC Girder Bridge	14X30.00
2	166+768 LHS RHS	Nallah	Reconstruction with New 6 lane bridge	RCC T- Beam Bridge	6X17.50 = 105 m
3	215+465 RHS	Nallah	Rehabilitation Reconstruction	PSC Girder Bridge	3X26.40
4	223+896 RHS	Seena River	Rehabilitation and Widening		9X24.50
5	230+855	Nallah	Rehabilitation and Widening	RCC T- Beam Bridge	5X17.25
6	245+069 LHS RHS	Nallah	Reconstruction	PSC Girder Bridge	10X18.50
7	246+329 RHS	Nallah	Rehabilitation and Widening		8X13.2

Minor Bridges- 21 nos. of Minor bridges are being developed for the widening of existing 3 lane to 6 lane configurations;

S. No	Design Chainage	Type of Crossing	Proposed Works	Proposed structure	Proposed span arrangement
1	151+700	Nallah	Rehabilitation and Widening	RCC solid Slab	1X6.10
2	152+278	Canal			1X12.9+1 X13.3

3	162+197	Nallah		RCC T- beam	1X16.70
4	166+280	Nallah			1X12.80
5	172+506	Nallah			1X11.45+1X10.95+1X11.35
6	173+363	Nallah			1X17.6+1X23.01+1X16.7
7	183+654	Nallah		RCC solid Slab	1X7.40
8	185+040	Nallah		RCC T-beam	1X16.9+1X22.40
9	185+631	Nallah			1X11.40+1X16.40
10	186+978	Nallah			1X10.70+1X10.4+1X10.8
11	190+383	Nallah		RCC solid Slab	1X8.80+2 X8.60
12	190+838	Nallah		RCC T- beam	1X17.20
13	201+493	Nallah		RCC solid slab	1X7.50
14	209+241	Nallah		RCC T- beam	2X14.50
15	224+626	Nallah		RCC solid slab bridge	1X8.90+1 X9.0+1X 8.90
16	232+032	Nallah		RCC T- beam	13X 7.0
17	233+112	Canal			1 X 17.2
18	236+647	Nallah		RCC solid slab bridge	1X9.40
19	237+164	Nallah		RCC T- beam	1 X11.6+ 1X17.6
20	242+494	Canal			1X11.25
21	249+090	Nallah			1X8

Reconstruction/Widening Scheme for Pipe Culverts and Box culverts:

The following numbers of Reconstruction/Widening Scheme has been developed for the 6 lane carriageway configuration

Sr. No	Type	Nos	Remarks
1	New Construction	25	HP culverts
2	Widening	73	HP culverts

3	Reconstruction	44	HP culverts

Sr. No	Type	NO's	Remarks
1	Widening	30	Box Culverts
2	Reconstruction	32	Box Culverts

Change of scope (culverts): At 8 locations of culverts were proposed with the change of scope proposals and developed on site

S. No	Chainage (Km)	Type of Structure	Span Arrangement
1	0.310	Portal Frame	116.95 X 4.5 X 3.8
2	6.640	Portal Frame	108.47 X 3 X 3.8
3	159.000	Portal Frame	25.24 X 4.5 X 3.8
4	164.500	Portal Frame	33.24 X 3 X 3.8
5	178.681	Box (Irrigation Canal)	2 X 2.0
6	180.135	Box (Irrigation Canal)	2 X 2.0
7	223.675	Box (NTPC)	4 X 3.0
8	247.140	Box (SMC)	2 X 2.0

Vehicular Underpasses: 11 Nos of Vehicular underpasses have been developed on the project highway

S. No	Proposed Chainage	Location	Vent Size		Total Length of structure
			Proposed	Actual adopted	
1	161+383	Tembhurni - Ahmadnagar SH - 141 Crossing	1X25X5.5	1X25X5.5	26.8
2	163+595	Kurduwadi Road (Tembhurni bypass)	1X15X5.50	1X15X5.50	17.1
3	167+154	Venegaon Phata Shetfal Chowk	1X12X5.5	1X12X5.5	14.1
4	190+180	LHS - Kurduwadi RHS -Pandharpur	1X25X5.5	1X25X5.5	26.8
5	214+867	Vairag Road	1X12X5.50	1X12X5.50	14.1
6	234+936	MIDC Solapur	1X15.0X5.50	1X15.0X5.50	26.8
7	237+970	Y-Junction Kondi village	1X15.00X5.50	1X15.00X5.50	17.1

8	244+575	LHS Barshi town Solapur Municipal Corporation.	1X25X5.50	1X25X5.50	26.8
9	246+600		1X25X5.50	1X25X5.50	26.8
10	248+978	Tuljapur road at Pune side	1X25X5.50	1X25X5.50	26.8
10	248+978		1X25X5.50	1X25X5.50	26.8
11	250+020	Shelgi Gaon	1X15X5.50	1X15X5.50	17.1

Pedestrian Underpasses (PUPs): 7 nos. of Pedestrian underpasses are developed and detailed as;

Sr. No	Proposed Chainage	As Built Chainage	Location	Vent Size	
				Proposed	Actual Adopted
1	152+750 183+420	184+220	From Bhimanagar Shifted to Aran	6X3.50	7.00 X 4.50 (*)
2	176+454	177.259	Varwade,-LHS Hole-RHS	6X3.50	7.00 x 4.50 (*)
3	220+382	221.187	Mohol Railway stn	6X3.50	6.00 X 3.50
4	224+373	225.178	Shirapur-LHS Lamboti - RHS	6X3.50	6.00 X 3.50
5	225+525	226.362	From 250+742 To Shifted 225+525	6X3.50	6.00 X 3.50
6	240+765	241+570	Kegaon / School	6X3.50	6.00 X 3.50
7	247+114	247+909	Karamba	6X3.50	6.00 X 3.50

(*) Modified under COS

Furthermore, 5 additional PUPs are developed in the approaches of the VUPs.

S. No.	Chainage (Km)	As Built Locations	Size	Remarks
1	244+560	245+455	4 X 2.50	
2	246+600	247+495	4 X 2.50	
3	248+975	249+631	4 X 2.50	
4	188+070	188+875	4 X 2.50	COS
5	215+700	216+535	4 X 2.50	COS

Railway Over bridge (ROB); 02 Nos of ROBs have been developed

S. No	Design Chainage	Type of Crossing	Existing Structure	Proposed Structural configuration	Proposed Structure type	Proposed span arrangement
1	187+ 929	Railway line	Level Crossing	New 6-Lane ROB	PSC girder	2X15.00+1X 26

2	220+ 560	Railway line	Existing 2 lane ROB	Widening and extension to 6- lane	PSC girder	2X12.00+1X 20

Grade Separated Intersections; One No of grade separated intersection was proposed to be developed as per the CA, however, the concessionaire had proposed to develop the same with a different span arrangement shown as and the difference was considered in the change of Scope;

S. No	Chainage	Location	Span	Remark
1	215+840 to 215+990	Mohol Town	As per CA 6X25X5.5 Proposed by Concessionaire 8X25X5.5	Change of Scope

Minor Intersections- 28 minor junctions are developed as per the provisions of the CA.

Toll Plaza; 02 Nos of toll plazas are developed and are functional

Sr. No	As per CA (Existing Km.)	Proposed Chainage	As built Chainage
1	224 + 400	229 + 230	230+155
2	173 + 500	178 + 572	179+377

Truck Lay Bays- 03 Nos truck lay bay has been developed on the project road section

Sr. No	As per CA (Existing Km.)	Proposed Chainage	As Built Chainage
1	145 + 200 (LHS)	151 + 800 (LHS)	152+103.52 (LHS)
2	233 + 000 (LHS)	233 + 000 (LHS)	233+525 (LHS)
3	245 + 300 (RHS)	233 + 300 (RHS)	234+255 (RHS)

Service roads – 83.05 km of the service road was to be developed but the final completed length of the service road as per the IE is 79.05 km.

LHS					
S. No	Design Chainage		Length (m)	Width (m)	Location
	From	To			
1	152.150	152.800	0.650	7	Bhima Nagar
2	161.000	162.850	1.850	7	Tembhurni

3	176.000	176.900	0.900	7	Varvade Village
4	187.050	188.600	1.550	7	Modnimb
5	190.000	190.750	0.750	7	Shetphal
6	214.550	215.150	0.600	7	Vairag
7	215.600	216.900	1.300	7	Mohol Town
8	220.170	220.370	0.200	7	Mohol Railway Station
9	224.100	224.500	0.400	7	Lamboti Village
10	234.300	246.600	12.300	7	Solapur City
11	246.600	251.350	4.750	7	Solapur Bypass
Total			25.250		
RHS					
Sr. No.	Design Chainage		Length (m)	Width (m)	Location
	From	To			
1	152.150	191.000	38.850	7	Starting from Bhima Nagar
2	215.600	216.900	1.300	7	Mohol Town
3	220.170	220.370	0.200	7	Mohol Railway Station
4	224.100	224.500	0.400	7	Lamboti Village
5	234.300	246.600	12.300	7	Solapur City
6	246.600	251.350	4.750	7	Solapur Bypass
Total			57.800		

3.3 OPERATION AND MAINTENANCE – KEY PROVISIONS

Preserving and keeping each type of roadway, roadside, structures as nearly as possible in its original condition as constructed or as subsequently improved and the operation of highway facilities and services to provide satisfactory and safe transportation, is called Road Maintenance or maintenance of highways

Highway maintenance is closely related to the quality of construction of original road. Insufficient pavement or base thickness or improper construction of these elements soon results in expensive patching or surface repair. Shoulder care becomes a serious problem where narrow lanes force heavy vehicle to travel with one set of wheels off the pavement.

Improperly designed drainage facilities, mean erosion or deposition of material and costly cleaning operation or other corrective measures. For regular highways maintenance and repair sharp ditches and steep slopes require manual maintenance as compare to cheap repair of flatter ditch and soil by machine.

Roadside and Highway Drainage maintenance

Depends on the characters of road side where the roadside is grassy it must be mowed; cutting, ploughing or spraying with weed killer must be done.

Drainage of Highways: Keeping ditch, culvert and other drainage structure, clean and ready to carry next flow water. Sediments deposited during period of heavy flow must be removed badly eroded channel and dikes properly protected to prevent recurrence.

Shoulders Maintenance:

The maintenance of shoulders depends on the surface character of the area where the maintenance and repair are performed. SOD shoulders (Sod shoulders are earth shoulders on which a solid turf has been established. Normally they require very little maintenance and holes, ruts, and settlements should be repaired with sod or stabilized material.) must be moved and occasionally bladed down to the level of the roadway so that water is not trapped in the travelled way. Grass must be kept in good condition. In maintenance of roads shoulders protected by bituminous blankets have surface treatments same as for roadway surface

Bridge maintenance:

Bridges maintenance is a major part of roads maintenance. Bridges can be maintained in good condition by following the below guidelines:

- Exposed steel work must be cleaned by sand blasting flame or other means followed by repainting.
- Deck joint may extrude or become filled with dirt so that cleaning and resealing is necessary.
- Out of control vehicle, causing damage to guard rail, must be repaired and strengthened.
- If bridge deck become rough resurfacing is required
- Remedial measures to correct serious scour around and under piers and abutments.

As per the scope, under the operation and maintenance, the O&M works are categorised into 2 heads

- Major Maintenance works and Routine Maintenance works

Summarised, the O&M Obligations of the Concessionaire (Clause 17.1)

- Permitting safe, smooth and uninterrupted flow of traffic on the Project Road
- Minimizing the disruption to traffic in the event of accidents
- Undertaking routine maintenance including prompt repairs of pot holes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices

- Undertaking major maintenance such as resurfacing of pavements, repairs and refurbishments of tolling system and other equipment
- Preventing any unauthorized use of the Project Road.
- Protection of environment and provision of equipment and materials
- Complying with safety Requirements in accordance with the provisions of the CA.

As per the documents available, Supervision Consultancy for Maintenance works at PSRDC is being awarded to Elsamex Maintenance Services Ltd.(EMSL), and the broad scope is

- Review quality of aggregates, binder, JMF (Job Mix Formula) & suggest changes, if required. Site visit for source approval & quality verification, if required.
- Review of laboratory setup of Contractor, ensure that equipment in the laboratory is complete &is sufficient for all tests required for carrying out the awarded work
- Review the methodology and work plan submitted by the Contractor, and ensure that plants, equipment and machinery mobilised by the Contractor is sufficient to undertake the work as per the work plan
- Review and ensure the Traffic Diversion/Traffic Management Plan, BOQ provisions & specifications with respect to actual site conditions & suggest modifications, if required
- Monitor sample collection of materials, mix and overlay. Ensure that materials to be used in overlay conform to IRC, MoRTH and CA Specifications
- Supervise lab tests. Report all test results weekly and inform the Client about failed tests which are required for the execution of the project, if any, within 24 hours from the completion of such tests
- Ensure that the temperature of the mix at the plant and at Project site is as per specifications
- Ensure that contractor effects and implements a system for the quality assurance of the works.
- Carry out supervision of all works as per approved method statements of various items of work and ensure proper supervision as per requirement;
- Measurement of quantities and certification, recording of measurements; verify, certify and issue interim and final payment certificate of the contractor based on the conditions of the contract/approval of the Client
- Documentation related to quality records & measurements of works, and submission of DPR on daily basis

The observation as per the IE's latest report as per the maintenance requirements set forth in Schedule K of CA (The "Maintenance Requirements"), and the same being tabulated below:

S No	Nature of defect or deficiency	Time limit for repair/ rectification	As summarised in IE Report
	ROADS		
A	Carriageway and paved shoulders		
1	Breach or blockade	Temporary / restoration of traffic within 24 hours; permanent restoration within 15 days	Nil
2	Roughness value exceeding 2,500 mm in a stretch of I km (as measured by a standardised rough meter/bump integrator)	180 days	Nil
3	Pot holes	48 hours	16 locations
4	Cracking in more than 5% of road surface in a stretch of I km	30 Days	almost 1.5 km identified
5	Rutting exceeding 10 mm in more than 2% of road surface in a stretch of I km (measured with 3 m straight edge)	30 days	almost 2 km identified
6	Bleeding/skidding	7 days	almost 6 km identified
7	Ravelling/Stripping of bitumen surface exceeding 10sq m	15 days	Nil
8	Damage to pavement edges exceeding 10 cm	15 days	
9	Removal of debris	6 hours	6 locations identified
B	Hard/earth shoulders, side slopes, drains and culverts		
1	Variation by more than 2% in the prescribed slope of camber/cross fall	30 days	Nil
2	Edge drop at shoulders exceeding 40 mm	- 7 days	32.75 kim identified
3	Variation by more than 15% in the prescribed side (embankment) slopes	30 days	Nil
4	Rain cuts/gullies in slope	7 days	
5	Damage to or silting of culverts and side drains during and immediately preceding the rainy season	7 days	(i) 3-row pipe culvert of 300 mm dia. at Ch. 150+150 on Median. RHS Headwall not Constructed at Ch. 233.950 pipe culvert.
6	Desilting of drains in urban/semi-urban areas	48 hours	

S No	Nature of defect or deficiency	Time limit for repair/ rectification	As summarised in IE Report
C	Road side furniture including road signs and pavement marking		
1	Damage to shape or position;	48 hours	59 km Kerb Damaged
2	poor visibility or loss of retro-reflectivity		2.8 km kerb painting to be done 2.62 km pavement marking to be done
D	Street lighting and telecom (ATMS)		
1	Any major failure of the system	24 hours	
2	Faults and minor failures	8 hours	
E	Trees and plantation		
1	Obstruction in a minimum head-room of 5 m above carriageway or Obstruction in visibility of road signs	24 hours	Routine practice
2	Deterioration in health of trees and bushes	Timely watering and treatment	Not Regular
3	Replacement of trees and bushes	90 days	In progress
4	Removal of vegetation affecting sight line and road Structure	15 days	In progress
F	Rest Areas		
1	Cleaning of Toilets	Every 4 hours	Not cleaned
2	Defect in Electrical water and sanitary installations	24 hours	Water Not available
G	Toll Plazas		
1	Failure of toll collection equipment or lighting	8 hours	Nil
2	Damage to toll plaza	7 days	Nil
H	Other Project Facilities and Approach roads		
1	Damage or deterioration in Approach Roads, [pedestrian facilities, truck lay-bys, bus-bays, bus shelters, cattle crossings, Traffic Aid Posts, Medical Aid Posts and other works]	- 15 days	Needed attention on all Bus-Shelters and Bus- stops. Pick-up bus Stops need to be provided with litter bins.
	BRIDGES		
A	Superstructure of bridges		
1	Cracks		Nil
	Temporary measures	within 48 hours	Nil
	Permanent measures	within 45 days	Nil
	(ii) Spalling/scaling	15 days	Nil
B	Foundations of bridges		
1	Scouring and/or cavitation	15 days	Nil

S No	Nature of defect or deficiency	Time limit for repair/ rectification	As summarised in IE Report
C	Piers, abutments, return walls and wing walls of bridges		
1	Cracks and damages including settlement and tilting	30 days	Nil
D	Bearings (metallic) of bridges		
1	Deformation	15 days	Nil
E	Joints in bridges		
1	Loosening and malfunctioning of joints	15 days	Cleaning of all expansion joint needed of all major bridges.
F	Other items relating to bridges		
1	Deforming of pads in elastomeric bearings	7 days	Nil
2	Gathering of dirt in bearings and joints; or clogging of spouts, weep holes and vent holes	3 days	Nil
3	Damage or deterioration in parapets and handrails	3 days	168+200 to 168+205 Pipe Railing damage at Approach of VUP Major Bridge at Ch. 247+100 LHS Pipe Railing damaged in 60 m length
4	Rain-cuts or erosion of banks of the side slopes of approaches	15 days	Nil
5	Damage to wearing coat	15 days	Nil
6	Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds	30 days	Jerk at Approach: 1. Minor Bridge Ch. 233+960 RHS 2. Minor Bridge Ch. 225+400 RHS 3. PUP Ch. 189+730 RHS
7	Growth of vegetation affecting the structure or obstructing the waterway	15 days	Nil

Safety and Traffic Maintenance

The Concessionaire should have established Highway Safety Management Unit (HSMU) as per Para 6.2 of Schedule L of concession agreement. It should be functional & designate one of its officers to be in-charge of the HSMU, who should

have specialist knowledge & training in road safety by attending a course on Road Safety & Traffic Engineering by CRRI or any other reputed organization.

As observed, for the unit, the vehicles and equipment's deployed are with the requisite and designated manpower

Sweeping and Broome Machine:	01 No's
Tow Away Crane:	02 No's
Water Tanker:	05 No's
Provision for User Services: -	
Ambulances:	2 No's
Route Patrol vehicle	2 No's
Tow Away Vehicles	2 No's.

Chapter 4: Secondary Data Collected

4.0 DATA COLLECTION:

As part of the Consultants' Scope of Work, the following Data was collected and analysed:

4.1 Pavement Design Report:

The Original Pavement Design Report & the Letter of Approval from the IE for Pavement Design was collected from the Client and analysed. It was observed that the Pavement has been designed and constructed for Stage Construction where the pavement has been designed for 20 years as well as for 10 years and the final construction was undertaken for 10 Years design Traffic.

The VDF adopted based on Axle Load Survey are as under:

Vehicle Type	Km. 171	Km. 242	Adopted VDF in Design Recommendation
LCV	0.73	0.73	0.73
BUS	1.13	1.59	1.13
2 A	1.58	2.49	2.49
3 A	2.95	2.49	2.95
MAV	5.47	4.73	5.47

For the purpose of evaluation of actual traffic that has passed on the Project Highway post COD, has been evaluated based on the above VDF values.

The final Traffic used to design the pavement that has been adopted is as given below:

Section	Overall Design Traffic (MSA for 20 Yrs)	Design Traffic for Stage – 1 (MSA for 10 Years)	Design period for Stage - 1
HS-A (Km.150.400 to214.600)	140	100	2012-2023
HS-B (Km.214.600 to 246.610)	94	90	2012-2026
HS-C (Km.246.610 to 251.325)	140	100	2012-2023

From the above, it could be ascertained that the pavement in Section A & C has been designed till the Year 2023 only and the same shall be validated through FWD tests whether the pavement has reached its useful life or not.

Accordingly, the following crust thickness had been adopted during construction. Though the actual thicknesses shall be validated by undertaking Trial Pits.

Section	Pavement Layer Thickness Proposed for Construction			
	BC	DBM	WMM	GSB
HS-A (Km.150.400 to214.600)	50	130	250	200
HS-B (Km.214.600 to 246.610)	50	125	250	200
HS-C (Km.246.610 to 251.325)	50	130	250	200

The detailed Pavement Design Report & The Letter of Approval from IE are annexed in Appendix N1: Pavement Design Report & Appendix N2: IE's Letter of Approval for Pavement Design.

4.2 Actual Traffic Data: The actual Traffic Data had been collected from both the toll Plaza. Since section-wise traffic data was not available, the Traffic Data for TP2 was used for Section C as well. However, it is prudent to note that in the original traffic study, there was a major difference between the traffic in Section B (the Toll Plaza Locations falls in this section) and Section C (94 MSA in Section B vs 140 MSA in Section C). However, since Section C is only for a length of ~7 Kms, it is felt that this would not make any major impact on the overall analysis.

The Data collected provides month-wise total Traffic for different class of Vehicles, the same is summarised as under:

Traffic Data for Toll Plaza #1							
Year	Tractor	Car	LCV	Bus	Truck	MAV	OSV
2014	0	844012	269584	100718	266968	1279607	864
2015	10971	982011	282738	87124	255299	1405919	1659
2016	14823	997241	295639	82189	309106	1625798	3694
2017	6867	1662553	388561	199677	364141	1726184	7955
2018	12792	1918780	440262	252593	325876	1664362	18398
2019	8880	1899525	364738	211917	402183	1654925	4421
2020	9340	1695850	289746	116487	370656	1419052	1744
2021	13605	2255684	296034	181200	488393	1687557	2335
2022	14683	2901855	273646	230877	528878	1600898	2353

From this Data, it was evaluated that a total Traffic of 34.118 MSA has passed on the Project Highway in Section A. The Average Traffic Growth has been found to be 4.25%. However, since there were extreme variations in traffic during 2020 & 2021 due to Covid-19, It was considered that instead of adopting the average Traffic Growth, it would be prudent to calculate the CAGR Growth Rates based on Traffic in Year 2013 and year 2023 for future projections. This Rate of Traffic Growth was estimated to 3.70%.

Traffic Data for Toll Plaza #2							
Year	Tractor	Car	LCV	Bus	Truck	MAV	OSV
2014	0	1210397	262308	181723	198955	683853	351
2015	5382	1469661	306588	186563	231978	847958	334
2016	11098	1457568	290271	167793	221386	792989	931
2017	12119	2613600	399480	340027	273199	909483	3204
2018	17748	3150220	492486	412361	287085	1152355	5772
2019	15689	3222977	443578	409404	332022	1218187	2977
2020	15978	2516839	351250	206865	332673	1040714	1185
2021	18297	3454419	352301	271235	458501	1189457	1412
2022	12664	4423472	329318	370719	540666	1388254	1664

From this Data, it was evaluated that a total Traffic of 24.220 MSA & 19.376 MSA (Four Lane & Six Lane respectively) has passed on the Project Highway in Section B & Section C. The Average Traffic Growth has been found to be 10.55%. However, since there were extreme variations in traffic during 2020 & 2021 due to Covid-19, It was considered that instead of adopting the average Traffic Growth, it would be prudent to calculate the CAGR Growth Rates based on Traffic in Year 2013 and year 2023 for future projections. This Rate of Traffic Growth was estimated to 9.67%.

Here it is also noted that despite of such good growth rates in TP2, the overall traffic numbers in terms of the traffic passed through the toll Plaza is substantially low at 24.220 MSA (as against designed 90MSA, which can only be possible, if the original n]base traffic was too low. However, since such high growth Rate are unsustainable, the standard growth rate of 5% has been adopted for future projections at TP2.

Thus it can be summarised that for future traffic projections, the growth rates to be adopted for both the toll Plaza would be as given below:

Sl No	Toll Plaza/ Section	Traffic Growth Rates		
		Average Annual Growth Rate (2013-2023)	CAGR (2013-2023)	Rates Adopted for Projections
1	TP 1/ Section A	4.25%	3.75%	3.75%
2	TP 2/ Section B & C	10.55%	9.67%	5.00%

Further, it has also been noted that due to poor traffic on both the toll plaza vis-à-vis Target Traffic as specified under Clause 29 of the Concession Agreement, the Concession Period is expected to be extended by four years to 2036 from 2032. Accordingly the future traffic projections have been estimated till 2036.

4.3 Details of Past Overlay: In order to arrive at the future major maintenance (Overlay / strengthening) provisions, it was necessary to evaluate the past overlays, if any. Accordingly, the details of Past Overlays in terms of the thickness and date when the overlay has been undertaken, was collected and duly evaluated. The same has been taken into account while proposing future overlays.

4.4 Asset Register: The List of Assets provided on completion was also obtained from the client so as to identify the deficiencies, if any, so as to ascertain the cost of providing / repairing damages assets, if any (other than Routine Masintenance).

4.4 UI Values: Roughness Index is also a necessary information to arrive at the requirement of the overlay based on the roughness index of the various stretches of the project highways. Therefore, UI values was collected from the Client and have been used in arriving at immediate requirement of the Overlay / other treatments. The UI Values obtained are provided in Appendix C.

4.5 O&M Data: In order to arrive at the future O&M Costs, the following additional information was collected from the Client:

- SPV Costs, if any
- IE Fee
- Insurance Costs
- Energy Costs
- Maintenance Contract with Elsamax

These details has been subsequently used to project future O&M Costs for the Project Highway.

Chapter 5: Primary Investigations

As part of the Consultants' Scope of Work following Primary Investigations were carried out:

- Pavement Condition Survey of MCW & Service Road
- Condition Survey of Bridges / VUPs / Culverts
- FWD Tests
- Asset Inventory
- Trial Pits

The details of Visits and Investigations carried out are discussed briefly below:

5.1 Pavement Condition Survey of MCW & Service Road

Detailed Pavement Condition Survey was conducted by the Team of LSI and it was observed that most of the Pavement on Main Carriageway is in reasonably Good Condition with the exception of some stretches where rutting & minor cracking was observed. The details of the Pavement Condition Survey are provided in Appendix E: Graphical Representation of Pavement Condition Assessment, Appendix F: Representative Pictures of the Project Highway Main Carriageway and Appendix G: Representative Photographs of Service Road. The Pavement condition can overall be summarised as under:

	Inner	Middle	Outer	Inner	Middle	Outer
Good	70.24%	98.26%	70.24%	51.60%	97.09%	51.60%
Fair	29.76%	1.74%	29.76%	48.40%	2.91%	48.40%
Poor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

While undertaking the Condition Survey of the Service Road it was observed that a substantial Length ~25 Kms on RHS is obstructed due to ongoing Pipe Line laying being taken up by L&T. It is understood that the restoration of the same shall be undertaken by L&T post completion of pipeline. Consequently, these stretches has not been included in the Current Analysis for Overlay. However, for future overlays, entire length has been considered.

The visual condition of the Pavement on Service Road can be seen from the photographs provided in Appendix G.

5.2 Condition Survey of Bridges / VUPs / Flyovers / Culverts

As part of Field Investigations, condition of all the structures viz Major & Minor Bridges, Flyovers, VUPs, ROBs, Culverts, etc. was undertaken and most of the structures are found to be in satisfactory condition requiring no major repairs except for the routine maintenance activities such as Cleaning, Painting, etc.

Cost of such activities has been considered under Routine Maintenance and No major Maintenance activity was deemed necessary for inclusion.

The representative photographs along with observations of various structures are given in Appendices I, J, K, L & M.

5.3 FWD Tests:

Detailed Pavement Investigations were carried out using Falling Weight Deflectometer (FWD) and thereafter, the Data was analysed using IITPAVE software to arrive at the residual life of the existing Pavement.

The FWD results were found to be consistent with the expectations of the Pavement Design Report and the residual Life of the Pavement was found to be lacking substantially at many locations. However, since the actual traffic was deficient vis-à-vis expected traffic, the pavement was continuing to behave satisfactorily till date, except for certain stretches where rutting was also observed which evidently is on account of construction issues (Since Material Testing was not within the scope of this assignment, the specific nature of the issue could not be ascertained) and not on account of design deficiency.

From the analysis it became evident that at least two overlays would be required in almost entire stretch till 2036 and in some stretches, there may be a requirement of three overlays including strengthening by 50mm DBM.

The summary of FWD Results and Residual Life estimates are given below:

Sl. No.	Homogenous Sections, km		Remaining Life 80% reliability, MSA			Required MSA	Check
	From	To	Fatigue	Rutting	Final		
Existing Remaining Life							
LHS							
1	150+100	157+600	34.56	1512.82	11.12	75.488	Not safe
2	157+600	165+350	19.69	851.07	6.33	75.488	Not safe
3	165+350	183+100	22.60	947.33	7.27	75.488	Not safe
4	183+100	197+500	10.71	483.14	3.45	75.488	Not safe
5	197+500	214+600	15.03	711.25	4.83	75.488	Not safe
6	214+600	217+000	7.44	214.60	2.39	76.355	Not safe
7	217+000	229+500	22.11	916.61	7.11	76.355	Not safe
8	229+500	235+600	22.87	938.67	7.36	61.085	Not safe
9	235+600	244+250	37.54	1351.59	12.08	61.085	Not safe
10	244+250	246+610	14.21	653.00	4.57	61.085	Not safe
11	246+610	252+000	16.70	766.49	5.37	61.085	Not safe

Sl. No.	Homogenous Sections, km		Remaining Life 80% reliability, MSA			Required MSA	Check
	From	To	Fatigue	Rutting	Remaining life		
Existing Remaining Life							
RHS							
1	150+000	157+400	19.60	871.21	6.31	75.488	Not safe
2	157+400	177+750	10.41	482.38	3.35	75.488	Not safe
3	177+750	189+850	12.32	559.37	3.96	75.488	Not safe
4	189+850	208+840	5.24	270.36	1.68	75.488	Not safe
5	208+840	214+600	7.13	404.73	2.29	75.488	Not safe
6	214+600	220+500	5.85	335.86	1.88	76.355	Not safe
7	220+500	227+500	14.30	670.98	4.60	76.355	Not safe
8	227+500	231+210	15.78	713.71	5.08	76.355	Not safe
9	231+210	246+750	17.39	754.50	5.59	61.085	Not safe
10	246+750	252+000	16.91	773.25	5.44	61.085	Not safe

The Detailed FWD Report is enclosed at Appendix B1 in PDF Format while the Raw Data and Analysis in Excel format is enclosed at Appendix B2.

5.4 Asset Inventory:

A detailed Asset Inventory assessment was undertaken and it was found that generally the Assets, especially the signages, Lighting, etc. are in reasonably good condition and maintenance, if any, can be taken care as part of routine maintenance maintenance. As such there was no requirement deemed necessary for inclusion as part of major ma9ntenance. The detailed List of Signages along with their condition is provided in Appendix H. Here it is significant to note that the current quantity of signages were found to be higher than the original list of signages provided by the client. It could be possible that due to certain site conditions, the additional signages were provided while the asset register was not updated suitably.

5.5 Trial Pits:

In order to ascertain the pavement composition actually provided and additional overlay layers provided subsequently, if any, number of trial pits were undertaken. From the trial Pits it was found that the thickness of Granular layers (GSB+WMM) was consistently

~450mm which is consistent with the Design. However, variance was found in the thickness of the Bituminous Layers which were varying from 165 mm to 190mm. The higher thickness could be on account of additional Overlay undertaken. As such as per reports the thickness of Bituminous Layers (DBM + BC) should ideally have been 225mm / 230mm (125/130 mm DBM +50 BC + 40 BC Overlay). Considering the regular wear & tear, erosion of 5-10mm of wearing surface is reasonable. It is understood that overlay has been undertaken after carrying out milling of the existing surface which had developed rutting. Consequently the thickness of the Bituminous Layers is consistent with the design.

The details of Trial Pits result are annexed at Appendix O.

Chapter 6: Pavement Analysis

The Pavement Analysis has been carried out based on four criteria:

- Roughness Index – Based on UI Values provided by the Client
- Visual Condition Survey
- Age of Last Overlay undertaken
- FWD Tests Results

6.1 Roughness Index:

Roughness Index analysis was carried out to ascertain whether any part of the highway has roughness Index beyond the acceptable limit of 2,500 as specified in the Concession Agreement. As such it was found that at no place the UI Value is beyond the specified limit of 2,500. The maximum value of UI was found to be 2162 for a length of 1.00 km on LHS between Km 175.000 to Km 176.000. As can be seen from the table below that a total of 7.20 Lane km out of total 443.20 Lane Km (1.6%) was found to have an unevenness Index above 2000 that also was high by only 8% above 2000.

UI	LHS			RHS		
	Outer	Middle	Inner	Inner	Middle	Outer
<2000	102.20	17.20	101.20	100.00	17.20	98.20
>2000	-	-	1.00	2.20	-	4.00
>2500	-	-	-	-	-	-

Accordingly, it was evident that at no location there is a requirement of Overlay on account of Roughness / Ride quality.

6.2 Visual Condition Survey:

6.2.1 Main Carriageway:

As mentioned earlier, approximately 36% of the Pavement was found to be under Fair Category and no portion was found as Poor. However, in certain stretches that has been classified as Fair, some rutting & Minor Cracking was observed. For the portion where rutting was observed, It would be prudent to undertake milling for levelling of the rut and provide 50mm thick DBM as a preventing maintenance.

A total of 9.1 km Length has been identified for DBM to rectify the DBM. Out of this 8.30km is required on Right Carriageway while 0.90 Km is required on Left Carriageway.

6.2.2 Service Road:

Based on the visual condition assessment it has been estimated that nearly entire length except for the length where pipeline works are in progress overlay shall be required. In few stretches repair with DBM is also proposed.

Out of total 83.050km Service Road, 58.346 Km Service Road length is available where the Pipeline work is not going on. Accordingly BC is proposed in 58.346 Kms. As mentioned earlier, in 3.322 Km length, there is a need to undertake DBM works as the pavement has deteriorated considerably. The details of the Service Road is as under:

Sl No	Description	Length (Km)
1	Total Service Road	83.050
2	Pipeline Work in Progress	24.704
3	Balance Service Road	58.346
4	DBM Required	3.322
5	BC Required	58.346

The detailed stretch-wise Analysis of the Service Road is provided in Appendix P3

6.3 Age of Last Overlay:

It was informed by the Client that nearly entire stretch has been provided with 40mm BC overlay between 2019 to 2022. The details of Overlay undertaken are as summarised below:

Year	LHS	RHS	Total	%
2019	19.90	21.30	41.20	21.25%
2020	2.20	2.40	4.60	2.37%
2021	27.70	31.20	58.90	30.38%
2022	51.20	38.00	89.20	46.00%
Total	101.00	92.90	193.90	

From the above it is evident that in only 41.20 km (21.25%) the age of last overlay is four years and it may require overlay only in 2024 and beyond. While the majority of the stretch (>75%) has been provided with the overlay in the last two years only. Under these circumstances, based on the results of FWD Tests, the Future Overlay / Strengthening would be considered.

6.4 FWD Tests:

As mentioned earlier, that the Residual life of the pavement has been found deficient for the 20 year design requirements. However, since the actual traffic has been found well below the projected traffic, the required Traffic for the balance concession period can be ascertained in two ways:

a) By calculating the Actual Traffic that has passed on the Project Highway till date and then subtracting the same from the Overall Design Traffic for the 20 Year design Life as estimated in the Pavement Design Report.

b) By Further Projecting the Existing Traffic to the end of Concession Period.

Accordingly both the scenario has been evaluated and suitable option would therefore be chosen for designing the overlay / strengthening provisions. These are summarised as under:

Traffic Estimation Summary			
Description	Section A	Section B	Section C
	TP1	TP2	TP2
Design Life	140.00 MSA	94.00 MSA	140.00 MSA
Traffic passed till Date	34.12 MSA	24.22 MSA	19.38 MSA
Balance Required Traffic	105.88 MSA	69.78 MSA	120.62 MSA
Traffic Projected Till 2036	75.49 MSA	76.36 MSA	61.09 MSA

In view of the above, it was finally considered to adopt the following values of Residual Design Life (MSA) for designing Overlay for the pavement so as to ensure that the pavement continues to act in a structurally strong manner till the end of Concession Period.

Section A	Section B	Section C
75.488 MSA	76.355 MSA	61.085 MSA

Here it is significant to note that the Section C in the present scenario is extended to the entire six lane section, i.e. from Km 235+000 to Km 252+200.

Based on the above requirements, the following Overlay/ Strengthening Provisions has been estimated:

Overlay-VG-30; Without Milling							
LHS							
Sl. No.	Homogenous Sections, km		Existing Residual Life	Required Life	Proposed (mm)		
	From	To			Total Overlay	BC	DBM
1	150+100	157+600	11.119	75.488	90	40	50
2	157+600	165+350	6.335	75.488	110	40	70
3	165+350	183+100	7.270	75.488	105	40	65
4	183+100	197+500	3.446	75.488	130	40	90
5	197+500	214+600	4.834	75.488	120	40	80
6	214+600	217+000	2.393	76.355	130	40	90
7	217+000	229+500	7.114	76.355	120	40	80
8	229+500	235+600	7.357	61.085	100	40	60
9	235+600	244+250	12.079	61.085	100	40	60
10	244+250	246+610	4.572	61.085	115	40	75
11	246+610	252+000	5.372	61.085	115	40	75

Overlay-VG-30; Without Milling							
RHS							
Sl. No.	Homogenous Sections, km		Existing Residual Life	Design MSA		Proposed (mm)	
	From	To			Total Overlay	BC	DBM
1	150+000	157+400	6.307	75.488	110	40	70
2	157+400	177+750	3.350	75.488	130	40	90
3	177+750	189+850	3.962	75.488	125	40	85
4	189+850	208+840	1.685	75.488	140	40	100
5	208+840	214+600	2.295	75.488	140	40	100
6	214+600	220+500	1.881	76.355	140	40	100
7	220+500	227+500	4.600	76.355	130	40	90
8	227+500	231+210	5.075	76.355	130	40	90
9	231+210	246+750	5.593	61.085	120	40	80
10	246+750	252+000	5.441	61.085	110	40	70

From the above, it is evident that it would take from 90mm to 140mm overlay to provide the suitable thickness that shall last for the entire duration of the Concession Period. However, it is also evident that due to various reasons, such as Roughness Index going beyond 2500, or some other distress during the course of the Concession it would require at least one more, if not two overlays, in such a case it does not make sense to undertake the entire strengthening overlay at this stage and then again undertake wearing course renewal 5-6 years later. It is also expected that just before the handover, NHAI would insist on an overlay as part of divestment requirement in accordance with the Concession Agreement.

In view of the above, a suitable Major Maintenance Strategy needs to be formulated. The same shall be discussed in the next Chapter.

Chapter 7: Major Maintenance Strategy

There are three Major Maintenance Strategies that have been considered. These are:

Option #1: In this strategy, the DBM & BC are executed in the year 2024-25 only as per the overlay design based on FWD Test Results and subsequent Overlay to meet the requirement of the Projected Traffic Numbers as estimated earlier. The advantages & Disadvantages of this strategy is as illustrated below:

- The advantage of this strategy is that the Pavement deficiency shall be taken care and there would be no future risks involved in any manner whatso ever.
- However, the initial costs would be highest in this Option and most likely the overall costs on NPV basis shall also be the highest.
- Another downside of this strategy is that it does not provide any flexibility in terms of variance in traffic.
- In future there would certainly be requirement of additional Overlays, the cost of which would be over and above the cost of selecting this Option.

Option #2: In this strategy, the DBM has not been considered and the entire thickness required shall be provided as BC in two or three different layers undertaken in 2024, 2028 & 2031 in such a manner that the overall thickness provided compares with the requirement of the overlay design based on FWD Test Results to meet the requirement of the Projected Traffic Numbers as estimated earlier. The advantages & Disadvantages of this strategy is as illustrated below:

- The initial Costs of this option is still too high, especially in view of the fact that nearly 75% of the pavement had just been provided with the overlay in 2021 & 2022.
- In this case, there is no consideration for extension period as well as for reduced traffic in the coming years.
- This does not resolve the immediate issue of Rutting in certain stretches.

Option #3: Considering the major deficiencies in the above two strategies, it becomes imperative to adopt a strategy which takes into account all the following Parameters:

a. The Entire period of Concession including the extended period up to 2036 is taken care of and the last overlay should be taken up in the years 2034-35 & 2035-36 just before the handing over.
b. Takes into account the fact that there should be adequate spacing between two overlays, i.e. there is no overlay in FY2023-24, FY2024-25 & FY 2025-26 on the stretches where overlay has been undertaken in years 2021 & 2022.
c. Immediate requirement of dealing with stretches where rutting has been observed has also been dealt with.

d. The strengthening requirements in accordance with projected traffic and FWD Data is also taken care off so that at no point the pavement is found structurally deficient and remains compliant with the provisions of the Concession Agreement.

In view of the above, in this strategy, the following provisions have been made in this strategy and the process as defined below has been adopted:

- DBM has been considered for a small length of 9.1 km to cater for the rutting.
- The entire Overlay requirement has been divided in two or three layers e.g. 90mm Overlay has been divided in two layers of 50 mm & 40mm or alternative 120mm Overlay has been divided in three layers of 40mm each.
- For each stretch, the present condition of the pavement, FWD Data & Last overlay date has been taken into account to distribute these layers amongst various years right up to 2035-36.

The Advantages & Disadvantages of this strategy is as illustrated below:

- The initial Costs has been reduced substantially and the overall cost on NPV basis is also the least.
- There is adequate flexibility of planning the overlay based on the parameters as they unfold at that time. For example, if the actual traffic is found to be below the projected traffic, the overlay can be delayed or eliminated.
- In case of the Actual Traffic being higher than the projected, the overlay can be preponed or enhanced depending upon the requirement at that stage.

From the above it can be ascertained that Option #3 provides the best option in terms of Cost Optimization, Sustainability and quality of Service on account of following Reasons:

- **The total overlay required to meet the Overlay Design based on the FWD tests has been accounted for.**
- **The Pavement Condition based on Visual Survey is also taken into account deciding for DBM where rutting is observed.**
- **There is at least 4-5 years' time difference between one overlay to another and unlike Option #1 & Option #2, new overlay is not undertaken immediately after the last overlay.**
- **The last overlay is proposed in the years 2034-35 & 2035-36 which also takes care of the handing over requirement in 2035-36.**

The costing of all these Strategies is being discussed in the next Chapter. The detailed Analysis in Excel format is enclosed as Appendix P1, Appendix P2 & Appendix P3

Chapter 8: Costing of Major Maintenance Provisions

The Coasting of Various Options is as given below:

Option #1: The Cost of Option #1 has been estimated as 484.89 Crores as per details given below. However, since all the costs are incurred upfront the NPV@12% is 303.39 Cr.

S No	Year	Item	Unit	Quantity	Rate	Amount
1	2024-25	BC	cum	79,938	12,464	99,63,47,232
		Tack Coat Under BC	Sq M	19,99,400	24	4,79,85,600
		DBM	cum	1,59,910	11,563	1,84,90,33,549
		Tack Coat Under DBM	Sq M	19,99,400	24	4,79,85,600
		Road marking	Sq M	97,096	1,055	10,24,36,280
		Kerb Painting	Sq M	1,43,010	141	2,01,64,410
		Shoulder Filling	cum	35,927	975	3,50,28,338
2	2032-33	BC	cum	79,938	18,415	1,47,20,58,642
		Tack Coat Under BC	Sq M	19,99,400	24	7,08,96,586
		DBM	cum	-	11,563	-
		Tack Coat Under DBM	Sq M	-	24	-
		Road marking	Sq M	97,096	1,055	15,13,45,040
		Kerb Painting	Sq M	1,43,010	141	2,97,92,017
		Shoulder Filling	cum	17,963	975	2,58,76,404
						4,84,89,49,697

Option #2: The cost of this Option is estimated at 372.42 Crores as per details given below. The NPV@12% is estimated as 186.54 Crores as not only major works are reduced, the works are also pushed and staggered.

S No	Year	Item	Unit	Qty	Rate	Cost
1	2024-25	BC	cum	53,104	12,464	66,18,88,256
		Tack Coat	Sq M	12,45,425	24	2,98,90,200
		Road marking	Sq M	83,918	1,055	8,85,32,963
		Kerb Painting	Sq M	69,825	141	98,45,325
		Shoulder Filling	cum	8,082	975	78,79,950
2	2028-29	BC	cum	69,845	15,150	1,05,81,60,420
		Tack Coat	Sq M	15,64,025.00	24	3,75,36,600
		Road marking	Sq M	74,363	1,055	7,84,52,438
		Kerb Painting	Sq M	54,163	141	76,36,913
		Shoulder Filling	cum	10,325	975	1,00,67,119
3	2031-32	BC	cum	86,385	17,538	1,51,50,28,740
		Tack Coat	Sq M	40,33,700	24	9,68,08,800
		Road marking	Sq M	94,740	1,055	9,99,50,700
		Kerb Painting	Sq M	70,665	141	99,63,765
		Shoulder Filling	cum	12,870	975	1,25,48,250
						3,72,41,90,436.75

Option #3: The Cost of this Option is estimated to be Rs. 414.78 Crores but since no major works are required to be executed in this option the NPV @12% works out to be Rs. 170.68 Crores. The details of the estimate are as given below:

Year	Item Description	Unit	Quantity	Rate	Amount
2024-25	DBM	Cum	4,445	11,553	5,13,53,085
	BC	Cum	15,257	12,464	19,01,63,248
	Tack Coat	Sqm	4,38,600	24	1,05,26,400
	Lane Marking	Sqm	16,006	1,055	1,68,86,594
	Kerb Painting	Sqm	12,740	141	17,96,340
	Shoulder Filling	Cum	2,730	975	26,61,750
	Total				27,33,87,417
2025-26	DBM	Cum	-	12,131	-
	BC	Cum	32,078	13,087	41,98,04,786
	Tack Coat	Sqm	7,48,950	25	1,87,23,750
	Lane Marking	Sqm	33,644	1,108	3,72,77,275
	Kerb Painting	Sqm	26,355	148	39,00,540
	Shoulder Filling	Cum	5,648	1,024	57,83,040
	Total				48,54,89,391
2028-29	DBM	Cum	-	14,043	-
	BC	Cum	19,591	15,150	29,67,96,075
	Tack Coat	Sqm	3,92,000	29	1,13,68,000
	Lane Marking	Sqm	17,175	1,282	2,20,18,350
	Kerb Painting	Sqm	13,160	171	22,50,360
	Shoulder Filling	Cum	2,820	1,185	33,41,700
	Total				33,57,74,485
2029-30	DBM	Cum	-	14,745	-
	BC	Cum	35,309	15,908	56,16,95,572
	Tack Coat	Sqm	7,50,550	31	2,32,67,050
	Lane Marking	Sqm	33,725	1,346	4,53,93,850
	Kerb Painting	Sqm	26,425	180	47,56,500
	Shoulder Filling	Cum	5,663	1,244	70,44,150
	Total				64,21,57,122
2031-32	DBM	Cum	-	16,256	-
	BC	Cum	37,200	17,538	65,24,13,600
	Tack Coat	Sqm	8,73,000	34	2,96,82,000
	Lane Marking	Sqm	39,319	1,484	5,83,49,025
	Kerb Painting	Sqm	30,870	198	61,12,260
	Shoulder Filling	Cum	6,615	1,372	90,75,780
	Total				75,56,32,665

2034-35	DBM	Cum	-	18,819	-
	BC	Cum	47,564	20,303	96,56,91,892
	Tack Coat	Sqm	11,41,600	39	4,45,22,400
	Lane Marking	Sqm	50,856	1,718	8,73,71,038
	Kerb Painting	Sqm	39,550	230	90,96,500
	Shoulder Filling	Cum	8,475	1,588	1,34,58,300
	Total				**1,12,01,40,130**
2035-36	DBM	Cum	-	19,760	-
	BC	Cum	21,516	21,318	45,86,78,088
	Tack Coat	Sqm	5,37,900	41	2,20,53,900
	Lane Marking	Sqm	24,000	1,804	4,32,96,000
	Kerb Painting	Sqm	18,690	241	45,04,290
	Shoulder Filling	Cum	4,005	1,668	66,80,340
	Total				**53,52,12,618**
Grand Total					**4,14,77,93,827**

The NPV Calculations of Various Options are as given below:

Option #1		Option #2		Option #3	
2023-24	-	2023-24	-	2023-24	-
2024-25	309.90	2024-25	79.80	2024-25	27.34
2025-26	-	2025-26	-	2025-26	48.55
2026-27	-	2026-27	-	2026-27	-
2027-28	-	2027-28	-	2027-28	-
2028-29	-	2028-29	119.19	2028-29	33.58
2029-30	-	2029-30	-	2029-30	64.22
2030-31	-	2030-31	-	2030-31	-
2031-32	-	2031-32	173.43	2031-32	75.56
2032-33	166.02	2032-33	-	2032-33	-
2033-34	-	2033-34	-	2033-34	-
2034-35	-	2034-35	-	2034-35	112.01
2035-36	-	2035-36	-	2035-36	53.52
Total	**484.89**	**Total**	**372.42**	**Total**	**414.78**
NPV@12%	**303.39**	**NPV@12%**	**186.54**	**NPV@12%**	**170.68**

From the above, it can be seen that the Option #3 is not only the best option but also most cost effective and is therefore recommended. The detailed Cost Analysis of various Options is given in Appendix P1 & Appendix P2..

Further the Cost of Overlay / Major Maintenance on the Service Road has been estimated to be Rs. 24.12 Crs. as per following details:

Sl No	Item Description	Unit	Qty	Rate	Amount
1	Tack Coat	Sq-mtr	438811	24	1,05,31,464
2	DBM - 50mm	Cum	1462.7	11563	1,69,13,200
3	BC - 40mm	Cum	16626.28	12464	20,72,29,954
4	Road Marking	Sq-mtr	3267.55	1055	34,47,265
5	Kerb Painting	Sq-mtr	20921.1	141	29,49,875
6	Shoulder Filling	Cum	169.12	975	1,64,892
				Total Amount=	24,12,36,650

It is proposed that half of this work amounting to Rs. 12.06 Crs is undertaken in FY 2023-24 while remaining half is undertaken in the first half of FY 2024-25. In future, at least one more overlay shall be required on the Service Road. It is propsoed that next overlay shall be undertaken in FY 2034 -35 & 2035-36 and the cost of the same shall be Rs. 43.73 Crs on 2034-35 rates. The NPV of total Major Maintenance on Service Road shall be Rs. 31.01 Crs as per following Details:

Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	Total	NPV @ 12%
Cost	12.06	12.06	-	-	-	-	-	-	-	-	-	21.87	21.87	67.85	31.01

The Details of Cost Estimate has been provided in Appendix P3.

Chapter 9: O&M Costing

O&M Costing for a DBFOT Project encompasses all costs comprising of following heads:

1. SPV Costs – which include SPV Manpower, Establishment such as Office, and other running expenses like Vehicle, Travel, Energy Costs etc.
2. IE Costs – The 50% of IE Fee that the Concessionaire is required to pay as part of Concession Agreement Provisions
3. Insurance & Other Statuary Expenses, if any.
4. Tolling Operation Costs that include Manpower, System Maintenance, Energy, Toll Plaza running Costs including incidental costs.
5. Maintenance Establishment Costs such as Maintenance supervision Staff and their establishment costs like Transportation, Office & Office running expenses.
6. Route Operations Costs which include Operating & Maintenance Costs of Route Patrolling vehicle, Ambulance & Cranes as mandated in the Concession Agreement.
7. Routine Maintenance of the Project Highway which can further be divided in the following sub categories:
    a. Cleaning & House Keeping of the Project Highway & Other Assets.
    b. Damage Repair such as damages crash barriers, Kerbs, Deliniters, etc. which may often results out of Accidents or vandalism.
    c. Periodic Painting and other Miscellaneous Maintenance of Various Assets such as Lighting, Signages, ATMS, etc.
    d. Maintenance of Plantation (mainly Median Plantation) which includes watering, Pruning, Providing Fertilizers, Replacement of dead Plants, if any, etc.
    e. Repairs of normal wear & tear such as pothole repairs, Crack sealing, etc.
8. Last but not the least Energy Charges for Street Lighting and other installations.
9. Other Miscellaneous Expenses including incidental expenses.

Generally the method adopted for efficient O&M is to appoint an specialised agency to undertake entire O&M Activity which has two advantages:

1. The Costs gets fixed and no major future variations can be expected.
2. No major management oversight is required as the O&M Contracts thus given out have strong Service Level requirements which can be easily and remotely monitored.
3. The Chances of pilferages are also substantially reduced.
4. However, this option typically results in higher costs due to the Agency Margins and additional tax implications (GST @ 18%) but the same is generally offset by better efficiency and reduction in Management Costs.

As Part of the analysis for this report, the costs has been worked out based on the option where the work is done directly by the company. As such it is significant to note that the Company has outsourced the Comprehensive O&M to M/S Elasmax (ESML).

ASSUMPTIONS:

As mentioned earlier, most of the costs are generally derived at the basis of various assumptions which are based on past experience of dealing with similar projects in the past. However, since the method adopted by PSRDCL requires the employment of third party for undertaking all aspects of O&M, 18% GST has been considered on all costs except for IE Payments, Electrical Payments & Insurance Costs. The major assumptions, as undertaken while arriving at the Costs are as under:

Sl. No.	Description	Criteria
1	Pot hole repair with BC (For Road)	0.05% of Total Balance area of BC
2	Providing tack coat on Existing Surface	As above
3	Maintenance of Earthen Shoulders, median and side slopes, filling with select soil.	0.1 % of the length of the project
4	Maintenance of cross drainage works, flyovers, elevated structures, drains, VUP, PUP etc. including cleaning of water way etc.	300000/- Year
5	Renewal of Road Markings	20% per year
6	Replacement retro reflective signage.	Avg. 5% of total Boards/year
7	Painting and lettering	
a	5 Km Stone	Once in two year
b	KM Stone	Once in two year
c	Hectometer Stone	Once in two year
8	Plantation Median & Avenue	60000/- per year per Km
9	Metal Beam Crash Barrier	Avg. 1% of total Quantity/year
10	Painting of Kerb	Avg. 15% of total Quantity/year
11	Painting of Crash Barrier/RCC Railing/Steel Railing/ Pedestrian Guard Rails	Once in two year
12	Replacement of Cats-eyes	Avg.10% per year
13	Maintenance of Public facilities like Bus Shelter, O/M Centre etc.	Once in two year
14	Maintenance of Fitting/Fixtures i/c replacement	LS Rs 50000/- per year
15	Power Consumption at Toll Plaza	increase of 1% assumed

In addition, based on the Feedback from the client, NO SPV Costs has been considered as the entire function of the SPV Team has been assigned to the O&M Contractor.

O&M COSTING

Thus the O&M Cost thus arrived at is Rs. 17.47 Crores for FY 2023-24 as per following details:

Sl. No	Description	Cost (Rs Lacs)
1	SPV Cost	92.75
2	Tolling Costs	637.20
3	IE & Other Professional Fees	32.02
4	Insurance	106.00
5	Maintenance Establishment	101.95
6	Operating Expenses	279.29
7	Routine Maintenance	264.30
8	Power Charges & Electrical Maintenance	233.52
Sub-Total Incl. Tolling Operations)		1,747.04

However, for the purpose of this analysis, this cost has been extrapolated till the end of Concession Period i.e. 2035-36 by assuming a Price Escalation of 5% per year while in the year 2023-24, only 50% of the total yearly cost has been considered for a period between Oct 2023 to Mar 2024. For the year FY 2035-36 also 50% of the costs has been considered as the extension of the Concession Period is estimated to September 2035 only. The total O&M Costs thus arrived, till the end of Concession, has been estimated to be Rs. 285.03 Crs. The NPV of the same @ 12% Discounting Rate is estimated to be Rs. 130.33 Crores. The summary of the same is as given below:

ITNL PSRDCL PUNE SHOLAPUR HIGHWAY
TOTAL O&M COSTS INCLUDING MAJOR MAINTENANCE COSTS (Rs. Crs.)

Sl. No	Description	Escalation Rate	FY-22 TO FY-36													Total (FY25-FY37)	NPV (FY25-FY37)
			FY24*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36*		@12%
1	SPV Cost	5%	0.46	0.97	1.02	1.07	1.13	1.18	1.24	1.31	1.37	1.44	1.51	1.59	0.83	15.13	6.92
2	Tolling Costs	5%	3.19	6.69	7.03	7.38	7.75	8.13	8.54	8.97	9.41	9.89	10.38	10.90	5.72	103.96	47.54
3	IE & Other Professional Fees	5%	0.16	0.34	0.35	0.37	0.39	0.41	0.43	0.45	0.47	0.50	0.52	0.55	0.29	5.22	2.39
4	Insurance	5%	0.53	1.11	1.17	1.23	1.29	1.35	1.42	1.49	1.57	1.64	1.73	1.81	0.95	17.29	7.91
5	Maint. Establishment	5%	0.51	1.07	1.12	1.18	1.24	1.30	1.37	1.43	1.51	1.58	1.66	1.74	0.92	16.63	7.61
6	Operating Expenses	5%	1.40	2.93	3.08	3.23	3.39	3.56	3.74	3.93	4.13	4.33	4.55	4.78	2.51	45.57	20.84
7	Routine Maintenance	5%	1.32	2.78	2.91	3.06	3.21	3.37	3.54	3.72	3.90	4.10	4.31	4.52	2.37	43.12	19.72
8	Power Charges & Electrical Maintenance	5%	1.17	2.45	2.57	2.70	2.84	2.98	3.13	3.29	3.45	3.62	3.80	3.99	2.10	38.10	17.42
TOTAL O&M COSTS (Excl Major Maintenance)			**8.74**	**18.34**	**19.26**	**20.22**	**21.24**	**22.30**	**23.41**	**24.58**	**25.81**	**27.10**	**28.46**	**29.88**	**15.69**	**285.03**	**130.33**

Note: Above Costs are including GST
* 50% of the total Cost for FY2023-24 &235-36 has been considered and added in the Total & NPV

The detailed Working of the O&M Costs has been provided in Appendix Q1 & Q2.

Chapter 10: Conclusion

Based on the detailed Analysis of data collected and field investigations conducted, the following is being concluded:

10.1 Major Maintenance:

m. The Pavement has been designed for a life of 10 years only and at some stage an additional 50mm DBM would be required to strengthen the pavement to meet the Design Traffic as stipulated at the time of conducting pavement design.

n. The FWD Data also suggest that the Pavement is nearing its design life

o. In the balance 13 years of Concession, two major overlay would be required in order to ensure reasonable quality of Service.

p. As the actual traffic has been lower than the estimated traffic, resulting in the extension of concession period by 4 years, immediate requirement of strengthening is not considered except for few stretches where Rutting has occurred.

q. It would therefore be necessary to strategically provide two or three overlay in such a manner so that immediate DBM requirement is eliminated.

r. Considering the above strategy, a Major Maintenance Plan has been recommended.

s. The Cost of such Major Maintenance on Main Carriageway would be Rs. 414.78 Crores while the NPV @12% discounting Rate for the same shall be Rs. 170.68 Crs.

t. On Service Road an Overlay is required immediately which shall require 3.322km of DBM and 58.346 Kms of BC.

u. Subsequently in 2034 another overlay shall be required in the entire 83.050km length.

v. The Cost of immediate overlay and DBM shall be Rs. 24.12 Crs and the Cost of future overlay shall be 43.73 Crs. It is proposed that half of the initial Maintenance amounting to Rs. 12.06 Crs, is undertaken in the current Financial Year (FY 2023-24) and the remaining cost (Rs.12.06 Crs) is incurred in FY 2024-25.

w. Thus the total Major Maintenance Cost on Service Road shall be Rs. 67.85 Crs while the NPV of the same shall be Rs. 31.01 Crs at 12% discounting rates.

x. In addition to the Pavement, there is no Major Maintenance envisaged as the all the structures and assets are in good condition and can be taken care of as part of Routine Maintenance.

10.2 O&M Costs:

c. The O&M Costs has been estimated based on first principles and has been found comparable with the current costs being incurred by the Company.

d. The Total Cost of FY 2023-24 works out to be Rs. 15.34 Crores. However, only 50% of the costs for FY 2023-24 & FY 2035-36 has been considered for the purpose of this analysis for a period between Oct 2023 to Mar 2024 (For Fy 2023-24) & Apr 2035 to September 2035 (for FY 2035-36) respectively. Thus the Total Cost to be incurred on O&M is estimated as Rs. 285.03 Crores (NPV@12% 130.33 Crores) for the period between FY2023-24 & FY2035-36, while considering a price escalation of 5%.

10.3 Overall Costs:

The Overall Costs of the Project O&M including Major Maintenance Cost has been estimated to be Rs. 746.87 Crs which includes Major Maintenance Works on Main Carriageway as well as Service Roads along with comprehensive O&M Costs up to the end of Concession Period (2036-37) starting from 2023-24. The NPV of the same at 12% Discounting Rate is Estimated to Rs. 351.06 Crs.

The summary of Overall Maintenance Costs till 2036-37 is summarised below which includes all the major components of Operations & Maintenance including Major Maintenance (Overlay) of Main Carriageway as well as Service Road:

ITNL PSRDCL PUNE SHOLAPUR HIGHWAY

TOTAL O&M COSTS INCLUDING MAJOR MAINTENANCE COSTS

(Rs. Crs.)

Sl. No	Description	Escalation Rate	FY-22 TO FY-36													Total (FY25-FY37)	NPV (FY25-FY37)
			FY24*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36*		@12%
1	SPV Cost	5%	0.46	0.97	1.02	1.07	1.13	1.18	1.24	1.31	1.37	1.44	1.51	1.59	0.83	15.13	6.92
2	Tolling Costs	5%	3.19	6.69	7.03	7.38	7.75	8.13	8.54	8.97	9.41	9.89	10.38	10.90	5.72	103.96	47.54
3	IE & Other Professional Fees	5%	0.16	0.34	0.35	0.37	0.39	0.41	0.43	0.45	0.47	0.50	0.52	0.55	0.29	5.22	2.39
4	Insurance	5%	0.53	1.11	1.17	1.23	1.29	1.35	1.42	1.49	1.57	1.64	1.73	1.81	0.95	17.29	7.91
5	Maint. Establishment	5%	0.51	1.07	1.12	1.18	1.24	1.30	1.37	1.43	1.51	1.58	1.66	1.74	0.92	16.63	7.61
6	Operating Expenses	5%	1.40	2.93	3.08	3.23	3.39	3.56	3.74	3.93	4.13	4.33	4.55	4.78	2.51	45.57	20.84
7	Routine Maintenance	5%	1.32	2.78	2.91	3.06	3.21	3.37	3.54	3.72	3.90	4.10	4.31	4.52	2.37	43.12	19.72
8	Power Charges & Electrical Maintenance	5%	1.17	2.45	2.57	2.70	2.84	2.98	3.13	3.29	3.45	3.62	3.80	3.99	2.10	38.10	17.42
TOTAL O&M COSTS (Excl Major Maintenance)			**8.74**	**18.34**	**19.26**	**20.22**	**21.24**	**22.30**	**23.41**	**24.58**	**25.81**	**27.10**	**28.46**	**29.88**	**15.69**	**285.03**	**130.33**
9	Major Maintenance Main Carriageway	5%	0.00	27.34	48.55	0.00	0.00	33.58	64.22	0.00	75.56	0.00	0.00	112.01	53.52	414.78	170.68
10	Major Maintenance Service Road	5%	12.06	12.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.87	21.87	67.85	31.01
GRAND TOTAL O&M COSTS (INCL. MAJOR MAINTENANCE & O&M)			**20.80**	**57.74**	**67.81**	**20.22**	**21.24**	**55.87**	**87.63**	**24.58**	**101.38**	**27.10**	**28.46**	**163.76**	**91.07**	**746.87**	**351.06**

Note: Above Costs are including GST

* 50% of the total Cost for FY2023-24 &235-36 has been considered and added in the Total & NPV

APPENDICES

IL&FS | Transportation

IL&FS TRANSPORTATION LIMITED

PUNE SHOLAPUR ROAD DEVELOPMENT COMPANY LIMITED

Four laning of Pune-Solapur section of NH-9
km 150+050 to km 252+200 in the state of Maharashtra
under NHDP Phase III on DBFOT basis

PROJECT DUE DILIGENCE FOR CLUSTER #1

Appendices to Final Report

By

LSI ENGINEERING & CONSULTANTS LIMITED

APPENIDX A
Traffic Calculations

Appendix A - Traffic Calculations

TP 1

	Tractor	Car	LCV	Bus	Truck	MAV	OSV
VDF	2.95	0	0.73	1.13	2.95	5.47	5.47
DDF	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LDF	0.75	0.75	0.75	0.75	0.75	0.75	0.75

Year	Tractor	Car	LCV	Bus	Truck	MAV	OSV	MSA	Cum MSA	Avg Growth		CAGR value
2014	0	844012	269584	100718	266968	1279607	864	3.038				
2015	10971	982011	282738	87124	255299	1405919	1659	3.296		8%		
2016	14823	997241	295639	82189	309106	1625798	3694	3.817		16%		
2017	6867	1662553	388561	199677	364141	1726184	7955	4.159		9%		
2018	12792	1918780	440262	252593	325876	1664362	18398	4.054		-3%		
2019	8880	1899525	364738	211917	402183	1654925	4421	4.048		0%		
2020	9340	1695850	289746	116487	370656	1419052	1744	3.463		-14%		
2021	13605	2255684	296034	181200	488393	1687557	2335	4.180		21%		
2022	14683	2901855	273646	230877	528878	1600898	2353	4.063	**34.118**	-3%	4.25%	3.70%
Projected Traffic based on CAGR Values												
2023	15226	3009177	283766	239416	548438	1660105	2440	4.213				
2024	15789	3120468	294261	248271	568721	1721502	2530	4.369				
2025	16373	3235875	305144	257453	589755	1785170	2624	4.530				
2026	16979	3355550	316429	266975	611566	1851192	2721	4.698				
2027	17607	3479651	328132	276849	634184	1919656	2822	4.872				
2028	18258	3608342	340268	287088	657639	1990652	2926	5.052				
2029	18933	3741792	352852	297706	681961	2064274	3034	5.239				
2030	19633	3880178	365902	308716	707183	2140619	3146	5.432				
2031	20359	4023682	379434	320134	733337	2219787	3262	5.633				
2032	21112	4172493	393467	331974	760459	2301883	3383	5.842				
Total MSA Required Till 2032								**49.880**	**83.998**			
2033	21893	4326808	408019	344252	788584	2387016	3508	6.058				
2034	22703	4486830	423109	356984	817749	2475297	3638	6.282				
2035	23543	4652770	438757	370187	847993	2566843	3773	6.514				
2036	24414	4824847	454984	383878	879355	2661775	3913	6.755				
Total MSA Required till 2036								**75.488**	**109.606**			

Appendix A - Traffic Calculations

TP 2

	Tractor	Car	LCV	Bus	Truck	MAV	OSV
VDF	2.95	0	0.73	1.13	2.95	5.47	5.47
DDF	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LDF 4L	0.75	0.75	0.75	0.75	0.75	0.75	0.75
LDF 6L	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Year	Tractor	Car	LCV	Bus	Truck	MAV	OSV	MSA 4 Lane	MSA 6 Lane	Avg Increase 4L	Avg Increase 6L	CAGR 4L	CAG 6L
2014	0	1210397	262308	181723	198955	683853	351	1.772	1.418				
2015	5382	1469661	306588	186563	231978	847958	334	2.166	1.732	22%	22.14%		
2016	11098	1457568	290271	167793	221386	792989	931	2.036	1.629	-6%	-5.95%		
2017	12119	2613600	399480	340027	273199	909483	3204	2.441	1.953	20%	19.89%		
2018	17748	3150220	492486	412361	287085	1152355	5772	3.022	2.418	24%	23.81%		
2019	15689	3222977	443578	409404	332022	1218187	2977	3.184	2.548	5%	5.38%		
2020	15978	2516839	351250	206865	332673	1040714	1185	2.707	2.165	-15%	-15.03%		
2021	18297	3454419	352301	271235	458501	1189457	1412	3.182	2.545	18%	17.55%		
2022	12664	4423472	329318	370719	540666	1388254	1664	3.71	2.968	17%	16.62%		
Total MSA Utilised								**24.220**	**19.376**	**10.56%**	**10.55%**	**9.68%**	**9.67**
Projected Traffic at 5% Traffic Growth								**4L**	**6L**				
2023	13297	4644646	345784	389255	567699	1457667	1747	3.896	3.117				
2024	13962	4876878	363073	408718	596084	1530550	1834	4.091	3.273				
2025	14660	5120722	381227	429154	625888	1607078	1926	4.295	3.436				
2026	15393	5376758	400288	450612	657182	1687432	2022	4.51	3.608				
2027	16163	5645596	420302	473143	690041	1771804	2123	4.736	3.788				
2028	16971	5927876	441317	496800	724543	1860394	2229	4.972	3.978				
2029	17820	6224270	463383	521640	760770	1953414	2340	5.221	4.177				
2030	18711	6535484	486552	547722	798809	2051085	2457	5.482	4.386				
2031	19647	6862258	510880	575108	838749	2153639	2580	5.756	4.605				
2032	20629	7205371	536424	603863	880686	2261321	2709	6.044	4.835				
Total MSA required Till 2032								**49.000**	**39.200**	**73.223**	**58.579**		
2033	21660	7565640			924720	2374387	2844	6.346	5.077				
2034	22743	7943922			970956	2493106	2986	6.663	5.331				
2035	23880	8341118			1019504	2617761	3135	6.997	5.597				
2036	25074	8758174			1070479	2748649	3292	7.346	5.877				

APPENIDX B1
FWD Report

PDF Provided Separately

APPENIDX B2
FWD Data Analysis-Excel Format

Excel Data provided Separately

APPENIDX C
UI Values

Appendix C - UI Values

Roughness Index Abstract							
Km		Roughness mm/Km. (on B.C. Surface)					
		LMCW			RMCW		
From	To	Outer	Middle	Inner	Inner	Middle	Outer
150+000	151+000	1943	2066	1880	2006		1920
151+000	152+000	1427		1622	1520		1622
152+000	153+000	1857		1755	1720		1838
153+000	154+000	1513		1661	1513		1653
154+000	155+000	1505		1520	1552		1567
155+000	156+000	1419		1408	1528		2006
156+000	157+000	1458		1489	1622		1419
157+000	158+000	1458		1497	1552		1607
158+000	159+000	1481		1513	1818	1818	1693
159+000	160+000	1520		1528	1434	1896	1410
160+000	161+000	1328		1456	1470		1487
161+000	162+000	1654	1505	1567	1685	1975	1724
162+000	163+000	1974		1583	1661		1818
163+000	164+000	1661	1614	1661	1853	1880	1774
164+000	165+000	1567		1567	1771		1701
165+000	166+000	1599		1513	1677		1748
166+000	167+000	1411		1513	1528		1528
167+000	168+000	1740		1747	1748	2112	1731
168+000	169+000	1473		1520	1630	2319	1771
169+000	170+000	1544		1614	1779		1802
170+000	171+000	1583		1567	1716		1708
171+000	172+000	1560		1536	1497		1513
172+000	173+000	1387		1426	1489		1513
173+000	174+000	1654		1614	1479		1557
174+000	175+000	1771		1708	1646		1630
175+000	176+000	1544		2162	1520		1552
176+000	177+000	1520		1552	1888	1974	1841
177+000	178+000	1714	1896	1802	2072	1909	1757
178+000	179+000	1646		1536	1466		1489
179+000	180+000	1714		1622	1400		1479
180+000	181+000	1505		1442	1418		1434
181+000	182+000	1520		1497	1614		1598
182+000	183+000	1520		1521	1489		2069
183+000	184+000	1505	1661	1700	1481	2014	1458
184+000	185+000	1716	1959	1818	1810	2112	1771
185+000	186+000	1520		1607	1922		1879
186+000	187+000	1607		1646	1679		1670
187+000	188+000	1607		1560	1763		1881
188+000	189+000	1627	1593	1679	1798	1862	1749
189+000	190+000	1591		1654	1677	1880	1567

Appendix C - UI Values

Km		Roughness mm/Km. (on B.C. Surface)					
		LMCW			RMCW		
From	To	Outer	Middle	Inner	Inner	Middle	Outer
190+000	191+000	1670	1505	1635	1794	2288	1591
191+000	192+000	1763	1695	1669	1943	1609	1974
192+000	193+000	1528		1458	1653		1614
193+000	194+000	1724		1638	1810		1763
194+000	195+000	1638		1591	1755		1638
195+000	196+000	1763		1716	1740		1599
196+000	197+000	1794		1818	1787		1677
197+000	198+000	1921		1863	1921		1979
198+000	199+000	1622		1513	1708		2014
199+000	200+000	1567		1505	1935		1748
200+000	201+000	1708		1661	1732		1779
201+000	202+000	1426		1583	1575		1630
202+000	203+000	1607		1669	1693		1669
203+000	204+000	1427		1450	1677		1622
204+000	205+000	1458		1661	1755		1700
205+000	206+000	1638		1677	1700		1779
206+000	207+000	1622		1700	1834		1732
207+000	208+000	1544		1654	1630		1552
208+000	209+000	1552		1685	1489		1575
209+000	210+000	1606		1622	1497		1512
210+000	211+000	1591		1622	1724		1693
211+000	212+000	1739		1693	1520		1387
212+000	213+000	1779		1771	1654		1708
213+000	214+000	1661		1638	1646		1638
214+000	215+000	1653		1669	1528		1520
215+000	216+000	1905	1930	1853	1544		1520
216+000	217+000	1920	2021	1959	1982	2186	1865
217+000	218+000	1635	2014	1661	1818	1975	1759
218+000	219+000	1528		1661	1505		1497
219+000	220+000	1497		1630	1489		1505
220+000	221+000	1552	1935	1693	1528	1427	1481
221+000	222+000	1593	1701	1642	1755	1714	1771
222+000	223+000	1513		1834	1442		1505
223+000	224+000	1614		1747	1489		1513
224+000	225+000	1700	2014	1826	1840	2092	1740
225+000	226+000	1779	1909	1802	1489	1779	2087
226+000	227+000	1544	1714	1552	1489	1831	1583
227+000	228+000	1513		1591	1434		1466
228+000	229+000	1372		1434	1458		1560
229+000	230+000	1387		1708	1442		1505
230+000	231+000	1518		1374	1505		1479
231+000	232+000	1548		1487	1630		1591

Appendix C - UI Values

Km		Roughness mm/Km. (on B.C. Surface)					
		LMCW			RMCW		
From	To	Outer	Middle	Inner	Inner	Middle	Outer
232+000	233+000	1473		1379	1583		1614
233+000	234+000	1466		1473	1418		1627
234+000	235+000	1513		1395	1473		1458
235+000	236+000	1497	1473	1544	1522	1583	1644
236+000	237+000	1622	1466	1513	1522	1470	1670
237+000	238+000	1442	1419	1536	1497	1685	1622
238+000	239+000	1661	1522	1618	1487	1505	1566
239+000	240+000	1528	1458	1497	1450	1497	1505
240+000	241+000	1552	1419	1473	1497	1552	1567
241+000	242+000	1364	1395	1458	1567	1520	1622
242+000	243+000	1583	1419	1497	1481	1544	1466
243+000	244+000	1677	1411	1505	1544	1458	1599
244+000	245+000	1630	1466	1513	1693	1794	1693
245+000	246+000	1847	1612	1720	1810	1505	1888
246+000	247+000	1614	1489	1473	1536	1559	1505
247+000	248+000	1635	1635	1609	1449	1326	1494
248+000	249+000	1466	1442	1497	1466	1521	1395
249+000	250+000	1536	1450	1552	1552	1982	1520
250+000	251+000	1603	1661	1618	1560	1614	1606
251+000	252+000	1661	1481	1552	1573	1505	1534
252+000	252+200	1897	1935	1896	2014	1936	1935

APPENIDX D
Last Overlay Dates

Appendix D: Last Overlay Dates

LHS			
Year	Length	From	To
2022	171	150+400	150+229
2022	300	152+300	152+000
2022	800	153+600	152+800
2022	1000	155+000	154+000
2022	200	156+200	156+000
2022	700	157+300	156+600
2022	20	163+611	163+591
2022	105	167+746	167+641
2022	1700	170+000	168+300
2022	500	172+500	172+000
2022	1560	176+000	174+440
2022	895	176+895	176+000
2022	650	179+150	178+500
2022	1000	181+500	180+500
2022	220	182+500	182+280
2022	400	182+900	182+500
2022	200	183+100	182+900
2022	300	183+400	183+100
2022	380	185+000	184+620
2022	250	185+250	185+000
2022	350	185+600	185+250
2022	200	185+800	185+600
2022	100	186+000	185+900
2022	300	186+300	186+000
2022	25	186+325	186+300
2022	25	186+650	186+625
2022	63	188+767	188+704
2022	580	190+000	189+420
2022	250	190+250	190+000
2022	27	190+991	190+964
2022	100	192+000	191+900
2022	500	192+500	192+000
2022	1000	193+500	192+500
2022	280	193+780	193+500
2022	650	195+650	195+000
2022	150	195+800	195+650
2022	200	196+000	195+800
2022	400	196+400	196+000
2022	145	196+945	196+800
2022	180	198+000	197+820
2022	300	198+300	198+000
2022	700	199+000	198+300
2022	80	202+200	202+120

RHS			
Year	length	From	To
2022	310	150+050	150+360
2022	1100	154+500	155+600
2022	1500	156+000	157+500
2022-23	444	150+450	150+894
2022-23	55	150+945	151+000
2022-23	420	151+380	151+800
2022-23	200	151+800	152+000
2022-23	275	152+000	152+275
2022-23	71	152+275	152+346
2022-23	1154	152+346	153+500
2022-23	400	155+600	156+000
2022	150	165+850	166+000
2022	1058	166+000	167+058
2022	15	167+108	167+123
2022	387	167+173	167+560
2022	106	167+641	167+747
2022	150	167+770	167+920
2022	15	167+964	167+979
2022	270	168+030	168+300
2022	550	168+300	168+850
2022	80	169+500	169+580
2022	450	171+550	172+000
2022	1109	172+000	173+109
2022	36	173+309	173+345
2022	536	173+464	174+000
2022	15	174+162	174+177
2022	32	174+177	174+209
2022	670	178+230	178+900
2022	150	178+900	179+050
2022	100	179+050	179+150
2022	100	179+650	179+750
2022	250	179+750	180+000
2022	1000	180+000	181+000
2022	390	182+500	182+890
2022	500	183+000	183+500
2022	100	183+500	183+600
2022	100	183+600	183+700
2022	300	183+700	184+000
2022	340	184+520	184+860
2022	150	185+630	185+780
2022	40	185+838	185+878
2022	22	185+878	185+900
2022	100	185+900	186+000

Appendix D: Last Overlay Dates

LHS			
Year	Length	From	To
2022	140	202+650	202+510
2022	400	203+050	202+650
2022	150	203+200	203+050
2022	650	203+850	203+200
2022	150	204+000	203+850
2022	1100	205+100	204+000
2022	900	206+000	205+100
2022	50	206+050	206+000
2022	310	206+360	206+050
2022	1090	207+450	206+360
2022	27	209+450	209+423
2022	143	210+900	210+757
2022	197	213+600	213+403
2022	207	216+557	216+350
2022	185	216+792	216+607
2022	108	216+950	216+842
2022	50	217+000	216+950
2022	125	217+125	217+000
2022	35	217+160	217+125
2022	135	220+935	220+800
2022	400	222+000	221+600
2022	610	222+610	222+000
2022	277	223+500	223+223
2022	491	224+491	224+000
2022	167	224+787	224+620
2022	180	225+900	225+720
2022	100	226+000	225+900
2022	173	226+173	226+000
2022	430	226+700	226+270
2022	1300	228+000	226+700
2022	1950	229+950	228+000
2022	500	232+000	231+500
2022	1000	233+000	232+000
2022	1000	234+000	233+000
2022	890	234+890	234+000
2022	28	235+755	235+727
2022	1500	238+000	236+500
2022	343	238+343	238+000
2022	17	238+783	238+766
2022	1000	240+000	239+000
2022	2000	242+000	240+000
2022	1850	243+850	242+000
2022	27	245+415	245+388
2022	195	246+000	245+805

RHS			
Year	length	From	To
2022	15	186+000	186+015
2022	28	186+427	186+455
2022	1113	186+475	187+588
2022	35	187+692	187+727
2022	140	187+800	187+940
2022	58	188+702	188+760
2022	680	189+320	190+000
2022	250	190+000	190+250
2022	250	190+250	190+500
2022	100	190+500	190+600
2022	130	190+600	190+730
2022	40	191+020	191+060
2022	18	191+642	191+660
2022	280	193+685	193+965
2022	307	198+000	198+307
2022	253	198+487	198+740
2022	180	198+740	198+920
2022	45	200+175	200+220
2022	130	200+220	200+350
2022	240	203+080	203+320
2022	20	203+980	204+000
2022	440	204+000	204+440
2022	220	204+440	204+660
2022	220	205+000	205+220
2022	180	205+220	205+400
2022-23	500	162+000	162+500
2022-23	185	162+500	162+685
2022-23	70	170+630	170+700
2022	260	207+000	207+260
2022	140	207+260	207+400
2022	600	207+400	208+000
2022	405	208+000	208+405
2022	90	209+410	209+500
2022	129	210+030	210+159
2022	200	213+000	213+200
2022	300	215+200	215+500
2022	73	216+204	216+277
2022	129	216+606	216+735
2022	155	216+845	217+000
2022	160	217+000	217+160
2022	390	217+560	217+950
2022	50	217+950	218+000
2022	580	218+000	218+580
2022	310	218+580	218+890

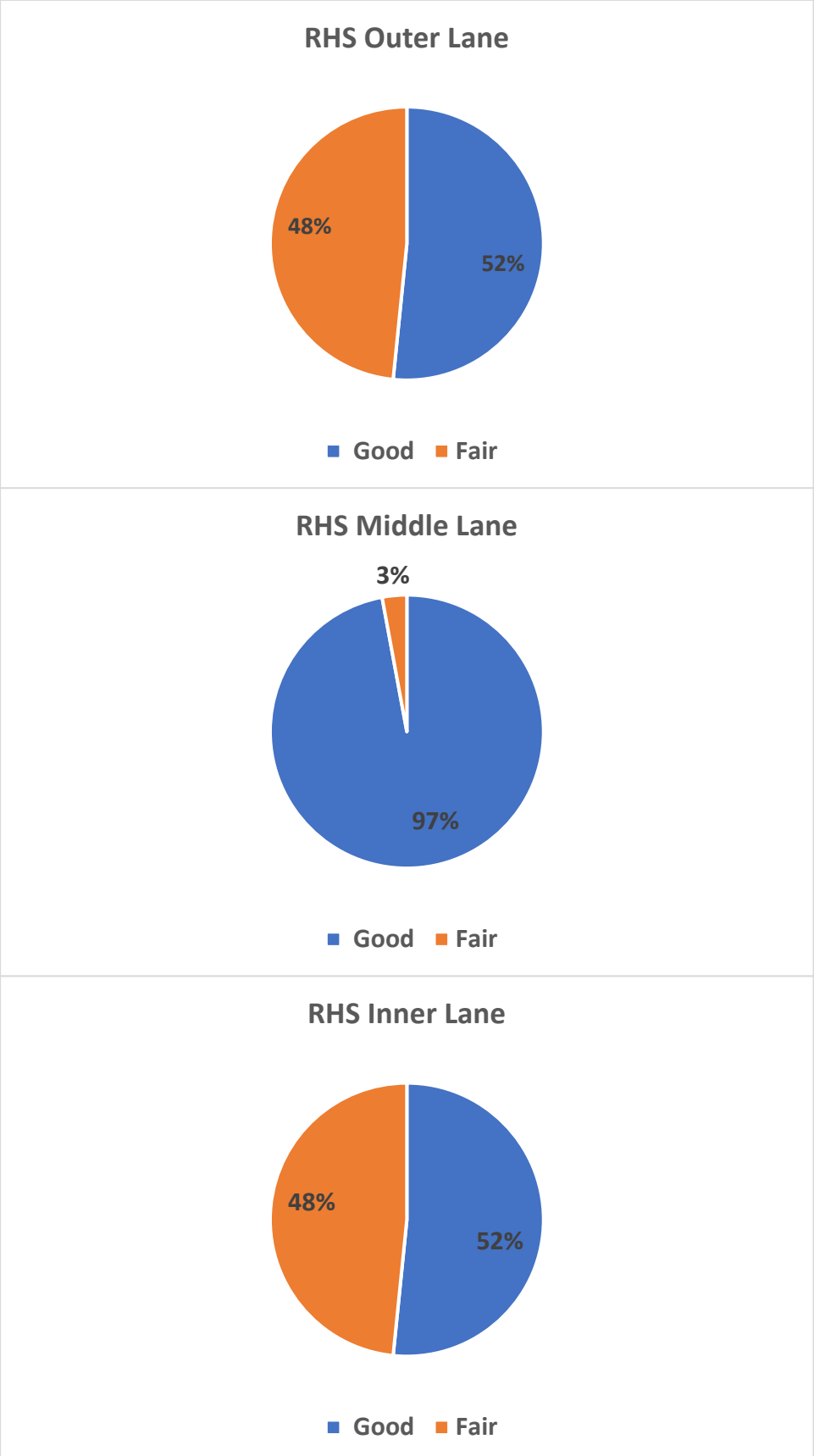
Appendix D: Last Overlay Dates

LHS			
Year	**Length**	**From**	**To**
2022	1261	247+261	246+000
2022	607	248+000	247+393
2022	1500	249+500	248+000
2022	500	250+000	249+500
2022	600	250+600	250+000
2022-23	441	150+894	150+453
2022-23	145	151+070	150+925
2022-23	624	152+000	151+376
2022-23	255	152+800	152+545
2022-23	400	154+000	153+600
2022-23	200	155+200	155+000
2022-23	321	156+000	155+679
2022-23	400	156+600	156+200
2022-23	1250	167+050	165+800
2022-23	165	170+165	170+000
2022-23	75	170+700	170+625
2022-23	608	173+108	172+500
2022-23	531	173+931	173+400
2022-23	77	216+277	216+200
2022-23	540	218+100	217+560
Total	**51036**		

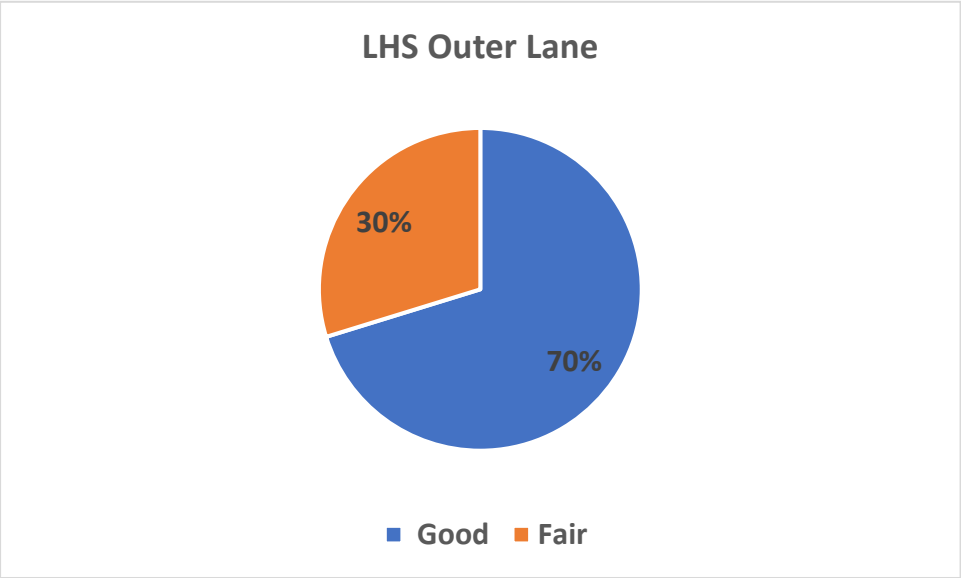
RHS			
Year	**length**	**From**	**To**
2022	220	218+890	219+110
2022	250	219+110	219+360
2022	250	219+360	219+610
2022	240	219+610	219+850
2022	150	219+850	220+000
2022	320	220+000	220+320
2022	220	220+320	220+540
2022	150	220+540	220+690
2022	150	220+690	220+840
2022	1000	223+000	224+000
2022	153	224+847	225+000
2022	8	226+357	226+365
2022	29	231+465	231+494
2022	94	231+494	231+588
2022	622	232+138	232+760
2022	24	232+824	232+848
2022	17	233+915	233+932
2022	27	235+727	235+754
2022	700	237+000	237+700
2022	232	237+700	237+932
2022	40	237+960	238+000
2022	18	238+765	238+783
2022	648	238+852	239+500
2022	1400	242+600	244+000
2022	480	244+000	244+480
2022	32	245+388	245+420
2022	249	245+751	246+000
2022	300	246+000	246+300
2022	105	246+395	246+500
2022	350	246+500	246+850
2022	1150	246+850	248+000
2022	2000	248+000	250+000
2022	750	250+000	250+750
2022-23	140	216+000	216+140
2022-23	64	216+140	216+204
2022-23	165	224+625	224+790
	38045		**Total**

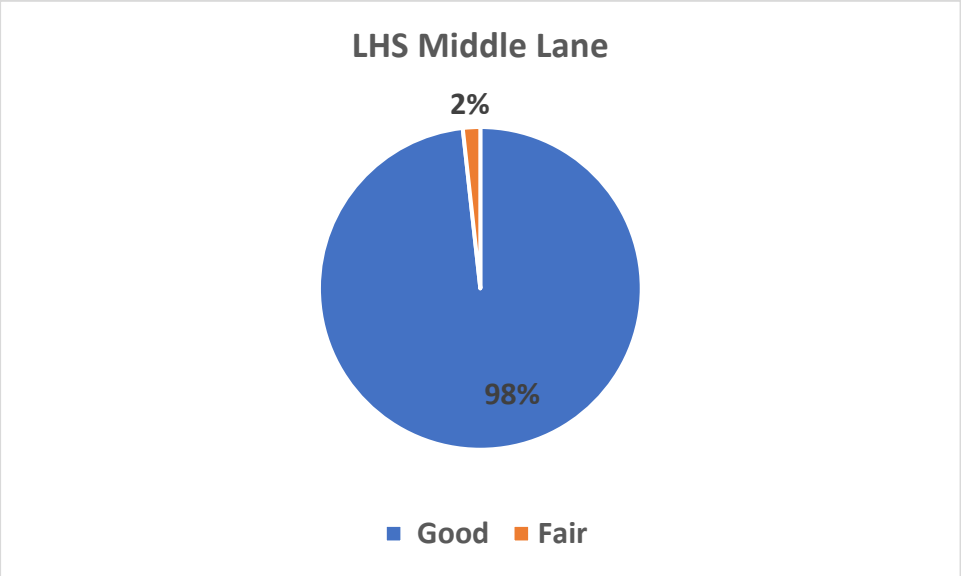
APPENIDX E
Pie Charts

Appendix E: - Pie Charts

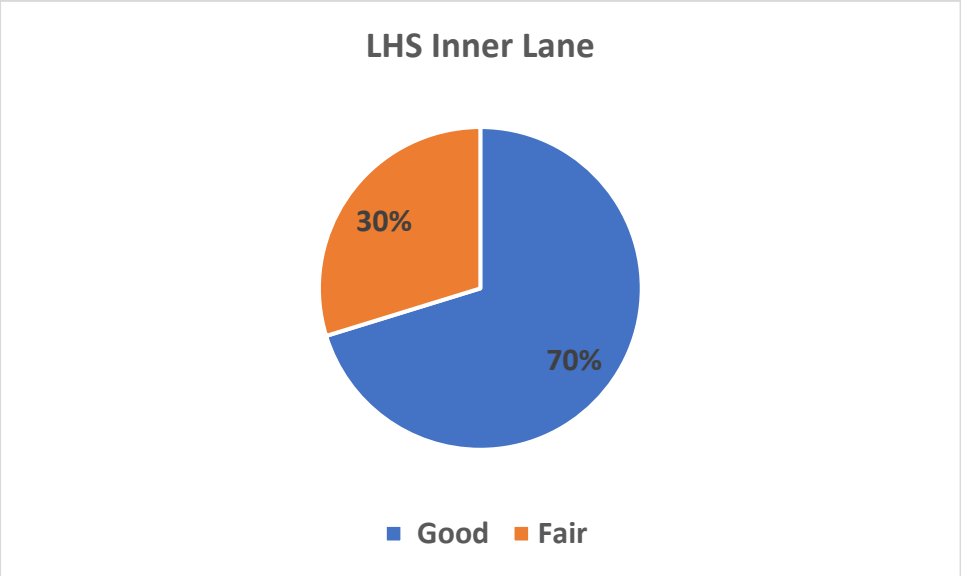


Appendix E: - Pie Charts





Appendix E: - Pie Charts



APPENIDX F
Rep photos MCW

APPENIDX F Rep photos MCW

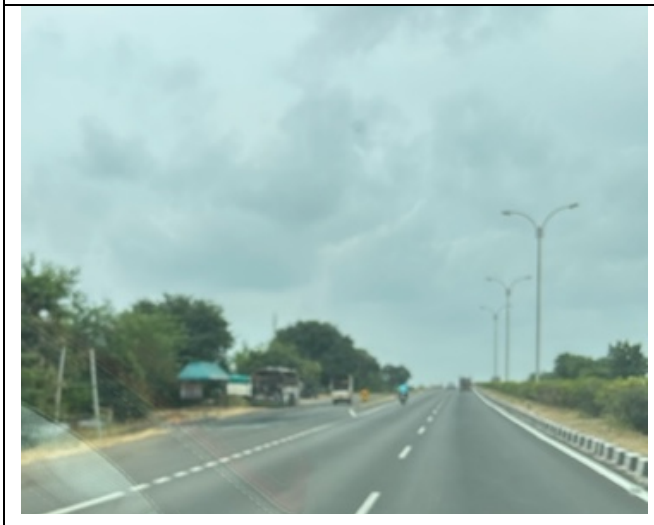
MCW Condition Photographs

Photo	Comments
	Cracking and rutting in MCW RHS
	Cracking and rutting in MCW LHS
	Cracking and rutting in MCW RHS

APPENIDX F Rep photos MCW

	Cracking and rutting in MCW RHS
	Cracking and rutting in MCW LHS
	Cracking and rutting in MCW LHS

APPENIDX F Rep photos MCW

	Cracking and rutting in MCW RHS
	Cracking and rutting in MCW RHS
	Rutting in MCW LHS

APPENIDX F Rep photos MCW

	Cracking and rutting in MCW RHS
	Cracking and rutting in MCW RHS

APPENIDX G
Rep Photos Service Road

Appendix G - Rep Photos Service Road

Photo	Comments
	Potholes
	Potholes
	Cracking and Potholes

Appendix G - Rep Photos Service Road

	Potholes
	Potholes

APPENIDX H
Road Signage

APPENIDX H - Road Signage

Village Road

S No	Chainage	Location	Qty
1	152.050	RHS Shoulder	1
2	152.050	RHS Shoulder	1
3	152.100	RHS Shoulder	1
4	152.100	RHS Shoulder	1
5	163.000	RHS	1
6	165.000	RHS Shoulder	1
7	165.000	RHS Shoulder	1
8	166.760	LHS Shoulder	1
9	166.850	RHS Shoulder	1
10	176.700	LHS Shoulder	1
11	184.860	RHS Shoulder	1
12	184.860	RHS Shoulder	1
13	195.500	RHS Shoulder	1
14	196.090	LHS Shoulder	1
15	200.010	LHS Median	1
16	200.050	MCW	1
17	200.200	MCW	1
18	202.150	MCW	1
19	202.550	MCW	1
20	204.700	MCW	1
21	204.750	MCW	1
22	206.030	MCW	1
23	210.570	MCW	1
24	210.570	MCW	1
25	211.130	MCW	1
26	211.130	MCW	1
27	219.250	MCW	1
28	219.400	MCW	1
29	223.200	MCW	1
30	228.600	MCW	1
31	228.600	MCW	1
32	228.850	MCW	1
33	246.050	MCW	1

APPENIDX H - Road Signage

Junction Board

S No	Chainage	Location	Qty	Remarks
1	200.300	MCW	1	Staggered
2	202.250	MCW	1	Staggered
3	206.260	MCW	1	T Jn'
4	215.800	MCW	1	T Jn'
5	228.850	MCW	1	T Jn'
6	245.050	MCW	1	T Jn'

Stop Board

S No	Chainage	Location	Qty
1	163.000	RHS	1
2	191.450	LHS	1
3	191.900	LHS	1
4	195.300	RHS	1
5	197.030	RHS	1
6	200.050	MCW	1
7	200.090	RHS	1
8	200.160	LHS	1
9	200.200	MCW	1
10	202.150	MCW	1
11	202.550	MCW	1
12	204.700	MCW	1
13	204.750	MCW	1
14	210.570	MCW	1
15	210.570	MCW	1
16	211.130	MCW	1
17	211.130	MCW	1
18	219.400	MCW	1
19	223.200	MCW	1
20	228.600	MCW	1
21	228.850	MCW	1
22	230.400	RHS	1
23	231.080	RHS	1
24	231.100	LHS	1

APPENIDX H - Road Signage

Red Cluster

S No	Chainage	Location	Qty
1	160.575	RHS Median	1
2	160.600	LHS Median	1
3	167.835	RHS Median	1
4	202.540	MCW	1
5	204.680	MCW	1
6	204.710	MCW	1
7	205.350	MCW	1
8	205.370	MCW	1
9	206.020	MCW	1
10	206.040	MCW	1
11	210.560	MCW	1
12	210.580	MCW	1
13	211.130	MCW	1
14	211.150	MCW	1
15	213.600	MCW	1
16	213.630	MCW	1
17	219.380	MCW	1
18	219.400	MCW	1
19	223.110	MCW	1
20	226.650	MCW	1
21	230.380	MCW	1

Left Turn Board

S No	Chainage	Location	Qty
1	151.385	RHS Shoulder	1
2	157.670	Median	1
3	158.950	LHS Shoulder	1
4	164.550	LHS Shoulder	1
5	170.300	LHS Shoulder	1
6	171.170	RHS shoulder	1
7	192.100	LHS Shoulder	1
8	192.750	RHS Shoulder	1

APPENIDX H - Road Signage

Right Hand Curve (Available on Site)

S No	Chainage	Location	Qty
1	201.800	MCW	1
2	204.300	MCW	1
3	207.420	MCW	1
4	208.200	MCW	1
5	209.400	MCW	1
6	212.150	MCW	1
7	212.400	MCW	1
8	222.950	MCW	1
9	223.000	MCW	1
10	224.400	MCW	1

Left Hand Curve (Available on Site)

S No	Chainage	Location	Qty	Status
1	203.800	MCW	1	Ok
2	206.950	MCW	1	Ok
3	208.400	MCW	1	Ok
4	212.400	MCW	1	Ok
5	222.850	MCW	1	Ok
6	223.120	MCW	1	Ok
7	223.900	MCW	1	Ok
8	224.000	MCW	1	Ok

APPENIDX H - Road Signage

Toll Plaza

S No	Chainage	Location	Qty	Board	Status
398	178.400	LHS Shoulder	1	1000m toll gate board	Ok
411	178.400	LHS	1	Toll Gate	Ok
413	178.800	LHS	1	Toll Gate	Ok
414	178.850	LHS	1	Toll Rate Board	Ok
401	178.900	LHS Shoulder	1	500m toll gate board	Ok
415	178.950	LHS	1	Toll Rate Board	Ok
417	179.100	LHS	1	Toll Information Board	Ok
409	179.750	RHS	1	Toll Rate	Ok
408	179.800	RHS	1	Toll Rate	Ok
402	179.900	RHS	1	Toll Gate	Ok
651	179.920	RHS Shoulder	1	500m toll gate board	Ok
650	180.350	RHS Shoulder	1	1000m toll gate board	Ok
843	229.180	LHS	1	Toll Gate 1000mtr	Ok
842	229.680	RHS	1	Toll Gate 500mtr	Ok
858	229.900	MCW	1	Toll Gate 200mtr	Ok
1024	230.150	MCW	2	Toll Rate Board (On Toll Booth)	Ok
1018	230.300	MCW	1	Toll Booth Ahead	Ok
1020	230.400	MCW	1	Toll Exempted Vehicles (English)	Ok
1021	230.450	MCW	1	Toll Exempted Vehicles (Hindi)	Ok
1022	230.530	MCW	1	Toll Rate Board (English)	Ok
1023	230.580	MCW	1	Toll Rate Board (Hindi)	Ok
1012	230.650	MCW	1	Toll Gate 500 Meter	Ok
1008	231.200	MCW	1	Toll Gate 1000 Meter	Ok

APPENIDX H - Road Signage

Left Hand Curve

S No	Chainage	Location	Qty	Remarks
1	161.250	RHS	1	End
2	162.070	LHS	1	End
3	161.700	LHS Shoulder	1	Start
4	163.280	LHS service road	1	Start
5	179.900	LHS Shoulder	1	End
6	179.900	RHS Shoulder	1	End
7	179.850	Median	1	End
8	179.870	RHS	1	Start
9	179.900	RHS	1	End
10	179.900	RHS	1	End
11	190.400	LHS Shoulder	1	Start
12	191.300	LHS service road	1	End
13	179.830	RHS Shoulder	1	Start
14	220.850	MCW	1	Start
15	225.000	MCW	1	End
16	225.380	MCW	1	End
17	225.430	MCW	1	Start
18	226.700	MCW	1	Start
19	246.000	MCW	1	Start
20	215.650	Service Road	1	Start
21	246.200	RHS	1	End

APPENIDX H - Road Signage

Informatory Boards

S No	Chainage	Location	Qty	Remarks
1	150.950	RHS Median	1	Bheema River
2	151.270	LHS Median	1	Bheema River
3	153.740	RHS Shoulder	1	Left side village board
4	153.975	LHS Shoulder	1	Left side village board
5	163.000	RHS	1	information board
6	167.150	LHS Shoulder	1	electric cable
7	170.700	RHS Shoulder	1	Electric cable
8	170.775	LHS Shoulder	1	Left side village board
9	172.100	LHS Median	1	stop and left sholder only
10	174.450	RHS shoulder	1	Electric cable
11	176.800	LHS Shoulder	1	Left side village board
12	177.785	RHS shoulder	1	Left side village board
13	178.600	Median	1	Oversized vehicle Extreme left
14	178.670	LHS Median	1	over size vihicle extreme left only
15	179.000	Median	1	Oversized vehicle Extreme left
16	179.250	Median	1	Two wheeler lane
17	179.750	Median	1	Oversized vehicle Extreme left
18	180.100	LHS Median	1	over size vihicle extreme left only
19	198.900	RHS shoulder	1	school board
20	199.270	LHS Median	1	stop on left shoulder only
21	210.700	MCW	1	School Ahead
22	216.230	MCW	1	School Ahead
23	219.550	MCW	1	Mohal Railway Station
24	224.900	MCW	1	Seena River Bridge
25	228.800	MCW	1	Lokmangal Sugar Factory
26	229.450	MCW	1	Oversized Vehicle Extreme Left
27	229.750	MCW	1	Oversized Vehicle Extreme Left
28	230.050	MCW	1	Two Wheeler Lane
29	230.300	MCW	1	Two wheeler lane
30	230.600	MCW	1	Oversized vehicle Extreme left
31	230.900	MCW	1	Oversized vehicle Extreme left
32	231.210	MCW	1	ECB Booth
33	233.220	MCW	1	ECB Booth
34	250.150	MCW	1	ECB Booth
35	251.600	MCW	1	Toll Road Starts

APPENIDX H - Road Signage

Village Name Board

S No	Chainage	Location	Qty
1	153.390	RHS Shoulder	1
2	153.610	RHS Shoulder	1
3	154.025	LHS Shoulder	1
4	154.200	RHS Shoulder	1
5	159.500	LHS Shoulder	1
6	160.490	LHS Shoulder	1
7	160.600	RHS Shoulder	1
8	160.620	RHS Shoulder	1
9	163.070	LHS Shoulder	1
10	166.750	LHS Shoulder	1
11	170.800	LHS Shoulder	1
12	173.130	LHS Shoulder	1
13	174.360	LHS Shoulder	1
14	176.750	LHS Shoulder	1
15	177.750	RHS Shoulder	1
16	183.720	LHS Shoulder	1
17	184.700	RHS Shoulder	1
18	187.275	LHS Shoulder	1
19	187.650	LHS Shoulder	1
20	187.650	LHS Shoulder	1
21	187.800	LHS Shoulder	1
22	189.370	LHS Median	1
23	190.450	RHS Shoulder	1
24	191.420	LHS Median	1
25	195.470	RHS Shoulder	1
26	196.990	LHS Shoulder	1
27	197.100	RHS Shoulder	1
28	197.200	RHS Shoulder	1
29	200.110	MCW	1
30	200.145	LHS Shoulder	1
31	200.200	MCW	1
32	200.230	MCW	1
33	202.200	MCW	1
34	202.450	MCW	1
35	202.600	MCW	1
36	204.530	MCW	1
37	204.800	MCW	1
38	206.100	MCW	1
39	206.300	MCW	1
40	211.030	MCW	1
41	211.200	MCW	1
42	215.400	MCW	1
43	219.900	MCW	1

APPENIDX H - Road Signage

Village Name Board

S No	Chainage	Location	Qty
44	221.180	MCW	1
45	221.480	MCW	1
46	223.200	MCW	1
47	224.830	MCW	1
48	225.600	MCW	1
49	225.800	MCW	1
50	228.550	MCW	1
51	228.650	MCW	1
52	228.850	MCW	1
53	230.820	MCW	1
54	231.300	MCW	1
55	231.350	MCW	1
56	231.980	MCW	1
57	238.200	MCW	1
58	239.250	MCW	1
59	241.900	MCW	1

Cautionary Sign Boards

S No	Chainage	Location	Qty	Remarks
1	150.975	RHS Median	1	Narrow Bridge board
2	151.620	RHS Shoulder	1	Narrow Bridge board
3	152.250	LHS Median	1	Narrow Bridge board
4	152.450	RHS Median	1	Narrow Bridge board
5	152.900	RHS Median	1	Do not drink and drive
6	157.300	RHS Median	1	While driving do not use mobile phone
7	157.300	LHS Median	1	While driving do not use mobile phone
8	159.600	LHS Median	1	While driving do not use mobile phone
9	161.830	LHS Median	1	400m Diversion ahead
10	162.050	LHS Median	1	200m Diversion ahead
11	162.100	LHS Median	1	Work in progress
12	168.775	RHS Median	1	Fasten your sheet belt
13	177.550	LHS service road	1	not u turn
14	178.995	RHS Median	1	stop over size vehicle only shoulder
15	179.880	RHS Shoulder	1	No entry
16	182.700	LHS Median	1	Do not drink and drive
17	184.320	LHS service road	1	not u turn
18	186.830	RHS Shoulder	1	Narrow Bridge board
19	187.180	RHS Shoulder	1	No entry
20	187.225	LHS Median	1	Do not use mobile phone
21	187.590	RHS Shoulder	1	U turn
22	187.750	RHS Shoulder	1	U turn
23	191.090	Service Road Median	1	speed limit
24	204.800	MCW	1	Major Road Ahed

APPENIDX H - Road Signage

Cautionary Sign Boards

S No	Chainage	Location	Qty	Remarks
25	207.700	MCW	1	Always Overtake from Right
26	213.300	MCW	1	Do Not Drink & Drive
27	216.040	MCW	1	U Turn Prohibited
28	219.750	MCW	1	Don't Stop Board
29	220.950	MCW	1	U Turn Prohibited
30	224.900	MCW	1	U Turn Prohibited
31	225.400	MCW	1	U Turn Prohibited
32	226.600	Service Road	1	U Turn Prohibited
33	227.100	MCW	1	Fasten Your Seat Belt
34	231.470	MCW	1	Narrow Bridge Ahed
35	232.100	MCW	1	Always Overtake from Right
36	235.080	MCW	1	U Turn Prohibited
37	237.350	MCW	1	Keep safe Distance
38	238.800	MCW	1	Speed limit
39	240.250	MCW	1	No Parking
40	240.300	MCW	1	No Parking
41	242.550	MCW	1	Do Not Drink & Drive
42	246.990	MCW	1	Narrow Bridge Ahed
43	247.940	MCW	1	Speed limit
44	250.450	MCW	1	Speed limit
45	251.010	MCW	1	Speed limit
46	251.450	MCW	1	Speed limit
47	251.700	MCW	1	Speed limit

Cross Road Board **APPENIDX H - Road Signage**

S No	Chainage	Location	Qty
1	151.900	RHS Shoulder	1
2	152.420	LHS Shoulder	1
3	152.550	RHS Shoulder	1
4	154.150	RHS Shoulder	1
5	156.400	LHS Shoulder	1
6	156.410	LHS Shoulder	1
7	156.500	LHS Shoulder	1
8	156.625	RHS Shoulder	1
9	156.800	RHS Shoulder	1
10	159.350	LHS Shoulder	1
11	159.550	RHS Shoulder	1
12	159.650	RHS Shoulder	1
13	160.450	LHS Shoulder	1
14	160.500	LHS Shoulder	1
15	160.650	RHS Shoulder	1
16	163.020	LHS Shoulder	1
17	163.090	RHS Shoulder	1
18	163.100	RHS Shoulder	1
19	164.900	LHS Shoulder	1
20	166.790	LHS Shoulder	1
21	166.870	RHS Shoulder	1
22	167.800	LHS Shoulder	1
23	169.720	RHS Shoulder	1
24	173.135	LHS Shoulder	1
25	174.390	LHS Shoulder	1
26	174.550	RHS Shoulder	1
27	176.730	LHS Shoulder	1
28	181.650	LHS Shoulder	1
29	181.900	RHS Shoulder	1
30	185.020	LHS Shoulder	1
31	185.170	RHS Shoulder	1
32	185.180	RHS Shoulder	1
33	189.550	LHS Shoulder	1
34	189.650	RHS Shoulder	1
35	191.050	RHS Shoulder	1
36	193.260	LHS Shoulder	1
37	193.470	RHS Shoulder	1
38	195.300	LHS Shoulder	1
39	195.350	RHS Shoulder	1
40	197.070	RHS Shoulder	1
41	200.140	LHS Shoulder	1
42	210.680	MCW	1
43	211.000	MCW	1
44	211.300	MCW	1

APPENIDX H - Road Signage

Cross Road Board

S No	Chainage	Location	Qty
45	228.900	MCW	1
46	230.800	MCW	1
47	231.350	MCW	1

Speed Breaker

S No	Chainage	Location	Qty
1	160.460	LHS Shoulder	1
2	160.750	RHS Shoulder	1
3	162.750	RHS Shoulder	1
4	163.000	RHS	1
5	176.880	LHS service road	1
6	177.250	LHS service road	1
7	184.100	LHS service road	1
8	184.300	Service road median	1
9	191.080	RHS service road	1
10	191.400	LHS service road	1
11	191.870	LHS service road	1
12	206.030	MCW	1
13	215.830	MCW	1
14	216.450	Service Road	1
15	222.250	MCW	1
16	230.400	MCW	1
17	231.100	MCW	1

APPENIDX H - Road Signage

Pedestrian Crossing

S No	Chainage	Location	Qty
1	200.100	MCW	1
2	200.260	MCW	1
3	202.500	MCW	1
4	202.600	MCW	1
5	204.540	MCW	1
6	204.780	MCW	1
7	205.300	MCW	1
8	205.350	MCW	1
9	206.150	MCW	1
10	206.280	MCW	1
11	210.520	MCW	1
12	211.080	MCW	1
13	211.150	MCW	1
14	219.360	MCW	1
15	219.450	MCW	1
16	223.100	MCW	1
17	223.160	MCW	1
18	228.500	MCW	1
19	228.700	MCW	1
20	231.030	MCW	1
21	250.000	MCW	1

NH-65 Board

S No	Chainage	Location	Qty
1	166.000	LHS Shoulder	1
2	170.750	RHS Shoulder	1
3	175.800	LHS Shoulder	1
4	180.900	RHS Shoulder	1
5	180.950	RHS Shoulder	1
6	186.830	LHS Shoulder	1
7	190.550	RHS Shoulder	1
8	196.220	LHS Shoulder	1
9	200.700	MCW	1
10	206.850	MCW	1
11	211.000	MCW	1
12	220.580	MCW	1
13	235.200	MCW	1
14	240.750	MCW	1
15	251.400	MCW	1

APPENIDX H - Road Signage

Merging Road

S No	Chainage	Location	Qty
1	216.020	MCW	1
2	221.000	MCW	1
3	224.950	MCW	1
4	225.350	MCW	1
5	226.030	MCW	1
6	226.590	MCW	1
7	236.000	MCW	1
8	242.580	MCW	1
9	242.800	MCW	1
10	246.190	MCW	1

Location Board

S No	Chainage	Location	Qty
1	158.200	LHS Shoulder	1
2	159.400	RHS Shoulder	1
3	161.020	LHS Shoulder	1
4	161.400	LHS Median	1
5	161.500	RHS Median	1
6	161.975	RHS Shoulder	1
7	163.000	LHS Shoulder	1
8	163.090	LHS Median	1
9	164.050	RHS Median	1
10	164.650	LHS Shoulder	1
11	167.590	LHS median	1
12	167.590	LHS Median	1
13	167.900	LHS median	1
14	167.995	LHS Median	1
15	168.870	RHS Median	1
16	169.100	LHS Shoulder	1
17	176.770	LHS Shoulder	1
18	189.500	LHS Median	1
19	190.000	LHS Median	1
20	190.130	LHS Shoulder	1
21	190.500	LHS Shoulder	1
22	191.100	Service road median	1
23	191.490	LHS Median	1
24	192.120	RHS Median	1

APPENIDX H - Road Signage

Median Opening

S No	Chainage	Location	Qty

1	151.750	Median	1
2	151.930	Median	1
3	153.950	Median	1
4	154.250	Median	1
5	156.450	Median	1
6	156.790	Median	1
7	159.300	RHS	1
8	159.350	LHS	1
9	159.670	RHS	1
10	160.450	Median	1
11	160.690	Median	1
12	162.750	RHS Median	1
13	162.900	LHS Median	1
14	163.150	RHS	1
15	164.700	LHS	1
16	166.720	Median	1
17	166.980	RHS Median	1
18	169.800	Median	1
19	170.700	Median	1
20	171.050	Median	1
21	173.050	Median	1
22	173.090	Median	1
23	174.250	Median	1
24	174.670	Median	1
25	181.435	Median	1
26	181.970	Median	1
27	184.930	Median	1
28	185.200	Median	1
29	187.400	Median	1
30	187.700	Median	1
31	189.470	Median	1
32	189.800	Median	1
33	193.250	Median	1
34	193.410	Median	1
35	195.200	Median	1
36	195.450	Median	1
37	196.100	Median	1
38	197.200	Median	1
39	200.030	MCW	1
40	200.060	Median	1
41	200.340	MCW	1
42	202.650	MCW	1

APPENIDX H - Road Signage

Median Opening

S No	Chainage	Location	Qty

43	204.520	MCW	1
44	204.830	MCW	1
45	205.250	MCW	1
46	205.400	MCW	1
47	206.050	MCW	1
48	206.380	MCW	1
49	210.480	MCW	1
50	210.680	MCW	1
51	211.000	MCW	1
52	211.300	MCW	1
53	213.500	MCW	1
54	213.650	MCW	1
55	219.300	MCW	1
56	219.500	MCW	1
57	223.000	MCW	1
58	223.200	MCW	1
59	228.500	MCW	1
60	228.790	MCW	1
61	230.550	MCW	1
62	231.990	MCW	1

Keep Left

S No	Chainage	Location	Qty
1	150.050	RHS Median	1
2	151.810	RHS Median	1
3	151.850	LHS Median	1
4	152.560	RHS Median	1
5	154.075	RHS Median	1
6	154.100	LHS Median	1
7	156.570	RHS Median	1
8	157.820	RHS Median	1
9	157.850	LHS Median	1
10	159.075	RHS Median	1
11	159.100	LHS Median	1
12	159.525	RHS Median	1
13	159.550	LHS Median	1
14	159.850	LHS Shoulder	1
15	160.575	RHS Median	1
16	160.600	LHS Median	1
17	161.800	RHS Median	1
18	161.825	LHS Median	1

Keep Left

S No	Chainage	Location	Qty
19	163.050	RHS Median	1

20	163.050	LHS Median	1
21	163.700	RHS Median	1
22	164.850	RHS median	1
23	164.875	LHS median	1
24	167.835	RHS Median	1
25	169.675	RHS Median	1
26	169.700	LHS Median	1
27	170.875	RHS Median	1
28	170.900	LHS Median	1
29	173.120	RHS Median	1
30	173.150	LHS Median	1
31	174.420	LHS Median	1
32	174.480	RHS Median	1
33	177.170	RHS Median	1
34	185.090	LHS Median	1
35	185.120	RHS Median	1
36	187.490	LHS Median	1
37	187.525	LHS Median	1
38	189.600	RHS Median	1
39	189.625	LHS Median	1
40	193.320	RHS Median	1
41	193.350	LHS Median	1
42	195.310	RHS Median	1
43	195.335	LHS Median	1
44	196.190	LHS Median	1
45	197.020	RHS Median	1
46	202.540	MCW	1
47	202.560	MCW	1
48	204.680	MCW	1
49	204.710	MCW	1
50	205.350	MCW	1
51	205.370	MCW	1
52	206.020	MCW	1
53	206.040	MCW	1
54	210.560	MCW	1
55	210.580	MCW	1
56	211.150	MCW	1
57	213.600	MCW	1
58	213.630	MCW	1
59	219.380	MCW	1
60	219.400	MCW	1
61	223.110	MCW	1

APPENIDX H - Road Signage

Keep Left

S No	Chainage	Location	Qty

62	223.130	MCW	1
63	228.600	MCW	1
64	228.630	MCW	1
65	230.380	MCW	1
66	231.080	MCW	1

Help Line Number

S No	Chainage	Location	Qty
1	158.050	LHS Shoulder	1
2	164.395	LHS Shoulder	1
3	165.450	RHS Shoulder	1
4	170.250	LHS Shoulder	1
5	175.600	RHS Shoulder	1
6	184.600	RHS Shoulder	1
7	184.600	RHS Shoulder	1
8	189.900	LHS Shoulder	1
9	199.070	LHS Shoulder	1
10	203.800	MCW	1
11	221.800	MCW	1
12	225.750	MCW	1
13	231.550	MCW	1
14	232.110	MCW	1
15	235.450	MCW	1
16	239.600	MCW	1
17	243.400	MCW	1
18	246.650	MCW	1

Go Slow Board

S No	Chainage	Location	Qty
	From		
1	160.430	LHS Median	1
2	163.090	RHS Median	1
3	179.150	Median	1
4	199.195	RHS Shoulder	1
5	205.400	MCW	1
6	230.300	MCW	1
7	231.050	MCW	1

APPENIDX H - Road Signage

Direction Board

S No	Chainage	Location	Qty

1	183.690	LHS Shoulder	1
2	184.935	LHS Shoulder	1
3	216.580	Service Road	1
4	235.020	MCW	1
5	235.100	MCW	1
6	238.010	MCW	1
7	238.190	MCW	1
8	241.280	MCW	1
9	241.400	MCW	3
10	241.750	MCW	1
11	243.600	MCW	1
12	245.800	MCW	1
13	245.980	MCW	1
14	246.000	MCW	1
15	249.250	MCW	1
16	250.250	MCW	1
17	251.400	MCW	1
18	251.470	MCW	1

Destination Board

S No	Chainage	Location	Qty
1	200.700	MCW	1
2	210.630	MCW	1
3	213.980	MCW	1
4	215.000	MCW	1
5	215.800	MCW	1
6	216.100	MCW	1
7	216.250	MCW	1
8	218.100	MCW	1
9	234.150	MCW	1
10	241.900	MCW	1
11	244.600	MCW	1
12	244.950	MCW	1
13	246.240	MCW	1
14	247.860	MCW	1
15	247.900	MCW	1
16	247.990	MCW	1

APPENIDX H - Road Signage

Chevron (Available on Site)

S No	Chainage		Location	Qty
	From	To		
1	239.900	240.200	MCW	5
2	240.200	239.950	MCW	4
3	243.850	244.000	MCW	7
4	246.400	246.540	MCW	3
5	247.210	247.310	MCW	2
6	247.400	247.550	MCW	3
7	247.600	247.550	MCW	5
8	250.680	251.040	MCW	7
9	150.100		LHS Shoulder	1
10	150.150		LHS Shoulder	1
11	150.200		LHS Shoulder	1
12	150.250		LHS Shoulder	1
13	150.300		LHS Shoulder	1
14	150.350		LHS Shoulder	1
15	151.100		RHS Median	1
16	151.100		RHS Median	1
17	151.125		LHS Shoulder	1
18	151.150		RHS Median	1
19	151.150		RHS Median	1
20	151.175		LHS Shoulder	1
21	151.200		RHS Median	1
22	151.200		RHS Median	1
23	151.225		LHS Shoulder	1
24	151.260		RHS Median	1
25	151.275		LHS Shoulder	1
26	151.290		RHS Median	1
27	151.300		RHS Median	1
28	151.325		LHS Shoulder	1
29	151.400		LHS Median	1
30	151.450		RHS Shoulder	1
31	151.480		LHS Median	1
32	151.500		RHS Shoulder	1
33	151.530		LHS Median	1
34	151.550		RHS Shoulder	1
35	158.750		LHS Median	1
36	158.750		RHS Shoulder	1
37	158.800		LHS Median	1
38	158.800		RHS Shoulder	1
39	158.850		RHS Shoulder	1
40	158.860		LHS Median	1
41	158.900		RHS Shoulder	1

APPENIDX H - Road Signage

Chevron (Available on Site)

S No	Chainage		Location	Qty
	From	To		
42	158.910		LHS Median	1
43	158.950		RHS Shoulder	1
44	158.960		LHS Median	1
45	159.005		LHS Median	1
46	159.010		RHS Shoulder	1
47	159.055		LHS Median	1
48	159.060		RHS Shoulder	1
49	159.105		LHS Median	1
50	159.110		RHS Shoulder	1
51	159.155		LHS Median	1
52	159.900		LHS Shoulder	1
53	159.935		LHS Shoulder	1
54	159.990		LHS Shoulder	1
55	160.000		RHS Median	1
56	160.030		LHS Shoulder	1
57	160.040		RHS Median	1
58	160.050		RHS Median	1
59	160.060		LHS Shoulder	1
60	160.085		LHS Shoulder	1
61	160.115		LHS Shoulder	1
62	160.145		LHS Shoulder	1
63	160.150		RHS Median	1
64	160.160		RHS Median	1
65	160.175		LHS Shoulder	1
66	160.200		RHS Median	1
67	160.220		LHS Shoulder	1
68	160.280		RHS Median	1
69	160.350		LHS Shoulder	1
70	160.405		LHS Shoulder	1
71	161.205		LHS Shoulder	1
72	162.000		LHS Shoulder	1
73	162.310		RHS Median	1
74	162.350		RHS Median	1
75	162.390		RHS Median	1
76	162.410		RHS Median	1
77	162.450		RHS Median	1
78	164.750		RHS Median	1
79	164.900		LHS	1
80	165.060		LHS Median	1
81	165.070		RHS Shoulder	1
82	165.100		RHS Shoulder	1

APPENIDX H - Road Signage

Chevron (Available on Site)

S No	Chainage		Location	Qty
	From	To		
83	165.100		LHS Median	1
84	165.125		RHS Shoulder	1
85	165.155		RHS Shoulder	1
86	165.165		LHS Median	1
87	165.185		RHS Shoulder	1
88	165.185		LHS Median	1
89	165.200		LHS Median	1
90	165.215		RHS Shoulder	1
91	165.215		LHS Median	1
92	170.375		LHS Median	1
93	170.425		LHS Median	1
94	170.475		LHS Median	1
95	170.500		RHS Shoulder	1
96	170.525		LHS Median	1
97	170.550		RHS Median	1
98	170.550		RHS Shoulder	1
99	170.600		RHS Median	1
100	170.600		LHS Shoulder	1
101	170.650		RHS Median	1
102	170.650		LHS Shoulder	1
103	170.700		RHS Median	1
104	170.700		LHS Shoulder	1
105	170.730		LHS Shoulder	1
106	170.750		RHS Median	1
107	170.760		LHS Shoulder	1
108	170.800		RHS Median	1
109	170.800		LHS Shoulder	1
110	170.950		RHS Median	1
111	171.000		RHS Median	1
112	171.000		LHS Shoulder	1
113	171.050		LHS Shoulder	1
114	174.900		LHS Shoulder	1
115	174.900		RHS Median	1
116	174.950		RHS Median	1
117	175.000		RHS Median	1
118	175.090		RHS Median	1
119	175.110		LHS Shoulder	1
120	175.140		RHS Median	1
121	175.150		LHS Shoulder	1
122	175.190		RHS Median	1
123	175.210		LHS Shoulder	1

APPENIDX H - Road Signage

Chevron (Available on Site)

S No	Chainage		Location	Qty
	From	To		
124	175.250		RHS Median	1
125	175.260		LHS Shoulder	1
126	175.300		rhs shoulder	1
127	175.500		rhs shoulder	1
128	185.620		LHS Median	1
129	185.630		rhs shoulder	1
130	185.680		RHS shoulder	1
131	185.690		RHS Shoulder	1
132	185.720		RHS Shoulder	1
133	185.730		RHS shoulder	1
134	185.750		RHS Shoulder	1
135	185.790		LHS Median	1
136	185.815		LHS Median	1
137	185.820		LHS Median	1
138	185.900		RHS Median	1
139	185.925		RHS Median	1
140	185.950		RHS Median	1
141	186.015		LHS Median	1
142	186.015		LHS Shoulder	1
143	186.025		LHS Median	1
144	186.030		LHS Median	1
145	186.100		LHS Median	1
146	186.120		LHS Median	1
147	186.120		LHS Shoulder	1
148	186.180		LHS Median	1
149	186.180		LHS Shoulder	1
150	186.220		LHS Median	1
151	186.240		RHS Shoulder	1
152	186.245		LHS Median	1
153	186.250		LHS Median	1
154	186.280		RHS Shoulder	1
155	186.300		LHS Median	1
156	186.320		RHS Shoulder	1
157	186.330		LHS Median	1
158	186.350		RHS Shoulder	1
159	186.360		LHS Median	1
160	186.400		LHS Median	1
161	186.450		RHS Shoulder	1
162	186.550		RHS Shoulder	1
163	186.600		LHS Median	1
164	186.650		LHS Median	1

APPENIDX H - Road Signage

Chevron (Available on Site)

S No	Chainage		Location	Qty
	From	To		
165	186.700		LHS Median	1
166	186.710		LHS Shoulder	1
167	191.600		LHS Shoulder	1
168	191.655		LHS Shoulder	1
169	192.110		RHS Shoulder	1
170	192.140		RHS Shoulder	1
171	192.145		LHS Median	1
172	192.220		LHS Median	1
173	192.230		RHS Shoulder	1
174	192.300		LHS Median	1
175	192.300		RHS Shoulder	1
176	192.370		RHS Shoulder	1
177	192.375		LHS Median	1
178	192.420		LHS Median	1
179	192.470		LHS Median	1
180	192.520		LHS Median	1
181	192.550		RHS Shoulder	1
182	192.600		LHS Median	1
183	192.625		LHS Median	1
184	192.650		RHS Shoulder	1
185	192.700		RHS Shoulder	1

Bus Stop Board

S No	Chainage	Location	Qty
1	151.650	LHS Shoulder	1
2	163.990	RHS Shoulder	1
3	174.470	LHS Shoulder	1
4	176.550	LHS Shoulder	1
5	177.600	LHS service road	1
6	187.320	LHS Shoulder	1
7	190.100	LHS Shoulder	1
8	191.805	LHS Shoulder	1
9	195.450	RHS Shoulder	1
10	196.110	LHS Shoulder	1
11	200.280	MCW	1
12	202.180	MCW	1
13	206.430	MCW	1
14	211.100	MCW	1

15	219.550	MCW	1
16	220.800	MCW	1
17	231.070	MCW	1
18	237.780	MCW	1
19	245.060	MCW	1

APPENIDX H - Road Signage

Accident Prone Zone Board

S No	Chainage	Location	Qty
1	151.700	LHS Median	1
2	152.100	RHS Median	1
3	152.580	RHS Median	1
4	152.650	RHS Median	1
5	156.400	LHS Median	1
6	156.850	RHS Median	1
7	158.700	LHS Median	1
8	160.430	LHS Median	1
9	160.700	RHS Median	1
10	162.120	LHS Median	1
11	162.400	LHS Median	1
12	163.090	RHS Median	1
13	164.500	LHS median	1
14	166.700	LHS Median	1
15	166.990	RHS median	1
16	204.500	MCW	1
17	204.850	MCW	1
18	215.850	MCW	1
19	223.000	MCW	1
20	223.250	MCW	1
21	224.850	MCW	1
22	225.430	MCW	1
23	234.300	MCW	1
24	234.800	MCW	1
25	234.800	MCW	1
26	235.350	MCW	1
27	240.500	MCW	1
28	246.960	MCW	1
29	251.580	MCW	1

APPENIDX H - Road Signage

Hazard Marker

S No	Chainage	Location	Qty
1	150.040	RHS Shoulder	1
2	150.410	LHS Shoulder	1
3	150.410	LHS Median	1
4	150.900	RHS Shoulder	1
5	150.900	RHS Median	1
6	151.400	LHS Shoulder	1
7	151.900	LHS Shoulder	1
8	152.290	LHS Median	1
9	152.300	LHS Shoulder	1
10	152.350	LHS Median	1
11	152.350	RHS Median	1
12	152.850	LHS Shoulder	1
13	152.855	RHS Shoulder	1
14	154.775	RHS Shoulder	1
15	156.270	RHS Shoulder	1
16	156.600	LHS Median	1
17	156.750	RHS Shoulder	1
18	156.795	LHS Shoulder	1
19	157.970	LHS Shoulder	1
20	157.990	LHS Shoulder	1
21	158.220	LHS Shoulder	1
22	158.960	LHS Shoulder	1
23	159.075	RHS Shoulder	1
24	159.100	RHS Shoulder	1
25	159.100	RHS Shoulder	1
26	159.825	LHS Shoulder	1
27	159.930	RHS Shoulder	1
28	160.000	RHS Shoulder	1
29	161.195	LHS Shoulder	1
30	161.430	LHS Median	1
31	161.450	RHS Median	1
32	161.700	RHS Shoulder	1
33	161.750	RHS Shoulder	1
34	163.210	LHS Shoulder	1
35	163.300	LHS Shoulder	1

APPENIDX H - Road Signage

Hazard Marker

S No	Chainage	Location	Qty
36	163.450	LHS Median	1
37	163.775	RHS Shoulder	1
38	163.790	RHS Shoulder	1
39	164.000	RHS Shoulder	1
40	164.000	LHS Shoulder	1
41	164.810	RHS Shoulder	1
42	164.820	RHS Shoulder	1
43	165.120	LHS Shoulder	1
44	166.050	RHS Shoulder	1
45	166.050	LHS Shoulder	1
46	166.860	LHS median	1
47	167.100	LHS Shoulder	1
48	167.100	LHS median	1
49	167.150	RHS median	1
50	167.250	RHS Shoulder	1
51	167.640	LHS Shoulder	1
52	167.700	RHS Shoulder	1
53	168.205	RHS Shoulder	1
54	168.430	RHS Shoulder	1
55	168.440	LHS Shoulder	1
56	168.800	LHS Shoulder	1
57	170.100	RHS Shoulder	1
58	170.350	LHS Shoulder	1
59	172.050	LHS Shoulder	1
60	173.250	LHS Shoulder	1
61	173.265	LHS Median	1
62	173.415	RHS Shoulder	1
63	173.500	LHS Shoulder	1
64	173.500	RHS Shoulder	1
65	174.100	LHS Shoulder	1
66	174.150	LHS Median	1
67	174.300	RHS Shoulder	1
68	176.850	RHS Shoulder	1
69	176.870	LHS Shoulder	1
70	177.600	RHS Shoulder	1
71	178.510	LHS Shoulder	1
72	178.550	RHS Shoulder	1
73	178.800	rhs shoulder	1
74	179.400	Median	1
75	180.400	RHS Shoulder	1
76	182.380	RHS Shoulder	1
77	182.600	RHS Shoulder	1
78	183.820	LHS Shoulder	1

APPENIDX H - Road Signage

Hazard Marker

S No	Chainage	Location	Qty
79	183.950	LHS Shoulder	1
80	184.170	LHS Median	1
81	184.450	RHS Shoulder	1
82	184.785	LHS Shoulder	1
83	184.790	RHS Shoulder	1
84	184.790	RHS Shoulder	1
85	185.800	LHS Shoulder	1
86	185.995	RHS Shoulder	1
87	185.995	RHS Shoulder	1
88	186.365	LHS Median	1
89	186.500	RHS Shoulder	1
90	186.630	RHS Shoulder	1
91	187.200	RHS Shoulder	1
92	187.510	LHS Shoulder	1
93	187.750	LHS Shoulder	1
94	187.750	RHS Shoulder	1
95	187.760	LHS Median	1
96	187.800	RHS Shoulder	1
97	188.120	LHS Service Road	1
98	188.170	LHS Shoulder	1
99	188.900	LHS Median	1
100	188.900	LHS Shoulder	1
101	189.850	RHs shoulder	1
102	190.170	LHS Shoulder	1
103	190.630	RHS Shoulder	1
104	190.670	LHS Shoulder	1
105	190.700	LHS Shoulder	1
106	190.950	LHS Median	1
107	191.280	RHS Shoulder	1
108	191.320	RHS Shoulder	1
109	191.650	LHS Shoulder	1
110	191.700	LHS Shoulder	1
111	191.700	LHS Median	1
112	191.700	RHS Shoulder	1
113	191.800	RHS Shoulder	1
114	191.900	RHS Shoulder	1
115	193.570	RHS Shoulder	1
116	193.580	RHS Shoulder	1
117	194.930	RHS Median	1
118	194.955	LHS Median	1
119	195.500	LHS Shoulder	1
120	195.550	RHS Shoulder	1
121	197.050	LHS Median	1

APPENIDX H - Road Signage

Hazard Marker

S No	Chainage	Location	Qty
122	197.395	LHS Shoulder	1
123	197.500	RHs shoulder	1
124	197.850	RHS Median	1
125	197.900	LHS Median	1
126	199.350	RHS Shoulder	1
127	199.350	LHS Shoulder	1
128	199.595	RHS Shoulder	1
129	231.420	MCW	1
130	231.560	MCW	1
131	231.800	MCW	1
132	232.800	MCW	1
133	232.820	MCW	1
134	232.900	MCW	1
135	233.220	MCW	1
136	233.420	MCW	1
137	233.800	MCW	1
138	233.850	MCW	1
139	233.880	MCW	1
140	234.000	MCW	1
141	234.400	MCW	1
142	234.500	MCW	1
143	234.900	MCW	1
144	234.940	MCW	1
145	235.050	MCW	1
146	235.200	MCW	1
147	235.700	MCW	1
148	235.750	MCW	1
149	236.100	MCW	1
150	236.950	MCW	1
151	237.950	MCW	1
152	238.000	MCW	1
153	238.200	MCW	1
154	238.200	MCW	1
155	238.300	MCW	1
156	238.500	MCW	1
157	238.800	MCW	1
158	239.200	MCW	1
159	241.200	MCW	1
160	243.260	MCW	1
161	243.300	MCW	1
162	245.350	MCW	1
163	245.980	MCW	1
164	246.000	MCW	1

APPENIDX H - Road Signage

Hazard Marker

S No	Chainage	Location	Qty
165	246.010	MCW	1
166	246.350	MCW	1
167	246.900	MCW	1
168	247.200	MCW	1
169	247.200	MCW	1
170	247.350	MCW	1
171	247.650	MCW	1
172	247.650	MCW	1
173	247.900	MCW	1
174	247.950	MCW	1
175	248.730	MCW	1
176	249.400	MCW	1
177	249.450	MCW	1
178	249.750	MCW	1
179	249.800	MCW	1
180	249.950	MCW	1
181	250.100	MCW	1
182	250.200	MCW	1
183	250.780	MCW	1
184	251.600	MCW	1
185	251.800	MCW	1

APPENIDX I
Rep Photos VUP

APPENIDX I - Rep Photos VUP

LVUP /VUP

Photo	Remarks
	226.800. Ok
	226.800. Ok
	225.200. Ok

APPENIDX I - Rep Photos VUP

	221.150. Ok
	221.150. Ok
	218.370. Ok

APPENIDX I - Rep Photos VUP

	215.500. Ok
	212.590. Ok
	212.590. Ok

APPENIDX I - Rep Photos VUP

	210.680. Ok

APPENIDX I - Rep Photos VUP

APPENIDX I - Rep Photos VUP

APPENIDX I - Rep Photos VUP

APPENIDX I - Rep Photos VUP

APPENIDX I - Rep Photos VUP

	168.000

APPENIDX I - Rep Photos VUP

	163.600
	161.450

APPENIDX J
Rep Photos MJB

APPENIDX J - Rep Photos MJB

Major Bridges

Photo	Chainage
	150.450

APPENIDX J - Rep Photos MJB

	150.450
	150.450
	150.450

APPENIDX J - Rep Photos MJB

	173.300. Plant growth needs to be cleaned under routine maintenance.
	173.300. Ok
	213.500. Ok

APPENIDX J - Rep Photos MJB

	214.030. Ok
	214.030. Ok
	224.810. Ok

APPENIDX J - Rep Photos MJB

	224.810. Ok
	224.810. Ok
	225.200. Ok

APPENIDX J - Rep Photos MJB

	245.900. Ok
	247.150. Ok

APPENIDX K
Rep Photos MNB

APPENIDX K - Rep Photos MNB

Minor Bridges

Photo	Chainage
	151.850. Being used as Utility Duct
	167.550. Ok
	162.209. Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	152.300. Ok
	159.000. Ok
	187.700. Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	186.400. Plant growth needs to be cleaned under routine maintenance.
	174.150. Plant growth needs to be cleaned under routine maintenance.
	Ok

APPENIDX K - Rep Photos MNB

	Ok
	Ok
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Ok
	Ok
	Ok

APPENIDX K - Rep Photos MNB

	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.
	Ok

APPENIDX K - Rep Photos MNB

	Ok
	Ok
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Ok
	Plant growth needs to be cleaned under routine maintenance.
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	Plant growth needs to be cleaned under routine maintenance.
	Ok
	Plant growth needs to be cleaned under routine maintenance.

APPENIDX K - Rep Photos MNB

	152.278. Plant growth needs to be cleaned under routine maintenance.
	151.700. Plant growth needs to be cleaned under routine maintenance.

APPENIDX L
Rep Photos Culverts

APPENIDX L - Rep Photos Culverts

Box Culverts Photographs

Photo	Remarks
	171.200 - ok
	165.000 - Ok
	172.080 – Parapet needs painting, Cleaning

APPENIDX L - Rep Photos Culverts

	199.600. Ok
	199.070. Waterway needs Cleaning
	197.300. Waterway needs Cleaning
	195.250 Waterway needs Cleaning

APPENIDX L - Rep Photos Culverts

	195.100 Waterway needs Cleaning
	195.100. Waterway needs Cleaning
	195.650. Waterway needs Cleaning
	181.700. Waterway needs Cleaning

APPENIDX L - Rep Photos Culverts

	181.780. Ok
	178.180.Ok
	177.250. Ok
	176.250. Ok

APPENIDX L - Rep Photos Culverts

	181.700. Water pipeline being laid.

APPENIDX M
Photos of Flyover

APPENIDX M - Photos of Flyover

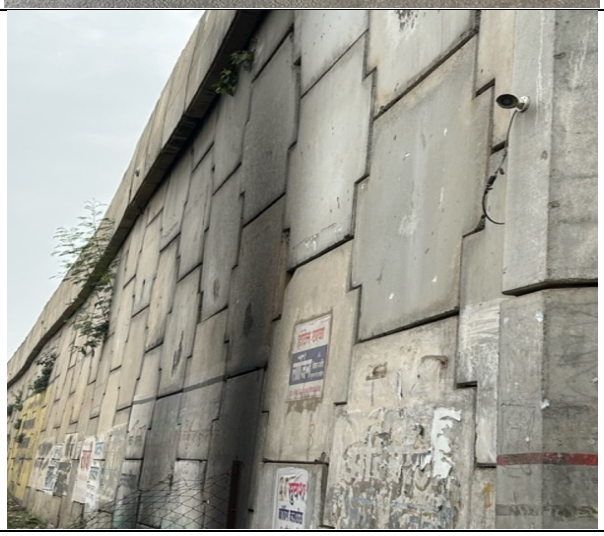
Photo	Remarks
	Ok

APPENIDX M - Photos of Flyover

APPENIDX M - Photos of Flyover

	Plant growth in RE panels to be removed under routine maintenance
	Plant growth in RE panels to be removed under routine maintenance
	Ok

APPENIDX M - Photos of Flyover

	Ok
	Ok
	Ok

APPENIDX M - Photos of Flyover

	Ok
	Ok

APPENIDX N1
Pavement Design Report

Report Provided Separately

APPENIDX N2
PAVEMENT DESIGN IE Approval

Provided Separately

APPENIDX O
Trail Pit Data

APPENIDX O - Trail Pit

Trial Pit Data					
S No	**Chainage**	**Side**	**Depth of the pit (mm)**	**Bituminious layer thickness (mm)**	**Granular layer thickness (mm)**
1	160.200	RHS	800	180	450
2		LHS	800	178	450
3	174.300	RHS	800	175	450
4		LHS	800	170	450
5	190.500	RHS	800	180	450
6		LHS	800	188	450
7	206.400	RHS	800	190	450
8		LHS	800	190	450
9	215.600	RHS	800	180	450
10		LHS	800	175	450
11	235.100	RHS	800	175	450
12		LHS	800	168	450
13	245.200	RHS	800	180	450
14		LHS	800	175	450
				178.86	

APPENIDX P1
Analysis (Option #1 & #3)

Excel Sheet Provided Separately

APPENIDX P2
Analysis (Option #2)

Excel Sheet Provided Separately

APPENIDX P3
Service Road Analysis & Estimation

Excel Sheet Provided Separately

APPENIDX Q1
O&M PSRDCL

Excel Sheet Provided Separately

APPENIDX Q2
O&M ITNL Format

APPENIDX Q2 - O&M ITNL Format

Routine Maintenance (OpEx) - Subhead	Existing Costs in FY 2023-24		Future Projected O&M Costs in Rs Lakhs (Escalated by 5% every year)													
	Period (Months)	Amount (Rs Lakhs)	FY 24-25	FY25-26	FY26-27	FY27-28	FY28-29	FY29-30	FY30-31	FY31-32	FY32-33	FY33-34	FY34-35	FY35-36	Total	NPV @12%
Routine Maintenance	12	168.29	353.41	371.09	389.64	409.12	429.58	451.06	473.61	497.29	522.15	548.26	575.68	302.23	5,491.41	2,510.94
Toll Plaza Operation	12	283.10	594.51	624.24	655.45	688.22	722.63	758.76	796.70	836.54	878.36	922.28	968.39	508.41	9,237.58	4,223.88
Corridor Control/Patrolling /Incident Management Expanses	12	131.44	276.03	289.83	304.32	319.54	335.52	352.29	369.91	388.40	407.82	428.21	449.62	236.05	4,289.01	1,961.14
O&M and Tolling Excluding GST		582.84	1,223.96	1,285.15	1,349.41	1,416.88	1,487.73	1,562.11	1,640.22	1,722.23	1,808.34	1,898.76	1,993.69	1,046.69	19,018.00	8,695.97
O&M and Tolling Including GST		687.75	1,444.27	1,516.48	1,592.31	1,671.92	1,755.52	1,843.29	1,935.46	2,032.23	2,133.84	2,240.53	2,352.56	1,235.09	22,441.24	10,261.24
Insurance Policy Charges including GST	12	53.00	111.30	116.87	122.71	128.84	135.29	142.05	149.15	156.61	164.44	172.66	181.30	95.18	1,729.40	790.76
IE Fee including GST based on the avg paid	6	16.01	33.63	35.31	37.07	38.93	40.87	42.92	45.06	47.32	49.68	52.16	54.77	28.76	522.49	238.91
Electric Cost based on the avg bill	7	116.76	245.20	257.46	270.33	283.85	298.04	312.94	328.59	345.02	362.27	380.39	399.41	209.69	3,809.96	1,742.10
Total Other Cost		185.77	390.13	409.63	430.11	451.62	474.20	497.91	522.81	548.95	576.39	605.21	635.48	333.62	6,061.84	2,771.77
Grand Total Including GST		873.52	1,834.39	1,926.11	2,022.42	2,123.54	2,229.72	2,341.20	2,458.26	2,581.18	2,710.24	2,845.75	2,988.03	1,568.72	28,503.09	13,033.01

APPENIDX R
Overall O&M Costs including MMR

APPENIDX R - Overall O&M Costs incl MMR

ITNL PSRDCL PUNE SHOLAPUR HIGHWAY

TOTAL O&M COSTS INCLUDING MAJOR MAINTENANCE COSTS

(Rs. Crs.)

Sl. No	Description	Escalation Rate	FY-22 TO FY-36													Total (FY25-FY37)	NPV (FY25-FY37) @12%
			FY24*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36*		
1	SPV Cost	5%	0.46	0.97	1.02	1.07	1.13	1.18	1.24	1.31	1.37	1.44	1.51	1.59	0.83	15.13	6.92
2	Tolling Costs	5%	3.19	6.69	7.03	7.38	7.75	8.13	8.54	8.97	9.41	9.89	10.38	10.90	5.72	103.96	47.54
3	IE & Other Professional Fees	5%	0.16	0.34	0.35	0.37	0.39	0.41	0.43	0.45	0.47	0.50	0.52	0.55	0.29	5.22	2.39
4	Insurance	5%	0.53	1.11	1.17	1.23	1.29	1.35	1.42	1.49	1.57	1.64	1.73	1.81	0.95	17.29	7.91
5	Maint. Establishment	5%	0.51	1.07	1.12	1.18	1.24	1.30	1.37	1.43	1.51	1.58	1.66	1.74	0.92	16.63	7.61
6	Operating Expenses	5%	1.40	2.93	3.08	3.23	3.39	3.56	3.74	3.93	4.13	4.33	4.55	4.78	2.51	45.57	20.84
7	Routine Maintenance	5%	1.32	2.78	2.91	3.06	3.21	3.37	3.54	3.72	3.90	4.10	4.31	4.52	2.37	43.12	19.72
8	Power Charges & Electrical Maintenance	5%	1.17	2.45	2.57	2.70	2.84	2.98	3.13	3.29	3.45	3.62	3.80	3.99	2.10	38.10	17.42
	TOTAL O&M COSTS (Excl Major Maintenance)		**8.74**	**18.34**	**19.26**	**20.22**	**21.24**	**22.30**	**23.41**	**24.58**	**25.81**	**27.10**	**28.46**	**29.88**	**15.69**	**285.03**	**130.33**
9	Major Maintenance Main Carriageway	5%	0.00	27.34	48.55	0.00	0.00	33.58	64.22	0.00	75.56	0.00	0.00	112.01	53.52	414.78	170.68
10	Major Maintenance Service Road	5%	12.06	12.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.87	21.87	67.85	31.01
	GRAND TOTAL O&M COSTS (INCL. MAJOR MAINTENANCE & O&M)		**20.80**	**57.74**	**67.81**	**20.22**	**21.24**	**55.87**	**87.63**	**24.58**	**101.38**	**27.10**	**28.46**	**163.76**	**91.07**	**746.87**	**351.06**

Note: Above Costs are including GST

* 50% of the total Cost for FY2023-24 &235-36 has been considered and added in the Total & NPV

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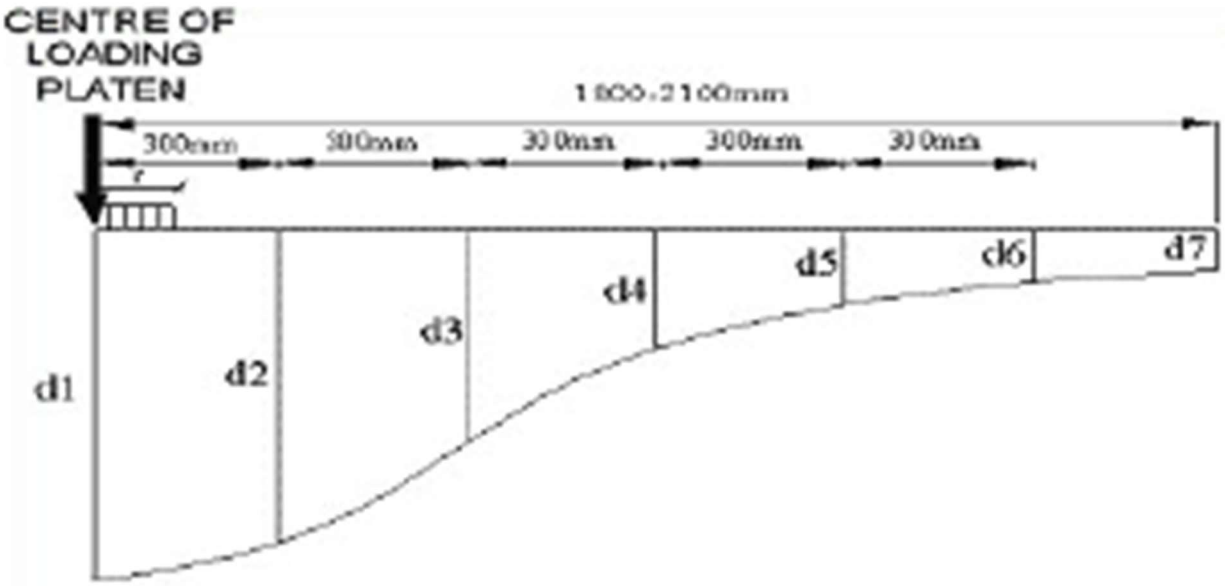
Operation and Maintenance of 4/6 laning of Pune-Sholapur section of NH-65 from Km.150.000 to Km.252.000 in the state of Maharashtra under NHDP Phase III on DBFOT basis.

FWD Report



By

M/s LSI Engineering & Consultants Limited

(May-2023)

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1: Basic Data
2. Back Calculation
3. Delineation Calculation
4. Calibration Certificate
5. Site Photographs

ABBREVIATIONS

BT	Bituminous
CBR	California Bearing Ratio
DBM	Dense Bituminous Macadam
GSB	Granular Sub-base
IRC	Indian Roads Congress
LHS	Left Hand Side
M_R	Resilient Modulus
msa	Million Standard Axles
RHS	Right Hand Side
WMM	Wet Mix Macadam

1. INTRODUCTION

As part of "Operation and Maintenance of 4/6 laning of Pune-Sholapur section of NH-65 from Km.150.000 to Km.252.000 in the state of Maharashtra under NHDP Phase III on DBFOT basis.". The **M/s LSI Engineering & Consultants Limited** is required to assess remaining life and overlay on "Existing Flexible Pavement".

In pursuance of the above, the project was evaluated using Non-Destructive Equipment – Falling Weight Deflectometer.

2. SCOPE OF WORK

The scope involves the following:

Perform the FWD test on Existing Flexible Pavement.
Estimation of Existing Remaining Life
Overlay Design

3. TEST SECTIONS

The following sections were preliminary identified for FWD Testing:

Table 3-1: FWD Test Section

Sl. No	Start Chainage (Km)	End Chainage (Km)	Side	Dates of Testing
1	150+000	252+000	Both	26-04-2023 to 04-05-2023

4. FALLING WEIGHT DEFLECTOMETER

The FWD tests have been carried out in accordance with the IRC: 115-2014"Guidelines for structural evaluation and strengthening of flexible road pavements using Falling Weight Deflectometer (FWD) technique".

4.1. General Information of Pavement Deflection Characteristics

Falling Weight Deflectometer (FWD) is an impulse-loading device in which a transient load is applied to the pavement and the deflected shape of the pavement surface is measured. The working principle of a typical FWD is illustrated in Fig.4-1.

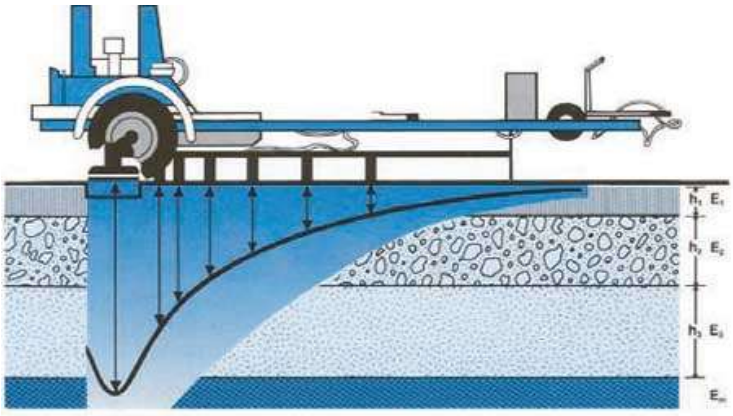


Figure 4-1: Falling weight Deflectometer

Impulse load is applied by means of a falling mass, which is allowed to drop vertically on a system of springs placed over a circular loading plate. The deflected shape of the pavement surface is measured using displacement sensors which are placed at different radial distances starting with the center of the load plate.

4.2. Principle Used

A falling mass in the range of 200 kg is dropped from a height of fall in the range of 100 to 600 mm to produce load pulses of desired peak load. The corresponding peak vertical surface deflections at different radial locations are measured and recorded. The target peak load can be decreased suitably if the peak maximum (central) deflection measured exceeds the measuring capacity of the deflection transducer.
Sufficient number of deflection transducers shall be used to adequately capture the shape of deflection bowl. Six to nine velocity transducers (geophones) are generally adequate.

Peak load of 40 kN (+/- 4 kN) and pulse duration of 20-30 ms is required for flexible pavement. The target peak load of 40 kN (+/- 4 kN) applied on bituminous pavements corresponds to the load on dual wheel set of 80 kN standard axle load and duration of 20-30 ms, which simulates traffic moving at a speed of 60 kmph. If the applied peak load differs from 40 kN within the above-mentioned range, the measured deflections have to be normalized linearly during the analysis to correspond to the standard target load of 40 kN.

4.2.1. Equipment Configuration

Make: Geotran, Roorkee, UK, India
Model: VMFWD
Month & Year of Manufacturing: Feb, 2020
Load Cell Max. Impact: 100 kN
Load Cell Accuracy: 0.1 kN
No. of Geophones to Capture Deflection Bowl: 7 No's
Geophone Arrangement Starting from Center of Loading Pad: 0, 300, 600, 900, 1200, 1500 and 1800 mm
Geophone Accuracy: 0.1 micrometer
Geophone Max. Limit: 4 millimeter
Air and Surface Temp. Sensors Max Limit: Max 70 Degree Celsius
Thermometer range used to measure pavement temp.: -50 to 250 Degree Celsius

5. PROCEDURE

5.1. Visual Pavement Condition Survey:

Pavement condition survey was assessed visually and summary of survey is given in Table 5-1. Homogenous sections were identified based on condition survey and classified into 3 categories as per clause 5.3, IRC: 115-2014 viz. good, fair and poor. As per clause 5.4, IRC: 115-2014, minimum of 4, 15 and 33 points should be taken for respective homogenous sections. But, data was collected at 16 locations for each kilometer (Minimum sample size), which is irrespective of pavement condition.

Table 5-1: Flexible Pavement Condition

Sl. No	Start Chainage (Km)	End Chainage (Km)	Visual Pavement Condition
LHS			
1	150+000	160+500	Good
2	160+500	160+750	Fair
3	160+750	161+750	Good
4	161+750	162+250	Fair
5	162+250	163+250	Poor
6	163+250	177+000	Good
7	177+000	178+250	Fair
8	178+250	184+250	Good
9	184+250	184+500	Poor
10	184+500	184+750	Fair
11	184+750	185+250	Good
12	185+250	189+000	Fair
13	189+000	190+000	Good
14	190+000	191+000	Fair
15	191+000	192+250	Good
16	192+250	192+500	Fair
17	192+500	193+750	Good
18	193+750	198+250	Fair
19	198+250	199+250	Good
20	199+250	201+750	Fair
21	201+750	202+500	Good
22	202+500	202+750	Fair
23	202+750	206+250	Good
24	206+250	207+250	Fair
25	207+250	207+500	Poor
26	207+500	210+000	Fair
27	210+000	210+500	Good
28	210+500	216+500	Fair
29	216+500	217+270	Good
30	217+270	217+950	Poor
31	217+950	220+000	Fair
32	220+000	220+500	Good
33	220+500	221+750	Fair
34	221+750	224+000	Good
35	224+000	224+250	Fair
36	224+250	225+250	Good
37	225+250	225+750	Fair
38	225+750	251+750	Good
39	251+750	252+000	Fair
RHS			
40	150+000	150+750	Good
41	150+750	151+500	Fair
42	151+500	152+000	Good
43	152+000	152+250	Fair
44	152+250	152+500	Poor
45	152+500	153+500	Fair
46	153+500	154+250	Good

Sl. No	Start Chainage (Km)	End Chainage (Km)	Visual Pavement Condition
47	154+250	159+250	Fair
48	159+250	160+000	Good
49	160+000	160+500	Fair
50	160+500	161+750	Good
51	161+750	162+000	Fair
52	162+000	162+250	Good
53	162+250	163+100	Poor
54	163+100	164+250	Fair
55	164+250	164+750	Good
56	164+750	165+250	Fair
57	165+250	168+000	Good
58	168+000	169+750	Fair
59	169+750	170+500	Good
60	170+500	170+750	Fair
61	170+750	172+750	Good
62	172+750	173+500	Fair
63	173+500	173+750	Good
64	173+750	174+250	Fair
65	174+250	174+750	Good
66	174+750	175+500	Fair
67	175+500	176+750	Poor
68	176+750	177+250	Fair
69	177+250	181+500	Good
70	181+500	181+750	Fair
71	181+750	183+500	Good
72	183+500	183+750	Fair
73	183+750	184+000	Good
74	184+000	184+500	Fair
75	184+500	185+000	Good
76	185+000	186+500	Fair
77	186+500	186+750	Good
78	186+750	187+250	Fair
79	187+250	187+750	Good
80	187+750	193+250	Fair
81	193+250	193+500	Poor
82	193+500	194+000	Fair
83	194+000	194+250	Poor
84	194+250	196+750	Fair
85	196+750	200+000	Poor
86	200+000	201+250	Fair
87	201+250	207+000	Poor
88	207+000	209+000	Fair
89	209+000	209+250	Good
90	209+250	210+500	Fair
91	210+500	212+000	Good
92	212+000	212+500	Fair
93	212+500	214+750	Good
94	214+750	215+000	Fair
95	215+000	216+000	Good
96	216+000	217+220	Fair

Sl. No	Start Chainage (Km)	End Chainage (Km)	Visual Pavement Condition
97	217+220	217+840	Poor
98	217+840	218+500	Good
99	218+500	218+750	Fair
100	218+750	219+250	Good
101	219+250	222+000	Fair
102	222+000	222+500	Good
103	222+500	223+250	Fair
104	223+250	224+000	Good
105	224+000	224+500	Fair
106	224+500	251+750	Good
107	251+750	252+000	Poor

5.2. FWD Testing:

As the pavement behavior is susceptible to temperature, seasonal variation (Moisture correction for granular and subgrade layers), etc. As a part of complete testing procedure various other information along with deflection measurements were collected namely pavement temperature, existing crust composition, CBR of subgrade soil, and other misc. information were collected during the deflection study have been recorded.

Following procedure has been followed for measurement of FWD data:
The test location is marked on the field.
The loading plate along with the deflection sensors have been lowered at the test location. At each location, 4 drops will be applied to achieve target load and corresponding pavement deflections. But readings corresponding to first drop is considered as seating drop, load and corresponding deflections values are not recorded by the equipment.

5.2.1. Temperature Measurement

The standard temperature for doing the experiment is 35ºC. Since, it is not possible to conduct the test at the standard temperature, a correction factor has to be applied for the deflection. The correction factor is determined by knowing the temperature at the time of the survey. The pavement temperature during the survey has been measured for every half hour by drilling a hole of 40 mm in the pavement and filling it with glycerol.

5.2.2. Existing Crust Composition, Thickness and Subgrade CBR.

Existing crust composition, thickness, and subgrade CBR are given below.

Table 5-2: Existing Crust Thickness and CBR (%)

Start Chainage (Km)	End Chainage (Km)	Side	BT (mm)	Granular (mm)	CBR (%)
150+000	214+600	Both	180	450	10.00
214+600	246+610	Both	175	450	10.00
246+610	252+000	Both	180	450	10.00

- Data received from site office

6. DATA, ANALYSIS AND RESULTS

6.1. Calculations and Interpretation:

- KGPBACK – Genetic Algorithm based software for back calculating the layer moduli
- Three-layer system (Bituminous, Granular & Subgrade) is adopted for back calculation
- Data required/assumptions:
    - Deflections at various radial distances (Given in **Annexure-1**.)
    - Existing layer thickness.
    - Subgrade CBR (%).
    - Layer moduli range (Refer Clause III.8.4 of IRC: 115-2014).
    - Poisson's ratio: (Refer Appendix III IRC: 115-2014)
        - For Back calculation: Existing BT-0.5, Granular-0.4, Subgrade-0.4.
        - For Overlay Design: Overlay BT-0.5, Existing BT-0.4, Granular-0.4, Subgrade-0.4

6.2. Range of Moduli

Type of Layer	Lower and Upper Limit (MPa)
Subgrade	50 to 150
Granular	150 to 400
Bituminous	400 to 1500

6.3. Correction for Temperature

The stiffness of bituminous layer is highly susceptible to temperature and hence, consequently the surface deflections of a given pavement will vary depending on the temperature of the constituent bituminous layers. If the depth of the BT surface is more than 40 mm, then correction factor has to be applied. If the depth is less i.e., if it is a thin bituminous surfacing like premix carpet and surface dressing, then no correction is required. Correction for temperature variation on deflection values measured at temperature other than $35^{o}C$ should be calculated as Clause 6.4.2 of IRC: 115-2014.

The key points to consider are:

- Pavement temperature range applicable for correction factor – $20^{0}C$ to $45^{0}C$.
- FWD shall not be carried for pavement temperature more than $45^{0}C$
- Temperature correction not required for following cases
    - Bituminous layers (depth < 40 mm)
    - Poor sections
    - Where average daily temperature is < $20^{o}C$ for more than 4 months

6.4. Correction for Seasonal Variation

Moisture content affects the strength of subgrade and granular subbase/base layers. The extent to which the strength is affected will depend on the nature of subgrade soil, gradation

and nature of fines in the granular layers, etc. For the purpose of applying these guidelines, it is intended that the pavement layer moduli values should pertain to the period when the subgrade is at its weakest condition. As per IRC: 115-2014, granular layers and subgrade will be in its weakest condition during the post-monsoon season. Survey was conducted in the months of April and May, which is the mid of summer season; Monsoon season correction corresponding to summer season is applied to subgrade and base layers.

6.5. Back-calculated Moduli

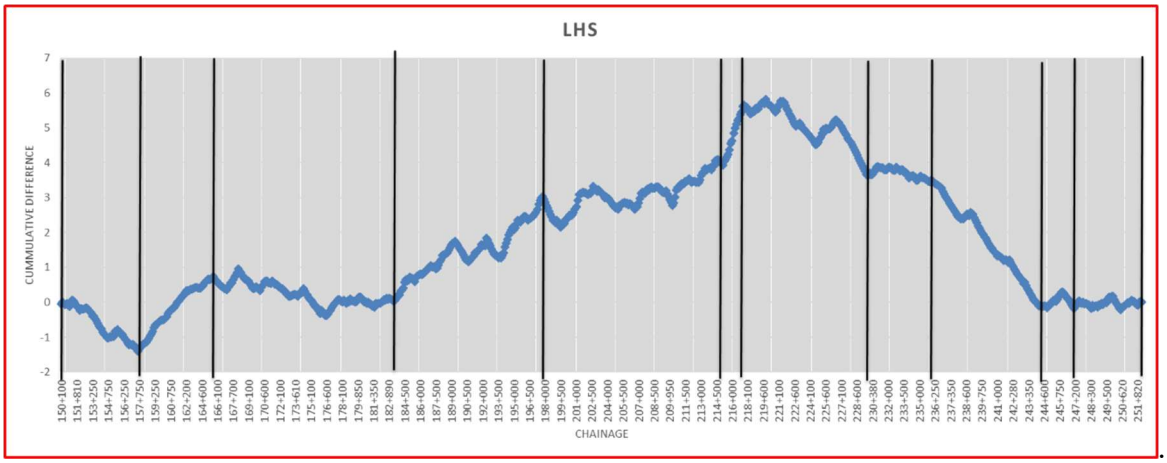
The back calculated (from KGP Back) and corrected moduli of the all the three layers are given in **Annexure-2**.

6.6. Delineation of Homogeneous Section

A statistical technique popularly used for identification of homogeneous sections is the "Cumulative Difference" approach. This approach is already being used extensively in India in many highway projects. In this approach, the sequence of actual cumulative sums in a measurement series is compared with the sums that would have resulted from adding averages. The difference between these values is termed as cumulative difference.
Surface Curvature Index (SCI) calculated as the difference between and D_0 and D_{300} where, D_0 and D_{300} are the peak deflections (mm) measured at the center of loading plate and at a radial distance of 300 mm is a bowl shape parameter, which reflects the contribution of upper layers, is the bowl shape parameter used to calculate cumulative difference.

Wherever the slope changes in the plot of cumulative difference VS distance (or number of test location), that should be considered as a possible delineator for identifying homogeneous sections. Further, few subsections were delineated based on Crust/msa. (**Refer Annexure-3: Delineation Data**)

The graph below shows plot between Cumulative Difference and test locations.



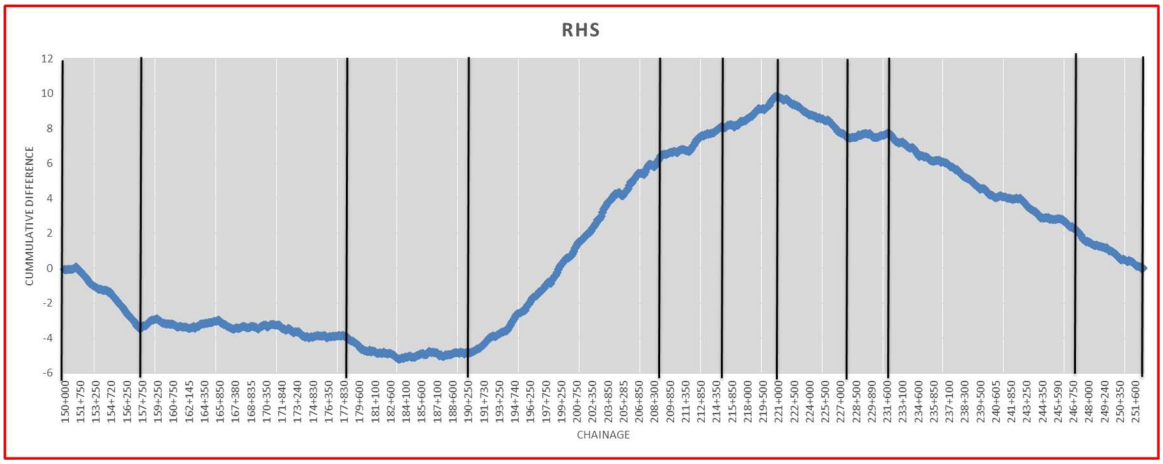


Figure 6-1: Delineation of Homogenous Sections

Upon delineation of final homogenous sections, 15th percentiles of modulus for each section was arrived and are given in Table 6-1, and is used for further analysis

Table 6-1: Homogenous Sections

Sl. No.	Homogenous Sections (km)		Existing Thickness, mm		Moduli, Mpa		
	From	To	BT	Granular	BT	Granular	Subgrade
LHS							
1	150+100	157+600	180	450	1663*	117	120
2	157+600	165+350	180	450	1161	104	120
3	165+350	183+100	180	450	1258	105	119
4	183+100	197+500	180	450	770	104	105
5	197+500	214+600	180	450	962	105	120
6	214+600	217+000	175	450	635	104	88
7	217+000	229+500	175	450	1339	105	120
8	229+500	235+600	175	450	1367	105	120
9	235+600	244+250	175	450	1318	154	120
10	244+250	246+610	175	450	1013	104	119
11	246+610	252+000	180	450	1033	105	120
RHS							
1	150+000	157+400	180	450	1138	106	120
2	157+400	177+750	180	450	753	104	107
3	177+750	189+850	180	450	850	104	110
4	189+850	208+840	180	450	418	104	102
5	208+840	214+600	180	450	547	105	115
6	214+600	220+500	175	450	511	104	113
7	220+500	227+500	175	450	1007	105	120
8	227+500	231+210	175	450	1077	105	119
9	231+210	246+750	175	450	1159	104	119
10	246+750	252+000	180	450	1042	105	120

* Arrived value shall be limited to 1500 MPa (Upper limit of BT Layer range) for further analysis.

6.7. Existing Remaining Life and Overlay Design:

Based on the back calculated moduli, existing remaining life in base year and overlay was estimated in accordance with IRC:37-2001 and IRC: 115-2014. The summary of results is shown in Table 6-2 and 6-3: (Various combinations were arrived taking into consideration of 80/90% reliability, grade of bitumen and with/without milling prior to overlay)

Table 6-2: Existing Remaining Life and Overlay

Using 80% reliability equations

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 80% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Existing Remaining Life																			
LHS																			
1	150+100	157+600	-	-	-	180	450	1500	117	120	0.0002661	-0.0002225	34.56	1512.82	34.56	72.08	Not safe	-	-
2	157+600	165+350	-	-	-	180	450	1161	104	120	0.0003253	-0.0002526	19.69	851.07	19.69	72.08	Not safe	-	-
3	165+350	183+100	-	-	-	180	450	1258	105	119	0.0003085	-0.0002467	22.60	947.33	22.60	72.08	Not safe	-	-
4	183+100	197+500	-	-	-	180	450	770	104	105	0.0004163	-0.0002862	10.71	483.14	10.71	72.08	Not safe	-	-
5	197+500	214+600	-	-	-	180	450	962	105	120	0.0003634	-0.0002628	15.03	711.25	15.03	72.08	Not safe	-	-
6	214+600	217+000	-	-	-	175	450	635	104	88	0.000477	-0.0003423	7.44	214.60	7.44	52.90	Not safe	-	-
7	217+000	229+500	-	-	-	175	450	1339	105	120	0.000306	-0.0002485	22.11	916.61	22.11	52.90	Not safe	-	-
8	229+500	235+600	-	-	-	175	450	1367	105	120	0.000302	-0.0002472	22.87	938.67	22.87	52.90	Not safe	-	-
9	235+600	244+250	-	-	-	175	450	1318	154	120	0.000268	-0.0002281	37.54	1351.59	37.54	52.90	Not safe	-	-
10	244+250	246+610	-	-	-	175	450	1013	104	119	0.0003645	-0.0002678	14.21	653.00	14.21	52.90	Not safe	-	-
11	246+610	252+000	-	-	-	180	450	1033	105	120	0.0003482	-0.0002585	16.70	766.49	16.70	99.79	Not safe	-	-
RHS																			
1	150+000	157+400	-	-	-	180	450	1138	106	120	0.0003271	-0.0002513	19.60	871.21	19.60	72.08	Not safe	-	-
2	157+400	177+750	-	-	-	180	450	753	104	107	0.0004214	-0.0002863	10.41	482.38	10.41	72.08	Not safe	-	-
3	177+750	189+850	-	-	-	180	450	850	104	110	0.000393	-0.0002771	12.32	559.37	12.32	72.08	Not safe	-	-
4	189+850	208+840	-	-	-	180	450	418	104	102	0.0005722	-0.0003253	5.24	270.36	5.24	72.08	Not safe	-	-
5	208+840	214+600	-	-	-	180	450	547	105	115	0.0004982	-0.0002976	7.13	404.73	7.13	72.08	Not safe	-	-
6	214+600	220+500	-	-	-	175	450	511	104	113	0.0005322	-0.0003101	5.85	335.86	5.85	52.90	Not safe	-	-
7	220+500	227+500	-	-	-	175	450	1007	105	120	0.0003644	-0.0002662	14.30	670.98	14.30	52.90	Not safe	-	-
8	227+500	231+210	-	-	-	175	450	1077	105	119	0.0003501	-0.0002626	15.78	713.71	15.78	52.90	Not safe	-	-
9	231+210	246+750	-	-	-	175	450	1159	104	119	0.000336	-0.0002594	17.39	754.50	17.39	52.90	Not safe	-	-
10	246+750	252+000	-	-	-	180	450	1042	105	120	0.0003464	-0.000258	16.91	773.25	16.91	99.79	Not safe	-	-

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 80% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-30; Without Milling																			
LHS																			
1	150+100	157+600	35	1700	-	180	450	1500	117	120	0.0002176	-0.0001882	75.60	3231.73	75.60	72.08	Safe	**40**	**50**
2	157+600	165+350	55	1700	-	180	450	1161	104	120	0.0002322	-0.0001898	73.08	3110.04	73.08	72.08	Safe	**40**	**50**
3	165+350	183+100	50	1700	-	180	450	1258	105	119	0.0002279	-0.0001908	73.39	3036.82	73.39	72.08	Safe	**40**	**50**
4	183+100	197+500	80	1700	-	180	450	770	104	105	0.0002502	-0.0001895	77.62	3132.42	77.62	72.08	Safe	**40**	**50**
5	197+500	214+600	65	1700	-	180	450	962	105	120	0.0002421	-0.0001872	72.95	3310.74	72.95	72.08	Safe	**40**	**50**
6	214+600	217+000	80	1700	-	175	450	635	104	88	0.0002825	-0.0002252	57.06	1432.31	57.06	52.90	Safe	**40**	**50**
7	217+000	229+500	40	1700	-	175	450	1339	105	120	0.0002402	-0.0002022	56.71	2334.30	56.71	52.90	Safe	**40**	**50**
8	229+500	235+600	40	1700	-	175	450	1367	105	120	0.0002374	-0.0002014	58.32	2376.64	58.32	52.90	Safe	**40**	**50**
9	235+600	244+250	30	1700	-	175	450	1318	154	120	0.0002243	-0.0001979	75.03	2573.25	75.03	52.90	Safe	**40**	**50**
10	244+250	246+610	55	1700	-	175	450	1013	104	119	0.0002576	-0.0001994	54.83	2486.64	54.83	52.90	Safe	**40**	**50**
11	246+610	252+000	75	1700	-	180	450	1033	105	120	0.0002197	-0.0001765	100.15	4323.26	100.15	99.79	Safe	**40**	**50**
RHS																			
1	150+000	157+400	55	1700	-	180	450	1138	106	120	0.0002334	-0.0001888	72.87	3185.42	72.87	72.08	Safe	**40**	**50**
2	157+400	177+750	80	1700	-	180	450	753	104	107	0.0002527	-0.0001896	76.12	3124.94	76.12	72.08	Safe	**40**	**50**
3	177+750	189+850	75	1700	-	180	450	850	104	110	0.000245	-0.0001878	77.41	3263.05	77.41	72.08	Safe	**40**	**50**
4	189+850	208+840	100	1700	-	180	450	418	104	102	0.0002822	-0.0002007	81.89	2414.45	81.89	72.08	Safe	**40**	**60**
5	208+840	214+600	90	1700	-	180	450	547	105	115	0.0002717	-0.0001904	75.43	3065.85	75.43	72.08	Safe	**40**	**50**
6	214+600	220+500	85	1700	-	175	450	511	104	113	0.0002967	-0.0002019	56.77	2350.07	56.77	52.90	Safe	**40**	**50**
7	220+500	227+500	55	1700	-	175	450	1007	105	120	0.0002575	-0.0001983	55.19	2549.80	55.19	52.90	Safe	**40**	**50**
8	227+500	231+210	50	1700	-	175	450	1077	105	119	0.0002558	-0.000201	53.47	2398.16	53.47	52.90	Safe	**40**	**50**
9	231+210	246+750	50	1700	-	175	450	1159	104	119	0.0002463	-0.000199	58.19	2509.39	58.19	52.90	Safe	**40**	**50**
10	246+750	252+000	75	1700	-	180	450	1042	105	120	0.0002187	-0.0001762	101.19	4356.73	101.19	99.79	Safe	**40**	**50**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 80% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-30; With 50mm Milling																			
LHS																			
1	150+100	157+600	85	1700	50	130	450	1500	117	120	0.0002176	-0.0001853	75.60	3467.45	75.60	72.08	Safe	**40**	**50**
2	157+600	165+350	105	1700	50	130	450	1161	104	120	0.000228	-0.0001862	78.46	3392.12	78.46	72.08	Safe	**40**	**65**
3	165+350	183+100	100	1700	50	130	450	1258	105	119	0.0002253	-0.0001875	76.74	3286.79	76.74	72.08	Safe	**40**	**60**
4	183+100	197+500	120	1700	50	130	450	770	104	105	0.0002492	-0.0001916	78.84	2979.76	78.84	72.08	Safe	**40**	**80**
5	197+500	214+600	110	1700	50	130	450	962	105	120	0.0002401	-0.0001869	75.34	3334.90	75.34	72.08	Safe	**40**	**70**
6	214+600	217+000	115	1700	50	125	450	635	104	88	0.0002844	-0.0002311	55.60	1273.85	55.60	52.90	Safe	**40**	**75**
7	217+000	229+500	90	1700	50	125	450	1339	105	120	0.0002386	-0.0001986	58.21	2532.38	58.21	52.90	Safe	**40**	**50**
8	229+500	235+600	85	1700	50	125	450	1367	105	120	0.0002433	-0.0002028	53.01	2303.16	53.01	52.90	Safe	**40**	**50**
9	235+600	244+250	65	1700	50	125	450	1318	154	120	0.0002427	-0.0002073	55.22	2085.03	55.22	52.90	Safe	**40**	**50**
10	244+250	246+610	100	1700	50	125	450	1013	104	119	0.0002572	-0.0001993	55.16	2492.31	55.16	52.90	Safe	**40**	**60**
11	246+610	252+000	120	1700	50	130	450	1033	105	120	0.0002192	-0.0001767	101.04	4301.12	101.04	99.79	Safe	**40**	**80**
RHS																			
1	150+000	157+400	105	1700	50	130	450	1138	106	120	0.0002287	-0.0001851	78.87	3484.47	78.87	72.08	Safe	**40**	**65**
2	157+400	177+750	120	1700	50	130	450	753	104	107	0.0002511	-0.0001914	78.02	2993.90	78.02	72.08	Safe	**40**	**80**
3	177+750	189+850	115	1700	50	130	450	850	104	110	0.0002469	-0.0001908	75.12	3036.82	75.12	72.08	Safe	**40**	**75**
4	189+850	208+840	125	1700	50	130	450	418	104	102	0.0002897	-0.0002095	73.95	1987.58	73.95	72.08	Safe	**40**	**85**
5	208+840	214+600	125	1700	50	130	450	547	105	115	0.0002683	-0.0001931	79.22	2876.25	79.22	72.08	Safe	**40**	**85**
6	214+600	220+500	115	1700	50	125	450	511	104	113	0.0003009	-0.0002092	53.75	2000.54	53.75	52.90	Safe	**40**	**75**
7	220+500	227+500	100	1700	50	125	450	1007	105	120	0.000257	-0.0001981	55.61	2561.49	55.61	52.90	Safe	**40**	**60**
8	227+500	231+210	100	1700	50	125	450	1077	105	119	0.0002494	-0.0001964	59.01	2663.56	59.01	52.90	Safe	**40**	**60**
9	231+210	246+750	95	1700	50	125	450	1159	104	119	0.0002492	-0.0001997	55.60	2469.75	55.60	52.90	Safe	**40**	**55**
10	246+750	252+000	120	1700	50	130	450	1042	105	120	0.0002184	-0.0001764	101.73	4334.38	101.73	99.79	Safe	**40**	**80**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 80% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-40; Without Milling																			
LHS																			
1	150+100	157+600	30	3000	-	180	450	1500	117	120	0.0002179	-0.0001828	75.20	3687.70	75.20	72.08	Safe	**40**	**50**
2	157+600	165+350	50	3000	-	180	450	1161	104	120	0.0002302	-0.0001825	75.59	3715.27	75.59	72.08	Safe	**40**	**50**
3	165+350	183+100	45	3000	-	180	450	1258	105	119	0.0002265	-0.0001837	75.17	3606.50	75.17	72.08	Safe	**40**	**50**
4	183+100	197+500	70	3000	-	180	450	770	104	105	0.0002507	-0.0001868	77.02	3343.00	77.02	72.08	Safe	**40**	**50**
5	197+500	214+600	60	3000	-	180	450	962	105	120	0.0002381	-0.0001803	77.83	3925.27	77.83	72.08	Safe	**40**	**50**
6	214+600	217+000	70	3000	-	175	450	635	104	88	0.0002828	-0.0002227	56.83	1506.67	56.83	52.90	Safe	**40**	**50**
7	217+000	229+500	35	3000	-	175	450	1339	105	120	0.00024	-0.0001957	56.90	2707.02	56.90	52.90	Safe	**40**	**50**
8	229+500	235+600	35	3000	-	175	450	1367	105	120	0.0002371	-0.0001948	58.61	2764.19	58.61	52.90	Safe	**40**	**50**
9	235+600	244+250	30	3000	-	175	450	1318	154	120	0.0002191	-0.0001882	82.20	3231.73	82.20	52.90	Safe	**40**	**50**
10	244+250	246+610	50	3000	-	175	450	1013	104	119	0.0002556	-0.0001925	56.52	2917.12	56.52	52.90	Safe	**40**	**50**
11	246+610	252+000	70	3000	-	180	450	1033	105	120	0.0002139	-0.0001689	111.13	5278.04	111.13	99.79	Safe	**40**	**50**
RHS																			
1	150+000	157+400	50	3000	-	180	450	1138	106	120	0.0002314	-0.0001816	75.35	3799.48	75.35	72.08	Safe	**40**	**50**
2	157+400	177+750	70	3000	-	180	450	753	104	107	0.0002532	-0.0001869	75.53	3334.90	75.53	72.08	Safe	**40**	**50**
3	177+750	189+850	65	3000	-	180	450	850	104	110	0.0002471	-0.000185	74.88	3493.02	74.88	72.08	Safe	**40**	**50**
4	189+850	208+840	85	3000	-	180	450	418	104	102	0.0002833	-0.0002029	80.66	2298.02	80.66	72.08	Safe	**40**	**50**
5	208+840	214+600	80	3000	-	180	450	547	105	115	0.0002672	-0.0001882	80.49	3231.73	80.49	72.08	Safe	**40**	**50**
6	214+600	220+500	75	3000	-	175	450	511	104	113	0.0002934	-0.0002004	59.29	2430.88	59.29	52.90	Safe	**40**	**50**
7	220+500	227+500	50	3000	-	175	450	1007	105	120	0.0002556	-0.0001913	56.81	3001.00	56.81	52.90	Safe	**40**	**50**
8	227+500	231+210	45	3000	-	175	450	1077	105	119	0.0002548	-0.000194	54.30	2816.25	54.30	52.90	Safe	**40**	**50**
9	231+210	246+750	45	3000	-	175	450	1159	104	119	0.0002451	-0.0001919	59.31	2958.70	59.31	52.90	Safe	**40**	**50**
10	246+750	252+000	70	3000	-	180	450	1042	105	120	0.0002129	-0.0001686	112.34	5320.76	112.34	99.79	Safe	**40**	**50**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 80% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-40; With 50mm Milling																			
LHS																			
1	150+100	157+600	75	3000	50	130	450	1500	117	120	0.0002159	-0.00018	77.94	3955.02	77.94	72.08	Safe	**40**	**50**
2	157+600	165+350	90	3000	50	130	450	1161	104	120	0.0002282	-0.0001846	78.19	3527.47	78.19	72.08	Safe	**40**	**50**
3	165+350	183+100	85	3000	50	130	450	1258	105	119	0.0002272	-0.0001861	74.27	3400.39	74.27	72.08	Safe	**40**	**50**
4	183+100	197+500	100	3000	50	130	450	770	104	105	0.0002522	-0.0001948	75.26	2764.19	75.26	72.08	Safe	**40**	**60**
5	197+500	214+600	95	3000	50	130	450	962	105	120	0.0002381	-0.0001856	77.83	3442.12	77.83	72.08	Safe	**40**	**55**
6	214+600	217+000	100	3000	50	125	450	635	104	88	0.0002772	-0.0002303	61.43	1294.03	61.43	52.90	Safe	**40**	**60**
7	217+000	229+500	75	3000	50	125	450	1339	105	120	0.0002437	-0.0001982	53.61	2555.63	53.61	52.90	Safe	**40**	**50**
8	229+500	235+600	75	3000	50	125	450	1367	105	120	0.0002411	-0.0001975	54.92	2596.96	54.92	52.90	Safe	**40**	**50**
9	235+600	244+250	60	3000	50	125	450	1318	154	120	0.0002387	-0.0001995	58.90	2481.00	58.90	52.90	Safe	**40**	**50**
10	244+250	246+610	85	3000	50	125	450	1013	104	119	0.0002589	-0.000199	53.77	2509.39	53.77	52.90	Safe	**40**	**50**
11	246+610	252+000	105	3000	50	130	450	1033	105	120	0.0002147	-0.0001741	109.53	4600.11	109.53	99.79	Safe	**40**	**65**
RHS																			
1	150+000	157+400	90	3000	50	130	450	1138	106	120	0.0002289	-0.0001837	78.60	3606.50	78.60	72.08	Safe	**40**	**50**
2	157+400	177+750	100	3000	50	130	450	753	104	107	0.000254	-0.0001948	74.61	2764.19	74.61	72.08	Safe	**40**	**60**
3	177+750	189+850	100	3000	50	130	450	850	104	110	0.0002426	-0.0001894	80.43	3139.93	80.43	72.08	Safe	**40**	**60**
4	189+850	208+840	105	3000	50	130	450	418	104	102	0.0002862	-0.0002136	77.53	1820.39	77.53	72.08	Safe	**40**	**65**
5	208+840	214+600	105	3000	50	130	450	547	105	115	0.000267	-0.0001966	80.73	2651.29	80.73	72.08	Safe	**40**	**65**
6	214+600	220+500	100	3000	50	125	450	511	104	113	0.0002908	-0.0002092	61.38	2000.54	61.38	52.90	Safe	**40**	**60**
7	220+500	227+500	85	3000	50	125	450	1007	105	120	0.0002587	-0.0001979	54.20	2573.25	54.20	52.90	Safe	**40**	**50**
8	227+500	231+210	85	3000	50	125	450	1077	105	119	0.0002511	-0.0001959	57.47	2694.52	57.47	52.90	Safe	**40**	**50**
9	231+210	246+750	85	3000	50	125	450	1159	104	119	0.0002436	-0.0001941	60.74	2809.68	60.74	52.90	Safe	**40**	**50**
10	246+750	252+000	105	3000	50	130	450	1042	105	120	0.0002139	-0.0001739	110.31	4624.14	110.31	99.79	Safe	**40**	**65**

Using 90% reliability equations

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 90% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Existing Remaining Life																			
LHS																			
1	150+100	157+600	-	-	-	180	450	1500	117	120	0.0002661	-0.0002225	11.12	512.07	11.12	72.08	Not safe	-	-
2	157+600	165+350	-	-	-	180	450	1161	104	120	0.0003253	-0.0002526	6.33	288.08	6.33	72.08	Not safe	-	-
3	165+350	183+100	-	-	-	180	450	1258	105	119	0.0003085	-0.0002467	7.27	320.66	7.27	72.08	Not safe	-	-
4	183+100	197+500	-	-	-	180	450	770	104	105	0.0004163	-0.0002862	3.45	163.54	3.45	72.08	Not safe	-	-
5	197+500	214+600	-	-	-	180	450	962	105	120	0.0003634	-0.0002628	4.83	240.75	4.83	72.08	Not safe	-	-
6	214+600	217+000	-	-	-	175	450	635	104	88	0.000477	-0.0003423	2.39	72.64	2.39	52.90	Not safe	-	-
7	217+000	229+500	-	-	-	175	450	1339	105	120	0.000306	-0.0002485	7.11	310.26	7.11	52.90	Not safe	-	-
8	229+500	235+600	-	-	-	175	450	1367	105	120	0.000302	-0.0002472	7.36	317.73	7.36	52.90	Not safe	-	-
9	235+600	244+250	-	-	-	175	450	1318	154	120	0.000268	-0.0002281	12.08	457.50	12.08	52.90	Not safe	-	-
10	244+250	246+610	-	-	-	175	450	1013	104	119	0.0003645	-0.0002678	4.57	221.03	4.57	52.90	Not safe	-	-
11	246+610	252+000	-	-	-	180	450	1033	105	120	0.0003482	-0.0002585	5.37	259.45	5.37	99.79	Not safe	-	-
RHS																			
1	150+000	157+400	-	-	-	180	450	1138	106	120	0.0003271	-0.0002513	6.31	294.89	6.31	72.08	Not safe	-	-
2	157+400	177+750	-	-	-	180	450	753	104	107	0.0004214	-0.0002863	3.35	163.28	3.35	72.08	Not safe	-	-
3	177+750	189+850	-	-	-	180	450	850	104	110	0.000393	-0.0002771	3.96	189.34	3.96	72.08	Not safe	-	-
4	189+850	208+840	-	-	-	180	450	418	104	102	0.0005722	-0.0003253	1.68	91.51	1.68	72.08	Not safe	-	-
5	208+840	214+600	-	-	-	180	450	547	105	115	0.0004982	-0.0002976	2.29	137.00	2.29	72.08	Not safe	-	-
6	214+600	220+500	-	-	-	175	450	511	104	113	0.0005322	-0.0003101	1.88	113.68	1.88	52.90	Not safe	-	-
7	220+500	227+500	-	-	-	175	450	1007	105	120	0.0003644	-0.0002662	4.60	227.12	4.60	52.90	Not safe	-	-
8	227+500	231+210	-	-	-	175	450	1077	105	119	0.0003501	-0.0002626	5.08	241.58	5.08	52.90	Not safe	-	-
9	231+210	246+750	-	-	-	175	450	1159	104	119	0.000336	-0.0002594	5.59	255.39	5.59	52.90	Not safe	-	-
10	246+750	252+000	-	-	-	180	450	1042	105	120	0.0003464	-0.000258	5.44	261.73	5.44	99.79	Not safe	-	-

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 90% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-30; Without Milling																			
LHS																			
1	150+100	157+600	85	1700	-	180	450	1500	117	120	0.0001642	-0.000149	72.73	3153.88	72.73	72.08	Safe	**40**	**50**
2	157+600	165+350	110	1700	-	180	450	1161	104	120	0.0001707	-0.0001493	77.82	3125.25	77.82	72.08	Safe	**40**	**70**
3	165+350	183+100	105	1700	-	180	450	1258	105	119	0.0001677	-0.0001494	77.86	3115.77	77.86	72.08	Safe	**40**	**65**
4	183+100	197+500	130	1700	-	180	450	770	104	105	0.0001866	-0.0001544	78.16	2683.79	78.16	72.08	Safe	**40**	**90**
5	197+500	214+600	120	1700	-	180	450	962	105	120	0.0001769	-0.0001486	79.54	3192.55	79.54	72.08	Safe	**40**	**80**
6	214+600	217+000	125	1700	-	175	450	635	104	88	0.0002137	-0.0001868	54.37	1131.56	54.37	52.90	Safe	**40**	**85**
7	217+000	229+500	90	1700	-	175	450	1339	105	120	0.0001802	-0.00016	55.81	2283.50	55.81	52.90	Safe	**40**	**50**
8	229+500	235+600	90	1700	-	175	450	1367	105	120	0.0001782	-0.0001593	57.27	2329.34	57.27	52.90	Safe	**40**	**50**
9	235+600	244+250	70	1700	-	175	450	1318	154	120	0.000179	-0.0001643	58.06	2024.80	58.06	52.90	Safe	**40**	**50**
10	244+250	246+610	105	1700	-	175	450	1013	104	119	0.0001926	-0.0001599	54.67	2289.98	54.67	52.90	Safe	**40**	**65**
11	246+610	252+000	130	1700	-	180	450	1033	105	120	0.0001622	-0.0001407	104.89	4089.76	104.89	99.79	Safe	**40**	**90**
RHS																			
1	150+000	157+400	110	1700	-	180	450	1138	106	120	0.0001715	-0.0001487	77.74	3182.83	77.74	72.08	Safe	**40**	**70**
2	157+400	177+750	130	1700	-	180	450	753	104	107	0.0001881	-0.0001544	77.22	2683.79	77.22	72.08	Safe	**40**	**90**
3	177+750	189+850	125	1700	-	180	450	850	104	110	0.0001834	-0.0001527	76.83	2821.94	76.83	72.08	Safe	**40**	**85**
4	189+850	208+840	140	1700	-	180	450	418	104	102	0.0002162	-0.0001704	74.27	1716.35	74.27	72.08	Safe	**40**	**100**
5	208+840	214+600	135	1700	-	180	450	547	105	115	0.0002043	-0.0001586	73.57	2376.32	73.57	72.08	Safe	**40**	**95**
6	214+600	220+500	130	1700	-	175	450	511	104	113	0.0002207	-0.0001679	57.74	1835.30	57.74	52.90	Safe	**40**	**90**
7	220+500	227+500	105	1700	-	175	450	1007	105	120	0.0001925	-0.0001592	55.06	2335.98	55.06	52.90	Safe	**40**	**65**
8	227+500	231+210	100	1700	-	175	450	1077	105	119	0.0001915	-0.0001605	53.05	2251.42	53.05	52.90	Safe	**40**	**60**
9	231+210	246+750	100	1700	-	175	450	1159	104	119	0.0001849	-0.0001589	57.12	2356.05	57.12	52.90	Safe	**40**	**60**
10	246+750	252+000	130	1700	-	180	450	1042	105	120	0.0001615	-0.0001405	105.88	4116.22	105.88	99.79	Safe	**40**	**90**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 90% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-30; With 50mm Milling																			
LHS																			
1	150+100	157+600	140	1700	50	130	450	1500	117	120	0.0001609	-0.0001453	78.70	3534.72	78.70	72.08	Safe	**40**	**100**
2	157+600	165+350	155	1700	50	130	450	1161	104	120	0.0001718	-0.0001502	75.90	3041.24	75.90	72.08	Safe	**40**	**115**
3	165+350	183+100	150	1700	50	130	450	1258	105	119	0.0001702	-0.0001509	73.50	2977.80	73.50	72.08	Safe	**40**	**110**
4	183+100	197+500	165	1700	50	130	450	770	104	105	0.0001905	-0.0001581	72.11	2410.58	72.11	72.08	Safe	**40**	**125**
5	197+500	214+600	160	1700	50	130	450	962	105	120	0.0001795	-0.000151	75.15	2968.87	75.15	72.08	Safe	**40**	**120**
6	214+600	217+000	160	1700	50	125	450	635	104	88	0.000214	-0.0001896	54.07	1057.75	54.07	52.90	Safe	**40**	**120**
7	217+000	229+500	140	1700	50	125	450	1339	105	120	0.0001793	-0.0001586	56.91	2376.32	56.91	52.90	Safe	**40**	**100**
8	229+500	235+600	140	1700	50	125	450	1367	105	120	0.0001776	-0.0001581	58.02	2410.58	58.02	52.90	Safe	**40**	**100**
9	235+600	244+250	115	1700	50	125	450	1318	154	120	0.000183	-0.0001658	53.28	1943.07	53.28	52.90	Safe	**40**	**75**
10	244+250	246+610	150	1700	50	125	450	1013	104	119	0.0001912	-0.0001599	56.25	2289.98	56.25	52.90	Safe	**40**	**110**
11	246+610	252+000	175	1700	50	130	450	1033	105	120	0.0001612	-0.0001406	107.44	4102.97	107.44	99.79	Safe	**40**	**135**
RHS																			
1	150+000	157+400	155	1700	50	130	450	1138	106	120	0.0001723	-0.0001493	76.34	3125.25	76.34	72.08	Safe	**40**	**115**
2	157+400	177+750	170	1700	50	130	450	753	104	107	0.0001863	-0.0001549	80.16	2644.74	80.16	72.08	Safe	**40**	**130**
3	177+750	189+850	165	1700	50	130	450	850	104	110	0.0001839	-0.0001542	76.02	2699.61	76.02	72.08	Safe	**40**	**125**
4	189+850	208+840	170	1700	50	130	450	418	104	102	0.0002146	-0.000172	76.44	1645.14	76.44	72.08	Safe	**40**	**130**
5	208+840	214+600	170	1700	50	130	450	547	105	115	0.0002016	-0.0001593	77.47	2329.34	77.47	72.08	Safe	**40**	**130**
6	214+600	220+500	160	1700	50	125	450	511	104	113	0.0002229	-0.0001715	55.56	1667.00	55.56	52.90	Safe	**40**	**120**
7	220+500	227+500	150	1700	50	125	450	1007	105	120	0.000191	-0.0001591	56.76	2342.65	56.76	52.90	Safe	**40**	**110**
8	227+500	231+210	145	1700	50	125	450	1077	105	119	0.0001914	-0.000161	53.16	2219.90	53.16	52.90	Safe	**40**	**105**
9	231+210	246+750	145	1700	50	125	450	1159	104	119	0.0001862	-0.0001599	55.58	2289.98	55.58	52.90	Safe	**40**	**105**
10	246+750	252+000	175	1700	50	130	450	1042	105	120	0.0001607	-0.0001404	107.95	4129.53	107.95	99.79	Safe	**40**	**135**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 90% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-40; Without Milling																			
LHS																			
1	150+100	157+600	75	3000	-	180	450	1500	117	120	0.0001636	-0.0001443	73.77	3647.15	73.77	72.08	Safe	**40**	**50**
2	157+600	165+350	95	3000	-	180	450	1161	104	120	0.0001709	-0.000147	77.47	3353.15	77.47	72.08	Safe	**40**	**55**
3	165+350	183+100	90	3000	-	180	450	1258	105	119	0.0001689	-0.0001471	75.73	3342.82	75.73	72.08	Safe	**40**	**50**
4	183+100	197+500	110	3000	-	180	450	770	104	105	0.0001879	-0.0001555	76.07	2598.79	76.07	72.08	Safe	**40**	**70**
5	197+500	214+600	100	3000	-	180	450	962	105	120	0.0001808	-0.0001496	73.07	3096.93	73.07	72.08	Safe	**40**	**60**
6	214+600	217+000	110	3000	-	175	450	635	104	88	0.0002082	-0.0001848	60.17	1188.15	60.17	52.90	Safe	**40**	**70**
7	217+000	229+500	80	3000	-	175	450	1339	105	120	0.0001785	-0.0001549	57.91	2644.74	57.91	52.90	Safe	**40**	**50**
8	229+500	235+600	80	3000	-	175	450	1367	105	120	0.0001765	-0.000154	59.44	2715.54	59.44	52.90	Safe	**40**	**50**
9	235+600	244+250	65	3000	-	175	450	1318	154	120	0.0001758	-0.0001573	62.28	2466.66	62.28	52.90	Safe	**40**	**50**
10	244+250	246+610	90	3000	-	175	450	1013	104	119	0.0001938	-0.0001586	53.37	2376.32	53.37	52.90	Safe	**40**	**50**
11	246+610	252+000	110	3000	-	180	450	1033	105	120	0.0001638	-0.0001407	100.96	4089.76	100.96	99.79	Safe	**40**	**70**
RHS																			
1	150+000	157+400	95	3000	-	180	450	1138	106	120	0.0001717	-0.0001464	77.39	3415.90	77.39	72.08	Safe	**40**	**55**
2	157+400	177+750	110	3000	-	180	450	753	104	107	0.0001894	-0.0001556	75.18	2591.23	75.18	72.08	Safe	**40**	**70**
3	177+750	189+850	105	3000	-	180	450	850	104	110	0.0001862	-0.0001539	72.43	2723.55	72.43	72.08	Safe	**40**	**65**
4	189+850	208+840	120	3000	-	180	450	418	104	102	0.0002115	-0.0001719	80.90	1649.49	80.90	72.08	Safe	**40**	**80**
5	208+840	214+600	115	3000	-	180	450	547	105	115	0.0002029	-0.0001601	75.56	2277.04	75.56	72.08	Safe	**40**	**75**
6	214+600	220+500	110	3000	-	175	450	511	104	113	0.0002202	-0.0001699	58.25	1739.37	58.25	52.90	Safe	**40**	**70**
7	220+500	227+500	90	3000	-	175	450	1007	105	120	0.0001938	-0.0001578	53.64	2431.43	53.64	52.90	Safe	**40**	**50**
8	227+500	231+210	90	3000	-	175	450	1077	105	119	0.0001875	-0.0001556	57.59	2591.23	57.59	52.90	Safe	**40**	**50**
9	231+210	246+750	85	3000	-	175	450	1159	104	119	0.0001873	-0.0001573	54.32	2466.66	54.32	52.90	Safe	**40**	**50**
10	246+750	252+000	110	3000	-	180	450	1042	105	120	0.0001631	-0.0001404	101.90	4129.53	101.90	99.79	Safe	**40**	**70**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Thickness, mm		Moduli, Mpa			Strains		Remaining Life 90% reliability, msa			Design msa	Check	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa		Existing BT	Existing Granular	BT	Granular	Subgrade	Tensile	Vertical	Fatigue	Rutting	Remaining life			BC	DBM
Overlay-VG-40; With 50mm Milling																			
LHS																			
1	150+100	157+600	120	3000	50	130	450	1500	117	120	0.0001599	-0.0001437	80.63	3716.70	80.63	72.08	Safe	**40**	**80**
2	157+600	165+350	130	3000	50	130	450	1161	104	120	0.0001725	-0.0001514	74.71	2933.48	74.71	72.08	Safe	**40**	**90**
3	165+350	183+100	130	3000	50	130	450	1258	105	119	0.0001666	-0.0001487	79.88	3182.83	79.88	72.08	Safe	**40**	**90**
4	183+100	197+500	140	3000	50	130	450	770	104	105	0.0001868	-0.0001594	77.83	2322.73	77.83	72.08	Safe	**40**	**100**
5	197+500	214+600	135	3000	50	130	450	962	105	120	0.0001783	-0.0001522	77.14	2864.22	77.14	72.08	Safe	**40**	**95**
6	214+600	217+000	135	3000	50	125	450	635	104	88	0.00021	-0.0001922	58.19	994.41	58.19	52.90	Safe	**40**	**95**
7	217+000	229+500	120	3000	50	125	450	1339	105	120	0.0001777	-0.0001572	58.93	2473.79	58.93	52.90	Safe	**40**	**80**
8	229+500	235+600	120	3000	50	125	450	1367	105	120	0.0001761	-0.0001566	59.97	2517.05	59.97	52.90	Safe	**40**	**80**
9	235+600	244+250	100	3000	50	125	450	1318	154	120	0.0001813	-0.0001634	55.25	2075.86	55.25	52.90	Safe	**40**	**60**
10	244+250	246+610	125	3000	50	125	450	1013	104	119	0.0001926	-0.0001624	54.67	2134.45	54.67	52.90	Safe	**40**	**85**
11	246+610	252+000	145	3000	50	130	450	1033	105	120	0.0001626	-0.0001433	103.89	3763.97	103.89	99.79	Safe	**40**	**105**
RHS																			
1	150+000	157+400	130	3000	50	130	450	1138	106	120	0.0001729	-0.0001506	75.32	3004.79	75.32	72.08	Safe	**40**	**90**
2	157+400	177+750	140	3000	50	130	450	753	104	107	0.0001878	-0.0001594	77.70	2322.73	77.70	72.08	Safe	**40**	**100**
3	177+750	189+850	140	3000	50	130	450	850	104	110	0.0001809	-0.0001552	81.04	2621.64	81.04	72.08	Safe	**40**	**100**
4	189+850	208+840	140	3000	50	130	450	418	104	102	0.0002126	-0.0001777	79.28	1419.09	79.28	72.08	Safe	**40**	**100**
5	208+840	214+600	140	3000	50	130	450	547	105	115	0.0002014	-0.0001644	77.77	2019.23	77.77	72.08	Safe	**40**	**100**
6	214+600	220+500	130	3000	50	125	450	511	104	113	0.0002256	-0.0001787	53.01	1383.45	53.01	52.90	Safe	**40**	**90**
7	220+500	227+500	125	3000	50	125	450	1007	105	120	0.0001923	-0.0001615	55.28	2188.91	55.28	52.90	Safe	**40**	**85**
8	227+500	231+210	125	3000	50	125	450	1077	105	119	0.0001877	-0.0001599	57.36	2289.98	57.36	52.90	Safe	**40**	**85**
9	231+210	246+750	125	3000	50	125	450	1159	104	119	0.0001829	-0.0001585	59.58	2383.12	59.58	52.90	Safe	**40**	**85**
10	246+750	252+000	145	3000	50	130	450	1042	105	120	0.0001621	-0.0001431	104.36	3787.88	104.36	99.79	Safe	**40**	**105**

Notes: msa details received from M/s LSI Engineering & Consultants Limited

Table 6-3: Overlay Comparison

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Remaining life	Proposed (mm)		Overlay		Milling(mm	Remaining life	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa			BC	DBM	Thickness	Moduli, Mpa			BC	DBM
80% Reliability									**90% Reliability**					
Existing Remaining Life														
LHS														
1	150+100	157+600	-	-	-	34.56	-	-	-	-	-	11.12	-	-
2	157+600	165+350	-	-	-	19.69	-	-	-	-	-	6.33	-	-
3	165+350	183+100	-	-	-	22.60	-	-	-	-	-	7.27	-	-
4	183+100	197+500	-	-	-	10.71	-	-	-	-	-	3.45	-	-
5	197+500	214+600	-	-	-	15.03	-	-	-	-	-	4.83	-	-
6	214+600	217+000	-	-	-	7.44	-	-	-	-	-	2.39	-	-
7	217+000	229+500	-	-	-	22.11	-	-	-	-	-	7.11	-	-
8	229+500	235+600	-	-	-	22.87	-	-	-	-	-	7.36	-	-
9	235+600	244+250	-	-	-	37.54	-	-	-	-	-	12.08	-	-
10	244+250	246+610	-	-	-	14.21	-	-	-	-	-	4.57	-	-
11	246+610	252+000	-	-	-	16.70	-	-	-	-	-	5.37	-	-
RHS														
1	150+000	157+400	-	-	-	19.60	-	-	-	-	-	6.31	-	-
2	157+400	177+750	-	-	-	10.41	-	-	-	-	-	3.35	-	-
3	177+750	189+850	-	-	-	12.32	-	-	-	-	-	3.96	-	-
4	189+850	208+840	-	-	-	5.24	-	-	-	-	-	1.68	-	-
5	208+840	214+600	-	-	-	7.13	-	-	-	-	-	2.29	-	-
6	214+600	220+500	-	-	-	5.85	-	-	-	-	-	1.88	-	-
7	220+500	227+500	-	-	-	14.30	-	-	-	-	-	4.60	-	-
8	227+500	231+210	-	-	-	15.78	-	-	-	-	-	5.08	-	-
9	231+210	246+750	-	-	-	17.39	-	-	-	-	-	5.59	-	-
10	246+750	252+000	-	-	-	16.91	-	-	-	-	-	5.44	-	-
Overlay-VG-30; Without Milling														
LHS														
1	150+100	157+600	35	1700	-	75.60	**40**	**50**	85	1700	-	72.73	**40**	**50**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Remaining life	Proposed (mm)		Overlay		Milling(mm	Remaining life	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa			BC	DBM	Thickness	Moduli, Mpa			BC	DBM
80% Reliability									**90% Reliability**					
2	157+600	165+350	55	1700	-	73.08	**40**	**50**	110	1700	-	77.82	**40**	**70**
3	165+350	183+100	50	1700	-	73.39	**40**	**50**	105	1700	-	77.86	**40**	**65**
4	183+100	197+500	80	1700	-	77.62	**40**	**50**	130	1700	-	78.16	**40**	**90**
5	197+500	214+600	65	1700	-	72.95	**40**	**50**	120	1700	-	79.54	**40**	**80**
6	214+600	217+000	80	1700	-	57.06	**40**	**50**	125	1700	-	54.37	**40**	**85**
7	217+000	229+500	40	1700	-	56.71	**40**	**50**	90	1700	-	55.81	**40**	**50**
8	229+500	235+600	40	1700	-	58.32	**40**	**50**	90	1700	-	57.27	**40**	**50**
9	235+600	244+250	30	1700	-	75.03	**40**	**50**	70	1700	-	58.06	**40**	**50**
10	244+250	246+610	55	1700	-	54.83	**40**	**50**	105	1700	-	54.67	**40**	**65**
11	246+610	252+000	75	1700	-	100.15	**40**	**50**	130	1700	-	104.89	**40**	**90**
RHS														
1	150+000	157+400	55	1700	-	72.87	**40**	**50**	110	1700	-	77.74	**40**	**70**
2	157+400	177+750	80	1700	-	76.12	**40**	**50**	130	1700	-	77.22	**40**	**90**
3	177+750	189+850	75	1700	-	77.41	**40**	**50**	125	1700	-	76.83	**40**	**85**
4	189+850	208+840	100	1700	-	81.89	**40**	**60**	140	1700	-	74.27	**40**	**100**
5	208+840	214+600	90	1700	-	75.43	**40**	**50**	135	1700	-	73.57	**40**	**95**
6	214+600	220+500	85	1700	-	56.77	**40**	**50**	130	1700	-	57.74	**40**	**90**
7	220+500	227+500	55	1700	-	55.19	**40**	**50**	105	1700	-	55.06	**40**	**65**
8	227+500	231+210	50	1700	-	53.47	**40**	**50**	100	1700	-	53.05	**40**	**60**
9	231+210	246+750	50	1700	-	58.19	**40**	**50**	100	1700	-	57.12	**40**	**60**
10	246+750	252+000	75	1700	-	101.19	**40**	**50**	130	1700	-	105.88	**40**	**90**
Overlay-VG-30; With 50mm Milling														
LHS														
1	150+100	157+600	85	1700	50	75.60	**40**	**50**	140	1700	50	78.70	**40**	**100**
2	157+600	165+350	105	1700	50	78.46	**40**	**65**	155	1700	50	75.90	**40**	**115**
3	165+350	183+100	100	1700	50	76.74	**40**	**60**	150	1700	50	73.50	**40**	**110**
4	183+100	197+500	120	1700	50	78.84	**40**	**80**	165	1700	50	72.11	**40**	**125**
5	197+500	214+600	110	1700	50	75.34	**40**	**70**	160	1700	50	75.15	**40**	**120**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Remaining life	Proposed (mm)		Overlay		Milling(mm	Remaining life	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa			BC	DBM	Thickness	Moduli, Mpa			BC	DBM
80% Reliability									**90% Reliability**					
6	214+600	217+000	115	1700	50	55.60	**40**	**75**	160	1700	50	54.07	**40**	**120**
7	217+000	229+500	90	1700	50	58.21	**40**	**50**	140	1700	50	56.91	**40**	**100**
8	229+500	235+600	85	1700	50	53.01	**40**	**50**	140	1700	50	58.02	**40**	**100**
9	235+600	244+250	65	1700	50	55.22	**40**	**50**	115	1700	50	53.28	**40**	**75**
10	244+250	246+610	100	1700	50	55.16	**40**	**60**	150	1700	50	56.25	**40**	**110**
11	246+610	252+000	120	1700	50	101.04	**40**	**80**	175	1700	50	107.44	**40**	**135**
RHS														
1	150+000	157+400	105	1700	50	78.87	**40**	**65**	155	1700	50	76.34	**40**	**115**
2	157+400	177+750	120	1700	50	78.02	**40**	**80**	170	1700	50	80.16	**40**	**130**
3	177+750	189+850	115	1700	50	75.12	**40**	**75**	165	1700	50	76.02	**40**	**125**
4	189+850	208+840	125	1700	50	73.95	**40**	**85**	170	1700	50	76.44	**40**	**130**
5	208+840	214+600	125	1700	50	79.22	**40**	**85**	170	1700	50	77.47	**40**	**130**
6	214+600	220+500	115	1700	50	53.75	**40**	**75**	160	1700	50	55.56	**40**	**120**
7	220+500	227+500	100	1700	50	55.61	**40**	**60**	150	1700	50	56.76	**40**	**110**
8	227+500	231+210	100	1700	50	59.01	**40**	**60**	145	1700	50	53.16	**40**	**105**
9	231+210	246+750	95	1700	50	55.60	**40**	**55**	145	1700	50	55.58	**40**	**105**
10	246+750	252+000	120	1700	50	101.73	**40**	**80**	175	1700	50	107.95	**40**	**135**
Overlay-VG-40; Without Milling														
LHS														
1	150+100	157+600	30	3000	-	75.20	**40**	**50**	75	3000	-	73.77	**40**	**50**
2	157+600	165+350	50	3000	-	75.59	**40**	**50**	95	3000	-	77.47	**40**	**55**
3	165+350	183+100	45	3000	-	75.17	**40**	**50**	90	3000	-	75.73	**40**	**50**
4	183+100	197+500	70	3000	-	77.02	**40**	**50**	110	3000	-	76.07	**40**	**70**
5	197+500	214+600	60	3000	-	77.83	**40**	**50**	100	3000	-	73.07	**40**	**60**
6	214+600	217+000	70	3000	-	56.83	**40**	**50**	110	3000	-	60.17	**40**	**70**
7	217+000	229+500	35	3000	-	56.90	**40**	**50**	80	3000	-	57.91	**40**	**50**
8	229+500	235+600	35	3000	-	58.61	**40**	**50**	80	3000	-	59.44	**40**	**50**
9	235+600	244+250	30	3000	-	82.20	**40**	**50**	65	3000	-	62.28	**40**	**50**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Remaining life	Proposed (mm)		Overlay		Milling(mm	Remaining life	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa			BC	DBM	Thickness	Moduli, Mpa			BC	DBM
80% Reliability									**90% Reliability**					
10	244+250	246+610	50	3000	-	56.52	**40**	**50**	90	3000	-	53.37	**40**	**50**
11	246+610	252+000	70	3000	-	111.13	**40**	**50**	110	3000	-	100.96	**40**	**70**
RHS														
1	150+000	157+400	50	3000	-	75.35	**40**	**50**	95	3000	-	77.39	**40**	**55**
2	157+400	177+750	70	3000	-	75.53	**40**	**50**	110	3000	-	75.18	**40**	**70**
3	177+750	189+850	65	3000	-	74.88	**40**	**50**	105	3000	-	72.43	**40**	**65**
4	189+850	208+840	85	3000	-	80.66	**40**	**50**	120	3000	-	80.90	**40**	**80**
5	208+840	214+600	80	3000	-	80.49	**40**	**50**	115	3000	-	75.56	**40**	**75**
6	214+600	220+500	75	3000	-	59.29	**40**	**50**	110	3000	-	58.25	**40**	**70**
7	220+500	227+500	50	3000	-	56.81	**40**	**50**	90	3000	-	53.64	**40**	**50**
8	227+500	231+210	45	3000	-	54.30	**40**	**50**	90	3000	-	57.59	**40**	**50**
9	231+210	246+750	45	3000	-	59.31	**40**	**50**	85	3000	-	54.32	**40**	**50**
10	246+750	252+000	70	3000	-	112.34	**40**	**50**	110	3000	-	101.90	**40**	**70**
Overlay-VG-40; With 50mm Milling														
LHS														
1	150+100	157+600	75	3000	50	77.94	**40**	**50**	120	3000	50	80.63	**40**	**80**
2	157+600	165+350	90	3000	50	78.19	**40**	**50**	130	3000	50	74.71	**40**	**90**
3	165+350	183+100	85	3000	50	74.27	**40**	**50**	130	3000	50	79.88	**40**	**90**
4	183+100	197+500	100	3000	50	75.26	**40**	**60**	140	3000	50	77.83	**40**	**100**
5	197+500	214+600	95	3000	50	77.83	**40**	**55**	135	3000	50	77.14	**40**	**95**
6	214+600	217+000	100	3000	50	61.43	**40**	**60**	135	3000	50	58.19	**40**	**95**
7	217+000	229+500	75	3000	50	53.61	**40**	**50**	120	3000	50	58.93	**40**	**80**
8	229+500	235+600	75	3000	50	54.92	**40**	**50**	120	3000	50	59.97	**40**	**80**
9	235+600	244+250	60	3000	50	58.90	**40**	**50**	100	3000	50	55.25	**40**	**60**
10	244+250	246+610	85	3000	50	53.77	**40**	**50**	125	3000	50	54.67	**40**	**85**
11	246+610	252+000	105	3000	50	109.53	**40**	**65**	145	3000	50	103.89	**40**	**105**
RHS														
1	150+000	157+400	90	3000	50	78.60	**40**	**50**	130	3000	50	75.32	**40**	**90**

Sl. No.	Homogenous Sections, km		Overlay		Milling(mm	Remaining life	Proposed (mm)		Overlay		Milling(mm	Remaining life	Proposed (mm)	
	From	To	Thickness	Moduli, Mpa			BC	DBM	Thickness	Moduli, Mpa			BC	DBM
80% Reliability									**90% Reliability**					
2	157+400	177+750	100	3000	50	74.61	**40**	**60**	140	3000	50	77.70	**40**	**100**
3	177+750	189+850	100	3000	50	80.43	**40**	**60**	140	3000	50	81.04	**40**	**100**
4	189+850	208+840	105	3000	50	77.53	**40**	**65**	140	3000	50	79.28	**40**	**100**
5	208+840	214+600	105	3000	50	80.73	**40**	**65**	140	3000	50	77.77	**40**	**100**
6	214+600	220+500	100	3000	50	61.38	**40**	**60**	130	3000	50	53.01	**40**	**90**
7	220+500	227+500	85	3000	50	54.20	**40**	**50**	125	3000	50	55.28	**40**	**85**
8	227+500	231+210	85	3000	50	57.47	**40**	**50**	125	3000	50	57.36	**40**	**85**
9	231+210	246+750	85	3000	50	60.74	**40**	**50**	125	3000	50	59.58	**40**	**85**
10	246+750	252+000	105	3000	50	110.31	**40**	**65**	145	3000	50	104.36	**40**	**105**

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1	26-4-2023	21:27:49	IL&FS	LSI	Solapur	MH	17.683441	75.929412	150+000	252+000	252+000 RHS Outer	1	36.6000	0.4020	0.2386	0.1510	0.0957	0.0555	0.0279	0.0251	38.3	40.2	T-34.5/41.4	41.4
	26-4-2023	21:27:49	IL&FS	LSI	Solapur	MH	17.683441	75.929412	150+000	252+000	252+000 RHS Outer	2	37.1000	0.3927	0.2455	0.1678	0.1083	0.0632	0.0281	0.0253	38.3	40.2	T-34.5/41.4	41.4
	26-4-2023	21:27:49	IL&FS	LSI	Solapur	MH	17.683441	75.929412	150+000	252+000	252+000 RHS Outer	3	37.3000	0.3934	0.2443	0.1593	0.1039	0.0573	0.0285	0.0256	38.3	40.2	T-34.5/41.4	41.4
2	26-4-2023	21:30:57	IL&FS	LSI	Solapur	MH	17.683229	75.928825	150+000	252+000	251+930 RHS Outer	1	37.5000	0.4035	0.2438	0.1431	0.0719	0.0491	0.0405	0.0365	38.3	40.4		41.4
	26-4-2023	21:30:57	IL&FS	LSI	Solapur	MH	17.683229	75.928825	150+000	252+000	251+930 RHS Outer	2	39.1000	0.4064	0.2336	0.1364	0.0759	0.0538	0.0468	0.0421	38.3	40.4		41.4
	26-4-2023	21:30:57	IL&FS	LSI	Solapur	MH	17.683229	75.928825	150+000	252+000	251+930 RHS Outer	3	38.9000	0.4105	0.2403	0.1447	0.0741	0.0503	0.0430	0.0387	38.3	40.4		41.4
3	26-4-2023	21:32:59	IL&FS	LSI	Solapur	MH	17.682943	75.928169	150+000	252+000	251+850 RHS Outer	1	37.7000	0.2952	0.1838	0.1129	0.0754	0.0591	0.0536	0.0519	38.4	40.3		41.4
	26-4-2023	21:32:59	IL&FS	LSI	Solapur	MH	17.682943	75.928169	150+000	252+000	251+850 RHS Outer	2	39.2000	0.3018	0.1956	0.1194	0.0869	0.0603	0.0525	0.0473	38.4	40.3		41.4
	26-4-2023	21:32:59	IL&FS	LSI	Solapur	MH	17.682943	75.928169	150+000	252+000	251+850 RHS Outer	3	38.1000	0.2906	0.1833	0.1169	0.0838	0.0575	0.0493	0.0444	38.4	40.3		41.4
4	26-4-2023	21:35:21	IL&FS	LSI	Solapur	MH	17.683057	75.927497	150+000	252+000	251+770 RHS Outer	1	38.0000	0.3721	0.2363	0.1460	0.0943	0.0582	0.0374	0.0242	38.4	41.5		41.4
	26-4-2023	21:35:21	IL&FS	LSI	Solapur	MH	17.683057	75.927497	150+000	252+000	251+770 RHS Outer	2	36.2000	0.3310	0.2094	0.1372	0.0890	0.0531	0.0352	0.0232	38.4	41.5		41.4
	26-4-2023	21:35:21	IL&FS	LSI	Solapur	MH	17.683057	75.927497	150+000	252+000	251+770 RHS Outer	3	38.3000	0.3583	0.2236	0.1435	0.0923	0.0546	0.0366	0.0245	38.4	41.5		41.4
5	26-4-2023	21:39:41	IL&FS	LSI	Solapur	MH	17.685373	75.926719	150+000	252+000	251+500 RHS Outer	1	40.0000	0.2506	0.1648	0.1023	0.0761	0.0609	0.0491	0.0442	37.9	39.9		41.4
	26-4-2023	21:39:41	IL&FS	LSI	Solapur	MH	17.685373	75.926719	150+000	252+000	251+500 RHS Outer	2	40.7000	0.2394	0.1586	0.1054	0.0787	0.0621	0.0497	0.0447	37.9	39.9		41.4
	26-4-2023	21:39:41	IL&FS	LSI	Solapur	MH	17.685373	75.926719	150+000	252+000	251+500 RHS Outer	3	39.3000	0.2263	0.1561	0.1026	0.0760	0.0596	0.0482	0.0434	37.9	39.9		41.4
6	26-4-2023	21:42:09	IL&FS	LSI	Solapur	MH	17.687482	75.925872	150+000	252+000	251+250 RHS Outer	1	39.9000	0.3165	0.1795	0.0924	0.0622	0.0416	0.0300	0.0218	37.9	40.0		41.4
	26-4-2023	21:42:09	IL&FS	LSI	Solapur	MH	17.687482	75.925872	150+000	252+000	251+250 RHS Outer	2	40.5000	0.3001	0.1784	0.0930	0.0632	0.0437	0.0291	0.0197	37.9	40.0		41.4
	26-4-2023	21:42:09	IL&FS	LSI	Solapur	MH	17.687482	75.925872	150+000	252+000	251+250 RHS Outer	3	40.2000	0.2996	0.1803	0.0934	0.0634	0.0430	0.0298	0.0216	37.9	40.0		41.4
7	26-4-2023	21:44:59	IL&FS	LSI	Solapur	MH	17.689697	75.924354	150+000	252+000	251+000 RHS Outer	1	39.8000	0.2981	0.1939	0.1015	0.0537	0.0407	0.0317	0.0285	37.7	39.7		41.4
	26-4-2023	21:44:59	IL&FS	LSI	Solapur	MH	17.689697	75.924354	150+000	252+000	251+000 RHS Outer	2	39.7000	0.2993	0.1890	0.0990	0.0544	0.0424	0.0347	0.0312	37.7	39.7		41.4
	26-4-2023	21:44:59	IL&FS	LSI	Solapur	MH	17.689697	75.924354	150+000	252+000	251+000 RHS Outer	3	39.9000	0.2944	0.1878	0.1009	0.0558	0.0441	0.0365	0.0328	37.7	39.7		41.4
8	26-4-2023	21:46:56	IL&FS	LSI	Solapur	MH	17.691158	75.922554	150+000	252+000	250+750 RHS Outer	1	40.7000	0.2691	0.1501	0.0846	0.0530	0.0419	0.0346	0.0292	37.5	39.4		41.4
	26-4-2023	21:46:56	IL&FS	LSI	Solapur	MH	17.691158	75.922554	150+000	252+000	250+750 RHS Outer	2	41.2000	0.2566	0.1509	0.0851	0.0576	0.0430	0.0321	0.0289	37.5	39.4		41.4
	26-4-2023	21:46:56	IL&FS	LSI	Solapur	MH	17.691158	75.922554	150+000	252+000	250+750 RHS Outer	3	41.1000	0.2599	0.1423	0.0836	0.0587	0.0443	0.0333	0.0282	37.5	39.4		41.4
9	26-4-2023	21:48:55	IL&FS	LSI	Solapur	MH	17.692111	75.920387	150+000	252+000	250+500 RHS Outer	1	41.0000	0.1300	0.0869	0.0471	0.0307	0.0230	0.0177	0.0159	37.4	39.5		41.4
	26-4-2023	21:48:55	IL&FS	LSI	Solapur	MH	17.692111	75.920387	150+000	252+000	250+500 RHS Outer	2	41.4000	0.1267	0.0814	0.0510	0.0325	0.0237	0.0181	0.0163	37.4	39.5		41.4
	26-4-2023	21:48:55	IL&FS	LSI	Solapur	MH	17.692111	75.920387	150+000	252+000	250+500 RHS Outer	3	41.6000	0.1322	0.0838	0.0473	0.0322	0.0242	0.0180	0.0162	37.4	39.5		41.4
10	26-4-2023	21:50:44	IL&FS	LSI	Solapur	MH	17.692686	75.918167	150+000	252+000	250+250 RHS Outer	1	41.3000	0.1798	0.1235	0.0860	0.0579	0.0440	0.0349	0.0314	37.5	40.0		41.4
	26-4-2023	21:50:44	IL&FS	LSI	Solapur	MH	17.692686	75.918167	150+000	252+000	250+250 RHS Outer	2	41.0000	0.1775	0.1229	0.0835	0.0545	0.0424	0.0335	0.0302	37.5	40.0		41.4
	26-4-2023	21:50:44	IL&FS	LSI	Solapur	MH	17.692686	75.918167	150+000	252+000	250+250 RHS Outer	3	41.1000	0.1844	0.1209	0.0855	0.0597	0.0435	0.0330	0.0297	37.5	40.0		41.4
11	26-4-2023	21:52:44	IL&FS	LSI	Solapur	MH	17.692890	75.915824	150+000	252+000	250+000 RHS Outer	1	39.9000	0.2205	0.1325	0.0831	0.0509	0.0309	0.0231	0.0207	37.7	39.8		41.4
	26-4-2023	21:52:44	IL&FS	LSI	Solapur	MH	17.692890	75.915824	150+000	252+000	250+000 RHS Outer	2	41.1000	0.2208	0.1358	0.0900	0.0581	0.0321	0.0240	0.0216	37.7	39.8		41.4
	26-4-2023	21:52:44	IL&FS	LSI	Solapur	MH	17.692890	75.915824	150+000	252+000	250+000 RHS Outer	3	41.5000	0.2213	0.1439	0.0865	0.0571	0.0321	0.0240	0.0216	37.7	39.8		41.4
12	26-4-2023	21:54:44	IL&FS	LSI	Solapur	MH	17.692790	75.913421	150+000	252+000	249+740 RHS Outer	1	39.0000	0.2579	0.1689	0.1027	0.0687	0.0436	0.0296	0.0205	37.9	39.9		41.4
	26-4-2023	21:54:44	IL&FS	LSI	Solapur	MH	17.692790	75.913421	150+000	252+000	249+740 RHS Outer	2	38.7000	0.2580	0.1681	0.1010	0.0678	0.0453	0.0300	0.0204	37.9	39.9		41.4
	26-4-2023	21:54:44	IL&FS	LSI	Solapur	MH	17.692790	75.913421	150+000	252+000	249+740 RHS Outer	3	38.9000	0.2587	0.1685	0.1059	0.0686	0.0445	0.0361	0.0298	37.9	39.9		41.4
13	26-4-2023	21:56:40	IL&FS	LSI	Solapur	MH	17.692821	75.910987	150+000	252+000	249+500 RHS Outer	1	41.3000	0.2198	0.1354	0.0790	0.0556	0.0401	0.0294	0.0235	38.0	39.9		41.4
	26-4-2023	21:56:40	IL&FS	LSI	Solapur	MH	17.692821	75.910987	150+000	252+000	249+500 RHS Outer	2	41.3000	0.2214	0.1325	0.0828	0.0539	0.0395	0.0290	0.0231	38.0	39.9		41.4
	26-4-2023	21:56:40	IL&FS	LSI	Solapur	MH	17.692821	75.910987	150+000	252+000	249+500 RHS Outer	3	41.9000	0.2163	0.1317	0.0846	0.0558	0.0399	0.0296	0.0236	38.0	39.9		41.4
14	26-4-2023	22:01:22	IL&FS	LSI	Solapur	MH	17.692783	75.908660	150+000	252+000	249+240 RHS Outer	1	39.8000	0.2548	0.1537	0.0857	0.0509	0.0401	0.0332	0.0299	38.0	39.8		41.4
	26-4-2023	22:01:22	IL&FS	LSI	Solapur	MH	17.692783	75.908660	150+000	252+000	249+240 RHS Outer	2	39.4000	0.2621	0.1523	0.0796	0.0490	0.0405	0.0343	0.0309	38.0	39.8		41.4
	26-4-2023	22:01:22	IL&FS	LSI	Solapur	MH	17.692783	75.908660	150+000	252+000	249+240 RHS Outer	3	38.9000	0.2369	0.1479	0.0753	0.0487	0.0380	0.0335	0.0314	38.0	39.8		41.4
15	26-4-2023	22:12:29	IL&FS	LSI	Solapur	MH	17.692502	75.906455	150+000	252+000	249+000 RHS Outer	1	40.2000	0.3010	0.1807	0.0994	0.0632	0.0394	0.0274	0.0246	37.7	39.2	T-34.8/41.2	41.2
	26-4-2023	22:12:29	IL&FS	LSI	Solapur	MH	17.692502	75.906455	150+000	252+000	249+000 RHS Outer	2	40.4000	0.3025	0.1849	0.1039	0.0670	0.0400	0.0298	0.0261	37.7	39.2	T-34.8/41.2	41.2
	26-4-2023	22:12:29	IL&FS	LSI	Solapur	MH	17.692502	75.906455	150+000	252+000	249+000 RHS Outer	3	39.5000	0.2958	0.1803	0.0987	0.0660	0.0406	0.0286	0.0230	37.7	39.2	T-34.8/41.2	41.2
16	26-4-2023	22:14:49	IL&FS	LSI	Solapur	MH	17.692125	75.904106	150+000	252+000	248+750 RHS Outer	1	39.0000	0.3052	0.1689	0.0942	0.0495	0.0368	0.0318	0.0286	37.3	38.3		41.2
	26-4-2023	22:14:49	IL&FS	LSI	Solapur	MH	17.692125	75.904106	150+000	252+000	248+750 RHS Outer	2	39.0000	0.3042	0.1709	0.0951	0.0527	0.0371	0.0323	0.0291	37.3	38.3		41.2
	26-4-2023	22:14:49	IL&FS	LSI	Solapur	MH	17.692125	75.904106	150+000	252+000	248+750 RHS Outer	3	39.2000	0.2980	0.1783	0.0921	0.0554	0.0354	0.0311	0.0280	37.3	38.3		41.2
17	26-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.691417	75.901863	150+000	252+000	248+500 RHS Outer	1	41.2000	0.2652	0.1564	0.0933	0.0608	0.0449	0.0377	0.0339	37.2	38.0		41.2
	26-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.691417	75.901863	150+000	252+000	248+500 RHS Outer	2	41.5000	0.2613	0.1468	0.0831	0.0616	0.0409	0.0357	0.0321	37.2	38.0		41.2
	26-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.691417	75.901863	150+000	252+000	248+500 RHS Outer	3	43.2000	0.2731	0.1640	0.0941	0.0639	0.0460	0.0401	0.0360	37.2	38.0		41.2
18	26-4-2023	22:18:40	IL&FS	LSI	Solapur	MH	17.690374	75.899780	150+000	252+000	248+250 RHS Outer	1	36.2000	0.1835	0.1065	0.0649	0.0405	0.0288	0.0214	0.0193	37.2	39.0		41.2
	26-4-2023	22:18:40	IL&FS	LSI	Solapur	MH	17.690374	75.899780	150+000	252+000	248+250 RHS Outer	2	36.8000	0.1931	0.1112	0.0695	0.0409	0.0303	0.0226	0.0203	37.2	39.0		41.2
	26-4-2023	22:18:40	IL&FS	LSI	Solapur	MH	17.690374	75.899780	150+000	252+000	248+250 RHS Outer	3	36.7000	0.1774	0.1111	0.0701	0.0405	0.0298	0.0228	0.0205	37.2	39.0		41.2
19	26-4-2023	22:20:27	IL&FS	LSI	Solapur	MH	17.689058	75.897857	150+000	252+000	248+000 RHS Outer	1	41.7000	0.2386	0.1393	0.0917	0.0569	0.0406	0.0303	0.0273	37.4	39.1		41.2
	26-4-2023	22:20:27	IL&FS	LSI	Solapur	MH	17.689058	75.897857	150+000	252+000	248+000 RHS Outer	2	41.7000	0.2448	0.1358	0.0853	0.0587	0.0421	0.0297	0.0267	37.4	39.1		41.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	26-4-2023	22:20:27	IL&FS	LSI	Solapur	MH	17.689058	75.897857	150+000	252+000	248+000 RHS Outer	3	42.0000	0.2371	0.1354	0.0875	0.0580	0.0414	0.0309	0.0278	37.4	39.1		41.2
20	26-4-2023	22:22:12	IL&FS	LSI	Solapur	MH	17.687479	75.896049	150+000	252+000	247+750 RHS Outer	1	41.6000	0.2317	0.1552	0.0916	0.0527	0.0300	0.0225	0.0203	37.6	39.7		41.2
	26-4-2023	22:22:12	IL&FS	LSI	Solapur	MH	17.687479	75.896049	150+000	252+000	247+750 RHS Outer	2	41.3000	0.2403	0.1555	0.0926	0.0530	0.0304	0.0231	0.0208	37.6	39.7		41.2
	26-4-2023	22:22:12	IL&FS	LSI	Solapur	MH	17.687479	75.896049	150+000	252+000	247+750 RHS Outer	3	41.6000	0.2292	0.1500	0.0912	0.0529	0.0323	0.0236	0.0212	37.6	39.7		41.2
21	26-4-2023	22:25:17	IL&FS	LSI	Solapur	MH	17.686008	75.894378	150+000	252+000	247+500 RHS Outer	1	41.4000	0.1337	0.1118	0.0877	0.0713	0.0530	0.0417	0.0259	37.4	39.2		41.2
	26-4-2023	22:25:17	IL&FS	LSI	Solapur	MH	17.686008	75.894378	150+000	252+000	247+500 RHS Outer	2	41.2000	0.1413	0.1093	0.0876	0.0729	0.0526	0.0401	0.0255	37.4	39.2		41.2
	26-4-2023	22:25:17	IL&FS	LSI	Solapur	MH	17.686008	75.894378	150+000	252+000	247+500 RHS Outer	3	40.1000	0.1310	0.1156	0.0887	0.0691	0.0511	0.0384	0.0255	37.4	39.2		41.2
22	26-4-2023	22:27:08	IL&FS	LSI	Solapur	MH	17.686220	75.892082	150+000	252+000	247+250 RHS Outer	1	41.3000	0.2350	0.1423	0.0833	0.0519	0.0375	0.0283	0.0202	37.4	39.3		41.2
	26-4-2023	22:27:08	IL&FS	LSI	Solapur	MH	17.686220	75.892082	150+000	252+000	247+250 RHS Outer	2	41.6000	0.2308	0.1410	0.0811	0.0515	0.0384	0.0300	0.0200	37.4	39.3		41.2
	26-4-2023	22:27:08	IL&FS	LSI	Solapur	MH	17.686220	75.892082	150+000	252+000	247+250 RHS Outer	3	41.1000	0.2159	0.1377	0.0828	0.0513	0.0370	0.0272	0.0204	37.4	39.3		41.2
23	26-4-2023	22:29:02	IL&FS	LSI	Solapur	MH	17.687398	75.890144	150+000	252+000	247+000 RHS Outer	1	39.8000	0.2807	0.1815	0.1169	0.0753	0.0525	0.0350	0.0193	37.2	38.7		41.2
	26-4-2023	22:29:02	IL&FS	LSI	Solapur	MH	17.687398	75.890144	150+000	252+000	247+000 RHS Outer	2	40.1000	0.2745	0.1831	0.1177	0.0713	0.0493	0.0354	0.0196	37.2	38.7		41.2
	26-4-2023	22:29:02	IL&FS	LSI	Solapur	MH	17.687398	75.890144	150+000	252+000	247+000 RHS Outer	3	40.7000	0.2826	0.1878	0.1188	0.0707	0.0510	0.0358	0.0192	37.2	38.7		41.2
24	26-4-2023	22:31:14	IL&FS	LSI	Solapur	MH	17.688758	75.888282	150+000	252+000	246+750 RHS Outer	1	42.5000	0.2062	0.1390	0.0856	0.0652	0.0494	0.0469	0.0422	37.1	38.1		41.2
	26-4-2023	22:31:14	IL&FS	LSI	Solapur	MH	17.688758	75.888282	150+000	252+000	246+750 RHS Outer	2	42.3000	0.2122	0.1364	0.0838	0.0639	0.0486	0.0439	0.0395	37.1	38.1		41.2
	26-4-2023	22:31:14	IL&FS	LSI	Solapur	MH	17.688758	75.888282	150+000	252+000	246+750 RHS Outer	3	42.3000	0.2119	0.1400	0.0875	0.0646	0.0495	0.0412	0.0371	37.1	38.1		41.2
25	26-4-2023	22:34:35	IL&FS	LSI	Solapur	MH	17.690237	75.886421	150+000	252+000	246+490 RHS Outer	1	42.0000	0.2014	0.1154	0.0751	0.0481	0.0270	0.0214	0.0193	36.7	37.5		41.2
	26-4-2023	22:34:35	IL&FS	LSI	Solapur	MH	17.690237	75.886421	150+000	252+000	246+490 RHS Outer	2	41.5000	0.1891	0.1186	0.0744	0.0469	0.0284	0.0222	0.0199	36.7	37.5		41.2
	26-4-2023	22:34:35	IL&FS	LSI	Solapur	MH	17.690237	75.886421	150+000	252+000	246+490 RHS Outer	3	42.2000	0.2053	0.1152	0.0763	0.0490	0.0289	0.0228	0.0205	36.7	37.5		41.2
26	26-4-2023	22:36:30	IL&FS	LSI	Solapur	MH	17.691059	75.884246	150+000	252+000	246+250 RHS Outer	1	41.8000	0.2272	0.1335	0.0740	0.0468	0.0352	0.0270	0.0243	36.5	37.3		41.2
	26-4-2023	22:36:30	IL&FS	LSI	Solapur	MH	17.691059	75.884246	150+000	252+000	246+250 RHS Outer	2	41.7000	0.2288	0.1303	0.0755	0.0471	0.0348	0.0265	0.0238	36.5	37.3		41.2
	26-4-2023	22:36:30	IL&FS	LSI	Solapur	MH	17.691059	75.884246	150+000	252+000	246+250 RHS Outer	3	41.6000	0.2173	0.1230	0.0739	0.0474	0.0354	0.0259	0.0233	36.5	37.3		41.2
27	26-4-2023	22:40:07	IL&FS	LSI	Solapur	MH	17.691728	75.882080	150+000	252+000	246+000 RHS Outer	1	39.2000	0.3853	0.2258	0.1220	0.0793	0.0619	0.0463	0.0355	36.5	37.1		41.2
	26-4-2023	22:40:07	IL&FS	LSI	Solapur	MH	17.691728	75.882080	150+000	252+000	246+000 RHS Outer	2	38.8000	0.3658	0.2243	0.1135	0.0717	0.0607	0.0429	0.0296	36.5	37.1		41.2
	26-4-2023	22:40:07	IL&FS	LSI	Solapur	MH	17.691728	75.882080	150+000	252+000	246+000 RHS Outer	3	39.4000	0.3621	0.2177	0.1150	0.0778	0.0612	0.0439	0.0324	36.5	37.1		41.2
28	26-4-2023	22:42:09	IL&FS	LSI	Solapur	MH	17.693143	75.880165	150+000	252+000	245+750 RHS Outer	1	39.9000	0.2666	0.1404	0.0738	0.0530	0.0419	0.0342	0.0220	36.2	36.7		41.2
	26-4-2023	22:42:09	IL&FS	LSI	Solapur	MH	17.693143	75.880165	150+000	252+000	245+750 RHS Outer	2	40.5000	0.2675	0.1434	0.0831	0.0524	0.0417	0.0346	0.0233	36.2	36.7		41.2
	26-4-2023	22:42:09	IL&FS	LSI	Solapur	MH	17.693143	75.880165	150+000	252+000	245+750 RHS Outer	3	40.7000	0.2629	0.1424	0.0758	0.0558	0.0434	0.0347	0.0244	36.2	36.7		41.2
29	26-4-2023	22:44:07	IL&FS	LSI	Solapur	MH	17.694101	75.878021	150+000	252+000	245+500 RHS Outer	1	39.0000	0.3833	0.2297	0.1275	0.0666	0.0465	0.0393	0.0354	35.9	37.3		41.2
	26-4-2023	22:44:07	IL&FS	LSI	Solapur	MH	17.694101	75.878021	150+000	252+000	245+500 RHS Outer	2	39.4000	0.3871	0.2199	0.1305	0.0710	0.0468	0.0399	0.0359	35.9	37.3		41.2
	26-4-2023	22:44:07	IL&FS	LSI	Solapur	MH	17.694101	75.878021	150+000	252+000	245+500 RHS Outer	3	39.8000	0.3807	0.2299	0.1309	0.0701	0.0518	0.0472	0.0349	35.9	37.3		41.2
30	26-4-2023	22:46:12	IL&FS	LSI	Solapur	MH	17.694873	75.875831	150+000	252+000	245+250 RHS Outer	1	39.4000	0.3460	0.2040	0.1090	0.0692	0.0492	0.0362	0.0326	36.2	37.7		41.2
	26-4-2023	22:46:12	IL&FS	LSI	Solapur	MH	17.694873	75.875831	150+000	252+000	245+250 RHS Outer	2	39.7000	0.3341	0.2052	0.1132	0.0719	0.0560	0.0436	0.0312	36.2	37.7		41.2
	26-4-2023	22:46:12	IL&FS	LSI	Solapur	MH	17.694873	75.875831	150+000	252+000	245+250 RHS Outer	3	39.8000	0.3371	0.1906	0.1178	0.0714	0.0533	0.0397	0.0313	36.2	37.7		41.2
31	26-4-2023	22:51:04	IL&FS	LSI	Solapur	MH	17.696071	75.873870	150+000	252+000	245+000 RHS Outer	1	40.9000	0.2236	0.1459	0.1060	0.0820	0.0649	0.0581	0.0532	35.9	37.8	T-32.5/39.4	39.4
	26-4-2023	22:51:04	IL&FS	LSI	Solapur	MH	17.696071	75.873870	150+000	252+000	245+000 RHS Outer	2	41.9000	0.2276	0.1485	0.1073	0.0840	0.0686	0.0600	0.0545	35.9	37.8	T-32.5/39.4	39.4
	26-4-2023	22:51:04	IL&FS	LSI	Solapur	MH	17.696071	75.873870	150+000	252+000	245+000 RHS Outer	3	40.7000	0.2225	0.1492	0.1065	0.0836	0.0679	0.0589	0.0529	35.9	37.8	T-32.5/39.4	39.4
32	26-4-2023	22:54:28	IL&FS	LSI	Solapur	MH	17.697174	75.871856	150+000	252+000	244+750 RHS Outer	1	38.5000	0.3025	0.1867	0.1100	0.0605	0.0424	0.0299	0.0269	35.8	36.7		39.4
	26-4-2023	22:54:28	IL&FS	LSI	Solapur	MH	17.697174	75.871856	150+000	252+000	244+750 RHS Outer	2	38.7000	0.2814	0.1763	0.1018	0.0652	0.0437	0.0295	0.0265	35.8	36.7		39.4
	26-4-2023	22:54:28	IL&FS	LSI	Solapur	MH	17.697174	75.871856	150+000	252+000	244+750 RHS Outer	3	38.9000	0.2816	0.1727	0.0999	0.0630	0.0434	0.0290	0.0261	35.8	36.7		39.4
33	26-4-2023	22:56:56	IL&FS	LSI	Solapur	MH	17.698247	75.869796	150+000	252+000	244+500 RHS Outer	1	38.9000	0.3091	0.1958	0.1206	0.0801	0.0528	0.0408	0.0318	35.6	36.4		39.4
	26-4-2023	22:56:56	IL&FS	LSI	Solapur	MH	17.698247	75.869796	150+000	252+000	244+500 RHS Outer	2	39.0000	0.3090	0.1934	0.1247	0.0842	0.0526	0.0428	0.0361	35.6	36.4		39.4
	26-4-2023	22:56:56	IL&FS	LSI	Solapur	MH	17.698247	75.869796	150+000	252+000	244+500 RHS Outer	3	39.2000	0.3117	0.1981	0.1252	0.0846	0.0553	0.0420	0.0337	35.6	36.4		39.4
34	26-4-2023	22:59:12	IL&FS	LSI	Solapur	MH	17.699310	75.867782	150+000	252+000	244+250 RHS Outer	1	41.6000	0.1834	0.1183	0.0815	0.0649	0.0537	0.0422	0.0331	35.7	37.3		39.4
	26-4-2023	22:59:12	IL&FS	LSI	Solapur	MH	17.699310	75.867782	150+000	252+000	244+250 RHS Outer	2	42.1000	0.1872	0.1192	0.0823	0.0663	0.0541	0.0425	0.0335	35.7	37.3		39.4
	26-4-2023	22:59:12	IL&FS	LSI	Solapur	MH	17.699310	75.867782	150+000	252+000	244+250 RHS Outer	3	42.1000	0.1891	0.1270	0.0808	0.0650	0.0545	0.0414	0.0324	35.7	37.3		39.4
35	26-4-2023	23:01:17	IL&FS	LSI	Solapur	MH	17.700523	75.865867	150+000	252+000	244+000 RHS Outer	1	42.3000	0.1774	0.1055	0.0648	0.0472	0.0298	0.0236	0.0196	35.8	37.8		39.4
	26-4-2023	23:01:17	IL&FS	LSI	Solapur	MH	17.700523	75.865867	150+000	252+000	244+000 RHS Outer	2	41.7000	0.1677	0.0983	0.0644	0.0417	0.0293	0.0242	0.0202	35.8	37.8		39.4
	26-4-2023	23:01:17	IL&FS	LSI	Solapur	MH	17.700523	75.865867	150+000	252+000	244+000 RHS Outer	3	42.3000	0.1672	0.1060	0.0681	0.0476	0.0299	0.0238	0.0197	35.8	37.8		39.4
36	26-4-2023	23:03:17	IL&FS	LSI	Solapur	MH	17.702125	75.864112	150+000	252+000	243+750 RHS Outer	1	40.6000	0.1981	0.1203	0.0740	0.0523	0.0372	0.0328	0.0295	35.6	37.2		39.4
	26-4-2023	23:03:17	IL&FS	LSI	Solapur	MH	17.702125	75.864112	150+000	252+000	243+750 RHS Outer	2	40.9000	0.1927	0.1197	0.0758	0.0509	0.0363	0.0302	0.0272	35.6	37.2		39.4
	26-4-2023	23:03:17	IL&FS	LSI	Solapur	MH	17.702125	75.864112	150+000	252+000	243+750 RHS Outer	3	40.8000	0.1858	0.1198	0.0758	0.0467	0.0395	0.0309	0.0278	35.6	37.2		39.4
37	26-4-2023	23:05:18	IL&FS	LSI	Solapur	MH	17.703748	75.862701	150+000	252+000	243+500 RHS Outer	1	41.2000	0.2198	0.1347	0.0778	0.0506	0.0322	0.0249	0.0192	35.7	37.5		39.4
	26-4-2023	23:05:18	IL&FS	LSI	Solapur	MH	17.703748	75.862701	150+000	252+000	243+500 RHS Outer	2	41.4000	0.2188	0.1197	0.0761	0.0505	0.0324	0.0252	0.0197	35.7	37.5		39.4
	26-4-2023	23:05:18	IL&FS	LSI	Solapur	MH	17.703748	75.862701	150+000	252+000	243+500 RHS Outer	3	41.0000	0.2146	0.1230	0.0785	0.0512	0.0317	0.0250	0.0206	35.7	37.5		39.4
38	26-4-2023	23:07:11	IL&FS	LSI	Solapur	MH	17.705377	75.861076	150+000	252+000	243+250 RHS Outer	1	41.6000	0.2361	0.1526	0.0920	0.0534	0.0373	0.0279	0.0207	35.6	37.5		39.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	26-4-2023	23:07:11	IL&FS	LSI	Solapur	MH	17.705377	75.861076	150+000	252+000	243+250 RHS Outer	2	41.3000	0.2326	0.1465	0.0951	0.0536	0.0370	0.0273	0.0209	35.6	37.5		39.4
	26-4-2023	23:07:11	IL&FS	LSI	Solapur	MH	17.705377	75.861076	150+000	252+000	243+250 RHS Outer	3	41.4000	0.2219	0.1403	0.0900	0.0552	0.0372	0.0291	0.0228	35.6	37.5		39.4
39	26-4-2023	23:09:20	IL&FS	LSI	Solapur	MH	17.707216	75.859283	150+000	252+000	243+000 RHS Outer	1	41.0000	0.1806	0.1122	0.0767	0.0487	0.0372	0.0300	0.0208	35.7	37.4		39.4
	26-4-2023	23:09:20	IL&FS	LSI	Solapur	MH	17.707216	75.859283	150+000	252+000	243+000 RHS Outer	2	41.9000	0.1837	0.1139	0.0724	0.0498	0.0390	0.0313	0.0221	35.7	37.4		39.4
	26-4-2023	23:09:20	IL&FS	LSI	Solapur	MH	17.707216	75.859283	150+000	252+000	243+000 RHS Outer	3	41.9000	0.1834	0.1149	0.0782	0.0496	0.0365	0.0277	0.0204	35.7	37.4		39.4
40	26-4-2023	23:11:20	IL&FS	LSI	Solapur	MH	17.708883	75.857688	150+000	252+000	242+750 RHS Outer	1	42.1000	0.1963	0.1421	0.0961	0.0715	0.0509	0.0335	0.0198	35.4	36.2		39.4
	26-4-2023	23:11:20	IL&FS	LSI	Solapur	MH	17.708883	75.857688	150+000	252+000	242+750 RHS Outer	2	42.3000	0.1941	0.1413	0.1008	0.0663	0.0480	0.0322	0.0213	35.4	36.2		39.4
	26-4-2023	23:11:20	IL&FS	LSI	Solapur	MH	17.708883	75.857688	150+000	252+000	242+750 RHS Outer	3	41.8000	0.1954	0.1316	0.0965	0.0685	0.0494	0.0332	0.0219	35.4	36.2		39.4
41	26-4-2023	23:13:10	IL&FS	LSI	Solapur	MH	17.710491	75.856147	150+000	252+000	242+500 RHS Outer	1	38.7000	0.4212	0.2466	0.1453	0.0973	0.0655	0.0497	0.0378	35.7	37.4		39.4
	26-4-2023	23:13:10	IL&FS	LSI	Solapur	MH	17.710491	75.856147	150+000	252+000	242+500 RHS Outer	2	39.2000	0.4219	0.2706	0.1329	0.0935	0.0637	0.0488	0.0382	35.7	37.4		39.4
	26-4-2023	23:13:10	IL&FS	LSI	Solapur	MH	17.710491	75.856147	150+000	252+000	242+500 RHS Outer	3	38.9000	0.4086	0.2522	0.1340	0.0944	0.0652	0.0492	0.0376	35.7	37.4		39.4
42	26-4-2023	23:15:11	IL&FS	LSI	Solapur	MH	17.712076	75.854583	150+000	252+000	242+250 RHS Outer	1	39.2000	0.3489	0.1824	0.1082	0.0704	0.0452	0.0377	0.0328	35.8	37.2		39.4
	26-4-2023	23:15:11	IL&FS	LSI	Solapur	MH	17.712076	75.854583	150+000	252+000	242+250 RHS Outer	2	39.2000	0.3405	0.2052	0.1112	0.0751	0.0494	0.0363	0.0270	35.8	37.2		39.4
	26-4-2023	23:15:11	IL&FS	LSI	Solapur	MH	17.712076	75.854583	150+000	252+000	242+250 RHS Outer	3	39.3000	0.3440	0.2008	0.1105	0.0741	0.0470	0.0387	0.0328	35.8	37.2		39.4
43	26-4-2023	23:17:07	IL&FS	LSI	Solapur	MH	17.713779	75.852912	150+000	252+000	242+000 RHS Outer	1	39.3000	0.3249	0.1915	0.1086	0.0648	0.0364	0.0262	0.0236	35.8	37.3		39.4
	26-4-2023	23:17:07	IL&FS	LSI	Solapur	MH	17.713779	75.852912	150+000	252+000	242+000 RHS Outer	2	39.3000	0.3063	0.1849	0.1087	0.0584	0.0409	0.0279	0.0251	35.8	37.3		39.4
	26-4-2023	23:17:07	IL&FS	LSI	Solapur	MH	17.713779	75.852912	150+000	252+000	242+000 RHS Outer	3	39.4000	0.3085	0.1851	0.1083	0.0637	0.0390	0.0268	0.0241	35.8	37.3		39.4
44	26-4-2023	23:18:57	IL&FS	LSI	Solapur	MH	17.715272	75.851409	150+000	252+000	241+750 RHS Outer	1	39.1000	0.3518	0.2046	0.1114	0.0784	0.0569	0.0486	0.0437	35.9	36.9		39.4
	26-4-2023	23:18:57	IL&FS	LSI	Solapur	MH	17.715272	75.851409	150+000	252+000	241+750 RHS Outer	2	39.4000	0.3590	0.2068	0.1209	0.0832	0.0589	0.0509	0.0458	35.9	36.9		39.4
	26-4-2023	23:18:57	IL&FS	LSI	Solapur	MH	17.715272	75.851409	150+000	252+000	241+750 RHS Outer	3	39.1000	0.3512	0.2082	0.1194	0.0813	0.0574	0.0551	0.0379	35.9	36.9		39.4
45	26-4-2023	23:20:53	IL&FS	LSI	Solapur	MH	17.716991	75.849784	150+000	252+000	241+500 RHS Outer	1	40.4000	0.3452	0.2133	0.1180	0.0712	0.0497	0.0351	0.0315	35.7	36.7		39.4
	26-4-2023	23:20:53	IL&FS	LSI	Solapur	MH	17.716991	75.849784	150+000	252+000	241+500 RHS Outer	2	40.4000	0.3253	0.2103	0.1184	0.0696	0.0509	0.0365	0.0328	35.7	36.7		39.4
	26-4-2023	23:20:53	IL&FS	LSI	Solapur	MH	17.716991	75.849784	150+000	252+000	241+500 RHS Outer	3	40.6000	0.3347	0.2098	0.1197	0.0675	0.0497	0.0368	0.0331	35.7	36.7		39.4
46	26-4-2023	23:22:48	IL&FS	LSI	Solapur	MH	17.718723	75.848197	150+000	252+000	241+250 RHS Outer	1	41.3000	0.2247	0.1356	0.0668	0.0503	0.0370	0.0345	0.0311	35.8	37.3		39.4
	26-4-2023	23:22:48	IL&FS	LSI	Solapur	MH	17.718723	75.848197	150+000	252+000	241+250 RHS Outer	2	41.6000	0.2275	0.1290	0.0746	0.0470	0.0394	0.0345	0.0310	35.8	37.3		39.4
	26-4-2023	23:22:48	IL&FS	LSI	Solapur	MH	17.718723	75.848197	150+000	252+000	241+250 RHS Outer	3	41.8000	0.2224	0.1258	0.0747	0.0459	0.0384	0.0382	0.0301	35.8	37.3		39.4
47	26-4-2023	23:24:57	IL&FS	LSI	Solapur	MH	17.720493	75.846557	150+000	252+000	241+000 RHS Outer	1	40.1000	0.4178	0.2304	0.1466	0.0820	0.0562	0.0463	0.0373	35.6	36.6		39.4
	26-4-2023	23:24:57	IL&FS	LSI	Solapur	MH	17.720493	75.846557	150+000	252+000	241+000 RHS Outer	2	40.2000	0.4062	0.2180	0.1333	0.0813	0.0586	0.0493	0.0374	35.6	36.6		39.4
	26-4-2023	23:24:57	IL&FS	LSI	Solapur	MH	17.720493	75.846557	150+000	252+000	241+000 RHS Outer	3	40.7000	0.3920	0.2166	0.1391	0.0835	0.0577	0.0488	0.0378	35.6	36.6		39.4
48	26-4-2023	23:26:52	IL&FS	LSI	Solapur	MH	17.722265	75.844863	150+000	252+000	240+750 RHS Outer	1	39.0000	0.3496	0.1894	0.1052	0.0607	0.0452	0.0340	0.0247	35.5	36.8		39.4
	26-4-2023	23:26:52	IL&FS	LSI	Solapur	MH	17.722265	75.844863	150+000	252+000	240+750 RHS Outer	2	39.7000	0.3623	0.1932	0.1080	0.0643	0.0464	0.0350	0.0240	35.5	36.8		39.4
	26-4-2023	23:26:52	IL&FS	LSI	Solapur	MH	17.722265	75.844863	150+000	252+000	240+750 RHS Outer	3	39.9000	0.3567	0.1918	0.1051	0.0571	0.0438	0.0352	0.0250	35.5	36.8		39.4
49	26-4-2023	23:28:58	IL&FS	LSI	Solapur	MH	17.723823	75.843338	150+000	252+000	240+500 RHS Outer	1	40.9000	0.2955	0.1669	0.1004	0.0611	0.0386	0.0283	0.0255	35.6	37.2		39.4
	26-4-2023	23:28:58	IL&FS	LSI	Solapur	MH	17.723823	75.843338	150+000	252+000	240+500 RHS Outer	2	40.3000	0.2842	0.1764	0.1059	0.0579	0.0429	0.0256	0.0230	35.6	37.2		39.4
	26-4-2023	23:28:58	IL&FS	LSI	Solapur	MH	17.723823	75.843338	150+000	252+000	240+500 RHS Outer	3	41.0000	0.2845	0.1655	0.0948	0.0570	0.0398	0.0285	0.0257	35.6	37.2		39.4
50	26-4-2023	23:31:00	IL&FS	LSI	Solapur	MH	17.725543	75.841690	150+000	252+000	240+250 RHS Outer	1	42.8000	0.1428	0.0915	0.0626	0.0423	0.0292	0.0242	0.0218	35.5	38.0		39.4
	26-4-2023	23:31:00	IL&FS	LSI	Solapur	MH	17.725543	75.841690	150+000	252+000	240+250 RHS Outer	2	43.0000	0.1409	0.0891	0.0586	0.0418	0.0290	0.0227	0.0204	35.5	38.0		39.4
	26-4-2023	23:31:00	IL&FS	LSI	Solapur	MH	17.725543	75.841690	150+000	252+000	240+250 RHS Outer	3	44.0000	0.1337	0.0909	0.0619	0.0425	0.0304	0.0260	0.0234	35.5	38.0		39.4
51	26-4-2023	23:33:01	IL&FS	LSI	Solapur	MH	17.726915	75.839996	150+000	252+000	240+000 RHS Outer	1	42.4000	0.1668	0.1079	0.0664	0.0469	0.0340	0.0275	0.0215	35.5	37.2		39.4
	26-4-2023	23:33:01	IL&FS	LSI	Solapur	MH	17.726915	75.839996	150+000	252+000	240+000 RHS Outer	2	42.7000	0.1669	0.1105	0.0653	0.0469	0.0355	0.0283	0.0230	35.5	37.2		39.4
	26-4-2023	23:33:01	IL&FS	LSI	Solapur	MH	17.726915	75.839996	150+000	252+000	240+000 RHS Outer	3	41.9000	0.1662	0.1064	0.0678	0.0486	0.0336	0.0268	0.0229	35.5	37.2		39.4
52	26-4-2023	23:35:39	IL&FS	LSI	Solapur	MH	17.727945	75.837806	150+000	252+000	239+750 RHS Outer	1	41.4000	0.2782	0.1483	0.0838	0.0495	0.0332	0.0229	0.0206	35.3	36.8	T-31.5/40.8	40.8
	26-4-2023	23:35:39	IL&FS	LSI	Solapur	MH	17.727945	75.837806	150+000	252+000	239+750 RHS Outer	2	41.0000	0.2795	0.1432	0.0797	0.0523	0.0347	0.0213	0.0191	35.3	36.8	T-31.5/40.8	40.8
	26-4-2023	23:35:39	IL&FS	LSI	Solapur	MH	17.727945	75.837806	150+000	252+000	239+750 RHS Outer	3	41.1000	0.2636	0.1385	0.0820	0.0506	0.0341	0.0221	0.0198	35.3	36.8	T-31.5/40.8	40.8
53	26-4-2023	23:39:17	IL&FS	LSI	Solapur	MH	17.728841	75.835723	150+000	252+000	239+500 RHS Outer	1	42.1000	0.1721	0.1090	0.0767	0.0471	0.0377	0.0310	0.0235	35.5	36.7		40.8
	26-4-2023	23:39:17	IL&FS	LSI	Solapur	MH	17.728841	75.835723	150+000	252+000	239+500 RHS Outer	2	42.6000	0.1660	0.1053	0.0759	0.0509	0.0396	0.0314	0.0241	35.5	36.7		40.8
	26-4-2023	23:39:17	IL&FS	LSI	Solapur	MH	17.728841	75.835723	150+000	252+000	239+500 RHS Outer	3	42.0000	0.1716	0.1130	0.0770	0.0503	0.0384	0.0296	0.0255	35.5	36.7		40.8
54	26-4-2023	23:41:21	IL&FS	LSI	Solapur	MH	17.729820	75.833526	150+000	252+000	239+250 RHS Outer	1	39.3000	0.3014	0.1900	0.1253	0.0854	0.0561	0.0436	0.0347	35.3	36.7		40.8
	26-4-2023	23:41:21	IL&FS	LSI	Solapur	MH	17.729820	75.833526	150+000	252+000	239+250 RHS Outer	2	39.1000	0.2962	0.1847	0.1259	0.0844	0.0585	0.0436	0.0341	35.3	36.7		40.8
	26-4-2023	23:41:21	IL&FS	LSI	Solapur	MH	17.729820	75.833526	150+000	252+000	239+250 RHS Outer	3	39.1000	0.2829	0.1838	0.1216	0.0824	0.0544	0.0430	0.0357	35.3	36.7		40.8
55	26-4-2023	23:43:20	IL&FS	LSI	Solapur	MH	17.730768	75.831405	150+000	252+000	239+000 RHS Outer	1	41.6000	0.2510	0.1496	0.0979	0.0647	0.0420	0.0281	0.0253	35.4	36.5		40.8
	26-4-2023	23:43:20	IL&FS	LSI	Solapur	MH	17.730768	75.831405	150+000	252+000	239+000 RHS Outer	2	42.0000	0.2244	0.1506	0.1023	0.0653	0.0446	0.0288	0.0259	35.4	36.5		40.8
	26-4-2023	23:43:20	IL&FS	LSI	Solapur	MH	17.730768	75.831405	150+000	252+000	239+000 RHS Outer	3	41.9000	0.2386	0.1510	0.1027	0.0652	0.0432	0.0283	0.0254	35.4	36.5		40.8
56	26-4-2023	23:45:32	IL&FS	LSI	Solapur	MH	17.731739	75.829139	150+000	252+000	238+730 RHS Outer	1	41.9000	0.2295	0.1484	0.1026	0.0683	0.0489	0.0352	0.0316	35.3	35.7		40.8
	26-4-2023	23:45:32	IL&FS	LSI	Solapur	MH	17.731739	75.829139	150+000	252+000	238+730 RHS Outer	2	41.6000	0.2215	0.1424	0.0951	0.0625	0.0473	0.0367	0.0313	35.3	35.7		40.8
	26-4-2023	23:45:32	IL&FS	LSI	Solapur	MH	17.731739	75.829139	150+000	252+000	238+730 RHS Outer	3	41.4000	0.2249	0.1414	0.0920	0.0613	0.0452	0.0332	0.0312	35.3	35.7		40.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
57	26-4-2023	23:47:27	IL&FS	LSI	Solapur	MH	17.732612	75.827056	150+000	252+000	238+500 RHS Outer	1	40.7000	0.2983	0.1829	0.1107	0.0612	0.0413	0.0261	0.0235	35.3	36.2		40.8
	26-4-2023	23:47:27	IL&FS	LSI	Solapur	MH	17.732612	75.827056	150+000	252+000	238+500 RHS Outer	2	40.5000	0.2913	0.1773	0.1050	0.0593	0.0403	0.0267	0.0240	35.3	36.2		40.8
	26-4-2023	23:47:27	IL&FS	LSI	Solapur	MH	17.732612	75.827056	150+000	252+000	238+500 RHS Outer	3	40.7000	0.3092	0.1875	0.1149	0.0602	0.0396	0.0263	0.0237	35.3	36.2		40.8
58	26-4-2023	23:49:23	IL&FS	LSI	Solapur	MH	17.733592	75.824943	150+000	252+000	238+250 RHS Outer	1	42.4000	0.2161	0.1330	0.0785	0.0477	0.0352	0.0256	0.0230	35.2	36.3		40.8
	26-4-2023	23:49:23	IL&FS	LSI	Solapur	MH	17.733592	75.824943	150+000	252+000	238+250 RHS Outer	2	42.3000	0.2192	0.1337	0.0801	0.0486	0.0350	0.0255	0.0230	35.2	36.3		40.8
	26-4-2023	23:49:23	IL&FS	LSI	Solapur	MH	17.733592	75.824943	150+000	252+000	238+250 RHS Outer	3	41.9000	0.2125	0.1312	0.0780	0.0517	0.0357	0.0249	0.0224	35.2	36.3		40.8
59	26-4-2023	23:51:22	IL&FS	LSI	Solapur	MH	17.734544	75.822944	150+000	252+000	238+000 RHS Outer	1	41.6000	0.1569	0.0961	0.0631	0.0406	0.0289	0.0209	0.0188	35.2	35.9		40.8
	26-4-2023	23:51:22	IL&FS	LSI	Solapur	MH	17.734544	75.822944	150+000	252+000	238+000 RHS Outer	2	40.3000	0.1591	0.0997	0.0654	0.0401	0.0288	0.0206	0.0185	35.2	35.9		40.8
	26-4-2023	23:51:22	IL&FS	LSI	Solapur	MH	17.734544	75.822944	150+000	252+000	238+000 RHS Outer	3	41.6000	0.1525	0.1006	0.0644	0.0389	0.0291	0.0217	0.0195	35.2	35.9		40.8
60	26-4-2023	23:53:28	IL&FS	LSI	Solapur	MH	17.735492	75.820701	150+000	252+000	237+750 RHS Outer	1	41.2000	0.1717	0.1093	0.0800	0.0570	0.0409	0.0274	0.0179	34.9	36.2		40.8
	26-4-2023	23:53:28	IL&FS	LSI	Solapur	MH	17.735492	75.820701	150+000	252+000	237+750 RHS Outer	2	41.2000	0.1711	0.1102	0.0799	0.0553	0.0379	0.0259	0.0182	34.9	36.2		40.8
	26-4-2023	23:53:28	IL&FS	LSI	Solapur	MH	17.735492	75.820701	150+000	252+000	237+750 RHS Outer	3	41.1000	0.1615	0.1076	0.0799	0.0557	0.0372	0.0254	0.0168	34.9	36.2		40.8
61	26-4-2023	23:55:42	IL&FS	LSI	Solapur	MH	17.736484	75.818496	150+000	252+000	237+500 RHS Outer	1	41.1000	0.2212	0.1465	0.0858	0.0573	0.0465	0.0381	0.0343	34.8	36.4		40.8
	26-4-2023	23:55:42	IL&FS	LSI	Solapur	MH	17.736484	75.818496	150+000	252+000	237+500 RHS Outer	2	41.0000	0.2126	0.1354	0.0900	0.0593	0.0479	0.0389	0.0350	34.8	36.4		40.8
	26-4-2023	23:55:42	IL&FS	LSI	Solapur	MH	17.736484	75.818496	150+000	252+000	237+500 RHS Outer	3	41.3000	0.2192	0.1446	0.0921	0.0618	0.0478	0.0389	0.0350	34.8	36.4		40.8
62	26-4-2023	23:58:06	IL&FS	LSI	Solapur	MH	17.737365	75.816444	150+000	252+000	237+250 RHS Outer	1	40.9000	0.2048	0.1315	0.0866	0.0489	0.0389	0.0317	0.0300	34.9	36.5		40.8
	26-4-2023	23:58:06	IL&FS	LSI	Solapur	MH	17.737365	75.816444	150+000	252+000	237+250 RHS Outer	2	40.9000	0.2148	0.1351	0.0838	0.0490	0.0387	0.0320	0.0284	34.9	36.5		40.8
	26-4-2023	23:58:06	IL&FS	LSI	Solapur	MH	17.737365	75.816444	150+000	252+000	237+250 RHS Outer	3	41.3000	0.2116	0.1294	0.0861	0.0496	0.0400	0.0331	0.0270	34.9	36.5		40.8
63	27-4-2023	00:00:07	IL&FS	LSI	Solapur	MH	17.738264	75.814308	150+000	252+000	237+000 RHS Outer	1	41.3000	0.2200	0.1482	0.0931	0.0575	0.0366	0.0258	0.0223	34.8	36.0		40.8
	27-4-2023	00:00:07	IL&FS	LSI	Solapur	MH	17.738264	75.814308	150+000	252+000	237+000 RHS Outer	2	41.7000	0.2261	0.1444	0.1019	0.0606	0.0393	0.0267	0.0220	34.8	36.0		40.8
	27-4-2023	00:00:07	IL&FS	LSI	Solapur	MH	17.738264	75.814308	150+000	252+000	237+000 RHS Outer	3	41.5000	0.2175	0.1388	0.0915	0.0583	0.0393	0.0276	0.0206	34.8	36.0		40.8
64	27-4-2023	00:02:14	IL&FS	LSI	Solapur	MH	17.739192	75.812088	150+000	252+000	236+750 RHS Outer	1	40.0000	0.3130	0.1816	0.0976	0.0528	0.0376	0.0273	0.0246	34.9	36.0		40.8
	27-4-2023	00:02:14	IL&FS	LSI	Solapur	MH	17.739192	75.812088	150+000	252+000	236+750 RHS Outer	2	40.5000	0.3026	0.1823	0.0959	0.0514	0.0376	0.0281	0.0253	34.9	36.0		40.8
	27-4-2023	00:02:14	IL&FS	LSI	Solapur	MH	17.739192	75.812088	150+000	252+000	236+750 RHS Outer	3	39.4000	0.3047	0.1788	0.0987	0.0543	0.0382	0.0267	0.0240	34.9	36.0		40.8
65	27-4-2023	00:04:14	IL&FS	LSI	Solapur	MH	17.740180	75.809898	150+000	252+000	236+500 RHS Outer	1	41.6000	0.1366	0.0909	0.0669	0.0460	0.0349	0.0273	0.0245	35.1	36.0		40.8
	27-4-2023	00:04:14	IL&FS	LSI	Solapur	MH	17.740180	75.809898	150+000	252+000	236+500 RHS Outer	2	41.9000	0.1459	0.0916	0.0696	0.0519	0.0371	0.0279	0.0251	35.1	36.0		40.8
	27-4-2023	00:04:14	IL&FS	LSI	Solapur	MH	17.740180	75.809898	150+000	252+000	236+500 RHS Outer	3	42.5000	0.1472	0.0929	0.0701	0.0508	0.0413	0.0351	0.0224	35.1	36.0		40.8
66	27-4-2023	00:06:14	IL&FS	LSI	Solapur	MH	17.741163	75.807693	150+000	252+000	236+235 RHS Outer	1	38.9000	0.3652	0.2136	0.1354	0.0765	0.0510	0.0351	0.0315	35.0	36.3		40.8
	27-4-2023	00:06:14	IL&FS	LSI	Solapur	MH	17.741163	75.807693	150+000	252+000	236+235 RHS Outer	2	38.9000	0.3599	0.2092	0.1261	0.0713	0.0493	0.0333	0.0299	35.0	36.3		40.8
	27-4-2023	00:06:14	IL&FS	LSI	Solapur	MH	17.741163	75.807693	150+000	252+000	236+235 RHS Outer	3	39.0000	0.3640	0.2088	0.1280	0.0746	0.0497	0.0340	0.0306	35.0	36.3		40.8
67	27-4-2023	00:08:23	IL&FS	LSI	Solapur	MH	17.742052	75.805580	150+000	252+000	236+000 RHS Outer	1	38.4000	0.3621	0.2232	0.1260	0.0665	0.0452	0.0307	0.0276	35.1	35.9		40.8
	27-4-2023	00:08:23	IL&FS	LSI	Solapur	MH	17.742052	75.805580	150+000	252+000	236+000 RHS Outer	2	38.6000	0.3507	0.2210	0.1234	0.0706	0.0434	0.0320	0.0288	35.1	35.9		40.8
	27-4-2023	00:08:23	IL&FS	LSI	Solapur	MH	17.742052	75.805580	150+000	252+000	236+000 RHS Outer	3	39.1000	0.3429	0.2184	0.1247	0.0672	0.0434	0.0308	0.0277	35.1	35.9		40.8
68	27-4-2023	00:11:47	IL&FS	LSI	Solapur	MH	17.743183	75.802909	150+000	252+000	235+680 RHS Outer	1	40.7000	0.3003	0.1880	0.1248	0.0826	0.0521	0.0341	0.0297	35.1	35.9		40.8
	27-4-2023	00:11:47	IL&FS	LSI	Solapur	MH	17.743183	75.802909	150+000	252+000	235+680 RHS Outer	2	41.2000	0.3045	0.1947	0.1263	0.0838	0.0537	0.0372	0.0325	35.1	35.9		40.8
	27-4-2023	00:11:47	IL&FS	LSI	Solapur	MH	17.743183	75.802909	150+000	252+000	235+680 RHS Outer	3	41.3000	0.2988	0.1872	0.1266	0.0842	0.0512	0.0407	0.0402	35.1	35.9		40.8
69	27-4-2023	00:13:34	IL&FS	LSI	Solapur	MH	17.743864	75.801368	150+000	252+000	235+500 RHS Outer	1	38.8000	0.3179	0.1991	0.1184	0.0718	0.0440	0.0318	0.0286	35.2	35.4		40.8
	27-4-2023	00:13:34	IL&FS	LSI	Solapur	MH	17.743864	75.801368	150+000	252+000	235+500 RHS Outer	2	40.9000	0.3243	0.2100	0.1204	0.0729	0.0455	0.0337	0.0303	35.2	35.4		40.8
	27-4-2023	00:13:34	IL&FS	LSI	Solapur	MH	17.743864	75.801368	150+000	252+000	235+500 RHS Outer	3	39.0000	0.3224	0.2005	0.1187	0.0711	0.0466	0.0342	0.0307	35.2	35.4		40.8
70	27-4-2023	00:15:28	IL&FS	LSI	Solapur	MH	17.744867	75.799194	150+000	252+000	235+250 RHS Outer	1	40.4000	0.2331	0.1450	0.0865	0.0561	0.0353	0.0246	0.0221	35.2	36.0		40.8
	27-4-2023	00:15:28	IL&FS	LSI	Solapur	MH	17.744867	75.799194	150+000	252+000	235+250 RHS Outer	2	40.9000	0.2425	0.1415	0.0901	0.0586	0.0354	0.0242	0.0217	35.2	36.0		40.8
	27-4-2023	00:15:28	IL&FS	LSI	Solapur	MH	17.744867	75.799194	150+000	252+000	235+250 RHS Outer	3	40.9000	0.2400	0.1417	0.0899	0.0594	0.0356	0.0243	0.0218	35.2	36.0		40.8
71	27-4-2023	01:01:18	IL&FS	LSI	Solapur	MH	17.745866	75.797134	150+000	252+000	235+000 RHS Outer	1	39.4000	0.2971	0.1747	0.0895	0.0534	0.0373	0.0335	0.0267	34.7	35.8	T-31.5/39.5	39.5
	27-4-2023	01:01:18	IL&FS	LSI	Solapur	MH	17.745866	75.797134	150+000	252+000	235+000 RHS Outer	2	39.5000	0.2888	0.1690	0.0842	0.0533	0.0386	0.0339	0.0270	34.7	35.8	T-31.5/39.5	39.5
	27-4-2023	01:01:18	IL&FS	LSI	Solapur	MH	17.745866	75.797134	150+000	252+000	235+000 RHS Outer	3	39.5000	0.2886	0.1727	0.0921	0.0536	0.0368	0.0315	0.0265	34.7	35.8	T-31.5/39.5	39.5
72	27-4-2023	01:03:30	IL&FS	LSI	Solapur	MH	17.746904	75.794830	150+000	252+000	234+750 RHS Outer	1	42.3000	0.1532	0.0983	0.0606	0.0441	0.0366	0.0317	0.0207	34.4	35.0		39.5
	27-4-2023	01:03:30	IL&FS	LSI	Solapur	MH	17.746904	75.794830	150+000	252+000	234+750 RHS Outer	2	41.7000	0.1387	0.0904	0.0567	0.0430	0.0350	0.0298	0.0210	34.4	35.0		39.5
	27-4-2023	01:03:30	IL&FS	LSI	Solapur	MH	17.746904	75.794830	150+000	252+000	234+750 RHS Outer	3	41.8000	0.1501	0.0941	0.0643	0.0456	0.0366	0.0310	0.0202	34.4	35.0		39.5
73	27-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.747840	75.792716	150+000	252+000	234+500 RHS Outer	1	41.5000	0.1251	0.0779	0.0460	0.0311	0.0203	0.0148	0.0133	34.0	34.7		39.5
	27-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.747840	75.792716	150+000	252+000	234+500 RHS Outer	2	42.0000	0.1274	0.0769	0.0433	0.0299	0.0212	0.0154	0.0138	34.0	34.7		39.5
	27-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.747840	75.792716	150+000	252+000	234+500 RHS Outer	3	42.1000	0.1295	0.0736	0.0460	0.0306	0.0202	0.0148	0.0133	34.0	34.7		39.5
74	27-4-2023	01:07:18	IL&FS	LSI	Solapur	MH	17.748849	75.790519	150+000	252+000	234+250 RHS Outer	1	40.2000	0.2415	0.1523	0.0929	0.0478	0.0334	0.0225	0.0200	33.8	34.5		39.5
	27-4-2023	01:07:18	IL&FS	LSI	Solapur	MH	17.748849	75.790519	150+000	252+000	234+250 RHS Outer	2	39.9000	0.2408	0.1577	0.0889	0.0505	0.0299	0.0228	0.0202	33.8	34.5		39.5
	27-4-2023	01:07:18	IL&FS	LSI	Solapur	MH	17.748849	75.790519	150+000	252+000	234+250 RHS Outer	3	40.4000	0.2215	0.1516	0.0872	0.0517	0.0315	0.0246	0.0207	33.8	34.5		39.5
75	27-4-2023	01:09:15	IL&FS	LSI	Solapur	MH	17.749708	75.788658	150+000	252+000	234+030 RHS Outer	1	38.9000	0.4251	0.2620	0.1439	0.0840	0.0604	0.0460	0.0354	33.7	34.6		39.5
	27-4-2023	01:09:15	IL&FS	LSI	Solapur	MH	17.749708	75.788658	150+000	252+000	234+030 RHS Outer	2	38.9000	0.4157	0.2529	0.1442	0.0772	0.0562	0.0434	0.0348	33.7	34.6		39.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	01:09:15	IL&FS	LSI	Solapur	MH	17.749708	75.788658	150+000	252+000	234+030 RHS Outer	3	38.6000	0.4121	0.2539	0.1487	0.0830	0.0577	0.0445	0.0360	33.7	34.6		39.5
76	27-4-2023	01:11:15	IL&FS	LSI	Solapur	MH	17.750764	75.786331	150+000	252+000	233+750 RHS Outer	1	38.7000	0.3330	0.2051	0.1076	0.0635	0.0490	0.0384	0.0284	33.6	34.5		39.5
	27-4-2023	01:11:15	IL&FS	LSI	Solapur	MH	17.750764	75.786331	150+000	252+000	233+750 RHS Outer	2	39.1000	0.3108	0.2029	0.1100	0.0643	0.0500	0.0401	0.0291	33.6	34.5		39.5
	27-4-2023	01:11:15	IL&FS	LSI	Solapur	MH	17.750764	75.786331	150+000	252+000	233+750 RHS Outer	3	38.9000	0.3194	0.1979	0.1127	0.0641	0.0499	0.0390	0.0316	33.6	34.5		39.5
77	27-4-2023	01:13:26	IL&FS	LSI	Solapur	MH	17.751741	75.784202	150+000	252+000	233+500 RHS Outer	1	40.0000	0.1788	0.1200	0.0781	0.0531	0.0375	0.0241	0.0217	33.4	34.6		39.5
	27-4-2023	01:13:26	IL&FS	LSI	Solapur	MH	17.751741	75.784202	150+000	252+000	233+500 RHS Outer	2	40.2000	0.1833	0.1279	0.0749	0.0537	0.0378	0.0245	0.0221	33.4	34.6		39.5
	27-4-2023	01:13:26	IL&FS	LSI	Solapur	MH	17.751741	75.784202	150+000	252+000	233+500 RHS Outer	3	40.6000	0.1794	0.1305	0.0739	0.0538	0.0389	0.0250	0.0225	33.4	34.6		39.5
78	27-4-2023	01:15:18	IL&FS	LSI	Solapur	MH	17.752752	75.782058	150+000	252+000	233+250 RHS Outer	1	40.9000	0.1846	0.1321	0.0859	0.0460	0.0317	0.0224	0.0202	33.5	34.8		39.5
	27-4-2023	01:15:18	IL&FS	LSI	Solapur	MH	17.752752	75.782058	150+000	252+000	233+250 RHS Outer	2	40.4000	0.1973	0.1263	0.0779	0.0470	0.0326	0.0217	0.0195	33.5	34.8		39.5
	27-4-2023	01:15:18	IL&FS	LSI	Solapur	MH	17.752752	75.782058	150+000	252+000	233+250 RHS Outer	3	40.5000	0.1787	0.1245	0.0821	0.0445	0.0319	0.0220	0.0198	33.5	34.8		39.5
79	27-4-2023	01:17:11	IL&FS	LSI	Solapur	MH	17.753648	75.780143	150+000	252+000	233+000 RHS Outer	1	37.9000	0.4109	0.2547	0.1515	0.0827	0.0578	0.0412	0.0230	33.4	34.8		39.5
	27-4-2023	01:17:11	IL&FS	LSI	Solapur	MH	17.753648	75.780143	150+000	252+000	233+000 RHS Outer	2	38.2000	0.3890	0.2449	0.1521	0.0827	0.0594	0.0441	0.0230	33.4	34.8		39.5
	27-4-2023	01:17:11	IL&FS	LSI	Solapur	MH	17.753648	75.780143	150+000	252+000	233+000 RHS Outer	3	37.7000	0.3961	0.2471	0.1458	0.0819	0.0584	0.0432	0.0233	33.4	34.8		39.5
80	27-4-2023	01:19:28	IL&FS	LSI	Solapur	MH	17.754732	75.777778	150+000	252+000	232+750 RHS Outer	1	39.9000	0.2259	0.1271	0.0782	0.0489	0.0346	0.0241	0.0169	33.4	34.3		39.5
	27-4-2023	01:19:28	IL&FS	LSI	Solapur	MH	17.754732	75.777778	150+000	252+000	232+750 RHS Outer	2	39.9000	0.2080	0.1309	0.0779	0.0495	0.0314	0.0243	0.0192	33.4	34.3		39.5
	27-4-2023	01:19:28	IL&FS	LSI	Solapur	MH	17.754732	75.777778	150+000	252+000	232+750 RHS Outer	3	40.0000	0.2195	0.1303	0.0849	0.0493	0.0346	0.0248	0.0184	33.4	34.3		39.5
81	27-4-2023	01:21:29	IL&FS	LSI	Solapur	MH	17.755653	75.775779	150+000	252+000	232+500 RHS Outer	1	40.3000	0.2319	0.1584	0.1073	0.0677	0.0479	0.0340	0.0306	33.0	34.7		39.5
	27-4-2023	01:21:29	IL&FS	LSI	Solapur	MH	17.755653	75.775779	150+000	252+000	232+500 RHS Outer	2	40.6000	0.2356	0.1485	0.0995	0.0674	0.0491	0.0367	0.0341	33.0	34.7		39.5
	27-4-2023	01:21:29	IL&FS	LSI	Solapur	MH	17.755653	75.775779	150+000	252+000	232+500 RHS Outer	3	41.2000	0.2365	0.1507	0.0999	0.0658	0.0473	0.0348	0.0313	33.0	34.7		39.5
82	27-4-2023	01:23:31	IL&FS	LSI	Solapur	MH	17.756614	75.773574	150+000	252+000	232+250 RHS Outer	1	41.8000	0.1345	0.0849	0.0564	0.0343	0.0245	0.0169	0.0152	32.9	34.4		39.5
	27-4-2023	01:23:31	IL&FS	LSI	Solapur	MH	17.756614	75.773574	150+000	252+000	232+250 RHS Outer	2	41.8000	0.1359	0.0851	0.0556	0.0335	0.0232	0.0167	0.0150	32.9	34.4		39.5
	27-4-2023	01:23:31	IL&FS	LSI	Solapur	MH	17.756614	75.773574	150+000	252+000	232+250 RHS Outer	3	41.8000	0.1379	0.0847	0.0558	0.0346	0.0245	0.0167	0.0150	32.9	34.4		39.5
83	27-4-2023	01:25:33	IL&FS	LSI	Solapur	MH	17.757633	75.771400	150+000	252+000	232+000 RHS Outer	1	39.5000	0.2724	0.1572	0.0789	0.0503	0.0324	0.0221	0.0189	33.0	34.4		39.5
	27-4-2023	01:25:33	IL&FS	LSI	Solapur	MH	17.757633	75.771400	150+000	252+000	232+000 RHS Outer	2	39.9000	0.2517	0.1466	0.0784	0.0522	0.0324	0.0216	0.0184	33.0	34.4		39.5
	27-4-2023	01:25:33	IL&FS	LSI	Solapur	MH	17.757633	75.771400	150+000	252+000	232+000 RHS Outer	3	39.6000	0.2605	0.1545	0.0780	0.0524	0.0324	0.0220	0.0188	33.0	34.4		39.5
84	27-4-2023	01:27:25	IL&FS	LSI	Solapur	MH	17.758632	75.769203	150+000	252+000	231+750 RHS Outer	1	37.3000	0.4382	0.2470	0.1243	0.0809	0.0523	0.0368	0.0331	32.8	34.3		39.5
	27-4-2023	01:27:25	IL&FS	LSI	Solapur	MH	17.758632	75.769203	150+000	252+000	231+750 RHS Outer	2	37.6000	0.4212	0.2414	0.1327	0.0837	0.0511	0.0376	0.0354	32.8	34.3		39.5
	27-4-2023	01:27:25	IL&FS	LSI	Solapur	MH	17.758632	75.769203	150+000	252+000	231+750 RHS Outer	3	37.7000	0.4039	0.2449	0.1352	0.0858	0.0530	0.0378	0.0369	32.8	34.3		39.5
85	27-4-2023	01:29:26	IL&FS	LSI	Solapur	MH	17.759527	75.767166	150+000	252+000	231+500 RHS Outer	1	37.1000	0.4974	0.3030	0.1421	0.0844	0.0556	0.0302	0.0271	32.9	34.3		39.5
	27-4-2023	01:29:26	IL&FS	LSI	Solapur	MH	17.759527	75.767166	150+000	252+000	231+500 RHS Outer	2	36.2000	0.4765	0.2855	0.1420	0.0825	0.0511	0.0279	0.0251	32.9	34.3		39.5
	27-4-2023	01:29:26	IL&FS	LSI	Solapur	MH	17.759527	75.767166	150+000	252+000	231+500 RHS Outer	3	36.5000	0.4656	0.2922	0.1379	0.0755	0.0499	0.0273	0.0245	32.9	34.3		39.5
86	27-4-2023	01:31:45	IL&FS	LSI	Solapur	MH	17.760601	75.764823	150+000	252+000	231+210 RHS Outer	1	37.0000	0.4158	0.2529	0.1313	0.0701	0.0584	0.0547	0.0469	33.0	34.4		39.5
	27-4-2023	01:31:45	IL&FS	LSI	Solapur	MH	17.760601	75.764823	150+000	252+000	231+210 RHS Outer	2	38.4000	0.4234	0.2574	0.1302	0.0752	0.0618	0.0581	0.0513	33.0	34.4		39.5
	27-4-2023	01:31:45	IL&FS	LSI	Solapur	MH	17.760601	75.764823	150+000	252+000	231+210 RHS Outer	3	37.1000	0.4284	0.2460	0.1238	0.0688	0.0617	0.0564	0.0492	33.0	34.4		39.5
87	27-4-2023	01:33:46	IL&FS	LSI	Solapur	MH	17.761425	75.763107	150+000	252+000	231+000 RHS Outer	1	37.2000	0.4309	0.2409	0.1179	0.0805	0.0568	0.0453	0.0250	32.9	34.3		39.5
	27-4-2023	01:33:46	IL&FS	LSI	Solapur	MH	17.761425	75.763107	150+000	252+000	231+000 RHS Outer	2	37.3000	0.4282	0.2419	0.1211	0.0804	0.0554	0.0352	0.0317	32.9	34.3		39.5
	27-4-2023	01:33:46	IL&FS	LSI	Solapur	MH	17.761425	75.763107	150+000	252+000	231+000 RHS Outer	3	37.2000	0.4331	0.2459	0.1167	0.0802	0.0530	0.0340	0.0306	32.9	34.3		39.5
88	27-4-2023	01:35:50	IL&FS	LSI	Solapur	MH	17.762392	75.760871	150+000	252+000	230+750 RHS Outer	1	37.6000	0.3970	0.2315	0.1159	0.0747	0.0434	0.0290	0.0261	32.9	34.5		39.5
	27-4-2023	01:35:50	IL&FS	LSI	Solapur	MH	17.762392	75.760871	150+000	252+000	230+750 RHS Outer	2	37.7000	0.3653	0.2345	0.1064	0.0694	0.0420	0.0288	0.0259	32.9	34.5		39.5
	27-4-2023	01:35:50	IL&FS	LSI	Solapur	MH	17.762392	75.760871	150+000	252+000	230+750 RHS Outer	3	37.9000	0.3707	0.2279	0.1125	0.0727	0.0442	0.0290	0.0261	32.9	34.5		39.5
89	27-4-2023	01:37:48	IL&FS	LSI	Solapur	MH	17.763362	75.758789	150+000	252+000	230+500 RHS Outer	1	37.9000	0.4112	0.2592	0.1238	0.0583	0.0406	0.0267	0.0240	32.9	34.7		39.5
	27-4-2023	01:37:48	IL&FS	LSI	Solapur	MH	17.763362	75.758789	150+000	252+000	230+500 RHS Outer	2	37.7000	0.4052	0.2541	0.1155	0.0624	0.0420	0.0263	0.0237	32.9	34.7		39.5
	27-4-2023	01:37:48	IL&FS	LSI	Solapur	MH	17.763362	75.758789	150+000	252+000	230+500 RHS Outer	3	38.1000	0.3901	0.2476	0.1234	0.0601	0.0423	0.0284	0.0256	32.9	34.7		39.5
90	27-4-2023	01:40:05	IL&FS	LSI	Solapur	MH	17.763874	75.757537	150+000	252+000	230+360 RHS Outer	1	38.8000	0.2800	0.2004	0.1094	0.0707	0.0543	0.0417	0.0319	32.9	34.5		39.5
	27-4-2023	01:40:05	IL&FS	LSI	Solapur	MH	17.763874	75.757537	150+000	252+000	230+360 RHS Outer	2	39.3000	0.2836	0.1840	0.1141	0.0720	0.0501	0.0363	0.0327	32.9	34.5		39.5
	27-4-2023	01:40:05	IL&FS	LSI	Solapur	MH	17.763874	75.757537	150+000	252+000	230+360 RHS Outer	3	39.5000	0.2751	0.1840	0.1170	0.0721	0.0530	0.0403	0.0320	32.9	34.5		39.5
91	27-4-2023	02:02:17	IL&FS	LSI	Solapur	MH	17.765644	75.753608	150+000	252+000	229+890 RHS Outer	1	42.2000	0.1366	0.0905	0.0600	0.0461	0.0320	0.0230	0.0164	33.1	34.4	T-30.1/39.2	39.2
	27-4-2023	02:02:17	IL&FS	LSI	Solapur	MH	17.765644	75.753608	150+000	252+000	229+890 RHS Outer	2	42.2000	0.1437	0.0894	0.0623	0.0456	0.0341	0.0236	0.0172	33.1	34.4	T-30.1/39.2	39.2
	27-4-2023	02:02:17	IL&FS	LSI	Solapur	MH	17.765644	75.753608	150+000	252+000	229+890 RHS Outer	3	41.3000	0.1429	0.0870	0.0631	0.0453	0.0315	0.0222	0.0156	33.1	34.4	T-30.1/39.2	39.2
92	27-4-2023	02:05:27	IL&FS	LSI	Solapur	MH	17.766265	75.752365	150+000	252+000	229+750 RHS Outer	1	38.3000	0.4274	0.2671	0.1488	0.0708	0.0484	0.0327	0.0294	32.9	33.9		39.2
	27-4-2023	02:05:27	IL&FS	LSI	Solapur	MH	17.766265	75.752365	150+000	252+000	229+750 RHS Outer	2	37.8000	0.3979	0.2673	0.1399	0.0713	0.0473	0.0316	0.0284	32.9	33.9		39.2
	27-4-2023	02:05:27	IL&FS	LSI	Solapur	MH	17.766265	75.752365	150+000	252+000	229+750 RHS Outer	3	38.7000	0.4049	0.2621	0.1487	0.0738	0.0493	0.0326	0.0293	32.9	33.9		39.2
93	27-4-2023	02:07:48	IL&FS	LSI	Solapur	MH	17.767215	75.750259	150+000	252+000	229+500 RHS Outer	1	39.3000	0.3701	0.2267	0.1101	0.0604	0.0484	0.0390	0.0300	32.7	33.2		39.2
	27-4-2023	02:07:48	IL&FS	LSI	Solapur	MH	17.767215	75.750259	150+000	252+000	229+500 RHS Outer	2	39.4000	0.3592	0.2183	0.1127	0.0658	0.0502	0.0404	0.0302	32.7	33.2		39.2
	27-4-2023	02:07:48	IL&FS	LSI	Solapur	MH	17.767215	75.750259	150+000	252+000	229+500 RHS Outer	3	39.9000	0.3573	0.2193	0.1174	0.0663	0.0473	0.0347	0.0312	32.7	33.2		39.2
94	27-4-2023	02:09:48	IL&FS	LSI	Solapur	MH	17.768207	75.747962	150+000	252+000	229+250 RHS Outer	1	37.6000	0.4212	0.2637	0.1553	0.0977	0.0568	0.0398	0.0358	32.5	33.7		39.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	02:09:48	IL&FS	LSI	Solapur	MH	17.768207	75.747962	150+000	252+000	229+250 RHS Outer	2	37.7000	0.4070	0.2600	0.1525	0.0980	0.0612	0.0420	0.0378	32.5	33.7		39.2
	27-4-2023	02:09:48	IL&FS	LSI	Solapur	MH	17.768207	75.747962	150+000	252+000	229+250 RHS Outer	3	37.4000	0.3804	0.2543	0.1469	0.0966	0.0595	0.0413	0.0371	32.5	33.7		39.2
95	27-4-2023	02:11:47	IL&FS	LSI	Solapur	MH	17.769126	75.746025	150+000	252+000	229+000 RHS Outer	1	40.1000	0.4428	0.2727	0.1277	0.0857	0.0579	0.0442	0.0307	32.4	34.1		39.2
	27-4-2023	02:11:47	IL&FS	LSI	Solapur	MH	17.769126	75.746025	150+000	252+000	229+000 RHS Outer	2	40.1000	0.4331	0.2496	0.1293	0.0856	0.0586	0.0444	0.0306	32.4	34.1		39.2
	27-4-2023	02:11:47	IL&FS	LSI	Solapur	MH	17.769126	75.746025	150+000	252+000	229+000 RHS Outer	3	39.5000	0.4331	0.2616	0.1269	0.0860	0.0559	0.0431	0.0302	32.4	34.1		39.2
96	27-4-2023	02:13:50	IL&FS	LSI	Solapur	MH	17.770101	75.743820	150+000	252+000	228+750 RHS Outer	1	40.2000	0.5444	0.2835	0.1202	0.0541	0.0407	0.0250	0.0225	32.4	33.9		39.2
	27-4-2023	02:13:50	IL&FS	LSI	Solapur	MH	17.770101	75.743820	150+000	252+000	228+750 RHS Outer	2	40.1000	0.4846	0.2630	0.1261	0.0530	0.0382	0.0244	0.0220	32.4	33.9		39.2
	27-4-2023	02:13:50	IL&FS	LSI	Solapur	MH	17.770101	75.743820	150+000	252+000	228+750 RHS Outer	3	39.8000	0.5159	0.2721	0.1131	0.0493	0.0417	0.0255	0.0230	32.4	33.9		39.2
97	27-4-2023	02:15:45	IL&FS	LSI	Solapur	MH	17.771087	75.741607	150+000	252+000	228+500 RHS Outer	1	40.2000	0.4123	0.2451	0.1116	0.0504	0.0409	0.0279	0.0251	32.4	33.8		39.2
	27-4-2023	02:15:45	IL&FS	LSI	Solapur	MH	17.771087	75.741607	150+000	252+000	228+500 RHS Outer	2	39.8000	0.3982	0.2386	0.1168	0.0507	0.0400	0.0288	0.0259	32.4	33.8		39.2
	27-4-2023	02:15:45	IL&FS	LSI	Solapur	MH	17.771087	75.741607	150+000	252+000	228+500 RHS Outer	3	40.2000	0.4018	0.2382	0.1187	0.0523	0.0404	0.0279	0.0251	32.4	33.8		39.2
98	27-4-2023	02:17:42	IL&FS	LSI	Solapur	MH	17.772043	75.739501	150+000	252+000	228+250 RHS Outer	1	38.3000	0.4551	0.2830	0.1508	0.0723	0.0576	0.0391	0.0341	32.3	33.4		39.2
	27-4-2023	02:17:42	IL&FS	LSI	Solapur	MH	17.772043	75.739501	150+000	252+000	228+250 RHS Outer	2	39.0000	0.4521	0.2811	0.1481	0.0722	0.0608	0.0400	0.0351	32.3	33.4		39.2
	27-4-2023	02:17:42	IL&FS	LSI	Solapur	MH	17.772043	75.739501	150+000	252+000	228+250 RHS Outer	3	38.6000	0.4476	0.2792	0.1448	0.0699	0.0599	0.0395	0.0372	32.3	33.4		39.2
99	27-4-2023	02:19:36	IL&FS	LSI	Solapur	MH	17.772958	75.737503	150+000	252+000	228+000 RHS Outer	1	39.2000	0.4204	0.2593	0.1466	0.0942	0.0608	0.0559	0.0503	32.2	33.3		39.2
	27-4-2023	02:19:36	IL&FS	LSI	Solapur	MH	17.772958	75.737503	150+000	252+000	228+000 RHS Outer	2	39.3000	0.4089	0.2546	0.1465	0.0959	0.0628	0.0597	0.0593	32.2	33.3		39.2
	27-4-2023	02:19:36	IL&FS	LSI	Solapur	MH	17.772958	75.737503	150+000	252+000	228+000 RHS Outer	3	39.7000	0.3994	0.2635	0.1432	0.0981	0.0644	0.0592	0.0533	32.2	33.3		39.2
100	27-4-2023	02:21:33	IL&FS	LSI	Solapur	MH	17.773948	75.735336	150+000	252+000	227+750 RHS Outer	1	38.1000	0.4066	0.2616	0.1313	0.0804	0.0460	0.0247	0.0222	32.1	33.6		39.2
	27-4-2023	02:21:33	IL&FS	LSI	Solapur	MH	17.773948	75.735336	150+000	252+000	227+750 RHS Outer	2	38.4000	0.3952	0.2569	0.1351	0.0804	0.0432	0.0242	0.0218	32.1	33.6		39.2
	27-4-2023	02:21:33	IL&FS	LSI	Solapur	MH	17.773948	75.735336	150+000	252+000	227+750 RHS Outer	3	38.0000	0.3857	0.2452	0.1250	0.0797	0.0443	0.0267	0.0240	32.1	33.6		39.2
101	27-4-2023	02:23:29	IL&FS	LSI	Solapur	MH	17.774898	75.733184	150+000	252+000	227+500 RHS Outer	1	40.0000	0.2563	0.1679	0.1028	0.0707	0.0506	0.0358	0.0228	31.9	33.4		39.2
	27-4-2023	02:23:29	IL&FS	LSI	Solapur	MH	17.774898	75.733184	150+000	252+000	227+500 RHS Outer	2	40.4000	0.2486	0.1672	0.1048	0.0713	0.0493	0.0357	0.0239	31.9	33.4		39.2
	27-4-2023	02:23:29	IL&FS	LSI	Solapur	MH	17.774898	75.733184	150+000	252+000	227+500 RHS Outer	3	40.2000	0.2415	0.1659	0.1056	0.0707	0.0498	0.0363	0.0229	31.9	33.4		39.2
102	27-4-2023	02:25:28	IL&FS	LSI	Solapur	MH	17.775896	75.730995	150+000	252+000	227+250 RHS Outer	1	36.0000	0.3104	0.1891	0.0989	0.0671	0.0430	0.0266	0.0201	31.9	33.4		39.2
	27-4-2023	02:25:28	IL&FS	LSI	Solapur	MH	17.775896	75.730995	150+000	252+000	227+250 RHS Outer	2	36.3000	0.3055	0.1812	0.0999	0.0640	0.0419	0.0299	0.0193	31.9	33.4		39.2
	27-4-2023	02:25:28	IL&FS	LSI	Solapur	MH	17.775896	75.730995	150+000	252+000	227+250 RHS Outer	3	36.5000	0.2950	0.1739	0.0968	0.0641	0.0406	0.0281	0.0214	31.9	33.4		39.2
103	27-4-2023	02:27:22	IL&FS	LSI	Solapur	MH	17.776796	75.729019	150+000	252+000	227+000 RHS Outer	1	39.4000	0.2725	0.1723	0.0872	0.0591	0.0382	0.0246	0.0221	31.8	33.2		39.2
	27-4-2023	02:27:22	IL&FS	LSI	Solapur	MH	17.776796	75.729019	150+000	252+000	227+000 RHS Outer	2	39.0000	0.2724	0.1671	0.0868	0.0529	0.0390	0.0302	0.0204	31.8	33.2		39.2
	27-4-2023	02:27:22	IL&FS	LSI	Solapur	MH	17.776796	75.729019	150+000	252+000	227+000 RHS Outer	3	39.3000	0.2745	0.1693	0.0872	0.0576	0.0416	0.0309	0.0200	31.8	33.2		39.2
104	27-4-2023	02:29:23	IL&FS	LSI	Solapur	MH	17.777799	75.727027	150+000	252+000	226+750 RHS Outer	1	41.2000	0.2005	0.1401	0.0848	0.0509	0.0330	0.0210	0.0189	31.9	33.2		39.2
	27-4-2023	02:29:23	IL&FS	LSI	Solapur	MH	17.777799	75.727027	150+000	252+000	226+750 RHS Outer	2	41.5000	0.2010	0.1331	0.0828	0.0487	0.0335	0.0233	0.0210	31.9	33.2		39.2
	27-4-2023	02:29:23	IL&FS	LSI	Solapur	MH	17.777799	75.727027	150+000	252+000	226+750 RHS Outer	3	41.1000	0.1973	0.1373	0.0797	0.0462	0.0322	0.0221	0.0199	31.9	33.2		39.2
105	27-4-2023	02:31:20	IL&FS	LSI	Solapur	MH	17.778858	75.725364	150+000	252+000	226+550 RHS Outer	1	39.6000	0.1875	0.1327	0.0782	0.0414	0.0326	0.0240	0.0177	31.6	33.3		39.2
	27-4-2023	02:31:20	IL&FS	LSI	Solapur	MH	17.778858	75.725364	150+000	252+000	226+550 RHS Outer	2	40.0000	0.1892	0.1208	0.0758	0.0465	0.0299	0.0224	0.0170	31.6	33.3		39.2
	27-4-2023	02:31:20	IL&FS	LSI	Solapur	MH	17.778858	75.725364	150+000	252+000	226+550 RHS Outer	3	39.6000	0.1830	0.1312	0.0825	0.0435	0.0293	0.0226	0.0176	31.6	33.3		39.2
106	27-4-2023	02:33:35	IL&FS	LSI	Solapur	MH	17.780364	75.722991	150+000	252+000	226+250 RHS Outer	1	40.5000	0.2185	0.1595	0.1057	0.0712	0.0455	0.0354	0.0280	31.8	33.1		39.2
	27-4-2023	02:33:35	IL&FS	LSI	Solapur	MH	17.780364	75.722991	150+000	252+000	226+250 RHS Outer	2	40.3000	0.2280	0.1555	0.1084	0.0709	0.0443	0.0349	0.0281	31.8	33.1		39.2
	27-4-2023	02:33:35	IL&FS	LSI	Solapur	MH	17.780364	75.722991	150+000	252+000	226+250 RHS Outer	3	40.3000	0.2201	0.1582	0.1048	0.0689	0.0440	0.0329	0.0255	31.8	33.1		39.2
107	27-4-2023	02:35:33	IL&FS	LSI	Solapur	MH	17.781597	75.721000	150+000	252+000	226+000 RHS Outer	1	41.1000	0.2048	0.1480	0.0842	0.0508	0.0404	0.0349	0.0299	31.8	33.2		39.2
	27-4-2023	02:35:33	IL&FS	LSI	Solapur	MH	17.781597	75.721000	150+000	252+000	226+000 RHS Outer	2	40.3000	0.2018	0.1365	0.0818	0.0520	0.0382	0.0338	0.0304	31.8	33.2		39.2
	27-4-2023	02:35:33	IL&FS	LSI	Solapur	MH	17.781597	75.721000	150+000	252+000	226+000 RHS Outer	3	40.5000	0.1950	0.1402	0.0840	0.0505	0.0406	0.0362	0.0295	31.8	33.2		39.2
108	27-4-2023	02:37:27	IL&FS	LSI	Solapur	MH	17.782600	75.718902	150+000	252+000	225+750 RHS Outer	1	37.9000	0.4117	0.2362	0.1102	0.0507	0.0313	0.0281	0.0252	31.6	33.1		39.2
	27-4-2023	02:37:27	IL&FS	LSI	Solapur	MH	17.782600	75.718902	150+000	252+000	225+750 RHS Outer	2	38.4000	0.4109	0.2295	0.1127	0.0523	0.0284	0.0271	0.0243	31.6	33.1		39.2
	27-4-2023	02:37:27	IL&FS	LSI	Solapur	MH	17.782600	75.718902	150+000	252+000	225+750 RHS Outer	3	38.0000	0.3977	0.2219	0.1136	0.0513	0.0311	0.0288	0.0259	31.6	33.1		39.2
109	27-4-2023	02:44:27	IL&FS	LSI	Solapur	MH	17.783464	75.716705	150+000	252+000	225+500 RHS Outer	1	39.8000	0.2926	0.2008	0.1185	0.0642	0.0476	0.0315	0.0284	30.5	32.2	T-27.6/36.8	36.8
	27-4-2023	02:44:27	IL&FS	LSI	Solapur	MH	17.783464	75.716705	150+000	252+000	225+500 RHS Outer	2	39.8000	0.3015	0.2028	0.1164	0.0678	0.0454	0.0336	0.0317	30.5	32.2	T-27.6/36.8	36.8
	27-4-2023	02:44:27	IL&FS	LSI	Solapur	MH	17.783464	75.716705	150+000	252+000	225+500 RHS Outer	3	40.0000	0.2898	0.2040	0.1165	0.0639	0.0440	0.0310	0.0279	30.5	32.2	T-27.6/36.8	36.8
110	27-4-2023	02:46:37	IL&FS	LSI	Solapur	MH	17.784147	75.714500	150+000	252+000	225+250 RHS Outer	1	37.9000	0.3745	0.2528	0.1380	0.0723	0.0510	0.0366	0.0329	30.9	33.1		36.8
	27-4-2023	02:46:37	IL&FS	LSI	Solapur	MH	17.784147	75.714500	150+000	252+000	225+250 RHS Outer	2	38.1000	0.3767	0.2544	0.1426	0.0796	0.0506	0.0364	0.0328	30.9	33.1		36.8
	27-4-2023	02:46:37	IL&FS	LSI	Solapur	MH	17.784147	75.714500	150+000	252+000	225+250 RHS Outer	3	38.0000	0.3706	0.2444	0.1423	0.0803	0.0514	0.0371	0.0334	30.9	33.1		36.8
111	27-4-2023	02:48:39	IL&FS	LSI	Solapur	MH	17.784631	75.712173	150+000	252+000	225+000 RHS Outer	1	37.7000	0.4552	0.2629	0.1601	0.1063	0.0587	0.0396	0.0311	31.2	33.1		36.8
	27-4-2023	02:48:39	IL&FS	LSI	Solapur	MH	17.784631	75.712173	150+000	252+000	225+000 RHS Outer	2	38.0000	0.4369	0.2707	0.1644	0.1055	0.0636	0.0363	0.0190	31.2	33.1		36.8
	27-4-2023	02:48:39	IL&FS	LSI	Solapur	MH	17.784631	75.712173	150+000	252+000	225+000 RHS Outer	3	37.8000	0.4166	0.2701	0.1626	0.0986	0.0578	0.0342	0.0183	31.2	33.1		36.8
112	27-4-2023	02:51:06	IL&FS	LSI	Solapur	MH	17.784727	75.710639	150+000	252+000	224+820 RHS Outer	1	40.2000	0.1291	0.0822	0.0510	0.0354	0.0244	0.0178	0.0134	30.9	32.7	Approach	36.8
	27-4-2023	02:51:06	IL&FS	LSI	Solapur	MH	17.784727	75.710639	150+000	252+000	224+820 RHS Outer	2	40.5000	0.1389	0.0910	0.0537	0.0364	0.0233	0.0172	0.0128	30.9	32.7	Approach	36.8
	27-4-2023	02:51:06	IL&FS	LSI	Solapur	MH	17.784727	75.710639	150+000	252+000	224+820 RHS Outer	3	40.9000	0.1329	0.0821	0.0490	0.0339	0.0237	0.0172	0.0130	30.9	32.7	Approach	36.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
113	27-4-2023	02:53:19	IL&FS	LSI	Solapur	MH	17.784914	75.707748	150+000	252+000	224+500 RHS Outer	1	39.9000	0.2682	0.1662	0.0968	0.0575	0.0388	0.0240	0.0137	31.0	32.4		36.8
	27-4-2023	02:53:19	IL&FS	LSI	Solapur	MH	17.784914	75.707748	150+000	252+000	224+500 RHS Outer	2	40.0000	0.2727	0.1533	0.0913	0.0637	0.0355	0.0223	0.0132	31.0	32.4		36.8
	27-4-2023	02:53:19	IL&FS	LSI	Solapur	MH	17.784914	75.707748	150+000	252+000	224+500 RHS Outer	3	40.3000	0.2712	0.1512	0.0910	0.0622	0.0400	0.0247	0.0150	31.0	32.4		36.8
114	27-4-2023	02:55:24	IL&FS	LSI	Solapur	MH	17.785091	75.705284	150+000	252+000	224+250 RHS Outer	1	39.8000	0.3820	0.2152	0.1298	0.0905	0.0616	0.0404	0.0264	31.1	32.9		36.8
	27-4-2023	02:55:24	IL&FS	LSI	Solapur	MH	17.785091	75.705284	150+000	252+000	224+250 RHS Outer	2	40.1000	0.3688	0.2100	0.1343	0.0968	0.0617	0.0391	0.0251	31.1	32.9		36.8
	27-4-2023	02:55:24	IL&FS	LSI	Solapur	MH	17.785091	75.705284	150+000	252+000	224+250 RHS Outer	3	40.3000	0.3634	0.1945	0.1375	0.0995	0.0637	0.0414	0.0272	31.1	32.9		36.8
115	27-4-2023	02:57:28	IL&FS	LSI	Solapur	MH	17.785932	75.702911	150+000	252+000	224+000 RHS Outer	1	40.4000	0.2728	0.1686	0.1154	0.0744	0.0451	0.0335	0.0257	31.1	32.6		36.8
	27-4-2023	02:57:28	IL&FS	LSI	Solapur	MH	17.785932	75.702911	150+000	252+000	224+000 RHS Outer	2	40.5000	0.2687	0.1601	0.1077	0.0674	0.0407	0.0327	0.0265	31.1	32.6		36.8
	27-4-2023	02:57:28	IL&FS	LSI	Solapur	MH	17.785932	75.702911	150+000	252+000	224+000 RHS Outer	3	40.5000	0.2767	0.1554	0.1074	0.0714	0.0455	0.0344	0.0267	31.1	32.6		36.8
116	27-4-2023	02:59:31	IL&FS	LSI	Solapur	MH	17.787046	75.700736	150+000	252+000	223+750 RHS Outer	1	40.6000	0.2260	0.1380	0.0903	0.0559	0.0365	0.0236	0.0212	30.8	32.9		36.8
	27-4-2023	02:59:31	IL&FS	LSI	Solapur	MH	17.787046	75.700736	150+000	252+000	223+750 RHS Outer	2	41.0000	0.2253	0.1380	0.0904	0.0556	0.0376	0.0247	0.0222	30.8	32.9		36.8
	27-4-2023	02:59:31	IL&FS	LSI	Solapur	MH	17.787046	75.700736	150+000	252+000	223+750 RHS Outer	3	41.0000	0.2177	0.1420	0.0921	0.0572	0.0383	0.0248	0.0223	30.8	32.9		36.8
117	27-4-2023	03:01:30	IL&FS	LSI	Solapur	MH	17.788085	75.698745	150+000	252+000	223+500 RHS Outer	1	39.3000	0.2967	0.2088	0.1333	0.0761	0.0475	0.0328	0.0303	30.8	32.8		36.8
	27-4-2023	03:01:30	IL&FS	LSI	Solapur	MH	17.788085	75.698745	150+000	252+000	223+500 RHS Outer	2	39.8000	0.3019	0.2078	0.1274	0.0730	0.0473	0.0341	0.0304	30.8	32.8		36.8
	27-4-2023	03:01:30	IL&FS	LSI	Solapur	MH	17.788085	75.698745	150+000	252+000	223+500 RHS Outer	3	39.9000	0.2993	0.2029	0.1272	0.0724	0.0428	0.0346	0.0311	30.8	32.8		36.8
118	27-4-2023	03:03:32	IL&FS	LSI	Solapur	MH	17.789140	75.696723	150+000	252+000	223+250 RHS Outer	1	39.9000	0.2690	0.1742	0.1076	0.0811	0.0614	0.0505	0.0431	31.0	33.1		36.8
	27-4-2023	03:03:32	IL&FS	LSI	Solapur	MH	17.789140	75.696723	150+000	252+000	223+250 RHS Outer	2	39.9000	0.2695	0.1695	0.1111	0.0819	0.0611	0.0500	0.0425	31.0	33.1		36.8
	27-4-2023	03:03:32	IL&FS	LSI	Solapur	MH	17.789140	75.696723	150+000	252+000	223+250 RHS Outer	3	40.1000	0.2528	0.1625	0.1110	0.0813	0.0620	0.0506	0.0436	31.0	33.1		36.8
119	27-4-2023	03:05:36	IL&FS	LSI	Solapur	MH	17.790224	75.694580	150+000	252+000	223+000 RHS Outer	1	38.4000	0.3452	0.2188	0.1231	0.0806	0.0529	0.0286	0.0135	31.2	33.9		36.8
	27-4-2023	03:05:36	IL&FS	LSI	Solapur	MH	17.790224	75.694580	150+000	252+000	223+000 RHS Outer	2	38.7000	0.3350	0.2135	0.1244	0.0810	0.0512	0.0287	0.0142	31.2	33.9		36.8
	27-4-2023	03:05:36	IL&FS	LSI	Solapur	MH	17.790224	75.694580	150+000	252+000	223+000 RHS Outer	3	39.0000	0.3405	0.2089	0.1266	0.0821	0.0528	0.0296	0.0134	31.2	33.9		36.8
120	27-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.790859	75.692367	150+000	252+000	222+750 RHS Outer	1	39.0000	0.3207	0.1945	0.1154	0.0601	0.0413	0.0292	0.0204	31.4	33.9		36.8
	27-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.790859	75.692367	150+000	252+000	222+750 RHS Outer	2	39.6000	0.3316	0.1904	0.1158	0.0607	0.0435	0.0322	0.0198	31.4	33.9		36.8
	27-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.790859	75.692367	150+000	252+000	222+750 RHS Outer	3	39.8000	0.3146	0.1924	0.1093	0.0613	0.0435	0.0304	0.0208	31.4	33.9		36.8
121	27-4-2023	03:09:32	IL&FS	LSI	Solapur	MH	17.791114	75.689994	150+000	252+000	222+500 RHS Outer	1	39.1000	0.4706	0.2950	0.1626	0.0929	0.0585	0.0481	0.0287	31.5	33.5		36.8
	27-4-2023	03:09:32	IL&FS	LSI	Solapur	MH	17.791114	75.689994	150+000	252+000	222+500 RHS Outer	2	39.4000	0.4564	0.2849	0.1691	0.0941	0.0670	0.0486	0.0438	31.5	33.5		36.8
	27-4-2023	03:09:32	IL&FS	LSI	Solapur	MH	17.791114	75.689994	150+000	252+000	222+500 RHS Outer	3	39.1000	0.4521	0.2893	0.1552	0.0932	0.0700	0.0518	0.0401	31.5	33.5		36.8
122	27-4-2023	03:11:38	IL&FS	LSI	Solapur	MH	17.791406	75.687667	150+000	252+000	222+250 RHS Outer	1	39.9000	0.3009	0.1796	0.1096	0.0751	0.0452	0.0288	0.0182	31.3	33.3		36.8
	27-4-2023	03:11:38	IL&FS	LSI	Solapur	MH	17.791406	75.687667	150+000	252+000	222+250 RHS Outer	2	40.9000	0.2915	0.1826	0.1097	0.0745	0.0462	0.0286	0.0168	31.3	33.3		36.8
	27-4-2023	03:11:38	IL&FS	LSI	Solapur	MH	17.791406	75.687667	150+000	252+000	222+250 RHS Outer	3	41.1000	0.2900	0.1912	0.1120	0.0683	0.0469	0.0306	0.0183	31.3	33.3		36.8
123	27-4-2023	03:13:40	IL&FS	LSI	Solapur	MH	17.791835	75.685264	150+000	252+000	222+000 RHS Outer	1	40.1000	0.2396	0.1435	0.0929	0.0567	0.0395	0.0308	0.0277	31.4	33.2		36.8
	27-4-2023	03:13:40	IL&FS	LSI	Solapur	MH	17.791835	75.685264	150+000	252+000	222+000 RHS Outer	2	40.6000	0.2267	0.1464	0.0946	0.0572	0.0410	0.0293	0.0264	31.4	33.2		36.8
	27-4-2023	03:13:40	IL&FS	LSI	Solapur	MH	17.791835	75.685264	150+000	252+000	222+000 RHS Outer	3	41.0000	0.2299	0.1448	0.0927	0.0586	0.0430	0.0283	0.0255	31.4	33.2		36.8
124	27-4-2023	03:15:37	IL&FS	LSI	Solapur	MH	17.792448	75.683158	150+000	252+000	221+750 RHS Outer	1	40.1000	0.4740	0.2695	0.1365	0.0753	0.0343	0.0235	0.0212	31.3	32.7		36.8
	27-4-2023	03:15:37	IL&FS	LSI	Solapur	MH	17.792448	75.683158	150+000	252+000	221+750 RHS Outer	2	39.9000	0.4630	0.2691	0.1345	0.0729	0.0346	0.0230	0.0207	31.3	32.7		36.8
	27-4-2023	03:15:37	IL&FS	LSI	Solapur	MH	17.792448	75.683158	150+000	252+000	221+750 RHS Outer	3	40.1000	0.4481	0.2708	0.1343	0.0752	0.0344	0.0254	0.0229	31.3	32.7		36.8
125	27-4-2023	06:17:41	IL&FS	LSI	Solapur	MH	17.793092	75.681030	150+000	252+000	221+500 RHS Outer	1	42.0000	0.2375	0.1591	0.0991	0.0618	0.0355	0.0245	0.0221	28.3	29.6	T-26.2/35.3	35.3
	27-4-2023	06:17:41	IL&FS	LSI	Solapur	MH	17.793092	75.681030	150+000	252+000	221+500 RHS Outer	2	42.7000	0.2399	0.1529	0.0942	0.0601	0.0390	0.0261	0.0235	28.3	29.6	T-26.2/35.3	35.3
	27-4-2023	06:17:41	IL&FS	LSI	Solapur	MH	17.793092	75.681030	150+000	252+000	221+500 RHS Outer	3	42.7000	0.2435	0.1556	0.0955	0.0605	0.0379	0.0254	0.0229	28.3	29.6	T-26.2/35.3	35.3
126	27-4-2023	06:19:44	IL&FS	LSI	Solapur	MH	17.793821	75.678619	150+000	252+000	221+250 RHS Outer	1	40.2000	0.2916	0.1795	0.1247	0.0865	0.0567	0.0380	0.0259	28.2	29.9		35.3
	27-4-2023	06:19:44	IL&FS	LSI	Solapur	MH	17.793821	75.678619	150+000	252+000	221+250 RHS Outer	2	39.1000	0.2677	0.1923	0.1159	0.0788	0.0551	0.0370	0.0249	28.2	29.9		35.3
	27-4-2023	06:19:44	IL&FS	LSI	Solapur	MH	17.793821	75.678619	150+000	252+000	221+250 RHS Outer	3	39.3000	0.2664	0.1718	0.1222	0.0828	0.0549	0.0365	0.0249	28.2	29.9		35.3
127	27-4-2023	06:21:34	IL&FS	LSI	Solapur	MH	17.794498	75.676353	150+000	252+000	221+000 RHS Outer	1	38.3000	0.4129	0.2485	0.1419	0.0895	0.0513	0.0365	0.0270	28.1	30.1		35.3
	27-4-2023	06:21:34	IL&FS	LSI	Solapur	MH	17.794498	75.676353	150+000	252+000	221+000 RHS Outer	2	38.7000	0.3917	0.2557	0.1440	0.0886	0.0516	0.0376	0.0284	28.1	30.1		35.3
	27-4-2023	06:21:34	IL&FS	LSI	Solapur	MH	17.794498	75.676353	150+000	252+000	221+000 RHS Outer	3	38.8000	0.3816	0.2603	0.1422	0.0874	0.0520	0.0368	0.0264	28.1	30.1		35.3
128	27-4-2023	06:23:20	IL&FS	LSI	Solapur	MH	17.795143	75.674201	150+000	252+000	220+750 RHS Outer	1	37.9000	0.4408	0.2627	0.1477	0.0875	0.0622	0.0420	0.0294	28.1	29.8		35.3
	27-4-2023	06:23:20	IL&FS	LSI	Solapur	MH	17.795143	75.674201	150+000	252+000	220+750 RHS Outer	2	37.1000	0.4350	0.2719	0.1471	0.0926	0.0560	0.0396	0.0270	28.1	29.8		35.3
	27-4-2023	06:23:20	IL&FS	LSI	Solapur	MH	17.795143	75.674201	150+000	252+000	220+750 RHS Outer	3	37.1000	0.4312	0.2699	0.1521	0.0909	0.0597	0.0419	0.0281	28.1	29.8		35.3
129	27-4-2023	06:25:16	IL&FS	LSI	Solapur	MH	17.795806	75.671989	150+000	252+000	220+500 RHS Outer	1	36.8000	0.5406	0.3116	0.1757	0.1157	0.0760	0.0550	0.0421	28.1	29.5		35.3
	27-4-2023	06:25:16	IL&FS	LSI	Solapur	MH	17.795806	75.671989	150+000	252+000	220+500 RHS Outer	2	37.1000	0.5441	0.3212	0.1620	0.1159	0.0799	0.0588	0.0428	28.1	29.5		35.3
	27-4-2023	06:25:16	IL&FS	LSI	Solapur	MH	17.795806	75.671989	150+000	252+000	220+500 RHS Outer	3	37.5000	0.5213	0.3232	0.1834	0.1247	0.0804	0.0595	0.0452	28.1	29.5		35.3
130	27-4-2023	06:27:09	IL&FS	LSI	Solapur	MH	17.796518	75.669578	150+000	252+000	220+240 RHS Outer	1	36.5000	0.6097	0.3065	0.1586	0.1089	0.0766	0.0567	0.0435	28.1	29.8		35.3
	27-4-2023	06:27:09	IL&FS	LSI	Solapur	MH	17.796518	75.669578	150+000	252+000	220+240 RHS Outer	2	36.2000	0.5850	0.2790	0.1552	0.1129	0.0780	0.0512	0.0431	28.1	29.8		35.3
	27-4-2023	06:27:09	IL&FS	LSI	Solapur	MH	17.796518	75.669578	150+000	252+000	220+240 RHS Outer	3	36.1000	0.5805	0.2869	0.1630	0.1143	0.0783	0.0554	0.0430	28.1	29.8		35.3
131	27-4-2023	06:29:02	IL&FS	LSI	Solapur	MH	17.797212	75.667358	150+000	252+000	220+000 RHS Outer	1	38.5000	0.4708	0.2579	0.1302	0.0782	0.0486	0.0422	0.0380	28.1	29.6		35.3
	27-4-2023	06:29:02	IL&FS	LSI	Solapur	MH	17.797212	75.667358	150+000	252+000	220+000 RHS Outer	2	38.9000	0.4802	0.2531	0.1407	0.0745	0.0458	0.0432	0.0389	28.1	29.6		35.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	06:29:02	IL&FS	LSI	Solapur	MH	17.797212	75.667358	150+000	252+000	220+000 RHS Outer	3	38.2000	0.4610	0.2506	0.1290	0.0716	0.0467	0.0421	0.0379	28.1	29.6		35.3
132	27-4-2023	06:30:58	IL&FS	LSI	Solapur	MH	17.797918	75.665084	150+000	252+000	219+730 RHS Outer	1	38.3000	0.4385	0.1946	0.1001	0.0613	0.0456	0.0348	0.0313	28.0	30.4		35.3
	27-4-2023	06:30:58	IL&FS	LSI	Solapur	MH	17.797918	75.665084	150+000	252+000	219+730 RHS Outer	2	38.6000	0.4362	0.1996	0.1035	0.0624	0.0476	0.0370	0.0325	28.0	30.4		35.3
	27-4-2023	06:30:58	IL&FS	LSI	Solapur	MH	17.797918	75.665084	150+000	252+000	219+730 RHS Outer	3	38.9000	0.4257	0.2061	0.0986	0.0629	0.0471	0.0361	0.0330	28.0	30.4		35.3
133	27-4-2023	06:32:47	IL&FS	LSI	Solapur	MH	17.798551	75.662963	150+000	252+000	219+500 RHS Outer	1	36.5000	0.4059	0.2476	0.1289	0.0863	0.0582	0.0352	0.0175	28.3	30.4		35.3
	27-4-2023	06:32:47	IL&FS	LSI	Solapur	MH	17.798551	75.662963	150+000	252+000	219+500 RHS Outer	2	38.3000	0.4156	0.2499	0.1353	0.0889	0.0582	0.0340	0.0180	28.3	30.4		35.3
	27-4-2023	06:32:47	IL&FS	LSI	Solapur	MH	17.798551	75.662963	150+000	252+000	219+500 RHS Outer	3	38.1000	0.4159	0.2467	0.1335	0.0891	0.0598	0.0349	0.0180	28.3	30.4		35.3
134	27-4-2023	06:34:34	IL&FS	LSI	Solapur	MH	17.799242	75.660743	150+000	252+000	219+250 RHS Outer	1	40.0000	0.3320	0.1961	0.1167	0.0695	0.0434	0.0288	0.0196	28.6	30.3		35.3
	27-4-2023	06:34:34	IL&FS	LSI	Solapur	MH	17.799242	75.660743	150+000	252+000	219+250 RHS Outer	2	39.9000	0.3110	0.1970	0.1091	0.0734	0.0411	0.0301	0.0202	28.6	30.3		35.3
	27-4-2023	06:34:34	IL&FS	LSI	Solapur	MH	17.799242	75.660743	150+000	252+000	219+250 RHS Outer	3	40.4000	0.3205	0.1879	0.1149	0.0692	0.0444	0.0292	0.0200	28.6	30.3		35.3
135	27-4-2023	06:36:22	IL&FS	LSI	Solapur	MH	17.799957	75.658378	150+000	252+000	219+000 RHS Outer	1	39.2000	0.5297	0.3003	0.1571	0.0972	0.0682	0.0423	0.0295	28.8	30.2		35.3
	27-4-2023	06:36:22	IL&FS	LSI	Solapur	MH	17.799957	75.658378	150+000	252+000	219+000 RHS Outer	2	39.8000	0.5102	0.3057	0.1690	0.0935	0.0661	0.0471	0.0297	28.8	30.2		35.3
	27-4-2023	06:36:22	IL&FS	LSI	Solapur	MH	17.799957	75.658378	150+000	252+000	219+000 RHS Outer	3	39.4000	0.5165	0.3024	0.1653	0.0920	0.0621	0.0420	0.0320	28.8	30.2		35.3
136	27-4-2023	06:38:10	IL&FS	LSI	Solapur	MH	17.800640	75.656196	150+000	252+000	218+750 RHS Outer	1	37.7000	0.4736	0.2435	0.1354	0.0864	0.0503	0.0445	0.0353	28.9	30.2	Patch	35.3
	27-4-2023	06:38:10	IL&FS	LSI	Solapur	MH	17.800640	75.656196	150+000	252+000	218+750 RHS Outer	2	38.2000	0.4687	0.2494	0.1230	0.0830	0.0525	0.0457	0.0340	28.9	30.2	Patch	35.3
	27-4-2023	06:38:10	IL&FS	LSI	Solapur	MH	17.800640	75.656196	150+000	252+000	218+750 RHS Outer	3	38.3000	0.4747	0.2429	0.1293	0.0821	0.0501	0.0420	0.0364	28.9	30.2	Patch	35.3
137	27-4-2023	06:40:44	IL&FS	LSI	Solapur	MH	17.801383	75.653915	150+000	252+000	218+500 RHS Outer	1	40.4000	0.4224	0.2356	0.1294	0.0991	0.0766	0.0492	0.0318	28.8	30.1		35.3
	27-4-2023	06:40:44	IL&FS	LSI	Solapur	MH	17.801383	75.653915	150+000	252+000	218+500 RHS Outer	2	40.2000	0.4204	0.2287	0.1349	0.0957	0.0707	0.0483	0.0315	28.8	30.1		35.3
	27-4-2023	06:40:44	IL&FS	LSI	Solapur	MH	17.801383	75.653915	150+000	252+000	218+500 RHS Outer	3	40.4000	0.4044	0.2354	0.1332	0.0978	0.0777	0.0498	0.0304	28.8	30.1		35.3
138	27-4-2023	06:42:25	IL&FS	LSI	Solapur	MH	17.802381	75.651756	150+000	252+000	218+250 RHS Outer	1	38.1000	0.4445	0.2388	0.1393	0.0810	0.0624	0.0479	0.0366	28.8	30.7		35.3
	27-4-2023	06:42:25	IL&FS	LSI	Solapur	MH	17.802381	75.651756	150+000	252+000	218+250 RHS Outer	2	38.4000	0.4251	0.2497	0.1311	0.0822	0.0602	0.0484	0.0380	28.8	30.7		35.3
	27-4-2023	06:42:25	IL&FS	LSI	Solapur	MH	17.802381	75.651756	150+000	252+000	218+250 RHS Outer	3	38.6000	0.4186	0.2406	0.1393	0.0814	0.0569	0.0438	0.0377	28.8	30.7		35.3
139	27-4-2023	06:44:15	IL&FS	LSI	Solapur	MH	17.803445	75.649780	150+000	252+000	218+000 RHS Outer	1	36.4000	0.5530	0.3101	0.1448	0.0926	0.0556	0.0376	0.0242	29.0	31.4		35.3
	27-4-2023	06:44:15	IL&FS	LSI	Solapur	MH	17.803445	75.649780	150+000	252+000	218+000 RHS Outer	2	36.9000	0.5166	0.2992	0.1541	0.0974	0.0595	0.0379	0.0245	29.0	31.4		35.3
	27-4-2023	06:44:15	IL&FS	LSI	Solapur	MH	17.803445	75.649780	150+000	252+000	218+000 RHS Outer	3	37.1000	0.5398	0.2990	0.1543	0.0951	0.0568	0.0384	0.0247	29.0	31.4		35.3
140	27-4-2023	06:51:36	IL&FS	LSI	Solapur	MH	17.806684	75.643203	150+000	252+000	217+200 RHS Outer	1	37.6000	0.4781	0.2737	0.1272	0.0941	0.0703	0.0494	0.0344	30.1	33.0		35.3
	27-4-2023	06:51:36	IL&FS	LSI	Solapur	MH	17.806684	75.643203	150+000	252+000	217+200 RHS Outer	2	37.9000	0.4651	0.2624	0.1283	0.0936	0.0682	0.0488	0.0364	30.1	33.0		35.3
	27-4-2023	06:51:36	IL&FS	LSI	Solapur	MH	17.806684	75.643203	150+000	252+000	217+200 RHS Outer	3	38.2000	0.4614	0.2617	0.1297	0.0872	0.0563	0.0445	0.0356	30.1	33.0		35.3
141	27-4-2023	06:53:27	IL&FS	LSI	Solapur	MH	17.807613	75.641082	150+000	252+000	217+000 RHS Outer	1	38.7000	0.3546	0.2173	0.1142	0.0733	0.0516	0.0383	0.0300	30.1	33.3		35.3
	27-4-2023	06:53:27	IL&FS	LSI	Solapur	MH	17.807613	75.641082	150+000	252+000	217+000 RHS Outer	2	39.1000	0.3668	0.2132	0.1195	0.0756	0.0534	0.0373	0.0290	30.1	33.3		35.3
	27-4-2023	06:53:27	IL&FS	LSI	Solapur	MH	17.807613	75.641082	150+000	252+000	217+000 RHS Outer	3	38.9000	0.3586	0.2043	0.1150	0.0684	0.0500	0.0382	0.0298	30.1	33.3		35.3
142	27-4-2023	06:56:12	IL&FS	LSI	Solapur	MH	17.809576	75.637992	150+000	252+000	216+590 RHS Outer	1	36.2000	0.5676	0.3352	0.1719	0.1153	0.0734	0.0381	0.0114	30.2	32.3		35.3
	27-4-2023	06:56:12	IL&FS	LSI	Solapur	MH	17.809576	75.637992	150+000	252+000	216+590 RHS Outer	2	36.6000	0.5551	0.3398	0.1731	0.1127	0.0705	0.0358	0.0113	30.2	32.3		35.3
	27-4-2023	06:56:12	IL&FS	LSI	Solapur	MH	17.809576	75.637992	150+000	252+000	216+590 RHS Outer	3	37.2000	0.5735	0.3444	0.1774	0.1116	0.0696	0.0364	0.0117	30.2	32.3		35.3
143	27-4-2023	06:59:20	IL&FS	LSI	Solapur	MH	17.810331	75.637420	150+000	252+000	216+500 RHS Outer	1	38.6000	0.4069	0.2193	0.1118	0.0645	0.0468	0.0348	0.0313	30.5	32.6	T-28.5/35.2	35.2
	27-4-2023	06:59:20	IL&FS	LSI	Solapur	MH	17.810331	75.637420	150+000	252+000	216+500 RHS Outer	2	39.1000	0.3903	0.2207	0.1153	0.0659	0.0474	0.0347	0.0312	30.5	32.6	T-28.5/35.2	35.2
	27-4-2023	06:59:20	IL&FS	LSI	Solapur	MH	17.810331	75.637420	150+000	252+000	216+500 RHS Outer	3	39.2000	0.4037	0.2230	0.1138	0.0625	0.0490	0.0401	0.0308	30.5	32.6	T-28.5/35.2	35.2
144	27-4-2023	07:02:03	IL&FS	LSI	Solapur	MH	17.812408	75.635871	150+000	252+000	216+210 RHS Outer	1	36.8000	0.6189	0.3383	0.1658	0.1021	0.0603	0.0469	0.0283	30.6	32.2	Bleeding	35.2
	27-4-2023	07:02:03	IL&FS	LSI	Solapur	MH	17.812408	75.635871	150+000	252+000	216+210 RHS Outer	2	36.4000	0.5805	0.3381	0.1695	0.1057	0.0613	0.0470	0.0256	30.6	32.2	Bleeding	35.2
	27-4-2023	07:02:03	IL&FS	LSI	Solapur	MH	17.812408	75.635871	150+000	252+000	216+210 RHS Outer	3	36.2000	0.5903	0.3349	0.1777	0.1067	0.0604	0.0473	0.0280	30.6	32.2	Bleeding	35.2
145	27-4-2023	07:03:45	IL&FS	LSI	Solapur	MH	17.813762	75.634674	150+000	252+000	216+000 RHS Outer	1	39.7000	0.3460	0.1936	0.1154	0.0759	0.0499	0.0377	0.0302	30.4	31.3		35.2
	27-4-2023	07:03:45	IL&FS	LSI	Solapur	MH	17.813762	75.634674	150+000	252+000	216+000 RHS Outer	2	40.0000	0.3277	0.1839	0.1221	0.0775	0.0445	0.0344	0.0278	30.4	31.3		35.2
	27-4-2023	07:03:45	IL&FS	LSI	Solapur	MH	17.813762	75.634674	150+000	252+000	216+000 RHS Outer	3	40.1000	0.3290	0.1896	0.1150	0.0758	0.0474	0.0369	0.0292	30.4	31.3		35.2
146	27-4-2023	07:05:36	IL&FS	LSI	Solapur	MH	17.815000	75.632530	150+000	252+000	215+750 RHS Outer	1	37.7000	0.4723	0.2693	0.1534	0.0989	0.0530	0.0382	0.0281	30.0	31.3		35.2
	27-4-2023	07:05:36	IL&FS	LSI	Solapur	MH	17.815000	75.632530	150+000	252+000	215+750 RHS Outer	2	38.5000	0.4531	0.2632	0.1545	0.0937	0.0536	0.0397	0.0297	30.0	31.3		35.2
	27-4-2023	07:05:36	IL&FS	LSI	Solapur	MH	17.815000	75.632530	150+000	252+000	215+750 RHS Outer	3	38.5000	0.4381	0.2582	0.1522	0.0964	0.0551	0.0386	0.0284	30.0	31.3		35.2
147	27-4-2023	07:07:29	IL&FS	LSI	Solapur	MH	17.816173	75.630638	150+000	252+000	215+500 RHS Outer	1	37.9000	0.5034	0.2782	0.1378	0.0711	0.0592	0.0384	0.0239	29.9	32.0		35.2
	27-4-2023	07:07:29	IL&FS	LSI	Solapur	MH	17.816173	75.630638	150+000	252+000	215+500 RHS Outer	2	38.3000	0.5077	0.2857	0.1410	0.0727	0.0548	0.0372	0.0238	29.9	32.0		35.2
	27-4-2023	07:07:29	IL&FS	LSI	Solapur	MH	17.816173	75.630638	150+000	252+000	215+500 RHS Outer	3	38.5000	0.4901	0.2818	0.1451	0.0765	0.0539	0.0424	0.0353	29.9	32.0		35.2
148	27-4-2023	07:09:20	IL&FS	LSI	Solapur	MH	17.817461	75.628623	150+000	252+000	215+250 RHS Outer	1	39.4000	0.3411	0.1806	0.1035	0.0570	0.0401	0.0286	0.0247	30.1	32.2		35.2
	27-4-2023	07:09:20	IL&FS	LSI	Solapur	MH	17.817461	75.628623	150+000	252+000	215+250 RHS Outer	2	39.5000	0.3270	0.1761	0.1058	0.0562	0.0416	0.0280	0.0260	30.1	32.2		35.2
	27-4-2023	07:09:20	IL&FS	LSI	Solapur	MH	17.817461	75.628623	150+000	252+000	215+250 RHS Outer	3	39.9000	0.3284	0.1794	0.1035	0.0594	0.0402	0.0288	0.0278	30.1	32.2		35.2
149	27-4-2023	07:11:16	IL&FS	LSI	Solapur	MH	17.818540	75.626739	150+000	252+000	215+000 RHS Outer	1	39.9000	0.2974	0.1898	0.1207	0.0628	0.0450	0.0311	0.0271	30.5	32.8		35.2
	27-4-2023	07:11:16	IL&FS	LSI	Solapur	MH	17.818540	75.626739	150+000	252+000	215+000 RHS Outer	2	39.8000	0.2989	0.2000	0.1121	0.0627	0.0444	0.0313	0.0270	30.5	32.8		35.2
	27-4-2023	07:11:16	IL&FS	LSI	Solapur	MH	17.818540	75.626739	150+000	252+000	215+000 RHS Outer	3	40.2000	0.2889	0.1829	0.1185	0.0686	0.0461	0.0315	0.0273	30.5	32.8		35.2
150	27-4-2023	07:13:03	IL&FS	LSI	Solapur	MH	17.819768	75.624633	150+000	252+000	214+750 RHS Outer	1	40.0000	0.4887	0.2629	0.1237	0.0843	0.0556	0.0375	0.0338	30.4	32.7		35.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	07:13:03	IL&FS	LSI	Solapur	MH	17.819768	75.624633	150+000	252+000	214+750 RHS Outer	2	40.1000	0.4848	0.2620	0.1250	0.0783	0.0552	0.0398	0.0358	30.4	32.7		35.2
	27-4-2023	07:13:03	IL&FS	LSI	Solapur	MH	17.819768	75.624633	150+000	252+000	214+750 RHS Outer	3	40.2000	0.4611	0.2598	0.1298	0.0779	0.0549	0.0394	0.0355	30.4	32.7		35.2
151	27-4-2023	07:14:57	IL&FS	LSI	Solapur	MH	17.820991	75.622528	150+000	252+000	214+480 RHS Outer	1	37.7000	0.4612	0.2664	0.1319	0.0910	0.0589	0.0435	0.0339	30.4	32.8		35.2
	27-4-2023	07:14:57	IL&FS	LSI	Solapur	MH	17.820991	75.622528	150+000	252+000	214+480 RHS Outer	2	37.9000	0.4677	0.2496	0.1334	0.0863	0.0559	0.0427	0.0345	30.4	32.8		35.2
	27-4-2023	07:14:57	IL&FS	LSI	Solapur	MH	17.820991	75.622528	150+000	252+000	214+480 RHS Outer	3	37.8000	0.4704	0.2593	0.1339	0.0930	0.0611	0.0449	0.0326	30.4	32.8		35.2
152	27-4-2023	07:16:45	IL&FS	LSI	Solapur	MH	17.822132	75.620635	150+000	252+000	214+250 RHS Outer	1	37.1000	0.5200	0.3064	0.1493	0.1016	0.0651	0.0504	0.0400	30.5	33.2		35.2
	27-4-2023	07:16:45	IL&FS	LSI	Solapur	MH	17.822132	75.620635	150+000	252+000	214+250 RHS Outer	2	36.6000	0.4692	0.2816	0.1445	0.0991	0.0697	0.0538	0.0419	30.5	33.2		35.2
	27-4-2023	07:16:45	IL&FS	LSI	Solapur	MH	17.822132	75.620635	150+000	252+000	214+250 RHS Outer	3	36.6000	0.4861	0.2701	0.1446	0.0988	0.0699	0.0531	0.0417	30.5	33.2		35.2
153	27-4-2023	07:18:40	IL&FS	LSI	Solapur	MH	17.823259	75.618667	150+000	252+000	214+000 RHS Outer	1	38.7000	0.3576	0.1763	0.1076	0.0688	0.0432	0.0418	0.0376	30.5	32.8		35.2
	27-4-2023	07:18:40	IL&FS	LSI	Solapur	MH	17.823259	75.618667	150+000	252+000	214+000 RHS Outer	2	38.8000	0.3411	0.1747	0.0997	0.0686	0.0429	0.0420	0.0378	30.5	32.8		35.2
	27-4-2023	07:18:40	IL&FS	LSI	Solapur	MH	17.823259	75.618667	150+000	252+000	214+000 RHS Outer	3	39.0000	0.3503	0.1760	0.1033	0.0720	0.0455	0.0437	0.0393	30.5	32.8		35.2
154	27-4-2023	07:20:51	IL&FS	LSI	Solapur	MH	17.824449	75.616691	150+000	252+000	213+750 RHS Outer	1	40.6000	0.3541	0.1672	0.1017	0.0704	0.0462	0.0380	0.0365	30.8	33.2		35.2
	27-4-2023	07:20:51	IL&FS	LSI	Solapur	MH	17.824449	75.616691	150+000	252+000	213+750 RHS Outer	2	40.8000	0.3425	0.1700	0.1097	0.0730	0.0447	0.0418	0.0371	30.8	33.2		35.2
	27-4-2023	07:20:51	IL&FS	LSI	Solapur	MH	17.824449	75.616691	150+000	252+000	213+750 RHS Outer	3	40.9000	0.3416	0.1718	0.1006	0.0673	0.0456	0.0420	0.0364	30.8	33.2		35.2
155	27-4-2023	07:22:35	IL&FS	LSI	Solapur	MH	17.825624	75.614669	150+000	252+000	213+500 RHS Outer	1	38.2000	0.4534	0.2420	0.1313	0.0765	0.0622	0.0414	0.0373	30.8	33.6		35.2
	27-4-2023	07:22:35	IL&FS	LSI	Solapur	MH	17.825624	75.614669	150+000	252+000	213+500 RHS Outer	2	38.3000	0.4673	0.2380	0.1233	0.0813	0.0556	0.0411	0.0370	30.8	33.6		35.2
	27-4-2023	07:22:35	IL&FS	LSI	Solapur	MH	17.825624	75.614669	150+000	252+000	213+500 RHS Outer	3	38.5000	0.4345	0.2365	0.1262	0.0797	0.0576	0.0397	0.0357	30.8	33.6		35.2
156	27-4-2023	07:41:29	IL&FS	LSI	Solapur	MH	17.826913	75.612586	150+000	252+000	213+230 RHS Outer	1	39.8000	0.4357	0.2310	0.1349	0.0885	0.0567	0.0383	0.0321	31.8	34.3	T-30.2/37.6	37.6
	27-4-2023	07:41:29	IL&FS	LSI	Solapur	MH	17.826913	75.612586	150+000	252+000	213+230 RHS Outer	2	39.3000	0.4248	0.2382	0.1303	0.0853	0.0540	0.0364	0.0289	31.8	34.3	T-30.2/37.6	37.6
	27-4-2023	07:41:29	IL&FS	LSI	Solapur	MH	17.826913	75.612586	150+000	252+000	213+230 RHS Outer	3	40.3000	0.4393	0.2366	0.1341	0.0895	0.0573	0.0375	0.0321	31.8	34.3	T-30.2/37.6	37.6
157	27-4-2023	07:44:28	IL&FS	LSI	Solapur	MH	17.828023	75.610664	150+000	252+000	213+000 RHS Outer	1	38.7000	0.4714	0.2566	0.1387	0.0884	0.0570	0.0376	0.0252	32.1	35.7		37.6
	27-4-2023	07:44:28	IL&FS	LSI	Solapur	MH	17.828023	75.610664	150+000	252+000	213+000 RHS Outer	2	38.9000	0.4470	0.2673	0.1386	0.0889	0.0557	0.0385	0.0266	32.1	35.7		37.6
	27-4-2023	07:44:28	IL&FS	LSI	Solapur	MH	17.828023	75.610664	150+000	252+000	213+000 RHS Outer	3	38.6000	0.4156	0.2543	0.1388	0.0900	0.0585	0.0399	0.0278	32.1	35.7		37.6
158	27-4-2023	07:46:17	IL&FS	LSI	Solapur	MH	17.829185	75.608726	150+000	252+000	212+750 RHS Outer	1	36.4000	0.6023	0.3147	0.1503	0.0935	0.0563	0.0383	0.0271	32.4	35.7		37.6
	27-4-2023	07:46:17	IL&FS	LSI	Solapur	MH	17.829185	75.608726	150+000	252+000	212+750 RHS Outer	2	36.6000	0.5696	0.3050	0.1416	0.0863	0.0522	0.0376	0.0275	32.4	35.7		37.6
	27-4-2023	07:46:17	IL&FS	LSI	Solapur	MH	17.829185	75.608726	150+000	252+000	212+750 RHS Outer	3	37.0000	0.5684	0.3091	0.1389	0.0904	0.0557	0.0375	0.0264	32.4	35.7		37.6
159	27-4-2023	07:48:03	IL&FS	LSI	Solapur	MH	17.830400	75.606689	150+000	252+000	212+500 RHS Outer	1	36.7000	0.6897	0.3972	0.2216	0.1496	0.0973	0.0610	0.0378	32.7	35.8		37.6
	27-4-2023	07:48:03	IL&FS	LSI	Solapur	MH	17.830400	75.606689	150+000	252+000	212+500 RHS Outer	2	36.1000	0.6755	0.3855	0.2173	0.1467	0.0944	0.0597	0.0375	32.7	35.8		37.6
	27-4-2023	07:48:03	IL&FS	LSI	Solapur	MH	17.830400	75.606689	150+000	252+000	212+500 RHS Outer	3	36.2000	0.6502	0.3804	0.2122	0.1439	0.0931	0.0603	0.0382	32.7	35.8		37.6
160	27-4-2023	07:49:57	IL&FS	LSI	Solapur	MH	17.831409	75.604530	150+000	252+000	212+250 RHS Outer	1	37.4000	0.5726	0.3367	0.2090	0.1466	0.1009	0.0652	0.0408	32.8	36.2		37.6
	27-4-2023	07:49:57	IL&FS	LSI	Solapur	MH	17.831409	75.604530	150+000	252+000	212+250 RHS Outer	2	37.6000	0.5318	0.3385	0.1881	0.1365	0.0983	0.0660	0.0421	32.8	36.2		37.6
	27-4-2023	07:49:57	IL&FS	LSI	Solapur	MH	17.831409	75.604530	150+000	252+000	212+250 RHS Outer	3	37.8000	0.5304	0.3315	0.1994	0.1408	0.0984	0.0642	0.0427	32.8	36.2		37.6
161	27-4-2023	07:52:05	IL&FS	LSI	Solapur	MH	17.832298	75.602172	150+000	252+000	211+980 RHS Outer	1	38.5000	0.5609	0.2984	0.1528	0.0936	0.0650	0.0422	0.0353	33.0	35.9		37.6
	27-4-2023	07:52:05	IL&FS	LSI	Solapur	MH	17.832298	75.602172	150+000	252+000	211+980 RHS Outer	2	38.5000	0.5635	0.3015	0.1464	0.0931	0.0657	0.0418	0.0369	33.0	35.9		37.6
	27-4-2023	07:52:05	IL&FS	LSI	Solapur	MH	17.832298	75.602172	150+000	252+000	211+980 RHS Outer	3	38.7000	0.5661	0.3016	0.1502	0.0940	0.0636	0.0442	0.0369	33.0	35.9		37.6
162	27-4-2023	07:54:00	IL&FS	LSI	Solapur	MH	17.833086	75.600196	150+000	252+000	211+750 RHS Outer	1	40.1000	0.3008	0.1702	0.0876	0.0539	0.0388	0.0277	0.0249	32.9	36.0		37.6
	27-4-2023	07:54:00	IL&FS	LSI	Solapur	MH	17.833086	75.600196	150+000	252+000	211+750 RHS Outer	2	40.5000	0.2965	0.1648	0.0953	0.0541	0.0373	0.0268	0.0241	32.9	36.0		37.6
	27-4-2023	07:54:00	IL&FS	LSI	Solapur	MH	17.833086	75.600196	150+000	252+000	211+750 RHS Outer	3	40.3000	0.2833	0.1649	0.0965	0.0580	0.0358	0.0283	0.0255	32.9	36.0		37.6
163	27-4-2023	07:55:53	IL&FS	LSI	Solapur	MH	17.833881	75.598007	150+000	252+000	211+500 RHS Outer	1	40.5000	0.2805	0.1552	0.0882	0.0541	0.0293	0.0183	0.0106	33.1	36.7		37.6
	27-4-2023	07:55:53	IL&FS	LSI	Solapur	MH	17.833881	75.598007	150+000	252+000	211+500 RHS Outer	2	40.7000	0.2845	0.1521	0.0929	0.0538	0.0287	0.0182	0.0109	33.1	36.7		37.6
	27-4-2023	07:55:53	IL&FS	LSI	Solapur	MH	17.833881	75.598007	150+000	252+000	211+500 RHS Outer	3	40.7000	0.2839	0.1546	0.0914	0.0555	0.0294	0.0191	0.0112	33.1	36.7		37.6
164	27-4-2023	07:57:48	IL&FS	LSI	Solapur	MH	17.834791	75.595664	150+000	252+000	211+240 RHS Outer	1	38.4000	0.3442	0.2018	0.1030	0.0742	0.0550	0.0374	0.0258	33.2	36.4		37.6
	27-4-2023	07:57:48	IL&FS	LSI	Solapur	MH	17.834791	75.595664	150+000	252+000	211+240 RHS Outer	2	39.2000	0.3399	0.1937	0.0999	0.0775	0.0625	0.0431	0.0297	33.2	36.4		37.6
	27-4-2023	07:57:48	IL&FS	LSI	Solapur	MH	17.834791	75.595664	150+000	252+000	211+240 RHS Outer	3	39.3000	0.3433	0.1917	0.1054	0.0783	0.0602	0.0412	0.0287	33.2	36.4		37.6
165	27-4-2023	08:00:14	IL&FS	LSI	Solapur	MH	17.835563	75.593551	150+000	252+000	211+000 RHS Outer	1	39.6000	0.3691	0.2035	0.1060	0.0681	0.0450	0.0335	0.0251	33.2	36.4		37.6
	27-4-2023	08:00:14	IL&FS	LSI	Solapur	MH	17.835563	75.593551	150+000	252+000	211+000 RHS Outer	2	40.2000	0.3663	0.2056	0.1062	0.0730	0.0445	0.0339	0.0271	33.2	36.4		37.6
	27-4-2023	08:00:14	IL&FS	LSI	Solapur	MH	17.835563	75.593551	150+000	252+000	211+000 RHS Outer	3	40.1000	0.3690	0.1973	0.1070	0.0722	0.0464	0.0335	0.0239	33.2	36.4		37.6
166	27-4-2023	08:02:09	IL&FS	LSI	Solapur	MH	17.836404	75.591361	150+000	252+000	210+750 RHS Outer	1	38.0000	0.4906	0.2459	0.1338	0.0897	0.0599	0.0398	0.0268	33.4	37.1		37.6
	27-4-2023	08:02:09	IL&FS	LSI	Solapur	MH	17.836404	75.591361	150+000	252+000	210+750 RHS Outer	2	38.4000	0.4678	0.2475	0.1295	0.0879	0.0612	0.0403	0.0265	33.4	37.1		37.6
	27-4-2023	08:02:09	IL&FS	LSI	Solapur	MH	17.836404	75.591361	150+000	252+000	210+750 RHS Outer	3	38.4000	0.4670	0.2249	0.1304	0.0890	0.0577	0.0400	0.0291	33.4	37.1		37.6
167	27-4-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.837202	75.589195	150+000	252+000	210+500 RHS Outer	1	40.1000	0.2315	0.1331	0.0784	0.0525	0.0359	0.0306	0.0275	33.5	36.9		37.6
	27-4-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.837202	75.589195	150+000	252+000	210+500 RHS Outer	2	40.0000	0.2304	0.1332	0.0805	0.0566	0.0385	0.0323	0.0291	33.5	36.9		37.6
	27-4-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.837202	75.589195	150+000	252+000	210+500 RHS Outer	3	39.9000	0.2262	0.1335	0.0840	0.0554	0.0359	0.0298	0.0268	33.5	36.9		37.6
168	27-4-2023	08:05:45	IL&FS	LSI	Solapur	MH	17.838014	75.587028	150+000	252+000	210+250 RHS Outer	1	38.4000	0.4538	0.2538	0.1326	0.0831	0.0484	0.0314	0.0283	33.6	37.0		37.6
	27-4-2023	08:05:45	IL&FS	LSI	Solapur	MH	17.838014	75.587028	150+000	252+000	210+250 RHS Outer	2	39.0000	0.4413	0.2589	0.1277	0.0795	0.0478	0.0320	0.0307	33.6	37.0		37.6
	27-4-2023	08:05:45	IL&FS	LSI	Solapur	MH	17.838014	75.587028	150+000	252+000	210+250 RHS Outer	3	39.0000	0.4494	0.2567	0.1210	0.0781	0.0491	0.0316	0.0310	33.6	37.0		37.6

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
169	27-4-2023	08:07:41	IL&FS	LSI	Solapur	MH	17.838987	75.584373	150+000	252+000	209+950 RHS Outer	1	37.2000	0.4618	0.2784	0.1443	0.0890	0.0531	0.0376	0.0268	33.5	37.0		37.6
	27-4-2023	08:07:41	IL&FS	LSI	Solapur	MH	17.838987	75.584373	150+000	252+000	209+950 RHS Outer	2	37.6000	0.4543	0.2733	0.1449	0.0929	0.0534	0.0373	0.0271	33.5	37.0		37.6
	27-4-2023	08:07:41	IL&FS	LSI	Solapur	MH	17.838987	75.584373	150+000	252+000	209+950 RHS Outer	3	37.8000	0.4360	0.2781	0.1443	0.0935	0.0547	0.0391	0.0279	33.5	37.0		37.6
170	27-4-2023	08:09:30	IL&FS	LSI	Solapur	MH	17.839611	75.582618	150+000	252+000	209+750 RHS Outer	1	39.1000	0.4774	0.3010	0.1461	0.0930	0.0584	0.0380	0.0240	33.6	37.5		37.6
	27-4-2023	08:09:30	IL&FS	LSI	Solapur	MH	17.839611	75.582618	150+000	252+000	209+750 RHS Outer	2	39.9000	0.4682	0.3004	0.1353	0.0914	0.0594	0.0365	0.0217	33.6	37.5		37.6
	27-4-2023	08:09:30	IL&FS	LSI	Solapur	MH	17.839611	75.582618	150+000	252+000	209+750 RHS Outer	3	39.6000	0.4680	0.2997	0.1404	0.0900	0.0589	0.0397	0.0258	33.6	37.5		37.6
171	27-4-2023	08:11:28	IL&FS	LSI	Solapur	MH	17.840351	75.580444	150+000	252+000	209+500 RHS Outer	1	39.7000	0.3479	0.2082	0.1240	0.0688	0.0519	0.0407	0.0366	33.7	37.9		37.6
	27-4-2023	08:11:28	IL&FS	LSI	Solapur	MH	17.840351	75.580444	150+000	252+000	209+500 RHS Outer	2	40.0000	0.3455	0.2130	0.1195	0.0697	0.0530	0.0417	0.0375	33.7	37.9		37.6
	27-4-2023	08:11:28	IL&FS	LSI	Solapur	MH	17.840351	75.580444	150+000	252+000	209+500 RHS Outer	3	39.9000	0.3359	0.2201	0.1274	0.0688	0.0542	0.0430	0.0387	33.7	37.9		37.6
172	27-4-2023	08:13:19	IL&FS	LSI	Solapur	MH	17.840782	75.578033	150+000	252+000	209+250 RHS Outer	1	39.2000	0.3432	0.1861	0.1048	0.0723	0.0518	0.0394	0.0298	33.6	37.8		37.6
	27-4-2023	08:13:19	IL&FS	LSI	Solapur	MH	17.840782	75.578033	150+000	252+000	209+250 RHS Outer	2	39.5000	0.3436	0.1868	0.1055	0.0732	0.0529	0.0402	0.0312	33.6	37.8		37.6
	27-4-2023	08:13:19	IL&FS	LSI	Solapur	MH	17.840782	75.578033	150+000	252+000	209+250 RHS Outer	3	39.6000	0.3414	0.1849	0.1051	0.0734	0.0535	0.0407	0.0323	33.6	37.8		37.6
173	27-4-2023	08:15:32	IL&FS	LSI	Solapur	MH	17.841175	75.575782	150+000	252+000	209+000 RHS Outer	1	37.3000	0.6073	0.3333	0.1726	0.1010	0.0546	0.0406	0.0303	33.6	37.5		37.6
	27-4-2023	08:15:32	IL&FS	LSI	Solapur	MH	17.841175	75.575782	150+000	252+000	209+000 RHS Outer	2	36.4000	0.5720	0.3168	0.1681	0.1011	0.0494	0.0375	0.0288	33.6	37.5		37.6
	27-4-2023	08:15:32	IL&FS	LSI	Solapur	MH	17.841175	75.575782	150+000	252+000	209+000 RHS Outer	3	36.8000	0.5614	0.3072	0.1744	0.1060	0.0546	0.0392	0.0292	33.6	37.5		37.6
174	27-4-2023	08:17:28	IL&FS	LSI	Solapur	MH	17.841543	75.573371	150+000	252+000	208+750 RHS Outer	1	36.5000	0.5985	0.3269	0.1609	0.0822	0.0475	0.0372	0.0325	33.6	37.9		37.6
	27-4-2023	08:17:28	IL&FS	LSI	Solapur	MH	17.841543	75.573371	150+000	252+000	208+750 RHS Outer	2	36.8000	0.5781	0.3263	0.1685	0.0829	0.0480	0.0366	0.0333	33.6	37.9		37.6
	27-4-2023	08:17:28	IL&FS	LSI	Solapur	MH	17.841543	75.573371	150+000	252+000	208+750 RHS Outer	3	36.8000	0.5793	0.3329	0.1705	0.0836	0.0446	0.0387	0.0331	33.6	37.9		37.6
175	27-4-2023	08:22:37	IL&FS	LSI	Solapur	MH	17.841943	75.571052	150+000	252+000	208+500 RHS Outer	1	36.1000	0.6545	0.3532	0.1691	0.0837	0.0568	0.0350	0.0299	33.9	37.8	T-30.8/40.2	40.2
	27-4-2023	08:22:37	IL&FS	LSI	Solapur	MH	17.841943	75.571052	150+000	252+000	208+500 RHS Outer	2	36.3000	0.6137	0.3392	0.1696	0.0838	0.0538	0.0331	0.0266	33.9	37.8	T-30.8/40.2	40.2
	27-4-2023	08:22:37	IL&FS	LSI	Solapur	MH	17.841943	75.571052	150+000	252+000	208+500 RHS Outer	3	36.0000	0.6221	0.3494	0.1704	0.0902	0.0566	0.0351	0.0280	33.9	37.8	T-30.8/40.2	40.2
176	27-4-2023	08:24:38	IL&FS	LSI	Solapur	MH	17.842187	75.568748	150+000	252+000	208+250 RHS Outer	1	40.7000	0.2028	0.1296	0.0789	0.0502	0.0291	0.0188	0.0109	34.0	38.8		40.2
	27-4-2023	08:24:38	IL&FS	LSI	Solapur	MH	17.842187	75.568748	150+000	252+000	208+250 RHS Outer	2	41.0000	0.2000	0.1308	0.0815	0.0516	0.0286	0.0182	0.0110	34.0	38.8		40.2
	27-4-2023	08:24:38	IL&FS	LSI	Solapur	MH	17.842187	75.568748	150+000	252+000	208+250 RHS Outer	3	41.2000	0.2105	0.1215	0.0821	0.0506	0.0296	0.0188	0.0111	34.0	38.8		40.2
177	27-4-2023	08:26:26	IL&FS	LSI	Solapur	MH	17.841966	75.566513	150+000	252+000	208+000 RHS Outer	1	38.7000	0.4045	0.2338	0.1354	0.0887	0.0552	0.0301	0.0120	34.2	38.7		40.2
	27-4-2023	08:26:26	IL&FS	LSI	Solapur	MH	17.841966	75.566513	150+000	252+000	208+000 RHS Outer	2	38.6000	0.3952	0.2271	0.1310	0.0868	0.0545	0.0289	0.0127	34.2	38.7		40.2
	27-4-2023	08:26:26	IL&FS	LSI	Solapur	MH	17.841966	75.566513	150+000	252+000	208+000 RHS Outer	3	38.8000	0.3852	0.2202	0.1251	0.0829	0.0544	0.0290	0.0124	34.2	38.7		40.2
178	27-4-2023	08:28:25	IL&FS	LSI	Solapur	MH	17.841732	75.564071	150+000	252+000	207+750 RHS Outer	1	36.9000	0.5775	0.3017	0.1591	0.0910	0.0579	0.0411	0.0283	34.2	39.1		40.2
	27-4-2023	08:28:25	IL&FS	LSI	Solapur	MH	17.841732	75.564071	150+000	252+000	207+750 RHS Outer	2	36.5000	0.5572	0.2971	0.1582	0.0815	0.0650	0.0451	0.0326	34.2	39.1		40.2
	27-4-2023	08:28:25	IL&FS	LSI	Solapur	MH	17.841732	75.564071	150+000	252+000	207+750 RHS Outer	3	36.8000	0.5649	0.2985	0.1527	0.0878	0.0608	0.0449	0.0337	34.2	39.1		40.2
179	27-4-2023	08:30:31	IL&FS	LSI	Solapur	MH	17.841613	75.562004	150+000	252+000	207+520 RHS Outer	1	40.8000	0.8678	0.5670	0.3778	0.2203	0.1057	0.0704	0.0438	34.3	38.6		40.2
	27-4-2023	08:30:31	IL&FS	LSI	Solapur	MH	17.841613	75.562004	150+000	252+000	207+520 RHS Outer	2	41.7000	0.9108	0.5976	0.3876	0.2203	0.1082	0.0717	0.0451	34.3	38.6		40.2
	27-4-2023	08:30:31	IL&FS	LSI	Solapur	MH	17.841613	75.562004	150+000	252+000	207+520 RHS Outer	3	41.0000	0.9044	0.5924	0.3815	0.2201	0.1030	0.0699	0.0470	34.3	38.6		40.2
180	27-4-2023	08:32:23	IL&FS	LSI	Solapur	MH	17.841596	75.559417	150+000	252+000	207+250 RHS Outer	1	39.9000	0.3034	0.1840	0.0902	0.0556	0.0302	0.0208	0.0137	34.4	39.2		40.2
	27-4-2023	08:32:23	IL&FS	LSI	Solapur	MH	17.841596	75.559417	150+000	252+000	207+250 RHS Outer	2	40.2000	0.2915	0.1667	0.0870	0.0535	0.0297	0.0195	0.0130	34.4	39.2		40.2
	27-4-2023	08:32:23	IL&FS	LSI	Solapur	MH	17.841596	75.559417	150+000	252+000	207+250 RHS Outer	3	39.2000	0.3064	0.1809	0.0911	0.0536	0.0293	0.0197	0.0130	34.4	39.2		40.2
181	27-4-2023	08:34:56	IL&FS	LSI	Solapur	MH	17.842203	75.557121	150+000	252+000	207+000 RHS Outer	1	40.3000	0.3655	0.2264	0.1244	0.0722	0.0376	0.0354	0.0351	34.5	38.6		40.2
	27-4-2023	08:34:56	IL&FS	LSI	Solapur	MH	17.842203	75.557121	150+000	252+000	207+000 RHS Outer	2	39.6000	0.3615	0.2224	0.1245	0.0644	0.0383	0.0346	0.0311	34.5	38.6		40.2
	27-4-2023	08:34:56	IL&FS	LSI	Solapur	MH	17.842203	75.557121	150+000	252+000	207+000 RHS Outer	3	39.2000	0.3659	0.2187	0.1276	0.0631	0.0408	0.0313	0.0282	34.5	38.6		40.2
182	27-4-2023	08:36:56	IL&FS	LSI	Solapur	MH	17.842782	75.554779	150+000	252+000	206+750 RHS Outer	1	36.7000	0.5693	0.3317	0.1723	0.0861	0.0629	0.0460	0.0392	34.3	39.0	Local Settlement	40.2
	27-4-2023	08:36:56	IL&FS	LSI	Solapur	MH	17.842782	75.554779	150+000	252+000	206+750 RHS Outer	2	37.1000	0.5589	0.3363	0.1722	0.0869	0.0633	0.0455	0.0365	34.3	39.0	Local Settlement	40.2
	27-4-2023	08:36:56	IL&FS	LSI	Solapur	MH	17.842782	75.554779	150+000	252+000	206+750 RHS Outer	3	37.1000	0.5644	0.3294	0.1710	0.0866	0.0648	0.0490	0.0377	34.3	39.0	Local Settlement	40.2
183	27-4-2023	08:38:55	IL&FS	LSI	Solapur	MH	17.843317	75.552543	150+000	252+000	206+500 RHS Outer	1	37.1000	0.5617	0.3538	0.2064	0.1157	0.0826	0.0607	0.0531	34.3	39.1		40.2
	27-4-2023	08:38:55	IL&FS	LSI	Solapur	MH	17.843317	75.552543	150+000	252+000	206+500 RHS Outer	2	37.2000	0.5695	0.3647	0.2225	0.1126	0.0812	0.0598	0.0523	34.3	39.1		40.2
	27-4-2023	08:38:55	IL&FS	LSI	Solapur	MH	17.843317	75.552543	150+000	252+000	206+500 RHS Outer	3	37.5000	0.5539	0.3541	0.2159	0.1180	0.0848	0.0613	0.0537	34.3	39.1		40.2
184	27-4-2023	08:40:46	IL&FS	LSI	Solapur	MH	17.843908	75.550216	150+000	252+000	206+250 RHS Outer	1	40.0000	0.3359	0.2038	0.1140	0.0673	0.0490	0.0364	0.0281	34.4	40.0		40.2
	27-4-2023	08:40:46	IL&FS	LSI	Solapur	MH	17.843908	75.550216	150+000	252+000	206+250 RHS Outer	2	39.7000	0.3164	0.1956	0.1125	0.0643	0.0505	0.0399	0.0274	34.4	40.0		40.2
	27-4-2023	08:40:46	IL&FS	LSI	Solapur	MH	17.843908	75.550216	150+000	252+000	206+250 RHS Outer	3	40.2000	0.3148	0.1962	0.1116	0.0658	0.0484	0.0372	0.0310	34.4	40.0		40.2
185	27-4-2023	08:42:36	IL&FS	LSI	Solapur	MH	17.844491	75.547920	150+000	252+000	206+000 RHS Outer	1	36.2000	0.6045	0.2556	0.1458	0.0907	0.0555	0.0489	0.0448	34.7	41.0		40.2
	27-4-2023	08:42:36	IL&FS	LSI	Solapur	MH	17.844491	75.547920	150+000	252+000	206+000 RHS Outer	2	36.5000	0.5757	0.2547	0.1440	0.0901	0.0538	0.0463	0.0415	34.7	41.0		40.2
	27-4-2023	08:42:36	IL&FS	LSI	Solapur	MH	17.844491	75.547920	150+000	252+000	206+000 RHS Outer	3	36.7000	0.5818	0.2834	0.1432	0.0923	0.0540	0.0461	0.0404	34.7	41.0		40.2
186	27-4-2023	08:44:27	IL&FS	LSI	Solapur	MH	17.845081	75.545616	150+000	252+000	205+750 RHS Outer	1	38.6000	0.4317	0.2192	0.1195	0.0766	0.0485	0.0382	0.0337	34.7	40.5		40.2
	27-4-2023	08:44:27	IL&FS	LSI	Solapur	MH	17.845081	75.545616	150+000	252+000	205+750 RHS Outer	2	38.6000	0.4040	0.2120	0.1262	0.0733	0.0464	0.0341	0.0307	34.7	40.5		40.2
	27-4-2023	08:44:27	IL&FS	LSI	Solapur	MH	17.845081	75.545616	150+000	252+000	205+750 RHS Outer	3	39.0000	0.4118	0.2149	0.1265	0.0730	0.0489	0.0368	0.0328	34.7	40.5		40.2
187	27-4-2023	08:46:33	IL&FS	LSI	Solapur	MH	17.845649	75.543434	150+000	252+000	205+500 RHS Outer	1	38.1000	0.5868	0.3303	0.1649	0.0838	0.0599	0.0461	0.0376	34.8	40.4		40.2
	27-4-2023	08:46:33	IL&FS	LSI	Solapur	MH	17.845649	75.543434	150+000	252+000	205+500 RHS Outer	2	37.3000	0.5603	0.3204	0.1576	0.0839	0.0606	0.0472	0.0247	34.8	40.4		40.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	08:46:33	IL&FS	LSI	Solapur	MH	17.845649	75.543434	150+000	252+000	205+500 RHS Outer	3	37.1000	0.5678	0.3133	0.1662	0.0834	0.0633	0.0525	0.0365	34.8	40.4		40.2
188	27-4-2023	08:49:11	IL&FS	LSI	Solapur	MH	17.846164	75.541038	150+000	252+000	205+250 RHS Outer	1	41.0000	0.2188	0.1427	0.0933	0.0565	0.0365	0.0286	0.0231	35.2	40.9		40.2
	27-4-2023	08:49:11	IL&FS	LSI	Solapur	MH	17.846164	75.541038	150+000	252+000	205+250 RHS Outer	2	41.2000	0.2218	0.1358	0.0933	0.0615	0.0386	0.0283	0.0218	35.2	40.9		40.2
	27-4-2023	08:49:11	IL&FS	LSI	Solapur	MH	17.846164	75.541038	150+000	252+000	205+250 RHS Outer	3	40.9000	0.2198	0.1399	0.0936	0.0580	0.0372	0.0278	0.0217	35.2	40.9		40.2
189	27-4-2023	08:51:38	IL&FS	LSI	Solapur	MH	17.846582	75.538780	150+000	252+000	205+000 RHS Outer	1	39.5000	0.3461	0.1865	0.0954	0.0637	0.0396	0.0303	0.0243	35.5	41.7		40.2
	27-4-2023	08:51:38	IL&FS	LSI	Solapur	MH	17.846582	75.538780	150+000	252+000	205+000 RHS Outer	2	39.9000	0.3460	0.1896	0.0996	0.0617	0.0375	0.0304	0.0260	35.5	41.7		40.2
	27-4-2023	08:51:38	IL&FS	LSI	Solapur	MH	17.846582	75.538780	150+000	252+000	205+000 RHS Outer	3	39.9000	0.3522	0.1852	0.1060	0.0679	0.0412	0.0312	0.0243	35.5	41.7		40.2
190	27-4-2023	08:53:23	IL&FS	LSI	Solapur	MH	17.846910	75.536369	150+000	252+000	204+750 RHS Outer	1	41.0000	0.2306	0.1442	0.0834	0.0566	0.0382	0.0258	0.0145	35.4	41.3		40.2
	27-4-2023	08:53:23	IL&FS	LSI	Solapur	MH	17.846910	75.536369	150+000	252+000	204+750 RHS Outer	2	41.1000	0.2340	0.1417	0.0804	0.0620	0.0380	0.0247	0.0148	35.4	41.3		40.2
	27-4-2023	08:53:23	IL&FS	LSI	Solapur	MH	17.846910	75.536369	150+000	252+000	204+750 RHS Outer	3	41.5000	0.2258	0.1436	0.0864	0.0586	0.0405	0.0254	0.0136	35.4	41.3		40.2
191	27-4-2023	08:55:11	IL&FS	LSI	Solapur	MH	17.847227	75.534088	150+000	252+000	204+500 RHS Outer	1	37.3000	0.5696	0.2988	0.1484	0.0939	0.0545	0.0390	0.0268	35.3	40.8		40.2
	27-4-2023	08:55:11	IL&FS	LSI	Solapur	MH	17.847227	75.534088	150+000	252+000	204+500 RHS Outer	2	37.7000	0.5434	0.2969	0.1429	0.0882	0.0539	0.0399	0.0304	35.3	40.8		40.2
	27-4-2023	08:55:11	IL&FS	LSI	Solapur	MH	17.847227	75.534088	150+000	252+000	204+500 RHS Outer	3	38.1000	0.5619	0.2988	0.1461	0.0910	0.0535	0.0394	0.0303	35.3	40.8		40.2
192	27-4-2023	08:57:00	IL&FS	LSI	Solapur	MH	17.847620	75.531822	150+000	252+000	204+250 RHS Outer	1	41.5000	0.3690	0.2027	0.1231	0.0754	0.0582	0.0457	0.0411	35.4	41.4		40.2
	27-4-2023	08:57:00	IL&FS	LSI	Solapur	MH	17.847620	75.531822	150+000	252+000	204+250 RHS Outer	2	41.1000	0.3672	0.2019	0.1221	0.0724	0.0565	0.0465	0.0419	35.4	41.4		40.2
	27-4-2023	08:57:00	IL&FS	LSI	Solapur	MH	17.847620	75.531822	150+000	252+000	204+250 RHS Outer	3	41.4000	0.3560	0.2020	0.1227	0.0748	0.0577	0.0453	0.0408	35.4	41.4		40.2
193	27-4-2023	09:02:35	IL&FS	LSI	Solapur	MH	17.848058	75.529495	150+000	252+000	204+000 RHS Outer	1	39.3000	0.4655	0.2486	0.1392	0.0768	0.0524	0.0343	0.0181	35.8	40.5	T-35.5/42	42
	27-4-2023	09:02:35	IL&FS	LSI	Solapur	MH	17.848058	75.529495	150+000	252+000	204+000 RHS Outer	2	39.6000	0.4690	0.2513	0.1398	0.0757	0.0553	0.0371	0.0178	35.8	40.5	T-35.5/42	42
	27-4-2023	09:02:35	IL&FS	LSI	Solapur	MH	17.848058	75.529495	150+000	252+000	204+000 RHS Outer	3	39.7000	0.4702	0.2528	0.1412	0.0802	0.0527	0.0355	0.0182	35.8	40.5	T-35.5/42	42
194	27-4-2023	09:05:06	IL&FS	LSI	Solapur	MH	17.848762	75.527389	150+000	252+000	203+750 RHS Outer	1	37.4000	0.5411	0.2873	0.1424	0.1003	0.0704	0.0507	0.0358	35.9	41.7		42
	27-4-2023	09:05:06	IL&FS	LSI	Solapur	MH	17.848762	75.527389	150+000	252+000	203+750 RHS Outer	2	37.2000	0.5191	0.2736	0.1413	0.0997	0.0692	0.0512	0.0384	35.9	41.7		42
	27-4-2023	09:05:06	IL&FS	LSI	Solapur	MH	17.848762	75.527389	150+000	252+000	203+750 RHS Outer	3	38.7000	0.5377	0.2834	0.1479	0.0960	0.0605	0.0479	0.0385	35.9	41.7		42
195	27-4-2023	09:06:56	IL&FS	LSI	Solapur	MH	17.849582	75.525154	150+000	252+000	203+500 RHS Outer	1	36.3000	0.6827	0.3371	0.1680	0.0867	0.0557	0.0421	0.0314	35.8	42.6		42
	27-4-2023	09:06:56	IL&FS	LSI	Solapur	MH	17.849582	75.525154	150+000	252+000	203+500 RHS Outer	2	37.0000	0.6461	0.3515	0.1689	0.0841	0.0506	0.0387	0.0308	35.8	42.6		42
	27-4-2023	09:06:56	IL&FS	LSI	Solapur	MH	17.849582	75.525154	150+000	252+000	203+500 RHS Outer	3	36.1000	0.6482	0.3462	0.1680	0.0830	0.0537	0.0397	0.0306	35.8	42.6		42
196	27-4-2023	09:09:06	IL&FS	LSI	Solapur	MH	17.850450	75.522857	150+000	252+000	203+250 RHS Outer	1	36.5000	0.6003	0.2970	0.1572	0.0991	0.0608	0.0432	0.0296	35.7	41.7		42
	27-4-2023	09:09:06	IL&FS	LSI	Solapur	MH	17.850450	75.522857	150+000	252+000	203+250 RHS Outer	2	37.1000	0.5845	0.2980	0.1574	0.1000	0.0598	0.0430	0.0315	35.7	41.7		42
	27-4-2023	09:09:06	IL&FS	LSI	Solapur	MH	17.850450	75.522857	150+000	252+000	203+250 RHS Outer	3	37.3000	0.5693	0.2933	0.1556	0.0965	0.0554	0.0456	0.0380	35.7	41.7		42
197	27-4-2023	09:10:54	IL&FS	LSI	Solapur	MH	17.851312	75.520637	150+000	252+000	203+000 RHS Outer	1	39.0000	0.3961	0.2149	0.1219	0.0783	0.0514	0.0419	0.0346	35.7	43.1		42
	27-4-2023	09:10:54	IL&FS	LSI	Solapur	MH	17.851312	75.520637	150+000	252+000	203+000 RHS Outer	2	39.1000	0.3755	0.2155	0.1282	0.0852	0.0515	0.0431	0.0370	35.7	43.1		42
	27-4-2023	09:10:54	IL&FS	LSI	Solapur	MH	17.851312	75.520637	150+000	252+000	203+000 RHS Outer	3	39.1000	0.3907	0.2180	0.1280	0.0822	0.0515	0.0418	0.0357	35.7	43.1		42
198	27-4-2023	09:12:44	IL&FS	LSI	Solapur	MH	17.852165	75.518501	150+000	252+000	202+750 RHS Outer	1	36.5000	0.5590	0.3042	0.1625	0.0919	0.0628	0.0508	0.0418	36.1	43.0		42
	27-4-2023	09:12:44	IL&FS	LSI	Solapur	MH	17.852165	75.518501	150+000	252+000	202+750 RHS Outer	2	37.2000	0.5363	0.3015	0.1698	0.0950	0.0651	0.0509	0.0413	36.1	43.0		42
	27-4-2023	09:12:44	IL&FS	LSI	Solapur	MH	17.852165	75.518501	150+000	252+000	202+750 RHS Outer	3	38.4000	0.5497	0.3083	0.1785	0.0988	0.0736	0.0564	0.0442	36.1	43.0		42
199	27-4-2023	09:14:38	IL&FS	LSI	Solapur	MH	17.853097	75.516250	150+000	252+000	202+500 RHS Outer	1	36.8000	0.5225	0.2961	0.1615	0.1109	0.0714	0.0559	0.0450	36.1	42.2		42
	27-4-2023	09:14:38	IL&FS	LSI	Solapur	MH	17.853097	75.516250	150+000	252+000	202+500 RHS Outer	2	36.3000	0.5177	0.2953	0.1601	0.1074	0.0702	0.0551	0.0454	36.1	42.2		42
	27-4-2023	09:14:38	IL&FS	LSI	Solapur	MH	17.853097	75.516250	150+000	252+000	202+500 RHS Outer	3	36.6000	0.5010	0.2944	0.1591	0.1106	0.0766	0.0581	0.0442	36.1	42.2		42
200	27-4-2023	09:16:36	IL&FS	LSI	Solapur	MH	17.854036	75.513801	150+000	252+000	202+220 RHS Outer	1	37.6000	0.5347	0.2891	0.1567	0.0808	0.0529	0.0506	0.0455	36.2	42.6		42
	27-4-2023	09:16:36	IL&FS	LSI	Solapur	MH	17.854036	75.513801	150+000	252+000	202+220 RHS Outer	2	37.8000	0.5259	0.2914	0.1607	0.0817	0.0554	0.0508	0.0457	36.2	42.6		42
	27-4-2023	09:16:36	IL&FS	LSI	Solapur	MH	17.854036	75.513801	150+000	252+000	202+220 RHS Outer	3	36.5000	0.5074	0.2797	0.1503	0.0767	0.0564	0.0505	0.0455	36.2	42.6		42
201	27-4-2023	09:18:48	IL&FS	LSI	Solapur	MH	17.854791	75.511871	150+000	252+000	202+000 RHS Outer	1	37.0000	0.5016	0.2918	0.1506	0.0722	0.0531	0.0498	0.0448	36.2	43.6		42
	27-4-2023	09:18:48	IL&FS	LSI	Solapur	MH	17.854791	75.511871	150+000	252+000	202+000 RHS Outer	2	38.3000	0.5039	0.2790	0.1499	0.0739	0.0550	0.0464	0.0418	36.2	43.6		42
	27-4-2023	09:18:48	IL&FS	LSI	Solapur	MH	17.854791	75.511871	150+000	252+000	202+000 RHS Outer	3	37.6000	0.4728	0.2723	0.1532	0.0772	0.0547	0.0461	0.0415	36.2	43.6		42
202	27-4-2023	09:20:38	IL&FS	LSI	Solapur	MH	17.855609	75.509742	150+000	252+000	201+750 RHS Outer	1	36.9000	0.5838	0.3155	0.1487	0.0751	0.0400	0.0136	0.0122	36.2	43.1		42
	27-4-2023	09:20:38	IL&FS	LSI	Solapur	MH	17.855609	75.509742	150+000	252+000	201+750 RHS Outer	2	37.4000	0.5636	0.3162	0.1513	0.0773	0.0392	0.0136	0.0122	36.2	43.1		42
	27-4-2023	09:20:38	IL&FS	LSI	Solapur	MH	17.855609	75.509742	150+000	252+000	201+750 RHS Outer	3	36.2000	0.5425	0.3027	0.1468	0.0749	0.0384	0.0124	0.0112	36.2	43.1		42
203	27-4-2023	09:22:31	IL&FS	LSI	Solapur	MH	17.856624	75.507644	150+000	252+000	201+500 RHS Outer	1	36.5000	0.5178	0.2824	0.1354	0.0718	0.0557	0.0441	0.0397	36.3	43.7		42
	27-4-2023	09:22:31	IL&FS	LSI	Solapur	MH	17.856624	75.507644	150+000	252+000	201+500 RHS Outer	2	36.6000	0.5217	0.2768	0.1407	0.0690	0.0566	0.0450	0.0405	36.3	43.7		42
	27-4-2023	09:22:31	IL&FS	LSI	Solapur	MH	17.856624	75.507644	150+000	252+000	201+500 RHS Outer	3	36.1000	0.5066	0.2725	0.1418	0.0768	0.0581	0.0450	0.0445	36.3	43.7		42
204	27-4-2023	09:24:22	IL&FS	LSI	Solapur	MH	17.857959	75.505691	150+000	252+000	201+250 RHS Outer	1	40.2000	0.3550	0.1636	0.0826	0.0607	0.0410	0.0373	0.0254	36.5	43.7		42
	27-4-2023	09:24:22	IL&FS	LSI	Solapur	MH	17.857959	75.505691	150+000	252+000	201+250 RHS Outer	2	40.4000	0.3697	0.1666	0.0831	0.0628	0.0437	0.0363	0.0253	36.5	43.7		42
	27-4-2023	09:24:22	IL&FS	LSI	Solapur	MH	17.857959	75.505691	150+000	252+000	201+250 RHS Outer	3	41.8000	0.3830	0.1694	0.0922	0.0591	0.0477	0.0367	0.0247	36.5	43.7		42
205	27-4-2023	20:05:02	IL&FS	LSI	Solapur	MH	17.859348	75.503654	150+000	252+000	201+000 RHS Outer	1	36.9000	0.5783	0.3015	0.1470	0.0805	0.0653	0.0537	0.0432	32.4	36.8	T-31/43.8	43.8
	27-4-2023	20:05:02	IL&FS	LSI	Solapur	MH	17.859348	75.503654	150+000	252+000	201+000 RHS Outer	2	37.3000	0.5581	0.2918	0.1497	0.0831	0.0659	0.0528	0.0484	32.4	36.8	T-31/43.8	43.8
	27-4-2023	20:05:02	IL&FS	LSI	Solapur	MH	17.859348	75.503654	150+000	252+000	201+000 RHS Outer	3	37.7000	0.5474	0.2915	0.1439	0.0897	0.0698	0.0564	0.0465	32.4	36.8	T-31/43.8	43.8
206	27-4-2023	20:08:33	IL&FS	LSI	Solapur	MH	17.860662	75.501762	150+000	252+000	200+750 RHS Outer	1	37.5000	0.5427	0.2508	0.1243	0.0760	0.0430	0.0337	0.0276	32.3	36.6		43.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	20:08:33	IL&FS	LSI	Solapur	MH	17.860662	75.501762	150+000	252+000	200+750 RHS Outer	2	37.7000	0.5235	0.2471	0.1376	0.0829	0.0453	0.0356	0.0285	32.3	36.6		43.8
	27-4-2023	20:08:33	IL&FS	LSI	Solapur	MH	17.860662	75.501762	150+000	252+000	200+750 RHS Outer	3	37.7000	0.5023	0.2389	0.1336	0.0766	0.0442	0.0347	0.0281	32.3	36.6		43.8
207	27-4-2023	20:10:32	IL&FS	LSI	Solapur	MH	17.861871	75.499908	150+000	252+000	200+520 RHS Outer	1	37.4000	0.5798	0.2894	0.1497	0.0981	0.0668	0.0480	0.0351	32.4	37.2		43.8
	27-4-2023	20:10:32	IL&FS	LSI	Solapur	MH	17.861871	75.499908	150+000	252+000	200+520 RHS Outer	2	37.6000	0.5654	0.2830	0.1535	0.0995	0.0716	0.0506	0.0353	32.4	37.2		43.8
	27-4-2023	20:10:32	IL&FS	LSI	Solapur	MH	17.861871	75.499908	150+000	252+000	200+520 RHS Outer	3	37.7000	0.5559	0.2787	0.1463	0.1006	0.0670	0.0479	0.0354	32.4	37.2		43.8
208	27-4-2023	20:12:42	IL&FS	LSI	Solapur	MH	17.863130	75.498008	150+000	252+000	200+160 RHS Outer	1	37.9000	0.4256	0.2346	0.1249	0.0795	0.0494	0.0259	0.0197	32.4	37.5		43.8
	27-4-2023	20:12:42	IL&FS	LSI	Solapur	MH	17.863130	75.498008	150+000	252+000	200+160 RHS Outer	2	38.1000	0.4147	0.2319	0.1375	0.0834	0.0484	0.0265	0.0189	32.4	37.5		43.8
	27-4-2023	20:12:42	IL&FS	LSI	Solapur	MH	17.863130	75.498008	150+000	252+000	200+160 RHS Outer	3	37.9000	0.4122	0.2260	0.1345	0.0810	0.0490	0.0252	0.0186	32.4	37.5		43.8
209	27-4-2023	20:14:38	IL&FS	LSI	Solapur	MH	17.864585	75.496162	150+000	252+000	200+000 RHS Outer	1	39.3000	0.3526	0.2124	0.1146	0.0637	0.0405	0.0257	0.0173	32.4	36.8		43.8
	27-4-2023	20:14:38	IL&FS	LSI	Solapur	MH	17.864585	75.496162	150+000	252+000	200+000 RHS Outer	2	39.4000	0.3582	0.2150	0.1154	0.0624	0.0401	0.0260	0.0190	32.4	36.8		43.8
	27-4-2023	20:14:38	IL&FS	LSI	Solapur	MH	17.864585	75.496162	150+000	252+000	200+000 RHS Outer	3	39.8000	0.3465	0.2147	0.1238	0.0623	0.0419	0.0262	0.0197	32.4	36.8		43.8
210	27-4-2023	20:16:53	IL&FS	LSI	Solapur	MH	17.866086	75.494491	150+000	252+000	199+750 RHS Outer	1	37.7000	0.5280	0.2670	0.1654	0.0921	0.0709	0.0594	0.0541	32.2	37.1		43.8
	27-4-2023	20:16:53	IL&FS	LSI	Solapur	MH	17.866086	75.494491	150+000	252+000	199+750 RHS Outer	2	37.6000	0.5094	0.2706	0.1604	0.0894	0.0677	0.0542	0.0488	32.2	37.1		43.8
	27-4-2023	20:16:53	IL&FS	LSI	Solapur	MH	17.866086	75.494491	150+000	252+000	199+750 RHS Outer	3	37.2000	0.5013	0.2653	0.1502	0.0961	0.0659	0.0544	0.0490	32.2	37.1		43.8
211	27-4-2023	20:18:50	IL&FS	LSI	Solapur	MH	17.867557	75.492774	150+000	252+000	199+500 RHS Outer	1	38.2000	0.4991	0.2667	0.1291	0.0833	0.0485	0.0369	0.0332	32.2	36.6		43.8
	27-4-2023	20:18:50	IL&FS	LSI	Solapur	MH	17.867557	75.492774	150+000	252+000	199+500 RHS Outer	2	38.4000	0.5042	0.2569	0.1344	0.0842	0.0476	0.0387	0.0348	32.2	36.6		43.8
	27-4-2023	20:18:50	IL&FS	LSI	Solapur	MH	17.867557	75.492774	150+000	252+000	199+500 RHS Outer	3	38.4000	0.5032	0.2552	0.1389	0.0897	0.0518	0.0410	0.0369	32.2	36.6		43.8
212	27-4-2023	20:20:52	IL&FS	LSI	Solapur	MH	17.869075	75.491081	150+000	252+000	199+250 RHS Outer	1	39.2000	0.6881	0.3681	0.1705	0.1040	0.0537	0.0382	0.0261	32.0	37.2		43.8
	27-4-2023	20:20:52	IL&FS	LSI	Solapur	MH	17.869075	75.491081	150+000	252+000	199+250 RHS Outer	2	38.8000	0.6614	0.3850	0.1696	0.1019	0.0554	0.0376	0.0246	32.0	37.2		43.8
	27-4-2023	20:20:52	IL&FS	LSI	Solapur	MH	17.869075	75.491081	150+000	252+000	199+250 RHS Outer	3	39.0000	0.6264	0.3707	0.1814	0.1089	0.0524	0.0361	0.0237	32.0	37.2		43.8
213	27-4-2023	20:22:52	IL&FS	LSI	Solapur	MH	17.870624	75.489257	150+000	252+000	199+000 RHS Outer	1	36.2000	0.6818	0.3681	0.1840	0.0776	0.0396	0.0268	0.0188	32.1	36.5	Wide cracking	43.8
	27-4-2023	20:22:52	IL&FS	LSI	Solapur	MH	17.870624	75.489257	150+000	252+000	199+000 RHS Outer	2	36.8000	0.6482	0.3451	0.1772	0.0838	0.0405	0.0289	0.0204	32.1	36.5	Wide cracking	43.8
	27-4-2023	20:22:52	IL&FS	LSI	Solapur	MH	17.870624	75.489257	150+000	252+000	199+000 RHS Outer	3	36.9000	0.6453	0.3474	0.1857	0.0837	0.0407	0.0292	0.0210	32.1	36.5	Wide cracking	43.8
214	27-4-2023	20:24:49	IL&FS	LSI	Solapur	MH	17.872060	75.487541	150+000	252+000	198+750 RHS Outer	1	36.1000	0.4844	0.2612	0.1411	0.0670	0.0457	0.0307	0.0276	32.1	37.6		43.8
	27-4-2023	20:24:49	IL&FS	LSI	Solapur	MH	17.872060	75.487541	150+000	252+000	198+750 RHS Outer	2	36.2000	0.4628	0.2606	0.1416	0.0694	0.0454	0.0310	0.0279	32.1	37.6		43.8
	27-4-2023	20:24:49	IL&FS	LSI	Solapur	MH	17.872060	75.487541	150+000	252+000	198+750 RHS Outer	3	36.4000	0.4549	0.2643	0.1375	0.0687	0.0460	0.0309	0.0278	32.1	37.6		43.8
215	27-4-2023	20:26:52	IL&FS	LSI	Solapur	MH	17.873447	75.485572	150+000	252+000	198+500 RHS Outer	1	37.1000	0.4930	0.2448	0.1207	0.0800	0.0512	0.0345	0.0224	32.2	37.3		43.8
	27-4-2023	20:26:52	IL&FS	LSI	Solapur	MH	17.873447	75.485572	150+000	252+000	198+500 RHS Outer	2	38.2000	0.4776	0.2367	0.1250	0.0783	0.0526	0.0359	0.0236	32.2	37.3		43.8
	27-4-2023	20:26:52	IL&FS	LSI	Solapur	MH	17.873447	75.485572	150+000	252+000	198+500 RHS Outer	3	38.2000	0.4857	0.2357	0.1290	0.0803	0.0531	0.0358	0.0239	32.2	37.3		43.8
216	27-4-2023	20:29:04	IL&FS	LSI	Solapur	MH	17.874706	75.483535	150+000	252+000	198+250 RHS Outer	1	39.8000	0.3426	0.2298	0.1399	0.0753	0.0471	0.0363	0.0326	32.1	36.8		43.8
	27-4-2023	20:29:04	IL&FS	LSI	Solapur	MH	17.874706	75.483535	150+000	252+000	198+250 RHS Outer	2	39.6000	0.3546	0.2192	0.1472	0.0731	0.0485	0.0374	0.0336	32.1	36.8		43.8
	27-4-2023	20:29:04	IL&FS	LSI	Solapur	MH	17.874706	75.483535	150+000	252+000	198+250 RHS Outer	3	40.1000	0.3354	0.2276	0.1378	0.0695	0.0483	0.0364	0.0327	32.1	36.8		43.8
217	27-4-2023	20:31:15	IL&FS	LSI	Solapur	MH	2.250000	75.481582	150+000	252+000	198+000 RHS Outer	1	36.2000	0.6147	0.3503	0.1697	0.0870	0.0619	0.0413	0.0263	32.1	36.7		43.8
	27-4-2023	20:31:15	IL&FS	LSI	Solapur	MH	2.250000	75.481582	150+000	252+000	198+000 RHS Outer	2	36.6000	0.6004	0.3417	0.1702	0.0836	0.0630	0.0390	0.0281	32.1	36.7		43.8
	27-4-2023	20:31:15	IL&FS	LSI	Solapur	MH	2.250000	75.481582	150+000	252+000	198+000 RHS Outer	3	36.5000	0.5988	0.3483	0.1659	0.0787	0.0633	0.0394	0.0251	32.1	36.7		43.8
218	27-4-2023	20:33:42	IL&FS	LSI	Solapur	MH	17.877187	75.479629	150+000	252+000	197+750 RHS Outer	1	36.8000	0.6388	0.3688	0.1892	0.1017	0.0656	0.0438	0.0278	32.0	35.9	Wide cracking	43.8
	27-4-2023	20:33:42	IL&FS	LSI	Solapur	MH	17.877187	75.479629	150+000	252+000	197+750 RHS Outer	2	37.0000	0.6447	0.3889	0.1951	0.0998	0.0637	0.0439	0.0296	32.0	35.9	Wide cracking	43.8
	27-4-2023	20:33:42	IL&FS	LSI	Solapur	MH	17.877187	75.479629	150+000	252+000	197+750 RHS Outer	3	36.4000	0.6056	0.3763	0.1905	0.1038	0.0625	0.0414	0.0269	32.0	35.9	Wide cracking	43.8
219	27-4-2023	20:35:41	IL&FS	LSI	Solapur	MH	17.878349	75.477706	150+000	252+000	197+500 RHS Outer	1	38.5000	0.4255	0.1930	0.1147	0.0594	0.0407	0.0281	0.0181	32.1	35.5		43.8
	27-4-2023	20:35:41	IL&FS	LSI	Solapur	MH	17.878349	75.477706	150+000	252+000	197+500 RHS Outer	2	38.7000	0.4307	0.1840	0.1098	0.0587	0.0371	0.0233	0.0210	32.1	35.5		43.8
	27-4-2023	20:35:41	IL&FS	LSI	Solapur	MH	17.878349	75.477706	150+000	252+000	197+500 RHS Outer	3	38.9000	0.4256	0.1877	0.1163	0.0608	0.0413	0.0277	0.0182	32.1	35.5		43.8
220	27-4-2023	20:37:34	IL&FS	LSI	Solapur	MH	17.879394	75.475585	150+000	252+000	197+250 RHS Outer	1	38.6000	0.4139	0.2614	0.1399	0.0910	0.0595	0.0450	0.0360	32.0	35.5		43.8
	27-4-2023	20:37:34	IL&FS	LSI	Solapur	MH	17.879394	75.475585	150+000	252+000	197+250 RHS Outer	2	39.1000	0.4110	0.2610	0.1481	0.0955	0.0606	0.0431	0.0320	32.0	35.5		43.8
	27-4-2023	20:37:34	IL&FS	LSI	Solapur	MH	17.879394	75.475585	150+000	252+000	197+250 RHS Outer	3	39.1000	0.4068	0.2624	0.1438	0.0967	0.0601	0.0440	0.0340	32.0	35.5		43.8
221	27-4-2023	20:40:35	IL&FS	LSI	Solapur	MH	17.880502	75.473480	150+000	252+000	197+000 RHS Outer	1	37.1000	0.5249	0.2969	0.1427	0.0832	0.0587	0.0390	0.0255	31.8	35.7		43.8
	27-4-2023	20:40:35	IL&FS	LSI	Solapur	MH	17.880502	75.473480	150+000	252+000	197+000 RHS Outer	2	37.2000	0.5252	0.3062	0.1429	0.0778	0.0635	0.0421	0.0257	31.8	35.7		43.8
	27-4-2023	20:40:35	IL&FS	LSI	Solapur	MH	17.880502	75.473480	150+000	252+000	197+000 RHS Outer	3	37.5000	0.5185	0.2862	0.1404	0.0777	0.0592	0.0384	0.0241	31.8	35.7		43.8
222	27-4-2023	20:42:28	IL&FS	LSI	Solapur	MH	17.881338	75.471359	150+000	252+000	196+750 RHS Outer	1	39.3000	0.4159	0.2012	0.1249	0.0654	0.0412	0.0252	0.0155	31.8	35.7		43.8
	27-4-2023	20:42:28	IL&FS	LSI	Solapur	MH	17.881338	75.471359	150+000	252+000	196+750 RHS Outer	2	38.7000	0.4041	0.1993	0.1207	0.0661	0.0421	0.0240	0.0144	31.8	35.7		43.8
	27-4-2023	20:42:28	IL&FS	LSI	Solapur	MH	17.881338	75.471359	150+000	252+000	196+750 RHS Outer	3	38.5000	0.3961	0.1945	0.1187	0.0644	0.0400	0.0244	0.0148	31.8	35.7		43.8
223	27-4-2023	20:50:46	IL&FS	LSI	Solapur	MH	17.882291	75.469253	150+000	252+000	196+500 RHS Outer	1	38.0000	0.4944	0.2457	0.1123	0.0668	0.0396	0.0221	0.0124	31.1	34.8	T-30.5/40	40
	27-4-2023	20:50:46	IL&FS	LSI	Solapur	MH	17.882291	75.469253	150+000	252+000	196+500 RHS Outer	2	39.5000	0.4951	0.2471	0.1194	0.0695	0.0415	0.0239	0.0137	31.1	34.8	T-30.5/40	40
	27-4-2023	20:50:46	IL&FS	LSI	Solapur	MH	17.882291	75.469253	150+000	252+000	196+500 RHS Outer	3	39.6000	0.4916	0.2476	0.1263	0.0693	0.0440	0.0257	0.0135	31.1	34.8	T-30.5/40	40
224	27-4-2023	20:52:37	IL&FS	LSI	Solapur	MH	17.883205	75.466949	150+000	252+000	196+250 RHS Outer	1	36.5000	0.4693	0.2061	0.1201	0.0696	0.0477	0.0332	0.0287	31.5	35.7		40
	27-4-2023	20:52:37	IL&FS	LSI	Solapur	MH	17.883205	75.466949	150+000	252+000	196+250 RHS Outer	2	36.6000	0.4658	0.2024	0.1075	0.0685	0.0491	0.0362	0.0292	31.5	35.7		40
	27-4-2023	20:52:37	IL&FS	LSI	Solapur	MH	17.883205	75.466949	150+000	252+000	196+250 RHS Outer	3	36.8000	0.4718	0.2213	0.1104	0.0687	0.0476	0.0343	0.0296	31.5	35.7		40

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
225	27-4-2023	20:54:35	IL&FS	LSI	Solapur	MH	17.884033	75.464828	150+000	252+000	196+000 RHS Outer	1	36.9000	0.5514	0.3026	0.1574	0.0890	0.0617	0.0438	0.0342	31.7	35.5		40
	27-4-2023	20:54:35	IL&FS	LSI	Solapur	MH	17.884033	75.464828	150+000	252+000	196+000 RHS Outer	2	37.1000	0.5289	0.2978	0.1619	0.0914	0.0634	0.0429	0.0294	31.7	35.5		40
	27-4-2023	20:54:35	IL&FS	LSI	Solapur	MH	17.884033	75.464828	150+000	252+000	196+000 RHS Outer	3	37.5000	0.5345	0.3042	0.1669	0.0856	0.0585	0.0412	0.0326	31.7	35.5		40
226	27-4-2023	20:56:37	IL&FS	LSI	Solapur	MH	17.884935	75.462745	150+000	252+000	195+750 RHS Outer	1	36.6000	0.3912	0.2300	0.1227	0.0778	0.0489	0.0331	0.0221	31.8	36.3		40
	27-4-2023	20:56:37	IL&FS	LSI	Solapur	MH	17.884935	75.462745	150+000	252+000	195+750 RHS Outer	2	36.6000	0.3900	0.2248	0.1220	0.0812	0.0539	0.0331	0.0188	31.8	36.3		40
	27-4-2023	20:56:37	IL&FS	LSI	Solapur	MH	17.884935	75.462745	150+000	252+000	195+750 RHS Outer	3	36.8000	0.3846	0.2123	0.1120	0.0789	0.0531	0.0328	0.0188	31.8	36.3		40
227	27-4-2023	20:58:39	IL&FS	LSI	Solapur	MH	17.885850	75.460533	150+000	252+000	195+500 RHS Outer	1	38.1000	0.4528	0.2410	0.1369	0.0721	0.0559	0.0451	0.0318	31.6	35.8		40
	27-4-2023	20:58:39	IL&FS	LSI	Solapur	MH	17.885850	75.460533	150+000	252+000	195+500 RHS Outer	2	38.8000	0.4595	0.2455	0.1323	0.0679	0.0551	0.0468	0.0336	31.6	35.8		40
	27-4-2023	20:58:39	IL&FS	LSI	Solapur	MH	17.885850	75.460533	150+000	252+000	195+500 RHS Outer	3	39.2000	0.4661	0.2439	0.1409	0.0756	0.0599	0.0502	0.0338	31.6	35.8		40
228	27-4-2023	21:00:47	IL&FS	LSI	Solapur	MH	17.886953	75.458274	150+000	252+000	195+230 RHS Outer	1	37.3000	0.4233	0.2423	0.1257	0.0770	0.0527	0.0376	0.0238	31.7	35.3		40
	27-4-2023	21:00:47	IL&FS	LSI	Solapur	MH	17.886953	75.458274	150+000	252+000	195+230 RHS Outer	2	37.5000	0.4267	0.2377	0.1253	0.0746	0.0538	0.0394	0.0255	31.7	35.3		40
	27-4-2023	21:00:47	IL&FS	LSI	Solapur	MH	17.886953	75.458274	150+000	252+000	195+230 RHS Outer	3	37.6000	0.4220	0.2367	0.1214	0.0807	0.0592	0.0425	0.0283	31.7	35.3		40
229	27-4-2023	21:02:46	IL&FS	LSI	Solapur	MH	17.888130	75.456512	150+000	252+000	195+000 RHS Outer	1	36.7000	0.5225	0.2829	0.1421	0.0779	0.0474	0.0266	0.0174	31.7	35.5		40
	27-4-2023	21:02:46	IL&FS	LSI	Solapur	MH	17.888130	75.456512	150+000	252+000	195+000 RHS Outer	2	36.8000	0.5050	0.2743	0.1311	0.0825	0.0496	0.0276	0.0183	31.7	35.5		40
	27-4-2023	21:02:46	IL&FS	LSI	Solapur	MH	17.888130	75.456512	150+000	252+000	195+000 RHS Outer	3	36.7000	0.5008	0.2598	0.1398	0.0733	0.0453	0.0253	0.0162	31.7	35.5		40
230	27-4-2023	21:05:27	IL&FS	LSI	Solapur	MH	17.889478	75.454322	150+000	252+000	194+740 RHS Outer	1	37.3000	0.4743	0.2313	0.1311	0.0793	0.0455	0.0210	0.0124	31.8	35.7		40
	27-4-2023	21:05:27	IL&FS	LSI	Solapur	MH	17.889478	75.454322	150+000	252+000	194+740 RHS Outer	2	37.1000	0.4888	0.2318	0.1282	0.0798	0.0436	0.0206	0.0120	31.8	35.7		40
	27-4-2023	21:05:27	IL&FS	LSI	Solapur	MH	17.889478	75.454322	150+000	252+000	194+740 RHS Outer	3	37.1000	0.4608	0.2289	0.1292	0.0830	0.0449	0.0203	0.0118	31.8	35.7		40
231	27-4-2023	21:07:19	IL&FS	LSI	Solapur	MH	17.890832	75.452407	150+000	252+000	194+500 RHS Outer	1	37.3000	0.5293	0.2497	0.1605	0.0911	0.0637	0.0451	0.0327	31.8	36.0		40
	27-4-2023	21:07:19	IL&FS	LSI	Solapur	MH	17.890832	75.452407	150+000	252+000	194+500 RHS Outer	2	37.8000	0.5003	0.2471	0.1569	0.1024	0.0692	0.0466	0.0317	31.8	36.0		40
	27-4-2023	21:07:19	IL&FS	LSI	Solapur	MH	17.890832	75.452407	150+000	252+000	194+500 RHS Outer	3	38.0000	0.5250	0.2565	0.1595	0.0943	0.0656	0.0457	0.0298	31.8	36.0		40
232	27-4-2023	21:09:15	IL&FS	LSI	Solapur	MH	17.892019	75.450637	150+000	252+000	194+250 RHS Outer	1	37.5000	0.5781	0.2807	0.1443	0.0572	0.0368	0.0224	0.0137	31.8	36.6		40
	27-4-2023	21:09:15	IL&FS	LSI	Solapur	MH	17.892019	75.450637	150+000	252+000	194+250 RHS Outer	2	36.6000	0.5462	0.2747	0.1313	0.0583	0.0366	0.0208	0.0122	31.8	36.6		40
	27-4-2023	21:09:15	IL&FS	LSI	Solapur	MH	17.892019	75.450637	150+000	252+000	194+250 RHS Outer	3	36.6000	0.5174	0.2719	0.1293	0.0604	0.0440	0.0315	0.0074	31.8	36.6		40
233	27-4-2023	21:11:13	IL&FS	LSI	Solapur	MH	17.893228	75.448699	150+000	252+000	194+000 RHS Outer	1	38.7000	0.3422	0.1856	0.0937	0.0511	0.0388	0.0227	0.0115	32.0	36.5		40
	27-4-2023	21:11:13	IL&FS	LSI	Solapur	MH	17.893228	75.448699	150+000	252+000	194+000 RHS Outer	2	38.6000	0.3377	0.1840	0.0944	0.0557	0.0372	0.0220	0.0119	32.0	36.5		40
	27-4-2023	21:11:13	IL&FS	LSI	Solapur	MH	17.893228	75.448699	150+000	252+000	194+000 RHS Outer	3	38.7000	0.3412	0.1810	0.0987	0.0554	0.0369	0.0226	0.0124	32.0	36.5		40
234	27-4-2023	21:13:09	IL&FS	LSI	Solapur	MH	17.894493	75.446662	150+000	252+000	193+750 RHS Outer	1	39.4000	0.3159	0.1562	0.0976	0.0585	0.0409	0.0324	0.0292	31.9	36.8		40
	27-4-2023	21:13:09	IL&FS	LSI	Solapur	MH	17.894493	75.446662	150+000	252+000	193+750 RHS Outer	2	39.9000	0.3093	0.1548	0.0965	0.0585	0.0411	0.0325	0.0292	31.9	36.8		40
	27-4-2023	21:13:09	IL&FS	LSI	Solapur	MH	17.894493	75.446662	150+000	252+000	193+750 RHS Outer	3	39.5000	0.3079	0.1573	0.0967	0.0588	0.0412	0.0317	0.0285	31.9	36.8		40
235	27-4-2023	21:15:07	IL&FS	LSI	Solapur	MH	17.895269	75.444450	150+000	252+000	193+500 RHS Outer	1	37.4000	0.4848	0.2557	0.1296	0.0607	0.0443	0.0315	0.0220	31.8	36.1		40
	27-4-2023	21:15:07	IL&FS	LSI	Solapur	MH	17.895269	75.444450	150+000	252+000	193+500 RHS Outer	2	37.5000	0.4715	0.2690	0.1318	0.0688	0.0481	0.0342	0.0201	31.8	36.1		40
	27-4-2023	21:15:07	IL&FS	LSI	Solapur	MH	17.895269	75.444450	150+000	252+000	193+500 RHS Outer	3	37.8000	0.4674	0.2594	0.1303	0.0670	0.0462	0.0331	0.0202	31.8	36.1		40
236	27-4-2023	21:16:58	IL&FS	LSI	Solapur	MH	17.895931	75.442085	150+000	252+000	193+250 RHS Outer	1	38.6000	0.4771	0.2791	0.1495	0.0923	0.0509	0.0327	0.0193	31.6	35.7		40
	27-4-2023	21:16:58	IL&FS	LSI	Solapur	MH	17.895931	75.442085	150+000	252+000	193+250 RHS Outer	2	38.2000	0.4605	0.2745	0.1419	0.0869	0.0497	0.0339	0.0218	31.6	35.7		40
	27-4-2023	21:16:58	IL&FS	LSI	Solapur	MH	17.895931	75.442085	150+000	252+000	193+250 RHS Outer	3	38.8000	0.4610	0.2757	0.1382	0.0860	0.0508	0.0332	0.0217	31.6	35.7		40
237	27-4-2023	21:18:52	IL&FS	LSI	Solapur	MH	17.896490	75.439971	150+000	252+000	193+000 RHS Outer	1	39.0000	0.4323	0.2033	0.1153	0.0674	0.0439	0.0299	0.0269	31.6	35.4		40
	27-4-2023	21:18:52	IL&FS	LSI	Solapur	MH	17.896490	75.439971	150+000	252+000	193+000 RHS Outer	2	39.3000	0.4231	0.2261	0.1235	0.0685	0.0439	0.0304	0.0274	31.6	35.4		40
	27-4-2023	21:18:52	IL&FS	LSI	Solapur	MH	17.896490	75.439971	150+000	252+000	193+000 RHS Outer	3	39.3000	0.4168	0.2254	0.1177	0.0647	0.0437	0.0302	0.0272	31.6	35.4		40
238	27-4-2023	21:20:44	IL&FS	LSI	Solapur	MH	17.897130	75.437606	150+000	252+000	192+750 RHS Outer	1	37.8000	0.4136	0.2553	0.1357	0.0787	0.0471	0.0283	0.0158	31.5	35.7		40
	27-4-2023	21:20:44	IL&FS	LSI	Solapur	MH	17.897130	75.437606	150+000	252+000	192+750 RHS Outer	2	37.9000	0.4018	0.2450	0.1260	0.0808	0.0443	0.0340	0.0268	31.5	35.7		40
	27-4-2023	21:20:44	IL&FS	LSI	Solapur	MH	17.897130	75.437606	150+000	252+000	192+750 RHS Outer	3	38.1000	0.4020	0.2505	0.1301	0.0819	0.0436	0.0333	0.0264	31.5	35.7		40
239	27-4-2023	21:22:43	IL&FS	LSI	Solapur	MH	17.897874	75.435356	150+000	252+000	192+500 RHS Outer	1	40.5000	0.3989	0.2251	0.1226	0.0690	0.0495	0.0405	0.0365	31.4	35.3		40
	27-4-2023	21:22:43	IL&FS	LSI	Solapur	MH	17.897874	75.435356	150+000	252+000	192+500 RHS Outer	2	39.9000	0.3930	0.2218	0.1170	0.0643	0.0490	0.0389	0.0350	31.4	35.3		40
	27-4-2023	21:22:43	IL&FS	LSI	Solapur	MH	17.897874	75.435356	150+000	252+000	192+500 RHS Outer	3	39.7000	0.3874	0.2207	0.1235	0.0672	0.0486	0.0363	0.0327	31.4	35.3		40
240	27-4-2023	21:24:44	IL&FS	LSI	Solapur	MH	17.899074	75.433273	150+000	252+000	192+250 RHS Outer	1	37.4000	0.5855	0.3266	0.1629	0.0850	0.0534	0.0326	0.0271	31.3	35.3		40
	27-4-2023	21:24:44	IL&FS	LSI	Solapur	MH	17.899074	75.433273	150+000	252+000	192+250 RHS Outer	2	37.4000	0.5627	0.3346	0.1567	0.0845	0.0538	0.0322	0.0268	31.3	35.3		40
	27-4-2023	21:24:44	IL&FS	LSI	Solapur	MH	17.899074	75.433273	150+000	252+000	192+250 RHS Outer	3	37.8000	0.5615	0.3303	0.1547	0.0859	0.0539	0.0322	0.0267	31.3	35.3		40
241	27-4-2023	21:26:37	IL&FS	LSI	Solapur	MH	17.900726	75.431922	150+000	252+000	192+000 RHS Outer	1	36.2000	0.5159	0.2978	0.1685	0.0935	0.0652	0.0468	0.0406	31.5	35.5		40
	27-4-2023	21:26:37	IL&FS	LSI	Solapur	MH	17.900726	75.431922	150+000	252+000	192+000 RHS Outer	2	36.3000	0.5121	0.3003	0.1718	0.0901	0.0640	0.0479	0.0416	31.5	35.5		40
	27-4-2023	21:26:37	IL&FS	LSI	Solapur	MH	17.900726	75.431922	150+000	252+000	192+000 RHS Outer	3	36.1000	0.5196	0.3045	0.1801	0.0923	0.0668	0.0471	0.0409	31.5	35.5		40
242	27-4-2023	21:29:22	IL&FS	LSI	Solapur	MH	17.902698	75.430412	150+000	252+000	191+730 RHS Outer	1	36.1000	0.4657	0.2892	0.1436	0.0652	0.0392	0.0219	0.0158	31.2	34.8	T-29.3/40.8	40.8
	27-4-2023	21:29:22	IL&FS	LSI	Solapur	MH	17.902698	75.430412	150+000	252+000	191+730 RHS Outer	2	36.1000	0.4556	0.2840	0.1598	0.0651	0.0415	0.0231	0.0169	31.2	34.8	T-29.3/40.8	40.8
	27-4-2023	21:29:22	IL&FS	LSI	Solapur	MH	17.902698	75.430412	150+000	252+000	191+730 RHS Outer	3	36.1000	0.4612	0.2796	0.1467	0.0681	0.0429	0.0238	0.0155	31.2	34.8	T-29.3/40.8	40.8
243	27-4-2023	21:33:05	IL&FS	LSI	Solapur	MH	17.904323	75.429077	150+000	252+000	191+500 RHS Outer	1	37.3000	0.5417	0.3224	0.1681	0.0991	0.0636	0.0514	0.0463	31.3	34.9		40.8
	27-4-2023	21:33:05	IL&FS	LSI	Solapur	MH	17.904323	75.429077	150+000	252+000	191+500 RHS Outer	2	37.4000	0.5296	0.3053	0.1630	0.0994	0.0591	0.0539	0.0485	31.3	34.9		40.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	21:33:05	IL&FS	LSI	Solapur	MH	17.904323	75.429077	150+000	252+000	191+500 RHS Outer	3	37.5000	0.5132	0.3063	0.1561	0.0996	0.0602	0.0513	0.0462	31.3	34.9		40.8
244	27-4-2023	21:35:01	IL&FS	LSI	Solapur	MH	17.905324	75.426864	150+000	252+000	191+250 RHS Outer	1	37.3000	0.4381	0.2636	0.1322	0.0744	0.0441	0.0284	0.0241	31.2	35.4		40.8
	27-4-2023	21:35:01	IL&FS	LSI	Solapur	MH	17.905324	75.426864	150+000	252+000	191+250 RHS Outer	2	37.8000	0.4177	0.2594	0.1325	0.0809	0.0448	0.0286	0.0242	31.2	35.4		40.8
	27-4-2023	21:35:01	IL&FS	LSI	Solapur	MH	17.905324	75.426864	150+000	252+000	191+250 RHS Outer	3	37.9000	0.4218	0.2544	0.1269	0.0737	0.0449	0.0289	0.0245	31.2	35.4		40.8
245	27-4-2023	21:37:04	IL&FS	LSI	Solapur	MH	17.906080	75.424896	150+000	252+000	191+020 RHS Outer	1	36.9000	0.5072	0.3037	0.1408	0.0731	0.0533	0.0301	0.0260	31.0	34.0	Approach	40.8
	27-4-2023	21:37:04	IL&FS	LSI	Solapur	MH	17.906080	75.424896	150+000	252+000	191+020 RHS Outer	2	37.5000	0.4894	0.2966	0.1438	0.0746	0.0548	0.0437	0.0176	31.0	34.0	Approach	40.8
	27-4-2023	21:37:04	IL&FS	LSI	Solapur	MH	17.906080	75.424896	150+000	252+000	191+020 RHS Outer	3	37.6000	0.4816	0.2957	0.1509	0.0760	0.0556	0.0421	0.0199	31.0	34.0	Approach	40.8
246	27-4-2023	21:39:14	IL&FS	LSI	Solapur	MH	17.907098	75.422470	150+000	252+000	190+740 RHS Outer	1	37.2000	0.4756	0.2936	0.1628	0.1102	0.0720	0.0463	0.0269	30.9	33.9		40.8
	27-4-2023	21:39:14	IL&FS	LSI	Solapur	MH	17.907098	75.422470	150+000	252+000	190+740 RHS Outer	2	37.2000	0.4808	0.2922	0.1480	0.1023	0.0707	0.0436	0.0244	30.9	33.9		40.8
	27-4-2023	21:39:14	IL&FS	LSI	Solapur	MH	17.907098	75.422470	150+000	252+000	190+740 RHS Outer	3	37.7000	0.4775	0.2861	0.1572	0.0991	0.0617	0.0457	0.0347	30.9	33.9		40.8
247	27-4-2023	21:41:05	IL&FS	LSI	Solapur	MH	17.907936	75.420532	150+000	252+000	190+500 RHS Outer	1	37.8000	0.3902	0.2607	0.1170	0.0676	0.0434	0.0236	0.0188	30.8	33.8		40.8
	27-4-2023	21:41:05	IL&FS	LSI	Solapur	MH	17.907936	75.420532	150+000	252+000	190+500 RHS Outer	2	37.9000	0.4125	0.2574	0.1295	0.0699	0.0444	0.0237	0.0185	30.8	33.8		40.8
	27-4-2023	21:41:05	IL&FS	LSI	Solapur	MH	17.907936	75.420532	150+000	252+000	190+500 RHS Outer	3	38.3000	0.4081	0.2503	0.1235	0.0678	0.0468	0.0243	0.0178	30.8	33.8		40.8
248	27-4-2023	21:43:05	IL&FS	LSI	Solapur	MH	17.908893	75.418281	150+000	252+000	190+250 RHS Outer	1	38.7000	0.2882	0.1874	0.1200	0.0758	0.0430	0.0300	0.0215	30.9	32.1		40.8
	27-4-2023	21:43:05	IL&FS	LSI	Solapur	MH	17.908893	75.418281	150+000	252+000	190+250 RHS Outer	2	39.5000	0.2896	0.1820	0.1135	0.0749	0.0466	0.0337	0.0244	30.9	32.1		40.8
	27-4-2023	21:43:05	IL&FS	LSI	Solapur	MH	17.908893	75.418281	150+000	252+000	190+250 RHS Outer	3	39.5000	0.2746	0.1847	0.1106	0.0726	0.0479	0.0342	0.0255	30.9	32.1		40.8
249	27-4-2023	21:45:05	IL&FS	LSI	Solapur	MH	17.909778	75.416122	150+000	252+000	190+000 RHS Outer	1	37.7000	0.4463	0.2195	0.1085	0.0764	0.0515	0.0348	0.0233	30.5	31.2		40.8
	27-4-2023	21:45:05	IL&FS	LSI	Solapur	MH	17.909778	75.416122	150+000	252+000	190+000 RHS Outer	2	38.1000	0.4244	0.2150	0.1030	0.0708	0.0460	0.0336	0.0256	30.5	31.2		40.8
	27-4-2023	21:45:05	IL&FS	LSI	Solapur	MH	17.909778	75.416122	150+000	252+000	190+000 RHS Outer	3	38.2000	0.4274	0.2039	0.1059	0.0732	0.0495	0.0350	0.0247	30.5	31.2		40.8
250	27-4-2023	21:47:16	IL&FS	LSI	Solapur	MH	17.910663	75.413894	150+000	252+000	189+750 RHS Outer	1	38.3000	0.3909	0.2282	0.1313	0.0852	0.0501	0.0408	0.0344	30.4	31.1		40.8
	27-4-2023	21:47:16	IL&FS	LSI	Solapur	MH	17.910663	75.413894	150+000	252+000	189+750 RHS Outer	2	38.3000	0.3824	0.2378	0.1277	0.0811	0.0479	0.0352	0.0269	30.4	31.1		40.8
	27-4-2023	21:47:16	IL&FS	LSI	Solapur	MH	17.910663	75.413894	150+000	252+000	189+750 RHS Outer	3	38.4000	0.3670	0.2376	0.1226	0.0811	0.0537	0.0407	0.0307	30.4	31.1		40.8
251	27-4-2023	21:49:08	IL&FS	LSI	Solapur	MH	17.911508	75.411781	150+000	252+000	189+500 RHS Outer	1	37.9000	0.5138	0.3108	0.1821	0.0972	0.0762	0.0505	0.0336	30.2	31.0		40.8
	27-4-2023	21:49:08	IL&FS	LSI	Solapur	MH	17.911508	75.411781	150+000	252+000	189+500 RHS Outer	2	38.1000	0.5116	0.2993	0.1847	0.1012	0.0716	0.0484	0.0308	30.2	31.0		40.8
	27-4-2023	21:49:08	IL&FS	LSI	Solapur	MH	17.911508	75.411781	150+000	252+000	189+500 RHS Outer	3	38.3000	0.5013	0.3032	0.1893	0.1000	0.0691	0.0483	0.0340	30.2	31.0		40.8
252	27-4-2023	21:53:05	IL&FS	LSI	Solapur	MH	17.913274	75.407226	150+000	252+000	189+000 RHS Outer	1	38.9000	0.4019	0.2568	0.1564	0.0996	0.0632	0.0396	0.0256	30.2	30.2		40.8
	27-4-2023	21:53:05	IL&FS	LSI	Solapur	MH	17.913274	75.407226	150+000	252+000	189+000 RHS Outer	2	39.1000	0.3917	0.2497	0.1633	0.0959	0.0660	0.0393	0.0254	30.2	30.2		40.8
	27-4-2023	21:53:05	IL&FS	LSI	Solapur	MH	17.913274	75.407226	150+000	252+000	189+000 RHS Outer	3	39.6000	0.4042	0.2561	0.1585	0.0997	0.0664	0.0400	0.0260	30.2	30.2		40.8
253	27-4-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.914316	75.404495	150+000	252+000	188+680 RHS Outer	1	38.3000	0.4246	0.2625	0.1414	0.0923	0.0589	0.0385	0.0249	29.9	30.1	6 Lane VUP Start	40.8
	27-4-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.914316	75.404495	150+000	252+000	188+680 RHS Outer	2	38.6000	0.4202	0.2542	0.1453	0.0955	0.0586	0.0395	0.0260	29.9	30.1	6 Lane VUP Start	40.8
	27-4-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.914316	75.404495	150+000	252+000	188+680 RHS Outer	3	38.6000	0.4241	0.2578	0.1372	0.0920	0.0588	0.0406	0.0282	29.9	30.1	6 Lane VUP Start	40.8
254	27-4-2023	21:57:04	IL&FS	LSI	Solapur	MH	17.914936	75.403038	150+000	252+000	188+500 RHS Outer	1	38.3000	0.4653	0.2953	0.1562	0.1060	0.0667	0.0482	0.0360	29.8	30.3		40.8
	27-4-2023	21:57:04	IL&FS	LSI	Solapur	MH	17.914936	75.403038	150+000	252+000	188+500 RHS Outer	2	39.3000	0.4619	0.2946	0.1622	0.1112	0.0745	0.0524	0.0376	29.8	30.3		40.8
	27-4-2023	21:57:04	IL&FS	LSI	Solapur	MH	17.914936	75.403038	150+000	252+000	188+500 RHS Outer	3	38.0000	0.4347	0.2921	0.1529	0.1065	0.0707	0.0509	0.0357	29.8	30.3		40.8
255	27-4-2023	21:58:55	IL&FS	LSI	Solapur	MH	17.915912	75.400741	150+000	252+000	188+250 RHS Outer	1	38.6000	0.4264	0.2438	0.1191	0.0852	0.0587	0.0374	0.0223	29.8	29.9	6 Lane VUP End	40.8
	27-4-2023	21:58:55	IL&FS	LSI	Solapur	MH	17.915912	75.400741	150+000	252+000	188+250 RHS Outer	2	38.7000	0.4107	0.2424	0.1174	0.0847	0.0608	0.0385	0.0222	29.8	29.9	6 Lane VUP End	40.8
	27-4-2023	21:58:55	IL&FS	LSI	Solapur	MH	17.915912	75.400741	150+000	252+000	188+250 RHS Outer	3	38.9000	0.4191	0.2473	0.1112	0.0773	0.0544	0.0361	0.0224	29.8	29.9	6 Lane VUP End	40.8
256	27-4-2023	22:00:45	IL&FS	LSI	Solapur	MH	17.916780	75.398696	150+000	252+000	188+000 RHS Outer	1	36.8000	0.4551	0.2658	0.1294	0.0787	0.0504	0.0377	0.0298	29.7	30.4		40.8
	27-4-2023	22:00:45	IL&FS	LSI	Solapur	MH	17.916780	75.398696	150+000	252+000	188+000 RHS Outer	2	36.0000	0.4216	0.2470	0.1298	0.0744	0.0534	0.0387	0.0278	29.7	30.4		40.8
	27-4-2023	22:00:45	IL&FS	LSI	Solapur	MH	17.916780	75.398696	150+000	252+000	188+000 RHS Outer	3	36.3000	0.4172	0.2543	0.1318	0.0791	0.0483	0.0363	0.0283	29.7	30.4		40.8
257	27-4-2023	22:03:03	IL&FS	LSI	Solapur	MH	17.917816	75.396247	150+000	252+000	187+730 RHS Outer	1	39.0000	0.3564	0.2346	0.1417	0.0838	0.0637	0.0493	0.0364	29.5	29.6		40.8
	27-4-2023	22:03:03	IL&FS	LSI	Solapur	MH	17.917816	75.396247	150+000	252+000	187+730 RHS Outer	2	39.6000	0.3354	0.2274	0.1323	0.0849	0.0647	0.0490	0.0361	29.5	29.6		40.8
	27-4-2023	22:03:03	IL&FS	LSI	Solapur	MH	17.917816	75.396247	150+000	252+000	187+730 RHS Outer	3	39.3000	0.3375	0.2114	0.1258	0.0848	0.0648	0.0506	0.0375	29.5	29.6		40.8
258	27-4-2023	22:05:02	IL&FS	LSI	Solapur	MH	17.918647	75.394165	150+000	252+000	187+500 RHS Outer	1	38.5000	0.4104	0.2088	0.1243	0.0760	0.0547	0.0391	0.0352	29.5	29.6		40.8
	27-4-2023	22:05:02	IL&FS	LSI	Solapur	MH	17.918647	75.394165	150+000	252+000	187+500 RHS Outer	2	38.6000	0.3869	0.1969	0.1195	0.0759	0.0559	0.0432	0.0326	29.5	29.6		40.8
	27-4-2023	22:05:02	IL&FS	LSI	Solapur	MH	17.918647	75.394165	150+000	252+000	187+500 RHS Outer	3	38.8000	0.3776	0.1887	0.1238	0.0773	0.0535	0.0368	0.0331	29.5	29.6		40.8
259	27-4-2023	22:06:56	IL&FS	LSI	Solapur	MH	17.919492	75.392059	150+000	252+000	187+250 RHS Outer	1	40.6000	0.2111	0.1487	0.1004	0.0713	0.0485	0.0366	0.0283	29.4	29.6		40.8
	27-4-2023	22:06:56	IL&FS	LSI	Solapur	MH	17.919492	75.392059	150+000	252+000	187+250 RHS Outer	2	40.9000	0.2126	0.1461	0.1020	0.0715	0.0488	0.0388	0.0312	29.4	29.6		40.8
	27-4-2023	22:06:56	IL&FS	LSI	Solapur	MH	17.919492	75.392059	150+000	252+000	187+250 RHS Outer	3	41.3000	0.2161	0.1370	0.0936	0.0669	0.0493	0.0369	0.0275	29.4	29.6		40.8
260	27-4-2023	22:09:29	IL&FS	LSI	Solapur	MH	17.920225	75.390190	150+000	252+000	187+000 RHS Outer	1	39.2000	0.4439	0.2754	0.1378	0.0757	0.0476	0.0368	0.0301	29.2	29.2	T-27.8/35.9	35.9
	27-4-2023	22:09:29	IL&FS	LSI	Solapur	MH	17.920225	75.390190	150+000	252+000	187+000 RHS Outer	2	38.5000	0.4333	0.2629	0.1334	0.0782	0.0508	0.0366	0.0275	29.2	29.2	T-27.8/35.9	35.9
	27-4-2023	22:09:29	IL&FS	LSI	Solapur	MH	17.920225	75.390190	150+000	252+000	187+000 RHS Outer	3	38.4000	0.4133	0.2659	0.1311	0.0803	0.0515	0.0381	0.0283	29.2	29.2	T-27.8/35.9	35.9
261	27-4-2023	22:13:55	IL&FS	LSI	Solapur	MH	17.921159	75.387916	150+000	252+000	186+750 RHS Outer	1	37.7000	0.4737	0.2849	0.1485	0.0727	0.0527	0.0386	0.0332	29.0	29.7		35.9
	27-4-2023	22:13:55	IL&FS	LSI	Solapur	MH	17.921159	75.387916	150+000	252+000	186+750 RHS Outer	2	38.4000	0.4640	0.2887	0.1381	0.0760	0.0532	0.0372	0.0320	29.0	29.7		35.9
	27-4-2023	22:13:55	IL&FS	LSI	Solapur	MH	17.921159	75.387916	150+000	252+000	186+750 RHS Outer	3	38.3000	0.4552	0.2765	0.1386	0.0750	0.0502	0.0333	0.0285	29.0	29.7		35.9
262	27-4-2023	22:16:00	IL&FS	LSI	Solapur	MH	17.921592	75.385688	150+000	252+000	186+500 RHS Outer	1	39.7000	0.3004	0.1880	0.1087	0.0671	0.0417	0.0307	0.0234	29.1	29.5		35.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	27-4-2023	22:16:00	IL&FS	LSI	Solapur	MH	17.921592	75.385688	150+000	252+000	186+500 RHS Outer	2	39.5000	0.2955	0.1854	0.1109	0.0706	0.0425	0.0311	0.0225	29.1	29.5		35.9
	27-4-2023	22:16:00	IL&FS	LSI	Solapur	MH	17.921592	75.385688	150+000	252+000	186+500 RHS Outer	3	39.9000	0.3089	0.1840	0.1052	0.0695	0.0425	0.0307	0.0230	29.1	29.5		35.9
263	27-4-2023	22:18:08	IL&FS	LSI	Solapur	MH	17.922248	75.383438	150+000	252+000	186+250 RHS Outer	1	36.0000	0.5625	0.3255	0.1594	0.0980	0.0688	0.0497	0.0356	28.9	30.1		35.9
	27-4-2023	22:18:08	IL&FS	LSI	Solapur	MH	17.922248	75.383438	150+000	252+000	186+250 RHS Outer	2	37.5000	0.5773	0.3257	0.1662	0.1059	0.0713	0.0479	0.0301	28.9	30.1		35.9
	27-4-2023	22:18:08	IL&FS	LSI	Solapur	MH	17.922248	75.383438	150+000	252+000	186+250 RHS Outer	3	37.6000	0.5656	0.3343	0.1575	0.0955	0.0719	0.0473	0.0308	28.9	30.1		35.9
264	27-4-2023	22:20:08	IL&FS	LSI	Solapur	MH	17.923307	75.381340	150+000	252+000	186+000 RHS Outer	1	36.4000	0.4545	0.2855	0.1607	0.0804	0.0490	0.0377	0.0305	29.1	29.9		35.9
	27-4-2023	22:20:08	IL&FS	LSI	Solapur	MH	17.923307	75.381340	150+000	252+000	186+000 RHS Outer	2	37.1000	0.4289	0.2933	0.1494	0.0820	0.0497	0.0357	0.0269	29.1	29.9		35.9
	27-4-2023	22:20:08	IL&FS	LSI	Solapur	MH	17.923307	75.381340	150+000	252+000	186+000 RHS Outer	3	37.2000	0.4237	0.2808	0.1574	0.0820	0.0483	0.0366	0.0276	29.1	29.9		35.9
265	27-4-2023	22:22:02	IL&FS	LSI	Solapur	MH	17.923498	75.378944	150+000	252+000	185+750 RHS Outer	1	37.4000	0.4211	0.2587	0.1347	0.0635	0.0397	0.0316	0.0260	28.9	30.4		35.9
	27-4-2023	22:22:02	IL&FS	LSI	Solapur	MH	17.923498	75.378944	150+000	252+000	185+750 RHS Outer	2	37.4000	0.4243	0.2539	0.1294	0.0635	0.0430	0.0348	0.0296	28.9	30.4		35.9
	27-4-2023	22:22:02	IL&FS	LSI	Solapur	MH	17.923498	75.378944	150+000	252+000	185+750 RHS Outer	3	37.6000	0.4199	0.2530	0.1346	0.0638	0.0408	0.0334	0.0284	28.9	30.4		35.9
266	27-4-2023	22:23:57	IL&FS	LSI	Solapur	MH	17.924278	75.376785	150+000	252+000	185+500 RHS Outer	1	36.8000	0.4460	0.2490	0.1276	0.0798	0.0566	0.0393	0.0263	28.8	29.9		35.9
	27-4-2023	22:23:57	IL&FS	LSI	Solapur	MH	17.924278	75.376785	150+000	252+000	185+500 RHS Outer	2	37.2000	0.4436	0.2418	0.1315	0.0798	0.0572	0.0370	0.0237	28.8	29.9		35.9
	27-4-2023	22:23:57	IL&FS	LSI	Solapur	MH	17.924278	75.376785	150+000	252+000	185+500 RHS Outer	3	37.3000	0.4298	0.2421	0.1280	0.0817	0.0572	0.0381	0.0247	28.8	29.9		35.9
267	27-4-2023	22:26:38	IL&FS	LSI	Solapur	MH	17.925109	75.374412	150+000	252+000	185+230 RHS Outer	1	36.6000	0.4729	0.3023	0.1711	0.1022	0.0537	0.0391	0.0283	28.8	29.8		35.9
	27-4-2023	22:26:38	IL&FS	LSI	Solapur	MH	17.925109	75.374412	150+000	252+000	185+230 RHS Outer	2	36.8000	0.4605	0.3040	0.1645	0.0987	0.0571	0.0415	0.0305	28.8	29.8		35.9
	27-4-2023	22:26:38	IL&FS	LSI	Solapur	MH	17.925109	75.374412	150+000	252+000	185+230 RHS Outer	3	37.0000	0.4561	0.3056	0.1658	0.1025	0.0598	0.0449	0.0335	28.8	29.8		35.9
268	27-4-2023	22:28:54	IL&FS	LSI	Solapur	MH	17.925884	75.372291	150+000	252+000	185+000 RHS Outer	1	37.7000	0.3872	0.2370	0.1432	0.1079	0.0819	0.0550	0.0377	28.6	29.3		35.9
	27-4-2023	22:28:54	IL&FS	LSI	Solapur	MH	17.925884	75.372291	150+000	252+000	185+000 RHS Outer	2	37.8000	0.3789	0.2153	0.1439	0.1051	0.0777	0.0538	0.0385	28.6	29.3		35.9
	27-4-2023	22:28:54	IL&FS	LSI	Solapur	MH	17.925884	75.372291	150+000	252+000	185+000 RHS Outer	3	38.1000	0.3819	0.2162	0.1357	0.1054	0.0772	0.0580	0.0434	28.6	29.3		35.9
269	27-4-2023	22:30:55	IL&FS	LSI	Solapur	MH	17.926683	75.370094	150+000	252+000	184+750 RHS Outer	1	38.3000	0.3320	0.2068	0.1311	0.0845	0.0661	0.0518	0.0372	28.5	28.9		35.9
	27-4-2023	22:30:55	IL&FS	LSI	Solapur	MH	17.926683	75.370094	150+000	252+000	184+750 RHS Outer	2	38.3000	0.3364	0.2017	0.1297	0.0845	0.0662	0.0526	0.0374	28.5	28.9		35.9
	27-4-2023	22:30:55	IL&FS	LSI	Solapur	MH	17.926683	75.370094	150+000	252+000	184+750 RHS Outer	3	38.5000	0.3316	0.1957	0.1309	0.0849	0.0657	0.0506	0.0345	28.5	28.9		35.9
270	27-4-2023	22:34:16	IL&FS	LSI	Solapur	MH	17.928005	75.368186	150+000	252+000	184+530 RHS Outer	1	38.1000	0.4269	0.2232	0.1323	0.0881	0.0547	0.0426	0.0333	28.5	29.9		35.9
	27-4-2023	22:34:16	IL&FS	LSI	Solapur	MH	17.928005	75.368186	150+000	252+000	184+530 RHS Outer	2	38.0000	0.4195	0.2478	0.1382	0.0907	0.0574	0.0444	0.0350	28.5	29.9		35.9
	27-4-2023	22:34:16	IL&FS	LSI	Solapur	MH	17.928005	75.368186	150+000	252+000	184+530 RHS Outer	3	38.4000	0.4181	0.2419	0.1397	0.0937	0.0594	0.0460	0.0368	28.5	29.9		35.9
271	27-4-2023	22:36:37	IL&FS	LSI	Solapur	MH	17.929466	75.366416	150+000	252+000	184+250 RHS Outer	1	38.2000	0.4232	0.2767	0.1682	0.0885	0.0680	0.0485	0.0339	28.6	30.3		35.9
	27-4-2023	22:36:37	IL&FS	LSI	Solapur	MH	17.929466	75.366416	150+000	252+000	184+250 RHS Outer	2	38.5000	0.4160	0.2773	0.1680	0.0890	0.0689	0.0478	0.0336	28.6	30.3		35.9
	27-4-2023	22:36:37	IL&FS	LSI	Solapur	MH	17.929466	75.366416	150+000	252+000	184+250 RHS Outer	3	38.5000	0.4018	0.2769	0.1651	0.0978	0.0696	0.0492	0.0338	28.6	30.3		35.9
272	27-4-2023	22:38:33	IL&FS	LSI	Solapur	MH	17.930807	75.364952	150+000	252+000	184+000 RHS Outer	1	37.2000	0.5220	0.3006	0.1580	0.0971	0.0721	0.0534	0.0481	28.6	31.6		35.9
	27-4-2023	22:38:33	IL&FS	LSI	Solapur	MH	17.930807	75.364952	150+000	252+000	184+000 RHS Outer	2	36.3000	0.4900	0.3073	0.1648	0.0913	0.0665	0.0511	0.0460	28.6	31.6		35.9
	27-4-2023	22:38:33	IL&FS	LSI	Solapur	MH	17.930807	75.364952	150+000	252+000	184+000 RHS Outer	3	37.2000	0.4901	0.3037	0.1543	0.1044	0.0734	0.0536	0.0482	28.6	31.6		35.9
273	27-4-2023	22:40:30	IL&FS	LSI	Solapur	MH	17.932304	75.363174	150+000	252+000	183+750 RHS Outer	1	37.9000	0.4206	0.2430	0.1362	0.0990	0.0708	0.0455	0.0298	28.7	30.2		35.9
	27-4-2023	22:40:30	IL&FS	LSI	Solapur	MH	17.932304	75.363174	150+000	252+000	183+750 RHS Outer	2	37.8000	0.4054	0.2379	0.1307	0.0925	0.0672	0.0447	0.0294	28.7	30.2		35.9
	27-4-2023	22:40:30	IL&FS	LSI	Solapur	MH	17.932304	75.363174	150+000	252+000	183+750 RHS Outer	3	38.3000	0.4273	0.2520	0.1360	0.0953	0.0694	0.0460	0.0313	28.7	30.2		35.9
274	27-4-2023	22:42:39	IL&FS	LSI	Solapur	MH	17.933832	75.361465	150+000	252+000	183+500 RHS Outer	1	39.0000	0.4051	0.2609	0.1407	0.0926	0.0636	0.0436	0.0284	28.8	31.0		35.9
	27-4-2023	22:42:39	IL&FS	LSI	Solapur	MH	17.933832	75.361465	150+000	252+000	183+500 RHS Outer	2	38.7000	0.3955	0.2467	0.1398	0.0849	0.0601	0.0439	0.0281	28.8	31.0		35.9
	27-4-2023	22:42:39	IL&FS	LSI	Solapur	MH	17.933832	75.361465	150+000	252+000	183+500 RHS Outer	3	38.7000	0.3890	0.2521	0.1443	0.0892	0.0606	0.0427	0.0234	28.8	31.0		35.9
275	27-4-2023	22:44:41	IL&FS	LSI	Solapur	MH	17.935352	75.359672	150+000	252+000	183+250 RHS Outer	1	40.8000	0.2384	0.1459	0.0948	0.0616	0.0375	0.0271	0.0198	28.8	31.6		35.9
	27-4-2023	22:44:41	IL&FS	LSI	Solapur	MH	17.935352	75.359672	150+000	252+000	183+250 RHS Outer	2	41.1000	0.2177	0.1465	0.0945	0.0604	0.0395	0.0276	0.0197	28.8	31.6		35.9
	27-4-2023	22:44:41	IL&FS	LSI	Solapur	MH	17.935352	75.359672	150+000	252+000	183+250 RHS Outer	3	40.6000	0.2261	0.1493	0.0963	0.0645	0.0412	0.0284	0.0192	28.8	31.6		35.9
276	27-4-2023	22:46:47	IL&FS	LSI	Solapur	MH	17.937135	75.357620	150+000	252+000	183+000 RHS Outer	1	38.8000	0.3125	0.2024	0.1209	0.0701	0.0509	0.0390	0.0308	28.8	31.2		35.9
	27-4-2023	22:46:47	IL&FS	LSI	Solapur	MH	17.937135	75.357620	150+000	252+000	183+000 RHS Outer	2	38.9000	0.3065	0.2066	0.1254	0.0707	0.0523	0.0392	0.0302	28.8	31.2		35.9
	27-4-2023	22:46:47	IL&FS	LSI	Solapur	MH	17.937135	75.357620	150+000	252+000	183+000 RHS Outer	3	39.2000	0.3274	0.2016	0.1250	0.0708	0.0491	0.0366	0.0282	28.8	31.2		35.9
277	27-4-2023	22:49:06	IL&FS	LSI	Solapur	MH	17.938579	75.355926	150+000	252+000	182+750 RHS Outer	1	39.5000	0.3095	0.1908	0.1197	0.0694	0.0477	0.0315	0.0274	28.6	31.0		35.9
	27-4-2023	22:49:06	IL&FS	LSI	Solapur	MH	17.938579	75.355926	150+000	252+000	182+750 RHS Outer	2	40.0000	0.3082	0.1911	0.1110	0.0629	0.0443	0.0316	0.0274	28.6	31.0		35.9
	27-4-2023	22:49:06	IL&FS	LSI	Solapur	MH	17.938579	75.355926	150+000	252+000	182+750 RHS Outer	3	40.0000	0.2949	0.1940	0.1154	0.0671	0.0474	0.0324	0.0281	28.6	31.0		35.9
278	28-4-2023	00:27:47	IL&FS	LSI	Solapur	MH	17.940103	75.354164	150+000	252+000	182+500 RHS Outer	1	40.3000	0.4242	0.2334	0.1405	0.0760	0.0521	0.0399	0.0316	28.2	31.0	T-26/34.1	34.1
	28-4-2023	00:27:47	IL&FS	LSI	Solapur	MH	17.940103	75.354164	150+000	252+000	182+500 RHS Outer	2	39.6000	0.4178	0.2308	0.1432	0.0724	0.0480	0.0369	0.0288	28.2	31.0	T-26/34.1	34.1
	28-4-2023	00:27:47	IL&FS	LSI	Solapur	MH	17.940103	75.354164	150+000	252+000	182+500 RHS Outer	3	39.2000	0.4147	0.2302	0.1498	0.0714	0.0475	0.0369	0.0294	28.2	31.0	T-26/34.1	34.1
279	28-4-2023	00:29:48	IL&FS	LSI	Solapur	MH	17.941549	75.352447	150+000	252+000	182+250 RHS Outer	1	38.6000	0.2784	0.1331	0.0852	0.0582	0.0404	0.0282	0.0253	28.3	30.9		34.1
	28-4-2023	00:29:48	IL&FS	LSI	Solapur	MH	17.941549	75.352447	150+000	252+000	182+250 RHS Outer	2	40.6000	0.2679	0.1395	0.0896	0.0585	0.0424	0.0305	0.0274	28.3	30.9		34.1
	28-4-2023	00:29:48	IL&FS	LSI	Solapur	MH	17.941549	75.352447	150+000	252+000	182+250 RHS Outer	3	38.9000	0.2518	0.1329	0.0880	0.0543	0.0386	0.0275	0.0248	28.3	30.9		34.1
280	28-4-2023	00:31:43	IL&FS	LSI	Solapur	MH	17.943111	75.350624	150+000	252+000	182+000 RHS Outer	1	38.8000	0.5015	0.2734	0.1559	0.0994	0.0624	0.0374	0.0227	28.4	31.4		34.1
	28-4-2023	00:31:43	IL&FS	LSI	Solapur	MH	17.943111	75.350624	150+000	252+000	182+000 RHS Outer	2	38.8000	0.4874	0.2645	0.1595	0.1029	0.0624	0.0371	0.0244	28.4	31.4		34.1
	28-4-2023	00:31:43	IL&FS	LSI	Solapur	MH	17.943111	75.350624	150+000	252+000	182+000 RHS Outer	3	39.1000	0.4999	0.2752	0.1613	0.1061	0.0632	0.0335	0.0231	28.4	31.4		34.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
281	28-4-2023	00:33:36	IL&FS	LSI	Solapur	MH	17.944631	75.348831	150+000	252+000	181+750 RHS Outer	1	39.4000	0.3752	0.2596	0.1502	0.1016	0.0595	0.0432	0.0311	28.5	31.4		34.1
	28-4-2023	00:33:36	IL&FS	LSI	Solapur	MH	17.944631	75.348831	150+000	252+000	181+750 RHS Outer	2	39.4000	0.3705	0.2568	0.1517	0.0988	0.0589	0.0428	0.0307	28.5	31.4		34.1
	28-4-2023	00:33:36	IL&FS	LSI	Solapur	MH	17.944631	75.348831	150+000	252+000	181+750 RHS Outer	3	39.3000	0.3578	0.2527	0.1424	0.0967	0.0607	0.0437	0.0308	28.5	31.4		34.1
282	28-4-2023	00:35:28	IL&FS	LSI	Solapur	MH	17.946041	75.347160	150+000	252+000	181+500 RHS Outer	1	39.3000	0.4662	0.2799	0.1573	0.1023	0.0621	0.0423	0.0287	28.4	30.9		34.1
	28-4-2023	00:35:28	IL&FS	LSI	Solapur	MH	17.946041	75.347160	150+000	252+000	181+500 RHS Outer	2	38.4000	0.4484	0.2718	0.1458	0.0954	0.0583	0.0404	0.0277	28.4	30.9		34.1
	28-4-2023	00:35:28	IL&FS	LSI	Solapur	MH	17.946041	75.347160	150+000	252+000	181+500 RHS Outer	3	38.0000	0.4272	0.2661	0.1419	0.0880	0.0537	0.0375	0.0249	28.4	30.9		34.1
283	28-4-2023	00:37:19	IL&FS	LSI	Solapur	MH	17.947635	75.345291	150+000	252+000	181+250 RHS Outer	1	41.4000	0.2461	0.1398	0.1034	0.0722	0.0430	0.0242	0.0168	28.6	31.3		34.1
	28-4-2023	00:37:19	IL&FS	LSI	Solapur	MH	17.947635	75.345291	150+000	252+000	181+250 RHS Outer	2	40.6000	0.2272	0.1464	0.1013	0.0662	0.0417	0.0243	0.0169	28.6	31.3		34.1
	28-4-2023	00:37:19	IL&FS	LSI	Solapur	MH	17.947635	75.345291	150+000	252+000	181+250 RHS Outer	3	40.4000	0.2199	0.1431	0.1027	0.0658	0.0393	0.0228	0.0155	28.6	31.3		34.1
284	28-4-2023	00:39:14	IL&FS	LSI	Solapur	MH	17.949100	75.343498	150+000	252+000	181+000 RHS Outer	1	40.4000	0.3146	0.2021	0.1154	0.0633	0.0413	0.0317	0.0249	28.6	31.3		34.1
	28-4-2023	00:39:14	IL&FS	LSI	Solapur	MH	17.949100	75.343498	150+000	252+000	181+000 RHS Outer	2	40.8000	0.3287	0.1930	0.1251	0.0627	0.0449	0.0291	0.0258	28.6	31.3		34.1
	28-4-2023	00:39:14	IL&FS	LSI	Solapur	MH	17.949100	75.343498	150+000	252+000	181+000 RHS Outer	3	39.2000	0.2928	0.1918	0.1062	0.0608	0.0421	0.0297	0.0251	28.6	31.3		34.1
285	28-4-2023	00:41:13	IL&FS	LSI	Solapur	MH	17.950416	75.341667	150+000	252+000	180+750 RHS Outer	1	41.3000	0.1840	0.1377	0.0889	0.0580	0.0425	0.0327	0.0294	28.6	31.4		34.1
	28-4-2023	00:41:13	IL&FS	LSI	Solapur	MH	17.950416	75.341667	150+000	252+000	180+750 RHS Outer	2	41.4000	0.2005	0.1394	0.0911	0.0589	0.0428	0.0309	0.0278	28.6	31.4		34.1
	28-4-2023	00:41:13	IL&FS	LSI	Solapur	MH	17.950416	75.341667	150+000	252+000	180+750 RHS Outer	3	40.9000	0.2010	0.1344	0.0906	0.0585	0.0432	0.0335	0.0302	28.6	31.4		34.1
286	28-4-2023	00:43:32	IL&FS	LSI	Solapur	MH	17.951719	75.339721	150+000	252+000	180+500 RHS Outer	1	38.9000	0.5035	0.2921	0.1785	0.1055	0.0482	0.0349	0.0263	28.7	32.0		34.1
	28-4-2023	00:43:32	IL&FS	LSI	Solapur	MH	17.951719	75.339721	150+000	252+000	180+500 RHS Outer	2	38.9000	0.4871	0.2657	0.1706	0.0968	0.0493	0.0388	0.0314	28.7	32.0		34.1
	28-4-2023	00:43:32	IL&FS	LSI	Solapur	MH	17.951719	75.339721	150+000	252+000	180+500 RHS Outer	3	39.1000	0.4662	0.2851	0.1683	0.0992	0.0537	0.0390	0.0290	28.7	32.0		34.1
287	28-4-2023	00:45:28	IL&FS	LSI	Solapur	MH	17.952978	75.337768	150+000	252+000	180+250 RHS Outer	1	40.8000	0.2539	0.1655	0.1092	0.0649	0.0492	0.0382	0.0244	28.8	31.8		34.1
	28-4-2023	00:45:28	IL&FS	LSI	Solapur	MH	17.952978	75.337768	150+000	252+000	180+250 RHS Outer	2	41.1000	0.2644	0.1678	0.1115	0.0637	0.0470	0.0363	0.0227	28.8	31.8		34.1
	28-4-2023	00:45:28	IL&FS	LSI	Solapur	MH	17.952978	75.337768	150+000	252+000	180+250 RHS Outer	3	41.4000	0.2634	0.1672	0.1080	0.0654	0.0478	0.0354	0.0219	28.8	31.8		34.1
288	28-4-2023	00:47:29	IL&FS	LSI	Solapur	MH	17.954185	75.336051	150+000	252+000	180+000 RHS Outer	1	41.2000	0.2080	0.1419	0.1006	0.0610	0.0415	0.0332	0.0299	28.8	31.3		34.1
	28-4-2023	00:47:29	IL&FS	LSI	Solapur	MH	17.954185	75.336051	150+000	252+000	180+000 RHS Outer	2	41.3000	0.1928	0.1339	0.0947	0.0592	0.0407	0.0342	0.0308	28.8	31.3		34.1
	28-4-2023	00:47:29	IL&FS	LSI	Solapur	MH	17.954185	75.336051	150+000	252+000	180+000 RHS Outer	3	40.9000	0.2050	0.1405	0.0949	0.0608	0.0407	0.0339	0.0305	28.8	31.3		34.1
289	28-4-2023	01:00:43	IL&FS	LSI	Solapur	MH	17.955478	75.334075	150+000	252+000	179+750 RHS Outer	1	39.8000	0.3196	0.2151	0.1402	0.0764	0.0548	0.0397	0.0237	28.4	31.2		34.1
	28-4-2023	01:00:43	IL&FS	LSI	Solapur	MH	17.955478	75.334075	150+000	252+000	179+750 RHS Outer	2	40.3000	0.3059	0.2095	0.1382	0.0820	0.0567	0.0372	0.0215	28.4	31.2		34.1
	28-4-2023	01:00:43	IL&FS	LSI	Solapur	MH	17.955478	75.334075	150+000	252+000	179+750 RHS Outer	3	40.3000	0.3082	0.2048	0.1360	0.0850	0.0588	0.0398	0.0238	28.4	31.2		34.1
290	28-4-2023	01:02:58	IL&FS	LSI	Solapur	MH	17.956289	75.332809	150+000	252+000	179+600 RHS Outer	1	41.5000	0.1727	0.1167	0.0766	0.0538	0.0432	0.0298	0.0209	28.6	31.2		34.1
	28-4-2023	01:02:58	IL&FS	LSI	Solapur	MH	17.956289	75.332809	150+000	252+000	179+600 RHS Outer	2	41.7000	0.1732	0.1162	0.0760	0.0531	0.0392	0.0283	0.0214	28.6	31.2		34.1
	28-4-2023	01:02:58	IL&FS	LSI	Solapur	MH	17.956289	75.332809	150+000	252+000	179+600 RHS Outer	3	41.7000	0.1734	0.1159	0.0743	0.0563	0.0423	0.0298	0.0203	28.6	31.2		34.1
291	28-4-2023	01:09:14	IL&FS	LSI	Solapur	MH	17.958654	75.329307	150+000	252+000	179+140 RHS Outer	1	39.0000	0.3359	0.2065	0.1324	0.0928	0.0621	0.0443	0.0320	28.6	32.2	T-26.6/36.8	36.8
	28-4-2023	01:09:14	IL&FS	LSI	Solapur	MH	17.958654	75.329307	150+000	252+000	179+140 RHS Outer	2	39.4000	0.3375	0.2099	0.1356	0.0905	0.0591	0.0436	0.0317	28.6	32.2	T-26.6/36.8	36.8
	28-4-2023	01:09:14	IL&FS	LSI	Solapur	MH	17.958654	75.329307	150+000	252+000	179+140 RHS Outer	3	39.8000	0.3211	0.1987	0.1298	0.0888	0.0598	0.0429	0.0323	28.6	32.2	T-26.6/36.8	36.8
292	28-4-2023	01:11:29	IL&FS	LSI	Solapur	MH	17.959499	75.328132	150+000	252+000	179+000 RHS Outer	1	39.9000	0.3459	0.2274	0.1366	0.0915	0.0563	0.0422	0.0313	28.6	31.8		36.8
	28-4-2023	01:11:29	IL&FS	LSI	Solapur	MH	17.959499	75.328132	150+000	252+000	179+000 RHS Outer	2	40.1000	0.3328	0.2165	0.1400	0.0855	0.0504	0.0389	0.0313	28.6	31.8		36.8
	28-4-2023	01:11:29	IL&FS	LSI	Solapur	MH	17.959499	75.328132	150+000	252+000	179+000 RHS Outer	3	40.1000	0.3401	0.2145	0.1337	0.0870	0.0579	0.0419	0.0318	28.6	31.8		36.8
293	28-4-2023	01:16:20	IL&FS	LSI	Solapur	MH	17.960992	75.326347	150+000	252+000	178+750 RHS Outer	1	40.2000	0.3762	0.2318	0.1349	0.0812	0.0582	0.0426	0.0283	28.8	31.8		36.8
	28-4-2023	01:16:20	IL&FS	LSI	Solapur	MH	17.960992	75.326347	150+000	252+000	178+750 RHS Outer	2	40.5000	0.3690	0.2326	0.1274	0.0818	0.0635	0.0414	0.0273	28.8	31.8		36.8
	28-4-2023	01:16:20	IL&FS	LSI	Solapur	MH	17.960992	75.326347	150+000	252+000	178+750 RHS Outer	3	40.9000	0.3645	0.2202	0.1389	0.0811	0.0649	0.0404	0.0264	28.8	31.8		36.8
294	28-4-2023	01:18:18	IL&FS	LSI	Solapur	MH	17.962591	75.324722	150+000	252+000	178+500 RHS Outer	1	40.4000	0.3316	0.2286	0.1382	0.0875	0.0646	0.0482	0.0356	28.7	31.6		36.8
	28-4-2023	01:18:18	IL&FS	LSI	Solapur	MH	17.962591	75.324722	150+000	252+000	178+500 RHS Outer	2	40.8000	0.3265	0.2353	0.1375	0.0838	0.0609	0.0439	0.0313	28.7	31.6		36.8
	28-4-2023	01:18:18	IL&FS	LSI	Solapur	MH	17.962591	75.324722	150+000	252+000	178+500 RHS Outer	3	40.8000	0.3280	0.2216	0.1400	0.0871	0.0626	0.0452	0.0331	28.7	31.6		36.8
295	28-4-2023	01:20:09	IL&FS	LSI	Solapur	MH	17.964088	75.322860	150+000	252+000	178+250 RHS Outer	1	41.5000	0.3080	0.2192	0.1306	0.0782	0.0589	0.0434	0.0319	28.8	31.6		36.8
	28-4-2023	01:20:09	IL&FS	LSI	Solapur	MH	17.964088	75.322860	150+000	252+000	178+250 RHS Outer	2	41.1000	0.3059	0.2173	0.1372	0.0768	0.0573	0.0425	0.0311	28.8	31.6		36.8
	28-4-2023	01:20:09	IL&FS	LSI	Solapur	MH	17.964088	75.322860	150+000	252+000	178+250 RHS Outer	3	41.5000	0.3018	0.2189	0.1392	0.0696	0.0536	0.0403	0.0318	28.8	31.6		36.8
296	28-4-2023	01:22:04	IL&FS	LSI	Solapur	MH	17.965581	75.321098	150+000	252+000	178+000 RHS Outer	1	39.8000	0.3744	0.2572	0.1500	0.1068	0.0698	0.0433	0.0370	28.9	31.8		36.8
	28-4-2023	01:22:04	IL&FS	LSI	Solapur	MH	17.965581	75.321098	150+000	252+000	178+000 RHS Outer	2	40.4000	0.3792	0.2531	0.1611	0.1136	0.0761	0.0502	0.0350	28.9	31.8		36.8
	28-4-2023	01:22:04	IL&FS	LSI	Solapur	MH	17.965581	75.321098	150+000	252+000	178+000 RHS Outer	3	40.4000	0.3638	0.2522	0.1550	0.1130	0.0734	0.0455	0.0412	28.9	31.8		36.8
297	28-4-2023	01:23:54	IL&FS	LSI	Solapur	MH	17.967037	75.319213	150+000	252+000	177+750 RHS Outer	1	38.7000	0.4452	0.2843	0.1385	0.0922	0.0629	0.0467	0.0270	28.8	31.8		36.8
	28-4-2023	01:23:54	IL&FS	LSI	Solapur	MH	17.967037	75.319213	150+000	252+000	177+750 RHS Outer	2	38.8000	0.4433	0.2779	0.1383	0.0909	0.0600	0.0461	0.0265	28.8	31.8		36.8
	28-4-2023	01:23:54	IL&FS	LSI	Solapur	MH	17.967037	75.319213	150+000	252+000	177+750 RHS Outer	3	38.7000	0.4242	0.2701	0.1426	0.0958	0.0619	0.0445	0.0251	28.8	31.8		36.8
298	28-4-2023	01:28:42	IL&FS	LSI	Solapur	MH	17.968423	75.317390	150+000	252+000	177+500 RHS Outer	1	39.3000	0.4253	0.2652	0.1564	0.0858	0.0515	0.0407	0.0246	28.9	31.7		36.8
	28-4-2023	01:28:42	IL&FS	LSI	Solapur	MH	17.968423	75.317390	150+000	252+000	177+500 RHS Outer	2	40.1000	0.4104	0.2801	0.1597	0.0858	0.0528	0.0424	0.0262	28.9	31.7		36.8
	28-4-2023	01:28:42	IL&FS	LSI	Solapur	MH	17.968423	75.317390	150+000	252+000	177+500 RHS Outer	3	40.1000	0.4145	0.2687	0.1564	0.0873	0.0579	0.0400	0.0240	28.9	31.7		36.8
299	28-4-2023	01:30:44	IL&FS	LSI	Solapur	MH	17.970052	75.315567	150+000	252+000	177+230 RHS Outer	1	41.2000	0.4101	0.2431	0.1415	0.0821	0.0400	0.0280	0.0192	28.9	32.2		36.8
	28-4-2023	01:30:44	IL&FS	LSI	Solapur	MH	17.970052	75.315567	150+000	252+000	177+230 RHS Outer	2	40.5000	0.3914	0.2509	0.1391	0.0819	0.0436	0.0295	0.0203	28.9	32.2		36.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	01:30:44	IL&FS	LSI	Solapur	MH	17.970052	75.315567	150+000	252+000	177+230 RHS Outer	3	41.0000	0.4005	0.2439	0.1408	0.0782	0.0387	0.0282	0.0208	28.9	32.2		36.8
300	28-4-2023	01:32:40	IL&FS	LSI	Solapur	MH	17.971426	75.313972	150+000	252+000	177+000 RHS Outer	1	39.5000	0.3766	0.2213	0.1480	0.1026	0.0685	0.0503	0.0372	28.9	32.6		36.8
	28-4-2023	01:32:40	IL&FS	LSI	Solapur	MH	17.971426	75.313972	150+000	252+000	177+000 RHS Outer	2	40.2000	0.3558	0.2314	0.1540	0.1069	0.0700	0.0524	0.0402	28.9	32.6		36.8
	28-4-2023	01:32:40	IL&FS	LSI	Solapur	MH	17.971426	75.313972	150+000	252+000	177+000 RHS Outer	3	40.6000	0.3471	0.2317	0.1465	0.1003	0.0715	0.0531	0.0395	28.9	32.6		36.8
301	28-4-2023	01:34:34	IL&FS	LSI	Solapur	MH	17.973047	75.312248	150+000	252+000	176+750 RHS Outer	1	39.4000	0.4215	0.2697	0.1628	0.0863	0.0536	0.0381	0.0283	29.0	32.5		36.8
	28-4-2023	01:34:34	IL&FS	LSI	Solapur	MH	17.973047	75.312248	150+000	252+000	176+750 RHS Outer	2	39.7000	0.4077	0.2523	0.1537	0.0915	0.0540	0.0363	0.0248	29.0	32.5		36.8
	28-4-2023	01:34:34	IL&FS	LSI	Solapur	MH	17.973047	75.312248	150+000	252+000	176+750 RHS Outer	3	39.8000	0.4048	0.2564	0.1548	0.0918	0.0540	0.0391	0.0288	29.0	32.5		36.8
302	28-4-2023	01:36:33	IL&FS	LSI	Solapur	MH	17.974527	75.310585	150+000	252+000	176+500 RHS Outer	1	38.5000	0.4880	0.3042	0.1347	0.0687	0.0416	0.0313	0.0236	29.1	32.8		36.8
	28-4-2023	01:36:33	IL&FS	LSI	Solapur	MH	17.974527	75.310585	150+000	252+000	176+500 RHS Outer	2	39.1000	0.4910	0.3095	0.1374	0.0752	0.0397	0.0296	0.0222	29.1	32.8		36.8
	28-4-2023	01:36:33	IL&FS	LSI	Solapur	MH	17.974527	75.310585	150+000	252+000	176+500 RHS Outer	3	39.3000	0.4905	0.2958	0.1401	0.0704	0.0402	0.0303	0.0227	29.1	32.8		36.8
303	28-4-2023	01:38:28	IL&FS	LSI	Solapur	MH	17.976173	75.308700	150+000	252+000	176+230 RHS Outer	1	41.3000	0.1826	0.1233	0.0842	0.0623	0.0463	0.0313	0.0195	29.1	32.6		36.8
	28-4-2023	01:38:28	IL&FS	LSI	Solapur	MH	17.976173	75.308700	150+000	252+000	176+230 RHS Outer	2	40.9000	0.1773	0.1236	0.0861	0.0614	0.0458	0.0310	0.0212	29.1	32.6		36.8
	28-4-2023	01:38:28	IL&FS	LSI	Solapur	MH	17.976173	75.308700	150+000	252+000	176+230 RHS Outer	3	41.2000	0.1743	0.1188	0.0828	0.0603	0.0460	0.0303	0.0198	29.1	32.6		36.8
304	28-4-2023	01:40:27	IL&FS	LSI	Solapur	MH	17.977668	75.307029	150+000	252+000	176+000 RHS Outer	1	38.4000	0.4600	0.2813	0.1466	0.0820	0.0608	0.0463	0.0267	29.1	33.0		36.8
	28-4-2023	01:40:27	IL&FS	LSI	Solapur	MH	17.977668	75.307029	150+000	252+000	176+000 RHS Outer	2	38.5000	0.4574	0.2756	0.1550	0.0829	0.0625	0.0475	0.0278	29.1	33.0		36.8
	28-4-2023	01:40:27	IL&FS	LSI	Solapur	MH	17.977668	75.307029	150+000	252+000	176+000 RHS Outer	3	38.9000	0.4596	0.2780	0.1440	0.0872	0.0650	0.0480	0.0282	29.1	33.0		36.8
305	28-4-2023	01:42:33	IL&FS	LSI	Solapur	MH	17.979146	75.305366	150+000	252+000	175+750 RHS Outer	1	38.4000	0.4417	0.2865	0.1564	0.0927	0.0698	0.0513	0.0377	29.1	32.8		36.8
	28-4-2023	01:42:33	IL&FS	LSI	Solapur	MH	17.979146	75.305366	150+000	252+000	175+750 RHS Outer	2	38.0000	0.4305	0.2879	0.1517	0.0944	0.0688	0.0475	0.0314	29.1	32.8		36.8
	28-4-2023	01:42:33	IL&FS	LSI	Solapur	MH	17.979146	75.305366	150+000	252+000	175+750 RHS Outer	3	38.5000	0.4129	0.2800	0.1475	0.0890	0.0691	0.0475	0.0331	29.1	32.8		36.8
306	28-4-2023	01:44:24	IL&FS	LSI	Solapur	MH	17.980663	75.303657	150+000	252+000	175+500 RHS Outer	1	39.0000	0.3783	0.2418	0.1347	0.0755	0.0627	0.0467	0.0361	29.1	32.6		36.8
	28-4-2023	01:44:24	IL&FS	LSI	Solapur	MH	17.980663	75.303657	150+000	252+000	175+500 RHS Outer	2	39.3000	0.3675	0.2434	0.1260	0.0773	0.0598	0.0452	0.0362	29.1	32.6		36.8
	28-4-2023	01:44:24	IL&FS	LSI	Solapur	MH	17.980663	75.303657	150+000	252+000	175+500 RHS Outer	3	39.3000	0.3639	0.2377	0.1324	0.0738	0.0612	0.0451	0.0333	29.1	32.6		36.8
307	28-4-2023	01:46:17	IL&FS	LSI	Solapur	MH	17.982227	75.301887	150+000	252+000	175+250 RHS Outer	1	39.0000	0.4033	0.2560	0.1365	0.0923	0.0534	0.0391	0.0252	29.1	32.5		36.8
	28-4-2023	01:46:17	IL&FS	LSI	Solapur	MH	17.982227	75.301887	150+000	252+000	175+250 RHS Outer	2	39.4000	0.3906	0.2543	0.1400	0.0870	0.0516	0.0379	0.0241	29.1	32.5		36.8
	28-4-2023	01:46:17	IL&FS	LSI	Solapur	MH	17.982227	75.301887	150+000	252+000	175+250 RHS Outer	3	39.4000	0.3676	0.2569	0.1346	0.0908	0.0562	0.0393	0.0254	29.1	32.5		36.8
308	28-4-2023	01:48:09	IL&FS	LSI	Solapur	MH	17.983644	75.300041	150+000	252+000	175+000 RHS Outer	1	38.7000	0.4610	0.2979	0.1634	0.1026	0.0673	0.0438	0.0273	29.1	32.6		36.8
	28-4-2023	01:48:09	IL&FS	LSI	Solapur	MH	17.983644	75.300041	150+000	252+000	175+000 RHS Outer	2	39.0000	0.4452	0.3028	0.1586	0.1044	0.0685	0.0439	0.0285	29.1	32.6		36.8
	28-4-2023	01:48:09	IL&FS	LSI	Solapur	MH	17.983644	75.300041	150+000	252+000	175+000 RHS Outer	3	38.9000	0.4517	0.2944	0.1579	0.1030	0.0623	0.0431	0.0285	29.1	32.6		36.8
309	28-4-2023	01:51:16	IL&FS	LSI	Solapur	MH	17.984621	75.298027	150+000	252+000	174+750 RHS Outer	1	38.8000	0.4833	0.3035	0.1520	0.0841	0.0735	0.0487	0.0300	29.1	32.3	T-27.3/38.1	38.1
	28-4-2023	01:51:16	IL&FS	LSI	Solapur	MH	17.984621	75.298027	150+000	252+000	174+750 RHS Outer	2	38.9000	0.4757	0.2913	0.1458	0.0911	0.0710	0.0487	0.0314	29.1	32.3	T-27.3/38.1	38.1
	28-4-2023	01:51:16	IL&FS	LSI	Solapur	MH	17.984621	75.298027	150+000	252+000	174+750 RHS Outer	3	39.1000	0.4651	0.2974	0.1470	0.0908	0.0776	0.0499	0.0301	29.1	32.3	T-27.3/38.1	38.1
310	28-4-2023	01:53:49	IL&FS	LSI	Solapur	MH	17.985647	75.295906	150+000	252+000	174+500 RHS Outer	1	40.0000	0.2577	0.1688	0.0982	0.0695	0.0512	0.0379	0.0287	29.3	32.6		38.1
	28-4-2023	01:53:49	IL&FS	LSI	Solapur	MH	17.985647	75.295906	150+000	252+000	174+500 RHS Outer	2	41.1000	0.2487	0.1748	0.0989	0.0676	0.0475	0.0358	0.0272	29.3	32.6		38.1
	28-4-2023	01:53:49	IL&FS	LSI	Solapur	MH	17.985647	75.295906	150+000	252+000	174+500 RHS Outer	3	41.2000	0.2548	0.1694	0.0968	0.0679	0.0501	0.0366	0.0268	29.3	32.6		38.1
311	28-4-2023	01:55:40	IL&FS	LSI	Solapur	MH	17.986816	75.293907	150+000	252+000	174+250 RHS Outer	1	38.4000	0.4518	0.2967	0.1626	0.1070	0.0646	0.0441	0.0300	29.4	33.1		38.1
	28-4-2023	01:55:40	IL&FS	LSI	Solapur	MH	17.986816	75.293907	150+000	252+000	174+250 RHS Outer	2	38.9000	0.4409	0.2948	0.1636	0.1076	0.0640	0.0436	0.0295	29.4	33.1		38.1
	28-4-2023	01:55:40	IL&FS	LSI	Solapur	MH	17.986816	75.293907	150+000	252+000	174+250 RHS Outer	3	38.5000	0.4438	0.2844	0.1587	0.1018	0.0656	0.0429	0.0289	29.4	33.1		38.1
312	28-4-2023	01:57:45	IL&FS	LSI	Solapur	MH	17.988258	75.291992	150+000	252+000	174+000 RHS Outer	1	39.2000	0.4417	0.2860	0.1612	0.0768	0.0568	0.0377	0.0228	29.5	33.3		38.1
	28-4-2023	01:57:45	IL&FS	LSI	Solapur	MH	17.988258	75.291992	150+000	252+000	174+000 RHS Outer	2	39.4000	0.4164	0.2820	0.1473	0.0740	0.0546	0.0368	0.0228	29.5	33.3		38.1
	28-4-2023	01:57:45	IL&FS	LSI	Solapur	MH	17.988258	75.291992	150+000	252+000	174+000 RHS Outer	3	39.5000	0.4290	0.2706	0.1590	0.0738	0.0532	0.0335	0.0196	29.5	33.3		38.1
313	28-4-2023	01:59:35	IL&FS	LSI	Solapur	MH	17.989324	75.290039	150+000	252+000	173+750 RHS Outer	1	41.6000	0.2015	0.1325	0.0921	0.0665	0.0483	0.0341	0.0238	29.6	32.7		38.1
	28-4-2023	01:59:35	IL&FS	LSI	Solapur	MH	17.989324	75.290039	150+000	252+000	173+750 RHS Outer	2	41.2000	0.1830	0.1339	0.0944	0.0674	0.0470	0.0330	0.0238	29.6	32.7		38.1
	28-4-2023	01:59:35	IL&FS	LSI	Solapur	MH	17.989324	75.290039	150+000	252+000	173+750 RHS Outer	3	41.8000	0.2007	0.1291	0.0854	0.0622	0.0464	0.0323	0.0236	29.6	32.7		38.1
314	28-4-2023	02:01:29	IL&FS	LSI	Solapur	MH	17.990468	75.288002	150+000	252+000	173+500 RHS Outer	1	38.9000	0.4296	0.2462	0.1074	0.0701	0.0414	0.0314	0.0242	29.6	32.7		38.1
	28-4-2023	02:01:29	IL&FS	LSI	Solapur	MH	17.990468	75.288002	150+000	252+000	173+500 RHS Outer	2	39.1000	0.4210	0.2330	0.1068	0.0708	0.0438	0.0317	0.0234	29.6	32.7		38.1
	28-4-2023	02:01:29	IL&FS	LSI	Solapur	MH	17.990468	75.288002	150+000	252+000	173+500 RHS Outer	3	38.8000	0.3943	0.2358	0.1081	0.0679	0.0408	0.0309	0.0231	29.6	32.7		38.1
315	28-4-2023	02:03:42	IL&FS	LSI	Solapur	MH	17.991704	75.285781	150+000	252+000	173+230 RHS Outer	1	39.1000	0.4938	0.3097	0.1623	0.0996	0.0689	0.0541	0.0480	29.6	33.0		38.1
	28-4-2023	02:03:42	IL&FS	LSI	Solapur	MH	17.991704	75.285781	150+000	252+000	173+230 RHS Outer	2	38.8000	0.4781	0.3110	0.1760	0.1110	0.0678	0.0481	0.0475	29.6	33.0		38.1
	28-4-2023	02:03:42	IL&FS	LSI	Solapur	MH	17.991704	75.285781	150+000	252+000	173+230 RHS Outer	3	39.5000	0.4914	0.3075	0.1715	0.1044	0.0689	0.0520	0.0463	29.6	33.0		38.1
316	28-4-2023	02:05:30	IL&FS	LSI	Solapur	MH	17.992786	75.283798	150+000	252+000	173+000 RHS Outer	1	41.1000	0.1906	0.1335	0.0841	0.0618	0.0456	0.0331	0.0218	29.8	32.7		38.1
	28-4-2023	02:05:30	IL&FS	LSI	Solapur	MH	17.992786	75.283798	150+000	252+000	173+000 RHS Outer	2	41.4000	0.1873	0.1289	0.0887	0.0564	0.0423	0.0333	0.0219	29.8	32.7		38.1
	28-4-2023	02:05:30	IL&FS	LSI	Solapur	MH	17.992786	75.283798	150+000	252+000	173+000 RHS Outer	3	41.5000	0.1969	0.1310	0.0840	0.0579	0.0429	0.0329	0.0216	29.8	32.7		38.1
317	28-4-2023	02:09:07	IL&FS	LSI	Solapur	MH	17.993848	75.281837	150+000	252+000	172+750 RHS Outer	1	40.6000	0.2469	0.1714	0.1044	0.0753	0.0555	0.0416	0.0274	29.7	32.7		38.1
	28-4-2023	02:09:07	IL&FS	LSI	Solapur	MH	17.993848	75.281837	150+000	252+000	172+750 RHS Outer	2	40.8000	0.2480	0.1648	0.0994	0.0782	0.0565	0.0419	0.0277	29.7	32.7		38.1
	28-4-2023	02:09:07	IL&FS	LSI	Solapur	MH	17.993848	75.281837	150+000	252+000	172+750 RHS Outer	3	40.6000	0.2353	0.1664	0.1074	0.0731	0.0530	0.0404	0.0264	29.7	32.7		38.1
318	28-4-2023	02:10:59	IL&FS	LSI	Solapur	MH	17.994955	75.279869	150+000	252+000	172+500 RHS Outer	1	36.9000	0.5705	0.3726	0.1966	0.1310	0.0795	0.0432	0.0309	29.8	32.5		38.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	02:10:59	IL&FS	LSI	Solapur	MH	17.994955	75.279869	150+000	252+000	172+500 RHS Outer	2	37.2000	0.5690	0.3759	0.1882	0.1206	0.0755	0.0437	0.0313	29.8	32.5		38.1
	28-4-2023	02:10:59	IL&FS	LSI	Solapur	MH	17.994955	75.279869	150+000	252+000	172+500 RHS Outer	3	36.9000	0.5421	0.3743	0.1995	0.1234	0.0747	0.0425	0.0303	29.8	32.5		38.1
319	28-4-2023	02:12:50	IL&FS	LSI	Solapur	MH	17.996110	75.277786	150+000	252+000	172+250 RHS Outer	1	42.6000	0.2310	0.1525	0.1043	0.0631	0.0491	0.0392	0.0253	29.7	32.5		38.1
	28-4-2023	02:12:50	IL&FS	LSI	Solapur	MH	17.996110	75.277786	150+000	252+000	172+250 RHS Outer	2	41.4000	0.2254	0.1484	0.0998	0.0622	0.0490	0.0397	0.0257	29.7	32.5		38.1
	28-4-2023	02:12:50	IL&FS	LSI	Solapur	MH	17.996110	75.277786	150+000	252+000	172+250 RHS Outer	3	41.5000	0.2246	0.1483	0.1026	0.0602	0.0473	0.0379	0.0241	29.7	32.5		38.1
320	28-4-2023	02:14:40	IL&FS	LSI	Solapur	MH	17.997297	75.275672	150+000	252+000	172+000 RHS Outer	1	41.2000	0.2567	0.1509	0.1042	0.0730	0.0524	0.0353	0.0225	29.7	32.7		38.1
	28-4-2023	02:14:40	IL&FS	LSI	Solapur	MH	17.997297	75.275672	150+000	252+000	172+000 RHS Outer	2	41.3000	0.2424	0.1519	0.0967	0.0734	0.0533	0.0349	0.0211	29.7	32.7		38.1
	28-4-2023	02:14:40	IL&FS	LSI	Solapur	MH	17.997297	75.275672	150+000	252+000	172+000 RHS Outer	3	41.5000	0.2570	0.1472	0.1009	0.0737	0.0531	0.0338	0.0203	29.7	32.7		38.1
321	28-4-2023	02:16:30	IL&FS	LSI	Solapur	MH	17.998405	75.273719	150+000	252+000	171+750 RHS Outer	1	42.0000	0.1536	0.1119	0.0813	0.0618	0.0406	0.0272	0.0200	29.7	32.5		38.1
	28-4-2023	02:16:30	IL&FS	LSI	Solapur	MH	17.998405	75.273719	150+000	252+000	171+750 RHS Outer	2	42.5000	0.1483	0.1120	0.0888	0.0569	0.0396	0.0273	0.0201	29.7	32.5		38.1
	28-4-2023	02:16:30	IL&FS	LSI	Solapur	MH	17.998405	75.273719	150+000	252+000	171+750 RHS Outer	3	42.3000	0.1570	0.1115	0.0825	0.0579	0.0400	0.0273	0.0201	29.7	32.5		38.1
322	28-4-2023	02:18:25	IL&FS	LSI	Solapur	MH	17.999490	75.271720	150+000	252+000	171+500 RHS Outer	1	38.9000	0.4058	0.2554	0.1515	0.1054	0.0643	0.0375	0.0238	29.6	32.5		38.1
	28-4-2023	02:18:25	IL&FS	LSI	Solapur	MH	17.999490	75.271720	150+000	252+000	171+500 RHS Outer	2	40.0000	0.3904	0.2596	0.1637	0.1182	0.0717	0.0382	0.0244	29.6	32.5		38.1
	28-4-2023	02:18:25	IL&FS	LSI	Solapur	MH	17.999490	75.271720	150+000	252+000	171+500 RHS Outer	3	39.8000	0.3962	0.2599	0.1602	0.1184	0.0733	0.0385	0.0247	29.6	32.5		38.1
323	28-4-2023	02:20:24	IL&FS	LSI	Solapur	MH	18.000658	75.269622	150+000	252+000	171+250 RHS Outer	1	36.3000	0.3726	0.2272	0.1206	0.0629	0.0423	0.0265	0.0224	29.6	32.7		38.1
	28-4-2023	02:20:24	IL&FS	LSI	Solapur	MH	18.000658	75.269622	150+000	252+000	171+250 RHS Outer	2	36.6000	0.3579	0.2405	0.1149	0.0649	0.0437	0.0286	0.0242	29.6	32.7		38.1
	28-4-2023	02:20:24	IL&FS	LSI	Solapur	MH	18.000658	75.269622	150+000	252+000	171+250 RHS Outer	3	37.0000	0.3358	0.2386	0.1218	0.0653	0.0423	0.0250	0.0210	29.6	32.7		38.1
324	28-4-2023	02:22:54	IL&FS	LSI	Solapur	MH	18.002052	75.266807	150+000	252+000	171+000 RHS Outer	1	40.3000	0.3892	0.2151	0.1163	0.0639	0.0489	0.0368	0.0257	29.6	32.4		38.1
	28-4-2023	02:22:54	IL&FS	LSI	Solapur	MH	18.002052	75.266807	150+000	252+000	171+000 RHS Outer	2	40.3000	0.3766	0.2119	0.1135	0.0649	0.0515	0.0383	0.0231	29.6	32.4		38.1
	28-4-2023	02:22:54	IL&FS	LSI	Solapur	MH	18.002052	75.266807	150+000	252+000	171+000 RHS Outer	3	40.7000	0.3784	0.2056	0.1089	0.0653	0.0526	0.0395	0.0314	29.6	32.4		38.1
325	28-4-2023	02:25:21	IL&FS	LSI	Solapur	MH	18.002515	75.264495	150+000	252+000	170+750 RHS Outer	1	38.4000	0.4459	0.2327	0.1354	0.1015	0.0952	0.0594	0.0331	29.7	32.4		38.1
	28-4-2023	02:25:21	IL&FS	LSI	Solapur	MH	18.002515	75.264495	150+000	252+000	170+750 RHS Outer	2	39.5000	0.4535	0.2136	0.1336	0.1051	0.0803	0.0531	0.0350	29.7	32.4		38.1
	28-4-2023	02:25:21	IL&FS	LSI	Solapur	MH	18.002515	75.264495	150+000	252+000	170+750 RHS Outer	3	39.2000	0.4291	0.2197	0.1337	0.1044	0.0996	0.0627	0.0362	29.7	32.4		38.1
326	28-4-2023	02:27:48	IL&FS	LSI	Solapur	MH	18.002729	75.262199	150+000	252+000	170+500 RHS Outer	1	42.6000	0.1979	0.1304	0.0954	0.0650	0.0420	0.0309	0.0251	30.0	33.0		38.1
	28-4-2023	02:27:48	IL&FS	LSI	Solapur	MH	18.002729	75.262199	150+000	252+000	170+500 RHS Outer	2	42.4000	0.2037	0.1452	0.0905	0.0609	0.0395	0.0307	0.0251	30.0	33.0		38.1
	28-4-2023	02:27:48	IL&FS	LSI	Solapur	MH	18.002729	75.262199	150+000	252+000	170+500 RHS Outer	3	42.5000	0.1942	0.1433	0.0870	0.0586	0.0397	0.0312	0.0251	30.0	33.0		38.1
327	28-4-2023	02:29:45	IL&FS	LSI	Solapur	MH	18.003265	75.259803	150+000	252+000	170+250 RHS Outer	1	40.3000	0.3718	0.2196	0.1158	0.0648	0.0468	0.0342	0.0338	30.0	32.7		38.1
	28-4-2023	02:29:45	IL&FS	LSI	Solapur	MH	18.003265	75.259803	150+000	252+000	170+250 RHS Outer	2	40.4000	0.3440	0.2262	0.1136	0.0582	0.0483	0.0373	0.0365	30.0	32.7		38.1
	28-4-2023	02:29:45	IL&FS	LSI	Solapur	MH	18.003265	75.259803	150+000	252+000	170+250 RHS Outer	3	40.6000	0.3551	0.2172	0.1191	0.0589	0.0498	0.0366	0.0359	30.0	32.7		38.1
328	28-4-2023	02:31:33	IL&FS	LSI	Solapur	MH	18.003608	75.258277	150+000	252+000	170+000 RHS Outer	1	39.0000	0.4824	0.3079	0.1692	0.1063	0.0485	0.0396	0.0296	29.8	32.7		38.1
	28-4-2023	02:31:33	IL&FS	LSI	Solapur	MH	18.003608	75.258277	150+000	252+000	170+000 RHS Outer	2	39.3000	0.4937	0.2967	0.1680	0.0977	0.0530	0.0395	0.0296	29.8	32.7		38.1
	28-4-2023	02:31:33	IL&FS	LSI	Solapur	MH	18.003608	75.258277	150+000	252+000	170+000 RHS Outer	3	39.0000	0.4599	0.3072	0.1742	0.0959	0.0514	0.0416	0.0314	29.8	32.7		38.1
329	28-4-2023	02:33:32	IL&FS	LSI	Solapur	MH	18.004133	75.255973	150+000	252+000	169+750 RHS Outer	1	38.9000	0.5676	0.3508	0.1812	0.0941	0.0653	0.0437	0.0347	29.8	32.8	T-27.3/36.4	36.4
	28-4-2023	02:33:32	IL&FS	LSI	Solapur	MH	18.004133	75.255973	150+000	252+000	169+750 RHS Outer	2	37.9000	0.5534	0.3358	0.1786	0.0944	0.0646	0.0432	0.0331	29.8	32.8	T-27.3/36.4	36.4
	28-4-2023	02:33:32	IL&FS	LSI	Solapur	MH	18.004133	75.255973	150+000	252+000	169+750 RHS Outer	3	38.1000	0.5446	0.3402	0.1824	0.0986	0.0643	0.0410	0.0309	29.8	32.8	T-27.3/36.4	36.4
330	28-4-2023	02:40:16	IL&FS	LSI	Solapur	MH	18.004648	75.253646	150+000	252+000	169+500 RHS Outer	1	42.9000	0.2733	0.1749	0.1136	0.0780	0.0517	0.0315	0.0224	29.3	32.3		36.4
	28-4-2023	02:40:16	IL&FS	LSI	Solapur	MH	18.004648	75.253646	150+000	252+000	169+500 RHS Outer	2	43.3000	0.2858	0.1831	0.1049	0.0730	0.0512	0.0298	0.0208	29.3	32.3		36.4
	28-4-2023	02:40:16	IL&FS	LSI	Solapur	MH	18.004648	75.253646	150+000	252+000	169+500 RHS Outer	3	43.1000	0.2891	0.1932	0.1181	0.0776	0.0517	0.0316	0.0224	29.3	32.3		36.4
331	28-4-2023	02:42:21	IL&FS	LSI	Solapur	MH	18.005182	75.251220	150+000	252+000	169+240 RHS Outer	1	40.8000	0.2709	0.1735	0.1048	0.0733	0.0510	0.0341	0.0302	29.3	32.2		36.4
	28-4-2023	02:42:21	IL&FS	LSI	Solapur	MH	18.005182	75.251220	150+000	252+000	169+240 RHS Outer	2	39.9000	0.2663	0.1758	0.1011	0.0685	0.0481	0.0358	0.0315	29.3	32.2		36.4
	28-4-2023	02:42:21	IL&FS	LSI	Solapur	MH	18.005182	75.251220	150+000	252+000	169+240 RHS Outer	3	41.6000	0.2625	0.1747	0.0986	0.0720	0.0531	0.0389	0.0318	29.3	32.2		36.4
332	28-4-2023	02:44:14	IL&FS	LSI	Solapur	MH	18.005681	75.249069	150+000	252+000	169+000 RHS Outer	1	37.8000	0.4532	0.2814	0.1841	0.1081	0.0705	0.0520	0.0376	29.3	31.8		36.4
	28-4-2023	02:44:14	IL&FS	LSI	Solapur	MH	18.005681	75.249069	150+000	252+000	169+000 RHS Outer	2	37.8000	0.4513	0.2807	0.1762	0.1093	0.0707	0.0506	0.0369	29.3	31.8		36.4
	28-4-2023	02:44:14	IL&FS	LSI	Solapur	MH	18.005681	75.249069	150+000	252+000	169+000 RHS Outer	3	37.5000	0.4568	0.2805	0.1732	0.1038	0.0687	0.0500	0.0380	29.3	31.8		36.4
333	28-4-2023	02:46:07	IL&FS	LSI	Solapur	MH	18.006277	75.246704	150+000	252+000	168+750 RHS Outer	1	39.1000	0.4645	0.2601	0.1485	0.0913	0.0654	0.0558	0.0502	29.2	31.9		36.4
	28-4-2023	02:46:07	IL&FS	LSI	Solapur	MH	18.006277	75.246704	150+000	252+000	168+750 RHS Outer	2	39.5000	0.4556	0.2681	0.1426	0.0955	0.0691	0.0570	0.0513	29.2	31.9		36.4
	28-4-2023	02:46:07	IL&FS	LSI	Solapur	MH	18.006277	75.246704	150+000	252+000	168+750 RHS Outer	3	39.2000	0.4304	0.2659	0.1460	0.0864	0.0718	0.0556	0.0500	29.2	31.9		36.4
334	28-4-2023	02:48:19	IL&FS	LSI	Solapur	MH	18.006809	75.244529	150+000	252+000	168+500 RHS Outer	1	37.0000	0.2797	0.1604	0.0979	0.0592	0.0435	0.0328	0.0295	29.1	31.8		36.4
	28-4-2023	02:48:19	IL&FS	LSI	Solapur	MH	18.006809	75.244529	150+000	252+000	168+500 RHS Outer	2	36.8000	0.2590	0.1679	0.1039	0.0588	0.0434	0.0335	0.0301	29.1	31.8		36.4
	28-4-2023	02:48:19	IL&FS	LSI	Solapur	MH	18.006809	75.244529	150+000	252+000	168+500 RHS Outer	3	36.0000	0.2644	0.1725	0.1049	0.0544	0.0412	0.0322	0.0290	29.1	31.8		36.4
335	28-4-2023	02:50:05	IL&FS	LSI	Solapur	MH	18.007366	75.242057	150+000	252+000	168+250 RHS Outer	1	38.5000	0.4013	0.2576	0.1502	0.0882	0.0619	0.0472	0.0366	29.2	32.0	6 Lane VUP Start	36.4
	28-4-2023	02:50:05	IL&FS	LSI	Solapur	MH	18.007366	75.242057	150+000	252+000	168+250 RHS Outer	2	38.9000	0.4057	0.2580	0.1503	0.0910	0.0586	0.0457	0.0356	29.2	32.0	6 Lane VUP Start	36.4
	28-4-2023	02:50:05	IL&FS	LSI	Solapur	MH	18.007366	75.242057	150+000	252+000	168+250 RHS Outer	3	37.6000	0.3936	0.2431	0.1382	0.0905	0.0567	0.0432	0.0342	29.2	32.0	6 Lane VUP Start	36.4
336	28-4-2023	02:51:51	IL&FS	LSI	Solapur	MH	18.007900	75.239830	150+000	252+000	168+000 RHS Outer	1	38.4000	0.5137	0.3250	0.1821	0.0909	0.0608	0.0388	0.0254	29.0	32.0	Approach	36.4
	28-4-2023	02:51:51	IL&FS	LSI	Solapur	MH	18.007900	75.239830	150+000	252+000	168+000 RHS Outer	2	39.1000	0.4922	0.3187	0.1798	0.0881	0.0546	0.0333	0.0275	29.0	32.0	Approach	36.4
	28-4-2023	02:51:51	IL&FS	LSI	Solapur	MH	18.007900	75.239830	150+000	252+000	168+000 RHS Outer	3	38.8000	0.5077	0.3141	0.1786	0.0917	0.0578	0.0345	0.0275	29.0	32.0	Approach	36.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
337	28-4-2023	02:53:58	IL&FS	LSI	Solapur	MH	18.008880	75.237617	150+000	252+000	167+740 RHS Outer	1	38.5000	0.4101	0.2332	0.1157	0.0683	0.0511	0.0391	0.0276	29.1	32.3	6 Lane VUP End	36.4
	28-4-2023	02:53:58	IL&FS	LSI	Solapur	MH	18.008880	75.237617	150+000	252+000	167+740 RHS Outer	2	38.9000	0.3957	0.2367	0.1240	0.0671	0.0504	0.0393	0.0324	29.1	32.3	6 Lane VUP End	36.4
	28-4-2023	02:53:58	IL&FS	LSI	Solapur	MH	18.008880	75.237617	150+000	252+000	167+740 RHS Outer	3	39.0000	0.3762	0.2377	0.1213	0.0646	0.0494	0.0378	0.0265	29.1	32.3	6 Lane VUP End	36.4
338	28-4-2023	02:56:07	IL&FS	LSI	Solapur	MH	18.010549	75.236030	150+000	252+000	167+480 RHS Outer	1	38.6000	0.4484	0.2681	0.1581	0.0869	0.0513	0.0366	0.0279	29.3	31.9		36.4
	28-4-2023	02:56:07	IL&FS	LSI	Solapur	MH	18.010549	75.236030	150+000	252+000	167+480 RHS Outer	2	38.8000	0.4428	0.2678	0.1509	0.0876	0.0549	0.0368	0.0281	29.3	31.9		36.4
	28-4-2023	02:56:07	IL&FS	LSI	Solapur	MH	18.010549	75.236030	150+000	252+000	167+480 RHS Outer	3	38.2000	0.4291	0.2694	0.1528	0.0817	0.0528	0.0364	0.0278	29.3	31.9		36.4
339	28-4-2023	02:58:01	IL&FS	LSI	Solapur	MH	18.011562	75.234161	150+000	252+000	167+250 RHS Outer	1	38.1000	0.4302	0.2738	0.1537	0.0961	0.0541	0.0235	0.0177	29.3	32.3		36.4
	28-4-2023	02:58:01	IL&FS	LSI	Solapur	MH	18.011562	75.234161	150+000	252+000	167+250 RHS Outer	2	38.4000	0.4198	0.2625	0.1529	0.0985	0.0500	0.0195	0.0141	29.3	32.3		36.4
	28-4-2023	02:58:01	IL&FS	LSI	Solapur	MH	18.011562	75.234161	150+000	252+000	167+250 RHS Outer	3	39.0000	0.4211	0.2636	0.1545	0.1050	0.0539	0.0225	0.0159	29.3	32.3		36.4
340	28-4-2023	02:59:56	IL&FS	LSI	Solapur	MH	18.011913	75.231811	150+000	252+000	167+000 RHS Outer	1	41.2000	0.2710	0.1753	0.0927	0.0702	0.0487	0.0353	0.0238	29.5	32.5		36.4
	28-4-2023	02:59:56	IL&FS	LSI	Solapur	MH	18.011913	75.231811	150+000	252+000	167+000 RHS Outer	2	40.6000	0.2725	0.1651	0.0914	0.0629	0.0463	0.0353	0.0238	29.5	32.5		36.4
	28-4-2023	02:59:56	IL&FS	LSI	Solapur	MH	18.011913	75.231811	150+000	252+000	167+000 RHS Outer	3	41.4000	0.2751	0.1710	0.0932	0.0629	0.0476	0.0360	0.0244	29.5	32.5		36.4
341	28-4-2023	03:01:48	IL&FS	LSI	Solapur	MH	18.012290	75.229476	150+000	252+000	166+750 RHS Outer	1	39.0000	0.3872	0.2438	0.1366	0.0898	0.0586	0.0424	0.0303	29.7	32.7		36.4
	28-4-2023	03:01:48	IL&FS	LSI	Solapur	MH	18.012290	75.229476	150+000	252+000	166+750 RHS Outer	2	39.3000	0.3846	0.2410	0.1458	0.1012	0.0591	0.0399	0.0275	29.7	32.7		36.4
	28-4-2023	03:01:48	IL&FS	LSI	Solapur	MH	18.012290	75.229476	150+000	252+000	166+750 RHS Outer	3	37.9000	0.3675	0.2388	0.1391	0.0889	0.0567	0.0420	0.0307	29.7	32.7		36.4
342	28-4-2023	03:03:42	IL&FS	LSI	Solapur	MH	18.012762	75.227218	150+000	252+000	166+500 RHS Outer	1	41.1000	0.2234	0.1704	0.1079	0.0567	0.0415	0.0299	0.0209	29.9	33.0		36.4
	28-4-2023	03:03:42	IL&FS	LSI	Solapur	MH	18.012762	75.227218	150+000	252+000	166+500 RHS Outer	2	39.7000	0.2187	0.1609	0.1038	0.0591	0.0398	0.0273	0.0185	29.9	33.0		36.4
	28-4-2023	03:03:42	IL&FS	LSI	Solapur	MH	18.012762	75.227218	150+000	252+000	166+500 RHS Outer	3	41.5000	0.2357	0.1619	0.1079	0.0628	0.0437	0.0293	0.0203	29.9	33.0		36.4
343	28-4-2023	03:05:38	IL&FS	LSI	Solapur	MH	18.013580	75.224945	150+000	252+000	166+250 RHS Outer	1	39.0000	0.2630	0.1932	0.1140	0.0827	0.0512	0.0380	0.0287	30.0	32.7		36.4
	28-4-2023	03:05:38	IL&FS	LSI	Solapur	MH	18.013580	75.224945	150+000	252+000	166+250 RHS Outer	2	39.5000	0.2765	0.1846	0.1243	0.0908	0.0550	0.0395	0.0287	30.0	32.7		36.4
	28-4-2023	03:05:38	IL&FS	LSI	Solapur	MH	18.013580	75.224945	150+000	252+000	166+250 RHS Outer	3	39.4000	0.2700	0.1840	0.1208	0.0858	0.0574	0.0406	0.0284	30.0	32.7		36.4
344	28-4-2023	03:10:39	IL&FS	LSI	Solapur	MH	18.014478	75.222785	150+000	252+000	166+000 RHS Outer	1	41.2000	0.1805	0.1282	0.0879	0.0579	0.0394	0.0271	0.0190	29.6	32.5	T-26.8/36.9	36.9
	28-4-2023	03:10:39	IL&FS	LSI	Solapur	MH	18.014478	75.222785	150+000	252+000	166+000 RHS Outer	2	41.5000	0.1731	0.1267	0.0911	0.0580	0.0413	0.0296	0.0215	29.6	32.5	T-26.8/36.9	36.9
	28-4-2023	03:10:39	IL&FS	LSI	Solapur	MH	18.014478	75.222785	150+000	252+000	166+000 RHS Outer	3	41.3000	0.1827	0.1330	0.0979	0.0590	0.0398	0.0286	0.0205	29.6	32.5	T-26.8/36.9	36.9
345	28-4-2023	03:13:03	IL&FS	LSI	Solapur	MH	18.015432	75.220680	150+000	252+000	165+750 RHS Outer	1	38.5000	0.4314	0.2295	0.1236	0.0634	0.0508	0.0374	0.0268	29.6	32.3		36.9
	28-4-2023	03:13:03	IL&FS	LSI	Solapur	MH	18.015432	75.220680	150+000	252+000	165+750 RHS Outer	2	39.2000	0.4220	0.2300	0.1261	0.0687	0.0509	0.0378	0.0280	29.6	32.3		36.9
	28-4-2023	03:13:03	IL&FS	LSI	Solapur	MH	18.015432	75.220680	150+000	252+000	165+750 RHS Outer	3	39.8000	0.4348	0.2273	0.1244	0.0736	0.0489	0.0368	0.0286	29.6	32.3		36.9
346	28-4-2023	03:15:00	IL&FS	LSI	Solapur	MH	18.016357	75.218551	150+000	252+000	165+500 RHS Outer	1	39.6000	0.4763	0.3122	0.1741	0.1152	0.0795	0.0574	0.0517	30.1	32.2		36.9
	28-4-2023	03:15:00	IL&FS	LSI	Solapur	MH	18.016357	75.218551	150+000	252+000	165+500 RHS Outer	2	38.9000	0.4636	0.3088	0.1715	0.1138	0.0772	0.0508	0.0457	30.1	32.2		36.9
	28-4-2023	03:15:00	IL&FS	LSI	Solapur	MH	18.016357	75.218551	150+000	252+000	165+500 RHS Outer	3	38.5000	0.4608	0.3030	0.1635	0.1115	0.0801	0.0557	0.0501	30.1	32.2		36.9
347	28-4-2023	03:16:52	IL&FS	LSI	Solapur	MH	18.017278	75.216407	150+000	252+000	165+250 RHS Outer	1	38.1000	0.4702	0.2993	0.1668	0.1212	0.0765	0.0498	0.0288	29.8	32.2		36.9
	28-4-2023	03:16:52	IL&FS	LSI	Solapur	MH	18.017278	75.216407	150+000	252+000	165+250 RHS Outer	2	38.3000	0.4539	0.2867	0.1710	0.1090	0.0714	0.0477	0.0270	29.8	32.2		36.9
	28-4-2023	03:16:52	IL&FS	LSI	Solapur	MH	18.017278	75.216407	150+000	252+000	165+250 RHS Outer	3	39.1000	0.4595	0.2893	0.1779	0.1134	0.0825	0.0504	0.0299	29.8	32.2		36.9
348	28-4-2023	03:18:37	IL&FS	LSI	Solapur	MH	18.018625	75.214454	150+000	252+000	165+000 RHS Outer	1	39.7000	0.4076	0.2533	0.1360	0.0852	0.0540	0.0345	0.0296	29.9	32.0		36.9
	28-4-2023	03:18:37	IL&FS	LSI	Solapur	MH	18.018625	75.214454	150+000	252+000	165+000 RHS Outer	2	40.2000	0.3991	0.2539	0.1434	0.0808	0.0544	0.0359	0.0308	29.9	32.0		36.9
	28-4-2023	03:18:37	IL&FS	LSI	Solapur	MH	18.018625	75.214454	150+000	252+000	165+000 RHS Outer	3	39.9000	0.3907	0.2547	0.1445	0.0780	0.0575	0.0329	0.0281	29.9	32.0		36.9
349	28-4-2023	03:20:30	IL&FS	LSI	Solapur	MH	18.020866	75.213302	150+000	252+000	164+720 RHS Outer	1	38.5000	0.4511	0.2830	0.1567	0.0865	0.0522	0.0349	0.0269	30.1	32.0		36.9
	28-4-2023	03:20:30	IL&FS	LSI	Solapur	MH	18.020866	75.213302	150+000	252+000	164+720 RHS Outer	2	38.9000	0.4387	0.2865	0.1587	0.0870	0.0533	0.0317	0.0240	30.1	32.0		36.9
	28-4-2023	03:20:30	IL&FS	LSI	Solapur	MH	18.020866	75.213302	150+000	252+000	164+720 RHS Outer	3	39.0000	0.4337	0.2871	0.1530	0.0807	0.0538	0.0323	0.0246	30.1	32.0		36.9
350	28-4-2023	03:22:53	IL&FS	LSI	Solapur	MH	18.022674	75.212478	150+000	252+000	164+500 RHS Outer	1	38.2000	0.4447	0.2689	0.1442	0.0967	0.0602	0.0365	0.0198	29.8	31.2		36.9
	28-4-2023	03:22:53	IL&FS	LSI	Solapur	MH	18.022674	75.212478	150+000	252+000	164+500 RHS Outer	2	38.4000	0.4189	0.2684	0.1441	0.0971	0.0650	0.0383	0.0199	29.8	31.2		36.9
	28-4-2023	03:22:53	IL&FS	LSI	Solapur	MH	18.022674	75.212478	150+000	252+000	164+500 RHS Outer	3	38.6000	0.4121	0.2652	0.1413	0.0957	0.0628	0.0366	0.0178	29.8	31.2		36.9
351	28-4-2023	03:25:13	IL&FS	LSI	Solapur	MH	18.024732	75.211524	150+000	252+000	164+250 RHS Outer	1	39.3000	0.4413	0.2983	0.1571	0.1022	0.0785	0.0585	0.0377	29.6	31.0		36.9
	28-4-2023	03:25:13	IL&FS	LSI	Solapur	MH	18.024732	75.211524	150+000	252+000	164+250 RHS Outer	2	39.6000	0.4287	0.2732	0.1561	0.0995	0.0696	0.0558	0.0352	29.6	31.0		36.9
	28-4-2023	03:25:13	IL&FS	LSI	Solapur	MH	18.024732	75.211524	150+000	252+000	164+250 RHS Outer	3	39.9000	0.4177	0.2753	0.1672	0.1079	0.0761	0.0600	0.0390	29.6	31.0		36.9
352	28-4-2023	03:27:02	IL&FS	LSI	Solapur	MH	18.026720	75.210571	150+000	252+000	164+000 RHS Outer	1	36.6000	0.5641	0.3374	0.1795	0.1005	0.0633	0.0446	0.0291	29.5	31.0		36.9
	28-4-2023	03:27:02	IL&FS	LSI	Solapur	MH	18.026720	75.210571	150+000	252+000	164+000 RHS Outer	2	37.0000	0.5801	0.3194	0.1655	0.0983	0.0576	0.0413	0.0262	29.5	31.0		36.9
	28-4-2023	03:27:02	IL&FS	LSI	Solapur	MH	18.026720	75.210571	150+000	252+000	164+000 RHS Outer	3	37.0000	0.5593	0.3279	0.1720	0.0978	0.0621	0.0458	0.0302	29.5	31.0		36.9
353	28-4-2023	03:29:08	IL&FS	LSI	Solapur	MH	18.028808	75.209526	150+000	252+000	163+750 RHS Outer	1	38.5000	0.5032	0.3053	0.1660	0.0978	0.0485	0.0372	0.0334	29.3	28.9	6 Lane VUP	36.9
	28-4-2023	03:29:08	IL&FS	LSI	Solapur	MH	18.028808	75.209526	150+000	252+000	163+750 RHS Outer	2	38.6000	0.4733	0.2957	0.1657	0.0888	0.0479	0.0372	0.0335	29.3	28.9	6 Lane VUP	36.9
	28-4-2023	03:29:08	IL&FS	LSI	Solapur	MH	18.028808	75.209526	150+000	252+000	163+750 RHS Outer	3	38.7000	0.4478	0.2957	0.1656	0.0906	0.0531	0.0394	0.0354	29.3	28.9	6 Lane VUP	36.9
354	28-4-2023	03:31:04	IL&FS	LSI	Solapur	MH	18.030780	75.208419	150+000	252+000	163+500 RHS Outer	1	38.6000	0.2005	0.1441	0.1041	0.0760	0.0543	0.0379	0.0251	29.3	29.8		36.9
	28-4-2023	03:31:04	IL&FS	LSI	Solapur	MH	18.030780	75.208419	150+000	252+000	163+500 RHS Outer	2	39.0000	0.2031	0.1507	0.1160	0.0795	0.0555	0.0362	0.0220	29.3	29.8		36.9
	28-4-2023	03:31:04	IL&FS	LSI	Solapur	MH	18.030780	75.208419	150+000	252+000	163+500 RHS Outer	3	39.3000	0.2071	0.1511	0.1142	0.0784	0.0549	0.0357	0.0237	29.3	29.8		36.9
355	28-4-2023	03:32:46	IL&FS	LSI	Solapur	MH	18.032808	75.207275	150+000	252+000	163+250 RHS Outer	1	37.7000	0.4698	0.2858	0.1671	0.1053	0.0713	0.0468	0.0301	29.3	30.4		36.9
	28-4-2023	03:32:46	IL&FS	LSI	Solapur	MH	18.032808	75.207275	150+000	252+000	163+250 RHS Outer	2	38.3000	0.4424	0.2912	0.1708	0.1067	0.0736	0.0495	0.0326	29.3	30.4		36.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	03:32:46	IL&FS	LSI	Solapur	MH	18.032808	75.207275	150+000	252+000	163+250 RHS Outer	3	38.3000	0.4510	0.2891	0.1634	0.1063	0.0734	0.0488	0.0319	29.3	30.4		36.9
356	28-4-2023	03:45:48	IL&FS	LSI	Solapur	MH	18.034341	75.205970	150+000	252+000	163+020 RHS Outer	1	39.1000	0.4677	0.2798	0.1402	0.0909	0.0572	0.0413	0.0290	28.3	30.4		36.9
	28-4-2023	03:45:48	IL&FS	LSI	Solapur	MH	18.034341	75.205970	150+000	252+000	163+020 RHS Outer	2	38.8000	0.4343	0.2663	0.1386	0.0914	0.0570	0.0412	0.0306	28.3	30.4		36.9
	28-4-2023	03:45:48	IL&FS	LSI	Solapur	MH	18.034341	75.205970	150+000	252+000	163+020 RHS Outer	3	39.4000	0.4267	0.2765	0.1326	0.0933	0.0639	0.0441	0.0316	28.3	30.4		36.9
357	28-4-2023	03:50:38	IL&FS	LSI	Solapur	MH	18.037061	75.198410	150+000	252+000	162+145 RHS Outer	1	40.4000	0.3528	0.2196	0.1300	0.0704	0.0503	0.0384	0.0296	28.4	30.7	T-25.8/34.8	34.8
	28-4-2023	03:50:38	IL&FS	LSI	Solapur	MH	18.037061	75.198410	150+000	252+000	162+145 RHS Outer	2	40.6000	0.3559	0.2260	0.1345	0.0776	0.0561	0.0413	0.0299	28.4	30.7	T-25.8/34.8	34.8
	28-4-2023	03:50:38	IL&FS	LSI	Solapur	MH	18.037061	75.198410	150+000	252+000	162+145 RHS Outer	3	40.3000	0.3404	0.2313	0.1374	0.0768	0.0555	0.0401	0.0296	28.4	30.7	T-25.8/34.8	34.8
358	28-4-2023	03:54:55	IL&FS	LSI	Solapur	MH	18.037517	75.196884	150+000	252+000	162+000 RHS Outer	1	39.8000	0.4104	0.2402	0.1327	0.0874	0.0606	0.0421	0.0259	28.2	30.7		34.8
	28-4-2023	03:54:55	IL&FS	LSI	Solapur	MH	18.037517	75.196884	150+000	252+000	162+000 RHS Outer	2	39.8000	0.4079	0.2381	0.1360	0.0779	0.0599	0.0470	0.0330	28.2	30.7		34.8
	28-4-2023	03:54:55	IL&FS	LSI	Solapur	MH	18.037517	75.196884	150+000	252+000	162+000 RHS Outer	3	39.7000	0.4033	0.2477	0.1374	0.0812	0.0599	0.0444	0.0280	28.2	30.7		34.8
359	28-4-2023	03:56:41	IL&FS	LSI	Solapur	MH	18.038179	75.194778	150+000	252+000	161+750 RHS Outer	1	39.1000	0.4640	0.2897	0.1500	0.0843	0.0563	0.0380	0.0192	28.4	31.0		34.8
	28-4-2023	03:56:41	IL&FS	LSI	Solapur	MH	18.038179	75.194778	150+000	252+000	161+750 RHS Outer	2	39.4000	0.4535	0.2843	0.1437	0.0825	0.0527	0.0410	0.0219	28.4	31.0		34.8
	28-4-2023	03:56:41	IL&FS	LSI	Solapur	MH	18.038179	75.194778	150+000	252+000	161+750 RHS Outer	3	39.5000	0.4507	0.2836	0.1463	0.0828	0.0572	0.0396	0.0206	28.4	31.0		34.8
360	28-4-2023	03:58:49	IL&FS	LSI	Solapur	MH	18.038814	75.192474	150+000	252+000	161+500 RHS Outer	1	39.9000	0.3764	0.2172	0.1315	0.0791	0.0433	0.0308	0.0224	28.6	31.1		34.8
	28-4-2023	03:58:49	IL&FS	LSI	Solapur	MH	18.038814	75.192474	150+000	252+000	161+500 RHS Outer	2	40.5000	0.3746	0.2083	0.1309	0.0791	0.0428	0.0313	0.0228	28.6	31.1		34.8
	28-4-2023	03:58:49	IL&FS	LSI	Solapur	MH	18.038814	75.192474	150+000	252+000	161+500 RHS Outer	3	40.4000	0.3661	0.2110	0.1303	0.0764	0.0416	0.0309	0.0231	28.6	31.1		34.8
361	28-4-2023	04:02:33	IL&FS	LSI	Solapur	MH	18.039394	75.190322	150+000	252+000	161+250 RHS Outer	1	39.4000	0.4100	0.2583	0.1390	0.0839	0.0558	0.0345	0.0211	29.1	31.3	6 Lane VUP Ends	34.8
	28-4-2023	04:02:33	IL&FS	LSI	Solapur	MH	18.039394	75.190322	150+000	252+000	161+250 RHS Outer	2	39.5000	0.3930	0.2535	0.1329	0.0817	0.0552	0.0346	0.0211	29.1	31.3	6 Lane VUP Ends	34.8
	28-4-2023	04:02:33	IL&FS	LSI	Solapur	MH	18.039394	75.190322	150+000	252+000	161+250 RHS Outer	3	39.9000	0.3915	0.2642	0.1411	0.0898	0.0564	0.0353	0.0217	29.1	31.3	6 Lane VUP Ends	34.8
362	28-4-2023	04:04:23	IL&FS	LSI	Solapur	MH	18.039924	75.188026	150+000	252+000	161+000 RHS Outer	1	39.3000	0.2851	0.1923	0.1089	0.0691	0.0476	0.0308	0.0277	29.2	31.1		34.8
	28-4-2023	04:04:23	IL&FS	LSI	Solapur	MH	18.039924	75.188026	150+000	252+000	161+000 RHS Outer	2	39.8000	0.2983	0.1924	0.1086	0.0713	0.0464	0.0312	0.0281	29.2	31.1		34.8
	28-4-2023	04:04:23	IL&FS	LSI	Solapur	MH	18.039924	75.188026	150+000	252+000	161+000 RHS Outer	3	39.4000	0.2964	0.1861	0.1015	0.0685	0.0455	0.0308	0.0277	29.2	31.1		34.8
363	28-4-2023	04:06:13	IL&FS	LSI	Solapur	MH	18.040277	75.185676	150+000	252+000	160+750 RHS Outer	1	39.3000	0.3636	0.2144	0.1205	0.0747	0.0506	0.0347	0.0300	29.0	31.3		34.8
	28-4-2023	04:06:13	IL&FS	LSI	Solapur	MH	18.040277	75.185676	150+000	252+000	160+750 RHS Outer	2	39.5000	0.3687	0.2167	0.1190	0.0728	0.0499	0.0350	0.0303	29.0	31.3		34.8
	28-4-2023	04:06:13	IL&FS	LSI	Solapur	MH	18.040277	75.185676	150+000	252+000	160+750 RHS Outer	3	39.6000	0.3523	0.2135	0.1153	0.0762	0.0509	0.0341	0.0295	29.0	31.3		34.8
364	28-4-2023	04:08:52	IL&FS	LSI	Solapur	MH	18.040477	75.183273	150+000	252+000	160+500 RHS Outer	1	40.2000	0.3505	0.2223	0.1070	0.0767	0.0602	0.0364	0.0259	28.8	31.0		34.8
	28-4-2023	04:08:52	IL&FS	LSI	Solapur	MH	18.040477	75.183273	150+000	252+000	160+500 RHS Outer	2	40.7000	0.3468	0.2272	0.1075	0.0800	0.0609	0.0361	0.0283	28.8	31.0		34.8
	28-4-2023	04:08:52	IL&FS	LSI	Solapur	MH	18.040477	75.183273	150+000	252+000	160+500 RHS Outer	3	40.1000	0.3404	0.2207	0.1187	0.0769	0.0603	0.0369	0.0270	28.8	31.0		34.8
365	28-4-2023	04:10:43	IL&FS	LSI	Solapur	MH	18.040382	75.180931	150+000	252+000	160+250 RHS Outer	1	39.0000	0.3575	0.2402	0.1399	0.0833	0.0606	0.0464	0.0375	28.9	30.8		34.8
	28-4-2023	04:10:43	IL&FS	LSI	Solapur	MH	18.040382	75.180931	150+000	252+000	160+250 RHS Outer	2	39.1000	0.3792	0.2340	0.1478	0.0828	0.0564	0.0436	0.0350	28.9	30.8		34.8
	28-4-2023	04:10:43	IL&FS	LSI	Solapur	MH	18.040382	75.180931	150+000	252+000	160+250 RHS Outer	3	39.2000	0.3416	0.2343	0.1425	0.0847	0.0545	0.0410	0.0327	28.9	30.8		34.8
366	28-4-2023	04:12:40	IL&FS	LSI	Solapur	MH	18.040008	75.178909	150+000	252+000	160+000 RHS Outer	1	39.5000	0.3870	0.2374	0.1171	0.0589	0.0446	0.0340	0.0206	28.7	30.8		34.8
	28-4-2023	04:12:40	IL&FS	LSI	Solapur	MH	18.040008	75.178909	150+000	252+000	160+000 RHS Outer	2	39.5000	0.3723	0.2292	0.1208	0.0620	0.0455	0.0344	0.0210	28.7	30.8		34.8
	28-4-2023	04:12:40	IL&FS	LSI	Solapur	MH	18.040008	75.178909	150+000	252+000	160+000 RHS Outer	3	39.8000	0.3629	0.2363	0.1190	0.0637	0.0461	0.0351	0.0216	28.7	30.8		34.8
367	28-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	18.039194	75.176567	150+000	252+000	159+750 RHS Outer	1	41.0000	0.3508	0.2254	0.1265	0.0763	0.0519	0.0357	0.0241	28.4	30.1		34.8
	28-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	18.039194	75.176567	150+000	252+000	159+750 RHS Outer	2	41.7000	0.3437	0.2242	0.1285	0.0761	0.0508	0.0370	0.0253	28.4	30.1		34.8
	28-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	18.039194	75.176567	150+000	252+000	159+750 RHS Outer	3	41.5000	0.3401	0.2217	0.1181	0.0767	0.0530	0.0367	0.0250	28.4	30.1		34.8
368	28-4-2023	04:16:24	IL&FS	LSI	Solapur	MH	18.038433	75.174392	150+000	252+000	159+500 RHS Outer	1	40.1000	0.3301	0.2184	0.1236	0.0774	0.0457	0.0355	0.0239	28.3	30.2		34.8
	28-4-2023	04:16:24	IL&FS	LSI	Solapur	MH	18.038433	75.174392	150+000	252+000	159+500 RHS Outer	2	40.3000	0.3297	0.2082	0.1195	0.0775	0.0487	0.0364	0.0248	28.3	30.2		34.8
	28-4-2023	04:16:24	IL&FS	LSI	Solapur	MH	18.038433	75.174392	150+000	252+000	159+500 RHS Outer	3	39.9000	0.3198	0.2128	0.1212	0.0776	0.0461	0.0350	0.0235	28.3	30.2		34.8
369	28-4-2023	04:19:19	IL&FS	LSI	Solapur	MH	18.037641	75.172187	150+000	252+000	159+250 RHS Outer	1	39.4000	0.3108	0.2093	0.1185	0.0628	0.0434	0.0355	0.0299	28.2	30.3		34.8
	28-4-2023	04:19:19	IL&FS	LSI	Solapur	MH	18.037641	75.172187	150+000	252+000	159+250 RHS Outer	2	39.3000	0.3262	0.2092	0.1104	0.0690	0.0470	0.0382	0.0313	28.2	30.3		34.8
	28-4-2023	04:19:19	IL&FS	LSI	Solapur	MH	18.037641	75.172187	150+000	252+000	159+250 RHS Outer	3	39.9000	0.3083	0.2147	0.1171	0.0694	0.0454	0.0372	0.0312	28.2	30.3		34.8
370	28-4-2023	06:39:26	IL&FS	LSI	Solapur	MH	18.037082	75.170288	150+000	252+000	159+000 RHS Outer	1	38.2000	0.4934	0.2991	0.1717	0.0982	0.0657	0.0445	0.0289	27.2	28.6	T-25.8/33.4	33.4
	28-4-2023	06:39:26	IL&FS	LSI	Solapur	MH	18.037082	75.170288	150+000	252+000	159+000 RHS Outer	2	38.4000	0.4965	0.3080	0.1711	0.0999	0.0691	0.0480	0.0320	27.2	28.6	T-25.8/33.4	33.4
	28-4-2023	06:39:26	IL&FS	LSI	Solapur	MH	18.037082	75.170288	150+000	252+000	159+000 RHS Outer	3	38.6000	0.4738	0.2922	0.1701	0.1002	0.0679	0.0443	0.0286	27.2	28.6	T-25.8/33.4	33.4
371	28-4-2023	06:41:58	IL&FS	LSI	Solapur	MH	18.037462	75.167945	150+000	252+000	158+750 RHS Outer	1	39.7000	0.4612	0.2938	0.1748	0.0949	0.0683	0.0427	0.0237	27.3	28.8		33.4
	28-4-2023	06:41:58	IL&FS	LSI	Solapur	MH	18.037462	75.167945	150+000	252+000	158+750 RHS Outer	2	39.9000	0.4596	0.2927	0.1778	0.0908	0.0697	0.0429	0.0239	27.3	28.8		33.4
	28-4-2023	06:41:58	IL&FS	LSI	Solapur	MH	18.037462	75.167945	150+000	252+000	158+750 RHS Outer	3	40.0000	0.4603	0.2931	0.1722	0.0921	0.0714	0.0440	0.0270	27.3	28.8		33.4
372	28-4-2023	06:43:44	IL&FS	LSI	Solapur	MH	18.038145	75.165756	150+000	252+000	158+500 RHS Outer	1	38.3000	0.5522	0.3420	0.1688	0.1091	0.0647	0.0463	0.0357	27.4	29.6		33.4
	28-4-2023	06:43:44	IL&FS	LSI	Solapur	MH	18.038145	75.165756	150+000	252+000	158+500 RHS Outer	2	38.4000	0.5561	0.3204	0.1656	0.1044	0.0644	0.0495	0.0445	27.4	29.6		33.4
	28-4-2023	06:43:44	IL&FS	LSI	Solapur	MH	18.038145	75.165756	150+000	252+000	158+500 RHS Outer	3	37.7000	0.5454	0.3049	0.1618	0.1045	0.0680	0.0497	0.0435	27.4	29.6		33.4
373	28-4-2023	06:45:33	IL&FS	LSI	Solapur	MH	18.038820	75.163475	150+000	252+000	158+250 RHS Outer	1	38.6000	0.5710	0.3417	0.1801	0.1141	0.0778	0.0525	0.0340	27.4	29.2		33.4
	28-4-2023	06:45:33	IL&FS	LSI	Solapur	MH	18.038820	75.163475	150+000	252+000	158+250 RHS Outer	2	38.4000	0.5457	0.3445	0.1813	0.1161	0.0755	0.0541	0.0336	27.4	29.2		33.4
	28-4-2023	06:45:33	IL&FS	LSI	Solapur	MH	18.038820	75.163475	150+000	252+000	158+250 RHS Outer	3	38.8000	0.5550	0.3452	0.1817	0.1187	0.0745	0.0526	0.0339	27.4	29.2		33.4
374	28-4-2023	06:47:44	IL&FS	LSI	Solapur	MH	18.039625	75.160781	150+000	252+000	157+950 RHS Outer	1	40.0000	0.4700	0.2992	0.1702	0.1216	0.0870	0.0558	0.0457	27.3	29.2		33.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	06:47:44	IL&FS	LSI	Solapur	MH	18.039625	75.160781	150+000	252+000	157+950 RHS Outer	2	40.8000	0.4536	0.2778	0.1695	0.1186	0.0854	0.0545	0.0446	27.3	29.2		33.4
	28-4-2023	06:47:44	IL&FS	LSI	Solapur	MH	18.039625	75.160781	150+000	252+000	157+950 RHS Outer	3	40.9000	0.4568	0.2921	0.1729	0.1246	0.0922	0.0567	0.0465	27.3	29.2		33.4
375	28-4-2023	06:50:09	IL&FS	LSI	Solapur	MH	18.040214	75.158744	150+000	252+000	157+750 RHS Outer	1	39.1000	0.4944	0.3007	0.1623	0.1012	0.0752	0.0557	0.0351	27.4	29.3		33.4
	28-4-2023	06:50:09	IL&FS	LSI	Solapur	MH	18.040214	75.158744	150+000	252+000	157+750 RHS Outer	2	39.1000	0.4645	0.2973	0.1614	0.0992	0.0725	0.0516	0.0314	27.4	29.3		33.4
	28-4-2023	06:50:09	IL&FS	LSI	Solapur	MH	18.040214	75.158744	150+000	252+000	157+750 RHS Outer	3	40.1000	0.4660	0.2929	0.1613	0.1045	0.0732	0.0525	0.0323	27.4	29.3		33.4
376	28-4-2023	06:52:02	IL&FS	LSI	Solapur	MH	18.040895	75.156494	150+000	252+000	157+500 RHS Outer	1	41.6000	0.2404	0.1321	0.0863	0.0556	0.0454	0.0351	0.0200	27.5	30.1		33.4
	28-4-2023	06:52:02	IL&FS	LSI	Solapur	MH	18.040895	75.156494	150+000	252+000	157+500 RHS Outer	2	42.0000	0.2374	0.1357	0.0909	0.0559	0.0457	0.0355	0.0230	27.5	30.1		33.4
	28-4-2023	06:52:02	IL&FS	LSI	Solapur	MH	18.040895	75.156494	150+000	252+000	157+500 RHS Outer	3	43.1000	0.2473	0.1390	0.0899	0.0568	0.0474	0.0380	0.0221	27.5	30.1		33.4
377	28-4-2023	06:53:52	IL&FS	LSI	Solapur	MH	18.041547	75.154304	150+000	252+000	157+250 RHS Outer	1	43.1000	0.1511	0.1123	0.0804	0.0524	0.0381	0.0286	0.0197	27.6	30.4		33.4
	28-4-2023	06:53:52	IL&FS	LSI	Solapur	MH	18.041547	75.154304	150+000	252+000	157+250 RHS Outer	2	42.9000	0.1482	0.1121	0.0774	0.0560	0.0400	0.0276	0.0188	27.6	30.4		33.4
	28-4-2023	06:53:52	IL&FS	LSI	Solapur	MH	18.041547	75.154304	150+000	252+000	157+250 RHS Outer	3	41.5000	0.1574	0.1083	0.0800	0.0549	0.0371	0.0256	0.0170	27.6	30.4		33.4
378	28-4-2023	06:55:52	IL&FS	LSI	Solapur	MH	18.042329	75.151573	150+000	252+000	157+000 RHS Outer	1	40.9000	0.2679	0.1767	0.1143	0.0776	0.0574	0.0407	0.0286	27.7	30.4		33.4
	28-4-2023	06:55:52	IL&FS	LSI	Solapur	MH	18.042329	75.151573	150+000	252+000	157+000 RHS Outer	2	41.6000	0.2420	0.1782	0.1105	0.0791	0.0592	0.0409	0.0288	27.7	30.4		33.4
	28-4-2023	06:55:52	IL&FS	LSI	Solapur	MH	18.042329	75.151573	150+000	252+000	157+000 RHS Outer	3	41.1000	0.2583	0.1689	0.1113	0.0784	0.0581	0.0409	0.0288	27.7	30.4		33.4
379	28-4-2023	06:57:37	IL&FS	LSI	Solapur	MH	18.042974	75.149307	150+000	252+000	156+750 RHS Outer	1	42.0000	0.3003	0.1880	0.1110	0.0657	0.0505	0.0390	0.0312	27.8	30.9		33.4
	28-4-2023	06:57:37	IL&FS	LSI	Solapur	MH	18.042974	75.149307	150+000	252+000	156+750 RHS Outer	2	40.7000	0.2756	0.1839	0.1132	0.0662	0.0498	0.0359	0.0272	27.8	30.9		33.4
	28-4-2023	06:57:37	IL&FS	LSI	Solapur	MH	18.042974	75.149307	150+000	252+000	156+750 RHS Outer	3	40.4000	0.2724	0.1782	0.1190	0.0621	0.0448	0.0335	0.0258	27.8	30.9		33.4
380	28-4-2023	06:59:41	IL&FS	LSI	Solapur	MH	18.043664	75.146980	150+000	252+000	156+480 RHS Outer	1	40.8000	0.3265	0.2166	0.1248	0.0810	0.0513	0.0405	0.0305	27.8	31.0		33.4
	28-4-2023	06:59:41	IL&FS	LSI	Solapur	MH	18.043664	75.146980	150+000	252+000	156+480 RHS Outer	2	41.5000	0.3059	0.2110	0.1288	0.0792	0.0497	0.0384	0.0286	27.8	31.0		33.4
	28-4-2023	06:59:41	IL&FS	LSI	Solapur	MH	18.043664	75.146980	150+000	252+000	156+480 RHS Outer	3	41.4000	0.3196	0.2122	0.1164	0.0756	0.0544	0.0426	0.0323	27.8	31.0		33.4
381	28-4-2023	07:01:47	IL&FS	LSI	Solapur	MH	18.044309	75.144859	150+000	252+000	156+250 RHS Outer	1	42.6000	0.1715	0.1252	0.0919	0.0632	0.0427	0.0321	0.0245	27.9	30.6		33.4
	28-4-2023	07:01:47	IL&FS	LSI	Solapur	MH	18.044309	75.144859	150+000	252+000	156+250 RHS Outer	2	43.2000	0.1864	0.1233	0.0834	0.0610	0.0448	0.0320	0.0241	27.9	30.6		33.4
	28-4-2023	07:01:47	IL&FS	LSI	Solapur	MH	18.044309	75.144859	150+000	252+000	156+250 RHS Outer	3	43.0000	0.1760	0.1256	0.0922	0.0616	0.0404	0.0316	0.0252	27.9	30.6		33.4
382	28-4-2023	07:03:38	IL&FS	LSI	Solapur	MH	18.044971	75.142601	150+000	252+000	156+000 RHS Outer	1	42.1000	0.2170	0.1550	0.1030	0.0686	0.0462	0.0338	0.0204	28.0	31.0		33.4
	28-4-2023	07:03:38	IL&FS	LSI	Solapur	MH	18.044971	75.142601	150+000	252+000	156+000 RHS Outer	2	42.3000	0.2097	0.1479	0.0977	0.0685	0.0470	0.0344	0.0210	28.0	31.0		33.4
	28-4-2023	07:03:38	IL&FS	LSI	Solapur	MH	18.044971	75.142601	150+000	252+000	156+000 RHS Outer	3	42.1000	0.2128	0.1447	0.0950	0.0669	0.0459	0.0339	0.0205	28.0	31.0		33.4
383	28-4-2023	07:05:35	IL&FS	LSI	Solapur	MH	18.045650	75.140365	150+000	252+000	155+750 RHS Outer	1	41.8000	0.1964	0.1440	0.0929	0.0623	0.0408	0.0308	0.0239	28.1	31.3		33.4
	28-4-2023	07:05:35	IL&FS	LSI	Solapur	MH	18.045650	75.140365	150+000	252+000	155+750 RHS Outer	2	42.4000	0.1975	0.1401	0.0941	0.0644	0.0421	0.0306	0.0234	28.1	31.3		33.4
	28-4-2023	07:05:35	IL&FS	LSI	Solapur	MH	18.045650	75.140365	150+000	252+000	155+750 RHS Outer	3	42.5000	0.1974	0.1461	0.0912	0.0655	0.0469	0.0336	0.0243	28.1	31.3		33.4
384	28-4-2023	07:07:24	IL&FS	LSI	Solapur	MH	18.046312	75.138130	150+000	252+000	155+500 RHS Outer	1	42.1000	0.1854	0.1308	0.0912	0.0583	0.0345	0.0279	0.0251	28.3	31.3		33.4
	28-4-2023	07:07:24	IL&FS	LSI	Solapur	MH	18.046312	75.138130	150+000	252+000	155+500 RHS Outer	2	42.3000	0.1809	0.1316	0.0895	0.0571	0.0328	0.0289	0.0260	28.3	31.3		33.4
	28-4-2023	07:07:24	IL&FS	LSI	Solapur	MH	18.046312	75.138130	150+000	252+000	155+500 RHS Outer	3	42.6000	0.1829	0.1341	0.0897	0.0540	0.0320	0.0293	0.0264	28.3	31.3		33.4
385	28-4-2023	07:09:12	IL&FS	LSI	Solapur	MH	18.047031	75.135879	150+000	252+000	155+250 RHS Outer	1	41.3000	0.1885	0.1294	0.0864	0.0633	0.0452	0.0339	0.0259	28.3	31.5		33.4
	28-4-2023	07:09:12	IL&FS	LSI	Solapur	MH	18.047031	75.135879	150+000	252+000	155+250 RHS Outer	2	41.8000	0.1965	0.1348	0.0882	0.0623	0.0460	0.0357	0.0283	28.3	31.5		33.4
	28-4-2023	07:09:12	IL&FS	LSI	Solapur	MH	18.047031	75.135879	150+000	252+000	155+250 RHS Outer	3	40.3000	0.1938	0.1306	0.0845	0.0616	0.0439	0.0322	0.0238	28.3	31.5		33.4
386	28-4-2023	07:10:57	IL&FS	LSI	Solapur	MH	18.047765	75.133575	150+000	252+000	155+000 RHS Outer	1	42.7000	0.2055	0.1368	0.0937	0.0714	0.0562	0.0454	0.0383	28.4	31.5		33.4
	28-4-2023	07:10:57	IL&FS	LSI	Solapur	MH	18.047765	75.133575	150+000	252+000	155+000 RHS Outer	2	43.1000	0.2023	0.1373	0.0946	0.0706	0.0556	0.0435	0.0346	28.4	31.5		33.4
	28-4-2023	07:10:57	IL&FS	LSI	Solapur	MH	18.047765	75.133575	150+000	252+000	155+000 RHS Outer	3	43.6000	0.2040	0.1404	0.0957	0.0736	0.0566	0.0445	0.0357	28.4	31.5		33.4
387	28-4-2023	07:14:45	IL&FS	LSI	Solapur	MH	18.048593	75.131172	150+000	252+000	154+720 RHS Outer	1	41.9000	0.1861	0.1299	0.0910	0.0641	0.0446	0.0316	0.0247	28.2	31.1		33.4
	28-4-2023	07:14:45	IL&FS	LSI	Solapur	MH	18.048593	75.131172	150+000	252+000	154+720 RHS Outer	2	40.7000	0.1766	0.1270	0.0876	0.0611	0.0424	0.0299	0.0232	28.2	31.1		33.4
	28-4-2023	07:14:45	IL&FS	LSI	Solapur	MH	18.048593	75.131172	150+000	252+000	154+720 RHS Outer	3	40.8000	0.1686	0.1282	0.0875	0.0622	0.0454	0.0324	0.0283	28.2	31.1		33.4
388	28-4-2023	07:16:37	IL&FS	LSI	Solapur	MH	18.049228	75.129272	150+000	252+000	154+500 RHS Outer	1	42.9000	0.1857	0.1338	0.0975	0.0713	0.0484	0.0318	0.0226	28.4	31.7		33.4
	28-4-2023	07:16:37	IL&FS	LSI	Solapur	MH	18.049228	75.129272	150+000	252+000	154+500 RHS Outer	2	41.7000	0.1777	0.1337	0.0982	0.0718	0.0479	0.0310	0.0219	28.4	31.7		33.4
	28-4-2023	07:16:37	IL&FS	LSI	Solapur	MH	18.049228	75.129272	150+000	252+000	154+500 RHS Outer	3	42.0000	0.1959	0.1285	0.0937	0.0701	0.0465	0.0312	0.0221	28.4	31.7		33.4
389	28-4-2023	07:18:37	IL&FS	LSI	Solapur	MH	18.049924	75.126976	150+000	252+000	154+250 RHS Outer	1	41.5000	0.2909	0.1823	0.1197	0.0777	0.0509	0.0327	0.0234	28.7	31.7		33.4
	28-4-2023	07:18:37	IL&FS	LSI	Solapur	MH	18.049924	75.126976	150+000	252+000	154+250 RHS Outer	2	41.7000	0.2886	0.1891	0.1183	0.0765	0.0496	0.0290	0.0201	28.7	31.7		33.4
	28-4-2023	07:18:37	IL&FS	LSI	Solapur	MH	18.049924	75.126976	150+000	252+000	154+250 RHS Outer	3	41.9000	0.2809	0.1898	0.1201	0.0769	0.0512	0.0311	0.0220	28.7	31.7		33.4
390	28-4-2023	07:22:37	IL&FS	LSI	Solapur	MH	18.050668	75.124656	150+000	252+000	154+000 RHS Outer	1	40.4000	0.4022	0.2759	0.1653	0.1119	0.0778	0.0486	0.0306	28.5	31.1	T-27.5/35.1	35.1
	28-4-2023	07:22:37	IL&FS	LSI	Solapur	MH	18.050668	75.124656	150+000	252+000	154+000 RHS Outer	2	40.5000	0.4055	0.2509	0.1571	0.1119	0.0777	0.0510	0.0308	28.5	31.1	T-27.5/35.1	35.1
	28-4-2023	07:22:37	IL&FS	LSI	Solapur	MH	18.050668	75.124656	150+000	252+000	154+000 RHS Outer	3	40.0000	0.3910	0.2574	0.1548	0.1065	0.0690	0.0467	0.0302	28.5	31.1	T-27.5/35.1	35.1
391	28-4-2023	07:26:32	IL&FS	LSI	Solapur	MH	18.051464	75.122528	150+000	252+000	153+750 RHS Outer	1	39.6000	0.3710	0.2208	0.1357	0.0780	0.0526	0.0363	0.0272	28.7	31.8		35.1
	28-4-2023	07:26:32	IL&FS	LSI	Solapur	MH	18.051464	75.122528	150+000	252+000	153+750 RHS Outer	2	39.8000	0.3724	0.2228	0.1267	0.0731	0.0519	0.0330	0.0242	28.7	31.8		35.1
	28-4-2023	07:26:32	IL&FS	LSI	Solapur	MH	18.051464	75.122528	150+000	252+000	153+750 RHS Outer	3	39.6000	0.3485	0.2231	0.1229	0.0714	0.0508	0.0315	0.0229	28.7	31.8		35.1
392	28-4-2023	07:28:24	IL&FS	LSI	Solapur	MH	18.052736	75.120452	150+000	252+000	153+500 RHS Outer	1	41.4000	0.3023	0.2101	0.1314	0.0939	0.0640	0.0429	0.0336	29.0	31.7		35.1
	28-4-2023	07:28:24	IL&FS	LSI	Solapur	MH	18.052736	75.120452	150+000	252+000	153+500 RHS Outer	2	41.8000	0.3150	0.2029	0.1263	0.0854	0.0620	0.0458	0.0362	29.0	31.7		35.1
	28-4-2023	07:28:24	IL&FS	LSI	Solapur	MH	18.052736	75.120452	150+000	252+000	153+500 RHS Outer	3	41.9000	0.3032	0.2132	0.1325	0.0897	0.0624	0.0438	0.0344	29.0	31.7		35.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
393	28-4-2023	07:30:16	IL&FS	LSI	Solapur	MH	18.054143	75.118797	150+000	252+000	153+250 RHS Outer	1	40.8000	0.2337	0.1598	0.1113	0.0715	0.0517	0.0379	0.0241	29.0	31.6		35.1
	28-4-2023	07:30:16	IL&FS	LSI	Solapur	MH	18.054143	75.118797	150+000	252+000	153+250 RHS Outer	2	40.9000	0.2191	0.1509	0.1077	0.0641	0.0480	0.0380	0.0242	29.0	31.6		35.1
	28-4-2023	07:30:16	IL&FS	LSI	Solapur	MH	18.054143	75.118797	150+000	252+000	153+250 RHS Outer	3	40.5000	0.2176	0.1513	0.1102	0.0686	0.0508	0.0376	0.0238	29.0	31.6		35.1
394	28-4-2023	07:32:08	IL&FS	LSI	Solapur	MH	18.055774	75.116928	150+000	252+000	153+000 RHS Outer	1	40.4000	0.1957	0.1242	0.0792	0.0535	0.0345	0.0233	0.0204	29.1	31.8		35.1
	28-4-2023	07:32:08	IL&FS	LSI	Solapur	MH	18.055774	75.116928	150+000	252+000	153+000 RHS Outer	2	40.4000	0.1857	0.1305	0.0859	0.0572	0.0348	0.0224	0.0196	29.1	31.8		35.1
	28-4-2023	07:32:08	IL&FS	LSI	Solapur	MH	18.055774	75.116928	150+000	252+000	153+000 RHS Outer	3	40.4000	0.1894	0.1279	0.0861	0.0541	0.0332	0.0240	0.0210	29.1	31.8		35.1
395	28-4-2023	07:34:04	IL&FS	LSI	Solapur	MH	18.057231	75.115272	150+000	252+000	152+750 RHS Outer	1	43.0000	0.1473	0.1116	0.0817	0.0535	0.0330	0.0225	0.0155	29.2	32.4		35.1
	28-4-2023	07:34:04	IL&FS	LSI	Solapur	MH	18.057231	75.115272	150+000	252+000	152+750 RHS Outer	2	43.5000	0.1529	0.1135	0.0794	0.0504	0.0312	0.0225	0.0161	29.2	32.4		35.1
	28-4-2023	07:34:04	IL&FS	LSI	Solapur	MH	18.057231	75.115272	150+000	252+000	152+750 RHS Outer	3	43.2000	0.1629	0.1109	0.0762	0.0497	0.0327	0.0222	0.0149	29.2	32.4		35.1
396	28-4-2023	07:36:32	IL&FS	LSI	Solapur	MH	18.058881	75.113327	150+000	252+000	152+475 RHS Outer	1	41.6000	0.1763	0.1264	0.0912	0.0697	0.0421	0.0211	0.0132	29.4	33.3		35.1
	28-4-2023	07:36:32	IL&FS	LSI	Solapur	MH	18.058881	75.113327	150+000	252+000	152+475 RHS Outer	2	40.5000	0.1762	0.1324	0.0984	0.0698	0.0411	0.0196	0.0132	29.4	33.3		35.1
	28-4-2023	07:36:32	IL&FS	LSI	Solapur	MH	18.058881	75.113327	150+000	252+000	152+475 RHS Outer	3	41.6000	0.1868	0.1303	0.0945	0.0686	0.0413	0.0201	0.0132	29.4	33.3		35.1
397	28-4-2023	07:38:26	IL&FS	LSI	Solapur	MH	18.060266	75.111785	150+000	252+000	152+250 RHS Outer	1	41.0000	0.2610	0.1782	0.1207	0.0800	0.0510	0.0301	0.0241	29.6	33.0		35.1
	28-4-2023	07:38:26	IL&FS	LSI	Solapur	MH	18.060266	75.111785	150+000	252+000	152+250 RHS Outer	2	41.3000	0.2517	0.1779	0.1255	0.0798	0.0498	0.0296	0.0236	29.6	33.0		35.1
	28-4-2023	07:38:26	IL&FS	LSI	Solapur	MH	18.060266	75.111785	150+000	252+000	152+250 RHS Outer	3	41.3000	0.2656	0.1789	0.1227	0.0804	0.0487	0.0290	0.0231	29.6	33.0		35.1
398	28-4-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.062053	75.110160	150+000	252+000	152+000 RHS Outer	1	44.7000	0.1348	0.0921	0.0589	0.0438	0.0332	0.0225	0.0149	29.6	32.7		35.1
	28-4-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.062053	75.110160	150+000	252+000	152+000 RHS Outer	2	43.7000	0.1270	0.0874	0.0594	0.0424	0.0299	0.0201	0.0139	29.6	32.7		35.1
	28-4-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.062053	75.110160	150+000	252+000	152+000 RHS Outer	3	44.4000	0.1273	0.0873	0.0610	0.0430	0.0318	0.0221	0.0159	29.6	32.7		35.1
399	28-4-2023	07:42:23	IL&FS	LSI	Solapur	MH	18.063720	75.108695	150+000	252+000	151+750 RHS Outer	1	41.0000	0.2340	0.1521	0.0957	0.0632	0.0412	0.0260	0.0194	29.5	32.6		35.1
	28-4-2023	07:42:23	IL&FS	LSI	Solapur	MH	18.063720	75.108695	150+000	252+000	151+750 RHS Outer	2	42.6000	0.2448	0.1577	0.1043	0.0709	0.0454	0.0279	0.0211	29.5	32.6		35.1
	28-4-2023	07:42:23	IL&FS	LSI	Solapur	MH	18.063720	75.108695	150+000	252+000	151+750 RHS Outer	3	42.8000	0.2496	0.1582	0.1113	0.0746	0.0459	0.0298	0.0228	29.5	32.6		35.1
400	28-4-2023	07:44:10	IL&FS	LSI	Solapur	MH	18.065488	75.107276	150+000	252+000	151+500 RHS Outer	1	42.7000	0.2621	0.1651	0.1048	0.0722	0.0511	0.0371	0.0334	29.6	33.0		35.1
	28-4-2023	07:44:10	IL&FS	LSI	Solapur	MH	18.065488	75.107276	150+000	252+000	151+500 RHS Outer	2	41.1000	0.2346	0.1551	0.0990	0.0670	0.0477	0.0359	0.0323	29.6	33.0		35.1
	28-4-2023	07:44:10	IL&FS	LSI	Solapur	MH	18.065488	75.107276	150+000	252+000	151+500 RHS Outer	3	42.5000	0.2392	0.1605	0.1007	0.0706	0.0508	0.0362	0.0326	29.6	33.0		35.1
401	28-4-2023	07:45:52	IL&FS	LSI	Solapur	MH	18.067579	75.106163	150+000	252+000	151+250 RHS Outer	1	39.7000	0.4398	0.2454	0.1358	0.0749	0.0549	0.0422	0.0380	29.6	32.7		35.1
	28-4-2023	07:45:52	IL&FS	LSI	Solapur	MH	18.067579	75.106163	150+000	252+000	151+250 RHS Outer	2	39.7000	0.4349	0.2359	0.1386	0.0728	0.0599	0.0422	0.0399	29.6	32.7		35.1
	28-4-2023	07:45:52	IL&FS	LSI	Solapur	MH	18.067579	75.106163	150+000	252+000	151+250 RHS Outer	3	39.8000	0.4216	0.2356	0.1337	0.0683	0.0562	0.0422	0.0380	29.6	32.7		35.1
402	28-4-2023	07:47:48	IL&FS	LSI	Solapur	MH	18.069602	75.104774	150+000	252+000	151+000 RHS Outer	1	40.6000	0.3853	0.2439	0.1298	0.0657	0.0433	0.0372	0.0335	29.7	33.1	Bheema Bridge Approach	35.1
	28-4-2023	07:47:48	IL&FS	LSI	Solapur	MH	18.069602	75.104774	150+000	252+000	151+000 RHS Outer	2	40.5000	0.3779	0.2328	0.1257	0.0642	0.0420	0.0364	0.0328	29.7	33.1	Bheema Bridge Approach	35.1
	28-4-2023	07:47:48	IL&FS	LSI	Solapur	MH	18.069602	75.104774	150+000	252+000	151+000 RHS Outer	3	40.5000	0.3598	0.2349	0.1246	0.0635	0.0407	0.0344	0.0310	29.7	33.1	Bheema Bridge Approach	35.1
403	28-4-2023	07:50:26	IL&FS	LSI	Solapur	MH	18.074592	75.102783	150+000	252+000	150+750 RHS Outer	1	40.7000	0.3739	0.2281	0.1198	0.0733	0.0395	0.0291	0.0202	30.1	33.6		35.1
	28-4-2023	07:50:26	IL&FS	LSI	Solapur	MH	18.074592	75.102783	150+000	252+000	150+750 RHS Outer	2	40.9000	0.3673	0.2333	0.1214	0.0736	0.0408	0.0299	0.0209	30.1	33.6		35.1
	28-4-2023	07:50:26	IL&FS	LSI	Solapur	MH	18.074592	75.102783	150+000	252+000	150+750 RHS Outer	3	40.9000	0.3687	0.2208	0.1144	0.0686	0.0374	0.0290	0.0201	30.1	33.6		35.1
404	28-4-2023	07:52:21	IL&FS	LSI	Solapur	MH	18.075716	75.102241	150+000	252+000	150+250 RHS Outer	1	40.0000	0.4316	0.2633	0.1232	0.0804	0.0453	0.0308	0.0277	30.1	33.6		35.1
	28-4-2023	07:52:21	IL&FS	LSI	Solapur	MH	18.075716	75.102241	150+000	252+000	150+250 RHS Outer	2	40.3000	0.4333	0.2518	0.1365	0.0796	0.0467	0.0336	0.0302	30.1	33.6		35.1
	28-4-2023	07:52:21	IL&FS	LSI	Solapur	MH	18.075716	75.102241	150+000	252+000	150+250 RHS Outer	3	40.2000	0.4469	0.2500	0.1368	0.0817	0.0453	0.0309	0.0278	30.1	33.6		35.1
405	28-4-2023	07:55:14	IL&FS	LSI	Solapur	MH	18.077175	75.100494	150+000	252+000	150+000 RHS Outer	1	41.3000	0.2588	0.1691	0.1024	0.0527	0.0385	0.0276	0.0248	30.0	33.1		35.1
	28-4-2023	07:55:14	IL&FS	LSI	Solapur	MH	18.077175	75.100494	150+000	252+000	150+000 RHS Outer	2	41.6000	0.2497	0.1768	0.1010	0.0502	0.0367	0.0267	0.0240	30.0	33.1		35.1
	28-4-2023	07:55:14	IL&FS	LSI	Solapur	MH	18.077175	75.100494	150+000	252+000	150+000 RHS Outer	3	41.6000	0.2591	0.1743	0.1018	0.0486	0.0369	0.0285	0.0257	30.0	33.1		35.1
406	28-4-2023	08:08:12	IL&FS	LSI	Solapur	MH	18.076906	75.101348	150+000	252+000	150+100 LHS Outer	1	41.9000	0.2395	0.1706	0.1168	0.0786	0.0548	0.0362	0.0266	30.9	33.7	T-29.1/37.8	37.8
	28-4-2023	08:08:12	IL&FS	LSI	Solapur	MH	18.076906	75.101348	150+000	252+000	150+100 LHS Outer	2	41.9000	0.2270	0.1732	0.1101	0.0730	0.0510	0.0348	0.0253	30.9	33.7	T-29.1/37.8	37.8
	28-4-2023	08:08:12	IL&FS	LSI	Solapur	MH	18.076906	75.101348	150+000	252+000	150+100 LHS Outer	3	42.2000	0.2431	0.1742	0.1055	0.0770	0.0524	0.0367	0.0270	30.9	33.7	T-29.1/37.8	37.8
407	28-4-2023	08:10:12	IL&FS	LSI	Solapur	MH	18.075992	75.102302	150+000	252+000	150+250 LHS Outer	1	41.4000	0.2012	0.1408	0.0890	0.0566	0.0403	0.0278	0.0184	31.1	34.2		37.8
	28-4-2023	08:10:12	IL&FS	LSI	Solapur	MH	18.075992	75.102302	150+000	252+000	150+250 LHS Outer	2	41.5000	0.2034	0.1393	0.0921	0.0562	0.0407	0.0289	0.0196	31.1	34.2		37.8
	28-4-2023	08:10:12	IL&FS	LSI	Solapur	MH	18.075992	75.102302	150+000	252+000	150+250 LHS Outer	3	41.5000	0.1989	0.1419	0.0916	0.0557	0.0403	0.0280	0.0194	31.1	34.2		37.8
408	28-4-2023	08:12:03	IL&FS	LSI	Solapur	MH	18.074268	75.103080	150+000	252+000	150+450 LHS Outer	1	36.5000	0.3557	0.2301	0.1342	0.0783	0.0473	0.0348	0.0261	31.2	34.7	Bheema Bridge Approach	37.8
	28-4-2023	08:12:03	IL&FS	LSI	Solapur	MH	18.074268	75.103080	150+000	252+000	150+450 LHS Outer	2	36.3000	0.3492	0.2197	0.1320	0.0782	0.0520	0.0359	0.0251	31.2	34.7	Bheema Bridge Approach	37.8
	28-4-2023	08:12:03	IL&FS	LSI	Solapur	MH	18.074268	75.103080	150+000	252+000	150+450 LHS Outer	3	37.0000	0.3360	0.2334	0.1312	0.0800	0.0533	0.0382	0.0288	31.2	34.7	Bheema Bridge Approach	37.8
409	28-4-2023	08:14:47	IL&FS	LSI	Solapur	MH	18.069738	75.104858	150+000	252+000	151+000 LHS Outer	1	39.8000	0.2049	0.1471	0.1040	0.0652	0.0402	0.0301	0.0230	31.3	34.8		37.8
	28-4-2023	08:14:47	IL&FS	LSI	Solapur	MH	18.069738	75.104858	150+000	252+000	151+000 LHS Outer	2	41.3000	0.2118	0.1457	0.0994	0.0649	0.0433	0.0310	0.0224	31.3	34.8		37.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	08:14:47	IL&FS	LSI	Solapur	MH	18.069738	75.104858	150+000	252+000	151+000 LHS Outer	3	39.7000	0.2016	0.1362	0.0935	0.0628	0.0403	0.0303	0.0232	31.3	34.8		37.8
410	28-4-2023	08:16:50	IL&FS	LSI	Solapur	MH	18.067840	75.106147	150+000	252+000	151+250 LHS Outer	1	38.2000	0.4636	0.2575	0.1645	0.0939	0.0652	0.0448	0.0291	31.2	34.2		37.8
	28-4-2023	08:16:50	IL&FS	LSI	Solapur	MH	18.067840	75.106147	150+000	252+000	151+250 LHS Outer	2	39.6000	0.4697	0.2652	0.1666	0.1017	0.0727	0.0491	0.0314	31.2	34.2		37.8
	28-4-2023	08:16:50	IL&FS	LSI	Solapur	MH	18.067840	75.106147	150+000	252+000	151+250 LHS Outer	3	38.6000	0.4602	0.2518	0.1647	0.1011	0.0666	0.0441	0.0281	31.2	34.2		37.8
411	28-4-2023	08:18:35	IL&FS	LSI	Solapur	MH	18.065797	75.107223	150+000	252+000	151+500 LHS Outer	1	42.6000	0.1898	0.1517	0.1026	0.0736	0.0502	0.0341	0.0247	31.4	34.9		37.8
	28-4-2023	08:18:35	IL&FS	LSI	Solapur	MH	18.065797	75.107223	150+000	252+000	151+500 LHS Outer	2	42.6000	0.1832	0.1427	0.1126	0.0721	0.0502	0.0348	0.0253	31.4	34.9		37.8
	28-4-2023	08:18:35	IL&FS	LSI	Solapur	MH	18.065797	75.107223	150+000	252+000	151+500 LHS Outer	3	42.6000	0.1871	0.1456	0.1076	0.0776	0.0525	0.0332	0.0239	31.4	34.9		37.8
412	28-4-2023	08:20:34	IL&FS	LSI	Solapur	MH	18.064186	75.108528	150+000	252+000	151+730 LHS Outer	1	42.6000	0.1601	0.1136	0.0810	0.0561	0.0399	0.0289	0.0256	31.5	34.5		37.8
	28-4-2023	08:20:34	IL&FS	LSI	Solapur	MH	18.064186	75.108528	150+000	252+000	151+730 LHS Outer	2	42.1000	0.1478	0.1107	0.0825	0.0566	0.0394	0.0290	0.0240	31.5	34.5		37.8
	28-4-2023	08:20:34	IL&FS	LSI	Solapur	MH	18.064186	75.108528	150+000	252+000	151+730 LHS Outer	3	43.5000	0.1609	0.1159	0.0856	0.0575	0.0374	0.0292	0.0236	31.5	34.5		37.8
413	28-4-2023	08:22:41	IL&FS	LSI	Solapur	MH	18.062316	75.110153	150+000	252+000	152+000 LHS Outer	1	43.4000	0.1706	0.1226	0.0929	0.0647	0.0424	0.0274	0.0180	31.8	35.7		37.8
	28-4-2023	08:22:41	IL&FS	LSI	Solapur	MH	18.062316	75.110153	150+000	252+000	152+000 LHS Outer	2	43.5000	0.1786	0.1213	0.0913	0.0693	0.0464	0.0296	0.0181	31.8	35.7		37.8
	28-4-2023	08:22:41	IL&FS	LSI	Solapur	MH	18.062316	75.110153	150+000	252+000	152+000 LHS Outer	3	43.9000	0.1664	0.1284	0.0908	0.0646	0.0416	0.0279	0.0182	31.8	35.7		37.8
414	28-4-2023	08:24:45	IL&FS	LSI	Solapur	MH	18.060630	75.111663	150+000	252+000	152+250 LHS Outer	1	41.0000	0.2369	0.1553	0.1052	0.0717	0.0481	0.0346	0.0241	32.0	36.4		37.8
	28-4-2023	08:24:45	IL&FS	LSI	Solapur	MH	18.060630	75.111663	150+000	252+000	152+250 LHS Outer	2	41.2000	0.2355	0.1601	0.1108	0.0741	0.0473	0.0353	0.0263	32.0	36.4		37.8
	28-4-2023	08:24:45	IL&FS	LSI	Solapur	MH	18.060630	75.111663	150+000	252+000	152+250 LHS Outer	3	40.8000	0.2276	0.1556	0.1062	0.0725	0.0513	0.0355	0.0255	32.0	36.4		37.8
415	28-4-2023	08:27:01	IL&FS	LSI	Solapur	MH	18.059064	75.113327	150+000	252+000	152+500 LHS Outer	1	40.5000	0.3642	0.2409	0.1467	0.0984	0.0685	0.0407	0.0218	32.1	35.2		37.8
	28-4-2023	08:27:01	IL&FS	LSI	Solapur	MH	18.059064	75.113327	150+000	252+000	152+500 LHS Outer	2	40.6000	0.3559	0.2289	0.1448	0.0992	0.0653	0.0391	0.0219	32.1	35.2		37.8
	28-4-2023	08:27:01	IL&FS	LSI	Solapur	MH	18.059064	75.113327	150+000	252+000	152+500 LHS Outer	3	40.6000	0.3539	0.2254	0.1477	0.0989	0.0678	0.0398	0.0219	32.1	35.2		37.8
416	28-4-2023	08:29:01	IL&FS	LSI	Solapur	MH	18.057847	75.114776	150+000	252+000	152+700 LHS Outer	1	40.7000	0.2790	0.1762	0.1022	0.0662	0.0494	0.0374	0.0290	31.9	35.4		37.8
	28-4-2023	08:29:01	IL&FS	LSI	Solapur	MH	18.057847	75.114776	150+000	252+000	152+700 LHS Outer	2	41.9000	0.2775	0.1725	0.1070	0.0658	0.0498	0.0379	0.0297	31.9	35.4		37.8
	28-4-2023	08:29:01	IL&FS	LSI	Solapur	MH	18.057847	75.114776	150+000	252+000	152+700 LHS Outer	3	42.3000	0.2735	0.1759	0.1013	0.0652	0.0502	0.0387	0.0300	31.9	35.4		37.8
417	28-4-2023	08:31:16	IL&FS	LSI	Solapur	MH	18.056001	75.116912	150+000	252+000	153+000 LHS Outer	1	41.7000	0.2660	0.2019	0.1300	0.0859	0.0566	0.0426	0.0329	31.9	35.2		37.8
	28-4-2023	08:31:16	IL&FS	LSI	Solapur	MH	18.056001	75.116912	150+000	252+000	153+000 LHS Outer	2	42.1000	0.2777	0.1960	0.1304	0.0816	0.0556	0.0448	0.0364	31.9	35.2		37.8
	28-4-2023	08:31:16	IL&FS	LSI	Solapur	MH	18.056001	75.116912	150+000	252+000	153+000 LHS Outer	3	41.5000	0.2696	0.2042	0.1332	0.0855	0.0566	0.0444	0.0355	31.9	35.2		37.8
418	28-4-2023	08:33:08	IL&FS	LSI	Solapur	MH	18.054531	75.118644	150+000	252+000	153+250 LHS Outer	1	41.6000	0.1223	0.0976	0.0791	0.0550	0.0395	0.0271	0.0179	31.9	35.3		37.8
	28-4-2023	08:33:08	IL&FS	LSI	Solapur	MH	18.054531	75.118644	150+000	252+000	153+250 LHS Outer	2	42.0000	0.1273	0.0990	0.0768	0.0524	0.0358	0.0254	0.0187	31.9	35.3		37.8
	28-4-2023	08:33:08	IL&FS	LSI	Solapur	MH	18.054531	75.118644	150+000	252+000	153+250 LHS Outer	3	41.9000	0.1228	0.0973	0.0795	0.0541	0.0362	0.0253	0.0171	31.9	35.3		37.8
419	28-4-2023	08:34:54	IL&FS	LSI	Solapur	MH	18.053007	75.120384	150+000	252+000	153+500 LHS Outer	1	42.7000	0.1297	0.0953	0.0691	0.0540	0.0423	0.0309	0.0236	31.9	35.2		37.8
	28-4-2023	08:34:54	IL&FS	LSI	Solapur	MH	18.053007	75.120384	150+000	252+000	153+500 LHS Outer	2	42.5000	0.1325	0.0922	0.0641	0.0503	0.0409	0.0306	0.0234	31.9	35.2		37.8
	28-4-2023	08:34:54	IL&FS	LSI	Solapur	MH	18.053007	75.120384	150+000	252+000	153+500 LHS Outer	3	43.0000	0.1401	0.0991	0.0677	0.0524	0.0412	0.0304	0.0236	31.9	35.2		37.8
420	28-4-2023	08:36:45	IL&FS	LSI	Solapur	MH	18.051736	75.122306	150+000	252+000	153+750 LHS Outer	1	42.5000	0.1390	0.1018	0.0660	0.0529	0.0400	0.0316	0.0234	31.8	35.8		37.8
	28-4-2023	08:36:45	IL&FS	LSI	Solapur	MH	18.051736	75.122306	150+000	252+000	153+750 LHS Outer	2	42.8000	0.1462	0.0985	0.0712	0.0506	0.0417	0.0319	0.0264	31.8	35.8		37.8
	28-4-2023	08:36:45	IL&FS	LSI	Solapur	MH	18.051736	75.122306	150+000	252+000	153+750 LHS Outer	3	42.7000	0.1356	0.1002	0.0712	0.0565	0.0409	0.0316	0.0247	31.8	35.8		37.8
421	28-4-2023	08:38:40	IL&FS	LSI	Solapur	MH	18.050907	75.124481	150+000	252+000	154+000 LHS Outer	1	42.8000	0.1704	0.1148	0.0745	0.0516	0.0375	0.0304	0.0268	32.0	35.9		37.8
	28-4-2023	08:38:40	IL&FS	LSI	Solapur	MH	18.050907	75.124481	150+000	252+000	154+000 LHS Outer	2	42.7000	0.1606	0.1100	0.0736	0.0502	0.0363	0.0277	0.0243	32.0	35.9		37.8
	28-4-2023	08:38:40	IL&FS	LSI	Solapur	MH	18.050907	75.124481	150+000	252+000	154+000 LHS Outer	3	43.2000	0.1578	0.1087	0.0747	0.0473	0.0376	0.0310	0.0273	32.0	35.9		37.8
422	28-4-2023	08:41:26	IL&FS	LSI	Solapur	MH	18.050197	75.126670	150+000	252+000	154+250 LHS Outer	1	42.8000	0.1282	0.0939	0.0676	0.0507	0.0337	0.0272	0.0225	32.3	36.8		37.8
	28-4-2023	08:41:26	IL&FS	LSI	Solapur	MH	18.050197	75.126670	150+000	252+000	154+250 LHS Outer	2	42.4000	0.1172	0.0859	0.0638	0.0499	0.0359	0.0280	0.0220	32.3	36.8		37.8
	28-4-2023	08:41:26	IL&FS	LSI	Solapur	MH	18.050197	75.126670	150+000	252+000	154+250 LHS Outer	3	42.2000	0.1276	0.0895	0.0646	0.0492	0.0338	0.0273	0.0226	32.3	36.8		37.8
423	28-4-2023	08:43:23	IL&FS	LSI	Solapur	MH	18.049480	75.128952	150+000	252+000	154+500 LHS Outer	1	42.0000	0.1985	0.1479	0.1060	0.0747	0.0500	0.0337	0.0303	32.5	36.9		37.8
	28-4-2023	08:43:23	IL&FS	LSI	Solapur	MH	18.049480	75.128952	150+000	252+000	154+500 LHS Outer	2	42.4000	0.2140	0.1494	0.1024	0.0742	0.0516	0.0364	0.0328	32.5	36.9		37.8
	28-4-2023	08:43:23	IL&FS	LSI	Solapur	MH	18.049480	75.128952	150+000	252+000	154+500 LHS Outer	3	42.2000	0.2000	0.1565	0.1057	0.0734	0.0519	0.0352	0.0317	32.5	36.9		37.8
424	28-4-2023	08:47:32	IL&FS	LSI	Solapur	MH	18.048753	75.131172	150+000	252+000	154+750 LHS Outer	1	41.4000	0.3236	0.2020	0.1173	0.0741	0.0492	0.0319	0.0277	32.6	36.4	T-30.8/39.1	39.1
	28-4-2023	08:47:32	IL&FS	LSI	Solapur	MH	18.048753	75.131172	150+000	252+000	154+750 LHS Outer	2	41.7000	0.3079	0.1995	0.1221	0.0674	0.0461	0.0320	0.0278	32.6	36.4	T-30.8/39.1	39.1
	28-4-2023	08:47:32	IL&FS	LSI	Solapur	MH	18.048753	75.131172	150+000	252+000	154+750 LHS Outer	3	41.3000	0.3064	0.1912	0.1124	0.0690	0.0464	0.0317	0.0275	32.6	36.4	T-30.8/39.1	39.1
425	28-4-2023	08:49:48	IL&FS	LSI	Solapur	MH	18.047967	75.133552	150+000	252+000	155+000 LHS Outer	1	41.7000	0.2736	0.1746	0.1087	0.0656	0.0501	0.0332	0.0289	32.8	37.1		39.1
	28-4-2023	08:49:48	IL&FS	LSI	Solapur	MH	18.047967	75.133552	150+000	252+000	155+000 LHS Outer	2	42.0000	0.2710	0.1709	0.1081	0.0683	0.0515	0.0339	0.0295	32.8	37.1		39.1
	28-4-2023	08:49:48	IL&FS	LSI	Solapur	MH	18.047967	75.133552	150+000	252+000	155+000 LHS Outer	3	42.3000	0.2853	0.1715	0.1071	0.0697	0.0533	0.0393	0.0237	32.8	37.1		39.1
426	28-4-2023	08:51:39	IL&FS	LSI	Solapur	MH	18.047248	75.135780	150+000	252+000	155+250 LHS Outer	1	41.5000	0.2782	0.1816	0.1206	0.0871	0.0541	0.0386	0.0275	32.9	36.3		39.1
	28-4-2023	08:51:39	IL&FS	LSI	Solapur	MH	18.047248	75.135780	150+000	252+000	155+250 LHS Outer	2	41.4000	0.2577	0.1829	0.1212	0.0841	0.0550	0.0385	0.0252	32.9	36.3		39.1
	28-4-2023	08:51:39	IL&FS	LSI	Solapur	MH	18.047248	75.135780	150+000	252+000	155+250 LHS Outer	3	41.4000	0.2644	0.1740	0.1170	0.0866	0.0534	0.0386	0.0251	32.9	36.3		39.1
427	28-4-2023	09:19:06	IL&FS	LSI	Solapur	MH	18.046457	75.138160	150+000	252+000	155+550 LHS Outer	1	41.0000	0.3061	0.2027	0.1243	0.0796	0.0618	0.0496	0.0334	33.0	36.6		39.1
	28-4-2023	09:19:06	IL&FS	LSI	Solapur	MH	18.046457	75.138160	150+000	252+000	155+550 LHS Outer	2	41.7000	0.2893	0.1908	0.1186	0.0786	0.0602	0.0488	0.0346	33.0	36.6		39.1
	28-4-2023	09:19:06	IL&FS	LSI	Solapur	MH	18.046457	75.138160	150+000	252+000	155+550 LHS Outer	3	41.5000	0.2952	0.1941	0.1268	0.0730	0.0595	0.0494	0.0342	33.0	36.6		39.1
428	28-4-2023	09:20:55	IL&FS	LSI	Solapur	MH	18.045860	75.140213	150+000	252+000	155+750 LHS Outer	1	43.1000	0.1231	0.0942	0.0655	0.0478	0.0410	0.0319	0.0250	33.0	37.7		39.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	09:20:55	IL&FS	LSI	Solapur	MH	18.045860	75.140213	150+000	252+000	155+750 LHS Outer	2	42.6000	0.1216	0.0911	0.0682	0.0521	0.0390	0.0310	0.0257	33.0	37.7		39.1
	28-4-2023	09:20:55	IL&FS	LSI	Solapur	MH	18.045860	75.140213	150+000	252+000	155+750 LHS Outer	3	42.9000	0.1195	0.0919	0.0654	0.0472	0.0402	0.0301	0.0231	33.0	37.7		39.1
429	28-4-2023	09:23:11	IL&FS	LSI	Solapur	MH	18.045183	75.142539	150+000	252+000	156+000 LHS Outer	1	41.4000	0.1543	0.1156	0.0902	0.0599	0.0414	0.0335	0.0244	33.0	38.1		39.1
	28-4-2023	09:23:11	IL&FS	LSI	Solapur	MH	18.045183	75.142539	150+000	252+000	156+000 LHS Outer	2	41.9000	0.1537	0.1192	0.0952	0.0652	0.0465	0.0323	0.0266	33.0	38.1		39.1
	28-4-2023	09:23:11	IL&FS	LSI	Solapur	MH	18.045183	75.142539	150+000	252+000	156+000 LHS Outer	3	42.2000	0.1677	0.1230	0.0925	0.0631	0.0425	0.0329	0.0244	33.0	38.1		39.1
430	28-4-2023	09:25:40	IL&FS	LSI	Solapur	MH	18.044488	75.144798	150+000	252+000	156+250 LHS Outer	1	43.2000	0.1679	0.1163	0.0798	0.0564	0.0391	0.0300	0.0235	33.0	37.8	T-31.5/40.5	40.5
	28-4-2023	09:25:40	IL&FS	LSI	Solapur	MH	18.044488	75.144798	150+000	252+000	156+250 LHS Outer	2	43.6000	0.1681	0.1180	0.0805	0.0560	0.0389	0.0310	0.0249	33.0	37.8	T-31.5/40.5	40.5
	28-4-2023	09:25:40	IL&FS	LSI	Solapur	MH	18.044488	75.144798	150+000	252+000	156+250 LHS Outer	3	43.1000	0.1743	0.1241	0.0857	0.0587	0.0394	0.0298	0.0226	33.0	37.8	T-31.5/40.5	40.5
431	28-4-2023	09:28:45	IL&FS	LSI	Solapur	MH	18.043848	75.147026	150+000	252+000	156+500 LHS Outer	1	42.4000	0.2583	0.1722	0.1130	0.0840	0.0621	0.0483	0.0383	32.9	38.2		40.5
	28-4-2023	09:28:45	IL&FS	LSI	Solapur	MH	18.043848	75.147026	150+000	252+000	156+500 LHS Outer	2	42.4000	0.2458	0.1772	0.1105	0.0820	0.0631	0.0467	0.0354	32.9	38.2		40.5
	28-4-2023	09:28:45	IL&FS	LSI	Solapur	MH	18.043848	75.147026	150+000	252+000	156+500 LHS Outer	3	42.8000	0.2480	0.1790	0.1069	0.0799	0.0633	0.0498	0.0403	32.9	38.2		40.5
432	28-4-2023	09:30:33	IL&FS	LSI	Solapur	MH	18.043163	75.149322	150+000	252+000	156+750 LHS Outer	1	42.1000	0.1992	0.1453	0.0948	0.0667	0.0474	0.0328	0.0235	33.3	40.1		40.5
	28-4-2023	09:30:33	IL&FS	LSI	Solapur	MH	18.043163	75.149322	150+000	252+000	156+750 LHS Outer	2	42.0000	0.2022	0.1417	0.0973	0.0665	0.0470	0.0324	0.0232	33.3	40.1		40.5
	28-4-2023	09:30:33	IL&FS	LSI	Solapur	MH	18.043163	75.149322	150+000	252+000	156+750 LHS Outer	3	41.7000	0.2046	0.1384	0.1012	0.0665	0.0466	0.0323	0.0231	33.3	40.1		40.5
433	28-4-2023	09:32:30	IL&FS	LSI	Solapur	MH	18.042539	75.151504	150+000	252+000	157+000 LHS Outer	1	41.9000	0.2918	0.2055	0.1377	0.0846	0.0597	0.0423	0.0321	33.6	40.7		40.5
	28-4-2023	09:32:30	IL&FS	LSI	Solapur	MH	18.042539	75.151504	150+000	252+000	157+000 LHS Outer	2	42.4000	0.2861	0.2063	0.1351	0.0812	0.0631	0.0441	0.0337	33.6	40.7		40.5
	28-4-2023	09:32:30	IL&FS	LSI	Solapur	MH	18.042539	75.151504	150+000	252+000	157+000 LHS Outer	3	42.4000	0.2916	0.2003	0.1389	0.0822	0.0632	0.0431	0.0328	33.6	40.7		40.5
434	28-4-2023	09:34:24	IL&FS	LSI	Solapur	MH	18.041851	75.153800	150+000	252+000	157+250 LHS Outer	1	42.6000	0.2026	0.1368	0.0896	0.0606	0.0489	0.0356	0.0265	33.9	40.9		40.5
	28-4-2023	09:34:24	IL&FS	LSI	Solapur	MH	18.041851	75.153800	150+000	252+000	157+250 LHS Outer	2	42.5000	0.2018	0.1311	0.0856	0.0586	0.0462	0.0352	0.0269	33.9	40.9		40.5
	28-4-2023	09:34:24	IL&FS	LSI	Solapur	MH	18.041851	75.153800	150+000	252+000	157+250 LHS Outer	3	42.8000	0.2094	0.1322	0.0860	0.0579	0.0443	0.0354	0.0290	33.9	40.9		40.5
435	28-4-2023	09:36:10	IL&FS	LSI	Solapur	MH	18.041179	75.156082	150+000	252+000	157+500 LHS Outer	1	40.3000	0.3258	0.2449	0.1545	0.0894	0.0715	0.0561	0.0464	33.9	40.5		40.5
	28-4-2023	09:36:10	IL&FS	LSI	Solapur	MH	18.041179	75.156082	150+000	252+000	157+500 LHS Outer	2	41.0000	0.3337	0.2424	0.1530	0.0913	0.0699	0.0578	0.0503	33.9	40.5		40.5
	28-4-2023	09:36:10	IL&FS	LSI	Solapur	MH	18.041179	75.156082	150+000	252+000	157+500 LHS Outer	3	40.7000	0.3211	0.2382	0.1529	0.0879	0.0766	0.0550	0.0402	33.9	40.5		40.5
436	28-4-2023	09:38:01	IL&FS	LSI	Solapur	MH	18.040517	75.158332	150+000	252+000	157+750 LHS Outer	1	39.6000	0.4187	0.2490	0.1451	0.0719	0.0604	0.0415	0.0273	34.1	41.0		40.5
	28-4-2023	09:38:01	IL&FS	LSI	Solapur	MH	18.040517	75.158332	150+000	252+000	157+750 LHS Outer	2	39.6000	0.3955	0.2392	0.1342	0.0789	0.0592	0.0400	0.0277	34.1	41.0		40.5
	28-4-2023	09:38:01	IL&FS	LSI	Solapur	MH	18.040517	75.158332	150+000	252+000	157+750 LHS Outer	3	39.8000	0.4054	0.2374	0.1292	0.0743	0.0620	0.0419	0.0285	34.1	41.0		40.5
437	28-4-2023	09:40:13	IL&FS	LSI	Solapur	MH	18.039829	75.160636	150+000	252+000	158+000 LHS Outer	1	39.4000	0.3745	0.2240	0.1152	0.0638	0.0465	0.0352	0.0315	34.1	40.9		40.5
	28-4-2023	09:40:13	IL&FS	LSI	Solapur	MH	18.039829	75.160636	150+000	252+000	158+000 LHS Outer	2	39.9000	0.3865	0.2256	0.1214	0.0651	0.0474	0.0357	0.0338	34.1	40.9		40.5
	28-4-2023	09:40:13	IL&FS	LSI	Solapur	MH	18.039829	75.160636	150+000	252+000	158+000 LHS Outer	3	40.0000	0.3786	0.2225	0.1296	0.0642	0.0480	0.0377	0.0295	34.1	40.9		40.5
438	28-4-2023	09:43:20	IL&FS	LSI	Solapur	MH	18.039081	75.163131	150+000	252+000	158+250 LHS Outer	1	42.7000	0.3837	0.2387	0.1351	0.0916	0.0633	0.0437	0.0295	34.4	42.0		40.5
	28-4-2023	09:43:20	IL&FS	LSI	Solapur	MH	18.039081	75.163131	150+000	252+000	158+250 LHS Outer	2	40.9000	0.3721	0.2288	0.1323	0.0897	0.0603	0.0403	0.0264	34.4	42.0		40.5
	28-4-2023	09:43:20	IL&FS	LSI	Solapur	MH	18.039081	75.163131	150+000	252+000	158+250 LHS Outer	3	40.8000	0.3625	0.2274	0.1261	0.0870	0.0607	0.0405	0.0277	34.4	42.0		40.5
439	28-4-2023	09:45:07	IL&FS	LSI	Solapur	MH	18.038396	75.165496	150+000	252+000	158+500 LHS Outer	1	40.2000	0.3981	0.2542	0.1330	0.0861	0.0658	0.0459	0.0317	34.8	42.4		40.5
	28-4-2023	09:45:07	IL&FS	LSI	Solapur	MH	18.038396	75.165496	150+000	252+000	158+500 LHS Outer	2	40.7000	0.4269	0.2542	0.1365	0.0865	0.0728	0.0464	0.0300	34.8	42.4		40.5
	28-4-2023	09:45:07	IL&FS	LSI	Solapur	MH	18.038396	75.165496	150+000	252+000	158+500 LHS Outer	3	40.3000	0.4087	0.2547	0.1358	0.0880	0.0724	0.0481	0.0292	34.8	42.4		40.5
440	28-4-2023	09:46:57	IL&FS	LSI	Solapur	MH	18.037761	75.167694	150+000	252+000	158+750 LHS Outer	1	40.3000	0.4070	0.2364	0.1199	0.0609	0.0488	0.0370	0.0286	35.0	43.0		40.5
	28-4-2023	09:46:57	IL&FS	LSI	Solapur	MH	18.037761	75.167694	150+000	252+000	158+750 LHS Outer	2	40.2000	0.4029	0.2353	0.1196	0.0570	0.0464	0.0319	0.0225	35.0	43.0		40.5
	28-4-2023	09:46:57	IL&FS	LSI	Solapur	MH	18.037761	75.167694	150+000	252+000	158+750 LHS Outer	3	39.9000	0.3938	0.2236	0.1194	0.0565	0.0476	0.0326	0.0221	35.0	43.0		40.5
441	28-4-2023	09:49:31	IL&FS	LSI	Solapur	MH	18.037343	75.170364	150+000	252+000	159+050 LHS Outer	1	40.1000	0.4261	0.2628	0.1299	0.0854	0.0605	0.0427	0.0305	35.1	41.7		40.5
	28-4-2023	09:49:31	IL&FS	LSI	Solapur	MH	18.037343	75.170364	150+000	252+000	159+050 LHS Outer	2	40.0000	0.4220	0.2524	0.1295	0.0786	0.0583	0.0398	0.0281	35.1	41.7		40.5
	28-4-2023	09:49:31	IL&FS	LSI	Solapur	MH	18.037343	75.170364	150+000	252+000	159+050 LHS Outer	3	39.9000	0.4090	0.2506	0.1346	0.0777	0.0596	0.0426	0.0313	35.1	41.7		40.5
442	28-4-2023	09:51:58	IL&FS	LSI	Solapur	MH	18.037870	75.172225	150+000	252+000	159+250 LHS Outer	1	39.5000	0.4848	0.2908	0.1611	0.0868	0.0571	0.0370	0.0274	35.0	41.6		40.5
	28-4-2023	09:51:58	IL&FS	LSI	Solapur	MH	18.037870	75.172225	150+000	252+000	159+250 LHS Outer	2	39.8000	0.4685	0.2789	0.1653	0.0796	0.0542	0.0371	0.0260	35.0	41.6		40.5
	28-4-2023	09:51:58	IL&FS	LSI	Solapur	MH	18.037870	75.172225	150+000	252+000	159+250 LHS Outer	3	40.0000	0.4639	0.2886	0.1542	0.0814	0.0574	0.0391	0.0271	35.0	41.6		40.5
443	28-4-2023	09:53:48	IL&FS	LSI	Solapur	MH	18.038665	75.174507	150+000	252+000	159+500 LHS Outer	1	41.1000	0.4334	0.2623	0.1518	0.0755	0.0518	0.0368	0.0266	34.8	40.9		40.5
	28-4-2023	09:53:48	IL&FS	LSI	Solapur	MH	18.038665	75.174507	150+000	252+000	159+500 LHS Outer	2	41.3000	0.4159	0.2629	0.1487	0.0756	0.0519	0.0360	0.0247	34.8	40.9		40.5
	28-4-2023	09:53:48	IL&FS	LSI	Solapur	MH	18.038665	75.174507	150+000	252+000	159+500 LHS Outer	3	41.3000	0.4017	0.2641	0.1577	0.0758	0.0520	0.0362	0.0249	34.8	40.9		40.5
444	28-4-2023	09:55:36	IL&FS	LSI	Solapur	MH	18.039449	75.176666	150+000	252+000	159+750 LHS Outer	1	41.1000	0.3548	0.2262	0.1312	0.0692	0.0464	0.0322	0.0289	34.3	41.2		40.5
	28-4-2023	09:55:36	IL&FS	LSI	Solapur	MH	18.039449	75.176666	150+000	252+000	159+750 LHS Outer	2	41.5000	0.3605	0.2147	0.1351	0.0685	0.0480	0.0332	0.0299	34.3	41.2		40.5
	28-4-2023	09:55:36	IL&FS	LSI	Solapur	MH	18.039449	75.176666	150+000	252+000	159+750 LHS Outer	3	41.4000	0.3487	0.2213	0.1352	0.0744	0.0468	0.0344	0.0191	34.3	41.2		40.5
445	28-4-2023	09:57:26	IL&FS	LSI	Solapur	MH	18.040155	75.178886	150+000	252+000	160+000 LHS Outer	1	40.3000	0.2747	0.1858	0.1073	0.0721	0.0455	0.0331	0.0245	34.6	41.0		40.5
	28-4-2023	09:57:26	IL&FS	LSI	Solapur	MH	18.040155	75.178886	150+000	252+000	160+000 LHS Outer	2	40.4000	0.2863	0.1805	0.1151	0.0740	0.0467	0.0329	0.0236	34.6	41.0		40.5
	28-4-2023	09:57:26	IL&FS	LSI	Solapur	MH	18.040155	75.178886	150+000	252+000	160+000 LHS Outer	3	40.6000	0.2677	0.1837	0.1167	0.0796	0.0512	0.0357	0.0254	34.6	41.0		40.5
446	28-4-2023	09:59:13	IL&FS	LSI	Solapur	MH	18.040582	75.181167	150+000	252+000	160+250 LHS Outer	1	40.9000	0.3894	0.2480	0.1486	0.0957	0.0635	0.0426	0.0287	34.4	41.0		40.5
	28-4-2023	09:59:13	IL&FS	LSI	Solapur	MH	18.040582	75.181167	150+000	252+000	160+250 LHS Outer	2	40.4000	0.3854	0.2500	0.1473	0.0954	0.0628	0.0411	0.0260	34.4	41.0		40.5
	28-4-2023	09:59:13	IL&FS	LSI	Solapur	MH	18.040582	75.181167	150+000	252+000	160+250 LHS Outer	3	40.7000	0.3785	0.2459	0.1466	0.0917	0.0629	0.0433	0.0294	34.4	41.0		40.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
447	28-4-2023	10:01:02	IL&FS	LSI	Solapur	MH	18.040636	75.183639	150+000	252+000	160+500 LHS Outer	1	39.0000	0.4686	0.2735	0.1429	0.0926	0.0534	0.0388	0.0274	34.3	41.2		40.5
	28-4-2023	10:01:02	IL&FS	LSI	Solapur	MH	18.040636	75.183639	150+000	252+000	160+500 LHS Outer	2	38.3000	0.4568	0.2642	0.1357	0.0854	0.0519	0.0378	0.0268	34.3	41.2		40.5
	28-4-2023	10:01:02	IL&FS	LSI	Solapur	MH	18.040636	75.183639	150+000	252+000	160+500 LHS Outer	3	39.5000	0.4703	0.2692	0.1357	0.0863	0.0532	0.0386	0.0278	34.3	41.2		40.5
448	28-4-2023	10:03:12	IL&FS	LSI	Solapur	MH	18.040414	75.186073	150+000	252+000	160+750 LHS Outer	1	40.4000	0.4020	0.2476	0.1349	0.0835	0.0565	0.0397	0.0297	34.5	40.9		40.5
	28-4-2023	10:03:12	IL&FS	LSI	Solapur	MH	18.040414	75.186073	150+000	252+000	160+750 LHS Outer	2	40.4000	0.3816	0.2449	0.1396	0.0842	0.0586	0.0386	0.0287	34.5	40.9		40.5
	28-4-2023	10:03:12	IL&FS	LSI	Solapur	MH	18.040414	75.186073	150+000	252+000	160+750 LHS Outer	3	40.5000	0.3965	0.2410	0.1345	0.0826	0.0576	0.0412	0.0284	34.5	40.9		40.5
449	28-4-2023	10:05:09	IL&FS	LSI	Solapur	MH	18.040048	75.188278	150+000	252+000	161+000 LHS Outer	1	40.7000	0.3722	0.2352	0.1191	0.0781	0.0480	0.0348	0.0233	34.6	40.9		40.5
	28-4-2023	10:05:09	IL&FS	LSI	Solapur	MH	18.040048	75.188278	150+000	252+000	161+000 LHS Outer	2	40.8000	0.3832	0.2286	0.1286	0.0825	0.0473	0.0369	0.0252	34.6	40.9		40.5
	28-4-2023	10:05:09	IL&FS	LSI	Solapur	MH	18.040048	75.188278	150+000	252+000	161+000 LHS Outer	3	41.0000	0.3714	0.2276	0.1153	0.0751	0.0480	0.0348	0.0233	34.6	40.9		40.5
450	28-4-2023	20:26:08	IL&FS	LSI	Solapur	MH	18.039514	75.190505	150+000	252+000	161+250 LHS Outer	1	37.9000	0.4689	0.2929	0.1535	0.0962	0.0601	0.0328	0.0280	29.8	32.9	T-27.4/37.5;6 Lane VUP Start	37.5
	28-4-2023	20:26:08	IL&FS	LSI	Solapur	MH	18.039514	75.190505	150+000	252+000	161+250 LHS Outer	2	38.6000	0.4446	0.2922	0.1586	0.0917	0.0607	0.0374	0.0321	29.8	32.9	T-27.4/37.5;6 Lane VUP Start	37.5
	28-4-2023	20:26:08	IL&FS	LSI	Solapur	MH	18.039514	75.190505	150+000	252+000	161+250 LHS Outer	3	38.5000	0.4488	0.2830	0.1595	0.0990	0.0607	0.0371	0.0318	29.8	32.9	T-27.4/37.5;6 Lane VUP Start	37.5
451	28-4-2023	20:28:12	IL&FS	LSI	Solapur	MH	18.038877	75.192817	150+000	252+000	161+500 LHS Outer	1	39.0000	0.3989	0.2779	0.1499	0.0843	0.0594	0.0403	0.0276	29.7	33.0		37.5
	28-4-2023	20:28:12	IL&FS	LSI	Solapur	MH	18.038877	75.192817	150+000	252+000	161+500 LHS Outer	2	39.4000	0.4125	0.2654	0.1367	0.0876	0.0641	0.0416	0.0285	29.7	33.0		37.5
	28-4-2023	20:28:12	IL&FS	LSI	Solapur	MH	18.038877	75.192817	150+000	252+000	161+500 LHS Outer	3	39.8000	0.4230	0.2780	0.1451	0.0840	0.0657	0.0401	0.0286	29.7	33.0		37.5
452	28-4-2023	20:30:40	IL&FS	LSI	Solapur	MH	18.038248	75.195114	150+000	252+000	161+750 LHS Outer	1	39.7000	0.4061	0.2452	0.1324	0.0766	0.0599	0.0381	0.0266	29.6	32.9	6 Lane VUP End	37.5
	28-4-2023	20:30:40	IL&FS	LSI	Solapur	MH	18.038248	75.195114	150+000	252+000	161+750 LHS Outer	2	39.2000	0.4010	0.2567	0.1278	0.0853	0.0645	0.0366	0.0271	29.6	32.9	6 Lane VUP End	37.5
	28-4-2023	20:30:40	IL&FS	LSI	Solapur	MH	18.038248	75.195114	150+000	252+000	161+750 LHS Outer	3	39.3000	0.4020	0.2495	0.1269	0.0782	0.0597	0.0374	0.0274	29.6	32.9	6 Lane VUP End	37.5
453	28-4-2023	20:32:33	IL&FS	LSI	Solapur	MH	18.037538	75.197288	150+000	252+000	162+000 LHS Outer	1	38.2000	0.4240	0.2826	0.1534	0.0985	0.0548	0.0360	0.0230	29.5	32.3		37.5
	28-4-2023	20:32:33	IL&FS	LSI	Solapur	MH	18.037538	75.197288	150+000	252+000	162+000 LHS Outer	2	38.8000	0.4363	0.2947	0.1512	0.0977	0.0544	0.0352	0.0234	29.5	32.3		37.5
	28-4-2023	20:32:33	IL&FS	LSI	Solapur	MH	18.037538	75.197288	150+000	252+000	162+000 LHS Outer	3	39.2000	0.4344	0.2833	0.1540	0.0934	0.0546	0.0360	0.0236	29.5	32.3		37.5
454	28-4-2023	20:35:18	IL&FS	LSI	Solapur	MH	18.037103	75.199165	150+000	252+000	162+200 LHS Outer	1	39.6000	0.4373	0.2823	0.1435	0.0996	0.0675	0.0468	0.0299	29.2	31.8		37.5
	28-4-2023	20:35:18	IL&FS	LSI	Solapur	MH	18.037103	75.199165	150+000	252+000	162+200 LHS Outer	2	38.7000	0.4279	0.2712	0.1461	0.0936	0.0648	0.0453	0.0306	29.2	31.8		37.5
	28-4-2023	20:35:18	IL&FS	LSI	Solapur	MH	18.037103	75.199165	150+000	252+000	162+200 LHS Outer	3	40.8000	0.4542	0.2736	0.1570	0.0977	0.0685	0.0488	0.0277	29.2	31.8		37.5
455	28-4-2023	20:39:51	IL&FS	LSI	Solapur	MH	18.032773	75.207496	150+000	252+000	163+260 LHS Outer	1	40.1000	0.2866	0.1705	0.1005	0.0578	0.0391	0.0240	0.0160	29.1	31.9		37.5
	28-4-2023	20:39:51	IL&FS	LSI	Solapur	MH	18.032773	75.207496	150+000	252+000	163+260 LHS Outer	2	40.0000	0.2747	0.1699	0.1058	0.0638	0.0389	0.0251	0.0156	29.1	31.9		37.5
	28-4-2023	20:39:51	IL&FS	LSI	Solapur	MH	18.032773	75.207496	150+000	252+000	163+260 LHS Outer	3	40.5000	0.2577	0.1711	0.1012	0.0629	0.0419	0.0235	0.0163	29.1	31.9		37.5
456	28-4-2023	20:41:47	IL&FS	LSI	Solapur	MH	18.030860	75.208580	150+000	252+000	163+500 LHS Outer	1	38.0000	0.4249	0.2736	0.1414	0.0842	0.0524	0.0283	0.0243	29.1	32.2		37.5
	28-4-2023	20:41:47	IL&FS	LSI	Solapur	MH	18.030860	75.208580	150+000	252+000	163+500 LHS Outer	2	38.4000	0.4099	0.2716	0.1468	0.0788	0.0525	0.0322	0.0278	29.1	32.2		37.5
	28-4-2023	20:41:47	IL&FS	LSI	Solapur	MH	18.030860	75.208580	150+000	252+000	163+500 LHS Outer	3	39.8000	0.4224	0.2796	0.1442	0.0863	0.0547	0.0301	0.0259	29.1	32.2		37.5
457	28-4-2023	20:43:43	IL&FS	LSI	Solapur	MH	18.028722	75.209770	150+000	252+000	163+760 LHS Outer	1	40.2000	0.3624	0.2394	0.1256	0.0896	0.0644	0.0401	0.0250	29.0	32.0		37.5
	28-4-2023	20:43:43	IL&FS	LSI	Solapur	MH	18.028722	75.209770	150+000	252+000	163+760 LHS Outer	2	40.3000	0.3541	0.2451	0.1294	0.0907	0.0636	0.0408	0.0234	29.0	32.0		37.5
	28-4-2023	20:43:43	IL&FS	LSI	Solapur	MH	18.028722	75.209770	150+000	252+000	163+760 LHS Outer	3	40.5000	0.3592	0.2355	0.1252	0.0843	0.0584	0.0379	0.0248	29.0	32.0		37.5
458	28-4-2023	20:45:48	IL&FS	LSI	Solapur	MH	18.026823	75.210685	150+000	252+000	164+000 LHS Outer	1	40.5000	0.3765	0.2394	0.1390	0.0803	0.0514	0.0414	0.0313	28.8	31.3		37.5
	28-4-2023	20:45:48	IL&FS	LSI	Solapur	MH	18.026823	75.210685	150+000	252+000	164+000 LHS Outer	2	40.4000	0.3595	0.2380	0.1350	0.0817	0.0507	0.0395	0.0296	28.8	31.3		37.5
	28-4-2023	20:45:48	IL&FS	LSI	Solapur	MH	18.026823	75.210685	150+000	252+000	164+000 LHS Outer	3	41.0000	0.3718	0.2367	0.1339	0.0815	0.0515	0.0422	0.0320	28.8	31.3		37.5
459	28-4-2023	20:51:10	IL&FS	LSI	Solapur	MH	18.024805	75.211662	150+000	252+000	164+250 LHS Outer	1	39.1000	0.3024	0.2073	0.1321	0.0789	0.0487	0.0270	0.0163	28.5	31.2		37.5
	28-4-2023	20:51:10	IL&FS	LSI	Solapur	MH	18.024805	75.211662	150+000	252+000	164+250 LHS Outer	2	39.5000	0.3070	0.2021	0.1291	0.0835	0.0502	0.0272	0.0165	28.5	31.2		37.5
	28-4-2023	20:51:10	IL&FS	LSI	Solapur	MH	18.024805	75.211662	150+000	252+000	164+250 LHS Outer	3	39.3000	0.2914	0.1971	0.1287	0.0858	0.0508	0.0286	0.0177	28.5	31.2		37.5
460	28-4-2023	20:53:06	IL&FS	LSI	Solapur	MH	18.022747	75.212615	150+000	252+000	164+500 LHS Outer	1	39.9000	0.3000	0.2026	0.1283	0.0857	0.0530	0.0403	0.0312	28.5	31.8		37.5
	28-4-2023	20:53:06	IL&FS	LSI	Solapur	MH	18.022747	75.212615	150+000	252+000	164+500 LHS Outer	2	39.7000	0.2956	0.1953	0.1178	0.0787	0.0531	0.0399	0.0316	28.5	31.8		37.5
	28-4-2023	20:53:06	IL&FS	LSI	Solapur	MH	18.022747	75.212615	150+000	252+000	164+500 LHS Outer	3	40.2000	0.3103	0.2006	0.1218	0.0791	0.0528	0.0407	0.0318	28.5	31.8		37.5
461	28-4-2023	20:55:07	IL&FS	LSI	Solapur	MH	18.020753	75.213584	150+000	252+000	164+750 LHS Outer	1	39.0000	0.3950	0.2457	0.1344	0.0887	0.0557	0.0380	0.0282	28.6	32.2		37.5
	28-4-2023	20:55:07	IL&FS	LSI	Solapur	MH	18.020753	75.213584	150+000	252+000	164+750 LHS Outer	2	39.1000	0.3979	0.2398	0.1264	0.0827	0.0541	0.0380	0.0282	28.6	32.2		37.5
	28-4-2023	20:55:07	IL&FS	LSI	Solapur	MH	18.020753	75.213584	150+000	252+000	164+750 LHS Outer	3	39.3000	0.4033	0.2352	0.1353	0.0887	0.0576	0.0383	0.0285	28.6	32.2		37.5
462	28-4-2023	20:57:30	IL&FS	LSI	Solapur	MH	18.018711	75.214584	150+000	252+000	165+000 LHS Outer	1	39.5000	0.3475	0.2128	0.1225	0.0825	0.0606	0.0405	0.0274	28.9	32.3		37.5
	28-4-2023	20:57:30	IL&FS	LSI	Solapur	MH	18.018711	75.214584	150+000	252+000	165+000 LHS Outer	2	39.3000	0.3362	0.2078	0.1243	0.0825	0.0590	0.0351	0.0260	28.9	32.3		37.5
	28-4-2023	20:57:30	IL&FS	LSI	Solapur	MH	18.018711	75.214584	150+000	252+000	165+000 LHS Outer	3	39.5000	0.3410	0.2036	0.1188	0.0854	0.0590	0.0374	0.0252	28.9	32.3		37.5
463	28-4-2023	21:00:10	IL&FS	LSI	Solapur	MH	18.017368	75.216606	150+000	252+000	165+250 LHS Outer	1	39.3000	0.3687	0.2333	0.1312	0.0829	0.0545	0.0375	0.0244	29.0	32.2		37.5
	28-4-2023	21:00:10	IL&FS	LSI	Solapur	MH	18.017368	75.216606	150+000	252+000	165+250 LHS Outer	2	39.0000	0.3635	0.2269	0.1321	0.0806	0.0499	0.0340	0.0236	29.0	32.2		37.5
	28-4-2023	21:00:10	IL&FS	LSI	Solapur	MH	18.017368	75.216606	150+000	252+000	165+250 LHS Outer	3	39.2000	0.3595	0.2352	0.1296	0.0845	0.0480	0.0335	0.0239	29.0	32.2		37.5
464	28-4-2023	21:02:30	IL&FS	LSI	Solapur	MH	18.016408	75.218750	150+000	252+000	165+500 LHS Outer	1	39.6000	0.3329	0.2189	0.1283	0.0694	0.0513	0.0332	0.0204	29.3	32.5		37.5
	28-4-2023	21:02:30	IL&FS	LSI	Solapur	MH	18.016408	75.218750	150+000	252+000	165+500 LHS Outer	2	40.4000	0.3448	0.2097	0.1186	0.0763	0.0539	0.0346	0.0203	29.3	32.5		37.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	21:02:30	IL&FS	LSI	Solapur	MH	18.016408	75.218750	150+000	252+000	165+500 LHS Outer	3	40.4000	0.3433	0.1976	0.1189	0.0698	0.0523	0.0351	0.0228	29.3	32.5		37.5
465	28-4-2023	21:04:24	IL&FS	LSI	Solapur	MH	18.015497	75.220870	150+000	252+000	165+750 LHS Outer	1	39.1000	0.4099	0.2519	0.1549	0.0902	0.0497	0.0248	0.0169	29.4	32.2		37.5
	28-4-2023	21:04:24	IL&FS	LSI	Solapur	MH	18.015497	75.220870	150+000	252+000	165+750 LHS Outer	2	39.3000	0.3982	0.2742	0.1551	0.0831	0.0462	0.0217	0.0187	29.4	32.2		37.5
	28-4-2023	21:04:24	IL&FS	LSI	Solapur	MH	18.015497	75.220870	150+000	252+000	165+750 LHS Outer	3	39.6000	0.4085	0.2543	0.1525	0.0912	0.0500	0.0230	0.0192	29.4	32.2		37.5
466	28-4-2023	21:26:51	IL&FS	LSI	Solapur	MH	18.014665	75.222862	150+000	252+000	165+980 LHS Outer	1	42.1000	0.1890	0.1354	0.0832	0.0486	0.0350	0.0261	0.0229	29.6	31.4	T-26.6/37.8	37.8
	28-4-2023	21:26:51	IL&FS	LSI	Solapur	MH	18.014665	75.222862	150+000	252+000	165+980 LHS Outer	2	42.1000	0.1905	0.1223	0.0787	0.0477	0.0345	0.0254	0.0223	29.6	31.4	T-26.6/37.8	37.8
	28-4-2023	21:26:51	IL&FS	LSI	Solapur	MH	18.014665	75.222862	150+000	252+000	165+980 LHS Outer	3	41.7000	0.1788	0.1306	0.0827	0.0496	0.0351	0.0258	0.0226	29.6	31.4	T-26.6/37.8	37.8
467	28-4-2023	21:28:46	IL&FS	LSI	Solapur	MH	18.013673	75.225112	150+000	252+000	166+250 LHS Outer	1	40.8000	0.1658	0.1240	0.0956	0.0705	0.0511	0.0341	0.0225	29.3	32.0		37.8
	28-4-2023	21:28:46	IL&FS	LSI	Solapur	MH	18.013673	75.225112	150+000	252+000	166+250 LHS Outer	2	41.6000	0.1696	0.1305	0.0994	0.0704	0.0517	0.0365	0.0256	29.3	32.0		37.8
	28-4-2023	21:28:46	IL&FS	LSI	Solapur	MH	18.013673	75.225112	150+000	252+000	166+250 LHS Outer	3	41.2000	0.1684	0.1296	0.0948	0.0661	0.0450	0.0345	0.0266	29.3	32.0		37.8
468	28-4-2023	21:30:39	IL&FS	LSI	Solapur	MH	18.012865	75.227325	150+000	252+000	166+500 LHS Outer	1	41.2000	0.2541	0.1652	0.1095	0.0771	0.0503	0.0335	0.0242	29.5	31.8		37.8
	28-4-2023	21:30:39	IL&FS	LSI	Solapur	MH	18.012865	75.227325	150+000	252+000	166+500 LHS Outer	2	41.0000	0.2560	0.1695	0.1062	0.0745	0.0517	0.0363	0.0267	29.5	31.8		37.8
	28-4-2023	21:30:39	IL&FS	LSI	Solapur	MH	18.012865	75.227325	150+000	252+000	166+500 LHS Outer	3	41.6000	0.2439	0.1660	0.1077	0.0758	0.0512	0.0351	0.0256	29.5	31.8		37.8
469	28-4-2023	21:32:23	IL&FS	LSI	Solapur	MH	18.012376	75.229667	150+000	252+000	166+750 LHS Outer	1	42.7000	0.1900	0.1359	0.1014	0.0756	0.0538	0.0369	0.0252	29.2	31.7		37.8
	28-4-2023	21:32:23	IL&FS	LSI	Solapur	MH	18.012376	75.229667	150+000	252+000	166+750 LHS Outer	2	42.8000	0.1970	0.1388	0.1007	0.0754	0.0535	0.0396	0.0276	29.2	31.7		37.8
	28-4-2023	21:32:23	IL&FS	LSI	Solapur	MH	18.012376	75.229667	150+000	252+000	166+750 LHS Outer	3	42.3000	0.2097	0.1448	0.1003	0.0740	0.0531	0.0390	0.0271	29.2	31.7		37.8
470	28-4-2023	21:34:08	IL&FS	LSI	Solapur	MH	18.012056	75.231925	150+000	252+000	167+000 LHS Outer	1	40.7000	0.2331	0.1627	0.1084	0.0722	0.0455	0.0391	0.0342	29.2	31.6		37.8
	28-4-2023	21:34:08	IL&FS	LSI	Solapur	MH	18.012056	75.231925	150+000	252+000	167+000 LHS Outer	2	41.0000	0.2289	0.1582	0.1011	0.0714	0.0484	0.0426	0.0380	29.2	31.6		37.8
	28-4-2023	21:34:08	IL&FS	LSI	Solapur	MH	18.012056	75.231925	150+000	252+000	167+000 LHS Outer	3	41.3000	0.2260	0.1547	0.0984	0.0705	0.0488	0.0407	0.0350	29.2	31.6		37.8
471	28-4-2023	21:36:01	IL&FS	LSI	Solapur	MH	18.011718	75.234222	150+000	252+000	167+250 LHS Outer	1	39.2000	0.3710	0.2151	0.1260	0.0911	0.0650	0.0451	0.0285	29.1	31.9		37.8
	28-4-2023	21:36:01	IL&FS	LSI	Solapur	MH	18.011718	75.234222	150+000	252+000	167+250 LHS Outer	2	39.7000	0.3576	0.2196	0.1206	0.0887	0.0632	0.0452	0.0286	29.1	31.9		37.8
	28-4-2023	21:36:01	IL&FS	LSI	Solapur	MH	18.011718	75.234222	150+000	252+000	167+250 LHS Outer	3	39.8000	0.3760	0.2191	0.1265	0.0893	0.0626	0.0459	0.0293	29.1	31.9		37.8
472	28-4-2023	21:37:55	IL&FS	LSI	Solapur	MH	18.010725	75.236091	150+000	252+000	167+470 LHS Outer	1	40.9000	0.3362	0.2368	0.1362	0.0754	0.0454	0.0353	0.0277	29.3	31.9		37.8
	28-4-2023	21:37:55	IL&FS	LSI	Solapur	MH	18.010725	75.236091	150+000	252+000	167+470 LHS Outer	2	40.3000	0.3385	0.2356	0.1342	0.0715	0.0450	0.0356	0.0286	29.3	31.9		37.8
	28-4-2023	21:37:55	IL&FS	LSI	Solapur	MH	18.010725	75.236091	150+000	252+000	167+470 LHS Outer	3	40.3000	0.3363	0.2344	0.1342	0.0735	0.0456	0.0367	0.0308	29.3	31.9		37.8
473	28-4-2023	21:39:46	IL&FS	LSI	Solapur	MH	18.008872	75.237960	150+000	252+000	167+750 LHS Outer	1	39.1000	0.4557	0.2697	0.1384	0.0855	0.0536	0.0321	0.0187	29.3	32.2		37.8
	28-4-2023	21:39:46	IL&FS	LSI	Solapur	MH	18.008872	75.237960	150+000	252+000	167+750 LHS Outer	2	37.7000	0.4336	0.2553	0.1291	0.0803	0.0547	0.0324	0.0166	29.3	32.2		37.8
	28-4-2023	21:39:46	IL&FS	LSI	Solapur	MH	18.008872	75.237960	150+000	252+000	167+750 LHS Outer	3	38.3000	0.4266	0.2447	0.1302	0.0755	0.0523	0.0316	0.0171	29.3	32.2		37.8
474	28-4-2023	21:41:39	IL&FS	LSI	Solapur	MH	18.008098	75.239997	150+000	252+000	168+000 LHS Outer	1	39.7000	0.4764	0.3071	0.1727	0.0949	0.0595	0.0382	0.0248	29.2	32.3		37.8
	28-4-2023	21:41:39	IL&FS	LSI	Solapur	MH	18.008098	75.239997	150+000	252+000	168+000 LHS Outer	2	40.3000	0.4722	0.3007	0.1724	0.0914	0.0610	0.0420	0.0278	29.2	32.3		37.8
	28-4-2023	21:41:39	IL&FS	LSI	Solapur	MH	18.008098	75.239997	150+000	252+000	168+000 LHS Outer	3	38.6000	0.4593	0.2767	0.1551	0.0943	0.0554	0.0369	0.0249	29.2	32.3		37.8
475	28-4-2023	21:43:36	IL&FS	LSI	Solapur	MH	18.007513	75.242340	150+000	252+000	168+250 LHS Outer	1	43.1000	0.1341	0.0885	0.0597	0.0444	0.0341	0.0278	0.0190	29.1	32.4		37.8
	28-4-2023	21:43:36	IL&FS	LSI	Solapur	MH	18.007513	75.242340	150+000	252+000	168+250 LHS Outer	2	42.0000	0.1309	0.0863	0.0558	0.0422	0.0331	0.0266	0.0179	29.1	32.4		37.8
	28-4-2023	21:43:36	IL&FS	LSI	Solapur	MH	18.007513	75.242340	150+000	252+000	168+250 LHS Outer	3	43.5000	0.1348	0.0871	0.0576	0.0431	0.0338	0.0274	0.0187	29.1	32.4		37.8
476	28-4-2023	21:45:27	IL&FS	LSI	Solapur	MH	18.006938	75.244583	150+000	252+000	168+500 LHS Outer	1	43.1000	0.1090	0.0667	0.0398	0.0280	0.0205	0.0127	0.0114	29.1	32.6		37.8
	28-4-2023	21:45:27	IL&FS	LSI	Solapur	MH	18.006938	75.244583	150+000	252+000	168+500 LHS Outer	2	42.6000	0.1024	0.0665	0.0393	0.0271	0.0194	0.0141	0.0127	29.1	32.6		37.8
	28-4-2023	21:45:27	IL&FS	LSI	Solapur	MH	18.006938	75.244583	150+000	252+000	168+500 LHS Outer	3	42.6000	0.1015	0.0666	0.0393	0.0276	0.0193	0.0138	0.0124	29.1	32.6		37.8
477	28-4-2023	21:48:45	IL&FS	LSI	Solapur	MH	18.006370	75.246917	150+000	252+000	168+750 LHS Outer	1	41.9000	0.1913	0.1353	0.0998	0.0734	0.0426	0.0266	0.0161	29.3	32.2		37.8
	28-4-2023	21:48:45	IL&FS	LSI	Solapur	MH	18.006370	75.246917	150+000	252+000	168+750 LHS Outer	2	40.8000	0.1961	0.1387	0.1023	0.0720	0.0456	0.0282	0.0157	29.3	32.2		37.8
	28-4-2023	21:48:45	IL&FS	LSI	Solapur	MH	18.006370	75.246917	150+000	252+000	168+750 LHS Outer	3	41.2000	0.1973	0.1371	0.0963	0.0754	0.0427	0.0267	0.0161	29.3	32.2		37.8
478	28-4-2023	21:50:31	IL&FS	LSI	Solapur	MH	18.005826	75.249114	150+000	252+000	169+000 LHS Outer	1	41.3000	0.2066	0.1422	0.0974	0.0678	0.0455	0.0295	0.0248	29.3	32.0		37.8
	28-4-2023	21:50:31	IL&FS	LSI	Solapur	MH	18.005826	75.249114	150+000	252+000	169+000 LHS Outer	2	41.7000	0.2074	0.1377	0.0879	0.0619	0.0454	0.0294	0.0254	29.3	32.0		37.8
	28-4-2023	21:50:31	IL&FS	LSI	Solapur	MH	18.005826	75.249114	150+000	252+000	169+000 LHS Outer	3	41.4000	0.2197	0.1394	0.0890	0.0643	0.0457	0.0287	0.0246	29.3	32.0		37.8
479	28-4-2023	21:52:19	IL&FS	LSI	Solapur	MH	18.005323	75.251419	150+000	252+000	169+250 LHS Outer	1	43.8000	0.1571	0.1089	0.0786	0.0560	0.0418	0.0360	0.0284	29.2	32.0		37.8
	28-4-2023	21:52:19	IL&FS	LSI	Solapur	MH	18.005323	75.251419	150+000	252+000	169+250 LHS Outer	2	43.9000	0.1492	0.1146	0.0883	0.0619	0.0424	0.0358	0.0316	29.2	32.0		37.8
	28-4-2023	21:52:19	IL&FS	LSI	Solapur	MH	18.005323	75.251419	150+000	252+000	169+250 LHS Outer	3	43.9000	0.1418	0.1067	0.0850	0.0616	0.0438	0.0356	0.0280	29.2	32.0		37.8
480	28-4-2023	21:54:12	IL&FS	LSI	Solapur	MH	18.004800	75.253715	150+000	252+000	169+500 LHS Outer	1	40.3000	0.1784	0.1254	0.0918	0.0627	0.0501	0.0406	0.0315	29.1	32.0		37.8
	28-4-2023	21:54:12	IL&FS	LSI	Solapur	MH	18.004800	75.253715	150+000	252+000	169+500 LHS Outer	2	40.4000	0.1714	0.1245	0.0885	0.0612	0.0480	0.0395	0.0306	29.1	32.0		37.8
	28-4-2023	21:54:12	IL&FS	LSI	Solapur	MH	18.004800	75.253715	150+000	252+000	169+500 LHS Outer	3	39.7000	0.1607	0.1172	0.0833	0.0575	0.0457	0.0379	0.0291	29.1	32.0		37.8
481	28-4-2023	21:56:06	IL&FS	LSI	Solapur	MH	18.004259	75.256095	150+000	252+000	169+750 LHS Outer	1	40.7000	0.3465	0.2251	0.1302	0.0885	0.0471	0.0332	0.0299	29.0	31.5		37.8
	28-4-2023	21:56:06	IL&FS	LSI	Solapur	MH	18.004259	75.256095	150+000	252+000	169+750 LHS Outer	2	41.0000	0.3398	0.2257	0.1323	0.0875	0.0489	0.0336	0.0302	29.0	31.5		37.8
	28-4-2023	21:56:06	IL&FS	LSI	Solapur	MH	18.004259	75.256095	150+000	252+000	169+750 LHS Outer	3	41.5000	0.3502	0.2182	0.1372	0.0884	0.0497	0.0336	0.0194	29.0	31.5		37.8
482	28-4-2023	21:57:58	IL&FS	LSI	Solapur	MH	18.003759	75.258354	150+000	252+000	170+000 LHS Outer	1	41.2000	0.2467	0.1923	0.1192	0.0815	0.0639	0.0433	0.0312	29.0	31.9		37.8
	28-4-2023	21:57:58	IL&FS	LSI	Solapur	MH	18.003759	75.258354	150+000	252+000	170+000 LHS Outer	2	42.0000	0.2430	0.1820	0.1270	0.0826	0.0668	0.0452	0.0319	29.0	31.9		37.8
	28-4-2023	21:57:58	IL&FS	LSI	Solapur	MH	18.003759	75.258354	150+000	252+000	170+000 LHS Outer	3	42.1000	0.2446	0.1809	0.1208	0.0842	0.0624	0.0441	0.0321	29.0	31.9		37.8
483	28-4-2023	22:00:11	IL&FS	LSI	Solapur	MH	18.003257	75.260612	150+000	252+000	170+250 LHS Outer	1	42.0000	0.2209	0.1530	0.1073	0.0733	0.0497	0.0361	0.0265	29.0	31.6	T-26.1/38.4	38.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	28-4-2023	22:00:11	IL&FS	LSI	Solapur	MH	18.003257	75.260612	150+000	252+000	170+250 LHS Outer	2	41.1000	0.2239	0.1534	0.1034	0.0732	0.0497	0.0360	0.0299	29.0	31.6	T-26.1/38.4	38.4
	28-4-2023	22:00:11	IL&FS	LSI	Solapur	MH	18.003257	75.260612	150+000	252+000	170+250 LHS Outer	3	42.5000	0.2271	0.1566	0.1083	0.0744	0.0507	0.0354	0.0259	29.0	31.6	T-26.1/38.4	38.4
484	28-4-2023	22:04:06	IL&FS	LSI	Solapur	MH	18.002769	75.262992	150+000	252+000	170+500 LHS Outer	1	39.6000	0.4747	0.2876	0.1554	0.0784	0.0569	0.0405	0.0246	28.8	31.9		38.4
	28-4-2023	22:04:06	IL&FS	LSI	Solapur	MH	18.002769	75.262992	150+000	252+000	170+500 LHS Outer	2	39.6000	0.4789	0.2842	0.1552	0.0827	0.0535	0.0359	0.0232	28.8	31.9		38.4
	28-4-2023	22:04:06	IL&FS	LSI	Solapur	MH	18.002769	75.262992	150+000	252+000	170+500 LHS Outer	3	39.6000	0.4609	0.2982	0.1560	0.0825	0.0565	0.0399	0.0227	28.8	31.9		38.4
485	28-4-2023	22:05:56	IL&FS	LSI	Solapur	MH	18.002565	75.265327	150+000	252+000	170+750 LHS Outer	1	41.6000	0.3444	0.2283	0.1269	0.0820	0.0557	0.0378	0.0263	29.1	31.9		38.4
	28-4-2023	22:05:56	IL&FS	LSI	Solapur	MH	18.002565	75.265327	150+000	252+000	170+750 LHS Outer	2	41.9000	0.3551	0.2202	0.1308	0.0803	0.0544	0.0346	0.0255	29.1	31.9		38.4
	28-4-2023	22:05:56	IL&FS	LSI	Solapur	MH	18.002565	75.265327	150+000	252+000	170+750 LHS Outer	3	40.5000	0.3393	0.2108	0.1184	0.0781	0.0522	0.0350	0.0215	29.1	31.9		38.4
486	28-4-2023	22:07:56	IL&FS	LSI	Solapur	MH	18.002017	75.267341	150+000	252+000	170+980 LHS Outer	1	41.3000	0.1598	0.1134	0.0827	0.0575	0.0433	0.0325	0.0233	28.7	31.1		38.4
	28-4-2023	22:07:56	IL&FS	LSI	Solapur	MH	18.002017	75.267341	150+000	252+000	170+980 LHS Outer	2	41.5000	0.1660	0.1167	0.0788	0.0576	0.0422	0.0326	0.0264	28.7	31.1		38.4
	28-4-2023	22:07:56	IL&FS	LSI	Solapur	MH	18.002017	75.267341	150+000	252+000	170+980 LHS Outer	3	41.8000	0.1764	0.1197	0.0806	0.0584	0.0433	0.0331	0.0246	28.7	31.1		38.4
487	28-4-2023	22:09:55	IL&FS	LSI	Solapur	MH	18.000802	75.269638	150+000	252+000	171+250 LHS Outer	1	41.8000	0.2700	0.1604	0.1017	0.0730	0.0505	0.0357	0.0284	28.9	31.6		38.4
	28-4-2023	22:09:55	IL&FS	LSI	Solapur	MH	18.000802	75.269638	150+000	252+000	171+250 LHS Outer	2	41.0000	0.2627	0.1580	0.0984	0.0669	0.0432	0.0322	0.0278	28.9	31.6		38.4
	28-4-2023	22:09:55	IL&FS	LSI	Solapur	MH	18.000802	75.269638	150+000	252+000	171+250 LHS Outer	3	41.1000	0.2580	0.1640	0.1034	0.0715	0.0517	0.0324	0.0281	28.9	31.6		38.4
488	28-4-2023	22:11:48	IL&FS	LSI	Solapur	MH	17.999696	75.271636	150+000	252+000	171+500 LHS Outer	1	42.7000	0.2199	0.1639	0.1271	0.0898	0.0627	0.0413	0.0351	29.2	31.7		38.4
	28-4-2023	22:11:48	IL&FS	LSI	Solapur	MH	17.999696	75.271636	150+000	252+000	171+500 LHS Outer	2	43.0000	0.2298	0.1612	0.1164	0.0874	0.0676	0.0387	0.0362	29.2	31.7		38.4
	28-4-2023	22:11:48	IL&FS	LSI	Solapur	MH	17.999696	75.271636	150+000	252+000	171+500 LHS Outer	3	43.0000	0.2277	0.1620	0.1194	0.0858	0.0645	0.0373	0.0326	29.2	31.7		38.4
489	28-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.998540	75.273696	150+000	252+000	171+750 LHS Outer	1	41.1000	0.3272	0.2146	0.1372	0.0925	0.0617	0.0489	0.0332	28.8	31.8		38.4
	28-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.998540	75.273696	150+000	252+000	171+750 LHS Outer	2	41.2000	0.3280	0.2106	0.1375	0.0960	0.0661	0.0444	0.0325	28.8	31.8		38.4
	28-4-2023	22:16:56	IL&FS	LSI	Solapur	MH	17.998540	75.273696	150+000	252+000	171+750 LHS Outer	3	40.6000	0.3232	0.2042	0.1368	0.0939	0.0662	0.0492	0.0320	28.8	31.8		38.4
490	28-4-2023	22:19:33	IL&FS	LSI	Solapur	MH	17.997423	75.275703	150+000	252+000	172+000 LHS Outer	1	42.7000	0.1951	0.1260	0.0773	0.0520	0.0374	0.0287	0.0252	28.9	31.4		38.4
	28-4-2023	22:19:33	IL&FS	LSI	Solapur	MH	17.997423	75.275703	150+000	252+000	172+000 LHS Outer	2	43.1000	0.1940	0.1325	0.0881	0.0558	0.0395	0.0291	0.0256	28.9	31.4		38.4
	28-4-2023	22:19:33	IL&FS	LSI	Solapur	MH	17.997423	75.275703	150+000	252+000	172+000 LHS Outer	3	43.4000	0.1917	0.1276	0.0781	0.0579	0.0405	0.0291	0.0256	28.9	31.4		38.4
491	28-4-2023	22:21:38	IL&FS	LSI	Solapur	MH	17.996324	75.277709	150+000	252+000	172+250 LHS Outer	1	41.7000	0.2340	0.1529	0.1022	0.0722	0.0466	0.0330	0.0297	28.7	31.2		38.4
	28-4-2023	22:21:38	IL&FS	LSI	Solapur	MH	17.996324	75.277709	150+000	252+000	172+250 LHS Outer	2	41.6000	0.2246	0.1507	0.1000	0.0696	0.0484	0.0332	0.0299	28.7	31.2		38.4
	28-4-2023	22:21:38	IL&FS	LSI	Solapur	MH	17.996324	75.277709	150+000	252+000	172+250 LHS Outer	3	41.9000	0.2318	0.1450	0.1032	0.0679	0.0497	0.0353	0.0318	28.7	31.2		38.4
492	28-4-2023	22:23:31	IL&FS	LSI	Solapur	MH	17.995231	75.279685	150+000	252+000	172+500 LHS Outer	1	40.7000	0.1974	0.1374	0.0836	0.0481	0.0335	0.0224	0.0140	28.7	31.5		38.4
	28-4-2023	22:23:31	IL&FS	LSI	Solapur	MH	17.995231	75.279685	150+000	252+000	172+500 LHS Outer	2	40.9000	0.2014	0.1312	0.0764	0.0505	0.0356	0.0222	0.0138	28.7	31.5		38.4
	28-4-2023	22:23:31	IL&FS	LSI	Solapur	MH	17.995231	75.279685	150+000	252+000	172+500 LHS Outer	3	41.0000	0.1859	0.1353	0.0808	0.0473	0.0346	0.0212	0.0125	28.7	31.5		38.4
493	28-4-2023	22:25:28	IL&FS	LSI	Solapur	MH	17.994031	75.281875	150+000	252+000	172+750 LHS Outer	1	41.5000	0.1379	0.0969	0.0648	0.0435	0.0302	0.0226	0.0163	28.7	31.5		38.4
	28-4-2023	22:25:28	IL&FS	LSI	Solapur	MH	17.994031	75.281875	150+000	252+000	172+750 LHS Outer	2	43.4000	0.1342	0.0955	0.0652	0.0449	0.0306	0.0237	0.0173	28.7	31.5		38.4
	28-4-2023	22:25:28	IL&FS	LSI	Solapur	MH	17.994031	75.281875	150+000	252+000	172+750 LHS Outer	3	43.0000	0.1471	0.1025	0.0703	0.0452	0.0280	0.0216	0.0154	28.7	31.5		38.4
494	28-4-2023	22:27:16	IL&FS	LSI	Solapur	MH	17.992910	75.283859	150+000	252+000	173+000 LHS Outer	1	43.2000	0.1496	0.1041	0.0737	0.0562	0.0435	0.0339	0.0245	28.9	31.8		38.4
	28-4-2023	22:27:16	IL&FS	LSI	Solapur	MH	17.992910	75.283859	150+000	252+000	173+000 LHS Outer	2	42.3000	0.1480	0.1021	0.0724	0.0518	0.0380	0.0339	0.0245	28.9	31.8		38.4
	28-4-2023	22:27:16	IL&FS	LSI	Solapur	MH	17.992910	75.283859	150+000	252+000	173+000 LHS Outer	3	42.6000	0.1472	0.1002	0.0698	0.0543	0.0441	0.0343	0.0249	28.9	31.8		38.4
495	28-4-2023	22:29:40	IL&FS	LSI	Solapur	MH	17.991830	75.285804	150+000	252+000	173+250 LHS Outer	1	41.0000	0.3433	0.2066	0.1233	0.0704	0.0483	0.0295	0.0260	28.7	31.3		38.4
	28-4-2023	22:29:40	IL&FS	LSI	Solapur	MH	17.991830	75.285804	150+000	252+000	173+250 LHS Outer	2	41.5000	0.3365	0.2126	0.1294	0.0763	0.0536	0.0336	0.0296	28.7	31.3		38.4
	28-4-2023	22:29:40	IL&FS	LSI	Solapur	MH	17.991830	75.285804	150+000	252+000	173+250 LHS Outer	3	41.0000	0.3217	0.2075	0.1259	0.0692	0.0500	0.0336	0.0296	28.7	31.3		38.4
496	28-4-2023	22:31:50	IL&FS	LSI	Solapur	MH	17.990728	75.287864	150+000	252+000	173+500 LHS Outer	1	41.3000	0.3675	0.2371	0.1430	0.0899	0.0670	0.0402	0.0308	29.0	31.5		38.4
	28-4-2023	22:31:50	IL&FS	LSI	Solapur	MH	17.990728	75.287864	150+000	252+000	173+500 LHS Outer	2	41.4000	0.3616	0.2435	0.1478	0.0899	0.0663	0.0430	0.0317	29.0	31.5		38.4
	28-4-2023	22:31:50	IL&FS	LSI	Solapur	MH	17.990728	75.287864	150+000	252+000	173+500 LHS Outer	3	41.2000	0.3601	0.2372	0.1384	0.0901	0.0686	0.0399	0.0311	29.0	31.5		38.4
497	28-4-2023	22:33:46	IL&FS	LSI	Solapur	MH	17.989599	75.289916	150+000	252+000	173+750 LHS Outer	1	41.2000	0.3022	0.2013	0.1215	0.0756	0.0472	0.0290	0.0160	29.0	31.2		38.4
	28-4-2023	22:33:46	IL&FS	LSI	Solapur	MH	17.989599	75.289916	150+000	252+000	173+750 LHS Outer	2	41.7000	0.2876	0.2029	0.1247	0.0781	0.0482	0.0301	0.0166	29.0	31.2		38.4
	28-4-2023	22:33:46	IL&FS	LSI	Solapur	MH	17.989599	75.289916	150+000	252+000	173+750 LHS Outer	3	41.5000	0.2918	0.2036	0.1232	0.0798	0.0482	0.0299	0.0161	29.0	31.2		38.4
498	28-4-2023	22:35:45	IL&FS	LSI	Solapur	MH	17.988437	75.291999	150+000	252+000	174+000 LHS Outer	1	39.8000	0.4236	0.2521	0.1486	0.1031	0.0777	0.0525	0.0381	29.1	31.4		38.4
	28-4-2023	22:35:45	IL&FS	LSI	Solapur	MH	17.988437	75.291999	150+000	252+000	174+000 LHS Outer	2	40.0000	0.4142	0.2576	0.1375	0.1049	0.0778	0.0532	0.0389	29.1	31.4		38.4
	28-4-2023	22:35:45	IL&FS	LSI	Solapur	MH	17.988437	75.291999	150+000	252+000	174+000 LHS Outer	3	40.0000	0.4154	0.2459	0.1428	0.1015	0.0782	0.0530	0.0389	29.1	31.4		38.4
499	29-4-2023	00:32:53	IL&FS	LSI	Solapur	MH	17.986930	75.294036	150+000	252+000	174+280 LHS Outer	1	40.8000	0.3057	0.1813	0.1041	0.0624	0.0332	0.0256	0.0208	27.2	29.1	T-26/34.5	34.5
	29-4-2023	00:32:53	IL&FS	LSI	Solapur	MH	17.986930	75.294036	150+000	252+000	174+280 LHS Outer	2	41.0000	0.2873	0.1905	0.1027	0.0617	0.0325	0.0252	0.0200	27.2	29.1	T-26/34.5	34.5
	29-4-2023	00:32:53	IL&FS	LSI	Solapur	MH	17.986930	75.294036	150+000	252+000	174+280 LHS Outer	3	41.0000	0.2823	0.1849	0.1051	0.0620	0.0343	0.0270	0.0217	27.2	29.1	T-26/34.5	34.5
500	29-4-2023	00:36:30	IL&FS	LSI	Solapur	MH	17.985939	75.295806	150+000	252+000	174+500 LHS Outer	1	40.4000	0.1334	0.1000	0.0739	0.0499	0.0346	0.0275	0.0208	27.2	29.0		34.5
	29-4-2023	00:36:30	IL&FS	LSI	Solapur	MH	17.985939	75.295806	150+000	252+000	174+500 LHS Outer	2	42.9000	0.1321	0.0990	0.0780	0.0521	0.0356	0.0296	0.0226	27.2	29.0		34.5
	29-4-2023	00:36:30	IL&FS	LSI	Solapur	MH	17.985939	75.295806	150+000	252+000	174+500 LHS Outer	3	42.7000	0.1401	0.0985	0.0727	0.0517	0.0362	0.0301	0.0231	27.2	29.0		34.5
501	29-4-2023	00:38:20	IL&FS	LSI	Solapur	MH	17.984930	75.297889	150+000	252+000	174+750 LHS Outer	1	42.3000	0.2248	0.1369	0.1021	0.0748	0.0544	0.0385	0.0323	27.2	29.2		34.5
	29-4-2023	00:38:20	IL&FS	LSI	Solapur	MH	17.984930	75.297889	150+000	252+000	174+750 LHS Outer	2	42.7000	0.2243	0.1470	0.1067	0.0758	0.0537	0.0398	0.0327	27.2	29.2		34.5
	29-4-2023	00:38:20	IL&FS	LSI	Solapur	MH	17.984930	75.297889	150+000	252+000	174+750 LHS Outer	3	42.2000	0.2159	0.1360	0.0990	0.0730	0.0517	0.0377	0.0322	27.2	29.2		34.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
502	29-4-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.983758	75.300086	150+000	252+000	175+000 LHS Outer	1	42.6000	0.1523	0.1118	0.0796	0.0618	0.0480	0.0380	0.0312	27.3	29.3		34.5
	29-4-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.983758	75.300086	150+000	252+000	175+000 LHS Outer	2	43.0000	0.1552	0.1075	0.0816	0.0627	0.0481	0.0368	0.0294	27.3	29.3		34.5
	29-4-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.983758	75.300086	150+000	252+000	175+000 LHS Outer	3	43.4000	0.1442	0.1077	0.0856	0.0637	0.0502	0.0399	0.0335	27.3	29.3		34.5
503	29-4-2023	00:42:05	IL&FS	LSI	Solapur	MH	17.982395	75.301933	150+000	252+000	175+250 LHS Outer	1	42.0000	0.1840	0.1354	0.1014	0.0760	0.0549	0.0384	0.0286	27.4	29.6		34.5
	29-4-2023	00:42:05	IL&FS	LSI	Solapur	MH	17.982395	75.301933	150+000	252+000	175+250 LHS Outer	2	41.7000	0.1854	0.1378	0.0959	0.0687	0.0508	0.0382	0.0284	27.4	29.6		34.5
	29-4-2023	00:42:05	IL&FS	LSI	Solapur	MH	17.982395	75.301933	150+000	252+000	175+250 LHS Outer	3	42.0000	0.1770	0.1379	0.0977	0.0683	0.0496	0.0379	0.0281	27.4	29.6		34.5
504	29-4-2023	00:43:50	IL&FS	LSI	Solapur	MH	17.980848	75.303672	150+000	252+000	175+500 LHS Outer	1	41.9000	0.1698	0.1234	0.0928	0.0720	0.0547	0.0414	0.0275	27.3	29.3		34.5
	29-4-2023	00:43:50	IL&FS	LSI	Solapur	MH	17.980848	75.303672	150+000	252+000	175+500 LHS Outer	2	42.0000	0.1588	0.1183	0.0911	0.0674	0.0509	0.0400	0.0296	27.3	29.3		34.5
	29-4-2023	00:43:50	IL&FS	LSI	Solapur	MH	17.980848	75.303672	150+000	252+000	175+500 LHS Outer	3	41.8000	0.1689	0.1286	0.0970	0.0684	0.0539	0.0434	0.0287	27.3	29.3		34.5
505	29-4-2023	00:45:29	IL&FS	LSI	Solapur	MH	17.979347	75.305366	150+000	252+000	175+750 LHS Outer	1	41.5000	0.1585	0.1120	0.0803	0.0597	0.0437	0.0282	0.0187	27.2	29.3		34.5
	29-4-2023	00:45:29	IL&FS	LSI	Solapur	MH	17.979347	75.305366	150+000	252+000	175+750 LHS Outer	2	42.8000	0.1643	0.1180	0.0831	0.0611	0.0441	0.0302	0.0196	27.2	29.3		34.5
	29-4-2023	00:45:29	IL&FS	LSI	Solapur	MH	17.979347	75.305366	150+000	252+000	175+750 LHS Outer	3	41.4000	0.1549	0.1105	0.0812	0.0590	0.0452	0.0297	0.0193	27.2	29.3		34.5
506	29-4-2023	00:47:14	IL&FS	LSI	Solapur	MH	17.977809	75.307121	150+000	252+000	176+000 LHS Outer	1	42.6000	0.1466	0.1058	0.0761	0.0586	0.0478	0.0296	0.0218	27.1	29.2		34.5
	29-4-2023	00:47:14	IL&FS	LSI	Solapur	MH	17.977809	75.307121	150+000	252+000	176+000 LHS Outer	2	42.4000	0.1576	0.1067	0.0744	0.0556	0.0434	0.0246	0.0173	27.1	29.2		34.5
	29-4-2023	00:47:14	IL&FS	LSI	Solapur	MH	17.977809	75.307121	150+000	252+000	176+000 LHS Outer	3	43.9000	0.1517	0.1108	0.0852	0.0645	0.0490	0.0301	0.0223	27.1	29.2		34.5
507	29-4-2023	00:48:55	IL&FS	LSI	Solapur	MH	17.976280	75.308853	150+000	252+000	176+250 LHS Outer	1	41.2000	0.2779	0.2063	0.1502	0.1034	0.0672	0.0412	0.0252	27.2	29.8		34.5
	29-4-2023	00:48:55	IL&FS	LSI	Solapur	MH	17.976280	75.308853	150+000	252+000	176+250 LHS Outer	2	41.2000	0.2680	0.1994	0.1533	0.0982	0.0627	0.0400	0.0249	27.2	29.8		34.5
	29-4-2023	00:48:55	IL&FS	LSI	Solapur	MH	17.976280	75.308853	150+000	252+000	176+250 LHS Outer	3	41.2000	0.2516	0.1876	0.1409	0.0973	0.0626	0.0395	0.0264	27.2	29.8		34.5
508	29-4-2023	00:50:48	IL&FS	LSI	Solapur	MH	17.974788	75.310523	150+000	252+000	176+500 LHS Outer	1	43.0000	0.2382	0.1582	0.1136	0.0831	0.0628	0.0461	0.0292	27.3	29.7		34.5
	29-4-2023	00:50:48	IL&FS	LSI	Solapur	MH	17.974788	75.310523	150+000	252+000	176+500 LHS Outer	2	41.3000	0.2248	0.1509	0.1094	0.0801	0.0584	0.0395	0.0272	27.3	29.7		34.5
	29-4-2023	00:50:48	IL&FS	LSI	Solapur	MH	17.974788	75.310523	150+000	252+000	176+500 LHS Outer	3	41.8000	0.2223	0.1707	0.1227	0.0869	0.0623	0.0449	0.0280	27.3	29.7		34.5
509	29-4-2023	00:52:40	IL&FS	LSI	Solapur	MH	17.973188	75.312347	150+000	252+000	176+750 LHS Outer	1	39.0000	0.3767	0.2290	0.1370	0.0829	0.0627	0.0397	0.0254	27.3	29.8		34.5
	29-4-2023	00:52:40	IL&FS	LSI	Solapur	MH	17.973188	75.312347	150+000	252+000	176+750 LHS Outer	2	41.5000	0.3708	0.2285	0.1472	0.0897	0.0679	0.0439	0.0269	27.3	29.8		34.5
	29-4-2023	00:52:40	IL&FS	LSI	Solapur	MH	17.973188	75.312347	150+000	252+000	176+750 LHS Outer	3	39.9000	0.3602	0.2200	0.1505	0.0847	0.0668	0.0435	0.0263	27.3	29.8		34.5
510	29-4-2023	00:54:28	IL&FS	LSI	Solapur	MH	17.971611	75.314064	150+000	252+000	177+000 LHS Outer	1	40.1000	0.4376	0.2706	0.1344	0.0828	0.0501	0.0371	0.0278	27.4	30.2		34.5
	29-4-2023	00:54:28	IL&FS	LSI	Solapur	MH	17.971611	75.314064	150+000	252+000	177+000 LHS Outer	2	40.5000	0.4221	0.2641	0.1366	0.0848	0.0465	0.0341	0.0260	27.4	30.2		34.5
	29-4-2023	00:54:28	IL&FS	LSI	Solapur	MH	17.971611	75.314064	150+000	252+000	177+000 LHS Outer	3	40.1000	0.4091	0.2657	0.1497	0.0854	0.0486	0.0364	0.0282	27.4	30.2		34.5
511	29-4-2023	00:56:35	IL&FS	LSI	Solapur	MH	17.969814	75.316085	150+000	252+000	177+300 LHS Outer	1	38.8000	0.4342	0.2823	0.1577	0.1104	0.0651	0.0395	0.0236	27.7	30.1		34.5
	29-4-2023	00:56:35	IL&FS	LSI	Solapur	MH	17.969814	75.316085	150+000	252+000	177+300 LHS Outer	2	39.0000	0.4344	0.2689	0.1580	0.1100	0.0659	0.0425	0.0263	27.7	30.1		34.5
	29-4-2023	00:56:35	IL&FS	LSI	Solapur	MH	17.969814	75.316085	150+000	252+000	177+300 LHS Outer	3	39.0000	0.4357	0.2848	0.1503	0.1111	0.0677	0.0416	0.0254	27.7	30.1		34.5
512	29-4-2023	00:58:14	IL&FS	LSI	Solapur	MH	17.968540	75.317535	150+000	252+000	177+500 LHS Outer	1	40.9000	0.4208	0.2783	0.1577	0.0898	0.0592	0.0392	0.0245	27.7	30.2		34.5
	29-4-2023	00:58:14	IL&FS	LSI	Solapur	MH	17.968540	75.317535	150+000	252+000	177+500 LHS Outer	2	40.4000	0.4141	0.2787	0.1602	0.0880	0.0580	0.0350	0.0245	27.7	30.2		34.5
	29-4-2023	00:58:14	IL&FS	LSI	Solapur	MH	17.968540	75.317535	150+000	252+000	177+500 LHS Outer	3	41.1000	0.4229	0.2638	0.1574	0.0957	0.0630	0.0388	0.0249	27.7	30.2		34.5
513	29-4-2023	01:00:02	IL&FS	LSI	Solapur	MH	17.967096	75.319335	150+000	252+000	177+750 LHS Outer	1	38.7000	0.3976	0.2415	0.1384	0.0899	0.0647	0.0434	0.0329	27.7	29.9		34.5
	29-4-2023	01:00:02	IL&FS	LSI	Solapur	MH	17.967096	75.319335	150+000	252+000	177+750 LHS Outer	2	40.2000	0.4017	0.2510	0.1444	0.0944	0.0593	0.0491	0.0351	27.7	29.9		34.5
	29-4-2023	01:00:02	IL&FS	LSI	Solapur	MH	17.967096	75.319335	150+000	252+000	177+750 LHS Outer	3	39.3000	0.3957	0.2330	0.1476	0.0847	0.0627	0.0481	0.0340	27.7	29.9		34.5
514	29-4-2023	01:01:59	IL&FS	LSI	Solapur	MH	17.965686	75.321159	150+000	252+000	178+000 LHS Outer	1	39.7000	0.1967	0.1362	0.0951	0.0698	0.0422	0.0291	0.0191	27.7	29.9		34.5
	29-4-2023	01:01:59	IL&FS	LSI	Solapur	MH	17.965686	75.321159	150+000	252+000	178+000 LHS Outer	2	39.9000	0.2057	0.1418	0.0924	0.0647	0.0426	0.0282	0.0192	27.7	29.9		34.5
	29-4-2023	01:01:59	IL&FS	LSI	Solapur	MH	17.965686	75.321159	150+000	252+000	178+000 LHS Outer	3	40.6000	0.2043	0.1448	0.0986	0.0688	0.0431	0.0293	0.0189	27.7	29.9		34.5
515	29-4-2023	01:03:39	IL&FS	LSI	Solapur	MH	17.964286	75.322967	150+000	252+000	178+250 LHS Outer	1	38.2000	0.4148	0.2699	0.1703	0.1197	0.0812	0.0548	0.0329	27.6	30.0		34.5
	29-4-2023	01:03:39	IL&FS	LSI	Solapur	MH	17.964286	75.322967	150+000	252+000	178+250 LHS Outer	2	38.4000	0.4013	0.2709	0.1747	0.1125	0.0814	0.0578	0.0335	27.6	30.0		34.5
	29-4-2023	01:03:39	IL&FS	LSI	Solapur	MH	17.964286	75.322967	150+000	252+000	178+250 LHS Outer	3	38.1000	0.3980	0.2583	0.1656	0.1132	0.0766	0.0539	0.0330	27.6	30.0		34.5
516	29-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.962810	75.324699	150+000	252+000	178+500 LHS Outer	1	41.9000	0.1735	0.1226	0.0839	0.0539	0.0399	0.0310	0.0200	27.5	30.4		34.5
	29-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.962810	75.324699	150+000	252+000	178+500 LHS Outer	2	41.3000	0.1803	0.1145	0.0822	0.0533	0.0370	0.0252	0.0195	27.5	30.4		34.5
	29-4-2023	01:05:25	IL&FS	LSI	Solapur	MH	17.962810	75.324699	150+000	252+000	178+500 LHS Outer	3	42.1000	0.1801	0.1226	0.0765	0.0539	0.0379	0.0270	0.0207	27.5	30.4		34.5
517	29-4-2023	01:07:17	IL&FS	LSI	Solapur	MH	17.961175	75.326416	150+000	252+000	178+750 LHS Outer	1	42.3000	0.2437	0.1649	0.1097	0.0624	0.0477	0.0330	0.0230	27.8	30.5		34.5
	29-4-2023	01:07:17	IL&FS	LSI	Solapur	MH	17.961175	75.326416	150+000	252+000	178+750 LHS Outer	2	42.4000	0.2463	0.1652	0.1002	0.0640	0.0488	0.0347	0.0241	27.8	30.5		34.5
	29-4-2023	01:07:17	IL&FS	LSI	Solapur	MH	17.961175	75.326416	150+000	252+000	178+750 LHS Outer	3	41.1000	0.2272	0.1698	0.1010	0.0621	0.0460	0.0330	0.0232	27.8	30.5		34.5
518	29-4-2023	01:09:09	IL&FS	LSI	Solapur	MH	17.959716	75.328086	150+000	252+000	179+000 LHS Outer	1	42.1000	0.1793	0.1185	0.0722	0.0495	0.0390	0.0306	0.0246	27.8	30.1		34.5
	29-4-2023	01:09:09	IL&FS	LSI	Solapur	MH	17.959716	75.328086	150+000	252+000	179+000 LHS Outer	2	42.2000	0.1772	0.1199	0.0757	0.0510	0.0384	0.0310	0.0260	27.8	30.1		34.5
	29-4-2023	01:09:09	IL&FS	LSI	Solapur	MH	17.959716	75.328086	150+000	252+000	179+000 LHS Outer	3	42.0000	0.1758	0.1167	0.0737	0.0502	0.0381	0.0306	0.0250	27.8	30.1		34.5
519	29-4-2023	01:10:53	IL&FS	LSI	Solapur	MH	17.959255	75.328773	150+000	252+000	179+080 LHS Outer	1	41.3000	0.2701	0.1534	0.1027	0.0744	0.0484	0.0423	0.0303	27.8	29.7		34.5
	29-4-2023	01:10:53	IL&FS	LSI	Solapur	MH	17.959255	75.328773	150+000	252+000	179+080 LHS Outer	2	41.3000	0.2649	0.1520	0.1114	0.0763	0.0478	0.0359	0.0305	27.8	29.7		34.5
	29-4-2023	01:10:53	IL&FS	LSI	Solapur	MH	17.959255	75.328773	150+000	252+000	179+080 LHS Outer	3	41.5000	0.2600	0.1556	0.1061	0.0726	0.0493	0.0402	0.0306	27.8	29.7		34.5
520	29-4-2023	01:16:15	IL&FS	LSI	Solapur	MH	17.956363	75.333084	150+000	252+000	179+630 LHS Outer	1	38.9000	0.2945	0.2044	0.1238	0.0807	0.0532	0.0289	0.0248	27.7	29.3		34.5
	29-4-2023	01:16:15	IL&FS	LSI	Solapur	MH	17.956363	75.333084	150+000	252+000	179+630 LHS Outer	2	39.4000	0.3001	0.2047	0.1289	0.0912	0.0506	0.0303	0.0261	27.7	29.3		34.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	01:16:15	IL&FS	LSI	Solapur	MH	17.956363	75.333084	150+000	252+000	179+630 LHS Outer	3	39.0000	0.2854	0.2112	0.1260	0.0812	0.0565	0.0279	0.0239	27.7	29.3		34.5
521	29-4-2023	01:18:04	IL&FS	LSI	Solapur	MH	17.955768	75.334007	150+000	252+000	179+750 LHS Outer	1	40.2000	0.4871	0.3363	0.2016	0.1400	0.0920	0.0649	0.0445	27.6	29.4		34.5
	29-4-2023	01:18:04	IL&FS	LSI	Solapur	MH	17.955768	75.334007	150+000	252+000	179+750 LHS Outer	2	39.8000	0.4601	0.3295	0.1960	0.1288	0.0856	0.0609	0.0440	27.6	29.4		34.5
	29-4-2023	01:18:04	IL&FS	LSI	Solapur	MH	17.955768	75.334007	150+000	252+000	179+750 LHS Outer	3	40.3000	0.4663	0.3328	0.2004	0.1246	0.0910	0.0638	0.0450	27.6	29.4		34.5
522	29-4-2023	01:24:49	IL&FS	LSI	Solapur	MH	17.954374	75.336105	150+000	252+000	180+000 LHS Outer	1	39.2000	0.3717	0.2436	0.1466	0.0854	0.0578	0.0386	0.0284	27.1	28.9	T-25.9/33	33
	29-4-2023	01:24:49	IL&FS	LSI	Solapur	MH	17.954374	75.336105	150+000	252+000	180+000 LHS Outer	2	39.5000	0.3673	0.2423	0.1484	0.0891	0.0603	0.0379	0.0263	27.1	28.9	T-25.9/33	33
	29-4-2023	01:24:49	IL&FS	LSI	Solapur	MH	17.954374	75.336105	150+000	252+000	180+000 LHS Outer	3	41.1000	0.3788	0.2485	0.1483	0.0846	0.0611	0.0429	0.0288	27.1	28.9	T-25.9/33	33
523	29-4-2023	01:27:13	IL&FS	LSI	Solapur	MH	17.953115	75.338005	150+000	252+000	180+250 LHS Outer	1	40.5000	0.2040	0.1575	0.1257	0.0879	0.0612	0.0421	0.0308	27.1	28.8		33
	29-4-2023	01:27:13	IL&FS	LSI	Solapur	MH	17.953115	75.338005	150+000	252+000	180+250 LHS Outer	2	40.9000	0.2002	0.1494	0.1151	0.0860	0.0640	0.0446	0.0306	27.1	28.8		33
	29-4-2023	01:27:13	IL&FS	LSI	Solapur	MH	17.953115	75.338005	150+000	252+000	180+250 LHS Outer	3	41.2000	0.2123	0.1560	0.1141	0.0888	0.0701	0.0420	0.0299	27.1	28.8		33
524	29-4-2023	01:29:17	IL&FS	LSI	Solapur	MH	17.951841	75.339920	150+000	252+000	180+500 LHS Outer	1	42.3000	0.1597	0.1131	0.0790	0.0531	0.0330	0.0241	0.0180	27.3	29.2		33
	29-4-2023	01:29:17	IL&FS	LSI	Solapur	MH	17.951841	75.339920	150+000	252+000	180+500 LHS Outer	2	40.8000	0.1558	0.1065	0.0704	0.0476	0.0331	0.0240	0.0173	27.3	29.2		33
	29-4-2023	01:29:17	IL&FS	LSI	Solapur	MH	17.951841	75.339920	150+000	252+000	180+500 LHS Outer	3	40.9000	0.1643	0.1064	0.0704	0.0498	0.0338	0.0244	0.0175	27.3	29.2		33
525	29-4-2023	01:31:13	IL&FS	LSI	Solapur	MH	17.950548	75.341835	150+000	252+000	180+750 LHS Outer	1	42.1000	0.2148	0.1444	0.0925	0.0618	0.0421	0.0291	0.0262	27.2	28.6		33
	29-4-2023	01:31:13	IL&FS	LSI	Solapur	MH	17.950548	75.341835	150+000	252+000	180+750 LHS Outer	2	42.4000	0.2134	0.1345	0.0951	0.0595	0.0430	0.0300	0.0270	27.2	28.6		33
	29-4-2023	01:31:13	IL&FS	LSI	Solapur	MH	17.950548	75.341835	150+000	252+000	180+750 LHS Outer	3	42.3000	0.2013	0.1479	0.0900	0.0570	0.0423	0.0325	0.0293	27.2	28.6		33
526	29-4-2023	01:33:05	IL&FS	LSI	Solapur	MH	17.949277	75.343643	150+000	252+000	181+000 LHS Outer	1	42.2000	0.1830	0.1128	0.0680	0.0470	0.0315	0.0235	0.0158	27.3	28.9		33
	29-4-2023	01:33:05	IL&FS	LSI	Solapur	MH	17.949277	75.343643	150+000	252+000	181+000 LHS Outer	2	42.9000	0.1815	0.1098	0.0658	0.0462	0.0319	0.0225	0.0149	27.3	28.9		33
	29-4-2023	01:33:05	IL&FS	LSI	Solapur	MH	17.949277	75.343643	150+000	252+000	181+000 LHS Outer	3	42.4000	0.1728	0.1104	0.0720	0.0475	0.0305	0.0217	0.0141	27.3	28.9		33
527	29-4-2023	01:34:53	IL&FS	LSI	Solapur	MH	17.947721	75.345489	150+000	252+000	181+250 LHS Outer	1	42.0000	0.1710	0.1137	0.0778	0.0589	0.0443	0.0341	0.0307	27.2	29.4		33
	29-4-2023	01:34:53	IL&FS	LSI	Solapur	MH	17.947721	75.345489	150+000	252+000	181+250 LHS Outer	2	43.2000	0.1670	0.1177	0.0793	0.0602	0.0482	0.0373	0.0336	27.2	29.4		33
	29-4-2023	01:34:53	IL&FS	LSI	Solapur	MH	17.947721	75.345489	150+000	252+000	181+250 LHS Outer	3	42.9000	0.1714	0.1184	0.0725	0.0575	0.0465	0.0364	0.0328	27.2	29.4		33
528	29-4-2023	01:36:38	IL&FS	LSI	Solapur	MH	17.946218	75.347221	150+000	252+000	181+500 LHS Outer	1	42.1000	0.3170	0.2050	0.1125	0.0827	0.0667	0.0492	0.0340	27.1	29.2		33
	29-4-2023	01:36:38	IL&FS	LSI	Solapur	MH	17.946218	75.347221	150+000	252+000	181+500 LHS Outer	2	41.9000	0.3101	0.2039	0.1137	0.0824	0.0649	0.0483	0.0285	27.1	29.2		33
	29-4-2023	01:36:38	IL&FS	LSI	Solapur	MH	17.946218	75.347221	150+000	252+000	181+500 LHS Outer	3	42.2000	0.3170	0.1990	0.1155	0.0834	0.0645	0.0466	0.0269	27.1	29.2		33
529	29-4-2023	01:38:46	IL&FS	LSI	Solapur	MH	17.944599	75.349113	150+000	252+000	181+770 LHS Outer	1	40.1000	0.2467	0.1679	0.1257	0.0939	0.0711	0.0615	0.0554	27.2	29.2		33
	29-4-2023	01:38:46	IL&FS	LSI	Solapur	MH	17.944599	75.349113	150+000	252+000	181+770 LHS Outer	2	41.8000	0.2500	0.1830	0.1307	0.0986	0.0744	0.0628	0.0565	27.2	29.2		33
	29-4-2023	01:38:46	IL&FS	LSI	Solapur	MH	17.944599	75.349113	150+000	252+000	181+770 LHS Outer	3	42.2000	0.2477	0.1702	0.1241	0.0985	0.0804	0.0606	0.0545	27.2	29.2		33
530	29-4-2023	01:40:33	IL&FS	LSI	Solapur	MH	17.943277	75.350700	150+000	252+000	182+000 LHS Outer	1	39.5000	0.3305	0.2164	0.1298	0.0985	0.0731	0.0489	0.0340	27.2	29.3		33
	29-4-2023	01:40:33	IL&FS	LSI	Solapur	MH	17.943277	75.350700	150+000	252+000	182+000 LHS Outer	2	41.4000	0.3551	0.2223	0.1385	0.1025	0.0770	0.0495	0.0346	27.2	29.3		33
	29-4-2023	01:40:33	IL&FS	LSI	Solapur	MH	17.943277	75.350700	150+000	252+000	182+000 LHS Outer	3	40.0000	0.3172	0.2252	0.1302	0.0936	0.0751	0.0488	0.0339	27.2	29.3		33
531	29-4-2023	01:42:31	IL&FS	LSI	Solapur	MH	17.941776	75.352470	150+000	252+000	182+250 LHS Outer	1	41.0000	0.3547	0.2334	0.1293	0.0848	0.0593	0.0393	0.0247	27.2	28.9		33
	29-4-2023	01:42:31	IL&FS	LSI	Solapur	MH	17.941776	75.352470	150+000	252+000	182+250 LHS Outer	2	39.5000	0.3334	0.2216	0.1194	0.0794	0.0555	0.0387	0.0226	27.2	28.9		33
	29-4-2023	01:42:31	IL&FS	LSI	Solapur	MH	17.941776	75.352470	150+000	252+000	182+250 LHS Outer	3	41.2000	0.3488	0.2255	0.1311	0.0920	0.0621	0.0401	0.0235	27.2	28.9		33
532	29-4-2023	01:44:25	IL&FS	LSI	Solapur	MH	17.940288	75.354209	150+000	252+000	182+500 LHS Outer	1	40.7000	0.2679	0.1497	0.0946	0.0695	0.0524	0.0407	0.0321	27.2	29.1		33
	29-4-2023	01:44:25	IL&FS	LSI	Solapur	MH	17.940288	75.354209	150+000	252+000	182+500 LHS Outer	2	42.5000	0.2628	0.1612	0.1001	0.0728	0.0547	0.0426	0.0345	27.2	29.1		33
	29-4-2023	01:44:25	IL&FS	LSI	Solapur	MH	17.940288	75.354209	150+000	252+000	182+500 LHS Outer	3	42.5000	0.2504	0.1641	0.1034	0.0745	0.0540	0.0434	0.0359	27.2	29.1		33
533	29-4-2023	01:46:20	IL&FS	LSI	Solapur	MH	17.938732	75.356040	150+000	252+000	182+750 LHS Outer	1	42.2000	0.2467	0.1662	0.1056	0.0755	0.0522	0.0380	0.0272	27.2	28.5		33
	29-4-2023	01:46:20	IL&FS	LSI	Solapur	MH	17.938732	75.356040	150+000	252+000	182+750 LHS Outer	2	40.9000	0.2398	0.1573	0.1058	0.0785	0.0498	0.0369	0.0281	27.2	28.5		33
	29-4-2023	01:46:20	IL&FS	LSI	Solapur	MH	17.938732	75.356040	150+000	252+000	182+750 LHS Outer	3	42.4000	0.2532	0.1664	0.1070	0.0804	0.0496	0.0392	0.0311	27.2	28.5		33
534	29-4-2023	01:48:15	IL&FS	LSI	Solapur	MH	17.937343	75.357658	150+000	252+000	183+000 LHS Outer	1	40.4000	0.2844	0.1917	0.1110	0.0717	0.0521	0.0475	0.0343	27.0	28.5		33
	29-4-2023	01:48:15	IL&FS	LSI	Solapur	MH	17.937343	75.357658	150+000	252+000	183+000 LHS Outer	2	40.6000	0.2696	0.1822	0.1123	0.0688	0.0473	0.0402	0.0362	27.0	28.5		33
	29-4-2023	01:48:15	IL&FS	LSI	Solapur	MH	17.937343	75.357658	150+000	252+000	183+000 LHS Outer	3	40.7000	0.2785	0.1832	0.1208	0.0691	0.0480	0.0408	0.0367	27.0	28.5		33
535	29-4-2023	01:50:02	IL&FS	LSI	Solapur	MH	17.935777	75.359527	150+000	252+000	183+250 LHS Outer	1	41.5000	0.2210	0.1463	0.0884	0.0566	0.0413	0.0313	0.0228	26.9	28.7		33
	29-4-2023	01:50:02	IL&FS	LSI	Solapur	MH	17.935777	75.359527	150+000	252+000	183+250 LHS Outer	2	42.0000	0.2254	0.1500	0.0884	0.0598	0.0432	0.0319	0.0233	26.9	28.7		33
	29-4-2023	01:50:02	IL&FS	LSI	Solapur	MH	17.935777	75.359527	150+000	252+000	183+250 LHS Outer	3	42.0000	0.2199	0.1488	0.0905	0.0627	0.0422	0.0304	0.0220	26.9	28.7		33
536	29-4-2023	01:51:58	IL&FS	LSI	Solapur	MH	17.934360	75.361198	150+000	252+000	183+500 LHS Outer	1	40.6000	0.3314	0.2265	0.1443	0.1002	0.0713	0.0575	0.0462	26.8	28.5		33
	29-4-2023	01:51:58	IL&FS	LSI	Solapur	MH	17.934360	75.361198	150+000	252+000	183+500 LHS Outer	2	39.1000	0.3199	0.2089	0.1356	0.0892	0.0700	0.0539	0.0473	26.8	28.5		33
	29-4-2023	01:51:58	IL&FS	LSI	Solapur	MH	17.934360	75.361198	150+000	252+000	183+500 LHS Outer	3	39.4000	0.3104	0.2066	0.1456	0.0919	0.0721	0.0543	0.0448	26.8	28.5		33
537	29-4-2023	01:53:51	IL&FS	LSI	Solapur	MH	17.932825	75.362998	150+000	252+000	183+750 LHS Outer	1	40.1000	0.3914	0.2253	0.1058	0.0667	0.0560	0.0373	0.0234	26.8	28.9		33
	29-4-2023	01:53:51	IL&FS	LSI	Solapur	MH	17.932825	75.362998	150+000	252+000	183+750 LHS Outer	2	40.7000	0.3864	0.2272	0.1099	0.0706	0.0538	0.0358	0.0229	26.8	28.9		33
	29-4-2023	01:53:51	IL&FS	LSI	Solapur	MH	17.932825	75.362998	150+000	252+000	183+750 LHS Outer	3	40.6000	0.3681	0.2281	0.1139	0.0678	0.0506	0.0342	0.0222	26.8	28.9		33
538	29-4-2023	01:56:13	IL&FS	LSI	Solapur	MH	17.931102	75.364868	150+000	252+000	184+000 LHS Outer	1	40.4000	0.3301	0.2320	0.1356	0.0967	0.0723	0.0458	0.0278	26.7	28.7		33
	29-4-2023	01:56:13	IL&FS	LSI	Solapur	MH	17.931102	75.364868	150+000	252+000	184+000 LHS Outer	2	39.3000	0.3206	0.2146	0.1407	0.0982	0.0721	0.0441	0.0265	26.7	28.7		33
	29-4-2023	01:56:13	IL&FS	LSI	Solapur	MH	17.931102	75.364868	150+000	252+000	184+000 LHS Outer	3	40.7000	0.3299	0.2159	0.1388	0.1004	0.0744	0.0462	0.0278	26.7	28.7		33
539	29-4-2023	01:58:14	IL&FS	LSI	Solapur	MH	17.929517	75.366706	150+000	252+000	184+250 LHS Outer	1	40.8000	0.3950	0.2334	0.1567	0.0989	0.0557	0.0320	0.0163	26.7	28.8		33

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	01:58:14	IL&FS	LSI	Solapur	MH	17.929517	75.366706	150+000	252+000	184+250 LHS Outer	2	41.2000	0.3889	0.2408	0.1465	0.0979	0.0624	0.0351	0.0169	26.7	28.8		33
	29-4-2023	01:58:14	IL&FS	LSI	Solapur	MH	17.929517	75.366706	150+000	252+000	184+250 LHS Outer	3	41.6000	0.3723	0.2377	0.1431	0.0910	0.0581	0.0344	0.0166	26.7	28.8		33
540	29-4-2023	02:00:13	IL&FS	LSI	Solapur	MH	17.928045	75.368408	150+000	252+000	184+500 LHS Outer	1	38.0000	0.6341	0.3921	0.2110	0.1298	0.0921	0.0776	0.0628	26.9	28.6		33
	29-4-2023	02:00:13	IL&FS	LSI	Solapur	MH	17.928045	75.368408	150+000	252+000	184+500 LHS Outer	2	37.9000	0.6350	0.3836	0.2079	0.1311	0.0908	0.0747	0.0552	26.9	28.6		33
	29-4-2023	02:00:13	IL&FS	LSI	Solapur	MH	17.928045	75.368408	150+000	252+000	184+500 LHS Outer	3	38.3000	0.6265	0.3745	0.2109	0.1359	0.0921	0.0843	0.0605	26.9	28.6		33
541	29-4-2023	02:04:48	IL&FS	LSI	Solapur	MH	17.926776	75.370384	150+000	252+000	184+750 LHS Outer	1	42.0000	0.2440	0.1688	0.1056	0.0700	0.0517	0.0397	0.0298	26.7	28.3	T-25.8/33.3	33.3
	29-4-2023	02:04:48	IL&FS	LSI	Solapur	MH	17.926776	75.370384	150+000	252+000	184+750 LHS Outer	2	41.9000	0.2572	0.1647	0.1082	0.0736	0.0542	0.0392	0.0298	26.7	28.3	T-25.8/33.3	33.3
	29-4-2023	02:04:48	IL&FS	LSI	Solapur	MH	17.926776	75.370384	150+000	252+000	184+750 LHS Outer	3	42.3000	0.2340	0.1670	0.1067	0.0719	0.0512	0.0356	0.0322	26.7	28.3	T-25.8/33.3	33.3
542	29-4-2023	02:07:14	IL&FS	LSI	Solapur	MH	17.926059	75.372352	150+000	252+000	185+000 LHS Outer	1	39.5000	0.4738	0.2770	0.1602	0.1120	0.0826	0.0573	0.0415	26.5	28.1		33.3
	29-4-2023	02:07:14	IL&FS	LSI	Solapur	MH	17.926059	75.372352	150+000	252+000	185+000 LHS Outer	2	39.7000	0.4639	0.2729	0.1610	0.1117	0.0870	0.0663	0.0531	26.5	28.1		33.3
	29-4-2023	02:07:14	IL&FS	LSI	Solapur	MH	17.926059	75.372352	150+000	252+000	185+000 LHS Outer	3	39.5000	0.4610	0.2621	0.1602	0.1101	0.0872	0.0676	0.0554	26.5	28.1		33.3
543	29-4-2023	02:09:12	IL&FS	LSI	Solapur	MH	17.925243	75.374549	150+000	252+000	185+250 LHS Outer	1	41.7000	0.2654	0.1833	0.1131	0.0802	0.0598	0.0470	0.0323	26.7	28.3		33.3
	29-4-2023	02:09:12	IL&FS	LSI	Solapur	MH	17.925243	75.374549	150+000	252+000	185+250 LHS Outer	2	40.4000	0.2469	0.1682	0.1040	0.0775	0.0597	0.0446	0.0301	26.7	28.3		33.3
	29-4-2023	02:09:12	IL&FS	LSI	Solapur	MH	17.925243	75.374549	150+000	252+000	185+250 LHS Outer	3	41.7000	0.2680	0.1643	0.1060	0.0763	0.0574	0.0449	0.0304	26.7	28.3		33.3
544	29-4-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.924446	75.376739	150+000	252+000	185+500 LHS Outer	1	41.5000	0.1838	0.1358	0.0952	0.0616	0.0406	0.0319	0.0263	26.4	28.0		33.3
	29-4-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.924446	75.376739	150+000	252+000	185+500 LHS Outer	2	41.3000	0.1870	0.1272	0.0894	0.0601	0.0397	0.0316	0.0257	26.4	28.0		33.3
	29-4-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.924446	75.376739	150+000	252+000	185+500 LHS Outer	3	41.7000	0.1709	0.1342	0.0887	0.0601	0.0416	0.0310	0.0245	26.4	28.0		33.3
545	29-4-2023	02:13:01	IL&FS	LSI	Solapur	MH	17.923698	75.378944	150+000	252+000	185+750 LHS Outer	1	39.7000	0.4822	0.2953	0.1642	0.1048	0.0782	0.0540	0.0388	26.3	27.9		33.3
	29-4-2023	02:13:01	IL&FS	LSI	Solapur	MH	17.923698	75.378944	150+000	252+000	185+750 LHS Outer	2	40.0000	0.4793	0.3025	0.1678	0.1113	0.0751	0.0541	0.0391	26.3	27.9		33.3
	29-4-2023	02:13:01	IL&FS	LSI	Solapur	MH	17.923698	75.378944	150+000	252+000	185+750 LHS Outer	3	40.2000	0.4529	0.2957	0.1702	0.1047	0.0725	0.0537	0.0395	26.3	27.9		33.3
546	29-4-2023	02:15:12	IL&FS	LSI	Solapur	MH	17.923488	75.381355	150+000	252+000	186+000 LHS Outer	1	42.4000	0.2820	0.1559	0.0901	0.0658	0.0402	0.0318	0.0286	26.2	27.8		33.3
	29-4-2023	02:15:12	IL&FS	LSI	Solapur	MH	17.923488	75.381355	150+000	252+000	186+000 LHS Outer	2	42.5000	0.2692	0.1580	0.0958	0.0619	0.0415	0.0308	0.0277	26.2	27.8		33.3
	29-4-2023	02:15:12	IL&FS	LSI	Solapur	MH	17.923488	75.381355	150+000	252+000	186+000 LHS Outer	3	41.3000	0.2686	0.1438	0.0886	0.0670	0.0358	0.0327	0.0294	26.2	27.8		33.3
547	29-4-2023	02:17:06	IL&FS	LSI	Solapur	MH	17.922462	75.383491	150+000	252+000	186+250 LHS Outer	1	40.5000	0.3647	0.2265	0.1367	0.0899	0.0577	0.0411	0.0301	26.3	27.7		33.3
	29-4-2023	02:17:06	IL&FS	LSI	Solapur	MH	17.922462	75.383491	150+000	252+000	186+250 LHS Outer	2	39.3000	0.3524	0.2224	0.1365	0.0869	0.0556	0.0405	0.0306	26.3	27.7		33.3
	29-4-2023	02:17:06	IL&FS	LSI	Solapur	MH	17.922462	75.383491	150+000	252+000	186+250 LHS Outer	3	40.8000	0.3474	0.2230	0.1369	0.0910	0.0605	0.0441	0.0323	26.3	27.7		33.3
548	29-4-2023	02:18:58	IL&FS	LSI	Solapur	MH	17.921787	75.385833	150+000	252+000	186+510 LHS Outer	1	40.1000	0.4235	0.2830	0.1835	0.1312	0.0939	0.0680	0.0502	26.4	28.0		33.3
	29-4-2023	02:18:58	IL&FS	LSI	Solapur	MH	17.921787	75.385833	150+000	252+000	186+510 LHS Outer	2	40.4000	0.3967	0.2761	0.1816	0.1270	0.0941	0.0686	0.0513	26.4	28.0		33.3
	29-4-2023	02:18:58	IL&FS	LSI	Solapur	MH	17.921787	75.385833	150+000	252+000	186+510 LHS Outer	3	40.4000	0.4153	0.2827	0.1847	0.1355	0.0939	0.0691	0.0497	26.4	28.0		33.3
549	29-4-2023	02:20:53	IL&FS	LSI	Solapur	MH	17.921363	75.387962	150+000	252+000	186+750 LHS Outer	1	40.0000	0.3843	0.2203	0.1393	0.0942	0.0720	0.0487	0.0332	26.4	28.5		33.3
	29-4-2023	02:20:53	IL&FS	LSI	Solapur	MH	17.921363	75.387962	150+000	252+000	186+750 LHS Outer	2	40.4000	0.3839	0.2153	0.1357	0.0899	0.0771	0.0537	0.0370	26.4	28.5		33.3
	29-4-2023	02:20:53	IL&FS	LSI	Solapur	MH	17.921363	75.387962	150+000	252+000	186+750 LHS Outer	3	40.5000	0.3739	0.2165	0.1370	0.0988	0.0769	0.0525	0.0371	26.4	28.5		33.3
550	29-4-2023	02:24:23	IL&FS	LSI	Solapur	MH	17.920476	75.390151	150+000	252+000	187+000 LHS Outer	1	40.8000	0.3858	0.2538	0.1726	0.1185	0.0816	0.0564	0.0461	26.5	27.8		33.3
	29-4-2023	02:24:23	IL&FS	LSI	Solapur	MH	17.920476	75.390151	150+000	252+000	187+000 LHS Outer	2	40.9000	0.3961	0.2356	0.1644	0.1136	0.0767	0.0511	0.0413	26.5	27.8		33.3
	29-4-2023	02:24:23	IL&FS	LSI	Solapur	MH	17.920476	75.390151	150+000	252+000	187+000 LHS Outer	3	39.6000	0.3755	0.2332	0.1581	0.1117	0.0756	0.0520	0.0431	26.5	27.8		33.3
551	29-4-2023	02:26:18	IL&FS	LSI	Solapur	MH	17.919591	75.392341	150+000	252+000	187+250 LHS Outer	1	41.4000	0.3252	0.2127	0.1339	0.0966	0.0683	0.0522	0.0400	26.4	28.0		33.3
	29-4-2023	02:26:18	IL&FS	LSI	Solapur	MH	17.919591	75.392341	150+000	252+000	187+250 LHS Outer	2	40.2000	0.3076	0.2110	0.1344	0.0954	0.0661	0.0483	0.0359	26.4	28.0		33.3
	29-4-2023	02:26:18	IL&FS	LSI	Solapur	MH	17.919591	75.392341	150+000	252+000	187+250 LHS Outer	3	42.0000	0.3265	0.2011	0.1335	0.0971	0.0698	0.0518	0.0382	26.4	28.0		33.3
552	29-4-2023	02:28:14	IL&FS	LSI	Solapur	MH	17.918659	75.394577	150+000	252+000	187+500 LHS Outer	1	43.6000	0.1623	0.1148	0.0850	0.0661	0.0472	0.0334	0.0229	26.5	27.9		33.3
	29-4-2023	02:28:14	IL&FS	LSI	Solapur	MH	17.918659	75.394577	150+000	252+000	187+500 LHS Outer	2	43.6000	0.1591	0.1143	0.0803	0.0676	0.0475	0.0334	0.0229	26.5	27.9		33.3
	29-4-2023	02:28:14	IL&FS	LSI	Solapur	MH	17.918659	75.394577	150+000	252+000	187+500 LHS Outer	3	43.2000	0.1594	0.1124	0.0819	0.0637	0.0446	0.0319	0.0215	26.5	27.9		33.3
553	29-4-2023	02:30:21	IL&FS	LSI	Solapur	MH	17.917865	75.396575	150+000	252+000	187+740 LHS Outer	1	38.3000	0.5288	0.3298	0.1855	0.1223	0.0816	0.0518	0.0284	26.3	28.1		33.3
	29-4-2023	02:30:21	IL&FS	LSI	Solapur	MH	17.917865	75.396575	150+000	252+000	187+740 LHS Outer	2	38.5000	0.4907	0.3220	0.1819	0.1226	0.0780	0.0498	0.0309	26.3	28.1		33.3
	29-4-2023	02:30:21	IL&FS	LSI	Solapur	MH	17.917865	75.396575	150+000	252+000	187+740 LHS Outer	3	38.5000	0.5129	0.3229	0.1850	0.1165	0.0728	0.0488	0.0315	26.3	28.1		33.3
554	29-4-2023	02:32:33	IL&FS	LSI	Solapur	MH	17.916950	75.398788	150+000	252+000	188+000 LHS Outer	1	40.0000	0.3834	0.2220	0.1155	0.0746	0.0469	0.0333	0.0250	26.5	28.6		33.3
	29-4-2023	02:32:33	IL&FS	LSI	Solapur	MH	17.916950	75.398788	150+000	252+000	188+000 LHS Outer	2	40.5000	0.3848	0.2147	0.1165	0.0764	0.0478	0.0365	0.0281	26.5	28.6		33.3
	29-4-2023	02:32:33	IL&FS	LSI	Solapur	MH	17.916950	75.398788	150+000	252+000	188+000 LHS Outer	3	40.1000	0.3608	0.2083	0.1157	0.0749	0.0459	0.0334	0.0257	26.5	28.6		33.3
555	29-4-2023	02:34:45	IL&FS	LSI	Solapur	MH	17.915998	75.401023	150+000	252+000	188+250 LHS Outer	1	41.6000	0.3686	0.2381	0.1373	0.0811	0.0537	0.0361	0.0285	26.5	28.4		33.3
	29-4-2023	02:34:45	IL&FS	LSI	Solapur	MH	17.915998	75.401023	150+000	252+000	188+250 LHS Outer	2	40.1000	0.3598	0.2212	0.1294	0.0711	0.0513	0.0372	0.0288	26.5	28.4		33.3
	29-4-2023	02:34:45	IL&FS	LSI	Solapur	MH	17.915998	75.401023	150+000	252+000	188+250 LHS Outer	3	41.6000	0.3474	0.2359	0.1350	0.0763	0.0538	0.0361	0.0278	26.5	28.4		33.3
556	29-4-2023	02:36:44	IL&FS	LSI	Solapur	MH	17.915077	75.403198	150+000	252+000	188+500 LHS Outer	1	39.9000	0.4015	0.2480	0.1339	0.0829	0.0544	0.0394	0.0287	26.6	28.8		33.3
	29-4-2023	02:36:44	IL&FS	LSI	Solapur	MH	17.915077	75.403198	150+000	252+000	188+500 LHS Outer	2	40.5000	0.4012	0.2417	0.1279	0.0876	0.0590	0.0405	0.0270	26.6	28.8		33.3
	29-4-2023	02:36:44	IL&FS	LSI	Solapur	MH	17.915077	75.403198	150+000	252+000	188+500 LHS Outer	3	40.7000	0.3720	0.2415	0.1377	0.0859	0.0535	0.0388	0.0276	26.6	28.8		33.3
557	29-4-2023	02:39:04	IL&FS	LSI	Solapur	MH	17.913959	75.405921	150+000	252+000	188+820 LHS Outer	1	40.1000	0.4496	0.2642	0.1330	0.0676	0.0449	0.0330	0.0254	26.9	28.8		33.3
	29-4-2023	02:39:04	IL&FS	LSI	Solapur	MH	17.913959	75.405921	150+000	252+000	188+820 LHS Outer	2	40.5000	0.4307	0.2758	0.1353	0.0643	0.0452	0.0339	0.0260	26.9	28.8		33.3
	29-4-2023	02:39:04	IL&FS	LSI	Solapur	MH	17.913959	75.405921	150+000	252+000	188+820 LHS Outer	3	40.4000	0.4380	0.2600	0.1337	0.0649	0.0465	0.0331	0.0246	26.9	28.8		33.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
558	29-4-2023	02:41:12	IL&FS	LSI	Solapur	MH	17.913372	75.407447	150+000	252+000	189+000 LHS Outer	1	40.6000	0.4419	0.2701	0.1458	0.1011	0.0727	0.0455	0.0268	26.9	28.5		33.3
	29-4-2023	02:41:12	IL&FS	LSI	Solapur	MH	17.913372	75.407447	150+000	252+000	189+000 LHS Outer	2	40.9000	0.4424	0.2496	0.1401	0.0939	0.0702	0.0452	0.0291	26.9	28.5		33.3
	29-4-2023	02:41:12	IL&FS	LSI	Solapur	MH	17.913372	75.407447	150+000	252+000	189+000 LHS Outer	3	40.6000	0.4311	0.2532	0.1419	0.0956	0.0765	0.0475	0.0288	26.9	28.5		33.3
559	29-4-2023	02:43:09	IL&FS	LSI	Solapur	MH	17.912462	75.409683	150+000	252+000	189+250 LHS Outer	1	40.1000	0.3198	0.2021	0.1446	0.0998	0.0653	0.0412	0.0227	26.7	28.4		33.3
	29-4-2023	02:43:09	IL&FS	LSI	Solapur	MH	17.912462	75.409683	150+000	252+000	189+250 LHS Outer	2	39.9000	0.2990	0.1925	0.1357	0.0982	0.0619	0.0393	0.0204	26.7	28.4		33.3
	29-4-2023	02:43:09	IL&FS	LSI	Solapur	MH	17.912462	75.409683	150+000	252+000	189+250 LHS Outer	3	40.5000	0.3142	0.1875	0.1368	0.0991	0.0622	0.0372	0.0230	26.7	28.4		33.3
560	29-4-2023	02:47:25	IL&FS	LSI	Solapur	MH	17.911649	75.411918	150+000	252+000	189+500 LHS Outer	1	42.7000	0.1977	0.1413	0.0944	0.0639	0.0430	0.0275	0.0164	26.6	28.0	T-25.2/32.8	32.8
	29-4-2023	02:47:25	IL&FS	LSI	Solapur	MH	17.911649	75.411918	150+000	252+000	189+500 LHS Outer	2	41.7000	0.1914	0.1361	0.0925	0.0633	0.0430	0.0284	0.0170	26.6	28.0	T-25.2/32.8	32.8
	29-4-2023	02:47:25	IL&FS	LSI	Solapur	MH	17.911649	75.411918	150+000	252+000	189+500 LHS Outer	3	43.0000	0.2009	0.1381	0.0900	0.0637	0.0454	0.0280	0.0169	26.6	28.0	T-25.2/32.8	32.8
561	29-4-2023	02:50:35	IL&FS	LSI	Solapur	MH	17.910850	75.413940	150+000	252+000	189+750 LHS Outer	1	41.9000	0.1498	0.1201	0.0866	0.0568	0.0345	0.0255	0.0192	26.6	27.6		32.8
	29-4-2023	02:50:35	IL&FS	LSI	Solapur	MH	17.910850	75.413940	150+000	252+000	189+750 LHS Outer	2	42.0000	0.1373	0.1159	0.0779	0.0538	0.0349	0.0265	0.0201	26.6	27.6		32.8
	29-4-2023	02:50:35	IL&FS	LSI	Solapur	MH	17.910850	75.413940	150+000	252+000	189+750 LHS Outer	3	42.0000	0.1514	0.1117	0.0821	0.0534	0.0340	0.0260	0.0206	26.6	27.6		32.8
562	29-4-2023	02:55:09	IL&FS	LSI	Solapur	MH	17.909870	75.416297	150+000	252+000	190+010 LHS Outer	1	43.7000	0.1631	0.1015	0.0620	0.0491	0.0304	0.0217	0.0161	26.3	27.5		32.8
	29-4-2023	02:55:09	IL&FS	LSI	Solapur	MH	17.909870	75.416297	150+000	252+000	190+010 LHS Outer	2	43.3000	0.1512	0.1060	0.0679	0.0441	0.0326	0.0230	0.0165	26.3	27.5		32.8
	29-4-2023	02:55:09	IL&FS	LSI	Solapur	MH	17.909870	75.416297	150+000	252+000	190+010 LHS Outer	3	42.6000	0.1553	0.1024	0.0600	0.0482	0.0322	0.0231	0.0163	26.3	27.5		32.8
563	29-4-2023	02:57:12	IL&FS	LSI	Solapur	MH	17.909032	75.418411	150+000	252+000	190+250 LHS Outer	1	42.2000	0.1524	0.0995	0.0725	0.0543	0.0333	0.0231	0.0161	26.3	27.6		32.8
	29-4-2023	02:57:12	IL&FS	LSI	Solapur	MH	17.909032	75.418411	150+000	252+000	190+250 LHS Outer	2	44.2000	0.1542	0.1043	0.0794	0.0541	0.0353	0.0257	0.0183	26.3	27.6		32.8
	29-4-2023	02:57:12	IL&FS	LSI	Solapur	MH	17.909032	75.418411	150+000	252+000	190+250 LHS Outer	3	44.2000	0.1467	0.1040	0.0768	0.0526	0.0339	0.0246	0.0187	26.3	27.6		32.8
564	29-4-2023	02:59:05	IL&FS	LSI	Solapur	MH	17.908115	75.420616	150+000	252+000	190+500 LHS Outer	1	40.6000	0.2545	0.1537	0.0992	0.0651	0.0546	0.0445	0.0409	26.3	27.4		32.8
	29-4-2023	02:59:05	IL&FS	LSI	Solapur	MH	17.908115	75.420616	150+000	252+000	190+500 LHS Outer	2	42.8000	0.2580	0.1565	0.1111	0.0673	0.0589	0.0447	0.0426	26.3	27.4		32.8
	29-4-2023	02:59:05	IL&FS	LSI	Solapur	MH	17.908115	75.420616	150+000	252+000	190+500 LHS Outer	3	41.0000	0.2455	0.1574	0.0997	0.0630	0.0525	0.0436	0.0396	26.3	27.4		32.8
565	29-4-2023	03:00:57	IL&FS	LSI	Solapur	MH	17.907194	75.422760	150+000	252+000	190+750 LHS Outer	1	41.1000	0.3998	0.2345	0.1201	0.0683	0.0515	0.0396	0.0244	26.3	27.6		32.8
	29-4-2023	03:00:57	IL&FS	LSI	Solapur	MH	17.907194	75.422760	150+000	252+000	190+750 LHS Outer	2	40.9000	0.3918	0.2383	0.1254	0.0686	0.0492	0.0357	0.0252	26.3	27.6		32.8
	29-4-2023	03:00:57	IL&FS	LSI	Solapur	MH	17.907194	75.422760	150+000	252+000	190+750 LHS Outer	3	41.5000	0.3896	0.2336	0.1158	0.0730	0.0522	0.0371	0.0226	26.3	27.6		32.8
566	29-4-2023	03:03:28	IL&FS	LSI	Solapur	MH	17.906463	75.424484	150+000	252+000	190+950 LHS Outer	1	37.8000	0.4177	0.2740	0.1548	0.0948	0.0544	0.0317	0.0159	26.0	27.4		32.8
	29-4-2023	03:03:28	IL&FS	LSI	Solapur	MH	17.906463	75.424484	150+000	252+000	190+950 LHS Outer	2	38.2000	0.3943	0.2717	0.1486	0.0993	0.0564	0.0315	0.0162	26.0	27.4		32.8
	29-4-2023	03:03:28	IL&FS	LSI	Solapur	MH	17.906463	75.424484	150+000	252+000	190+950 LHS Outer	3	38.5000	0.3845	0.2606	0.1588	0.0992	0.0528	0.0321	0.0162	26.0	27.4		32.8
567	29-4-2023	03:05:35	IL&FS	LSI	Solapur	MH	17.905454	75.427085	150+000	252+000	191+250 LHS Outer	1	40.4000	0.4888	0.2906	0.1669	0.0860	0.0511	0.0362	0.0247	26.2	27.5		32.8
	29-4-2023	03:05:35	IL&FS	LSI	Solapur	MH	17.905454	75.427085	150+000	252+000	191+250 LHS Outer	2	40.5000	0.4858	0.2917	0.1542	0.0848	0.0515	0.0353	0.0252	26.2	27.5		32.8
	29-4-2023	03:05:35	IL&FS	LSI	Solapur	MH	17.905454	75.427085	150+000	252+000	191+250 LHS Outer	3	40.5000	0.4736	0.2921	0.1568	0.0830	0.0493	0.0349	0.0240	26.2	27.5		32.8
568	29-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.904476	75.429214	150+000	252+000	191+500 LHS Outer	1	40.3000	0.4370	0.2682	0.1446	0.0926	0.0546	0.0380	0.0264	26.1	27.9		32.8
	29-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.904476	75.429214	150+000	252+000	191+500 LHS Outer	2	39.0000	0.4041	0.2567	0.1441	0.0975	0.0629	0.0412	0.0252	26.1	27.9		32.8
	29-4-2023	03:07:35	IL&FS	LSI	Solapur	MH	17.904476	75.429214	150+000	252+000	191+500 LHS Outer	3	38.9000	0.3837	0.2595	0.1388	0.0885	0.0543	0.0361	0.0232	26.1	27.9		32.8
569	29-4-2023	03:09:52	IL&FS	LSI	Solapur	MH	17.902744	75.430610	150+000	252+000	191+750 LHS Outer	1	40.1000	0.3869	0.2378	0.1500	0.0827	0.0611	0.0419	0.0280	26.2	27.4		32.8
	29-4-2023	03:09:52	IL&FS	LSI	Solapur	MH	17.902744	75.430610	150+000	252+000	191+750 LHS Outer	2	40.2000	0.3919	0.2510	0.1545	0.0821	0.0613	0.0424	0.0293	26.2	27.4		32.8
	29-4-2023	03:09:52	IL&FS	LSI	Solapur	MH	17.902744	75.430610	150+000	252+000	191+750 LHS Outer	3	40.5000	0.4145	0.2437	0.1451	0.0829	0.0617	0.0413	0.0286	26.2	27.4		32.8
570	29-4-2023	03:11:50	IL&FS	LSI	Solapur	MH	17.900890	75.431976	150+000	252+000	192+000 LHS Outer	1	41.6000	0.2209	0.1368	0.0980	0.0724	0.0452	0.0341	0.0207	26.3	27.1		32.8
	29-4-2023	03:11:50	IL&FS	LSI	Solapur	MH	17.900890	75.431976	150+000	252+000	192+000 LHS Outer	2	41.0000	0.2161	0.1449	0.0952	0.0748	0.0460	0.0326	0.0193	26.3	27.1		32.8
	29-4-2023	03:11:50	IL&FS	LSI	Solapur	MH	17.900890	75.431976	150+000	252+000	192+000 LHS Outer	3	42.2000	0.2162	0.1368	0.0968	0.0753	0.0496	0.0327	0.0194	26.3	27.1		32.8
571	29-4-2023	03:13:59	IL&FS	LSI	Solapur	MH	17.899120	75.433448	150+000	252+000	192+250 LHS Outer	1	40.9000	0.2237	0.1510	0.0951	0.0572	0.0441	0.0349	0.0214	26.1	27.0		32.8
	29-4-2023	03:13:59	IL&FS	LSI	Solapur	MH	17.899120	75.433448	150+000	252+000	192+250 LHS Outer	2	41.2000	0.2210	0.1551	0.0992	0.0607	0.0445	0.0341	0.0215	26.1	27.0		32.8
	29-4-2023	03:13:59	IL&FS	LSI	Solapur	MH	17.899120	75.433448	150+000	252+000	192+250 LHS Outer	3	41.5000	0.2286	0.1521	0.0940	0.0632	0.0463	0.0346	0.0218	26.1	27.0		32.8
572	29-4-2023	07:04:11	IL&FS	LSI	Solapur	MH	17.897880	75.435722	150+000	252+000	192+530 LHS Outer	1	44.8000	0.1172	0.0728	0.0427	0.0279	0.0216	0.0176	0.0131	26.0	27.6	T-25.8/31.3	31.3
	29-4-2023	07:04:11	IL&FS	LSI	Solapur	MH	17.897880	75.435722	150+000	252+000	192+530 LHS Outer	2	43.1000	0.1147	0.0730	0.0429	0.0290	0.0209	0.0173	0.0127	26.0	27.6	T-25.8/31.3	31.3
	29-4-2023	07:04:11	IL&FS	LSI	Solapur	MH	17.897880	75.435722	150+000	252+000	192+530 LHS Outer	3	42.7000	0.1161	0.0711	0.0414	0.0296	0.0218	0.0177	0.0134	26.0	27.6	T-25.8/31.3	31.3
573	29-4-2023	07:13:09	IL&FS	LSI	Solapur	MH	17.897308	75.437667	150+000	252+000	192+750 LHS Outer	1	44.0000	0.1048	0.0663	0.0413	0.0278	0.0173	0.0157	0.0127	26.5	28.0		31.3
	29-4-2023	07:13:09	IL&FS	LSI	Solapur	MH	17.897308	75.437667	150+000	252+000	192+750 LHS Outer	2	44.0000	0.1070	0.0680	0.0408	0.0275	0.0178	0.0155	0.0130	26.5	28.0		31.3
	29-4-2023	07:13:09	IL&FS	LSI	Solapur	MH	17.897308	75.437667	150+000	252+000	192+750 LHS Outer	3	44.7000	0.1015	0.0682	0.0400	0.0279	0.0179	0.0158	0.0132	26.5	28.0		31.3
574	29-4-2023	07:16:06	IL&FS	LSI	Solapur	MH	17.896686	75.439910	150+000	252+000	193+000 LHS Outer	1	44.2000	0.1063	0.0692	0.0403	0.0238	0.0187	0.0179	0.0155	26.6	27.9		31.3
	29-4-2023	07:16:06	IL&FS	LSI	Solapur	MH	17.896686	75.439910	150+000	252+000	193+000 LHS Outer	2	44.1000	0.1076	0.0704	0.0387	0.0238	0.0191	0.0171	0.0150	26.6	27.9		31.3
	29-4-2023	07:16:06	IL&FS	LSI	Solapur	MH	17.896686	75.439910	150+000	252+000	193+000 LHS Outer	3	44.5000	0.1077	0.0684	0.0410	0.0242	0.0193	0.0180	0.0162	26.6	27.9		31.3
575	29-4-2023	07:18:45	IL&FS	LSI	Solapur	MH	17.896024	75.442237	150+000	252+000	193+250 LHS Outer	1	44.1000	0.1483	0.0777	0.0394	0.0319	0.0243	0.0220	0.0198	26.7	29.0		31.3
	29-4-2023	07:18:45	IL&FS	LSI	Solapur	MH	17.896024	75.442237	150+000	252+000	193+250 LHS Outer	2	42.9000	0.1443	0.0744	0.0384	0.0307	0.0230	0.0211	0.0190	26.7	29.0		31.3
	29-4-2023	07:18:45	IL&FS	LSI	Solapur	MH	17.896024	75.442237	150+000	252+000	193+250 LHS Outer	3	43.4000	0.1449	0.0744	0.0386	0.0310	0.0233	0.0225	0.0203	26.7	29.0		31.3
576	29-4-2023	07:20:47	IL&FS	LSI	Solapur	MH	17.895420	75.444488	150+000	252+000	193+500 LHS Outer	1	41.8000	0.1414	0.0884	0.0588	0.0399	0.0279	0.0202	0.0182	26.9	29.0		31.3
	29-4-2023	07:20:47	IL&FS	LSI	Solapur	MH	17.895420	75.444488	150+000	252+000	193+500 LHS Outer	2	42.1000	0.1430	0.0933	0.0562	0.0390	0.0283	0.0209	0.0188	26.9	29.0		31.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	07:20:47	IL&FS	LSI	Solapur	MH	17.895420	75.444488	150+000	252+000	193+500 LHS Outer	3	42.3000	0.1319	0.0950	0.0573	0.0395	0.0279	0.0207	0.0186	26.9	29.0		31.3
577	29-4-2023	07:22:55	IL&FS	LSI	Solapur	MH	17.894598	75.446784	150+000	252+000	193+750 LHS Outer	1	43.4000	0.1577	0.1031	0.0561	0.0399	0.0286	0.0218	0.0168	26.9	28.9		31.3
	29-4-2023	07:22:55	IL&FS	LSI	Solapur	MH	17.894598	75.446784	150+000	252+000	193+750 LHS Outer	2	43.8000	0.1591	0.1061	0.0550	0.0391	0.0284	0.0207	0.0157	26.9	28.9		31.3
	29-4-2023	07:22:55	IL&FS	LSI	Solapur	MH	17.894598	75.446784	150+000	252+000	193+750 LHS Outer	3	43.4000	0.1577	0.1004	0.0585	0.0412	0.0294	0.0226	0.0176	26.9	28.9		31.3
578	29-4-2023	07:24:54	IL&FS	LSI	Solapur	MH	17.893365	75.448722	150+000	252+000	194+000 LHS Outer	1	38.4000	0.4607	0.2778	0.1395	0.0947	0.0632	0.0436	0.0295	27.0	29.0		31.3
	29-4-2023	07:24:54	IL&FS	LSI	Solapur	MH	17.893365	75.448722	150+000	252+000	194+000 LHS Outer	2	40.3000	0.4787	0.2938	0.1382	0.0966	0.0644	0.0459	0.0316	27.0	29.0		31.3
	29-4-2023	07:24:54	IL&FS	LSI	Solapur	MH	17.893365	75.448722	150+000	252+000	194+000 LHS Outer	3	40.5000	0.4835	0.2947	0.1457	0.0967	0.0625	0.0446	0.0318	27.0	29.0		31.3
579	29-4-2023	07:27:02	IL&FS	LSI	Solapur	MH	17.892057	75.450721	150+000	252+000	194+250 LHS Outer	1	39.6000	0.5053	0.2848	0.1707	0.1248	0.0905	0.0699	0.0568	27.1	29.2		31.3
	29-4-2023	07:27:02	IL&FS	LSI	Solapur	MH	17.892057	75.450721	150+000	252+000	194+250 LHS Outer	2	39.9000	0.4749	0.2886	0.1661	0.1247	0.0949	0.0686	0.0510	27.1	29.2		31.3
	29-4-2023	07:27:02	IL&FS	LSI	Solapur	MH	17.892057	75.450721	150+000	252+000	194+250 LHS Outer	3	40.1000	0.4784	0.2793	0.1751	0.1294	0.0938	0.0685	0.0511	27.1	29.2		31.3
580	29-4-2023	07:28:56	IL&FS	LSI	Solapur	MH	17.890810	75.452644	150+000	252+000	194+500 LHS Outer	1	40.0000	0.4752	0.2531	0.1470	0.1022	0.0718	0.0521	0.0318	27.2	29.8		31.3
	29-4-2023	07:28:56	IL&FS	LSI	Solapur	MH	17.890810	75.452644	150+000	252+000	194+500 LHS Outer	2	39.9000	0.4506	0.2423	0.1477	0.1036	0.0713	0.0504	0.0304	27.2	29.8		31.3
	29-4-2023	07:28:56	IL&FS	LSI	Solapur	MH	17.890810	75.452644	150+000	252+000	194+500 LHS Outer	3	40.1000	0.4761	0.2309	0.1521	0.1037	0.0740	0.0518	0.0316	27.2	29.8		31.3
581	29-4-2023	07:30:46	IL&FS	LSI	Solapur	MH	17.889577	75.454582	150+000	252+000	194+750 LHS Outer	1	38.7000	0.4496	0.2603	0.1529	0.0861	0.0612	0.0444	0.0250	27.2	29.4		31.3
	29-4-2023	07:30:46	IL&FS	LSI	Solapur	MH	17.889577	75.454582	150+000	252+000	194+750 LHS Outer	2	40.7000	0.4380	0.2754	0.1739	0.1004	0.0686	0.0461	0.0265	27.2	29.4		31.3
	29-4-2023	07:30:46	IL&FS	LSI	Solapur	MH	17.889577	75.454582	150+000	252+000	194+750 LHS Outer	3	39.5000	0.4292	0.2644	0.1603	0.0913	0.0637	0.0451	0.0255	27.2	29.4		31.3
582	29-4-2023	07:32:39	IL&FS	LSI	Solapur	MH	17.888298	75.456520	150+000	252+000	195+000 LHS Outer	1	43.0000	0.1264	0.0895	0.0641	0.0444	0.0297	0.0210	0.0154	27.3	28.9		31.3
	29-4-2023	07:32:39	IL&FS	LSI	Solapur	MH	17.888298	75.456520	150+000	252+000	195+000 LHS Outer	2	44.9000	0.1212	0.0908	0.0703	0.0489	0.0343	0.0238	0.0173	27.3	28.9		31.3
	29-4-2023	07:32:39	IL&FS	LSI	Solapur	MH	17.888298	75.456520	150+000	252+000	195+000 LHS Outer	3	43.1000	0.1247	0.0869	0.0597	0.0418	0.0296	0.0207	0.0153	27.3	28.9		31.3
583	29-4-2023	07:34:33	IL&FS	LSI	Solapur	MH	17.886991	75.458473	150+000	252+000	195+250 LHS Outer	1	38.9000	0.5077	0.3084	0.1725	0.1161	0.1016	0.0731	0.0485	27.4	29.8		31.3
	29-4-2023	07:34:33	IL&FS	LSI	Solapur	MH	17.886991	75.458473	150+000	252+000	195+250 LHS Outer	2	39.8000	0.5188	0.3195	0.1714	0.1241	0.0944	0.0745	0.0463	27.4	29.8		31.3
	29-4-2023	07:34:33	IL&FS	LSI	Solapur	MH	17.886991	75.458473	150+000	252+000	195+250 LHS Outer	3	39.8000	0.5048	0.3017	0.1729	0.1264	0.0985	0.0751	0.0490	27.4	29.8		31.3
584	29-4-2023	07:36:35	IL&FS	LSI	Solapur	MH	17.885969	75.460617	150+000	252+000	195+500 LHS Outer	1	43.4000	0.2387	0.1351	0.0815	0.0584	0.0423	0.0325	0.0256	27.7	29.9		31.3
	29-4-2023	07:36:35	IL&FS	LSI	Solapur	MH	17.885969	75.460617	150+000	252+000	195+500 LHS Outer	2	43.5000	0.2384	0.1464	0.0866	0.0651	0.0412	0.0314	0.0247	27.7	29.9		31.3
	29-4-2023	07:36:35	IL&FS	LSI	Solapur	MH	17.885969	75.460617	150+000	252+000	195+500 LHS Outer	3	43.7000	0.2411	0.1485	0.0835	0.0606	0.0441	0.0338	0.0269	27.7	29.9		31.3
585	29-4-2023	07:38:33	IL&FS	LSI	Solapur	MH	17.885080	75.462806	150+000	252+000	195+750 LHS Outer	1	39.7000	0.5216	0.3244	0.1681	0.1107	0.0672	0.0587	0.0525	27.8	30.0		31.3
	29-4-2023	07:38:33	IL&FS	LSI	Solapur	MH	17.885080	75.462806	150+000	252+000	195+750 LHS Outer	2	39.9000	0.5357	0.3551	0.1662	0.1084	0.0693	0.0592	0.0521	27.8	30.0		31.3
	29-4-2023	07:38:33	IL&FS	LSI	Solapur	MH	17.885080	75.462806	150+000	252+000	195+750 LHS Outer	3	40.3000	0.5371	0.3170	0.1595	0.1056	0.0671	0.0557	0.0482	27.8	30.0		31.3
586	29-4-2023	07:40:37	IL&FS	LSI	Solapur	MH	17.884185	75.464973	150+000	252+000	196+000 LHS Outer	1	41.8000	0.3236	0.1747	0.1039	0.0506	0.0337	0.0274	0.0167	27.9	29.3	T-26.4/33.6	33.6
	29-4-2023	07:40:37	IL&FS	LSI	Solapur	MH	17.884185	75.464973	150+000	252+000	196+000 LHS Outer	2	41.9000	0.3309	0.1651	0.1009	0.0536	0.0338	0.0292	0.0183	27.9	29.3	T-26.4/33.6	33.6
	29-4-2023	07:40:37	IL&FS	LSI	Solapur	MH	17.884185	75.464973	150+000	252+000	196+000 LHS Outer	3	42.0000	0.3360	0.1542	0.0895	0.0493	0.0344	0.0266	0.0159	27.9	29.3	T-26.4/33.6	33.6
587	29-4-2023	07:44:03	IL&FS	LSI	Solapur	MH	17.883300	75.467109	150+000	252+000	196+250 LHS Outer	1	44.6000	0.1425	0.0832	0.0440	0.0343	0.0267	0.0191	0.0138	27.7	29.2		33.6
	29-4-2023	07:44:03	IL&FS	LSI	Solapur	MH	17.883300	75.467109	150+000	252+000	196+250 LHS Outer	2	43.2000	0.1385	0.0788	0.0423	0.0331	0.0262	0.0182	0.0131	27.7	29.2		33.6
	29-4-2023	07:44:03	IL&FS	LSI	Solapur	MH	17.883300	75.467109	150+000	252+000	196+250 LHS Outer	3	44.9000	0.1373	0.0823	0.0427	0.0334	0.0263	0.0188	0.0136	27.7	29.2		33.6
588	29-4-2023	07:46:10	IL&FS	LSI	Solapur	MH	17.882347	75.469383	150+000	252+000	196+500 LHS Outer	1	40.5000	0.3844	0.2265	0.1307	0.0579	0.0442	0.0304	0.0274	27.7	29.4	Wide Cracking	33.6
	29-4-2023	07:46:10	IL&FS	LSI	Solapur	MH	17.882347	75.469383	150+000	252+000	196+500 LHS Outer	2	41.1000	0.3807	0.2219	0.1203	0.0566	0.0422	0.0278	0.0250	27.7	29.4	Wide Cracking	33.6
	29-4-2023	07:46:10	IL&FS	LSI	Solapur	MH	17.882347	75.469383	150+000	252+000	196+500 LHS Outer	3	41.2000	0.3629	0.2360	0.1262	0.0556	0.0427	0.0297	0.0267	27.7	29.4	Wide Cracking	33.6
589	29-4-2023	07:48:15	IL&FS	LSI	Solapur	MH	17.881483	75.471458	150+000	252+000	196+750 LHS Outer	1	42.3000	0.3028	0.1283	0.0625	0.0442	0.0320	0.0266	0.0148	27.7	29.8		33.6
	29-4-2023	07:48:15	IL&FS	LSI	Solapur	MH	17.881483	75.471458	150+000	252+000	196+750 LHS Outer	2	43.0000	0.2999	0.1216	0.0658	0.0442	0.0306	0.0249	0.0165	27.7	29.8		33.6
	29-4-2023	07:48:15	IL&FS	LSI	Solapur	MH	17.881483	75.471458	150+000	252+000	196+750 LHS Outer	3	41.4000	0.2728	0.1190	0.0591	0.0414	0.0289	0.0243	0.0155	27.7	29.8		33.6
590	29-4-2023	07:50:09	IL&FS	LSI	Solapur	MH	17.880632	75.473548	150+000	252+000	197+000 LHS Outer	1	41.2000	0.3371	0.1663	0.0812	0.0570	0.0382	0.0365	0.0332	27.6	29.4		33.6
	29-4-2023	07:50:09	IL&FS	LSI	Solapur	MH	17.880632	75.473548	150+000	252+000	197+000 LHS Outer	2	41.5000	0.3382	0.1617	0.0783	0.0623	0.0412	0.0359	0.0347	27.6	29.4		33.6
	29-4-2023	07:50:09	IL&FS	LSI	Solapur	MH	17.880632	75.473548	150+000	252+000	197+000 LHS Outer	3	41.9000	0.3473	0.1706	0.0806	0.0615	0.0403	0.0390	0.0329	27.6	29.4		33.6
591	29-4-2023	07:52:17	IL&FS	LSI	Solapur	MH	17.879547	75.475753	150+000	252+000	197+250 LHS Outer	1	39.7000	0.4857	0.2815	0.1504	0.0679	0.0398	0.0328	0.0295	27.8	29.9		33.6
	29-4-2023	07:52:17	IL&FS	LSI	Solapur	MH	17.879547	75.475753	150+000	252+000	197+250 LHS Outer	2	39.7000	0.4733	0.2893	0.1592	0.0683	0.0387	0.0317	0.0285	27.8	29.9		33.6
	29-4-2023	07:52:17	IL&FS	LSI	Solapur	MH	17.879547	75.475753	150+000	252+000	197+250 LHS Outer	3	39.8000	0.4831	0.2887	0.1455	0.0685	0.0428	0.0343	0.0309	27.8	29.9		33.6
592	29-4-2023	07:54:08	IL&FS	LSI	Solapur	MH	17.878440	75.477783	150+000	252+000	197+500 LHS Outer	1	36.9000	0.4500	0.2375	0.1303	0.0753	0.0466	0.0269	0.0267	27.9	29.9		33.6
	29-4-2023	07:54:08	IL&FS	LSI	Solapur	MH	17.878440	75.477783	150+000	252+000	197+500 LHS Outer	2	36.9000	0.4442	0.2394	0.1374	0.0753	0.0450	0.0243	0.0219	27.9	29.9		33.6
	29-4-2023	07:54:08	IL&FS	LSI	Solapur	MH	17.878440	75.477783	150+000	252+000	197+500 LHS Outer	3	37.3000	0.4466	0.2311	0.1400	0.0761	0.0464	0.0246	0.0221	27.9	29.9		33.6
593	29-4-2023	07:56:15	IL&FS	LSI	Solapur	MH	17.877225	75.479804	150+000	252+000	197+750 LHS Outer	1	40.5000	0.2764	0.1245	0.0738	0.0536	0.0409	0.0302	0.0229	28.1	30.0		33.6
	29-4-2023	07:56:15	IL&FS	LSI	Solapur	MH	17.877225	75.479804	150+000	252+000	197+750 LHS Outer	2	43.1000	0.2814	0.1300	0.0779	0.0573	0.0432	0.0324	0.0249	28.1	30.0		33.6
	29-4-2023	07:56:15	IL&FS	LSI	Solapur	MH	17.877225	75.479804	150+000	252+000	197+750 LHS Outer	3	41.2000	0.2599	0.1211	0.0749	0.0559	0.0416	0.0310	0.0235	28.1	30.0		33.6
594	29-4-2023	07:58:03	IL&FS	LSI	Solapur	MH	17.876041	75.481704	150+000	252+000	198+000 LHS Outer	1	43.7000	0.0848	0.0629	0.0485	0.0357	0.0272	0.0201	0.0153	28.1	30.1		33.6
	29-4-2023	07:58:03	IL&FS	LSI	Solapur	MH	17.876041	75.481704	150+000	252+000	198+000 LHS Outer	2	42.9000	0.0842	0.0627	0.0479	0.0357	0.0282	0.0208	0.0161	28.1	30.1		33.6
	29-4-2023	07:58:03	IL&FS	LSI	Solapur	MH	17.876041	75.481704	150+000	252+000	198+000 LHS Outer	3	43.3000	0.0853	0.0623	0.0469	0.0350	0.0266	0.0196	0.0147	28.1	30.1		33.6
595	29-4-2023	08:01:29	IL&FS	LSI	Solapur	MH	17.874778	75.483695	150+000	252+000	198+250 LHS Outer	1	44.2000	0.0989	0.0737	0.0545	0.0405	0.0310	0.0236	0.0167	28.4	31.1		33.6

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	08:01:29	IL&FS	LSI	Solapur	MH	17.874778	75.483695	150+000	252+000	198+250 LHS Outer	2	43.3000	0.0965	0.0694	0.0521	0.0387	0.0303	0.0230	0.0162	28.4	31.1		33.6
	29-4-2023	08:01:29	IL&FS	LSI	Solapur	MH	17.874778	75.483695	150+000	252+000	198+250 LHS Outer	3	44.3000	0.0941	0.0722	0.0567	0.0406	0.0306	0.0233	0.0165	28.4	31.1		33.6
596	29-4-2023	08:03:19	IL&FS	LSI	Solapur	MH	17.873540	75.485702	150+000	252+000	198+500 LHS Outer	1	43.0000	0.0962	0.0714	0.0537	0.0395	0.0303	0.0225	0.0129	28.5	30.5		33.6
	29-4-2023	08:03:19	IL&FS	LSI	Solapur	MH	17.873540	75.485702	150+000	252+000	198+500 LHS Outer	2	42.8000	0.0948	0.0683	0.0518	0.0387	0.0303	0.0229	0.0133	28.5	30.5		33.6
	29-4-2023	08:03:19	IL&FS	LSI	Solapur	MH	17.873540	75.485702	150+000	252+000	198+500 LHS Outer	3	43.0000	0.0940	0.0699	0.0536	0.0395	0.0295	0.0222	0.0134	28.5	30.5		33.6
597	29-4-2023	08:05:25	IL&FS	LSI	Solapur	MH	17.872211	75.487617	150+000	252+000	198+750 LHS Outer	1	44.9000	0.1005	0.0756	0.0565	0.0415	0.0318	0.0241	0.0153	28.5	30.9		33.6
	29-4-2023	08:05:25	IL&FS	LSI	Solapur	MH	17.872211	75.487617	150+000	252+000	198+750 LHS Outer	2	44.9000	0.0998	0.0720	0.0540	0.0401	0.0316	0.0240	0.0153	28.5	30.9		33.6
	29-4-2023	08:05:25	IL&FS	LSI	Solapur	MH	17.872211	75.487617	150+000	252+000	198+750 LHS Outer	3	44.8000	0.0972	0.0743	0.0578	0.0420	0.0311	0.0239	0.0155	28.5	30.9		33.6
598	29-4-2023	08:09:18	IL&FS	LSI	Solapur	MH	17.870758	75.489265	150+000	252+000	199+000 LHS Outer	1	42.8000	0.1015	0.0761	0.0569	0.0421	0.0320	0.0240	0.0146	28.9	31.5		33.6
	29-4-2023	08:09:18	IL&FS	LSI	Solapur	MH	17.870758	75.489265	150+000	252+000	199+000 LHS Outer	2	43.4000	0.1014	0.0724	0.0551	0.0410	0.0319	0.0243	0.0147	28.9	31.5		33.6
	29-4-2023	08:09:18	IL&FS	LSI	Solapur	MH	17.870758	75.489265	150+000	252+000	199+000 LHS Outer	3	43.1000	0.1001	0.0743	0.0578	0.0425	0.0316	0.0238	0.0149	28.9	31.5		33.6
599	29-4-2023	08:11:05	IL&FS	LSI	Solapur	MH	17.869266	75.490989	150+000	252+000	199+250 LHS Outer	1	44.0000	0.1675	0.1149	0.0674	0.0512	0.0391	0.0299	0.0235	29.1	32.0		33.6
	29-4-2023	08:11:05	IL&FS	LSI	Solapur	MH	17.869266	75.490989	150+000	252+000	199+250 LHS Outer	2	44.8000	0.1660	0.1102	0.0754	0.0537	0.0377	0.0287	0.0229	29.1	32.0		33.6
	29-4-2023	08:11:05	IL&FS	LSI	Solapur	MH	17.869266	75.490989	150+000	252+000	199+250 LHS Outer	3	44.2000	0.1639	0.1022	0.0717	0.0531	0.0416	0.0326	0.0263	29.1	32.0		33.6
600	29-4-2023	08:13:01	IL&FS	LSI	Solapur	MH	17.867746	75.492759	150+000	252+000	199+500 LHS Outer	1	42.9000	0.2136	0.1523	0.1083	0.0762	0.0480	0.0303	0.0172	29.1	32.0		33.6
	29-4-2023	08:13:01	IL&FS	LSI	Solapur	MH	17.867746	75.492759	150+000	252+000	199+500 LHS Outer	2	42.2000	0.2019	0.1425	0.1067	0.0820	0.0530	0.0304	0.0174	29.1	32.0		33.6
	29-4-2023	08:13:01	IL&FS	LSI	Solapur	MH	17.867746	75.492759	150+000	252+000	199+500 LHS Outer	3	43.0000	0.2090	0.1607	0.1115	0.0806	0.0494	0.0296	0.0166	29.1	32.0		33.6
601	29-4-2023	08:14:54	IL&FS	LSI	Solapur	MH	17.866270	75.494491	150+000	252+000	199+750 LHS Outer	1	42.0000	0.2390	0.1499	0.1143	0.0886	0.0585	0.0417	0.0302	29.2	31.3		33.6
	29-4-2023	08:14:54	IL&FS	LSI	Solapur	MH	17.866270	75.494491	150+000	252+000	199+750 LHS Outer	2	42.0000	0.2371	0.1496	0.1100	0.0838	0.0570	0.0436	0.0338	29.2	31.3		33.6
	29-4-2023	08:14:54	IL&FS	LSI	Solapur	MH	17.866270	75.494491	150+000	252+000	199+750 LHS Outer	3	42.0000	0.2402	0.1503	0.1115	0.0877	0.0544	0.0436	0.0358	29.2	31.3		33.6
602	29-4-2023	08:16:52	IL&FS	LSI	Solapur	MH	17.864732	75.496299	150+000	252+000	200+000 LHS Outer	1	40.0000	0.4573	0.2387	0.1255	0.0954	0.0740	0.0493	0.0329	29.1	31.7		33.6
	29-4-2023	08:16:52	IL&FS	LSI	Solapur	MH	17.864732	75.496299	150+000	252+000	200+000 LHS Outer	2	40.1000	0.4334	0.2199	0.1239	0.0938	0.0707	0.0498	0.0390	29.1	31.7		33.6
	29-4-2023	08:16:52	IL&FS	LSI	Solapur	MH	17.864732	75.496299	150+000	252+000	200+000 LHS Outer	3	40.4000	0.4183	0.2353	0.1277	0.0921	0.0651	0.0490	0.0388	29.1	31.7		33.6
603	29-4-2023	08:19:54	IL&FS	LSI	Solapur	MH	17.863275	75.498115	150+000	252+000	200+250 LHS Outer	1	41.3000	0.3772	0.1930	0.0987	0.0676	0.0432	0.0294	0.0199	29.5	32.7	T-29.3/35.3	35.3
	29-4-2023	08:19:54	IL&FS	LSI	Solapur	MH	17.863275	75.498115	150+000	252+000	200+250 LHS Outer	2	42.1000	0.3790	0.1939	0.0957	0.0673	0.0453	0.0313	0.0218	29.5	32.7	T-29.3/35.3	35.3
	29-4-2023	08:19:54	IL&FS	LSI	Solapur	MH	17.863275	75.498115	150+000	252+000	200+250 LHS Outer	3	42.3000	0.3627	0.1978	0.0967	0.0699	0.0512	0.0326	0.0206	29.5	32.7	T-29.3/35.3	35.3
604	29-4-2023	08:22:16	IL&FS	LSI	Solapur	MH	17.861927	75.500137	150+000	252+000	200+500 LHS Outer	1	42.3000	0.2867	0.1774	0.1015	0.0763	0.0576	0.0450	0.0325	29.8	33.3		35.3
	29-4-2023	08:22:16	IL&FS	LSI	Solapur	MH	17.861927	75.500137	150+000	252+000	200+500 LHS Outer	2	42.4000	0.2815	0.1726	0.0962	0.0732	0.0557	0.0453	0.0342	29.8	33.3		35.3
	29-4-2023	08:22:16	IL&FS	LSI	Solapur	MH	17.861927	75.500137	150+000	252+000	200+500 LHS Outer	3	42.7000	0.2864	0.1815	0.1026	0.0736	0.0521	0.0454	0.0345	29.8	33.3		35.3
605	29-4-2023	08:24:12	IL&FS	LSI	Solapur	MH	17.860656	75.501998	150+000	252+000	200+750 LHS Outer	1	41.5000	0.3853	0.1794	0.0950	0.0663	0.0494	0.0395	0.0322	30.0	33.6		35.3
	29-4-2023	08:24:12	IL&FS	LSI	Solapur	MH	17.860656	75.501998	150+000	252+000	200+750 LHS Outer	2	41.6000	0.3815	0.1929	0.0933	0.0694	0.0496	0.0394	0.0320	30.0	33.6		35.3
	29-4-2023	08:24:12	IL&FS	LSI	Solapur	MH	17.860656	75.501998	150+000	252+000	200+750 LHS Outer	3	41.8000	0.3700	0.1984	0.0993	0.0647	0.0507	0.0386	0.0305	30.0	33.6		35.3
606	29-4-2023	08:26:38	IL&FS	LSI	Solapur	MH	17.859384	75.503852	150+000	252+000	201+000 LHS Outer	1	40.4000	0.4104	0.2157	0.1525	0.1031	0.0683	0.0451	0.0346	30.1	33.5		35.3
	29-4-2023	08:26:38	IL&FS	LSI	Solapur	MH	17.859384	75.503852	150+000	252+000	201+000 LHS Outer	2	40.7000	0.4115	0.2151	0.1446	0.1039	0.0707	0.0494	0.0385	30.1	33.5		35.3
	29-4-2023	08:26:38	IL&FS	LSI	Solapur	MH	17.859384	75.503852	150+000	252+000	201+000 LHS Outer	3	40.6000	0.3963	0.2149	0.1518	0.1036	0.0751	0.0528	0.0415	30.1	33.5		35.3
607	29-4-2023	08:28:57	IL&FS	LSI	Solapur	MH	17.858066	75.505859	150+000	252+000	201+250 LHS Outer	1	38.5000	0.5275	0.2610	0.1291	0.0654	0.0462	0.0335	0.0236	30.1	33.6		35.3
	29-4-2023	08:28:57	IL&FS	LSI	Solapur	MH	17.858066	75.505859	150+000	252+000	201+250 LHS Outer	2	38.7000	0.5130	0.2481	0.1308	0.0727	0.0463	0.0330	0.0241	30.1	33.6		35.3
	29-4-2023	08:28:57	IL&FS	LSI	Solapur	MH	17.858066	75.505859	150+000	252+000	201+250 LHS Outer	3	39.0000	0.5089	0.2465	0.1283	0.0719	0.0521	0.0354	0.0244	30.1	33.6		35.3
608	29-4-2023	08:30:46	IL&FS	LSI	Solapur	MH	17.856803	75.507774	150+000	252+000	201+500 LHS Outer	1	42.5000	0.3121	0.1880	0.1265	0.0749	0.0608	0.0421	0.0379	30.0	32.0		35.3
	29-4-2023	08:30:46	IL&FS	LSI	Solapur	MH	17.856803	75.507774	150+000	252+000	201+500 LHS Outer	2	42.9000	0.3067	0.2022	0.1165	0.0780	0.0654	0.0471	0.0424	30.0	32.0		35.3
	29-4-2023	08:30:46	IL&FS	LSI	Solapur	MH	17.856803	75.507774	150+000	252+000	201+500 LHS Outer	3	42.7000	0.2988	0.1880	0.1147	0.0799	0.0637	0.0433	0.0390	30.0	32.0		35.3
609	29-4-2023	08:33:03	IL&FS	LSI	Solapur	MH	17.855663	75.510002	150+000	252+000	201+750 LHS Outer	1	43.0000	0.2075	0.1101	0.0693	0.0484	0.0421	0.0380	0.0262	29.8	33.0		35.3
	29-4-2023	08:33:03	IL&FS	LSI	Solapur	MH	17.855663	75.510002	150+000	252+000	201+750 LHS Outer	2	43.7000	0.2123	0.1149	0.0658	0.0530	0.0450	0.0391	0.0272	29.8	33.0		35.3
	29-4-2023	08:33:03	IL&FS	LSI	Solapur	MH	17.855663	75.510002	150+000	252+000	201+750 LHS Outer	3	43.8000	0.2014	0.1066	0.0652	0.0539	0.0444	0.0376	0.0258	29.8	33.0		35.3
610	29-4-2023	08:35:17	IL&FS	LSI	Solapur	MH	17.854932	75.512001	150+000	252+000	202+000 LHS Outer	1	42.8000	0.2093	0.1128	0.0785	0.0523	0.0402	0.0309	0.0240	30.1	34.3		35.3
	29-4-2023	08:35:17	IL&FS	LSI	Solapur	MH	17.854932	75.512001	150+000	252+000	202+000 LHS Outer	2	43.4000	0.2052	0.1184	0.0800	0.0539	0.0405	0.0313	0.0243	30.1	34.3		35.3
	29-4-2023	08:35:17	IL&FS	LSI	Solapur	MH	17.854932	75.512001	150+000	252+000	202+000 LHS Outer	3	43.4000	0.2025	0.1071	0.0740	0.0536	0.0409	0.0314	0.0235	30.1	34.3		35.3
611	29-4-2023	08:37:22	IL&FS	LSI	Solapur	MH	17.854030	75.514198	150+000	252+000	202+250 LHS Outer	1	39.2000	0.3476	0.2187	0.1291	0.0718	0.0497	0.0340	0.0233	30.3	33.3		35.3
	29-4-2023	08:37:22	IL&FS	LSI	Solapur	MH	17.854030	75.514198	150+000	252+000	202+250 LHS Outer	2	39.7000	0.3612	0.2099	0.1333	0.0718	0.0516	0.0363	0.0235	30.3	33.3		35.3
	29-4-2023	08:37:22	IL&FS	LSI	Solapur	MH	17.854030	75.514198	150+000	252+000	202+250 LHS Outer	3	39.9000	0.3533	0.2055	0.1392	0.0711	0.0531	0.0416	0.0234	30.3	33.3		35.3
612	29-4-2023	08:39:30	IL&FS	LSI	Solapur	MH	17.853176	75.516342	150+000	252+000	202+500 LHS Outer	1	39.2000	0.4361	0.2517	0.1322	0.0777	0.0453	0.0330	0.0297	30.6	34.4		35.3
	29-4-2023	08:39:30	IL&FS	LSI	Solapur	MH	17.853176	75.516342	150+000	252+000	202+500 LHS Outer	2	39.7000	0.4187	0.2581	0.1278	0.0806	0.0462	0.0335	0.0302	30.6	34.4		35.3
	29-4-2023	08:39:30	IL&FS	LSI	Solapur	MH	17.853176	75.516342	150+000	252+000	202+500 LHS Outer	3	39.7000	0.4229	0.2435	0.1334	0.0759	0.0479	0.0340	0.0306	30.6	34.4		35.3
613	29-4-2023	08:41:29	IL&FS	LSI	Solapur	MH	17.852291	75.518592	150+000	252+000	202+750 LHS Outer	1	43.1000	0.1606	0.1017	0.0784	0.0550	0.0411	0.0316	0.0270	30.9	35.0		35.3
	29-4-2023	08:41:29	IL&FS	LSI	Solapur	MH	17.852291	75.518592	150+000	252+000	202+750 LHS Outer	2	43.2000	0.1538	0.0985	0.0757	0.0522	0.0403	0.0312	0.0266	30.9	35.0		35.3
	29-4-2023	08:41:29	IL&FS	LSI	Solapur	MH	17.852291	75.518592	150+000	252+000	202+750 LHS Outer	3	43.3000	0.1608	0.1031	0.0719	0.0520	0.0411	0.0329	0.0270	30.9	35.0		35.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
614	29-4-2023	08:43:44	IL&FS	LSI	Solapur	MH	17.851476	75.520660	150+000	252+000	203+000 LHS Outer	1	42.5000	0.1340	0.0982	0.0704	0.0553	0.0390	0.0283	0.0195	31.0	34.4		35.3
	29-4-2023	08:43:44	IL&FS	LSI	Solapur	MH	17.851476	75.520660	150+000	252+000	203+000 LHS Outer	2	43.2000	0.1385	0.1009	0.0767	0.0553	0.0415	0.0309	0.0218	31.0	34.4		35.3
	29-4-2023	08:43:44	IL&FS	LSI	Solapur	MH	17.851476	75.520660	150+000	252+000	203+000 LHS Outer	3	42.9000	0.1257	0.0940	0.0733	0.0517	0.0391	0.0305	0.0215	31.0	34.4		35.3
615	29-4-2023	08:45:51	IL&FS	LSI	Solapur	MH	17.850563	75.522956	150+000	252+000	203+250 LHS Outer	1	43.5000	0.1479	0.0870	0.0581	0.0400	0.0317	0.0258	0.0172	31.2	35.7		35.3
	29-4-2023	08:45:51	IL&FS	LSI	Solapur	MH	17.850563	75.522956	150+000	252+000	203+250 LHS Outer	2	43.9000	0.1471	0.0853	0.0586	0.0412	0.0312	0.0248	0.0163	31.2	35.7		35.3
	29-4-2023	08:45:51	IL&FS	LSI	Solapur	MH	17.850563	75.522956	150+000	252+000	203+250 LHS Outer	3	43.4000	0.1409	0.0895	0.0588	0.0384	0.0308	0.0257	0.0171	31.2	35.7		35.3
616	29-4-2023	08:48:00	IL&FS	LSI	Solapur	MH	17.849758	75.525154	150+000	252+000	203+500 LHS Outer	1	44.3000	0.1421	0.0928	0.0644	0.0430	0.0276	0.0174	0.0103	31.1	34.9		35.3
	29-4-2023	08:48:00	IL&FS	LSI	Solapur	MH	17.849758	75.525154	150+000	252+000	203+500 LHS Outer	2	44.6000	0.1530	0.0892	0.0621	0.0437	0.0290	0.0179	0.0107	31.1	34.9		35.3
	29-4-2023	08:48:00	IL&FS	LSI	Solapur	MH	17.849758	75.525154	150+000	252+000	203+500 LHS Outer	3	44.8000	0.1518	0.0872	0.0645	0.0481	0.0301	0.0177	0.0105	31.1	34.9		35.3
617	29-4-2023	08:50:14	IL&FS	LSI	Solapur	MH	17.848947	75.527343	150+000	252+000	203+750 LHS Outer	1	42.7000	0.1521	0.0961	0.0560	0.0403	0.0305	0.0247	0.0209	31.2	35.5		35.3
	29-4-2023	08:50:14	IL&FS	LSI	Solapur	MH	17.848947	75.527343	150+000	252+000	203+750 LHS Outer	2	42.8000	0.1474	0.0944	0.0571	0.0402	0.0296	0.0254	0.0224	31.2	35.5		35.3
	29-4-2023	08:50:14	IL&FS	LSI	Solapur	MH	17.848947	75.527343	150+000	252+000	203+750 LHS Outer	3	42.6000	0.1435	0.0870	0.0521	0.0378	0.0286	0.0248	0.0220	31.2	35.5		35.3
618	29-4-2023	08:52:16	IL&FS	LSI	Solapur	MH	17.848196	75.529472	150+000	252+000	204+000 LHS Outer	1	40.9000	0.1776	0.1201	0.0850	0.0644	0.0472	0.0340	0.0206	31.3	35.9		35.3
	29-4-2023	08:52:16	IL&FS	LSI	Solapur	MH	17.848196	75.529472	150+000	252+000	204+000 LHS Outer	2	41.5000	0.1643	0.1232	0.0859	0.0629	0.0479	0.0362	0.0226	31.3	35.9		35.3
	29-4-2023	08:52:16	IL&FS	LSI	Solapur	MH	17.848196	75.529472	150+000	252+000	204+000 LHS Outer	3	41.5000	0.1778	0.1158	0.0865	0.0670	0.0463	0.0326	0.0193	31.3	35.9		35.3
619	29-4-2023	08:54:33	IL&FS	LSI	Solapur	MH	17.847707	75.531906	150+000	252+000	204+250 LHS Outer	1	44.3000	0.1726	0.1217	0.0778	0.0472	0.0323	0.0184	0.0157	31.7	36.4		35.3
	29-4-2023	08:54:33	IL&FS	LSI	Solapur	MH	17.847707	75.531906	150+000	252+000	204+250 LHS Outer	2	44.2000	0.1708	0.1259	0.0770	0.0465	0.0322	0.0188	0.0149	31.7	36.4		35.3
	29-4-2023	08:54:33	IL&FS	LSI	Solapur	MH	17.847707	75.531906	150+000	252+000	204+250 LHS Outer	3	44.5000	0.1654	0.1288	0.0801	0.0480	0.0325	0.0179	0.0141	31.7	36.4		35.3
620	29-4-2023	08:56:53	IL&FS	LSI	Solapur	MH	17.847330	75.534416	150+000	252+000	204+530 LHS Outer	1	43.1000	0.1672	0.1065	0.0709	0.0456	0.0335	0.0250	0.0175	31.8	36.3		35.3
	29-4-2023	08:56:53	IL&FS	LSI	Solapur	MH	17.847330	75.534416	150+000	252+000	204+530 LHS Outer	2	43.5000	0.1743	0.1100	0.0729	0.0444	0.0321	0.0237	0.0163	31.8	36.3		35.3
	29-4-2023	08:56:53	IL&FS	LSI	Solapur	MH	17.847330	75.534416	150+000	252+000	204+530 LHS Outer	3	43.4000	0.1694	0.1157	0.0758	0.0449	0.0327	0.0242	0.0168	31.8	36.3		35.3
621	29-4-2023	08:58:59	IL&FS	LSI	Solapur	MH	17.847007	75.536399	150+000	252+000	204+750 LHS Outer	1	44.2000	0.1334	0.0848	0.0480	0.0339	0.0236	0.0200	0.0140	31.9	36.8		35.3
	29-4-2023	08:58:59	IL&FS	LSI	Solapur	MH	17.847007	75.536399	150+000	252+000	204+750 LHS Outer	2	44.4000	0.1301	0.0845	0.0510	0.0348	0.0224	0.0191	0.0132	31.9	36.8		35.3
	29-4-2023	08:58:59	IL&FS	LSI	Solapur	MH	17.847007	75.536399	150+000	252+000	204+750 LHS Outer	3	44.4000	0.1438	0.0888	0.0512	0.0339	0.0216	0.0185	0.0127	31.9	36.8		35.3
622	29-4-2023	09:01:01	IL&FS	LSI	Solapur	MH	17.846679	75.538696	150+000	252+000	205+000 LHS Outer	1	41.8000	0.1762	0.1363	0.0933	0.0686	0.0464	0.0322	0.0220	32.0	36.8		35.3
	29-4-2023	09:01:01	IL&FS	LSI	Solapur	MH	17.846679	75.538696	150+000	252+000	205+000 LHS Outer	2	41.7000	0.1778	0.1324	0.0944	0.0643	0.0462	0.0337	0.0248	32.0	36.8		35.3
	29-4-2023	09:01:01	IL&FS	LSI	Solapur	MH	17.846679	75.538696	150+000	252+000	205+000 LHS Outer	3	41.7000	0.1858	0.1320	0.0881	0.0703	0.0469	0.0315	0.0231	32.0	36.8		35.3
623	29-4-2023	09:03:01	IL&FS	LSI	Solapur	MH	17.846288	75.541275	150+000	252+000	205+250 LHS Outer	1	40.4000	0.3275	0.2187	0.1332	0.0796	0.0478	0.0247	0.0222	32.1	36.4		35.3
	29-4-2023	09:03:01	IL&FS	LSI	Solapur	MH	17.846288	75.541275	150+000	252+000	205+250 LHS Outer	2	40.4000	0.3298	0.2197	0.1398	0.0852	0.0507	0.0243	0.0218	32.1	36.4		35.3
	29-4-2023	09:03:01	IL&FS	LSI	Solapur	MH	17.846288	75.541275	150+000	252+000	205+250 LHS Outer	3	40.3000	0.3236	0.2074	0.1264	0.0758	0.0499	0.0320	0.0159	32.1	36.4		35.3
624	29-4-2023	09:07:24	IL&FS	LSI	Solapur	MH	17.845800	75.543411	150+000	252+000	205+500 LHS Outer	1	41.4000	0.2990	0.1751	0.1066	0.0715	0.0460	0.0346	0.0211	32.2	35.8	T-29.9/36.8	36.8
	29-4-2023	09:07:24	IL&FS	LSI	Solapur	MH	17.845800	75.543411	150+000	252+000	205+500 LHS Outer	2	41.6000	0.2943	0.1648	0.1120	0.0713	0.0453	0.0348	0.0213	32.2	35.8	T-29.9/36.8	36.8
	29-4-2023	09:07:24	IL&FS	LSI	Solapur	MH	17.845800	75.543411	150+000	252+000	205+500 LHS Outer	3	42.1000	0.2938	0.1664	0.1110	0.0705	0.0441	0.0338	0.0204	32.2	35.8	T-29.9/36.8	36.8
625	29-4-2023	09:10:25	IL&FS	LSI	Solapur	MH	17.845144	75.545829	150+000	252+000	205+750 LHS Outer	1	44.0000	0.1688	0.0959	0.0660	0.0488	0.0373	0.0250	0.0165	32.2	35.9		36.8
	29-4-2023	09:10:25	IL&FS	LSI	Solapur	MH	17.845144	75.545829	150+000	252+000	205+750 LHS Outer	2	43.9000	0.1824	0.1025	0.0597	0.0461	0.0372	0.0247	0.0162	32.2	35.9		36.8
	29-4-2023	09:10:25	IL&FS	LSI	Solapur	MH	17.845144	75.545829	150+000	252+000	205+750 LHS Outer	3	44.0000	0.1824	0.1053	0.0603	0.0463	0.0374	0.0249	0.0164	32.2	35.9		36.8
626	29-4-2023	09:12:32	IL&FS	LSI	Solapur	MH	17.844646	75.547889	150+000	252+000	206+000 LHS Outer	1	42.8000	0.1643	0.1122	0.0766	0.0499	0.0331	0.0223	0.0151	32.2	35.6		36.8
	29-4-2023	09:12:32	IL&FS	LSI	Solapur	MH	17.844646	75.547889	150+000	252+000	206+000 LHS Outer	2	43.7000	0.1760	0.1099	0.0741	0.0512	0.0347	0.0240	0.0166	32.2	35.6		36.8
	29-4-2023	09:12:32	IL&FS	LSI	Solapur	MH	17.844646	75.547889	150+000	252+000	206+000 LHS Outer	3	43.8000	0.1671	0.1110	0.0734	0.0475	0.0351	0.0254	0.0178	32.2	35.6		36.8
627	29-4-2023	09:14:36	IL&FS	LSI	Solapur	MH	17.844028	75.550331	150+000	252+000	206+250 LHS Outer	1	42.8000	0.2272	0.1231	0.0743	0.0575	0.0327	0.0221	0.0198	32.1	35.2		36.8
	29-4-2023	09:14:36	IL&FS	LSI	Solapur	MH	17.844028	75.550331	150+000	252+000	206+250 LHS Outer	2	43.1000	0.2129	0.1179	0.0769	0.0585	0.0327	0.0216	0.0194	32.1	35.2		36.8
	29-4-2023	09:14:36	IL&FS	LSI	Solapur	MH	17.844028	75.550331	150+000	252+000	206+250 LHS Outer	3	43.1000	0.2230	0.1179	0.0755	0.0561	0.0316	0.0210	0.0189	32.1	35.2		36.8
628	29-4-2023	09:16:30	IL&FS	LSI	Solapur	MH	17.843435	75.552543	150+000	252+000	206+500 LHS Outer	1	43.8000	0.2139	0.1418	0.0983	0.0760	0.0446	0.0301	0.0247	32.2	35.8		36.8
	29-4-2023	09:16:30	IL&FS	LSI	Solapur	MH	17.843435	75.552543	150+000	252+000	206+500 LHS Outer	2	44.0000	0.2176	0.1392	0.0993	0.0737	0.0446	0.0316	0.0245	32.2	35.8		36.8
	29-4-2023	09:16:30	IL&FS	LSI	Solapur	MH	17.843435	75.552543	150+000	252+000	206+500 LHS Outer	3	44.1000	0.2131	0.1364	0.0981	0.0782	0.0424	0.0282	0.0245	32.2	35.8		36.8
629	29-4-2023	09:18:32	IL&FS	LSI	Solapur	MH	17.842882	75.554824	150+000	252+000	206+750 LHS Outer	1	40.4000	0.3612	0.1949	0.0951	0.0617	0.0359	0.0230	0.0147	32.3	35.9		36.8
	29-4-2023	09:18:32	IL&FS	LSI	Solapur	MH	17.842882	75.554824	150+000	252+000	206+750 LHS Outer	2	40.4000	0.3688	0.1920	0.0961	0.0599	0.0338	0.0230	0.0145	32.3	35.9		36.8
	29-4-2023	09:18:32	IL&FS	LSI	Solapur	MH	17.842882	75.554824	150+000	252+000	206+750 LHS Outer	3	40.5000	0.3438	0.2018	0.1014	0.0628	0.0336	0.0196	0.0147	32.3	35.9		36.8
630	29-4-2023	09:20:35	IL&FS	LSI	Solapur	MH	17.842290	75.557083	150+000	252+000	207+000 LHS Outer	1	39.9000	0.4643	0.2460	0.1152	0.0689	0.0513	0.0376	0.0238	32.5	37.1		36.8
	29-4-2023	09:20:35	IL&FS	LSI	Solapur	MH	17.842290	75.557083	150+000	252+000	207+000 LHS Outer	2	39.9000	0.4715	0.2362	0.1199	0.0689	0.0580	0.0392	0.0253	32.5	37.1		36.8
	29-4-2023	09:20:35	IL&FS	LSI	Solapur	MH	17.842290	75.557083	150+000	252+000	207+000 LHS Outer	3	40.1000	0.4548	0.2320	0.1164	0.0693	0.0539	0.0407	0.0266	32.5	37.1		36.8
631	29-4-2023	09:22:35	IL&FS	LSI	Solapur	MH	17.841758	75.559333	150+000	252+000	207+250 LHS Outer	1	38.7000	0.5401	0.2969	0.1518	0.0733	0.0453	0.0307	0.0200	32.8	38.2		36.8
	29-4-2023	09:22:35	IL&FS	LSI	Solapur	MH	17.841758	75.559333	150+000	252+000	207+250 LHS Outer	2	38.8000	0.5368	0.2976	0.1514	0.0762	0.0462	0.0299	0.0195	32.8	38.2		36.8
	29-4-2023	09:22:35	IL&FS	LSI	Solapur	MH	17.841758	75.559333	150+000	252+000	207+250 LHS Outer	3	39.5000	0.5392	0.2898	0.1536	0.0794	0.0460	0.0300	0.0193	32.8	38.2		36.8
632	29-4-2023	09:24:58	IL&FS	LSI	Solapur	MH	17.841732	75.561836	150+000	252+000	207+500 LHS Outer	1	44.2000	0.2200	0.1321	0.0750	0.0527	0.0352	0.0235	0.0211	33.4	38.7		36.8
	29-4-2023	09:24:58	IL&FS	LSI	Solapur	MH	17.841732	75.561836	150+000	252+000	207+500 LHS Outer	2	44.4000	0.2239	0.1384	0.0750	0.0538	0.0354	0.0224	0.0202	33.4	38.7		36.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	09:24:58	IL&FS	LSI	Solapur	MH	17.841732	75.561836	150+000	252+000	207+500 LHS Outer	3	44.7000	0.2085	0.1301	0.0754	0.0523	0.0345	0.0223	0.0201	33.4	38.7		36.8
633	29-4-2023	09:27:08	IL&FS	LSI	Solapur	MH	17.841953	75.564064	150+000	252+000	207+750 LHS Outer	1	40.8000	0.3811	0.1967	0.0843	0.0526	0.0331	0.0241	0.0178	33.5	38.8		36.8
	29-4-2023	09:27:08	IL&FS	LSI	Solapur	MH	17.841953	75.564064	150+000	252+000	207+750 LHS Outer	2	41.0000	0.3856	0.1812	0.0917	0.0583	0.0367	0.0242	0.0147	33.5	38.8		36.8
	29-4-2023	09:27:08	IL&FS	LSI	Solapur	MH	17.841953	75.564064	150+000	252+000	207+750 LHS Outer	3	40.6000	0.3839	0.1860	0.0927	0.0606	0.0354	0.0234	0.0145	33.5	38.8		36.8
634	29-4-2023	09:29:04	IL&FS	LSI	Solapur	MH	17.842164	75.566474	150+000	252+000	208+000 LHS Outer	1	41.4000	0.2633	0.1828	0.1158	0.0688	0.0491	0.0294	0.0185	33.7	39.4		36.8
	29-4-2023	09:29:04	IL&FS	LSI	Solapur	MH	17.842164	75.566474	150+000	252+000	208+000 LHS Outer	2	41.3000	0.2637	0.1787	0.1180	0.0737	0.0478	0.0288	0.0179	33.7	39.4		36.8
	29-4-2023	09:29:04	IL&FS	LSI	Solapur	MH	17.842164	75.566474	150+000	252+000	208+000 LHS Outer	3	41.6000	0.2679	0.1822	0.1142	0.0709	0.0493	0.0296	0.0186	33.7	39.4		36.8
635	29-4-2023	09:30:53	IL&FS	LSI	Solapur	MH	17.842359	75.568794	150+000	252+000	208+250 LHS Outer	1	41.0000	0.3414	0.2088	0.1331	0.0888	0.0559	0.0292	0.0160	33.7	39.3		36.8
	29-4-2023	09:30:53	IL&FS	LSI	Solapur	MH	17.842359	75.568794	150+000	252+000	208+250 LHS Outer	2	41.3000	0.3427	0.2168	0.1330	0.0898	0.0560	0.0303	0.0166	33.7	39.3		36.8
	29-4-2023	09:30:53	IL&FS	LSI	Solapur	MH	17.842359	75.568794	150+000	252+000	208+250 LHS Outer	3	41.5000	0.3438	0.2186	0.1373	0.0898	0.0566	0.0294	0.0154	33.7	39.3		36.8
636	29-4-2023	09:32:58	IL&FS	LSI	Solapur	MH	17.842060	75.571197	150+000	252+000	208+500 LHS Outer	1	41.1000	0.3899	0.2650	0.1629	0.0984	0.0504	0.0316	0.0200	33.9	39.7		36.8
	29-4-2023	09:32:58	IL&FS	LSI	Solapur	MH	17.842060	75.571197	150+000	252+000	208+500 LHS Outer	2	40.9000	0.3833	0.2642	0.1642	0.0980	0.0495	0.0316	0.0206	33.9	39.7		36.8
	29-4-2023	09:32:58	IL&FS	LSI	Solapur	MH	17.842060	75.571197	150+000	252+000	208+500 LHS Outer	3	41.2000	0.3853	0.2783	0.1718	0.0986	0.0508	0.0321	0.0203	33.9	39.7		36.8
637	29-4-2023	09:34:50	IL&FS	LSI	Solapur	MH	17.841705	75.573478	150+000	252+000	208+750 LHS Outer	1	43.7000	0.2111	0.1015	0.0528	0.0429	0.0299	0.0199	0.0136	34.0	40.1		36.8
	29-4-2023	09:34:50	IL&FS	LSI	Solapur	MH	17.841705	75.573478	150+000	252+000	208+750 LHS Outer	2	43.2000	0.2059	0.0945	0.0528	0.0413	0.0290	0.0209	0.0152	34.0	40.1		36.8
	29-4-2023	09:34:50	IL&FS	LSI	Solapur	MH	17.841705	75.573478	150+000	252+000	208+750 LHS Outer	3	43.8000	0.1977	0.1010	0.0535	0.0411	0.0267	0.0196	0.0150	34.0	40.1		36.8
638	29-4-2023	09:36:46	IL&FS	LSI	Solapur	MH	17.841341	75.575698	150+000	252+000	209+000 LHS Outer	1	42.6000	0.1614	0.1151	0.0647	0.0397	0.0271	0.0191	0.0141	34.1	39.6		36.8
	29-4-2023	09:36:46	IL&FS	LSI	Solapur	MH	17.841341	75.575698	150+000	252+000	209+000 LHS Outer	2	42.8000	0.1630	0.1116	0.0656	0.0395	0.0280	0.0192	0.0142	34.1	39.6		36.8
	29-4-2023	09:36:46	IL&FS	LSI	Solapur	MH	17.841341	75.575698	150+000	252+000	209+000 LHS Outer	3	43.2000	0.1613	0.1189	0.0648	0.0393	0.0271	0.0190	0.0141	34.1	39.6		36.8
639	29-4-2023	09:49:44	IL&FS	LSI	Solapur	MH	17.840894	75.578125	150+000	252+000	209+250 LHS Outer	1	44.1000	0.1321	0.0931	0.0631	0.0413	0.0273	0.0211	0.0189	34.4	39.7	T-32.2/41.2	41.2
	29-4-2023	09:49:44	IL&FS	LSI	Solapur	MH	17.840894	75.578125	150+000	252+000	209+250 LHS Outer	2	44.7000	0.1328	0.0882	0.0598	0.0390	0.0256	0.0193	0.0174	34.4	39.7	T-32.2/41.2	41.2
	29-4-2023	09:49:44	IL&FS	LSI	Solapur	MH	17.840894	75.578125	150+000	252+000	209+250 LHS Outer	3	45.0000	0.1381	0.0903	0.0605	0.0396	0.0268	0.0206	0.0185	34.4	39.7	T-32.2/41.2	41.2
640	29-4-2023	09:52:06	IL&FS	LSI	Solapur	MH	17.840490	75.580490	150+000	252+000	209+500 LHS Outer	1	41.4000	0.2886	0.1377	0.0645	0.0430	0.0369	0.0318	0.0286	34.6	40.3		41.2
	29-4-2023	09:52:06	IL&FS	LSI	Solapur	MH	17.840490	75.580490	150+000	252+000	209+500 LHS Outer	2	41.4000	0.2803	0.1321	0.0657	0.0442	0.0369	0.0328	0.0295	34.6	40.3		41.2
	29-4-2023	09:52:06	IL&FS	LSI	Solapur	MH	17.840490	75.580490	150+000	252+000	209+500 LHS Outer	3	41.5000	0.2683	0.1232	0.0667	0.0392	0.0381	0.0370	0.0298	34.6	40.3		41.2
641	29-4-2023	09:54:20	IL&FS	LSI	Solapur	MH	17.839729	75.582664	150+000	252+000	209+750 LHS Outer	1	43.3000	0.1011	0.0724	0.0517	0.0396	0.0314	0.0207	0.0127	34.6	41.3		41.2
	29-4-2023	09:54:20	IL&FS	LSI	Solapur	MH	17.839729	75.582664	150+000	252+000	209+750 LHS Outer	2	44.2000	0.1031	0.0748	0.0549	0.0416	0.0318	0.0206	0.0125	34.6	41.3		41.2
	29-4-2023	09:54:20	IL&FS	LSI	Solapur	MH	17.839729	75.582664	150+000	252+000	209+750 LHS Outer	3	44.2000	0.1043	0.0745	0.0520	0.0398	0.0308	0.0208	0.0131	34.6	41.3		41.2
642	29-4-2023	09:57:54	IL&FS	LSI	Solapur	MH	17.839080	75.584358	150+000	252+000	209+950 LHS Outer	1	43.9000	0.1091	0.0782	0.0546	0.0419	0.0337	0.0259	0.0208	34.7	35.8		41.2
	29-4-2023	09:57:54	IL&FS	LSI	Solapur	MH	17.839080	75.584358	150+000	252+000	209+950 LHS Outer	2	45.0000	0.1078	0.0800	0.0585	0.0461	0.0377	0.0274	0.0203	34.7	35.8		41.2
	29-4-2023	09:57:54	IL&FS	LSI	Solapur	MH	17.839080	75.584358	150+000	252+000	209+950 LHS Outer	3	44.7000	0.1144	0.0828	0.0584	0.0446	0.0359	0.0267	0.0199	34.7	35.8		41.2
643	29-4-2023	10:00:08	IL&FS	LSI	Solapur	MH	17.838092	75.587158	150+000	252+000	210+250 LHS Outer	1	43.3000	0.1022	0.0715	0.0509	0.0382	0.0297	0.0211	0.0148	34.8	41.9		41.2
	29-4-2023	10:00:08	IL&FS	LSI	Solapur	MH	17.838092	75.587158	150+000	252+000	210+250 LHS Outer	2	44.9000	0.1049	0.0739	0.0531	0.0418	0.0331	0.0215	0.0132	34.8	41.9		41.2
	29-4-2023	10:00:08	IL&FS	LSI	Solapur	MH	17.838092	75.587158	150+000	252+000	210+250 LHS Outer	3	43.3000	0.1022	0.0714	0.0502	0.0390	0.0315	0.0200	0.0128	34.8	41.9		41.2
644	29-4-2023	10:02:26	IL&FS	LSI	Solapur	MH	17.837249	75.589385	150+000	252+000	210+500 LHS Outer	1	37.2000	0.5896	0.3308	0.1548	0.0951	0.0654	0.0477	0.0319	34.9	42.7		41.2
	29-4-2023	10:02:26	IL&FS	LSI	Solapur	MH	17.837249	75.589385	150+000	252+000	210+500 LHS Outer	2	37.2000	0.5777	0.3175	0.1575	0.0901	0.0694	0.0491	0.0317	34.9	42.7		41.2
	29-4-2023	10:02:26	IL&FS	LSI	Solapur	MH	17.837249	75.589385	150+000	252+000	210+500 LHS Outer	3	37.4000	0.5788	0.3378	0.1544	0.1013	0.0722	0.0456	0.0309	34.9	42.7		41.2
645	29-4-2023	10:04:29	IL&FS	LSI	Solapur	MH	17.836442	75.591537	150+000	252+000	210+750 LHS Outer	1	39.2000	0.3971	0.2181	0.1208	0.0903	0.0606	0.0424	0.0305	35.2	43.0		41.2
	29-4-2023	10:04:29	IL&FS	LSI	Solapur	MH	17.836442	75.591537	150+000	252+000	210+750 LHS Outer	2	39.5000	0.3998	0.2237	0.1295	0.0868	0.0610	0.0421	0.0283	35.2	43.0		41.2
	29-4-2023	10:04:29	IL&FS	LSI	Solapur	MH	17.836442	75.591537	150+000	252+000	210+750 LHS Outer	3	39.6000	0.3908	0.2267	0.1299	0.0851	0.0626	0.0422	0.0276	35.2	43.0		41.2
646	29-4-2023	10:06:56	IL&FS	LSI	Solapur	MH	17.835611	75.593772	150+000	252+000	211+020 LHS Outer	1	40.7000	0.4198	0.2101	0.0892	0.0473	0.0313	0.0216	0.0194	35.3	39.0		41.2
	29-4-2023	10:06:56	IL&FS	LSI	Solapur	MH	17.835611	75.593772	150+000	252+000	211+020 LHS Outer	2	41.0000	0.4230	0.2195	0.0872	0.0455	0.0309	0.0220	0.0198	35.3	39.0		41.2
	29-4-2023	10:06:56	IL&FS	LSI	Solapur	MH	17.835611	75.593772	150+000	252+000	211+020 LHS Outer	3	40.6000	0.4095	0.2127	0.0860	0.0482	0.0302	0.0228	0.0205	35.3	39.0		41.2
647	29-4-2023	10:09:01	IL&FS	LSI	Solapur	MH	17.834880	75.595779	150+000	252+000	211+250 LHS Outer	1	41.8000	0.2330	0.1207	0.0805	0.0540	0.0362	0.0235	0.0151	35.3	42.4		41.2
	29-4-2023	10:09:01	IL&FS	LSI	Solapur	MH	17.834880	75.595779	150+000	252+000	211+250 LHS Outer	2	42.5000	0.2298	0.1129	0.0782	0.0547	0.0374	0.0239	0.0155	35.3	42.4		41.2
	29-4-2023	10:09:01	IL&FS	LSI	Solapur	MH	17.834880	75.595779	150+000	252+000	211+250 LHS Outer	3	42.1000	0.2247	0.1133	0.0777	0.0543	0.0357	0.0241	0.0157	35.3	42.4		41.2
648	29-4-2023	10:11:20	IL&FS	LSI	Solapur	MH	17.834075	75.597969	150+000	252+000	211+500 LHS Outer	1	41.5000	0.3688	0.1650	0.0724	0.0423	0.0284	0.0183	0.0167	35.4	42.3		41.2
	29-4-2023	10:11:20	IL&FS	LSI	Solapur	MH	17.834075	75.597969	150+000	252+000	211+500 LHS Outer	2	40.2000	0.3598	0.1581	0.0746	0.0387	0.0306	0.0187	0.0158	35.4	42.3		41.2
	29-4-2023	10:11:20	IL&FS	LSI	Solapur	MH	17.834075	75.597969	150+000	252+000	211+500 LHS Outer	3	40.1000	0.3416	0.1547	0.0709	0.0367	0.0277	0.0178	0.0167	35.4	42.3		41.2
649	29-4-2023	10:13:43	IL&FS	LSI	Solapur	MH	17.833225	75.600112	150+000	252+000	211+750 LHS Outer	1	40.7000	0.3298	0.1685	0.0856	0.0470	0.0298	0.0183	0.0135	34.9	40.4		41.2
	29-4-2023	10:13:43	IL&FS	LSI	Solapur	MH	17.833225	75.600112	150+000	252+000	211+750 LHS Outer	2	42.5000	0.3185	0.1907	0.0857	0.0443	0.0307	0.0214	0.0128	34.9	40.4		41.2
	29-4-2023	10:13:43	IL&FS	LSI	Solapur	MH	17.833225	75.600112	150+000	252+000	211+750 LHS Outer	3	41.3000	0.3143	0.1823	0.0818	0.0462	0.0314	0.0210	0.0140	34.9	40.4		41.2
650	29-4-2023	10:15:56	IL&FS	LSI	Solapur	MH	17.832391	75.602287	150+000	252+000	211+985 LHS Outer	1	44.3000	0.1989	0.1310	0.0841	0.0500	0.0331	0.0234	0.0211	34.8	40.6		41.2
	29-4-2023	10:15:56	IL&FS	LSI	Solapur	MH	17.832391	75.602287	150+000	252+000	211+985 LHS Outer	2	44.6000	0.2078	0.1319	0.0854	0.0531	0.0362	0.0229	0.0209	34.8	40.6		41.2
	29-4-2023	10:15:56	IL&FS	LSI	Solapur	MH	17.832391	75.602287	150+000	252+000	211+985 LHS Outer	3	42.7000	0.1937	0.1263	0.0799	0.0504	0.0339	0.0227	0.0200	34.8	40.6		41.2
651	29-4-2023	10:18:02	IL&FS	LSI	Solapur	MH	17.831537	75.604667	150+000	252+000	212+250 LHS Outer	1	40.1000	0.3558	0.2004	0.1115	0.0710	0.0474	0.0321	0.0209	34.7	41.5	Bleeding	41.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	10:18:02	IL&FS	LSI	Solapur	MH	17.831537	75.604667	150+000	252+000	212+250 LHS Outer	2	39.9000	0.3535	0.1930	0.1130	0.0646	0.0497	0.0324	0.0208	34.7	41.5	Bleeding	41.2
	29-4-2023	10:18:02	IL&FS	LSI	Solapur	MH	17.831537	75.604667	150+000	252+000	212+250 LHS Outer	3	40.1000	0.3352	0.2044	0.1082	0.0661	0.0484	0.0316	0.0209	34.7	41.5	Bleeding	41.2
652	29-4-2023	10:20:02	IL&FS	LSI	Solapur	MH	17.830575	75.606666	150+000	252+000	212+500 LHS Outer	1	42.9000	0.2113	0.1397	0.0969	0.0670	0.0484	0.0360	0.0283	35.1	41.7		41.2
	29-4-2023	10:20:02	IL&FS	LSI	Solapur	MH	17.830575	75.606666	150+000	252+000	212+500 LHS Outer	2	43.7000	0.2175	0.1401	0.1073	0.0756	0.0542	0.0329	0.0173	35.1	41.7		41.2
	29-4-2023	10:20:02	IL&FS	LSI	Solapur	MH	17.830575	75.606666	150+000	252+000	212+500 LHS Outer	3	43.6000	0.2028	0.1440	0.1007	0.0731	0.0553	0.0340	0.0175	35.1	41.7		41.2
653	29-4-2023	10:21:51	IL&FS	LSI	Solapur	MH	17.829492	75.608489	150+000	252+000	212+750 LHS Outer	1	44.3000	0.2366	0.1471	0.0906	0.0668	0.0530	0.0351	0.0216	35.1	40.9		41.2
	29-4-2023	10:21:51	IL&FS	LSI	Solapur	MH	17.829492	75.608489	150+000	252+000	212+750 LHS Outer	2	42.8000	0.2376	0.1395	0.0824	0.0649	0.0519	0.0348	0.0213	35.1	40.9		41.2
	29-4-2023	10:21:51	IL&FS	LSI	Solapur	MH	17.829492	75.608489	150+000	252+000	212+750 LHS Outer	3	44.4000	0.2436	0.1509	0.0897	0.0678	0.0529	0.0338	0.0204	35.1	40.9		41.2
654	29-4-2023	10:24:13	IL&FS	LSI	Solapur	MH	17.828207	75.610679	150+000	252+000	213+000 LHS Outer	1	40.0000	0.5035	0.2429	0.1027	0.0605	0.0491	0.0385	0.0247	34.9	40.8		41.2
	29-4-2023	10:24:13	IL&FS	LSI	Solapur	MH	17.828207	75.610679	150+000	252+000	213+000 LHS Outer	2	40.2000	0.4823	0.2632	0.1108	0.0637	0.0535	0.0391	0.0252	34.9	40.8		41.2
	29-4-2023	10:24:13	IL&FS	LSI	Solapur	MH	17.828207	75.610679	150+000	252+000	213+000 LHS Outer	3	40.3000	0.4775	0.2439	0.1106	0.0600	0.0492	0.0390	0.0251	34.9	40.8		41.2
655	29-4-2023	10:26:36	IL&FS	LSI	Solapur	MH	17.826965	75.612701	150+000	252+000	213+250 LHS Outer	1	42.7000	0.2800	0.1345	0.0710	0.0471	0.0317	0.0285	0.0207	34.8	41.4		41.2
	29-4-2023	10:26:36	IL&FS	LSI	Solapur	MH	17.826965	75.612701	150+000	252+000	213+250 LHS Outer	2	43.2000	0.2972	0.1387	0.0690	0.0518	0.0391	0.0306	0.0225	34.8	41.4		41.2
	29-4-2023	10:26:36	IL&FS	LSI	Solapur	MH	17.826965	75.612701	150+000	252+000	213+250 LHS Outer	3	44.2000	0.2928	0.1344	0.0753	0.0533	0.0378	0.0308	0.0227	34.8	41.4		41.2
656	29-4-2023	10:28:41	IL&FS	LSI	Solapur	MH	17.825757	75.614776	150+000	252+000	213+500 LHS Outer	1	43.2000	0.1811	0.0998	0.0698	0.0405	0.0295	0.0221	0.0158	35.0	41.0		41.2
	29-4-2023	10:28:41	IL&FS	LSI	Solapur	MH	17.825757	75.614776	150+000	252+000	213+500 LHS Outer	2	43.4000	0.1731	0.1042	0.0693	0.0422	0.0319	0.0242	0.0156	35.0	41.0		41.2
	29-4-2023	10:28:41	IL&FS	LSI	Solapur	MH	17.825757	75.614776	150+000	252+000	213+500 LHS Outer	3	42.9000	0.1669	0.1010	0.0636	0.0415	0.0307	0.0231	0.0159	35.0	41.0		41.2
657	29-4-2023	19:55:46	IL&FS	LSI	Solapur	MH	17.824707	75.616859	150+000	252+000	213+750 LHS Outer	1	41.3000	0.3207	0.1913	0.1181	0.0761	0.0474	0.0368	0.0301	30.8	34.3	T-28.5/38.6	38.6
	29-4-2023	19:55:46	IL&FS	LSI	Solapur	MH	17.824707	75.616859	150+000	252+000	213+750 LHS Outer	2	41.7000	0.3174	0.1758	0.1153	0.0769	0.0483	0.0368	0.0301	30.8	34.3	T-28.5/38.6	38.6
	29-4-2023	19:55:46	IL&FS	LSI	Solapur	MH	17.824707	75.616859	150+000	252+000	213+750 LHS Outer	3	41.9000	0.3044	0.1921	0.1125	0.0761	0.0475	0.0373	0.0306	30.8	34.3	T-28.5/38.6	38.6
658	29-4-2023	19:58:30	IL&FS	LSI	Solapur	MH	17.823463	75.618797	150+000	252+000	214+000 LHS Outer	1	41.9000	0.1762	0.1189	0.0766	0.0541	0.0400	0.0321	0.0268	30.7	33.7		38.6
	29-4-2023	19:58:30	IL&FS	LSI	Solapur	MH	17.823463	75.618797	150+000	252+000	214+000 LHS Outer	2	42.2000	0.1821	0.1250	0.0821	0.0562	0.0382	0.0323	0.0267	30.7	33.7		38.6
	29-4-2023	19:58:30	IL&FS	LSI	Solapur	MH	17.823463	75.618797	150+000	252+000	214+000 LHS Outer	3	42.3000	0.1751	0.1173	0.0770	0.0544	0.0388	0.0324	0.0242	30.7	33.7		38.6
659	29-4-2023	20:00:33	IL&FS	LSI	Solapur	MH	17.822252	75.620925	150+000	252+000	214+250 LHS Outer	1	40.2000	0.3179	0.2038	0.1162	0.0750	0.0478	0.0271	0.0177	30.7	34.2		38.6
	29-4-2023	20:00:33	IL&FS	LSI	Solapur	MH	17.822252	75.620925	150+000	252+000	214+250 LHS Outer	2	40.8000	0.2937	0.1846	0.1110	0.0753	0.0458	0.0261	0.0199	30.7	34.2		38.6
	29-4-2023	20:00:33	IL&FS	LSI	Solapur	MH	17.822252	75.620925	150+000	252+000	214+250 LHS Outer	3	40.5000	0.3078	0.1989	0.1149	0.0759	0.0474	0.0263	0.0198	30.7	34.2		38.6
660	29-4-2023	20:02:26	IL&FS	LSI	Solapur	MH	17.821100	75.622825	150+000	252+000	214+500 LHS Outer	1	40.6000	0.3331	0.2006	0.1179	0.0829	0.0508	0.0337	0.0252	30.7	33.9		38.6
	29-4-2023	20:02:26	IL&FS	LSI	Solapur	MH	17.821100	75.622825	150+000	252+000	214+500 LHS Outer	2	40.8000	0.3285	0.2097	0.1236	0.0845	0.0515	0.0335	0.0272	30.7	33.9		38.6
	29-4-2023	20:02:26	IL&FS	LSI	Solapur	MH	17.821100	75.622825	150+000	252+000	214+500 LHS Outer	3	40.8000	0.3202	0.2066	0.1175	0.0825	0.0498	0.0321	0.0257	30.7	33.9		38.6
661	29-4-2023	20:04:17	IL&FS	LSI	Solapur	MH	17.819894	75.624870	150+000	252+000	214+750 LHS Outer	1	42.5000	0.2014	0.1404	0.0968	0.0717	0.0550	0.0433	0.0377	30.7	33.8		38.6
	29-4-2023	20:04:17	IL&FS	LSI	Solapur	MH	17.819894	75.624870	150+000	252+000	214+750 LHS Outer	2	42.7000	0.1998	0.1335	0.1039	0.0748	0.0542	0.0401	0.0377	30.7	33.8		38.6
	29-4-2023	20:04:17	IL&FS	LSI	Solapur	MH	17.819894	75.624870	150+000	252+000	214+750 LHS Outer	3	42.8000	0.2002	0.1448	0.0922	0.0719	0.0584	0.0396	0.0383	30.7	33.8		38.6
662	29-4-2023	20:06:07	IL&FS	LSI	Solapur	MH	17.818719	75.626831	150+000	252+000	215+000 LHS Outer	1	41.7000	0.2764	0.1742	0.1279	0.0839	0.0605	0.0463	0.0357	30.7	34.2		38.6
	29-4-2023	20:06:07	IL&FS	LSI	Solapur	MH	17.818719	75.626831	150+000	252+000	215+000 LHS Outer	2	41.7000	0.2756	0.1622	0.1195	0.0845	0.0622	0.0480	0.0370	30.7	34.2		38.6
	29-4-2023	20:06:07	IL&FS	LSI	Solapur	MH	17.818719	75.626831	150+000	252+000	215+000 LHS Outer	3	41.7000	0.2736	0.1746	0.1142	0.0869	0.0598	0.0431	0.0314	30.7	34.2		38.6
663	29-4-2023	20:08:15	IL&FS	LSI	Solapur	MH	17.817546	75.628852	150+000	252+000	215+250 LHS Outer	1	38.9000	0.4910	0.2671	0.1669	0.1098	0.0697	0.0475	0.0323	30.8	34.0		38.6
	29-4-2023	20:08:15	IL&FS	LSI	Solapur	MH	17.817546	75.628852	150+000	252+000	215+250 LHS Outer	2	38.9000	0.4666	0.2935	0.1725	0.1091	0.0717	0.0581	0.0300	30.8	34.0		38.6
	29-4-2023	20:08:15	IL&FS	LSI	Solapur	MH	17.817546	75.628852	150+000	252+000	215+250 LHS Outer	3	39.0000	0.4849	0.2823	0.1710	0.0897	0.0770	0.0653	0.0360	30.8	34.0		38.6
664	29-4-2023	20:10:09	IL&FS	LSI	Solapur	MH	17.816331	75.630859	150+000	252+000	215+500 LHS Outer	1	39.5000	0.3369	0.1721	0.0967	0.0586	0.0351	0.0228	0.0152	30.8	34.5		38.6
	29-4-2023	20:10:09	IL&FS	LSI	Solapur	MH	17.816331	75.630859	150+000	252+000	215+500 LHS Outer	2	39.5000	0.3226	0.1605	0.0894	0.0557	0.0344	0.0226	0.0147	30.8	34.5		38.6
	29-4-2023	20:10:09	IL&FS	LSI	Solapur	MH	17.816331	75.630859	150+000	252+000	215+500 LHS Outer	3	39.2000	0.3210	0.1603	0.0932	0.0600	0.0349	0.0219	0.0134	30.8	34.5		38.6
665	29-4-2023	20:13:29	IL&FS	LSI	Solapur	MH	17.814702	75.633575	150+000	252+000	215+850 LHS Outer	1	38.6000	0.5581	0.2921	0.1692	0.1084	0.0670	0.0465	0.0289	30.7	33.8		38.6
	29-4-2023	20:13:29	IL&FS	LSI	Solapur	MH	17.814702	75.633575	150+000	252+000	215+850 LHS Outer	2	38.9000	0.5374	0.3087	0.1667	0.1063	0.0635	0.0456	0.0263	30.7	33.8		38.6
	29-4-2023	20:13:29	IL&FS	LSI	Solapur	MH	17.814702	75.633575	150+000	252+000	215+850 LHS Outer	3	39.0000	0.5373	0.3164	0.1671	0.1061	0.0621	0.0440	0.0278	30.7	33.8		38.6
666	29-4-2023	20:15:29	IL&FS	LSI	Solapur	MH	17.813915	75.634895	150+000	252+000	216+000 LHS Outer	1	39.0000	0.4704	0.2777	0.1577	0.1030	0.0585	0.0248	0.0163	30.7	33.8		38.6
	29-4-2023	20:15:29	IL&FS	LSI	Solapur	MH	17.813915	75.634895	150+000	252+000	216+000 LHS Outer	2	37.8000	0.4330	0.2644	0.1530	0.0998	0.0573	0.0254	0.0169	30.7	33.8		38.6
	29-4-2023	20:15:29	IL&FS	LSI	Solapur	MH	17.813915	75.634895	150+000	252+000	216+000 LHS Outer	3	39.2000	0.4494	0.2802	0.1526	0.1035	0.0580	0.0251	0.0166	30.7	33.8		38.6
667	29-4-2023	20:18:06	IL&FS	LSI	Solapur	MH	17.811395	75.636856	150+000	252+000	216+350 LHS Outer	1	36.9000	0.5295	0.2941	0.1454	0.0747	0.0417	0.0315	0.0262	30.8	33.9		38.6
	29-4-2023	20:18:06	IL&FS	LSI	Solapur	MH	17.811395	75.636856	150+000	252+000	216+350 LHS Outer	2	36.6000	0.5276	0.2870	0.1487	0.0653	0.0469	0.0287	0.0259	30.8	33.9		38.6
	29-4-2023	20:18:06	IL&FS	LSI	Solapur	MH	17.811395	75.636856	150+000	252+000	216+350 LHS Outer	3	36.3000	0.5023	0.2800	0.1493	0.0685	0.0433	0.0297	0.0257	30.8	33.9		38.6
668	29-4-2023	20:19:57	IL&FS	LSI	Solapur	MH	17.810279	75.637641	150+000	252+000	216+500 LHS Outer	1	38.6000	0.4489	0.2261	0.1236	0.0762	0.0448	0.0298	0.0205	30.7	34.4		38.6
	29-4-2023	20:19:57	IL&FS	LSI	Solapur	MH	17.810279	75.637641	150+000	252+000	216+500 LHS Outer	2	38.8000	0.4365	0.2132	0.1253	0.0763	0.0451	0.0301	0.0202	30.7	34.4		38.6
	29-4-2023	20:19:57	IL&FS	LSI	Solapur	MH	17.810279	75.637641	150+000	252+000	216+500 LHS Outer	3	38.8000	0.4247	0.2149	0.1256	0.0771	0.0447	0.0305	0.0201	30.7	34.4		38.6
669	29-4-2023	20:22:42	IL&FS	LSI	Solapur	MH	17.808050	75.640457	150+000	252+000	216+900 LHS Outer	1	38.7000	0.4579	0.2800	0.1350	0.0691	0.0462	0.0363	0.0302	30.8	34.3		38.6
	29-4-2023	20:22:42	IL&FS	LSI	Solapur	MH	17.808050	75.640457	150+000	252+000	216+900 LHS Outer	2	39.0000	0.4909	0.2781	0.1237	0.0662	0.0462	0.0359	0.0318	30.8	34.3		38.6
	29-4-2023	20:22:42	IL&FS	LSI	Solapur	MH	17.808050	75.640457	150+000	252+000	216+900 LHS Outer	3	39.0000	0.4816	0.2698	0.1297	0.0692	0.0471	0.0396	0.0306	30.8	34.3		38.6

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
670	29-4-2023	20:24:46	IL&FS	LSI	Solapur	MH	17.807775	75.641090	150+000	252+000	217+000 LHS Outer	1	39.1000	0.4891	0.2131	0.0967	0.0510	0.0414	0.0290	0.0261	30.9	34.3		38.6
	29-4-2023	20:24:46	IL&FS	LSI	Solapur	MH	17.807775	75.641090	150+000	252+000	217+000 LHS Outer	2	39.5000	0.4723	0.2143	0.0999	0.0500	0.0419	0.0307	0.0276	30.9	34.3		38.6
	29-4-2023	20:24:46	IL&FS	LSI	Solapur	MH	17.807775	75.641090	150+000	252+000	217+000 LHS Outer	3	39.6000	0.4506	0.2176	0.1040	0.0506	0.0417	0.0310	0.0279	30.9	34.3		38.6
671	29-4-2023	20:27:09	IL&FS	LSI	Solapur	MH	17.806880	75.643173	150+000	252+000	217+250 LHS Outer	1	42.6000	0.1296	0.0809	0.0552	0.0361	0.0301	0.0256	0.0190	31.0	34.5		38.6
	29-4-2023	20:27:09	IL&FS	LSI	Solapur	MH	17.806880	75.643173	150+000	252+000	217+250 LHS Outer	2	43.0000	0.1332	0.0841	0.0549	0.0366	0.0303	0.0257	0.0191	31.0	34.5		38.6
	29-4-2023	20:27:09	IL&FS	LSI	Solapur	MH	17.806880	75.643173	150+000	252+000	217+250 LHS Outer	3	42.7000	0.1385	0.0837	0.0559	0.0365	0.0305	0.0258	0.0192	31.0	34.5		38.6
672	29-4-2023	20:34:26	IL&FS	LSI	Solapur	MH	17.803607	75.649909	150+000	252+000	218+000 LHS Outer	1	40.5000	0.2877	0.1803	0.1060	0.0640	0.0535	0.0460	0.0365	31.1	33.5	T-28.5/38	38
	29-4-2023	20:34:26	IL&FS	LSI	Solapur	MH	17.803607	75.649909	150+000	252+000	218+000 LHS Outer	2	40.4000	0.2922	0.1821	0.1080	0.0632	0.0515	0.0470	0.0382	31.1	33.5	T-28.5/38	38
	29-4-2023	20:34:26	IL&FS	LSI	Solapur	MH	17.803607	75.649909	150+000	252+000	218+000 LHS Outer	3	40.8000	0.2855	0.1799	0.1090	0.0634	0.0509	0.0469	0.0373	31.1	33.5	T-28.5/38	38
673	29-4-2023	20:37:16	IL&FS	LSI	Solapur	MH	17.802549	75.652061	150+000	252+000	218+250 LHS Outer	1	43.4000	0.1081	0.0768	0.0558	0.0382	0.0268	0.0198	0.0150	31.0	33.6		38
	29-4-2023	20:37:16	IL&FS	LSI	Solapur	MH	17.802549	75.652061	150+000	252+000	218+250 LHS Outer	2	42.7000	0.1087	0.0778	0.0551	0.0387	0.0266	0.0196	0.0151	31.0	33.6		38
	29-4-2023	20:37:16	IL&FS	LSI	Solapur	MH	17.802549	75.652061	150+000	252+000	218+250 LHS Outer	3	43.5000	0.1092	0.0778	0.0559	0.0379	0.0267	0.0202	0.0157	31.0	33.6		38
674	29-4-2023	20:41:18	IL&FS	LSI	Solapur	MH	17.801509	75.654106	150+000	252+000	218+500 LHS Outer	1	39.1000	0.4233	0.2398	0.1496	0.0786	0.0574	0.0393	0.0257	30.7	33.6		38
	29-4-2023	20:41:18	IL&FS	LSI	Solapur	MH	17.801509	75.654106	150+000	252+000	218+500 LHS Outer	2	39.0000	0.4287	0.2507	0.1532	0.0793	0.0585	0.0386	0.0260	30.7	33.6		38
	29-4-2023	20:41:18	IL&FS	LSI	Solapur	MH	17.801509	75.654106	150+000	252+000	218+500 LHS Outer	3	39.2000	0.4098	0.2495	0.1462	0.0766	0.0569	0.0382	0.0249	30.7	33.6		38
675	29-4-2023	20:43:18	IL&FS	LSI	Solapur	MH	17.800777	75.656356	150+000	252+000	218+750 LHS Outer	1	42.5000	0.2787	0.1293	0.0812	0.0512	0.0325	0.0244	0.0185	30.9	33.3		38
	29-4-2023	20:43:18	IL&FS	LSI	Solapur	MH	17.800777	75.656356	150+000	252+000	218+750 LHS Outer	2	42.2000	0.2816	0.1373	0.0769	0.0513	0.0335	0.0255	0.0199	30.9	33.3		38
	29-4-2023	20:43:18	IL&FS	LSI	Solapur	MH	17.800777	75.656356	150+000	252+000	218+750 LHS Outer	3	42.5000	0.2633	0.1394	0.0717	0.0498	0.0334	0.0251	0.0199	30.9	33.3		38
676	29-4-2023	20:45:21	IL&FS	LSI	Solapur	MH	17.800157	75.658485	150+000	252+000	219+000 LHS Outer	1	40.4000	0.2613	0.1561	0.1129	0.0775	0.0636	0.0434	0.0307	30.8	33.3		38
	29-4-2023	20:45:21	IL&FS	LSI	Solapur	MH	17.800157	75.658485	150+000	252+000	219+000 LHS Outer	2	40.7000	0.2508	0.1574	0.1114	0.0747	0.0584	0.0443	0.0327	30.8	33.3		38
	29-4-2023	20:45:21	IL&FS	LSI	Solapur	MH	17.800157	75.658485	150+000	252+000	219+000 LHS Outer	3	40.6000	0.2609	0.1603	0.1009	0.0812	0.0576	0.0401	0.0337	30.8	33.3		38
677	29-4-2023	20:47:28	IL&FS	LSI	Solapur	MH	17.799459	75.660804	150+000	252+000	219+250 LHS Outer	1	39.5000	0.4252	0.2299	0.1176	0.0689	0.0538	0.0421	0.0340	30.6	32.3		38
	29-4-2023	20:47:28	IL&FS	LSI	Solapur	MH	17.799459	75.660804	150+000	252+000	219+250 LHS Outer	2	39.7000	0.4101	0.2072	0.1200	0.0758	0.0575	0.0461	0.0333	30.6	32.3		38
	29-4-2023	20:47:28	IL&FS	LSI	Solapur	MH	17.799459	75.660804	150+000	252+000	219+250 LHS Outer	3	39.6000	0.4051	0.2287	0.1187	0.0725	0.0562	0.0444	0.0318	30.6	32.3		38
678	29-4-2023	20:49:53	IL&FS	LSI	Solapur	MH	17.798780	75.663085	150+000	252+000	219+500 LHS Outer	1	40.6000	0.3588	0.1676	0.0960	0.0511	0.0329	0.0227	0.0204	30.4	33.0		38
	29-4-2023	20:49:53	IL&FS	LSI	Solapur	MH	17.798780	75.663085	150+000	252+000	219+500 LHS Outer	2	41.3000	0.3395	0.1670	0.0886	0.0511	0.0310	0.0218	0.0196	30.4	33.0		38
	29-4-2023	20:49:53	IL&FS	LSI	Solapur	MH	17.798780	75.663085	150+000	252+000	219+500 LHS Outer	3	41.1000	0.3428	0.1745	0.0932	0.0515	0.0307	0.0217	0.0195	30.4	33.0		38
679	29-4-2023	20:51:57	IL&FS	LSI	Solapur	MH	17.798015	75.665321	150+000	252+000	219+750 LHS Outer	1	42.4000	0.2300	0.1425	0.0746	0.0482	0.0314	0.0243	0.0200	30.3	32.4		38
	29-4-2023	20:51:57	IL&FS	LSI	Solapur	MH	17.798015	75.665321	150+000	252+000	219+750 LHS Outer	2	42.6000	0.2381	0.1435	0.0817	0.0527	0.0315	0.0250	0.0206	30.3	32.4		38
	29-4-2023	20:51:57	IL&FS	LSI	Solapur	MH	17.798015	75.665321	150+000	252+000	219+750 LHS Outer	3	42.3000	0.2165	0.1351	0.0770	0.0503	0.0311	0.0247	0.0204	30.3	32.4		38
680	29-4-2023	20:54:01	IL&FS	LSI	Solapur	MH	17.797363	75.667449	150+000	252+000	220+000 LHS Outer	1	43.4000	0.1041	0.0772	0.0581	0.0422	0.0299	0.0233	0.0189	30.3	32.0		38
	29-4-2023	20:54:01	IL&FS	LSI	Solapur	MH	17.797363	75.667449	150+000	252+000	220+000 LHS Outer	2	43.8000	0.1064	0.0786	0.0578	0.0421	0.0301	0.0237	0.0191	30.3	32.0		38
	29-4-2023	20:54:01	IL&FS	LSI	Solapur	MH	17.797363	75.667449	150+000	252+000	220+000 LHS Outer	3	43.7000	0.1074	0.0806	0.0598	0.0421	0.0300	0.0234	0.0190	30.3	32.0		38
681	29-4-2023	20:57:23	IL&FS	LSI	Solapur	MH	17.796649	75.669776	150+000	252+000	220+250 LHS Outer	1	41.3000	0.2423	0.1601	0.1218	0.0841	0.0583	0.0328	0.0195	30.1	32.3		38
	29-4-2023	20:57:23	IL&FS	LSI	Solapur	MH	17.796649	75.669776	150+000	252+000	220+250 LHS Outer	2	41.4000	0.2378	0.1625	0.1194	0.0866	0.0611	0.0356	0.0220	30.1	32.3		38
	29-4-2023	20:57:23	IL&FS	LSI	Solapur	MH	17.796649	75.669776	150+000	252+000	220+250 LHS Outer	3	41.3000	0.2308	0.1487	0.1208	0.0835	0.0583	0.0328	0.0195	30.1	32.3		38
682	29-4-2023	21:06:31	IL&FS	LSI	Solapur	MH	17.795980	75.672119	150+000	252+000	220+500 LHS Outer	1	43.3000	0.1256	0.0850	0.0647	0.0464	0.0319	0.0204	0.0139	29.9	32.0		38
	29-4-2023	21:06:31	IL&FS	LSI	Solapur	MH	17.795980	75.672119	150+000	252+000	220+500 LHS Outer	2	43.6000	0.1244	0.0867	0.0644	0.0470	0.0334	0.0212	0.0148	29.9	32.0		38
	29-4-2023	21:06:31	IL&FS	LSI	Solapur	MH	17.795980	75.672119	150+000	252+000	220+500 LHS Outer	3	44.1000	0.1224	0.0825	0.0644	0.0461	0.0323	0.0200	0.0140	29.9	32.0		38
683	29-4-2023	21:08:40	IL&FS	LSI	Solapur	MH	17.795330	75.674324	150+000	252+000	220+750 LHS Outer	1	42.9000	0.1316	0.0883	0.0678	0.0477	0.0323	0.0194	0.0121	30.0	32.5		38
	29-4-2023	21:08:40	IL&FS	LSI	Solapur	MH	17.795330	75.674324	150+000	252+000	220+750 LHS Outer	2	43.2000	0.1301	0.0892	0.0659	0.0485	0.0338	0.0206	0.0135	30.0	32.5		38
	29-4-2023	21:08:40	IL&FS	LSI	Solapur	MH	17.795330	75.674324	150+000	252+000	220+750 LHS Outer	3	43.5000	0.1274	0.0831	0.0663	0.0462	0.0331	0.0189	0.0122	30.0	32.5		38
684	29-4-2023	21:11:05	IL&FS	LSI	Solapur	MH	17.794700	75.676460	150+000	252+000	221+000 LHS Outer	1	39.1000	0.4224	0.2206	0.1315	0.0828	0.0493	0.0373	0.0292	29.9	32.2	T-27.7/38	38
	29-4-2023	21:11:05	IL&FS	LSI	Solapur	MH	17.794700	75.676460	150+000	252+000	221+000 LHS Outer	2	39.5000	0.4219	0.2101	0.1327	0.0854	0.0518	0.0388	0.0306	29.9	32.2	T-27.7/38	38
	29-4-2023	21:11:05	IL&FS	LSI	Solapur	MH	17.794700	75.676460	150+000	252+000	221+000 LHS Outer	3	39.2000	0.4128	0.2197	0.1320	0.0846	0.0487	0.0367	0.0287	29.9	32.2	T-27.7/38	38
685	29-4-2023	21:14:14	IL&FS	LSI	Solapur	MH	17.793907	75.678840	150+000	252+000	221+250 LHS Outer	1	38.4000	0.5019	0.2979	0.1695	0.1150	0.0729	0.0535	0.0411	29.9	32.5		38
	29-4-2023	21:14:14	IL&FS	LSI	Solapur	MH	17.793907	75.678840	150+000	252+000	221+250 LHS Outer	2	38.0000	0.4767	0.2902	0.1651	0.1157	0.0783	0.0563	0.0393	29.9	32.5		38
	29-4-2023	21:14:14	IL&FS	LSI	Solapur	MH	17.793907	75.678840	150+000	252+000	221+250 LHS Outer	3	38.8000	0.4852	0.2963	0.1545	0.1036	0.0723	0.0532	0.0384	29.9	32.5		38
686	29-4-2023	21:16:18	IL&FS	LSI	Solapur	MH	17.793230	75.681076	150+000	252+000	221+500 LHS Outer	1	38.5000	0.4256	0.2571	0.1540	0.0783	0.0564	0.0428	0.0334	30.0	32.4		38
	29-4-2023	21:16:18	IL&FS	LSI	Solapur	MH	17.793230	75.681076	150+000	252+000	221+500 LHS Outer	2	39.6000	0.4154	0.2413	0.1487	0.0799	0.0592	0.0437	0.0331	30.0	32.4		38
	29-4-2023	21:16:18	IL&FS	LSI	Solapur	MH	17.793230	75.681076	150+000	252+000	221+500 LHS Outer	3	39.9000	0.4173	0.2369	0.1404	0.0808	0.0589	0.0445	0.0346	30.0	32.4		38
687	29-4-2023	21:18:14	IL&FS	LSI	Solapur	MH	17.792589	75.683273	150+000	252+000	221+750 LHS Outer	1	42.9000	0.1012	0.0835	0.0619	0.0451	0.0362	0.0282	0.0214	29.8	32.6		38
	29-4-2023	21:18:14	IL&FS	LSI	Solapur	MH	17.792589	75.683273	150+000	252+000	221+750 LHS Outer	2	42.7000	0.1034	0.0814	0.0598	0.0428	0.0353	0.0281	0.0218	29.8	32.6		38
	29-4-2023	21:18:14	IL&FS	LSI	Solapur	MH	17.792589	75.683273	150+000	252+000	221+750 LHS Outer	3	42.8000	0.1053	0.0787	0.0606	0.0470	0.0380	0.0282	0.0215	29.8	32.6		38
688	29-4-2023	21:20:15	IL&FS	LSI	Solapur	MH	17.791955	75.685508	150+000	252+000	222+000 LHS Outer	1	43.5000	0.1252	0.0812	0.0516	0.0300	0.0224	0.0169	0.0132	29.9	33.0		38
	29-4-2023	21:20:15	IL&FS	LSI	Solapur	MH	17.791955	75.685508	150+000	252+000	222+000 LHS Outer	2	43.9000	0.1244	0.0777	0.0497	0.0292	0.0230	0.0176	0.0132	29.9	33.0		38

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	21:20:15	IL&FS	LSI	Solapur	MH	17.791955	75.685508	150+000	252+000	222+000 LHS Outer	3	43.3000	0.1271	0.0757	0.0490	0.0305	0.0230	0.0174	0.0133	29.9	33.0		38
689	29-4-2023	21:21:59	IL&FS	LSI	Solapur	MH	17.791494	75.687782	150+000	252+000	222+250 LHS Outer	1	42.0000	0.1275	0.0846	0.0500	0.0379	0.0305	0.0221	0.0167	30.0	33.2		38
	29-4-2023	21:21:59	IL&FS	LSI	Solapur	MH	17.791494	75.687782	150+000	252+000	222+250 LHS Outer	2	42.1000	0.1379	0.0797	0.0510	0.0373	0.0279	0.0212	0.0165	30.0	33.2		38
	29-4-2023	21:21:59	IL&FS	LSI	Solapur	MH	17.791494	75.687782	150+000	252+000	222+250 LHS Outer	3	42.1000	0.1343	0.0815	0.0516	0.0382	0.0299	0.0224	0.0172	30.0	33.2		38
690	29-4-2023	21:23:50	IL&FS	LSI	Solapur	MH	17.791261	75.690170	150+000	252+000	222+500 LHS Outer	1	43.0000	0.0947	0.0629	0.0430	0.0327	0.0250	0.0184	0.0135	30.0	33.0		38
	29-4-2023	21:23:50	IL&FS	LSI	Solapur	MH	17.791261	75.690170	150+000	252+000	222+500 LHS Outer	2	42.3000	0.0927	0.0626	0.0433	0.0321	0.0243	0.0176	0.0130	30.0	33.0		38
	29-4-2023	21:23:50	IL&FS	LSI	Solapur	MH	17.791261	75.690170	150+000	252+000	222+500 LHS Outer	3	43.0000	0.0964	0.0658	0.0428	0.0327	0.0254	0.0175	0.0120	30.0	33.0		38
691	29-4-2023	21:25:43	IL&FS	LSI	Solapur	MH	17.790960	75.692649	150+000	252+000	222+750 LHS Outer	1	43.7000	0.1358	0.0939	0.0611	0.0470	0.0360	0.0258	0.0133	29.9	32.7		38
	29-4-2023	21:25:43	IL&FS	LSI	Solapur	MH	17.790960	75.692649	150+000	252+000	222+750 LHS Outer	2	43.6000	0.1299	0.0898	0.0596	0.0452	0.0347	0.0243	0.0130	29.9	32.7		38
	29-4-2023	21:25:43	IL&FS	LSI	Solapur	MH	17.790960	75.692649	150+000	252+000	222+750 LHS Outer	3	43.8000	0.1334	0.0860	0.0557	0.0420	0.0327	0.0196	0.0176	29.9	32.7		38
692	29-4-2023	21:27:30	IL&FS	LSI	Solapur	MH	17.790365	75.694671	150+000	252+000	223+000 LHS Outer	1	41.9000	0.2177	0.1137	0.0780	0.0544	0.0369	0.0272	0.0245	30.0	32.4		38
	29-4-2023	21:27:30	IL&FS	LSI	Solapur	MH	17.790365	75.694671	150+000	252+000	223+000 LHS Outer	2	41.5000	0.2330	0.1227	0.0714	0.0503	0.0347	0.0261	0.0235	30.0	32.4		38
	29-4-2023	21:27:30	IL&FS	LSI	Solapur	MH	17.790365	75.694671	150+000	252+000	223+000 LHS Outer	3	41.8000	0.2129	0.1171	0.0732	0.0536	0.0389	0.0347	0.0174	30.0	32.4		38
693	29-4-2023	21:29:35	IL&FS	LSI	Solapur	MH	17.789276	75.696815	150+000	252+000	223+250 LHS Outer	1	42.3000	0.1221	0.0843	0.0509	0.0293	0.0203	0.0168	0.0151	30.0	32.7		38
	29-4-2023	21:29:35	IL&FS	LSI	Solapur	MH	17.789276	75.696815	150+000	252+000	223+250 LHS Outer	2	42.6000	0.1247	0.0852	0.0540	0.0300	0.0206	0.0170	0.0153	30.0	32.7		38
	29-4-2023	21:29:35	IL&FS	LSI	Solapur	MH	17.789276	75.696815	150+000	252+000	223+250 LHS Outer	3	42.6000	0.1224	0.0859	0.0513	0.0295	0.0206	0.0170	0.0153	30.0	32.7		38
694	29-4-2023	21:31:33	IL&FS	LSI	Solapur	MH	17.788200	75.698921	150+000	252+000	223+500 LHS Outer	1	41.5000	0.2341	0.1425	0.1069	0.0818	0.0592	0.0368	0.0229	29.9	32.2		38
	29-4-2023	21:31:33	IL&FS	LSI	Solapur	MH	17.788200	75.698921	150+000	252+000	223+500 LHS Outer	2	41.5000	0.2365	0.1466	0.1093	0.0824	0.0605	0.0371	0.0220	29.9	32.2		38
	29-4-2023	21:31:33	IL&FS	LSI	Solapur	MH	17.788200	75.698921	150+000	252+000	223+500 LHS Outer	3	41.1000	0.2312	0.1376	0.1009	0.0780	0.0591	0.0362	0.0210	29.9	32.2		38
695	29-4-2023	21:33:22	IL&FS	LSI	Solapur	MH	17.787096	75.701026	150+000	252+000	223+750 LHS Outer	1	40.7000	0.2103	0.1440	0.0935	0.0627	0.0442	0.0317	0.0217	29.7	32.2		38
	29-4-2023	21:33:22	IL&FS	LSI	Solapur	MH	17.787096	75.701026	150+000	252+000	223+750 LHS Outer	2	40.8000	0.2070	0.1327	0.0857	0.0600	0.0431	0.0310	0.0224	29.7	32.2		38
	29-4-2023	21:33:22	IL&FS	LSI	Solapur	MH	17.787096	75.701026	150+000	252+000	223+750 LHS Outer	3	42.2000	0.2092	0.1379	0.0864	0.0644	0.0444	0.0302	0.0229	29.7	32.2		38
696	29-4-2023	21:35:53	IL&FS	LSI	Solapur	MH	17.786159	75.702972	150+000	252+000	224+000 LHS Outer	1	40.4000	0.2386	0.1537	0.1109	0.0778	0.0516	0.0342	0.0207	29.6	32.0		38
	29-4-2023	21:35:53	IL&FS	LSI	Solapur	MH	17.786159	75.702972	150+000	252+000	224+000 LHS Outer	2	42.7000	0.2474	0.1644	0.1122	0.0811	0.0553	0.0368	0.0230	29.6	32.0		38
	29-4-2023	21:35:53	IL&FS	LSI	Solapur	MH	17.786159	75.702972	150+000	252+000	224+000 LHS Outer	3	41.2000	0.2301	0.1595	0.1013	0.0774	0.0534	0.0347	0.0221	29.6	32.0		38
697	29-4-2023	21:37:43	IL&FS	LSI	Solapur	MH	17.785182	75.705276	150+000	252+000	224+250 LHS Outer	1	43.2000	0.1125	0.0748	0.0529	0.0373	0.0252	0.0176	0.0110	29.8	32.4		38
	29-4-2023	21:37:43	IL&FS	LSI	Solapur	MH	17.785182	75.705276	150+000	252+000	224+250 LHS Outer	2	43.7000	0.1166	0.0793	0.0516	0.0390	0.0266	0.0186	0.0111	29.8	32.4		38
	29-4-2023	21:37:43	IL&FS	LSI	Solapur	MH	17.785182	75.705276	150+000	252+000	224+250 LHS Outer	3	43.6000	0.1080	0.0781	0.0486	0.0366	0.0267	0.0179	0.0119	29.8	32.4		38
698	29-4-2023	21:39:36	IL&FS	LSI	Solapur	MH	17.785064	75.707618	150+000	252+000	224+500 LHS Outer	1	41.4000	0.1024	0.0617	0.0447	0.0324	0.0247	0.0194	0.0113	29.7	32.7		38
	29-4-2023	21:39:36	IL&FS	LSI	Solapur	MH	17.785064	75.707618	150+000	252+000	224+500 LHS Outer	2	41.9000	0.0920	0.0641	0.0428	0.0326	0.0251	0.0195	0.0104	29.7	32.7		38
	29-4-2023	21:39:36	IL&FS	LSI	Solapur	MH	17.785064	75.707618	150+000	252+000	224+500 LHS Outer	3	43.2000	0.1000	0.0667	0.0422	0.0332	0.0251	0.0195	0.0118	29.7	32.7		38
699	29-4-2023	21:41:52	IL&FS	LSI	Solapur	MH	17.784870	75.710830	150+000	252+000	224+750 LHS Outer	1	40.1000	0.3134	0.1840	0.1047	0.0754	0.0542	0.0382	0.0243	29.8	32.6		38
	29-4-2023	21:41:52	IL&FS	LSI	Solapur	MH	17.784870	75.710830	150+000	252+000	224+750 LHS Outer	2	40.3000	0.3091	0.1773	0.1029	0.0740	0.0536	0.0376	0.0238	29.8	32.6		38
	29-4-2023	21:41:52	IL&FS	LSI	Solapur	MH	17.784870	75.710830	150+000	252+000	224+750 LHS Outer	3	40.2000	0.2860	0.1799	0.1072	0.0782	0.0577	0.0411	0.0270	29.8	32.6		38
700	29-4-2023	21:43:48	IL&FS	LSI	Solapur	MH	17.784729	75.712226	150+000	252+000	225+000 LHS Outer	1	38.0000	0.4124	0.2293	0.1576	0.0969	0.0566	0.0311	0.0265	29.9	32.0		38
	29-4-2023	21:43:48	IL&FS	LSI	Solapur	MH	17.784729	75.712226	150+000	252+000	225+000 LHS Outer	2	38.8000	0.4237	0.2396	0.1528	0.0985	0.0595	0.0411	0.0205	29.9	32.0		38
	29-4-2023	21:43:48	IL&FS	LSI	Solapur	MH	17.784729	75.712226	150+000	252+000	225+000 LHS Outer	3	39.9000	0.4342	0.2373	0.1509	0.0994	0.0670	0.0501	0.0244	29.9	32.0		38
701	29-4-2023	21:45:39	IL&FS	LSI	Solapur	MH	17.784246	75.714561	150+000	252+000	225+250 LHS Outer	1	36.1000	0.5047	0.3091	0.1661	0.1086	0.0683	0.0407	0.0234	29.9	32.6		38
	29-4-2023	21:45:39	IL&FS	LSI	Solapur	MH	17.784246	75.714561	150+000	252+000	225+250 LHS Outer	2	37.0000	0.4897	0.2890	0.1564	0.0971	0.0543	0.0372	0.0253	29.9	32.6		38
	29-4-2023	21:45:39	IL&FS	LSI	Solapur	MH	17.784246	75.714561	150+000	252+000	225+250 LHS Outer	3	36.9000	0.4782	0.2948	0.1585	0.1069	0.0680	0.0409	0.0242	29.9	32.6		38
702	29-4-2023	21:47:35	IL&FS	LSI	Solapur	MH	17.783588	75.716926	150+000	252+000	225+500 LHS Outer	1	42.4000	0.1122	0.0784	0.0573	0.0427	0.0336	0.0279	0.0242	29.9	32.2	T-28.2/37.5	37.5
	29-4-2023	21:47:35	IL&FS	LSI	Solapur	MH	17.783588	75.716926	150+000	252+000	225+500 LHS Outer	2	43.3000	0.1133	0.0819	0.0572	0.0424	0.0325	0.0273	0.0236	29.9	32.2	T-28.2/37.5	37.5
	29-4-2023	21:47:35	IL&FS	LSI	Solapur	MH	17.783588	75.716926	150+000	252+000	225+500 LHS Outer	3	43.0000	0.1159	0.0819	0.0566	0.0425	0.0328	0.0278	0.0239	29.9	32.2	T-28.2/37.5	37.5
703	29-4-2023	21:55:57	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	225+750 LHS Outer	1	42.4000	0.2271	0.1445	0.0841	0.0590	0.0402	0.0266	0.0176	29.6	32.2		37.5
	29-4-2023	21:55:57	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	225+750 LHS Outer	2	41.9000	0.2247	0.1399	0.0852	0.0567	0.0396	0.0262	0.0169	29.6	32.2		37.5
	29-4-2023	21:55:57	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	225+750 LHS Outer	3	42.4000	0.2334	0.1503	0.0866	0.0557	0.0389	0.0262	0.0180	29.6	32.2		37.5
704	29-4-2023	21:58:05	IL&FS	LSI	Solapur	MH	17.781764	75.721290	150+000	252+000	226+000 LHS Outer	1	40.8000	0.2836	0.1830	0.1080	0.0672	0.0475	0.0378	0.0311	29.9	32.6		37.5
	29-4-2023	21:58:05	IL&FS	LSI	Solapur	MH	17.781764	75.721290	150+000	252+000	226+000 LHS Outer	2	41.1000	0.2889	0.1779	0.1085	0.0681	0.0467	0.0379	0.0309	29.9	32.6		37.5
	29-4-2023	21:58:05	IL&FS	LSI	Solapur	MH	17.781764	75.721290	150+000	252+000	226+000 LHS Outer	3	40.9000	0.2726	0.1823	0.1092	0.0680	0.0506	0.0402	0.0326	29.9	32.6		37.5
705	29-4-2023	22:00:08	IL&FS	LSI	Solapur	MH	17.780416	75.723159	150+000	252+000	226+250 LHS Outer	1	39.4000	0.4362	0.2545	0.1360	0.0869	0.0556	0.0383	0.0345	30.0	32.7		37.5
	29-4-2023	22:00:08	IL&FS	LSI	Solapur	MH	17.780416	75.723159	150+000	252+000	226+250 LHS Outer	2	39.6000	0.4152	0.2464	0.1474	0.0897	0.0591	0.0401	0.0361	30.0	32.7		37.5
	29-4-2023	22:00:08	IL&FS	LSI	Solapur	MH	17.780416	75.723159	150+000	252+000	226+250 LHS Outer	3	39.9000	0.4161	0.2388	0.1428	0.0895	0.0615	0.0401	0.0361	30.0	32.7		37.5
706	29-4-2023	22:02:35	IL&FS	LSI	Solapur	MH	17.779064	75.725242	150+000	252+000	226+530 LHS Outer	1	38.1000	0.4338	0.2928	0.1592	0.0975	0.0585	0.0411	0.0370	30.2	32.7		37.5
	29-4-2023	22:02:35	IL&FS	LSI	Solapur	MH	17.779064	75.725242	150+000	252+000	226+530 LHS Outer	2	38.4000	0.4447	0.2836	0.1523	0.0959	0.0587	0.0415	0.0374	30.2	32.7		37.5
	29-4-2023	22:02:35	IL&FS	LSI	Solapur	MH	17.779064	75.725242	150+000	252+000	226+530 LHS Outer	3	38.1000	0.4329	0.2737	0.1558	0.1002	0.0581	0.0415	0.0374	30.2	32.7		37.5
707	29-4-2023	22:04:37	IL&FS	LSI	Solapur	MH	17.777996	75.726997	150+000	252+000	226+750 LHS Outer	1	40.3000	0.2027	0.1372	0.0897	0.0560	0.0438	0.0344	0.0309	30.3	32.7		37.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	29-4-2023	22:04:37	IL&FS	LSI	Solapur	MH	17.777996	75.726997	150+000	252+000	226+750 LHS Outer	2	41.0000	0.1875	0.1432	0.0914	0.0614	0.0450	0.0332	0.0299	30.3	32.7		37.5
	29-4-2023	22:04:37	IL&FS	LSI	Solapur	MH	17.777996	75.726997	150+000	252+000	226+750 LHS Outer	3	41.0000	0.2008	0.1411	0.0926	0.0600	0.0438	0.0326	0.0293	30.3	32.7		37.5
708	30-4-2023	01:49:04	IL&FS	LSI	Solapur	MH	17.776981	75.729080	150+000	252+000	227+000 LHS Outer	1	44.2000	0.0886	0.0524	0.0351	0.0268	0.0213	0.0190	0.0171	29.6	32.0	T-27.3/34.2	34.2
	30-4-2023	01:49:04	IL&FS	LSI	Solapur	MH	17.776981	75.729080	150+000	252+000	227+000 LHS Outer	2	44.7000	0.0901	0.0531	0.0387	0.0292	0.0223	0.0194	0.0175	29.6	32.0	T-27.3/34.2	34.2
	30-4-2023	01:49:04	IL&FS	LSI	Solapur	MH	17.776981	75.729080	150+000	252+000	227+000 LHS Outer	3	44.3000	0.0893	0.0494	0.0376	0.0285	0.0215	0.0192	0.0173	29.6	32.0	T-27.3/34.2	34.2
709	30-4-2023	01:50:50	IL&FS	LSI	Solapur	MH	17.775949	75.731246	150+000	252+000	227+250 LHS Outer	1	43.9000	0.0823	0.0546	0.0375	0.0257	0.0204	0.0173	0.0140	29.6	31.7		34.2
	30-4-2023	01:50:50	IL&FS	LSI	Solapur	MH	17.775949	75.731246	150+000	252+000	227+250 LHS Outer	2	44.5000	0.0851	0.0545	0.0382	0.0263	0.0205	0.0174	0.0141	29.6	31.7		34.2
	30-4-2023	01:50:50	IL&FS	LSI	Solapur	MH	17.775949	75.731246	150+000	252+000	227+250 LHS Outer	3	44.1000	0.0832	0.0543	0.0376	0.0270	0.0201	0.0165	0.0134	29.6	31.7		34.2
710	30-4-2023	01:52:28	IL&FS	LSI	Solapur	MH	17.774976	75.733383	150+000	252+000	227+500 LHS Outer	1	44.4000	0.0972	0.0548	0.0345	0.0262	0.0210	0.0188	0.0142	29.8	31.9		34.2
	30-4-2023	01:52:28	IL&FS	LSI	Solapur	MH	17.774976	75.733383	150+000	252+000	227+500 LHS Outer	2	44.3000	0.1001	0.0568	0.0356	0.0264	0.0210	0.0186	0.0140	29.8	31.9		34.2
	30-4-2023	01:52:28	IL&FS	LSI	Solapur	MH	17.774976	75.733383	150+000	252+000	227+500 LHS Outer	3	44.9000	0.1038	0.0558	0.0350	0.0262	0.0210	0.0188	0.0142	29.8	31.9		34.2
711	30-4-2023	01:54:07	IL&FS	LSI	Solapur	MH	17.773984	75.735527	150+000	252+000	227+750 LHS Outer	1	43.3000	0.0975	0.0738	0.0551	0.0418	0.0295	0.0190	0.0132	29.9	31.8		34.2
	30-4-2023	01:54:07	IL&FS	LSI	Solapur	MH	17.773984	75.735527	150+000	252+000	227+750 LHS Outer	2	44.0000	0.1005	0.0746	0.0536	0.0414	0.0301	0.0204	0.0143	29.9	31.8		34.2
	30-4-2023	01:54:07	IL&FS	LSI	Solapur	MH	17.773984	75.735527	150+000	252+000	227+750 LHS Outer	3	43.5000	0.0960	0.0747	0.0529	0.0408	0.0296	0.0192	0.0137	29.9	31.8		34.2
712	30-4-2023	01:55:46	IL&FS	LSI	Solapur	MH	17.773080	75.737586	150+000	252+000	228+000 LHS Outer	1	44.3000	0.0895	0.0503	0.0348	0.0288	0.0227	0.0177	0.0123	29.8	31.9		34.2
	30-4-2023	01:55:46	IL&FS	LSI	Solapur	MH	17.773080	75.737586	150+000	252+000	228+000 LHS Outer	2	44.5000	0.0893	0.0499	0.0336	0.0266	0.0225	0.0187	0.0132	29.8	31.9		34.2
	30-4-2023	01:55:46	IL&FS	LSI	Solapur	MH	17.773080	75.737586	150+000	252+000	228+000 LHS Outer	3	42.6000	0.0878	0.0467	0.0308	0.0248	0.0207	0.0173	0.0119	29.8	31.9		34.2
713	30-4-2023	01:57:27	IL&FS	LSI	Solapur	MH	17.772075	75.739776	150+000	252+000	228+250 LHS Outer	1	43.9000	0.0855	0.0513	0.0342	0.0256	0.0202	0.0175	0.0147	30.1	32.0		34.2
	30-4-2023	01:57:27	IL&FS	LSI	Solapur	MH	17.772075	75.739776	150+000	252+000	228+250 LHS Outer	2	44.6000	0.0889	0.0530	0.0364	0.0261	0.0208	0.0179	0.0145	30.1	32.0		34.2
	30-4-2023	01:57:27	IL&FS	LSI	Solapur	MH	17.772075	75.739776	150+000	252+000	228+250 LHS Outer	3	44.4000	0.0898	0.0507	0.0353	0.0266	0.0204	0.0176	0.0146	30.1	32.0		34.2
714	30-4-2023	01:59:16	IL&FS	LSI	Solapur	MH	17.771066	75.741973	150+000	252+000	228+500 LHS Outer	1	42.9000	0.0876	0.0590	0.0410	0.0303	0.0231	0.0178	0.0133	30.1	31.5		34.2
	30-4-2023	01:59:16	IL&FS	LSI	Solapur	MH	17.771066	75.741973	150+000	252+000	228+500 LHS Outer	2	44.3000	0.0807	0.0598	0.0414	0.0298	0.0231	0.0181	0.0137	30.1	31.5		34.2
	30-4-2023	01:59:16	IL&FS	LSI	Solapur	MH	17.771066	75.741973	150+000	252+000	228+500 LHS Outer	3	44.2000	0.0824	0.0595	0.0402	0.0305	0.0224	0.0174	0.0131	30.1	31.5		34.2
715	30-4-2023	02:00:59	IL&FS	LSI	Solapur	MH	17.770154	75.744033	150+000	252+000	228+750 LHS Outer	1	44.6000	0.0861	0.0571	0.0403	0.0307	0.0239	0.0179	0.0129	30.2	31.6		34.2
	30-4-2023	02:00:59	IL&FS	LSI	Solapur	MH	17.770154	75.744033	150+000	252+000	228+750 LHS Outer	2	44.8000	0.0857	0.0591	0.0395	0.0305	0.0236	0.0186	0.0133	30.2	31.6		34.2
	30-4-2023	02:00:59	IL&FS	LSI	Solapur	MH	17.770154	75.744033	150+000	252+000	228+750 LHS Outer	3	44.3000	0.0843	0.0578	0.0383	0.0291	0.0226	0.0179	0.0130	30.2	31.6		34.2
716	30-4-2023	02:02:44	IL&FS	LSI	Solapur	MH	17.769237	75.746116	150+000	252+000	229+000 LHS Outer	1	45.1000	0.0811	0.0563	0.0405	0.0310	0.0232	0.0163	0.0147	30.3	31.7		34.2
	30-4-2023	02:02:44	IL&FS	LSI	Solapur	MH	17.769237	75.746116	150+000	252+000	229+000 LHS Outer	2	42.8000	0.0791	0.0570	0.0398	0.0301	0.0237	0.0150	0.0135	30.3	31.7		34.2
	30-4-2023	02:02:44	IL&FS	LSI	Solapur	MH	17.769237	75.746116	150+000	252+000	229+000 LHS Outer	3	44.4000	0.0845	0.0560	0.0377	0.0293	0.0225	0.0166	0.0149	30.3	31.7		34.2
717	30-4-2023	02:04:38	IL&FS	LSI	Solapur	MH	17.768224	75.748435	150+000	252+000	229+250 LHS Outer	1	44.1000	0.0844	0.0523	0.0357	0.0273	0.0211	0.0171	0.0097	30.0	31.7		34.2
	30-4-2023	02:04:38	IL&FS	LSI	Solapur	MH	17.768224	75.748435	150+000	252+000	229+250 LHS Outer	2	44.2000	0.0844	0.0522	0.0363	0.0261	0.0214	0.0175	0.0107	30.0	31.7		34.2
	30-4-2023	02:04:38	IL&FS	LSI	Solapur	MH	17.768224	75.748435	150+000	252+000	229+250 LHS Outer	3	44.8000	0.0848	0.0502	0.0347	0.0265	0.0207	0.0166	0.0104	30.0	31.7		34.2
718	30-4-2023	02:06:16	IL&FS	LSI	Solapur	MH	17.767286	75.750495	150+000	252+000	229+500 LHS Outer	1	41.6000	0.0724	0.0536	0.0387	0.0287	0.0187	0.0121	0.0109	30.1	31.0		34.2
	30-4-2023	02:06:16	IL&FS	LSI	Solapur	MH	17.767286	75.750495	150+000	252+000	229+500 LHS Outer	2	42.4000	0.0725	0.0560	0.0392	0.0292	0.0191	0.0129	0.0116	30.1	31.0		34.2
	30-4-2023	02:06:16	IL&FS	LSI	Solapur	MH	17.767286	75.750495	150+000	252+000	229+500 LHS Outer	3	42.4000	0.0740	0.0532	0.0357	0.0275	0.0192	0.0115	0.0104	30.1	31.0		34.2
719	30-4-2023	02:07:58	IL&FS	LSI	Solapur	MH	17.766307	75.752655	150+000	252+000	229+750 LHS Outer	1	40.3000	0.2991	0.1592	0.0885	0.0605	0.0382	0.0298	0.0190	30.2	31.6		34.2
	30-4-2023	02:07:58	IL&FS	LSI	Solapur	MH	17.766307	75.752655	150+000	252+000	229+750 LHS Outer	2	40.4000	0.2926	0.1672	0.0859	0.0602	0.0389	0.0308	0.0199	30.2	31.6		34.2
	30-4-2023	02:07:58	IL&FS	LSI	Solapur	MH	17.766307	75.752655	150+000	252+000	229+750 LHS Outer	3	40.0000	0.3004	0.1718	0.0840	0.0603	0.0381	0.0297	0.0189	30.2	31.6		34.2
720	30-4-2023	02:10:02	IL&FS	LSI	Solapur	MH	17.765699	75.753997	150+000	252+000	229+920 LHS Outer	1	39.9000	0.1645	0.1038	0.0762	0.0511	0.0402	0.0362	0.0338	30.0	31.4		34.2
	30-4-2023	02:10:02	IL&FS	LSI	Solapur	MH	17.765699	75.753997	150+000	252+000	229+920 LHS Outer	2	39.9000	0.1704	0.1146	0.0759	0.0566	0.0420	0.0367	0.0324	30.0	31.4		34.2
	30-4-2023	02:10:02	IL&FS	LSI	Solapur	MH	17.765699	75.753997	150+000	252+000	229+920 LHS Outer	3	39.8000	0.1635	0.1055	0.0765	0.0518	0.0428	0.0361	0.0354	30.0	31.4		34.2
721	30-4-2023	02:14:21	IL&FS	LSI	Solapur	MH	17.764699	75.756469	150+000	252+000	230+200 LHS Outer	1	41.6000	0.0652	0.0561	0.0405	0.0314	0.0223	0.0169	0.0151	30.5	31.7	CC-Interior	34.2
	30-4-2023	02:14:21	IL&FS	LSI	Solapur	MH	17.764699	75.756469	150+000	252+000	230+200 LHS Outer	2	42.3000	0.0645	0.0525	0.0427	0.0321	0.0214	0.0158	0.0142	30.5	31.7	CC-Interior	34.2
	30-4-2023	02:14:21	IL&FS	LSI	Solapur	MH	17.764699	75.756469	150+000	252+000	230+200 LHS Outer	3	41.9000	0.0669	0.0550	0.0406	0.0308	0.0210	0.0155	0.0139	30.5	31.7	CC-Interior	34.2
722	30-4-2023	02:18:59	IL&FS	LSI	Solapur	MH	17.763437	75.758995	150+000	252+000	230+500 LHS Outer	1	39.1000	0.3723	0.1911	0.1115	0.0697	0.0428	0.0285	0.0162	31.1	32.0		34.2
	30-4-2023	02:18:59	IL&FS	LSI	Solapur	MH	17.763437	75.758995	150+000	252+000	230+500 LHS Outer	2	40.3000	0.3555	0.2013	0.1154	0.0727	0.0429	0.0287	0.0163	31.1	32.0		34.2
	30-4-2023	02:18:59	IL&FS	LSI	Solapur	MH	17.763437	75.758995	150+000	252+000	230+500 LHS Outer	3	40.4000	0.3746	0.2041	0.1163	0.0699	0.0427	0.0285	0.0162	31.1	32.0		34.2
723	30-4-2023	02:20:49	IL&FS	LSI	Solapur	MH	17.762445	75.761093	150+000	252+000	230+750 LHS Outer	1	39.2000	0.3882	0.2265	0.1103	0.0538	0.0295	0.0152	0.0105	31.2	32.0		34.2
	30-4-2023	02:20:49	IL&FS	LSI	Solapur	MH	17.762445	75.761093	150+000	252+000	230+750 LHS Outer	2	39.7000	0.4099	0.2226	0.1074	0.0545	0.0296	0.0153	0.0106	31.2	32.0		34.2
	30-4-2023	02:20:49	IL&FS	LSI	Solapur	MH	17.762445	75.761093	150+000	252+000	230+750 LHS Outer	3	39.6000	0.3962	0.2074	0.1070	0.0547	0.0301	0.0157	0.0109	31.2	32.0		34.2
724	30-4-2023	02:22:38	IL&FS	LSI	Solapur	MH	17.761518	75.763160	150+000	252+000	231+000 LHS Outer	1	41.0000	0.2185	0.1383	0.0763	0.0488	0.0295	0.0195	0.0130	31.2	31.9		34.2
	30-4-2023	02:22:38	IL&FS	LSI	Solapur	MH	17.761518	75.763160	150+000	252+000	231+000 LHS Outer	2	41.4000	0.2182	0.1350	0.0754	0.0488	0.0296	0.0200	0.0128	31.2	31.9		34.2
	30-4-2023	02:22:38	IL&FS	LSI	Solapur	MH	17.761518	75.763160	150+000	252+000	231+000 LHS Outer	3	41.4000	0.2251	0.1349	0.0776	0.0494	0.0292	0.0198	0.0133	31.2	31.9		34.2
725	30-4-2023	02:24:21	IL&FS	LSI	Solapur	MH	17.760524	75.765365	150+000	252+000	231+250 LHS Outer	1	40.4000	0.3142	0.1876	0.1021	0.0545	0.0297	0.0209	0.0151	31.2	31.8		34.2
	30-4-2023	02:24:21	IL&FS	LSI	Solapur	MH	17.760524	75.765365	150+000	252+000	231+250 LHS Outer	2	40.8000	0.3094	0.1962	0.1009	0.0570	0.0304	0.0213	0.0150	31.2	31.8		34.2
	30-4-2023	02:24:21	IL&FS	LSI	Solapur	MH	17.760524	75.765365	150+000	252+000	231+250 LHS Outer	3	40.9000	0.2880	0.1981	0.0937	0.0558	0.0295	0.0210	0.0158	31.2	31.8		34.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
726	30-4-2023	02:26:23	IL&FS	LSI	Solapur	MH	17.759538	75.767494	150+000	252+000	231+500 LHS Outer	1	41.4000	0.1435	0.0921	0.0555	0.0380	0.0312	0.0230	0.0170	31.0	31.4		34.2
	30-4-2023	02:26:23	IL&FS	LSI	Solapur	MH	17.759538	75.767494	150+000	252+000	231+500 LHS Outer	2	41.8000	0.1539	0.0874	0.0561	0.0386	0.0316	0.0223	0.0166	31.0	31.4		34.2
	30-4-2023	02:26:23	IL&FS	LSI	Solapur	MH	17.759538	75.767494	150+000	252+000	231+500 LHS Outer	3	41.4000	0.1414	0.0883	0.0560	0.0389	0.0317	0.0234	0.0175	31.0	31.4		34.2
727	30-4-2023	02:28:20	IL&FS	LSI	Solapur	MH	17.758541	75.769729	150+000	252+000	231+750 LHS Outer	1	43.2000	0.2803	0.1585	0.0832	0.0404	0.0280	0.0226	0.0203	30.8	31.1		34.2
	30-4-2023	02:28:20	IL&FS	LSI	Solapur	MH	17.758541	75.769729	150+000	252+000	231+750 LHS Outer	2	41.2000	0.2648	0.1575	0.0808	0.0392	0.0282	0.0224	0.0202	30.8	31.1		34.2
	30-4-2023	02:28:20	IL&FS	LSI	Solapur	MH	17.758541	75.769729	150+000	252+000	231+750 LHS Outer	3	41.2000	0.2720	0.1626	0.0810	0.0384	0.0259	0.0215	0.0194	30.8	31.1		34.2
728	30-4-2023	02:31:46	IL&FS	LSI	Solapur	MH	17.757642	75.771690	150+000	252+000	232+000 LHS Outer	1	39.5000	0.3752	0.2075	0.1179	0.0695	0.0398	0.0149	0.0089	30.4	31.1	T-27.7/34.2	34.2
	30-4-2023	02:31:46	IL&FS	LSI	Solapur	MH	17.757642	75.771690	150+000	252+000	232+000 LHS Outer	2	39.4000	0.3447	0.1884	0.1172	0.0648	0.0394	0.0142	0.0083	30.4	31.1	T-27.7/34.2	34.2
	30-4-2023	02:31:46	IL&FS	LSI	Solapur	MH	17.757642	75.771690	150+000	252+000	232+000 LHS Outer	3	39.3000	0.3492	0.1956	0.1187	0.0623	0.0381	0.0141	0.0082	30.4	31.1	T-27.7/34.2	34.2
729	30-4-2023	02:34:20	IL&FS	LSI	Solapur	MH	17.756626	75.773918	150+000	252+000	232+250 LHS Outer	1	39.7000	0.2739	0.1857	0.1200	0.0694	0.0383	0.0220	0.0097	30.3	31.1		34.2
	30-4-2023	02:34:20	IL&FS	LSI	Solapur	MH	17.756626	75.773918	150+000	252+000	232+250 LHS Outer	2	40.5000	0.2575	0.1807	0.1180	0.0712	0.0412	0.0225	0.0094	30.3	31.1		34.2
	30-4-2023	02:34:20	IL&FS	LSI	Solapur	MH	17.756626	75.773918	150+000	252+000	232+250 LHS Outer	3	40.5000	0.2813	0.1753	0.1186	0.0753	0.0430	0.0224	0.0104	30.3	31.1		34.2
730	30-4-2023	02:36:07	IL&FS	LSI	Solapur	MH	17.755680	75.775955	150+000	252+000	232+500 LHS Outer	1	41.8000	0.2336	0.1455	0.0883	0.0577	0.0366	0.0203	0.0098	30.5	30.8		34.2
	30-4-2023	02:36:07	IL&FS	LSI	Solapur	MH	17.755680	75.775955	150+000	252+000	232+500 LHS Outer	2	41.9000	0.2423	0.1386	0.0912	0.0599	0.0368	0.0215	0.0109	30.5	30.8		34.2
	30-4-2023	02:36:07	IL&FS	LSI	Solapur	MH	17.755680	75.775955	150+000	252+000	232+500 LHS Outer	3	42.4000	0.2278	0.1543	0.0911	0.0624	0.0373	0.0221	0.0112	30.5	30.8		34.2
731	30-4-2023	02:37:48	IL&FS	LSI	Solapur	MH	17.754749	75.778060	150+000	252+000	232+750 LHS Outer	1	39.1000	0.4580	0.2385	0.1311	0.0663	0.0390	0.0218	0.0116	30.4	31.1		34.2
	30-4-2023	02:37:48	IL&FS	LSI	Solapur	MH	17.754749	75.778060	150+000	252+000	232+750 LHS Outer	2	39.2000	0.4277	0.2250	0.1277	0.0666	0.0392	0.0219	0.0117	30.4	31.1		34.2
	30-4-2023	02:37:48	IL&FS	LSI	Solapur	MH	17.754749	75.778060	150+000	252+000	232+750 LHS Outer	3	39.0000	0.4104	0.2304	0.1254	0.0656	0.0407	0.0218	0.0116	30.4	31.1		34.2
732	30-4-2023	02:39:36	IL&FS	LSI	Solapur	MH	17.753776	75.780189	150+000	252+000	233+000 LHS Outer	1	41.0000	0.1502	0.0895	0.0606	0.0434	0.0358	0.0303	0.0217	30.5	31.3		34.2
	30-4-2023	02:39:36	IL&FS	LSI	Solapur	MH	17.753776	75.780189	150+000	252+000	233+000 LHS Outer	2	41.4000	0.1488	0.0868	0.0614	0.0457	0.0350	0.0278	0.0213	30.5	31.3		34.2
	30-4-2023	02:39:36	IL&FS	LSI	Solapur	MH	17.753776	75.780189	150+000	252+000	233+000 LHS Outer	3	41.4000	0.1527	0.0922	0.0610	0.0410	0.0355	0.0278	0.0217	30.5	31.3		34.2
733	30-4-2023	02:41:24	IL&FS	LSI	Solapur	MH	17.752759	75.782424	150+000	252+000	233+250 LHS Outer	1	40.5000	0.2936	0.1401	0.0873	0.0478	0.0293	0.0165	0.0097	30.2	31.2		34.2
	30-4-2023	02:41:24	IL&FS	LSI	Solapur	MH	17.752759	75.782424	150+000	252+000	233+250 LHS Outer	2	41.0000	0.2918	0.1437	0.0848	0.0488	0.0299	0.0163	0.0105	30.2	31.2		34.2
	30-4-2023	02:41:24	IL&FS	LSI	Solapur	MH	17.752759	75.782424	150+000	252+000	233+250 LHS Outer	3	40.9000	0.2722	0.1450	0.0835	0.0469	0.0292	0.0161	0.0097	30.2	31.2		34.2
734	30-4-2023	02:43:10	IL&FS	LSI	Solapur	MH	17.751808	75.784446	150+000	252+000	233+500 LHS Outer	1	41.9000	0.0910	0.0585	0.0402	0.0263	0.0215	0.0183	0.0165	30.2	31.2		34.2
	30-4-2023	02:43:10	IL&FS	LSI	Solapur	MH	17.751808	75.784446	150+000	252+000	233+500 LHS Outer	2	42.2000	0.0936	0.0581	0.0370	0.0254	0.0223	0.0203	0.0182	30.2	31.2		34.2
	30-4-2023	02:43:10	IL&FS	LSI	Solapur	MH	17.751808	75.784446	150+000	252+000	233+500 LHS Outer	3	42.2000	0.0952	0.0582	0.0375	0.0249	0.0209	0.0183	0.0165	30.2	31.2		34.2
735	30-4-2023	02:45:05	IL&FS	LSI	Solapur	MH	17.750806	75.786590	150+000	252+000	233+750 LHS Outer	1	40.8000	0.2092	0.1158	0.0673	0.0431	0.0266	0.0151	0.0098	30.3	31.1		34.2
	30-4-2023	02:45:05	IL&FS	LSI	Solapur	MH	17.750806	75.786590	150+000	252+000	233+750 LHS Outer	2	41.0000	0.1936	0.1237	0.0679	0.0424	0.0258	0.0148	0.0103	30.3	31.1		34.2
	30-4-2023	02:45:05	IL&FS	LSI	Solapur	MH	17.750806	75.786590	150+000	252+000	233+750 LHS Outer	3	41.6000	0.2072	0.1204	0.0701	0.0459	0.0267	0.0143	0.0102	30.3	31.1		34.2
736	30-4-2023	02:47:06	IL&FS	LSI	Solapur	MH	17.749876	75.788673	150+000	252+000	234+000 LHS Outer	1	43.8000	0.1182	0.0755	0.0473	0.0372	0.0267	0.0185	0.0165	30.3	30.9		34.2
	30-4-2023	02:47:06	IL&FS	LSI	Solapur	MH	17.749876	75.788673	150+000	252+000	234+000 LHS Outer	2	44.0000	0.1154	0.0784	0.0455	0.0318	0.0260	0.0189	0.0169	30.3	30.9		34.2
	30-4-2023	02:47:06	IL&FS	LSI	Solapur	MH	17.749876	75.788673	150+000	252+000	234+000 LHS Outer	3	44.3000	0.1178	0.0748	0.0497	0.0356	0.0258	0.0198	0.0191	30.3	30.9		34.2
737	30-4-2023	02:48:57	IL&FS	LSI	Solapur	MH	17.748914	75.790824	150+000	252+000	234+250 LHS Outer	1	38.6000	0.3489	0.2038	0.1258	0.0648	0.0321	0.0181	0.0085	30.3	31.2		34.2
	30-4-2023	02:48:57	IL&FS	LSI	Solapur	MH	17.748914	75.790824	150+000	252+000	234+250 LHS Outer	2	38.6000	0.3527	0.2223	0.1215	0.0673	0.0326	0.0183	0.0091	30.3	31.2		34.2
	30-4-2023	02:48:57	IL&FS	LSI	Solapur	MH	17.748914	75.790824	150+000	252+000	234+250 LHS Outer	3	38.9000	0.3198	0.2098	0.1220	0.0638	0.0313	0.0180	0.0090	30.3	31.2		34.2
738	30-4-2023	02:50:48	IL&FS	LSI	Solapur	MH	17.747932	75.793014	150+000	252+000	234+500 LHS Outer	1	41.2000	0.1261	0.0727	0.0510	0.0378	0.0245	0.0175	0.0131	30.3	31.3		34.2
	30-4-2023	02:50:48	IL&FS	LSI	Solapur	MH	17.747932	75.793014	150+000	252+000	234+500 LHS Outer	2	42.2000	0.1345	0.0734	0.0502	0.0391	0.0263	0.0198	0.0147	30.3	31.3		34.2
	30-4-2023	02:50:48	IL&FS	LSI	Solapur	MH	17.747932	75.793014	150+000	252+000	234+500 LHS Outer	3	42.0000	0.1240	0.0755	0.0506	0.0387	0.0267	0.0198	0.0147	30.3	31.3		34.2
739	30-4-2023	02:52:41	IL&FS	LSI	Solapur	MH	17.746967	75.795051	150+000	252+000	234+750 LHS Outer	1	37.0000	0.1249	0.1080	0.0954	0.0771	0.0625	0.0529	0.0480	30.4	31.1		34.2
	30-4-2023	02:52:41	IL&FS	LSI	Solapur	MH	17.746967	75.795051	150+000	252+000	234+750 LHS Outer	2	36.9000	0.1324	0.1090	0.0912	0.0745	0.0613	0.0527	0.0478	30.4	31.1		34.2
	30-4-2023	02:52:41	IL&FS	LSI	Solapur	MH	17.746967	75.795051	150+000	252+000	234+750 LHS Outer	3	37.2000	0.1221	0.1016	0.0878	0.0726	0.0616	0.0532	0.0483	30.4	31.1		34.2
740	30-4-2023	02:54:28	IL&FS	LSI	Solapur	MH	17.746007	75.797172	150+000	252+000	235+000 LHS Outer	1	38.8000	0.3889	0.2046	0.1186	0.0688	0.0311	0.0186	0.0095	30.3	31.1		34.2
	30-4-2023	02:54:28	IL&FS	LSI	Solapur	MH	17.746007	75.797172	150+000	252+000	235+000 LHS Outer	2	39.1000	0.3836	0.2145	0.1145	0.0657	0.0302	0.0178	0.0088	30.3	31.1		34.2
	30-4-2023	02:54:28	IL&FS	LSI	Solapur	MH	17.746007	75.797172	150+000	252+000	235+000 LHS Outer	3	39.5000	0.3552	0.1930	0.1184	0.0680	0.0308	0.0183	0.0093	30.3	31.1		34.2
741	30-4-2023	02:56:20	IL&FS	LSI	Solapur	MH	17.745008	75.799415	150+000	252+000	235+250 LHS Outer	1	40.9000	0.1874	0.1117	0.0729	0.0479	0.0315	0.0155	0.0118	30.2	31.0	6 Lane Start	34.2
	30-4-2023	02:56:20	IL&FS	LSI	Solapur	MH	17.745008	75.799415	150+000	252+000	235+250 LHS Outer	2	41.1000	0.1799	0.1142	0.0739	0.0488	0.0313	0.0168	0.0118	30.2	31.0	6 Lane Start	34.2
	30-4-2023	02:56:20	IL&FS	LSI	Solapur	MH	17.745008	75.799415	150+000	252+000	235+250 LHS Outer	3	41.1000	0.1741	0.1190	0.0728	0.0495	0.0315	0.0156	0.0118	30.2	31.0	6 Lane Start	34.2
742	30-4-2023	02:58:02	IL&FS	LSI	Solapur	MH	17.744071	75.801567	150+000	252+000	235+500 LHS Outer	1	39.0000	0.2003	0.1469	0.0965	0.0623	0.0392	0.0272	0.0190	30.1	30.6		34.2
	30-4-2023	02:58:02	IL&FS	LSI	Solapur	MH	17.744071	75.801567	150+000	252+000	235+500 LHS Outer	2	39.3000	0.1943	0.1369	0.0920	0.0627	0.0395	0.0284	0.0189	30.1	30.6		34.2
	30-4-2023	02:58:02	IL&FS	LSI	Solapur	MH	17.744071	75.801567	150+000	252+000	235+500 LHS Outer	3	39.3000	0.2035	0.1407	0.0922	0.0632	0.0395	0.0291	0.0188	30.1	30.6		34.2
743	30-4-2023	02:59:55	IL&FS	LSI	Solapur	MH	17.743333	75.803199	150+000	252+000	235+700 LHS Outer	1	38.4000	0.2379	0.1474	0.0964	0.0594	0.0374	0.0232	0.0178	30.1	30.6		34.2
	30-4-2023	02:59:55	IL&FS	LSI	Solapur	MH	17.743333	75.803199	150+000	252+000	235+700 LHS Outer	2	38.8000	0.2405	0.1421	0.0975	0.0602	0.0377	0.0231	0.0178	30.1	30.6		34.2
	30-4-2023	02:59:55	IL&FS	LSI	Solapur	MH	17.743333	75.803199	150+000	252+000	235+700 LHS Outer	3	39.0000	0.2408	0.1513	0.0978	0.0602	0.0379	0.0237	0.0183	30.1	30.6		34.2
744	30-4-2023	03:02:18	IL&FS	LSI	Solapur	MH	17.742229	75.805740	150+000	252+000	236+000 LHS Outer	1	40.6000	0.2199	0.1437	0.0984	0.0657	0.0455	0.0323	0.0180	30.0	30.8		34.2
	30-4-2023	03:02:18	IL&FS	LSI	Solapur	MH	17.742229	75.805740	150+000	252+000	236+000 LHS Outer	2	40.5000	0.2178	0.1536	0.0993	0.0659	0.0459	0.0317	0.0181	30.0	30.8		34.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	03:02:18	IL&FS	LSI	Solapur	MH	17.742229	75.805740	150+000	252+000	236+000 LHS Outer	3	40.2000	0.2236	0.1545	0.0957	0.0652	0.0447	0.0308	0.0178	30.0	30.8		34.2
745	30-4-2023	03:04:29	IL&FS	LSI	Solapur	MH	17.741302	75.807968	150+000	252+000	236+250 LHS Outer	1	41.1000	0.1958	0.1324	0.0882	0.0514	0.0295	0.0213	0.0165	30.2	30.7		34.2
	30-4-2023	03:04:29	IL&FS	LSI	Solapur	MH	17.741302	75.807968	150+000	252+000	236+250 LHS Outer	2	40.6000	0.1909	0.1305	0.0840	0.0526	0.0291	0.0211	0.0163	30.2	30.7		34.2
	30-4-2023	03:04:29	IL&FS	LSI	Solapur	MH	17.741302	75.807968	150+000	252+000	236+250 LHS Outer	3	40.7000	0.2082	0.1345	0.0880	0.0537	0.0295	0.0214	0.0165	30.2	30.7		34.2
746	30-4-2023	03:06:14	IL&FS	LSI	Solapur	MH	17.740289	75.810264	150+000	252+000	236+500 LHS Outer	1	40.9000	0.1823	0.1311	0.0895	0.0574	0.0357	0.0251	0.0173	30.0	30.4		34.2
	30-4-2023	03:06:14	IL&FS	LSI	Solapur	MH	17.740289	75.810264	150+000	252+000	236+500 LHS Outer	2	41.0000	0.1869	0.1286	0.0876	0.0573	0.0337	0.0243	0.0177	30.0	30.4		34.2
	30-4-2023	03:06:14	IL&FS	LSI	Solapur	MH	17.740289	75.810264	150+000	252+000	236+500 LHS Outer	3	41.1000	0.1908	0.1262	0.0881	0.0597	0.0343	0.0245	0.0183	30.0	30.4		34.2
747	30-4-2023	03:07:59	IL&FS	LSI	Solapur	MH	17.739387	75.812301	150+000	252+000	236+750 LHS Outer	1	42.7000	0.0765	0.0620	0.0504	0.0377	0.0270	0.0204	0.0154	30.0	30.2		34.2
	30-4-2023	03:07:59	IL&FS	LSI	Solapur	MH	17.739387	75.812301	150+000	252+000	236+750 LHS Outer	2	42.7000	0.0765	0.0615	0.0494	0.0404	0.0284	0.0209	0.0158	30.0	30.2		34.2
	30-4-2023	03:07:59	IL&FS	LSI	Solapur	MH	17.739387	75.812301	150+000	252+000	236+750 LHS Outer	3	42.1000	0.0753	0.0625	0.0527	0.0397	0.0276	0.0200	0.0150	30.0	30.2		34.2
748	30-4-2023	03:12:17	IL&FS	LSI	Solapur	MH	17.738502	75.814331	150+000	252+000	237+000 LHS Outer	1	41.3000	0.1263	0.0902	0.0648	0.0428	0.0281	0.0191	0.0092	29.9	30.9	T-27.2/33.3	33.3
	30-4-2023	03:12:17	IL&FS	LSI	Solapur	MH	17.738502	75.814331	150+000	252+000	237+000 LHS Outer	2	41.2000	0.1368	0.0944	0.0661	0.0450	0.0309	0.0193	0.0101	29.9	30.9	T-27.2/33.3	33.3
	30-4-2023	03:12:17	IL&FS	LSI	Solapur	MH	17.738502	75.814331	150+000	252+000	237+000 LHS Outer	3	41.2000	0.1234	0.0890	0.0634	0.0438	0.0305	0.0182	0.0098	29.9	30.9	T-27.2/33.3	33.3
749	30-4-2023	03:14:30	IL&FS	LSI	Solapur	MH	17.737565	75.816612	150+000	252+000	237+250 LHS Outer	1	40.9000	0.1253	0.0813	0.0548	0.0442	0.0375	0.0319	0.0252	30.1	30.3		33.3
	30-4-2023	03:14:30	IL&FS	LSI	Solapur	MH	17.737565	75.816612	150+000	252+000	237+250 LHS Outer	2	40.7000	0.1286	0.0851	0.0554	0.0430	0.0346	0.0288	0.0224	30.1	30.3		33.3
	30-4-2023	03:14:30	IL&FS	LSI	Solapur	MH	17.737565	75.816612	150+000	252+000	237+250 LHS Outer	3	41.6000	0.1426	0.0850	0.0583	0.0450	0.0348	0.0295	0.0230	30.1	30.3		33.3
750	30-4-2023	03:16:14	IL&FS	LSI	Solapur	MH	17.736637	75.818695	150+000	252+000	237+500 LHS Outer	1	42.1000	0.1262	0.0668	0.0392	0.0228	0.0152	0.0147	0.0132	29.9	30.6		33.3
	30-4-2023	03:16:14	IL&FS	LSI	Solapur	MH	17.736637	75.818695	150+000	252+000	237+500 LHS Outer	2	41.9000	0.1187	0.0647	0.0393	0.0217	0.0149	0.0145	0.0131	29.9	30.6		33.3
	30-4-2023	03:16:14	IL&FS	LSI	Solapur	MH	17.736637	75.818695	150+000	252+000	237+500 LHS Outer	3	41.9000	0.1210	0.0624	0.0396	0.0227	0.0141	0.0138	0.0124	29.9	30.6		33.3
751	30-4-2023	03:17:58	IL&FS	LSI	Solapur	MH	17.735683	75.820854	150+000	252+000	237+750 LHS Outer	1	41.1000	0.1686	0.1163	0.0688	0.0540	0.0382	0.0276	0.0164	29.9	30.4		33.3
	30-4-2023	03:17:58	IL&FS	LSI	Solapur	MH	17.735683	75.820854	150+000	252+000	237+750 LHS Outer	2	41.8000	0.1531	0.1123	0.0749	0.0547	0.0383	0.0279	0.0185	29.9	30.4		33.3
	30-4-2023	03:17:58	IL&FS	LSI	Solapur	MH	17.735683	75.820854	150+000	252+000	237+750 LHS Outer	3	41.3000	0.1627	0.1117	0.0697	0.0578	0.0396	0.0277	0.0163	29.9	30.4		33.3
752	30-4-2023	03:19:46	IL&FS	LSI	Solapur	MH	17.734727	75.822990	150+000	252+000	238+000 LHS Outer	1	41.2000	0.1100	0.0647	0.0404	0.0292	0.0214	0.0182	0.0159	29.8	30.3		33.3
	30-4-2023	03:19:46	IL&FS	LSI	Solapur	MH	17.734727	75.822990	150+000	252+000	238+000 LHS Outer	2	41.0000	0.1087	0.0595	0.0443	0.0298	0.0201	0.0171	0.0149	29.8	30.3		33.3
	30-4-2023	03:19:46	IL&FS	LSI	Solapur	MH	17.734727	75.822990	150+000	252+000	238+000 LHS Outer	3	41.0000	0.1104	0.0611	0.0452	0.0284	0.0216	0.0192	0.0167	29.8	30.3		33.3
753	30-4-2023	03:21:34	IL&FS	LSI	Solapur	MH	17.733730	75.825103	150+000	252+000	238+250 LHS Outer	1	40.5000	0.2043	0.1359	0.0889	0.0661	0.0336	0.0218	0.0120	29.8	30.1		33.3
	30-4-2023	03:21:34	IL&FS	LSI	Solapur	MH	17.733730	75.825103	150+000	252+000	238+250 LHS Outer	2	40.5000	0.1895	0.1380	0.0930	0.0620	0.0345	0.0216	0.0118	29.8	30.1		33.3
	30-4-2023	03:21:34	IL&FS	LSI	Solapur	MH	17.733730	75.825103	150+000	252+000	238+250 LHS Outer	3	40.8000	0.2077	0.1353	0.0892	0.0632	0.0363	0.0211	0.0116	29.8	30.1		33.3
754	30-4-2023	03:23:21	IL&FS	LSI	Solapur	MH	17.732707	75.827392	150+000	252+000	238+510 LHS Outer	1	39.2000	0.3396	0.1848	0.1177	0.0689	0.0445	0.0254	0.0212	29.6	29.4		33.3
	30-4-2023	03:23:21	IL&FS	LSI	Solapur	MH	17.732707	75.827392	150+000	252+000	238+510 LHS Outer	2	39.3000	0.3448	0.1932	0.1151	0.0706	0.0440	0.0240	0.0214	29.6	29.4		33.3
	30-4-2023	03:23:21	IL&FS	LSI	Solapur	MH	17.732707	75.827392	150+000	252+000	238+510 LHS Outer	3	39.1000	0.3179	0.1896	0.1217	0.0732	0.0443	0.0245	0.0206	29.6	29.4		33.3
755	30-4-2023	03:25:56	IL&FS	LSI	Solapur	MH	17.731847	75.829307	150+000	252+000	238+740 LHS Outer	1	40.4000	0.2418	0.1743	0.1083	0.0628	0.0390	0.0214	0.0160	29.6	28.1	Approach	33.3
	30-4-2023	03:25:56	IL&FS	LSI	Solapur	MH	17.731847	75.829307	150+000	252+000	238+740 LHS Outer	2	40.7000	0.2559	0.1807	0.1132	0.0570	0.0357	0.0216	0.0162	29.6	28.1	Approach	33.3
	30-4-2023	03:25:56	IL&FS	LSI	Solapur	MH	17.731847	75.829307	150+000	252+000	238+740 LHS Outer	3	40.7000	0.2340	0.1842	0.1127	0.0625	0.0379	0.0214	0.0163	29.6	28.1	Approach	33.3
756	30-4-2023	03:27:56	IL&FS	LSI	Solapur	MH	17.730907	75.831497	150+000	252+000	239+000 LHS Outer	1	39.3000	0.2836	0.1902	0.1157	0.0732	0.0451	0.0256	0.0125	29.6	27.6		33.3
	30-4-2023	03:27:56	IL&FS	LSI	Solapur	MH	17.730907	75.831497	150+000	252+000	239+000 LHS Outer	2	39.7000	0.3201	0.1979	0.1215	0.0730	0.0466	0.0286	0.0122	29.6	27.6		33.3
	30-4-2023	03:27:56	IL&FS	LSI	Solapur	MH	17.730907	75.831497	150+000	252+000	239+000 LHS Outer	3	39.6000	0.2878	0.1982	0.1198	0.0741	0.0472	0.0284	0.0121	29.6	27.6		33.3
757	30-4-2023	03:29:42	IL&FS	LSI	Solapur	MH	17.729909	75.833770	150+000	252+000	239+250 LHS Outer	1	42.3000	0.0958	0.0745	0.0539	0.0404	0.0334	0.0264	0.0237	29.3	27.9		33.3
	30-4-2023	03:29:42	IL&FS	LSI	Solapur	MH	17.729909	75.833770	150+000	252+000	239+250 LHS Outer	2	43.3000	0.0981	0.0743	0.0557	0.0410	0.0340	0.0270	0.0243	29.3	27.9		33.3
	30-4-2023	03:29:42	IL&FS	LSI	Solapur	MH	17.729909	75.833770	150+000	252+000	239+250 LHS Outer	3	42.3000	0.0952	0.0766	0.0546	0.0394	0.0330	0.0266	0.0239	29.3	27.9		33.3
758	30-4-2023	03:31:34	IL&FS	LSI	Solapur	MH	17.729003	75.835884	150+000	252+000	239+500 LHS Outer	1	42.2000	0.0804	0.0543	0.0368	0.0264	0.0206	0.0163	0.0147	29.2	27.6		33.3
	30-4-2023	03:31:34	IL&FS	LSI	Solapur	MH	17.729003	75.835884	150+000	252+000	239+500 LHS Outer	2	42.4000	0.0811	0.0559	0.0373	0.0267	0.0208	0.0162	0.0145	29.2	27.6		33.3
	30-4-2023	03:31:34	IL&FS	LSI	Solapur	MH	17.729003	75.835884	150+000	252+000	239+500 LHS Outer	3	42.7000	0.0751	0.0519	0.0376	0.0266	0.0204	0.0159	0.0143	29.2	27.6		33.3
759	30-4-2023	03:33:28	IL&FS	LSI	Solapur	MH	17.728021	75.838058	150+000	252+000	239+750 LHS Outer	1	41.6000	0.0959	0.0687	0.0460	0.0330	0.0243	0.0199	0.0179	29.0	27.8		33.3
	30-4-2023	03:33:28	IL&FS	LSI	Solapur	MH	17.728021	75.838058	150+000	252+000	239+750 LHS Outer	2	41.4000	0.0934	0.0676	0.0494	0.0349	0.0248	0.0197	0.0177	29.0	27.8		33.3
	30-4-2023	03:33:28	IL&FS	LSI	Solapur	MH	17.728021	75.838058	150+000	252+000	239+750 LHS Outer	3	41.6000	0.0946	0.0690	0.0486	0.0338	0.0239	0.0198	0.0178	29.0	27.8		33.3
760	30-4-2023	03:35:30	IL&FS	LSI	Solapur	MH	17.727115	75.840042	150+000	252+000	240+000 LHS Outer	1	42.0000	0.0957	0.0600	0.0340	0.0209	0.0153	0.0116	0.0104	29.0	27.8		33.3
	30-4-2023	03:35:30	IL&FS	LSI	Solapur	MH	17.727115	75.840042	150+000	252+000	240+000 LHS Outer	2	41.1000	0.0942	0.0586	0.0344	0.0204	0.0155	0.0121	0.0108	29.0	27.8		33.3
	30-4-2023	03:35:30	IL&FS	LSI	Solapur	MH	17.727115	75.840042	150+000	252+000	240+000 LHS Outer	3	41.0000	0.0903	0.0584	0.0375	0.0208	0.0154	0.0117	0.0105	29.0	27.8		33.3
761	30-4-2023	03:37:25	IL&FS	LSI	Solapur	MH	17.725536	75.841865	150+000	252+000	240+250 LHS Outer	1	41.4000	0.1024	0.0676	0.0429	0.0315	0.0239	0.0206	0.0185	29.0	27.4		33.3
	30-4-2023	03:37:25	IL&FS	LSI	Solapur	MH	17.725536	75.841865	150+000	252+000	240+250 LHS Outer	2	41.1000	0.0995	0.0688	0.0438	0.0324	0.0242	0.0210	0.0189	29.0	27.4		33.3
	30-4-2023	03:37:25	IL&FS	LSI	Solapur	MH	17.725536	75.841865	150+000	252+000	240+250 LHS Outer	3	40.8000	0.0976	0.0719	0.0458	0.0314	0.0217	0.0185	0.0166	29.0	27.4		33.3
762	30-4-2023	03:39:11	IL&FS	LSI	Solapur	MH	17.723863	75.843452	150+000	252+000	240+500 LHS Outer	1	41.7000	0.1436	0.0922	0.0668	0.0523	0.0423	0.0354	0.0351	28.8	27.5		33.3
	30-4-2023	03:39:11	IL&FS	LSI	Solapur	MH	17.723863	75.843452	150+000	252+000	240+500 LHS Outer	2	42.0000	0.1330	0.0936	0.0624	0.0508	0.0420	0.0352	0.0317	28.8	27.5		33.3
	30-4-2023	03:39:11	IL&FS	LSI	Solapur	MH	17.723863	75.843452	150+000	252+000	240+500 LHS Outer	3	42.3000	0.1330	0.0921	0.0650	0.0511	0.0414	0.0345	0.0311	28.8	27.5		33.3
763	30-4-2023	03:40:51	IL&FS	LSI	Solapur	MH	17.722187	75.845054	150+000	252+000	240+750 LHS Outer	1	40.3000	0.1788	0.1074	0.0718	0.0454	0.0299	0.0191	0.0109	28.7	27.5		33.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	03:40:51	IL&FS	LSI	Solapur	MH	17.722187	75.845054	150+000	252+000	240+750 LHS Outer	2	40.4000	0.1694	0.1041	0.0700	0.0461	0.0286	0.0185	0.0106	28.7	27.5		33.3
	30-4-2023	03:40:51	IL&FS	LSI	Solapur	MH	17.722187	75.845054	150+000	252+000	240+750 LHS Outer	3	40.4000	0.1663	0.1002	0.0705	0.0428	0.0291	0.0180	0.0099	28.7	27.5		33.3
764	30-4-2023	03:42:31	IL&FS	LSI	Solapur	MH	17.720640	75.846557	150+000	252+000	241+000 LHS Outer	1	41.4000	0.1240	0.0800	0.0584	0.0422	0.0287	0.0193	0.0174	28.7	27.6		33.3
	30-4-2023	03:42:31	IL&FS	LSI	Solapur	MH	17.720640	75.846557	150+000	252+000	241+000 LHS Outer	2	41.9000	0.1247	0.0797	0.0570	0.0401	0.0278	0.0202	0.0182	28.7	27.6		33.3
	30-4-2023	03:42:31	IL&FS	LSI	Solapur	MH	17.720640	75.846557	150+000	252+000	241+000 LHS Outer	3	41.9000	0.1249	0.0877	0.0593	0.0417	0.0294	0.0210	0.0189	28.7	27.6		33.3
765	30-4-2023	03:45:44	IL&FS	LSI	Solapur	MH	17.718925	75.848197	150+000	252+000	241+250 LHS Outer	1	41.3000	0.1511	0.0877	0.0565	0.0417	0.0311	0.0237	0.0213	28.7	27.6		33.3
	30-4-2023	03:45:44	IL&FS	LSI	Solapur	MH	17.718925	75.848197	150+000	252+000	241+250 LHS Outer	2	41.3000	0.1541	0.0949	0.0581	0.0423	0.0312	0.0245	0.0220	28.7	27.6		33.3
	30-4-2023	03:45:44	IL&FS	LSI	Solapur	MH	17.718925	75.848197	150+000	252+000	241+250 LHS Outer	3	41.5000	0.1470	0.0928	0.0614	0.0429	0.0313	0.0238	0.0214	28.7	27.6		33.3
766	30-4-2023	03:47:45	IL&FS	LSI	Solapur	MH	17.717189	75.849830	150+000	252+000	241+500 LHS Outer	1	40.4000	0.1578	0.1062	0.0769	0.0523	0.0336	0.0205	0.0119	28.6	27.7		33.3
	30-4-2023	03:47:45	IL&FS	LSI	Solapur	MH	17.717189	75.849830	150+000	252+000	241+500 LHS Outer	2	39.9000	0.1560	0.1101	0.0717	0.0497	0.0341	0.0205	0.0118	28.6	27.7		33.3
	30-4-2023	03:47:45	IL&FS	LSI	Solapur	MH	17.717189	75.849830	150+000	252+000	241+500 LHS Outer	3	40.0000	0.1558	0.1060	0.0745	0.0498	0.0347	0.0213	0.0117	28.6	27.7		33.3
767	30-4-2023	03:50:51	IL&FS	LSI	Solapur	MH	17.715538	75.851409	150+000	252+000	241+750 LHS Outer	1	41.2000	0.1404	0.0951	0.0686	0.0525	0.0344	0.0213	0.0146	28.5	27.6	T-26.5/31.8	31.8
	30-4-2023	03:50:51	IL&FS	LSI	Solapur	MH	17.715538	75.851409	150+000	252+000	241+750 LHS Outer	2	41.4000	0.1453	0.0946	0.0770	0.0544	0.0337	0.0204	0.0138	28.5	27.6	T-26.5/31.8	31.8
	30-4-2023	03:50:51	IL&FS	LSI	Solapur	MH	17.715538	75.851409	150+000	252+000	241+750 LHS Outer	3	41.5000	0.1328	0.0942	0.0718	0.0561	0.0345	0.0198	0.0133	28.5	27.6	T-26.5/31.8	31.8
768	30-4-2023	03:53:20	IL&FS	LSI	Solapur	MH	17.713964	75.852935	150+000	252+000	242+000 LHS Outer	1	40.8000	0.1237	0.0832	0.0544	0.0360	0.0232	0.0152	0.0137	28.6	27.6		31.8
	30-4-2023	03:53:20	IL&FS	LSI	Solapur	MH	17.713964	75.852935	150+000	252+000	242+000 LHS Outer	2	41.2000	0.1331	0.0866	0.0510	0.0341	0.0235	0.0153	0.0138	28.6	27.6		31.8
	30-4-2023	03:53:20	IL&FS	LSI	Solapur	MH	17.713964	75.852935	150+000	252+000	242+000 LHS Outer	3	41.3000	0.1189	0.0771	0.0488	0.0338	0.0237	0.0150	0.0135	28.6	27.6		31.8
769	30-4-2023	03:55:12	IL&FS	LSI	Solapur	MH	17.712083	75.854827	150+000	252+000	242+280 LHS Outer	1	42.2000	0.1365	0.0931	0.0593	0.0445	0.0399	0.0319	0.0298	28.5	27.8		31.8
	30-4-2023	03:55:12	IL&FS	LSI	Solapur	MH	17.712083	75.854827	150+000	252+000	242+280 LHS Outer	2	42.3000	0.1292	0.0871	0.0567	0.0469	0.0407	0.0330	0.0285	28.5	27.8		31.8
	30-4-2023	03:55:12	IL&FS	LSI	Solapur	MH	17.712083	75.854827	150+000	252+000	242+280 LHS Outer	3	42.0000	0.1294	0.0833	0.0531	0.0417	0.0413	0.0331	0.0293	28.5	27.8		31.8
770	30-4-2023	03:56:56	IL&FS	LSI	Solapur	MH	17.710622	75.856246	150+000	252+000	242+500 LHS Outer	1	42.3000	0.0905	0.0696	0.0506	0.0388	0.0304	0.0190	0.0116	28.5	27.9		31.8
	30-4-2023	03:56:56	IL&FS	LSI	Solapur	MH	17.710622	75.856246	150+000	252+000	242+500 LHS Outer	2	42.3000	0.0970	0.0671	0.0567	0.0432	0.0328	0.0203	0.0125	28.5	27.9		31.8
	30-4-2023	03:56:56	IL&FS	LSI	Solapur	MH	17.710622	75.856246	150+000	252+000	242+500 LHS Outer	3	42.6000	0.0955	0.0666	0.0537	0.0386	0.0294	0.0196	0.0126	28.5	27.9		31.8
771	30-4-2023	03:58:51	IL&FS	LSI	Solapur	MH	17.708831	75.857963	150+000	252+000	242+770 LHS Outer	1	40.7000	0.1537	0.0991	0.0652	0.0496	0.0314	0.0186	0.0167	28.5	28.4		31.8
	30-4-2023	03:58:51	IL&FS	LSI	Solapur	MH	17.708831	75.857963	150+000	252+000	242+770 LHS Outer	2	40.2000	0.1465	0.0909	0.0673	0.0496	0.0342	0.0231	0.0153	28.5	28.4		31.8
	30-4-2023	03:58:51	IL&FS	LSI	Solapur	MH	17.708831	75.857963	150+000	252+000	242+770 LHS Outer	3	40.7000	0.1551	0.0931	0.0648	0.0454	0.0298	0.0201	0.0181	28.5	28.4		31.8
772	30-4-2023	04:00:31	IL&FS	LSI	Solapur	MH	17.707372	75.859413	150+000	252+000	243+000 LHS Outer	1	42.2000	0.0908	0.0645	0.0466	0.0333	0.0235	0.0174	0.0129	28.6	28.0		31.8
	30-4-2023	04:00:31	IL&FS	LSI	Solapur	MH	17.707372	75.859413	150+000	252+000	243+000 LHS Outer	2	42.3000	0.0883	0.0652	0.0491	0.0338	0.0229	0.0171	0.0135	28.6	28.0		31.8
	30-4-2023	04:00:31	IL&FS	LSI	Solapur	MH	17.707372	75.859413	150+000	252+000	243+000 LHS Outer	3	42.0000	0.0871	0.0632	0.0470	0.0323	0.0222	0.0166	0.0131	28.6	28.0		31.8
773	30-4-2023	04:02:13	IL&FS	LSI	Solapur	MH	17.705621	75.861106	150+000	252+000	243+250 LHS Outer	1	41.0000	0.0756	0.0637	0.0551	0.0464	0.0371	0.0345	0.0311	28.4	27.5		31.8
	30-4-2023	04:02:13	IL&FS	LSI	Solapur	MH	17.705621	75.861106	150+000	252+000	243+250 LHS Outer	2	40.9000	0.0787	0.0635	0.0551	0.0467	0.0395	0.0351	0.0316	28.4	27.5		31.8
	30-4-2023	04:02:13	IL&FS	LSI	Solapur	MH	17.705621	75.861106	150+000	252+000	243+250 LHS Outer	3	41.6000	0.0822	0.0646	0.0550	0.0454	0.0377	0.0338	0.0304	28.4	27.5		31.8
774	30-4-2023	04:03:53	IL&FS	LSI	Solapur	MH	17.703945	75.862716	150+000	252+000	243+500 LHS Outer	1	42.2000	0.1254	0.0857	0.0455	0.0354	0.0299	0.0218	0.0196	28.4	28.1		31.8
	30-4-2023	04:03:53	IL&FS	LSI	Solapur	MH	17.703945	75.862716	150+000	252+000	243+500 LHS Outer	2	42.1000	0.1193	0.0855	0.0456	0.0350	0.0310	0.0224	0.0201	28.4	28.1		31.8
	30-4-2023	04:03:53	IL&FS	LSI	Solapur	MH	17.703945	75.862716	150+000	252+000	243+500 LHS Outer	3	41.8000	0.1253	0.0854	0.0454	0.0320	0.0316	0.0226	0.0203	28.4	28.1		31.8
775	30-4-2023	04:05:39	IL&FS	LSI	Solapur	MH	17.702310	75.864265	150+000	252+000	243+750 LHS Outer	1	41.6000	0.1083	0.0744	0.0512	0.0356	0.0270	0.0223	0.0192	28.5	27.7		31.8
	30-4-2023	04:05:39	IL&FS	LSI	Solapur	MH	17.702310	75.864265	150+000	252+000	243+750 LHS Outer	2	41.8000	0.1088	0.0728	0.0498	0.0354	0.0266	0.0216	0.0179	28.5	27.7		31.8
	30-4-2023	04:05:39	IL&FS	LSI	Solapur	MH	17.702310	75.864265	150+000	252+000	243+750 LHS Outer	3	41.9000	0.1138	0.0799	0.0542	0.0365	0.0273	0.0223	0.0184	28.5	27.7		31.8
776	30-4-2023	04:07:17	IL&FS	LSI	Solapur	MH	17.700799	75.865829	150+000	252+000	244+000 LHS Outer	1	41.2000	0.1822	0.1126	0.0678	0.0447	0.0291	0.0234	0.0210	28.4	28.4		31.8
	30-4-2023	04:07:17	IL&FS	LSI	Solapur	MH	17.700799	75.865829	150+000	252+000	244+000 LHS Outer	2	41.3000	0.1638	0.1120	0.0674	0.0445	0.0289	0.0237	0.0213	28.4	28.4		31.8
	30-4-2023	04:07:17	IL&FS	LSI	Solapur	MH	17.700799	75.865829	150+000	252+000	244+000 LHS Outer	3	41.2000	0.1791	0.1086	0.0702	0.0460	0.0303	0.0242	0.0218	28.4	28.4		31.8
777	30-4-2023	04:08:58	IL&FS	LSI	Solapur	MH	17.699573	75.867866	150+000	252+000	244+250 LHS Outer	1	40.7000	0.1526	0.0992	0.0788	0.0577	0.0374	0.0248	0.0182	28.3	28.5		31.8
	30-4-2023	04:08:58	IL&FS	LSI	Solapur	MH	17.699573	75.867866	150+000	252+000	244+250 LHS Outer	2	40.3000	0.1555	0.0987	0.0783	0.0565	0.0381	0.0261	0.0177	28.3	28.5		31.8
	30-4-2023	04:08:58	IL&FS	LSI	Solapur	MH	17.699573	75.867866	150+000	252+000	244+250 LHS Outer	3	40.9000	0.1479	0.1014	0.0744	0.0576	0.0379	0.0251	0.0180	28.3	28.5		31.8
778	30-4-2023	04:10:39	IL&FS	LSI	Solapur	MH	17.698476	75.869949	150+000	252+000	244+500 LHS Outer	1	39.8000	0.2810	0.1973	0.1164	0.0710	0.0483	0.0292	0.0171	28.3	27.9		31.8
	30-4-2023	04:10:39	IL&FS	LSI	Solapur	MH	17.698476	75.869949	150+000	252+000	244+500 LHS Outer	2	39.9000	0.2922	0.2112	0.1127	0.0674	0.0480	0.0302	0.0172	28.3	27.9		31.8
	30-4-2023	04:10:39	IL&FS	LSI	Solapur	MH	17.698476	75.869949	150+000	252+000	244+500 LHS Outer	3	39.6000	0.2786	0.1851	0.1151	0.0698	0.0468	0.0297	0.0171	28.3	27.9		31.8
779	30-4-2023	04:12:45	IL&FS	LSI	Solapur	MH	17.697353	75.872032	150+000	252+000	244+750 LHS Outer	1	41.1000	0.1341	0.0877	0.0500	0.0354	0.0293	0.0193	0.0143	28.2	27.2		31.8
	30-4-2023	04:12:45	IL&FS	LSI	Solapur	MH	17.697353	75.872032	150+000	252+000	244+750 LHS Outer	2	40.9000	0.1258	0.0843	0.0498	0.0356	0.0274	0.0192	0.0153	28.2	27.2		31.8
	30-4-2023	04:12:45	IL&FS	LSI	Solapur	MH	17.697353	75.872032	150+000	252+000	244+750 LHS Outer	3	41.5000	0.1432	0.0894	0.0475	0.0349	0.0272	0.0195	0.0141	28.2	27.2		31.8
780	30-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	17.696224	75.874031	150+000	252+000	245+000 LHS Outer	1	38.5000	0.3554	0.2459	0.1624	0.0991	0.0575	0.0377	0.0225	28.2	27.5		31.8
	30-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	17.696224	75.874031	150+000	252+000	245+000 LHS Outer	2	38.4000	0.3330	0.2224	0.1520	0.0939	0.0564	0.0349	0.0207	28.2	27.5		31.8
	30-4-2023	04:14:26	IL&FS	LSI	Solapur	MH	17.696224	75.874031	150+000	252+000	245+000 LHS Outer	3	38.7000	0.3470	0.2309	0.1538	0.0952	0.0558	0.0344	0.0199	28.2	27.5		31.8
781	30-4-2023	04:16:06	IL&FS	LSI	Solapur	MH	17.694999	75.876052	150+000	252+000	245+250 LHS Outer	1	39.9000	0.2955	0.1979	0.1251	0.0640	0.0360	0.0254	0.0153	28.5	27.9		31.8
	30-4-2023	04:16:06	IL&FS	LSI	Solapur	MH	17.694999	75.876052	150+000	252+000	245+250 LHS Outer	2	40.2000	0.2970	0.1998	0.1250	0.0692	0.0403	0.0257	0.0153	28.5	27.9		31.8
	30-4-2023	04:16:06	IL&FS	LSI	Solapur	MH	17.694999	75.876052	150+000	252+000	245+250 LHS Outer	3	40.2000	0.2899	0.1945	0.1253	0.0656	0.0406	0.0258	0.0153	28.5	27.9		31.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
782	30-4-2023	04:17:51	IL&FS	LSI	Solapur	MH	17.694232	75.878387	150+000	252+000	245+500 LHS Outer	1	39.7000	0.2720	0.1742	0.1063	0.0648	0.0374	0.0279	0.0215	28.5	27.9		31.8
	30-4-2023	04:17:51	IL&FS	LSI	Solapur	MH	17.694232	75.878387	150+000	252+000	245+500 LHS Outer	2	39.0000	0.2537	0.1771	0.1092	0.0690	0.0397	0.0279	0.0204	28.5	27.9		31.8
	30-4-2023	04:17:51	IL&FS	LSI	Solapur	MH	17.694232	75.878387	150+000	252+000	245+500 LHS Outer	3	39.2000	0.2404	0.1800	0.1101	0.0689	0.0382	0.0280	0.0206	28.5	27.9		31.8
783	30-4-2023	04:19:38	IL&FS	LSI	Solapur	MH	17.693342	75.880218	150+000	252+000	245+750 LHS Outer	1	40.1000	0.2833	0.1713	0.0923	0.0579	0.0327	0.0233	0.0210	28.7	27.8		31.8
	30-4-2023	04:19:38	IL&FS	LSI	Solapur	MH	17.693342	75.880218	150+000	252+000	245+750 LHS Outer	2	40.4000	0.2635	0.1703	0.0906	0.0579	0.0345	0.0259	0.0254	28.7	27.8		31.8
	30-4-2023	04:19:38	IL&FS	LSI	Solapur	MH	17.693342	75.880218	150+000	252+000	245+750 LHS Outer	3	40.3000	0.2679	0.1637	0.0950	0.0585	0.0359	0.0249	0.0224	28.7	27.8		31.8
784	30-4-2023	04:21:35	IL&FS	LSI	Solapur	MH	17.691846	75.882232	150+000	252+000	246+000 LHS Outer	1	37.1000	0.4703	0.2867	0.1284	0.0613	0.0378	0.0214	0.0165	28.8	27.5		31.8
	30-4-2023	04:21:35	IL&FS	LSI	Solapur	MH	17.691846	75.882232	150+000	252+000	246+000 LHS Outer	2	37.1000	0.4841	0.2794	0.1266	0.0597	0.0370	0.0216	0.0166	28.8	27.5		31.8
	30-4-2023	04:21:35	IL&FS	LSI	Solapur	MH	17.691846	75.882232	150+000	252+000	246+000 LHS Outer	3	37.6000	0.4477	0.2694	0.1313	0.0635	0.0396	0.0219	0.0169	28.8	27.5		31.8
785	30-4-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.691249	75.884490	150+000	252+000	246+250 LHS Outer	1	39.4000	0.2039	0.1485	0.1022	0.0743	0.0557	0.0394	0.0336	28.7	27.7		31.8
	30-4-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.691249	75.884490	150+000	252+000	246+250 LHS Outer	2	39.7000	0.2250	0.1515	0.1088	0.0776	0.0585	0.0422	0.0340	28.7	27.7		31.8
	30-4-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.691249	75.884490	150+000	252+000	246+250 LHS Outer	3	39.7000	0.2097	0.1512	0.1067	0.0787	0.0601	0.0436	0.0341	28.7	27.7		31.8
786	30-4-2023	04:25:02	IL&FS	LSI	Solapur	MH	17.690387	75.886634	150+000	252+000	246+500 LHS Outer	1	39.2000	0.1776	0.1215	0.0774	0.0428	0.0286	0.0176	0.0158	28.7	28.4		31.8
	30-4-2023	04:25:02	IL&FS	LSI	Solapur	MH	17.690387	75.886634	150+000	252+000	246+500 LHS Outer	2	39.4000	0.1684	0.1275	0.0775	0.0419	0.0273	0.0179	0.0161	28.7	28.4		31.8
	30-4-2023	04:25:02	IL&FS	LSI	Solapur	MH	17.690387	75.886634	150+000	252+000	246+500 LHS Outer	3	39.3000	0.1835	0.1334	0.0736	0.0384	0.0259	0.0174	0.0156	28.7	28.4		31.8
787	30-4-2023	04:26:48	IL&FS	LSI	Solapur	MH	17.688894	75.888450	150+000	252+000	246+750 LHS Outer	1	41.4000	0.1426	0.1011	0.0763	0.0536	0.0384	0.0299	0.0169	28.7	28.5		31.8
	30-4-2023	04:26:48	IL&FS	LSI	Solapur	MH	17.688894	75.888450	150+000	252+000	246+750 LHS Outer	2	41.2000	0.1418	0.0964	0.0705	0.0529	0.0402	0.0285	0.0169	28.7	28.5		31.8
	30-4-2023	04:26:48	IL&FS	LSI	Solapur	MH	17.688894	75.888450	150+000	252+000	246+750 LHS Outer	3	41.2000	0.1423	0.1016	0.0722	0.0536	0.0414	0.0297	0.0169	28.7	28.5		31.8
788	30-4-2023	04:28:26	IL&FS	LSI	Solapur	MH	17.687675	75.890243	150+000	252+000	247+000 LHS Outer	1	39.7000	0.1685	0.1117	0.0678	0.0426	0.0328	0.0259	0.0203	28.5	27.9		31.8
	30-4-2023	04:28:26	IL&FS	LSI	Solapur	MH	17.687675	75.890243	150+000	252+000	247+000 LHS Outer	2	39.8000	0.1717	0.1117	0.0687	0.0423	0.0321	0.0247	0.0192	28.5	27.9		31.8
	30-4-2023	04:28:26	IL&FS	LSI	Solapur	MH	17.687675	75.890243	150+000	252+000	247+000 LHS Outer	3	39.9000	0.1549	0.1123	0.0663	0.0389	0.0296	0.0232	0.0179	28.5	27.9		31.8
789	30-4-2023	04:34:47	IL&FS	LSI	Solapur	MH	17.686248	75.892494	150+000	252+000	247+250 LHS Outer	1	40.3000	0.3725	0.2269	0.0995	0.0547	0.0334	0.0199	0.0149	28.7	28.7	T-26.5/30.3	30.3
	30-4-2023	04:34:47	IL&FS	LSI	Solapur	MH	17.686248	75.892494	150+000	252+000	247+250 LHS Outer	2	41.1000	0.3506	0.2274	0.1112	0.0552	0.0339	0.0198	0.0145	28.7	28.7	T-26.5/30.3	30.3
	30-4-2023	04:34:47	IL&FS	LSI	Solapur	MH	17.686248	75.892494	150+000	252+000	247+250 LHS Outer	3	40.5000	0.3447	0.2122	0.1052	0.0530	0.0327	0.0198	0.0145	28.7	28.7	T-26.5/30.3	30.3
790	30-4-2023	04:36:40	IL&FS	LSI	Solapur	MH	17.686464	75.894622	150+000	252+000	247+500 LHS Outer	1	41.5000	0.1581	0.1165	0.0753	0.0452	0.0315	0.0221	0.0150	28.7	28.9		30.3
	30-4-2023	04:36:40	IL&FS	LSI	Solapur	MH	17.686464	75.894622	150+000	252+000	247+500 LHS Outer	2	40.9000	0.1563	0.1056	0.0760	0.0432	0.0312	0.0221	0.0150	28.7	28.9		30.3
	30-4-2023	04:36:40	IL&FS	LSI	Solapur	MH	17.686464	75.894622	150+000	252+000	247+500 LHS Outer	3	41.0000	0.1557	0.1096	0.0704	0.0460	0.0322	0.0223	0.0152	28.7	28.9		30.3
791	30-4-2023	04:38:17	IL&FS	LSI	Solapur	MH	17.688049	75.896339	150+000	252+000	247+750 LHS Outer	1	39.4000	0.1827	0.1322	0.0988	0.0743	0.0593	0.0357	0.0211	28.8	28.5		30.3
	30-4-2023	04:38:17	IL&FS	LSI	Solapur	MH	17.688049	75.896339	150+000	252+000	247+750 LHS Outer	2	39.2000	0.1796	0.1278	0.0987	0.0778	0.0558	0.0345	0.0206	28.8	28.5		30.3
	30-4-2023	04:38:17	IL&FS	LSI	Solapur	MH	17.688049	75.896339	150+000	252+000	247+750 LHS Outer	3	39.6000	0.1798	0.1351	0.0989	0.0755	0.0533	0.0330	0.0201	28.8	28.5		30.3
792	30-4-2023	04:40:18	IL&FS	LSI	Solapur	MH	17.689325	75.897827	150+000	252+000	247+980 LHS Outer	1	39.8000	0.2042	0.1287	0.0915	0.0657	0.0465	0.0317	0.0238	28.5	28.0		30.3
	30-4-2023	04:40:18	IL&FS	LSI	Solapur	MH	17.689325	75.897827	150+000	252+000	247+980 LHS Outer	2	40.7000	0.2033	0.1268	0.0866	0.0654	0.0441	0.0279	0.0251	28.5	28.0		30.3
	30-4-2023	04:40:18	IL&FS	LSI	Solapur	MH	17.689325	75.897827	150+000	252+000	247+980 LHS Outer	3	41.4000	0.2080	0.1300	0.0946	0.0619	0.0430	0.0289	0.0260	28.5	28.0		30.3
793	30-4-2023	04:41:58	IL&FS	LSI	Solapur	MH	17.690790	75.900039	150+000	252+000	248+250 LHS Outer	1	41.2000	0.1432	0.1046	0.0661	0.0441	0.0360	0.0299	0.0188	28.4	28.6		30.3
	30-4-2023	04:41:58	IL&FS	LSI	Solapur	MH	17.690790	75.900039	150+000	252+000	248+250 LHS Outer	2	41.4000	0.1318	0.1000	0.0659	0.0445	0.0347	0.0282	0.0187	28.4	28.6		30.3
	30-4-2023	04:41:58	IL&FS	LSI	Solapur	MH	17.690790	75.900039	150+000	252+000	248+250 LHS Outer	3	41.3000	0.1394	0.1034	0.0682	0.0464	0.0329	0.0241	0.0217	28.4	28.6		30.3
794	30-4-2023	04:43:40	IL&FS	LSI	Solapur	MH	17.691759	75.902130	150+000	252+000	248+500 LHS Outer	1	38.6000	0.1976	0.1379	0.0871	0.0462	0.0293	0.0181	0.0131	28.4	29.0		30.3
	30-4-2023	04:43:40	IL&FS	LSI	Solapur	MH	17.691759	75.902130	150+000	252+000	248+500 LHS Outer	2	38.0000	0.1981	0.1348	0.0869	0.0453	0.0296	0.0186	0.0135	28.4	29.0		30.3
	30-4-2023	04:43:40	IL&FS	LSI	Solapur	MH	17.691759	75.902130	150+000	252+000	248+500 LHS Outer	3	38.6000	0.1967	0.1384	0.0819	0.0471	0.0304	0.0179	0.0129	28.4	29.0		30.3
795	30-4-2023	04:45:26	IL&FS	LSI	Solapur	MH	17.692432	75.904365	150+000	252+000	248+750 LHS Outer	1	40.4000	0.2162	0.1473	0.0925	0.0679	0.0454	0.0290	0.0202	28.5	28.9		30.3
	30-4-2023	04:45:26	IL&FS	LSI	Solapur	MH	17.692432	75.904365	150+000	252+000	248+750 LHS Outer	2	39.9000	0.2246	0.1525	0.0939	0.0655	0.0447	0.0284	0.0202	28.5	28.9		30.3
	30-4-2023	04:45:26	IL&FS	LSI	Solapur	MH	17.692432	75.904365	150+000	252+000	248+750 LHS Outer	3	40.1000	0.2221	0.1506	0.0878	0.0668	0.0444	0.0287	0.0202	28.5	28.9		30.3
796	30-4-2023	04:47:30	IL&FS	LSI	Solapur	MH	17.692811	75.906417	150+000	252+000	249+000 LHS Outer	1	36.1000	0.2256	0.1510	0.0878	0.0639	0.0458	0.0306	0.0208	28.6	28.1		30.3
	30-4-2023	04:47:30	IL&FS	LSI	Solapur	MH	17.692811	75.906417	150+000	252+000	249+000 LHS Outer	2	36.8000	0.2396	0.1559	0.0888	0.0641	0.0468	0.0357	0.0288	28.6	28.1		30.3
	30-4-2023	04:47:30	IL&FS	LSI	Solapur	MH	17.692811	75.906417	150+000	252+000	249+000 LHS Outer	3	36.9000	0.2394	0.1468	0.0866	0.0629	0.0471	0.0370	0.0291	28.6	28.1		30.3
797	30-4-2023	04:49:24	IL&FS	LSI	Solapur	MH	17.692981	75.908836	150+000	252+000	249+250 LHS Outer	1	39.4000	0.2178	0.1496	0.0969	0.0709	0.0440	0.0259	0.0165	28.7	27.8		30.3
	30-4-2023	04:49:24	IL&FS	LSI	Solapur	MH	17.692981	75.908836	150+000	252+000	249+250 LHS Outer	2	39.5000	0.2153	0.1430	0.0982	0.0669	0.0437	0.0258	0.0164	28.7	27.8		30.3
	30-4-2023	04:49:24	IL&FS	LSI	Solapur	MH	17.692981	75.908836	150+000	252+000	249+250 LHS Outer	3	39.3000	0.2084	0.1434	0.0981	0.0693	0.0423	0.0250	0.0157	28.7	27.8		30.3
798	30-4-2023	04:51:18	IL&FS	LSI	Solapur	MH	17.693017	75.911224	150+000	252+000	249+500 LHS Outer	1	40.5000	0.2250	0.1661	0.0948	0.0576	0.0358	0.0198	0.0153	28.8	28.3		30.3
	30-4-2023	04:51:18	IL&FS	LSI	Solapur	MH	17.693017	75.911224	150+000	252+000	249+500 LHS Outer	2	41.3000	0.2308	0.1611	0.0974	0.0541	0.0343	0.0201	0.0147	28.8	28.3		30.3
	30-4-2023	04:51:18	IL&FS	LSI	Solapur	MH	17.693017	75.911224	150+000	252+000	249+500 LHS Outer	3	41.0000	0.2267	0.1686	0.0934	0.0588	0.0353	0.0201	0.0151	28.8	28.3		30.3
799	30-4-2023	04:53:09	IL&FS	LSI	Solapur	MH	17.693017	75.913452	150+000	252+000	249+730 LHS Outer	1	39.8000	0.1970	0.1372	0.0792	0.0544	0.0376	0.0181	0.0107	28.6	28.3		30.3
	30-4-2023	04:53:09	IL&FS	LSI	Solapur	MH	17.693017	75.913452	150+000	252+000	249+730 LHS Outer	2	40.1000	0.1881	0.1315	0.0804	0.0564	0.0388	0.0184	0.0108	28.6	28.3		30.3
	30-4-2023	04:53:09	IL&FS	LSI	Solapur	MH	17.693017	75.913452	150+000	252+000	249+730 LHS Outer	3	39.9000	0.1790	0.1278	0.0815	0.0559	0.0382	0.0180	0.0107	28.6	28.3		30.3
800	30-4-2023	04:55:07	IL&FS	LSI	Solapur	MH	17.693111	75.915824	150+000	252+000	250+000 LHS Outer	1	39.6000	0.2921	0.1880	0.1020	0.0669	0.0414	0.0269	0.0167	28.6	28.1		30.3
	30-4-2023	04:55:07	IL&FS	LSI	Solapur	MH	17.693111	75.915824	150+000	252+000	250+000 LHS Outer	2	39.5000	0.2870	0.1911	0.1046	0.0659	0.0414	0.0272	0.0167	28.6	28.1		30.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	04:55:07	IL&FS	LSI	Solapur	MH	17.693111	75.915824	150+000	252+000	250+000 LHS Outer	3	39.6000	0.2897	0.1749	0.1001	0.0668	0.0415	0.0271	0.0167	28.6	28.1		30.3
801	30-4-2023	04:57:07	IL&FS	LSI	Solapur	MH	17.692850	75.918281	150+000	252+000	250+250 LHS Outer	1	42.0000	0.1110	0.0732	0.0584	0.0395	0.0298	0.0223	0.0185	28.9	29.0		30.3
	30-4-2023	04:57:07	IL&FS	LSI	Solapur	MH	17.692850	75.918281	150+000	252+000	250+250 LHS Outer	2	41.7000	0.1147	0.0738	0.0555	0.0397	0.0294	0.0219	0.0182	28.9	29.0		30.3
	30-4-2023	04:57:07	IL&FS	LSI	Solapur	MH	17.692850	75.918281	150+000	252+000	250+250 LHS Outer	3	41.6000	0.1166	0.0803	0.0573	0.0379	0.0281	0.0216	0.0179	28.9	29.0		30.3
802	30-4-2023	04:58:52	IL&FS	LSI	Solapur	MH	17.692241	75.920623	150+000	252+000	250+500 LHS Outer	1	40.5000	0.1613	0.1054	0.0692	0.0425	0.0274	0.0180	0.0138	28.9	27.5		30.3
	30-4-2023	04:58:52	IL&FS	LSI	Solapur	MH	17.692241	75.920623	150+000	252+000	250+500 LHS Outer	2	41.0000	0.1512	0.1059	0.0717	0.0426	0.0279	0.0182	0.0139	28.9	27.5		30.3
	30-4-2023	04:58:52	IL&FS	LSI	Solapur	MH	17.692241	75.920623	150+000	252+000	250+500 LHS Outer	3	40.9000	0.1438	0.1022	0.0691	0.0436	0.0282	0.0182	0.0140	28.9	27.5		30.3
803	30-4-2023	05:00:34	IL&FS	LSI	Solapur	MH	17.691303	75.922744	150+000	252+000	250+750 LHS Outer	1	40.0000	0.3459	0.1929	0.1226	0.0688	0.0424	0.0248	0.0123	28.7	28.8		30.3
	30-4-2023	05:00:34	IL&FS	LSI	Solapur	MH	17.691303	75.922744	150+000	252+000	250+750 LHS Outer	2	40.3000	0.3445	0.1901	0.1198	0.0727	0.0423	0.0251	0.0124	28.7	28.8		30.3
	30-4-2023	05:00:34	IL&FS	LSI	Solapur	MH	17.691303	75.922744	150+000	252+000	250+750 LHS Outer	3	40.1000	0.3263	0.1843	0.1195	0.0717	0.0415	0.0244	0.0124	28.7	28.8		30.3
804	30-4-2023	05:02:33	IL&FS	LSI	Solapur	MH	17.689886	75.924476	150+000	252+000	251+000 LHS Outer	1	38.8000	0.4037	0.2450	0.1296	0.0756	0.0446	0.0228	0.0145	28.8	29.2		30.3
	30-4-2023	05:02:33	IL&FS	LSI	Solapur	MH	17.689886	75.924476	150+000	252+000	251+000 LHS Outer	2	38.5000	0.4136	0.2399	0.1306	0.0771	0.0455	0.0218	0.0147	28.8	29.2		30.3
	30-4-2023	05:02:33	IL&FS	LSI	Solapur	MH	17.689886	75.924476	150+000	252+000	251+000 LHS Outer	3	38.7000	0.3935	0.2304	0.1320	0.0808	0.0470	0.0223	0.0140	28.8	29.2		30.3
805	30-4-2023	05:04:23	IL&FS	LSI	Solapur	MH	17.687967	75.925827	150+000	252+000	251+250 LHS Outer	1	37.7000	0.2895	0.2030	0.1163	0.0660	0.0321	0.0188	0.0146	28.9	29.4		30.3
	30-4-2023	05:04:23	IL&FS	LSI	Solapur	MH	17.687967	75.925827	150+000	252+000	251+250 LHS Outer	2	38.3000	0.2840	0.1884	0.1134	0.0664	0.0360	0.0189	0.0150	28.9	29.4		30.3
	30-4-2023	05:04:23	IL&FS	LSI	Solapur	MH	17.687967	75.925827	150+000	252+000	251+250 LHS Outer	3	37.9000	0.2703	0.1881	0.1149	0.0687	0.0357	0.0188	0.0154	28.9	29.4		30.3
806	30-4-2023	05:06:19	IL&FS	LSI	Solapur	MH	17.685970	75.926666	150+000	252+000	251+500 LHS Outer	1	39.6000	0.2105	0.1484	0.0933	0.0529	0.0388	0.0286	0.0184	28.9	28.8		30.3
	30-4-2023	05:06:19	IL&FS	LSI	Solapur	MH	17.685970	75.926666	150+000	252+000	251+500 LHS Outer	2	39.8000	0.2211	0.1552	0.0944	0.0542	0.0404	0.0298	0.0182	28.9	28.8		30.3
	30-4-2023	05:06:19	IL&FS	LSI	Solapur	MH	17.685970	75.926666	150+000	252+000	251+500 LHS Outer	3	39.1000	0.2224	0.1484	0.0951	0.0544	0.0392	0.0289	0.0186	28.9	28.8		30.3
807	30-4-2023	05:08:14	IL&FS	LSI	Solapur	MH	17.683828	75.927413	150+000	252+000	251+750 LHS Outer	1	40.0000	0.2213	0.1355	0.0880	0.0514	0.0307	0.0224	0.0130	28.9	28.1		30.3
	30-4-2023	05:08:14	IL&FS	LSI	Solapur	MH	17.683828	75.927413	150+000	252+000	251+750 LHS Outer	2	40.3000	0.2194	0.1457	0.0900	0.0508	0.0318	0.0224	0.0130	28.9	28.1		30.3
	30-4-2023	05:08:14	IL&FS	LSI	Solapur	MH	17.683828	75.927413	150+000	252+000	251+750 LHS Outer	3	40.4000	0.2262	0.1353	0.0870	0.0530	0.0298	0.0229	0.0134	28.9	28.1		30.3
808	30-4-2023	05:10:55	IL&FS	LSI	Solapur	MH	17.683343	75.928695	150+000	252+000	251+950 LHS Outer	1	38.5000	0.4999	0.3167	0.1578	0.0903	0.0446	0.0299	0.0189	28.7	27.2		30.3
	30-4-2023	05:10:55	IL&FS	LSI	Solapur	MH	17.683343	75.928695	150+000	252+000	251+950 LHS Outer	2	38.3000	0.5208	0.3178	0.1551	0.0909	0.0441	0.0291	0.0185	28.7	27.2		30.3
	30-4-2023	05:10:55	IL&FS	LSI	Solapur	MH	17.683343	75.928695	150+000	252+000	251+950 LHS Outer	3	38.7000	0.5173	0.3204	0.1581	0.0912	0.0444	0.0296	0.0188	28.7	27.2		30.3
809	30-4-2023	05:13:09	IL&FS	LSI	Solapur	MH	17.683588	75.929359	150+000	252+000	252+000 LHS Outer	1	38.4000	0.1938	0.1303	0.0735	0.0505	0.0326	0.0201	0.0128	28.5	27.2		30.3
	30-4-2023	05:13:09	IL&FS	LSI	Solapur	MH	17.683588	75.929359	150+000	252+000	252+000 LHS Outer	2	38.9000	0.2117	0.1229	0.0719	0.0474	0.0308	0.0201	0.0128	28.5	27.2		30.3
	30-4-2023	05:13:09	IL&FS	LSI	Solapur	MH	17.683588	75.929359	150+000	252+000	252+000 LHS Outer	3	39.1000	0.2161	0.1297	0.0781	0.0502	0.0317	0.0201	0.0128	28.5	27.2		30.3
810	30-4-2023	05:55:19	IL&FS	LSI	Solapur	MH	17.683155	75.928451	150+000	252+000	251+935 RHS Inner	1	41.9000	0.1366	0.0901	0.0573	0.0402	0.0276	0.0194	0.0135	27.9	27.6	T-25.7/31	31
	30-4-2023	05:55:19	IL&FS	LSI	Solapur	MH	17.683155	75.928451	150+000	252+000	251+935 RHS Inner	2	41.3000	0.1389	0.0915	0.0574	0.0417	0.0294	0.0196	0.0134	27.9	27.6	T-25.7/31	31
	30-4-2023	05:55:19	IL&FS	LSI	Solapur	MH	17.683155	75.928451	150+000	252+000	251+935 RHS Inner	3	41.8000	0.1456	0.0923	0.0560	0.0394	0.0284	0.0198	0.0135	27.9	27.6	T-25.7/31	31
811	30-4-2023	05:58:06	IL&FS	LSI	Solapur	MH	17.684946	75.926925	150+000	252+000	251+600 RHS Inner	1	41.9000	0.2580	0.1631	0.1102	0.0690	0.0386	0.0230	0.0163	27.9	28.0		31
	30-4-2023	05:58:06	IL&FS	LSI	Solapur	MH	17.684946	75.926925	150+000	252+000	251+600 RHS Inner	2	41.8000	0.2498	0.1656	0.1059	0.0680	0.0387	0.0230	0.0163	27.9	28.0		31
	30-4-2023	05:58:06	IL&FS	LSI	Solapur	MH	17.684946	75.926925	150+000	252+000	251+600 RHS Inner	3	41.8000	0.2547	0.1640	0.0985	0.0725	0.0386	0.0229	0.0162	27.9	28.0		31
812	30-4-2023	06:02:01	IL&FS	LSI	Solapur	MH	17.687023	75.926155	150+000	252+000	251+350 RHS Inner	1	39.8000	0.3410	0.2149	0.1117	0.0651	0.0298	0.0191	0.0124	27.3	27.6		31
	30-4-2023	06:02:01	IL&FS	LSI	Solapur	MH	17.687023	75.926155	150+000	252+000	251+350 RHS Inner	2	39.8000	0.3243	0.2091	0.1132	0.0661	0.0299	0.0190	0.0123	27.3	27.6		31
	30-4-2023	06:02:01	IL&FS	LSI	Solapur	MH	17.687023	75.926155	150+000	252+000	251+350 RHS Inner	3	40.2000	0.3051	0.2094	0.1054	0.0616	0.0302	0.0190	0.0123	27.3	27.6		31
813	30-4-2023	06:04:08	IL&FS	LSI	Solapur	MH	17.689075	75.925003	150+000	252+000	251+100 RHS Inner	1	37.7000	0.4317	0.2240	0.1196	0.0757	0.0416	0.0276	0.0183	27.2	27.5		31
	30-4-2023	06:04:08	IL&FS	LSI	Solapur	MH	17.689075	75.925003	150+000	252+000	251+100 RHS Inner	2	37.9000	0.4121	0.2291	0.1119	0.0713	0.0416	0.0283	0.0183	27.2	27.5		31
	30-4-2023	06:04:08	IL&FS	LSI	Solapur	MH	17.689075	75.925003	150+000	252+000	251+100 RHS Inner	3	37.9000	0.4221	0.2181	0.1121	0.0719	0.0414	0.0274	0.0183	27.2	27.5		31
814	30-4-2023	06:06:02	IL&FS	LSI	Solapur	MH	17.690664	75.923416	150+000	252+000	250+850 RHS Inner	1	40.1000	0.2561	0.1567	0.0981	0.0642	0.0392	0.0233	0.0179	27.2	28.1		31
	30-4-2023	06:06:02	IL&FS	LSI	Solapur	MH	17.690664	75.923416	150+000	252+000	250+850 RHS Inner	2	40.7000	0.2514	0.1524	0.1004	0.0647	0.0389	0.0228	0.0197	27.2	28.1		31
	30-4-2023	06:06:02	IL&FS	LSI	Solapur	MH	17.690664	75.923416	150+000	252+000	250+850 RHS Inner	3	40.3000	0.2592	0.1549	0.0986	0.0640	0.0381	0.0221	0.0190	27.2	28.1		31
815	30-4-2023	06:07:44	IL&FS	LSI	Solapur	MH	17.691862	75.921272	150+000	252+000	250+600 RHS Inner	1	39.7000	0.3344	0.1590	0.0878	0.0537	0.0280	0.0202	0.0153	27.2	27.8		31
	30-4-2023	06:07:44	IL&FS	LSI	Solapur	MH	17.691862	75.921272	150+000	252+000	250+600 RHS Inner	2	39.8000	0.3152	0.1680	0.0871	0.0539	0.0280	0.0204	0.0153	27.2	27.8		31
	30-4-2023	06:07:44	IL&FS	LSI	Solapur	MH	17.691862	75.921272	150+000	252+000	250+600 RHS Inner	3	40.0000	0.3127	0.1563	0.0894	0.0543	0.0281	0.0208	0.0153	27.2	27.8		31
816	30-4-2023	06:09:19	IL&FS	LSI	Solapur	MH	17.692518	75.919082	150+000	252+000	250+350 RHS Inner	1	39.6000	0.2635	0.1765	0.1071	0.0689	0.0399	0.0233	0.0119	27.2	28.4		31
	30-4-2023	06:09:19	IL&FS	LSI	Solapur	MH	17.692518	75.919082	150+000	252+000	250+350 RHS Inner	2	39.5000	0.2510	0.1626	0.1050	0.0658	0.0397	0.0230	0.0120	27.2	28.4		31
	30-4-2023	06:09:19	IL&FS	LSI	Solapur	MH	17.692518	75.919082	150+000	252+000	250+350 RHS Inner	3	39.5000	0.2477	0.1629	0.1009	0.0645	0.0397	0.0226	0.0119	27.2	28.4		31
817	30-4-2023	06:11:02	IL&FS	LSI	Solapur	MH	17.692964	75.916770	150+000	252+000	250+100 RHS Inner	1	37.0000	0.3226	0.1856	0.0900	0.0556	0.0288	0.0195	0.0124	27.4	28.5		31
	30-4-2023	06:11:02	IL&FS	LSI	Solapur	MH	17.692964	75.916770	150+000	252+000	250+100 RHS Inner	2	36.6000	0.3178	0.1912	0.0915	0.0556	0.0290	0.0189	0.0126	27.4	28.5		31
	30-4-2023	06:11:02	IL&FS	LSI	Solapur	MH	17.692964	75.916770	150+000	252+000	250+100 RHS Inner	3	36.7000	0.2959	0.1845	0.0869	0.0520	0.0288	0.0194	0.0125	27.4	28.5		31
818	30-4-2023	06:12:43	IL&FS	LSI	Solapur	MH	17.692926	75.914474	150+000	252+000	249+850 RHS Inner	1	41.5000	0.2766	0.1472	0.0756	0.0449	0.0236	0.0139	0.0113	27.4	28.7		31
	30-4-2023	06:12:43	IL&FS	LSI	Solapur	MH	17.692926	75.914474	150+000	252+000	249+850 RHS Inner	2	41.4000	0.2626	0.1415	0.0762	0.0471	0.0241	0.0132	0.0107	27.4	28.7		31
	30-4-2023	06:12:43	IL&FS	LSI	Solapur	MH	17.692926	75.914474	150+000	252+000	249+850 RHS Inner	3	41.6000	0.2857	0.1480	0.0756	0.0437	0.0243	0.0136	0.0110	27.4	28.7		31
819	30-4-2023	06:14:46	IL&FS	LSI	Solapur	MH	17.692882	75.910362	150+000	252+000	249+420 RHS Inner	1	41.2000	0.1996	0.1268	0.0754	0.0379	0.0246	0.0146	0.0136	27.6	28.4		31

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	06:14:46	IL&FS	LSI	Solapur	MH	17.692882	75.910362	150+000	252+000	249+420 RHS Inner	2	40.6000	0.2055	0.1410	0.0757	0.0364	0.0235	0.0137	0.0128	27.6	28.4		31
	30-4-2023	06:14:46	IL&FS	LSI	Solapur	MH	17.692882	75.910362	150+000	252+000	249+420 RHS Inner	3	40.6000	0.1867	0.1344	0.0735	0.0382	0.0238	0.0142	0.0133	27.6	28.4		31
820	30-4-2023	06:16:12	IL&FS	LSI	Solapur	MH	17.692876	75.909683	150+000	252+000	249+350 RHS Inner	1	37.5000	0.4175	0.2512	0.1074	0.0567	0.0252	0.0164	0.0109	27.5	28.0		31
	30-4-2023	06:16:12	IL&FS	LSI	Solapur	MH	17.692876	75.909683	150+000	252+000	249+350 RHS Inner	2	38.2000	0.4240	0.2388	0.1093	0.0585	0.0255	0.0170	0.0106	27.5	28.0		31
	30-4-2023	06:16:12	IL&FS	LSI	Solapur	MH	17.692876	75.909683	150+000	252+000	249+350 RHS Inner	3	38.7000	0.3864	0.2374	0.1087	0.0615	0.0249	0.0166	0.0108	27.5	28.0		31
821	30-4-2023	06:17:54	IL&FS	LSI	Solapur	MH	17.692729	75.907356	150+000	252+000	249+100 RHS Inner	1	39.2000	0.4175	0.2608	0.1267	0.0702	0.0297	0.0198	0.0127	27.5	28.0		31
	30-4-2023	06:17:54	IL&FS	LSI	Solapur	MH	17.692729	75.907356	150+000	252+000	249+100 RHS Inner	2	39.8000	0.4001	0.2619	0.1301	0.0716	0.0295	0.0195	0.0128	27.5	28.0		31
	30-4-2023	06:17:54	IL&FS	LSI	Solapur	MH	17.692729	75.907356	150+000	252+000	249+100 RHS Inner	3	39.4000	0.4093	0.2621	0.1294	0.0723	0.0289	0.0195	0.0127	27.5	28.0		31
822	30-4-2023	06:19:33	IL&FS	LSI	Solapur	MH	17.691667	75.905258	150+000	252+000	248+850 RHS Inner	1	39.6000	0.3608	0.2119	0.1218	0.0705	0.0386	0.0237	0.0131	27.5	28.1		31
	30-4-2023	06:19:33	IL&FS	LSI	Solapur	MH	17.691667	75.905258	150+000	252+000	248+850 RHS Inner	2	39.8000	0.3636	0.2161	0.1212	0.0741	0.0392	0.0233	0.0115	27.5	28.1		31
	30-4-2023	06:19:33	IL&FS	LSI	Solapur	MH	17.691667	75.905258	150+000	252+000	248+850 RHS Inner	3	40.1000	0.3604	0.2081	0.1231	0.0714	0.0395	0.0230	0.0113	27.5	28.1		31
823	30-4-2023	06:21:13	IL&FS	LSI	Solapur	MH	17.691846	75.902778	150+000	252+000	248+600 RHS Inner	1	38.3000	0.4593	0.2538	0.1466	0.0772	0.0322	0.0246	0.0187	27.6	28.1		31
	30-4-2023	06:21:13	IL&FS	LSI	Solapur	MH	17.691846	75.902778	150+000	252+000	248+600 RHS Inner	2	38.8000	0.4629	0.2635	0.1600	0.0872	0.0327	0.0248	0.0191	27.6	28.1		31
	30-4-2023	06:21:13	IL&FS	LSI	Solapur	MH	17.691846	75.902778	150+000	252+000	248+600 RHS Inner	3	39.0000	0.4321	0.2706	0.1502	0.0780	0.0322	0.0245	0.0187	27.6	28.1		31
824	30-4-2023	06:22:58	IL&FS	LSI	Solapur	MH	17.690826	75.900321	150+000	252+000	248+350 RHS Inner	1	39.4000	0.3587	0.2178	0.1219	0.0699	0.0418	0.0244	0.0135	27.6	28.5		31
	30-4-2023	06:22:58	IL&FS	LSI	Solapur	MH	17.690826	75.900321	150+000	252+000	248+350 RHS Inner	2	39.7000	0.3466	0.2168	0.1161	0.0692	0.0415	0.0244	0.0135	27.6	28.5		31
	30-4-2023	06:22:58	IL&FS	LSI	Solapur	MH	17.690826	75.900321	150+000	252+000	248+350 RHS Inner	3	39.8000	0.3525	0.2144	0.1221	0.0729	0.0446	0.0248	0.0138	27.6	28.5		31
825	30-4-2023	06:24:54	IL&FS	LSI	Solapur	MH	17.689584	75.898368	150+000	252+000	248+075 RHS Inner	1	39.1000	0.3220	0.1746	0.1078	0.0617	0.0310	0.0232	0.0181	27.7	28.9		31
	30-4-2023	06:24:54	IL&FS	LSI	Solapur	MH	17.689584	75.898368	150+000	252+000	248+075 RHS Inner	2	39.6000	0.2990	0.1793	0.1090	0.0627	0.0327	0.0242	0.0181	27.7	28.9		31
	30-4-2023	06:24:54	IL&FS	LSI	Solapur	MH	17.689584	75.898368	150+000	252+000	248+075 RHS Inner	3	39.4000	0.2901	0.1649	0.1056	0.0607	0.0298	0.0225	0.0179	27.7	28.9		31
826	30-4-2023	06:26:37	IL&FS	LSI	Solapur	MH	17.688123	75.896659	150+000	252+000	247+830 RHS Inner	1	39.1000	0.4371	0.2608	0.1244	0.0699	0.0355	0.0234	0.0153	27.9	29.1		31
	30-4-2023	06:26:37	IL&FS	LSI	Solapur	MH	17.688123	75.896659	150+000	252+000	247+830 RHS Inner	2	38.8000	0.4013	0.2678	0.1364	0.0801	0.0364	0.0243	0.0156	27.9	29.1		31
	30-4-2023	06:26:37	IL&FS	LSI	Solapur	MH	17.688123	75.896659	150+000	252+000	247+830 RHS Inner	3	39.3000	0.4275	0.2493	0.1239	0.0692	0.0353	0.0231	0.0149	27.9	29.1		31
827	30-4-2023	06:28:28	IL&FS	LSI	Solapur	MH	17.686708	75.895156	150+000	252+000	247+600 RHS Inner	1	40.4000	0.3055	0.1608	0.0923	0.0734	0.0511	0.0364	0.0176	28.1	28.8		31
	30-4-2023	06:28:28	IL&FS	LSI	Solapur	MH	17.686708	75.895156	150+000	252+000	247+600 RHS Inner	2	40.6000	0.3153	0.1684	0.0941	0.0741	0.0529	0.0392	0.0187	28.1	28.8		31
	30-4-2023	06:28:28	IL&FS	LSI	Solapur	MH	17.686708	75.895156	150+000	252+000	247+600 RHS Inner	3	40.5000	0.2954	0.1638	0.0945	0.0738	0.0528	0.0385	0.0184	28.1	28.8		31
828	30-4-2023	06:30:15	IL&FS	LSI	Solapur	MH	17.685899	75.893035	150+000	252+000	247+350 RHS Inner	1	42.1000	0.1809	0.1248	0.0803	0.0471	0.0319	0.0220	0.0198	28.1	29.1		31
	30-4-2023	06:30:15	IL&FS	LSI	Solapur	MH	17.685899	75.893035	150+000	252+000	247+350 RHS Inner	2	42.3000	0.1766	0.1198	0.0840	0.0497	0.0343	0.0224	0.0202	28.1	29.1		31
	30-4-2023	06:30:15	IL&FS	LSI	Solapur	MH	17.685899	75.893035	150+000	252+000	247+350 RHS Inner	3	42.8000	0.1804	0.1234	0.0766	0.0459	0.0321	0.0227	0.0204	28.1	29.1		31
829	30-4-2023	06:34:00	IL&FS	LSI	Solapur	MH	17.687274	75.890632	150+000	252+000	247+060 RHS Inner	1	41.2000	0.1895	0.1092	0.0645	0.0442	0.0314	0.0222	0.0146	27.9	28.0	T-26.9/32.1	32.1
	30-4-2023	06:34:00	IL&FS	LSI	Solapur	MH	17.687274	75.890632	150+000	252+000	247+060 RHS Inner	2	41.6000	0.1831	0.1143	0.0706	0.0474	0.0328	0.0221	0.0145	27.9	28.0	T-26.9/32.1	32.1
	30-4-2023	06:34:00	IL&FS	LSI	Solapur	MH	17.687274	75.890632	150+000	252+000	247+060 RHS Inner	3	41.8000	0.1757	0.1179	0.0648	0.0489	0.0327	0.0224	0.0147	27.9	28.0	T-26.9/32.1	32.1
830	30-4-2023	06:36:09	IL&FS	LSI	Solapur	MH	17.688287	75.888938	150+000	252+000	246+850 RHS Inner	1	38.8000	0.3712	0.2340	0.1202	0.0742	0.0417	0.0274	0.0166	27.6	26.6		32.1
	30-4-2023	06:36:09	IL&FS	LSI	Solapur	MH	17.688287	75.888938	150+000	252+000	246+850 RHS Inner	2	39.3000	0.3730	0.2272	0.1238	0.0746	0.0426	0.0272	0.0166	27.6	26.6		32.1
	30-4-2023	06:36:09	IL&FS	LSI	Solapur	MH	17.688287	75.888938	150+000	252+000	246+850 RHS Inner	3	39.1000	0.3355	0.2306	0.1152	0.0731	0.0412	0.0265	0.0167	27.6	26.6		32.1
831	30-4-2023	06:37:59	IL&FS	LSI	Solapur	MH	17.689714	75.887344	150+000	252+000	246+600 RHS Inner	1	38.1000	0.3389	0.2237	0.1122	0.0692	0.0372	0.0228	0.0140	27.8	28.7		32.1
	30-4-2023	06:37:59	IL&FS	LSI	Solapur	MH	17.689714	75.887344	150+000	252+000	246+600 RHS Inner	2	38.3000	0.3517	0.2054	0.1160	0.0687	0.0385	0.0246	0.0144	27.8	28.7		32.1
	30-4-2023	06:37:59	IL&FS	LSI	Solapur	MH	17.689714	75.887344	150+000	252+000	246+600 RHS Inner	3	38.6000	0.3341	0.2113	0.1033	0.0647	0.0382	0.0238	0.0142	27.8	28.7		32.1
832	30-4-2023	06:40:00	IL&FS	LSI	Solapur	MH	17.690952	75.885025	150+000	252+000	246+325 RHS Inner	1	41.2000	0.1936	0.1359	0.0900	0.0614	0.0373	0.0215	0.0153	27.8	28.4		32.1
	30-4-2023	06:40:00	IL&FS	LSI	Solapur	MH	17.690952	75.885025	150+000	252+000	246+325 RHS Inner	2	40.9000	0.1922	0.1393	0.0900	0.0581	0.0356	0.0216	0.0154	27.8	28.4		32.1
	30-4-2023	06:40:00	IL&FS	LSI	Solapur	MH	17.690952	75.885025	150+000	252+000	246+325 RHS Inner	3	40.8000	0.1939	0.1381	0.0976	0.0554	0.0366	0.0227	0.0134	27.8	28.4		32.1
833	30-4-2023	06:41:54	IL&FS	LSI	Solapur	MH	17.691406	75.882888	150+000	252+000	246+100 RHS Inner	1	40.8000	0.1923	0.1305	0.0844	0.0522	0.0362	0.0216	0.0114	27.7	28.4		32.1
	30-4-2023	06:41:54	IL&FS	LSI	Solapur	MH	17.691406	75.882888	150+000	252+000	246+100 RHS Inner	2	40.4000	0.1903	0.1234	0.0815	0.0504	0.0375	0.0215	0.0111	27.7	28.4		32.1
	30-4-2023	06:41:54	IL&FS	LSI	Solapur	MH	17.691406	75.882888	150+000	252+000	246+100 RHS Inner	3	41.0000	0.1959	0.1290	0.0836	0.0503	0.0393	0.0226	0.0112	27.7	28.4		32.1
834	30-4-2023	06:44:24	IL&FS	LSI	Solapur	MH	17.693246	75.880088	150+000	252+000	245+730 RHS Inner	1	39.3000	0.3373	0.2223	0.1153	0.0669	0.0310	0.0208	0.0140	27.7	28.8		32.1
	30-4-2023	06:44:24	IL&FS	LSI	Solapur	MH	17.693246	75.880088	150+000	252+000	245+730 RHS Inner	2	39.5000	0.3383	0.2045	0.1172	0.0673	0.0312	0.0210	0.0138	27.7	28.8		32.1
	30-4-2023	06:44:24	IL&FS	LSI	Solapur	MH	17.693246	75.880088	150+000	252+000	245+730 RHS Inner	3	39.0000	0.3372	0.1978	0.1139	0.0624	0.0307	0.0203	0.0134	27.7	28.8		32.1
835	30-4-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.693891	75.879020	150+000	252+000	245+600 RHS Inner	1	37.7000	0.4148	0.2194	0.1135	0.0758	0.0379	0.0228	0.0128	27.6	28.9		32.1
	30-4-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.693891	75.879020	150+000	252+000	245+600 RHS Inner	2	38.0000	0.3848	0.2211	0.1151	0.0762	0.0385	0.0226	0.0121	27.6	28.9		32.1
	30-4-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.693891	75.879020	150+000	252+000	245+600 RHS Inner	3	38.4000	0.3861	0.2189	0.1085	0.0704	0.0381	0.0230	0.0129	27.6	28.9		32.1
836	30-4-2023	06:51:41	IL&FS	LSI	Solapur	MH	17.694602	75.876609	150+000	252+000	245+330 RHS Inner	1	39.2000	0.3568	0.2102	0.1000	0.0626	0.0379	0.0244	0.0150	27.8	29.7		32.1
	30-4-2023	06:51:41	IL&FS	LSI	Solapur	MH	17.694602	75.876609	150+000	252+000	245+330 RHS Inner	2	39.4000	0.3441	0.2131	0.1092	0.0644	0.0346	0.0233	0.0148	27.8	29.7		32.1
	30-4-2023	06:51:41	IL&FS	LSI	Solapur	MH	17.694602	75.876609	150+000	252+000	245+330 RHS Inner	3	39.5000	0.3427	0.2006	0.1091	0.0572	0.0235	0.0185	0.0149	27.8	29.7		32.1
837	30-4-2023	06:53:28	IL&FS	LSI	Solapur	MH	17.695703	75.874725	150+000	252+000	245+100 RHS Inner	1	37.5000	0.3772	0.2225	0.1294	0.0758	0.0366	0.0280	0.0177	27.9	29.4		32.1
	30-4-2023	06:53:28	IL&FS	LSI	Solapur	MH	17.695703	75.874725	150+000	252+000	245+100 RHS Inner	2	38.1000	0.3894	0.2236	0.1274	0.0732	0.0370	0.0279	0.0176	27.9	29.4		32.1
	30-4-2023	06:53:28	IL&FS	LSI	Solapur	MH	17.695703	75.874725	150+000	252+000	245+100 RHS Inner	3	37.7000	0.3676	0.2345	0.1344	0.0760	0.0371	0.0282	0.0178	27.9	29.4		32.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
838	30-4-2023	06:55:17	IL&FS	LSI	Solapur	MH	17.696796	75.872665	150+000	252+000	244+850 RHS Inner	1	37.5000	0.4071	0.2185	0.1049	0.0717	0.0509	0.0320	0.0200	27.9	29.4		32.1
	30-4-2023	06:55:17	IL&FS	LSI	Solapur	MH	17.696796	75.872665	150+000	252+000	244+850 RHS Inner	2	38.0000	0.3865	0.2158	0.1148	0.0776	0.0512	0.0330	0.0198	27.9	29.4		32.1
	30-4-2023	06:55:17	IL&FS	LSI	Solapur	MH	17.696796	75.872665	150+000	252+000	244+850 RHS Inner	3	38.3000	0.4004	0.2419	0.1111	0.0764	0.0509	0.0331	0.0200	27.9	29.4		32.1
839	30-4-2023	06:57:34	IL&FS	LSI	Solapur	MH	17.697900	75.870559	150+000	252+000	244+600 RHS Inner	1	38.8000	0.4007	0.2424	0.1373	0.0826	0.0399	0.0266	0.0183	27.8	29.2		32.1
	30-4-2023	06:57:34	IL&FS	LSI	Solapur	MH	17.697900	75.870559	150+000	252+000	244+600 RHS Inner	2	39.0000	0.3969	0.2436	0.1336	0.0796	0.0398	0.0267	0.0181	27.8	29.2		32.1
	30-4-2023	06:57:34	IL&FS	LSI	Solapur	MH	17.697900	75.870559	150+000	252+000	244+600 RHS Inner	3	38.9000	0.4320	0.2430	0.1307	0.0766	0.0399	0.0276	0.0184	27.8	29.2		32.1
840	30-4-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.698957	75.868728	150+000	252+000	244+350 RHS Inner	1	38.6000	0.3979	0.2375	0.1185	0.0721	0.0358	0.0239	0.0151	27.8	29.4		32.1
	30-4-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.698957	75.868728	150+000	252+000	244+350 RHS Inner	2	38.6000	0.4167	0.2363	0.1229	0.0736	0.0359	0.0233	0.0152	27.8	29.4		32.1
	30-4-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.698957	75.868728	150+000	252+000	244+350 RHS Inner	3	38.7000	0.3961	0.2445	0.1226	0.0716	0.0365	0.0247	0.0156	27.8	29.4		32.1
841	30-4-2023	07:01:41	IL&FS	LSI	Solapur	MH	17.700288	75.866363	150+000	252+000	244+080 RHS Inner	1	41.8000	0.1651	0.1129	0.0813	0.0535	0.0330	0.0217	0.0141	27.8	29.7		32.1
	30-4-2023	07:01:41	IL&FS	LSI	Solapur	MH	17.700288	75.866363	150+000	252+000	244+080 RHS Inner	2	41.4000	0.1570	0.1030	0.0772	0.0498	0.0326	0.0222	0.0142	27.8	29.7		32.1
	30-4-2023	07:01:41	IL&FS	LSI	Solapur	MH	17.700288	75.866363	150+000	252+000	244+080 RHS Inner	3	41.3000	0.1759	0.1093	0.0827	0.0531	0.0324	0.0215	0.0141	27.8	29.7		32.1
842	30-4-2023	07:03:34	IL&FS	LSI	Solapur	MH	17.701623	75.864784	150+000	252+000	243+850 RHS Inner	1	38.2000	0.4734	0.3012	0.1626	0.0997	0.0515	0.0315	0.0161	27.9	29.7		32.1
	30-4-2023	07:03:34	IL&FS	LSI	Solapur	MH	17.701623	75.864784	150+000	252+000	243+850 RHS Inner	2	38.3000	0.4394	0.3140	0.1668	0.0970	0.0518	0.0300	0.0162	27.9	29.7		32.1
	30-4-2023	07:03:34	IL&FS	LSI	Solapur	MH	17.701623	75.864784	150+000	252+000	243+850 RHS Inner	3	38.2000	0.4949	0.3190	0.1764	0.1036	0.0511	0.0310	0.0162	27.9	29.7		32.1
843	30-4-2023	07:05:22	IL&FS	LSI	Solapur	MH	17.703336	75.863113	150+000	252+000	243+600 RHS Inner	1	36.4000	0.2328	0.1267	0.0790	0.0502	0.0387	0.0300	0.0220	27.9	29.8		32.1
	30-4-2023	07:05:22	IL&FS	LSI	Solapur	MH	17.703336	75.863113	150+000	252+000	243+600 RHS Inner	2	36.2000	0.2184	0.1316	0.0825	0.0509	0.0371	0.0324	0.0242	27.9	29.8		32.1
	30-4-2023	07:05:22	IL&FS	LSI	Solapur	MH	17.703336	75.863113	150+000	252+000	243+600 RHS Inner	3	36.8000	0.2216	0.1225	0.0774	0.0495	0.0361	0.0321	0.0239	27.9	29.8		32.1
844	30-4-2023	07:07:20	IL&FS	LSI	Solapur	MH	17.704963	75.861564	150+000	252+000	243+350 RHS Inner	1	39.5000	0.3462	0.2224	0.1050	0.0652	0.0354	0.0224	0.0131	28.1	30.0		32.1
	30-4-2023	07:07:20	IL&FS	LSI	Solapur	MH	17.704963	75.861564	150+000	252+000	243+350 RHS Inner	2	39.9000	0.3603	0.2002	0.1050	0.0643	0.0352	0.0221	0.0132	28.1	30.0		32.1
	30-4-2023	07:07:20	IL&FS	LSI	Solapur	MH	17.704963	75.861564	150+000	252+000	243+350 RHS Inner	3	40.0000	0.3253	0.2222	0.1109	0.0658	0.0354	0.0223	0.0132	28.1	30.0		32.1
845	30-4-2023	07:09:14	IL&FS	LSI	Solapur	MH	17.706609	75.859916	150+000	252+000	243+100 RHS Inner	1	40.9000	0.1325	0.0929	0.0665	0.0435	0.0274	0.0186	0.0129	28.0	29.9		32.1
	30-4-2023	07:09:14	IL&FS	LSI	Solapur	MH	17.706609	75.859916	150+000	252+000	243+100 RHS Inner	2	40.7000	0.1258	0.0902	0.0641	0.0432	0.0270	0.0186	0.0124	28.0	29.9		32.1
	30-4-2023	07:09:14	IL&FS	LSI	Solapur	MH	17.706609	75.859916	150+000	252+000	243+100 RHS Inner	3	40.7000	0.1265	0.0850	0.0584	0.0404	0.0281	0.0184	0.0123	28.0	29.9		32.1
846	30-4-2023	07:19:07	IL&FS	LSI	Solapur	MH	17.708269	75.858375	150+000	252+000	242+850 RHS Inner	1	39.4000	0.3334	0.1888	0.0934	0.0509	0.0313	0.0226	0.0159	28.1	30.5	T-27.5/35	35
	30-4-2023	07:19:07	IL&FS	LSI	Solapur	MH	17.708269	75.858375	150+000	252+000	242+850 RHS Inner	2	39.4000	0.3184	0.1941	0.0973	0.0503	0.0319	0.0218	0.0156	28.1	30.5	T-27.5/35	35
	30-4-2023	07:19:07	IL&FS	LSI	Solapur	MH	17.708269	75.858375	150+000	252+000	242+850 RHS Inner	3	39.4000	0.3251	0.1971	0.0951	0.0498	0.0306	0.0220	0.0158	28.1	30.5	T-27.5/35	35
847	30-4-2023	07:54:46	IL&FS	LSI	Solapur	MH	17.711614	75.855079	150+000	252+000	242+350 RHS Inner	1	40.1000	0.4303	0.3176	0.1890	0.0974	0.0581	0.0311	0.0255	28.7	32.2	T-28.8/37	37
	30-4-2023	07:54:46	IL&FS	LSI	Solapur	MH	17.711614	75.855079	150+000	252+000	242+350 RHS Inner	2	40.1000	0.4440	0.2940	0.1809	0.1012	0.0581	0.0311	0.0251	28.7	32.2	T-28.8/37	37
	30-4-2023	07:54:46	IL&FS	LSI	Solapur	MH	17.711614	75.855079	150+000	252+000	242+350 RHS Inner	3	40.0000	0.4221	0.3059	0.1760	0.0940	0.0581	0.0313	0.0250	28.7	32.2	T-28.8/37	37
848	30-4-2023	07:56:46	IL&FS	LSI	Solapur	MH	17.713195	75.853553	150+000	252+000	242+100 RHS Inner	1	40.6000	0.4226	0.2411	0.1427	0.0896	0.0540	0.0393	0.0294	29.1	33.5		37
	30-4-2023	07:56:46	IL&FS	LSI	Solapur	MH	17.713195	75.853553	150+000	252+000	242+100 RHS Inner	2	40.9000	0.3947	0.2290	0.1423	0.0869	0.0505	0.0351	0.0256	29.1	33.5		37
	30-4-2023	07:56:46	IL&FS	LSI	Solapur	MH	17.713195	75.853553	150+000	252+000	242+100 RHS Inner	3	41.3000	0.4300	0.2319	0.1479	0.0896	0.0505	0.0356	0.0255	29.1	33.5		37
849	30-4-2023	07:58:29	IL&FS	LSI	Solapur	MH	17.714830	75.851890	150+000	252+000	241+850 RHS Inner	1	39.9000	0.3715	0.2389	0.1393	0.0976	0.0692	0.0486	0.0437	29.2	33.5		37
	30-4-2023	07:58:29	IL&FS	LSI	Solapur	MH	17.714830	75.851890	150+000	252+000	241+850 RHS Inner	2	39.9000	0.3631	0.2582	0.1444	0.0990	0.0746	0.0513	0.0461	29.2	33.5		37
	30-4-2023	07:58:29	IL&FS	LSI	Solapur	MH	17.714830	75.851890	150+000	252+000	241+850 RHS Inner	3	40.0000	0.3444	0.2497	0.1319	0.0995	0.0684	0.0484	0.0435	29.2	33.5		37
850	30-4-2023	08:00:18	IL&FS	LSI	Solapur	MH	17.716424	75.850326	150+000	252+000	241+600 RHS Inner	1	39.6000	0.3268	0.2155	0.1343	0.0879	0.0662	0.0527	0.0474	29.3	33.2		37
	30-4-2023	08:00:18	IL&FS	LSI	Solapur	MH	17.716424	75.850326	150+000	252+000	241+600 RHS Inner	2	39.8000	0.3254	0.2165	0.1304	0.0876	0.0661	0.0558	0.0502	29.3	33.2		37
	30-4-2023	08:00:18	IL&FS	LSI	Solapur	MH	17.716424	75.850326	150+000	252+000	241+600 RHS Inner	3	39.8000	0.3052	0.2097	0.1204	0.0874	0.0672	0.0498	0.0448	29.3	33.2		37
851	30-4-2023	08:02:15	IL&FS	LSI	Solapur	MH	17.718193	75.848701	150+000	252+000	241+350 RHS Inner	1	36.0000	0.3904	0.2361	0.1472	0.0939	0.0630	0.0429	0.0386	29.5	33.7		37
	30-4-2023	08:02:15	IL&FS	LSI	Solapur	MH	17.718193	75.848701	150+000	252+000	241+350 RHS Inner	2	36.7000	0.3923	0.2316	0.1509	0.0970	0.0656	0.0427	0.0384	29.5	33.7		37
	30-4-2023	08:02:15	IL&FS	LSI	Solapur	MH	17.718193	75.848701	150+000	252+000	241+350 RHS Inner	3	38.0000	0.3844	0.2462	0.1534	0.0997	0.0679	0.0443	0.0398	29.5	33.7		37
852	30-4-2023	08:03:51	IL&FS	LSI	Solapur	MH	17.719842	75.847160	150+000	252+000	241+100 RHS Inner	1	41.5000	0.4962	0.2721	0.1599	0.1045	0.0763	0.0549	0.0494	29.7	33.8		37
	30-4-2023	08:03:51	IL&FS	LSI	Solapur	MH	17.719842	75.847160	150+000	252+000	241+100 RHS Inner	2	41.1000	0.4658	0.2728	0.1531	0.1068	0.0725	0.0514	0.0463	29.7	33.8		37
	30-4-2023	08:03:51	IL&FS	LSI	Solapur	MH	17.719842	75.847160	150+000	252+000	241+100 RHS Inner	3	41.4000	0.4772	0.2683	0.1615	0.1068	0.0753	0.0529	0.0476	29.7	33.8		37
853	30-4-2023	08:05:49	IL&FS	LSI	Solapur	MH	17.721561	75.845535	150+000	252+000	240+850 RHS Inner	1	40.4000	0.4602	0.2842	0.1434	0.0901	0.0569	0.0436	0.0346	29.7	33.9		37
	30-4-2023	08:05:49	IL&FS	LSI	Solapur	MH	17.721561	75.845535	150+000	252+000	240+850 RHS Inner	2	41.4000	0.4464	0.2609	0.1442	0.0925	0.0594	0.0468	0.0371	29.7	33.9		37
	30-4-2023	08:05:49	IL&FS	LSI	Solapur	MH	17.721561	75.845535	150+000	252+000	240+850 RHS Inner	3	41.6000	0.4942	0.2687	0.1509	0.0995	0.0614	0.0470	0.0379	29.7	33.9		37
854	30-4-2023	08:07:29	IL&FS	LSI	Solapur	MH	17.723215	75.843948	150+000	252+000	240+600 RHS Inner	1	42.9000	0.2764	0.1873	0.1015	0.0656	0.0504	0.0384	0.0307	29.6	34.1		37
	30-4-2023	08:07:29	IL&FS	LSI	Solapur	MH	17.723215	75.843948	150+000	252+000	240+600 RHS Inner	2	42.9000	0.2816	0.1957	0.1016	0.0664	0.0476	0.0387	0.0342	29.6	34.1		37
	30-4-2023	08:07:29	IL&FS	LSI	Solapur	MH	17.723215	75.843948	150+000	252+000	240+600 RHS Inner	3	43.5000	0.2847	0.1869	0.1048	0.0683	0.0502	0.0389	0.0337	29.6	34.1		37
855	30-4-2023	08:09:15	IL&FS	LSI	Solapur	MH	17.724855	75.842323	150+000	252+000	240+350 RHS Inner	1	40.6000	0.3660	0.2237	0.1476	0.0844	0.0590	0.0412	0.0169	29.7	33.3		37
	30-4-2023	08:09:15	IL&FS	LSI	Solapur	MH	17.724855	75.842323	150+000	252+000	240+350 RHS Inner	2	40.9000	0.3899	0.2272	0.1444	0.0850	0.0576	0.0374	0.0189	29.7	33.3		37
	30-4-2023	08:09:15	IL&FS	LSI	Solapur	MH	17.724855	75.842323	150+000	252+000	240+350 RHS Inner	3	41.0000	0.3578	0.2181	0.1467	0.0852	0.0597	0.0400	0.0183	29.7	33.3		37
856	30-4-2023	08:11:02	IL&FS	LSI	Solapur	MH	17.726530	75.840675	150+000	252+000	240+100 RHS Inner	1	42.6000	0.1919	0.1313	0.0863	0.0634	0.0462	0.0309	0.0209	29.7	34.3		37
	30-4-2023	08:11:02	IL&FS	LSI	Solapur	MH	17.726530	75.840675	150+000	252+000	240+100 RHS Inner	2	42.2000	0.1933	0.1234	0.0794	0.0578	0.0429	0.0288	0.0181	29.7	34.3		37

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	08:11:02	IL&FS	LSI	Solapur	MH	17.726530	75.840675	150+000	252+000	240+100 RHS Inner	3	42.2000	0.2078	0.1350	0.0846	0.0590	0.0427	0.0287	0.0181	29.7	34.3		37
857	30-4-2023	08:12:40	IL&FS	LSI	Solapur	MH	17.727548	75.838668	150+000	252+000	239+850 RHS Inner	1	41.3000	0.3792	0.2357	0.1321	0.0764	0.0594	0.0359	0.0187	29.7	34.1		37
	30-4-2023	08:12:40	IL&FS	LSI	Solapur	MH	17.727548	75.838668	150+000	252+000	239+850 RHS Inner	2	41.7000	0.3428	0.2231	0.1304	0.0780	0.0601	0.0358	0.0186	29.7	34.1		37
	30-4-2023	08:12:40	IL&FS	LSI	Solapur	MH	17.727548	75.838668	150+000	252+000	239+850 RHS Inner	3	43.1000	0.3664	0.2357	0.1218	0.0785	0.0621	0.0395	0.0187	29.7	34.1		37
858	30-4-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.728509	75.836524	150+000	252+000	239+600 RHS Inner	1	41.9000	0.4544	0.2383	0.1557	0.1009	0.0609	0.0376	0.0200	29.9	34.4		37
	30-4-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.728509	75.836524	150+000	252+000	239+600 RHS Inner	2	41.9000	0.4456	0.2630	0.1571	0.1027	0.0646	0.0367	0.0190	29.9	34.4		37
	30-4-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.728509	75.836524	150+000	252+000	239+600 RHS Inner	3	42.0000	0.4561	0.2603	0.1679	0.1079	0.0658	0.0413	0.0186	29.9	34.4		37
859	30-4-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.729465	75.834442	150+000	252+000	239+350 RHS Inner	1	42.0000	0.3797	0.2576	0.1364	0.0793	0.0556	0.0391	0.0352	30.0	33.7		37
	30-4-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.729465	75.834442	150+000	252+000	239+350 RHS Inner	2	42.8000	0.3946	0.2468	0.1363	0.0906	0.0594	0.0397	0.0357	30.0	33.7		37
	30-4-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.729465	75.834442	150+000	252+000	239+350 RHS Inner	3	41.3000	0.3693	0.2477	0.1358	0.0787	0.0545	0.0380	0.0342	30.0	33.7		37
860	30-4-2023	08:18:05	IL&FS	LSI	Solapur	MH	17.730527	75.832031	150+000	252+000	239+075 RHS Inner	1	43.2000	0.1699	0.1227	0.0773	0.0462	0.0306	0.0200	0.0135	30.0	33.9		37
	30-4-2023	08:18:05	IL&FS	LSI	Solapur	MH	17.730527	75.832031	150+000	252+000	239+075 RHS Inner	2	44.0000	0.1806	0.1245	0.0792	0.0469	0.0333	0.0219	0.0138	30.0	33.9		37
	30-4-2023	08:18:05	IL&FS	LSI	Solapur	MH	17.730527	75.832031	150+000	252+000	239+075 RHS Inner	3	43.4000	0.1721	0.1185	0.0778	0.0462	0.0322	0.0211	0.0135	30.0	33.9		37
861	30-4-2023	08:19:50	IL&FS	LSI	Solapur	MH	17.731336	75.830146	150+000	252+000	238+850 RHS Inner	1	41.4000	0.3508	0.2013	0.1239	0.0854	0.0554	0.0439	0.0352	30.3	34.5		37
	30-4-2023	08:19:50	IL&FS	LSI	Solapur	MH	17.731336	75.830146	150+000	252+000	238+850 RHS Inner	2	41.5000	0.3316	0.1992	0.1269	0.0849	0.0552	0.0440	0.0366	30.3	34.5		37
	30-4-2023	08:19:50	IL&FS	LSI	Solapur	MH	17.731336	75.830146	150+000	252+000	238+850 RHS Inner	3	41.5000	0.3423	0.2120	0.1319	0.0858	0.0557	0.0434	0.0348	30.3	34.5		37
862	30-4-2023	08:21:39	IL&FS	LSI	Solapur	MH	17.732269	75.827995	150+000	252+000	238+600 RHS Inner	1	41.2000	0.3986	0.2713	0.1542	0.0988	0.0563	0.0391	0.0271	30.5	34.5		37
	30-4-2023	08:21:39	IL&FS	LSI	Solapur	MH	17.732269	75.827995	150+000	252+000	238+600 RHS Inner	2	41.2000	0.3894	0.2726	0.1510	0.0946	0.0581	0.0412	0.0305	30.5	34.5		37
	30-4-2023	08:21:39	IL&FS	LSI	Solapur	MH	17.732269	75.827995	150+000	252+000	238+600 RHS Inner	3	40.9000	0.3924	0.2648	0.1590	0.1015	0.0582	0.0415	0.0296	30.5	34.5		37
863	30-4-2023	08:23:21	IL&FS	LSI	Solapur	MH	17.733280	75.825782	150+000	252+000	238+350 RHS Inner	1	42.7000	0.3353	0.2342	0.1493	0.0993	0.0655	0.0443	0.0349	30.7	35.5		37
	30-4-2023	08:23:21	IL&FS	LSI	Solapur	MH	17.733280	75.825782	150+000	252+000	238+350 RHS Inner	2	43.2000	0.3475	0.2311	0.1494	0.1010	0.0713	0.0462	0.0366	30.7	35.5		37
	30-4-2023	08:23:21	IL&FS	LSI	Solapur	MH	17.733280	75.825782	150+000	252+000	238+350 RHS Inner	3	43.4000	0.3366	0.2122	0.1526	0.1048	0.0715	0.0456	0.0360	30.7	35.5		37
864	30-4-2023	08:25:05	IL&FS	LSI	Solapur	MH	17.734228	75.823745	150+000	252+000	238+100 RHS Inner	1	42.8000	0.2691	0.1769	0.1231	0.0892	0.0586	0.0348	0.0205	30.7	35.3		37
	30-4-2023	08:25:05	IL&FS	LSI	Solapur	MH	17.734228	75.823745	150+000	252+000	238+100 RHS Inner	2	40.8000	0.2626	0.1827	0.1069	0.0787	0.0522	0.0328	0.0201	30.7	35.3		37
	30-4-2023	08:25:05	IL&FS	LSI	Solapur	MH	17.734228	75.823745	150+000	252+000	238+100 RHS Inner	3	41.1000	0.2530	0.1677	0.1127	0.0826	0.0524	0.0314	0.0200	30.7	35.3		37
865	30-4-2023	08:26:57	IL&FS	LSI	Solapur	MH	17.735195	75.821640	150+000	252+000	237+850 RHS Inner	1	41.5000	0.2438	0.1644	0.1096	0.0709	0.0416	0.0261	0.0161	30.8	35.6		37
	30-4-2023	08:26:57	IL&FS	LSI	Solapur	MH	17.735195	75.821640	150+000	252+000	237+850 RHS Inner	2	42.2000	0.2436	0.1635	0.1044	0.0689	0.0431	0.0279	0.0167	30.8	35.6		37
	30-4-2023	08:26:57	IL&FS	LSI	Solapur	MH	17.735195	75.821640	150+000	252+000	237+850 RHS Inner	3	42.2000	0.2537	0.1736	0.1052	0.0662	0.0394	0.0266	0.0168	30.8	35.6		37
866	30-4-2023	08:28:51	IL&FS	LSI	Solapur	MH	17.736181	75.819488	150+000	252+000	237+600 RHS Inner	1	40.0000	0.5215	0.3088	0.1883	0.1307	0.0881	0.0531	0.0291	30.8	36.1		37
	30-4-2023	08:28:51	IL&FS	LSI	Solapur	MH	17.736181	75.819488	150+000	252+000	237+600 RHS Inner	2	41.2000	0.5214	0.3015	0.1950	0.1321	0.0869	0.0532	0.0304	30.8	36.1		37
	30-4-2023	08:28:51	IL&FS	LSI	Solapur	MH	17.736181	75.819488	150+000	252+000	237+600 RHS Inner	3	40.2000	0.5096	0.3125	0.1807	0.1280	0.0871	0.0515	0.0286	30.8	36.1		37
867	30-4-2023	08:30:42	IL&FS	LSI	Solapur	MH	17.737110	75.817298	150+000	252+000	237+350 RHS Inner	1	40.8000	0.3870	0.2495	0.1436	0.0965	0.0538	0.0340	0.0185	31.0	35.9	T-30.5/37.9	37.9
	30-4-2023	08:30:42	IL&FS	LSI	Solapur	MH	17.737110	75.817298	150+000	252+000	237+350 RHS Inner	2	41.4000	0.4081	0.2484	0.1495	0.1049	0.0575	0.0357	0.0203	31.0	35.9	T-30.5/37.9	37.9
	30-4-2023	08:30:42	IL&FS	LSI	Solapur	MH	17.737110	75.817298	150+000	252+000	237+350 RHS Inner	3	41.3000	0.3852	0.2602	0.1389	0.0979	0.0602	0.0364	0.0179	31.0	35.9	T-30.5/37.9	37.9
868	30-4-2023	08:35:40	IL&FS	LSI	Solapur	MH	17.738006	75.815208	150+000	252+000	237+100 RHS Inner	1	42.0000	0.2926	0.1745	0.1190	0.0860	0.0616	0.0461	0.0342	31.2	35.9		37.9
	30-4-2023	08:35:40	IL&FS	LSI	Solapur	MH	17.738006	75.815208	150+000	252+000	237+100 RHS Inner	2	43.6000	0.2798	0.1735	0.1222	0.0890	0.0647	0.0496	0.0383	31.2	35.9		37.9
	30-4-2023	08:35:40	IL&FS	LSI	Solapur	MH	17.738006	75.815208	150+000	252+000	237+100 RHS Inner	3	43.7000	0.2850	0.1895	0.1150	0.0837	0.0604	0.0441	0.0333	31.2	35.9		37.9
869	30-4-2023	08:37:48	IL&FS	LSI	Solapur	MH	17.739063	75.812835	150+000	252+000	236+820 RHS Inner	1	42.8000	0.4133	0.2562	0.1709	0.1085	0.0759	0.0512	0.0329	31.4	36.5		37.9
	30-4-2023	08:37:48	IL&FS	LSI	Solapur	MH	17.739063	75.812835	150+000	252+000	236+820 RHS Inner	2	43.3000	0.4078	0.2677	0.1540	0.1062	0.0771	0.0516	0.0331	31.4	36.5		37.9
	30-4-2023	08:37:48	IL&FS	LSI	Solapur	MH	17.739063	75.812835	150+000	252+000	236+820 RHS Inner	3	42.9000	0.3962	0.2388	0.1667	0.1075	0.0765	0.0510	0.0330	31.4	36.5		37.9
870	30-4-2023	08:39:27	IL&FS	LSI	Solapur	MH	17.739862	75.810920	150+000	252+000	236+600 RHS Inner	1	41.9000	0.5534	0.3177	0.1967	0.1189	0.0701	0.0610	0.0413	31.5	37.5		37.9
	30-4-2023	08:39:27	IL&FS	LSI	Solapur	MH	17.739862	75.810920	150+000	252+000	236+600 RHS Inner	2	42.4000	0.5300	0.3424	0.1894	0.1266	0.0835	0.0602	0.0418	31.5	37.5		37.9
	30-4-2023	08:39:27	IL&FS	LSI	Solapur	MH	17.739862	75.810920	150+000	252+000	236+600 RHS Inner	3	42.6000	0.5509	0.3540	0.1917	0.1195	0.0716	0.0651	0.0414	31.5	37.5		37.9
871	30-4-2023	08:41:40	IL&FS	LSI	Solapur	MH	17.740837	75.808723	150+000	252+000	236+350 RHS Inner	1	41.5000	0.3426	0.1901	0.0994	0.0656	0.0408	0.0253	0.0227	31.5	37.0		37.9
	30-4-2023	08:41:40	IL&FS	LSI	Solapur	MH	17.740837	75.808723	150+000	252+000	236+350 RHS Inner	2	41.4000	0.3271	0.1898	0.1023	0.0678	0.0438	0.0279	0.0251	31.5	37.0		37.9
	30-4-2023	08:41:40	IL&FS	LSI	Solapur	MH	17.740837	75.808723	150+000	252+000	236+350 RHS Inner	3	41.4000	0.3291	0.1698	0.1045	0.0698	0.0437	0.0278	0.0250	31.5	37.0		37.9
872	30-4-2023	08:43:36	IL&FS	LSI	Solapur	MH	17.741809	75.806533	150+000	252+000	236+100 RHS Inner	1	41.6000	0.4222	0.2465	0.1210	0.0768	0.0484	0.0334	0.0241	31.8	38.2		37.9
	30-4-2023	08:43:36	IL&FS	LSI	Solapur	MH	17.741809	75.806533	150+000	252+000	236+100 RHS Inner	2	41.6000	0.4296	0.2464	0.1280	0.0794	0.0481	0.0318	0.0242	31.8	38.2		37.9
	30-4-2023	08:43:36	IL&FS	LSI	Solapur	MH	17.741809	75.806533	150+000	252+000	236+100 RHS Inner	3	41.5000	0.4605	0.2400	0.1243	0.0794	0.0479	0.0340	0.0240	31.8	38.2		37.9
873	30-4-2023	08:45:22	IL&FS	LSI	Solapur	MH	17.742637	75.804435	150+000	252+000	235+850 RHS Inner	1	39.4000	0.5123	0.3004	0.1679	0.1112	0.0673	0.0501	0.0436	32.1	37.9		37.9
	30-4-2023	08:45:22	IL&FS	LSI	Solapur	MH	17.742637	75.804435	150+000	252+000	235+850 RHS Inner	2	40.9000	0.4882	0.3198	0.1660	0.1049	0.0661	0.0495	0.0430	32.1	37.9		37.9
	30-4-2023	08:45:22	IL&FS	LSI	Solapur	MH	17.742637	75.804435	150+000	252+000	235+850 RHS Inner	3	40.9000	0.4828	0.3199	0.1741	0.1128	0.0699	0.0521	0.0454	32.1	37.9		37.9
874	30-4-2023	08:47:16	IL&FS	LSI	Solapur	MH	17.743663	75.802276	150+000	252+000	235+600 RHS Inner	1	43.7000	0.2889	0.2136	0.1206	0.0741	0.0398	0.0277	0.0249	32.1	37.8		37.9
	30-4-2023	08:47:16	IL&FS	LSI	Solapur	MH	17.743663	75.802276	150+000	252+000	235+600 RHS Inner	2	43.6000	0.2971	0.2131	0.1236	0.0738	0.0413	0.0275	0.0248	32.1	37.8		37.9
	30-4-2023	08:47:16	IL&FS	LSI	Solapur	MH	17.743663	75.802276	150+000	252+000	235+600 RHS Inner	3	43.7000	0.2839	0.2136	0.1259	0.0775	0.0406	0.0275	0.0248	32.1	37.8		37.9
875	30-4-2023	08:49:00	IL&FS	LSI	Solapur	MH	17.744560	75.800102	150+000	252+000	235+350 RHS Inner	1	36.5000	0.2925	0.1995	0.1119	0.0836	0.0619	0.0491	0.0391	32.2	38.8		37.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	30-4-2023	08:49:00	IL&FS	LSI	Solapur	MH	17.744560	75.800102	150+000	252+000	235+350 RHS Inner	2	36.0000	0.3021	0.1933	0.1152	0.0815	0.0583	0.0456	0.0359	32.2	38.8		37.9
	30-4-2023	08:49:00	IL&FS	LSI	Solapur	MH	17.744560	75.800102	150+000	252+000	235+350 RHS Inner	3	37.0000	0.2739	0.2009	0.1114	0.0836	0.0638	0.0500	0.0404	32.2	38.8		37.9
876	30-4-2023	08:50:53	IL&FS	LSI	Solapur	MH	17.745508	75.797966	150+000	252+000	235+100 RHS Inner	1	42.0000	0.3359	0.1835	0.1076	0.0697	0.0446	0.0373	0.0276	32.3	38.7		37.9
	30-4-2023	08:50:53	IL&FS	LSI	Solapur	MH	17.745508	75.797966	150+000	252+000	235+100 RHS Inner	2	42.3000	0.3113	0.1728	0.1070	0.0782	0.0569	0.0371	0.0273	32.3	38.7		37.9
	30-4-2023	08:50:53	IL&FS	LSI	Solapur	MH	17.745508	75.797966	150+000	252+000	235+100 RHS Inner	3	41.9000	0.3063	0.1642	0.1092	0.0734	0.0473	0.0372	0.0274	32.3	38.7		37.9
877	30-4-2023	08:52:39	IL&FS	LSI	Solapur	MH	17.746490	75.795875	150+000	252+000	234+850 RHS Inner	1	40.0000	0.5271	0.2901	0.1336	0.0955	0.0686	0.0527	0.0405	32.3	38.4		37.9
	30-4-2023	08:52:39	IL&FS	LSI	Solapur	MH	17.746490	75.795875	150+000	252+000	234+850 RHS Inner	2	40.5000	0.5017	0.2704	0.1449	0.0980	0.0667	0.0512	0.0409	32.3	38.4		37.9
	30-4-2023	08:52:39	IL&FS	LSI	Solapur	MH	17.746490	75.795875	150+000	252+000	234+850 RHS Inner	3	40.7000	0.4972	0.2849	0.1519	0.1025	0.0702	0.0526	0.0416	32.3	38.4		37.9
878	30-4-2023	08:54:25	IL&FS	LSI	Solapur	MH	17.747499	75.793792	150+000	252+000	234+600 RHS Inner	1	44.3000	0.1299	0.0901	0.0598	0.0435	0.0324	0.0302	0.0248	32.5	39.1		37.9
	30-4-2023	08:54:25	IL&FS	LSI	Solapur	MH	17.747499	75.793792	150+000	252+000	234+600 RHS Inner	2	42.8000	0.1193	0.0823	0.0576	0.0406	0.0296	0.0261	0.0259	32.5	39.1		37.9
	30-4-2023	08:54:25	IL&FS	LSI	Solapur	MH	17.747499	75.793792	150+000	252+000	234+600 RHS Inner	3	44.8000	0.1183	0.0855	0.0624	0.0450	0.0316	0.0287	0.0239	32.5	39.1		37.9
879	30-4-2023	08:57:35	IL&FS	LSI	Solapur	MH	17.748443	75.791641	150+000	252+000	234+350 RHS Inner	1	36.4000	0.1023	0.0704	0.0488	0.0329	0.0261	0.0216	0.0189	32.7	38.7		37.9
	30-4-2023	08:57:35	IL&FS	LSI	Solapur	MH	17.748443	75.791641	150+000	252+000	234+350 RHS Inner	2	36.7000	0.1033	0.0690	0.0489	0.0347	0.0273	0.0219	0.0188	32.7	38.7		37.9
	30-4-2023	08:57:35	IL&FS	LSI	Solapur	MH	17.748443	75.791641	150+000	252+000	234+350 RHS Inner	3	36.5000	0.0972	0.0696	0.0479	0.0313	0.0260	0.0219	0.0186	32.7	38.7		37.9
880	30-4-2023	08:59:14	IL&FS	LSI	Solapur	MH	17.749443	75.789436	150+000	252+000	234+100 RHS Inner	1	36.5000	0.3410	0.2028	0.1007	0.0654	0.0432	0.0361	0.0314	32.6	39.0		37.9
	30-4-2023	08:59:14	IL&FS	LSI	Solapur	MH	17.749443	75.789436	150+000	252+000	234+100 RHS Inner	2	36.8000	0.3571	0.1918	0.1047	0.0666	0.0429	0.0352	0.0300	32.6	39.0		37.9
	30-4-2023	08:59:14	IL&FS	LSI	Solapur	MH	17.749443	75.789436	150+000	252+000	234+100 RHS Inner	3	36.1000	0.3432	0.1850	0.1002	0.0678	0.0433	0.0356	0.0303	32.6	39.0		37.9
881	30-4-2023	09:01:02	IL&FS	LSI	Solapur	MH	17.750408	75.787284	150+000	252+000	233+850 RHS Inner	1	36.3000	0.2762	0.1709	0.0927	0.0665	0.0463	0.0378	0.0320	32.9	38.9		37.9
	30-4-2023	09:01:02	IL&FS	LSI	Solapur	MH	17.750408	75.787284	150+000	252+000	233+850 RHS Inner	2	36.7000	0.2980	0.1680	0.1034	0.0702	0.0475	0.0387	0.0330	32.9	38.9		37.9
	30-4-2023	09:01:02	IL&FS	LSI	Solapur	MH	17.750408	75.787284	150+000	252+000	233+850 RHS Inner	3	36.3000	0.2944	0.1722	0.0937	0.0665	0.0479	0.0395	0.0337	32.9	38.9		37.9
882	30-4-2023	09:03:22	IL&FS	LSI	Solapur	MH	17.751356	75.785163	150+000	252+000	233+600 RHS Inner	1	44.3000	0.1968	0.1304	0.0885	0.0606	0.0371	0.0224	0.0142	32.8	38.7		37.9
	30-4-2023	09:03:22	IL&FS	LSI	Solapur	MH	17.751356	75.785163	150+000	252+000	233+600 RHS Inner	2	44.6000	0.1956	0.1328	0.0917	0.0613	0.0375	0.0218	0.0136	32.8	38.7		37.9
	30-4-2023	09:03:22	IL&FS	LSI	Solapur	MH	17.751356	75.785163	150+000	252+000	233+600 RHS Inner	3	44.9000	0.2000	0.1243	0.0891	0.0616	0.0383	0.0211	0.0130	32.8	38.7		37.9
883	30-4-2023	09:05:19	IL&FS	LSI	Solapur	MH	17.752359	75.782989	150+000	252+000	233+350 RHS Inner	1	40.6000	0.4119	0.2671	0.1563	0.0879	0.0605	0.0401	0.0301	33.1	39.5	T-31.5/40.9	40.9
	30-4-2023	09:05:19	IL&FS	LSI	Solapur	MH	17.752359	75.782989	150+000	252+000	233+350 RHS Inner	2	40.6000	0.4161	0.2688	0.1651	0.0899	0.0591	0.0392	0.0292	33.1	39.5	T-31.5/40.9	40.9
	30-4-2023	09:05:19	IL&FS	LSI	Solapur	MH	17.752359	75.782989	150+000	252+000	233+350 RHS Inner	3	40.5000	0.4185	0.2726	0.1660	0.0893	0.0586	0.0385	0.0287	33.1	39.5	T-31.5/40.9	40.9
884	30-4-2023	09:08:51	IL&FS	LSI	Solapur	MH	17.753332	75.780921	150+000	252+000	233+100 RHS Inner	1	36.8000	0.3749	0.1935	0.1270	0.0769	0.0439	0.0290	0.0189	33.0	39.7		40.9
	30-4-2023	09:08:51	IL&FS	LSI	Solapur	MH	17.753332	75.780921	150+000	252+000	233+100 RHS Inner	2	38.0000	0.3819	0.2019	0.1308	0.0786	0.0465	0.0316	0.0190	33.0	39.7		40.9
	30-4-2023	09:08:51	IL&FS	LSI	Solapur	MH	17.753332	75.780921	150+000	252+000	233+100 RHS Inner	3	38.1000	0.3962	0.1982	0.1370	0.0837	0.0430	0.0293	0.0192	33.0	39.7		40.9
885	30-4-2023	09:10:53	IL&FS	LSI	Solapur	MH	17.754508	75.778388	150+000	252+000	232+800 RHS Inner	1	41.3000	0.4760	0.2875	0.1510	0.1001	0.0630	0.0424	0.0362	33.2	39.5		40.9
	30-4-2023	09:10:53	IL&FS	LSI	Solapur	MH	17.754508	75.778388	150+000	252+000	232+800 RHS Inner	2	41.5000	0.4937	0.3061	0.1691	0.1113	0.0663	0.0458	0.0392	33.2	39.5		40.9
	30-4-2023	09:10:53	IL&FS	LSI	Solapur	MH	17.754508	75.778388	150+000	252+000	232+800 RHS Inner	3	41.7000	0.4744	0.2968	0.1616	0.1057	0.0623	0.0416	0.0354	33.2	39.5		40.9
886	30-4-2023	09:12:29	IL&FS	LSI	Solapur	MH	17.755270	75.776695	150+000	252+000	232+600 RHS Inner	1	41.6000	0.3190	0.1796	0.1098	0.0701	0.0439	0.0340	0.0246	33.3	40.5		40.9
	30-4-2023	09:12:29	IL&FS	LSI	Solapur	MH	17.755270	75.776695	150+000	252+000	232+600 RHS Inner	2	41.0000	0.2917	0.1763	0.1068	0.0680	0.0412	0.0329	0.0236	33.3	40.5		40.9
	30-4-2023	09:12:29	IL&FS	LSI	Solapur	MH	17.755270	75.776695	150+000	252+000	232+600 RHS Inner	3	42.3000	0.3167	0.1804	0.1094	0.0694	0.0415	0.0329	0.0236	33.3	40.5		40.9
887	30-4-2023	09:14:22	IL&FS	LSI	Solapur	MH	17.756320	75.774375	150+000	252+000	232+330 RHS Inner	1	44.0000	0.2028	0.1395	0.0951	0.0741	0.0581	0.0386	0.0240	33.4	40.1		40.9
	30-4-2023	09:14:22	IL&FS	LSI	Solapur	MH	17.756320	75.774375	150+000	252+000	232+330 RHS Inner	2	44.2000	0.2053	0.1393	0.0976	0.0755	0.0596	0.0387	0.0243	33.4	40.1		40.9
	30-4-2023	09:14:22	IL&FS	LSI	Solapur	MH	17.756320	75.774375	150+000	252+000	232+330 RHS Inner	3	44.8000	0.2095	0.1428	0.0987	0.0745	0.0593	0.0384	0.0243	33.4	40.1		40.9
888	30-4-2023	09:16:28	IL&FS	LSI	Solapur	MH	17.757228	75.772422	150+000	252+000	232+100 RHS Inner	1	42.7000	0.1357	0.0868	0.0731	0.0491	0.0342	0.0286	0.0257	33.4	40.0		40.9
	30-4-2023	09:16:28	IL&FS	LSI	Solapur	MH	17.757228	75.772422	150+000	252+000	232+100 RHS Inner	2	43.3000	0.1302	0.0909	0.0660	0.0476	0.0355	0.0289	0.0260	33.4	40.0		40.9
	30-4-2023	09:16:28	IL&FS	LSI	Solapur	MH	17.757228	75.772422	150+000	252+000	232+100 RHS Inner	3	42.7000	0.1344	0.0853	0.0678	0.0474	0.0335	0.0274	0.0247	33.4	40.0		40.9
889	30-4-2023	09:18:16	IL&FS	LSI	Solapur	MH	17.758186	75.770256	150+000	252+000	231+850 RHS Inner	1	42.6000	0.2796	0.1856	0.1225	0.0922	0.0696	0.0437	0.0271	33.7	40.9		40.9
	30-4-2023	09:18:16	IL&FS	LSI	Solapur	MH	17.758186	75.770256	150+000	252+000	231+850 RHS Inner	2	43.2000	0.2720	0.1884	0.1193	0.0906	0.0701	0.0456	0.0271	33.7	40.9		40.9
	30-4-2023	09:18:16	IL&FS	LSI	Solapur	MH	17.758186	75.770256	150+000	252+000	231+850 RHS Inner	3	41.7000	0.2761	0.1804	0.1228	0.0895	0.0676	0.0433	0.0270	33.7	40.9		40.9
890	30-4-2023	09:19:57	IL&FS	LSI	Solapur	MH	17.759197	75.768074	150+000	252+000	231+600 RHS Inner	1	39.2000	0.5191	0.3221	0.1687	0.0993	0.0608	0.0446	0.0290	33.6	41.3		40.9
	30-4-2023	09:19:57	IL&FS	LSI	Solapur	MH	17.759197	75.768074	150+000	252+000	231+600 RHS Inner	2	39.6000	0.5081	0.3434	0.1701	0.0925	0.0614	0.0395	0.0355	33.6	41.3		40.9
	30-4-2023	09:19:57	IL&FS	LSI	Solapur	MH	17.759197	75.768074	150+000	252+000	231+600 RHS Inner	3	39.4000	0.5272	0.3317	0.1675	0.0997	0.0611	0.0393	0.0353	33.6	41.3		40.9
891	30-4-2023	09:21:48	IL&FS	LSI	Solapur	MH	17.760313	75.765625	150+000	252+000	231+300 RHS Inner	1	40.8000	0.3773	0.2306	0.1391	0.0774	0.0522	0.0407	0.0366	33.6	40.9		40.9
	30-4-2023	09:21:48	IL&FS	LSI	Solapur	MH	17.760313	75.765625	150+000	252+000	231+300 RHS Inner	2	40.5000	0.3993	0.2289	0.1415	0.0685	0.0535	0.0413	0.0372	33.6	40.9		40.9
	30-4-2023	09:21:48	IL&FS	LSI	Solapur	MH	17.760313	75.765625	150+000	252+000	231+300 RHS Inner	3	40.6000	0.3896	0.2227	0.1367	0.0704	0.0531	0.0414	0.0373	33.6	40.9		40.9
892	30-4-2023	09:23:29	IL&FS	LSI	Solapur	MH	17.761117	75.763839	150+000	252+000	231+100 RHS Inner	1	41.2000	0.5062	0.2874	0.1572	0.0990	0.0566	0.0440	0.0350	33.5	40.9		40.9
	30-4-2023	09:23:29	IL&FS	LSI	Solapur	MH	17.761117	75.763839	150+000	252+000	231+100 RHS Inner	2	41.0000	0.4951	0.3182	0.1585	0.0969	0.0532	0.0407	0.0323	33.5	40.9		40.9
	30-4-2023	09:23:29	IL&FS	LSI	Solapur	MH	17.761117	75.763839	150+000	252+000	231+100 RHS Inner	3	41.5000	0.4591	0.3020	0.1540	0.0968	0.0573	0.0450	0.0355	33.5	40.9		40.9
893	30-4-2023	09:25:15	IL&FS	LSI	Solapur	MH	17.762083	75.761764	150+000	252+000	230+850 RHS Inner	1	41.9000	0.4250	0.2524	0.1342	0.0969	0.0679	0.0533	0.0380	33.6	41.5		40.9
	30-4-2023	09:25:15	IL&FS	LSI	Solapur	MH	17.762083	75.761764	150+000	252+000	230+850 RHS Inner	2	42.2000	0.4346	0.2505	0.1315	0.0931	0.0668	0.0531	0.0377	33.6	41.5		40.9
	30-4-2023	09:25:15	IL&FS	LSI	Solapur	MH	17.762083	75.761764	150+000	252+000	230+850 RHS Inner	3	41.9000	0.4042	0.2389	0.1299	0.0907	0.0647	0.0525	0.0372	33.6	41.5		40.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
894	30-4-2023	09:26:57	IL&FS	LSI	Solapur	MH	17.763092	75.759574	150+000	252+000	230+600 RHS Inner	1	39.9000	0.4398	0.3003	0.1341	0.0669	0.0392	0.0242	0.0170	33.6	41.4		40.9
	30-4-2023	09:26:57	IL&FS	LSI	Solapur	MH	17.763092	75.759574	150+000	252+000	230+600 RHS Inner	2	39.9000	0.4409	0.2811	0.1361	0.0695	0.0386	0.0244	0.0172	33.6	41.4		40.9
	30-4-2023	09:26:57	IL&FS	LSI	Solapur	MH	17.763092	75.759574	150+000	252+000	230+600 RHS Inner	3	39.7000	0.4247	0.2727	0.1429	0.0680	0.0385	0.0243	0.0171	33.6	41.4		40.9
895	30-4-2023	09:28:49	IL&FS	LSI	Solapur	MH	17.763830	75.757789	150+000	252+000	230+380 RHS Inner	1	43.4000	0.2177	0.1063	0.0647	0.0436	0.0323	0.0237	0.0133	33.6	42.2		40.9
	30-4-2023	09:28:49	IL&FS	LSI	Solapur	MH	17.763830	75.757789	150+000	252+000	230+380 RHS Inner	2	43.0000	0.2284	0.1030	0.0613	0.0446	0.0327	0.0241	0.0136	33.6	42.2		40.9
	30-4-2023	09:28:49	IL&FS	LSI	Solapur	MH	17.763830	75.757789	150+000	252+000	230+380 RHS Inner	3	45.1000	0.2315	0.1069	0.0676	0.0468	0.0341	0.0261	0.0155	33.6	42.2		40.9
896	30-4-2023	09:33:08	IL&FS	LSI	Solapur	MH	17.765933	75.753189	150+000	252+000	229+850 RHS Inner	1	41.5000	0.4662	0.2873	0.1600	0.1042	0.0668	0.0446	0.0293	34.4	42.4		40.9
	30-4-2023	09:33:08	IL&FS	LSI	Solapur	MH	17.765933	75.753189	150+000	252+000	229+850 RHS Inner	2	41.7000	0.4738	0.2825	0.1607	0.1075	0.0689	0.0443	0.0283	34.4	42.4		40.9
	30-4-2023	09:33:08	IL&FS	LSI	Solapur	MH	17.765933	75.753189	150+000	252+000	229+850 RHS Inner	3	42.1000	0.4773	0.2998	0.1559	0.1021	0.0675	0.0433	0.0279	34.4	42.4		40.9
897	30-4-2023	09:35:00	IL&FS	LSI	Solapur	MH	17.766880	75.751106	150+000	252+000	229+600 RHS Inner	1	42.3000	0.3914	0.2379	0.1171	0.0631	0.0432	0.0309	0.0228	34.5	42.7		40.9
	30-4-2023	09:35:00	IL&FS	LSI	Solapur	MH	17.766880	75.751106	150+000	252+000	229+600 RHS Inner	2	42.4000	0.3885	0.2214	0.1152	0.0642	0.0460	0.0320	0.0238	34.5	42.7		40.9
	30-4-2023	09:35:00	IL&FS	LSI	Solapur	MH	17.766880	75.751106	150+000	252+000	229+600 RHS Inner	3	42.5000	0.3556	0.2216	0.1237	0.0637	0.0446	0.0329	0.0246	34.5	42.7		40.9
898	30-4-2023	09:36:39	IL&FS	LSI	Solapur	MH	17.767887	75.748954	150+000	252+000	229+350 RHS Inner	1	40.4000	0.4870	0.2700	0.1579	0.0995	0.0594	0.0416	0.0332	34.4	43.1		40.9
	30-4-2023	09:36:39	IL&FS	LSI	Solapur	MH	17.767887	75.748954	150+000	252+000	229+350 RHS Inner	2	40.2000	0.4679	0.2796	0.1562	0.1005	0.0626	0.0416	0.0325	34.4	43.1		40.9
	30-4-2023	09:36:39	IL&FS	LSI	Solapur	MH	17.767887	75.748954	150+000	252+000	229+350 RHS Inner	3	40.0000	0.4485	0.2586	0.1572	0.0981	0.0591	0.0414	0.0336	34.4	43.1		40.9
899	30-4-2023	09:38:41	IL&FS	LSI	Solapur	MH	17.768789	75.746788	150+000	252+000	229+100 RHS Inner	1	41.2000	0.4311	0.2335	0.1242	0.0654	0.0398	0.0238	0.0169	35.1	44.2		40.9
	30-4-2023	09:38:41	IL&FS	LSI	Solapur	MH	17.768789	75.746788	150+000	252+000	229+100 RHS Inner	2	40.0000	0.4516	0.2040	0.1202	0.0602	0.0379	0.0232	0.0163	35.1	44.2		40.9
	30-4-2023	09:38:41	IL&FS	LSI	Solapur	MH	17.768789	75.746788	150+000	252+000	229+100 RHS Inner	3	40.5000	0.4250	0.2234	0.1167	0.0650	0.0404	0.0234	0.0165	35.1	44.2		40.9
900	30-4-2023	09:40:34	IL&FS	LSI	Solapur	MH	17.769710	75.744659	150+000	252+000	228+850 RHS Inner	1	42.2000	0.3058	0.1801	0.1145	0.0779	0.0540	0.0416	0.0324	35.3	43.6		40.9
	30-4-2023	09:40:34	IL&FS	LSI	Solapur	MH	17.769710	75.744659	150+000	252+000	228+850 RHS Inner	2	41.7000	0.2994	0.1957	0.1077	0.0761	0.0541	0.0420	0.0328	35.3	43.6		40.9
	30-4-2023	09:40:34	IL&FS	LSI	Solapur	MH	17.769710	75.744659	150+000	252+000	228+850 RHS Inner	3	41.8000	0.3110	0.1816	0.1150	0.0793	0.0526	0.0397	0.0307	35.3	43.6		40.9
901	30-4-2023	09:42:36	IL&FS	LSI	Solapur	MH	17.770709	75.742446	150+000	252+000	228+600 RHS Inner	1	40.1000	0.4454	0.2566	0.1394	0.0797	0.0556	0.0384	0.0249	35.0	43.1		40.9
	30-4-2023	09:42:36	IL&FS	LSI	Solapur	MH	17.770709	75.742446	150+000	252+000	228+600 RHS Inner	2	40.2000	0.4289	0.2409	0.1360	0.0752	0.0558	0.0374	0.0254	35.0	43.1		40.9
	30-4-2023	09:42:36	IL&FS	LSI	Solapur	MH	17.770709	75.742446	150+000	252+000	228+600 RHS Inner	3	40.1000	0.4280	0.2464	0.1307	0.0813	0.0555	0.0379	0.0249	35.0	43.1		40.9
902	30-4-2023	09:44:28	IL&FS	LSI	Solapur	MH	17.771692	75.740409	150+000	252+000	228+350 RHS Inner	1	41.1000	0.3818	0.2410	0.1285	0.0843	0.0551	0.0430	0.0342	34.7	42.3		40.9
	30-4-2023	09:44:28	IL&FS	LSI	Solapur	MH	17.771692	75.740409	150+000	252+000	228+350 RHS Inner	2	41.4000	0.3908	0.2373	0.1441	0.0979	0.0621	0.0500	0.0407	34.7	42.3		40.9
	30-4-2023	09:44:28	IL&FS	LSI	Solapur	MH	17.771692	75.740409	150+000	252+000	228+350 RHS Inner	3	41.5000	0.3791	0.2468	0.1418	0.0909	0.0597	0.0471	0.0377	34.7	42.3		40.9
903	30-4-2023	09:46:20	IL&FS	LSI	Solapur	MH	17.772666	75.738227	150+000	252+000	228+100 RHS Inner	1	40.9000	0.5071	0.3016	0.1802	0.0985	0.0757	0.0585	0.0406	34.7	42.7		40.9
	30-4-2023	09:46:20	IL&FS	LSI	Solapur	MH	17.772666	75.738227	150+000	252+000	228+100 RHS Inner	2	41.0000	0.4675	0.3103	0.1903	0.1028	0.0758	0.0565	0.0389	34.7	42.7		40.9
	30-4-2023	09:46:20	IL&FS	LSI	Solapur	MH	17.772666	75.738227	150+000	252+000	228+100 RHS Inner	3	41.1000	0.4663	0.2839	0.1695	0.0970	0.0701	0.0527	0.0354	34.7	42.7		40.9
904	1-5-2023	02:47:03	IL&FS	LSI	Solapur	MH	17.773611	75.736305	150+000	252+000	227+850 RHS Inner	1	42.1000	0.3739	0.2405	0.1313	0.0817	0.0439	0.0315	0.0224	30.3	31.8	T-27.8/36.4	36.4
	1-5-2023	02:47:03	IL&FS	LSI	Solapur	MH	17.773611	75.736305	150+000	252+000	227+850 RHS Inner	2	42.0000	0.3509	0.2274	0.1322	0.0780	0.0441	0.0313	0.0225	30.3	31.8	T-27.8/36.4	36.4
	1-5-2023	02:47:03	IL&FS	LSI	Solapur	MH	17.773611	75.736305	150+000	252+000	227+850 RHS Inner	3	42.8000	0.3751	0.2343	0.1220	0.0781	0.0445	0.0313	0.0229	30.3	31.8	T-27.8/36.4	36.4
905	1-5-2023	02:49:03	IL&FS	LSI	Solapur	MH	17.774492	75.734161	150+000	252+000	227+600 RHS Inner	1	42.8000	0.2416	0.1640	0.1109	0.0755	0.0479	0.0289	0.0206	30.3	31.3		36.4
	1-5-2023	02:49:03	IL&FS	LSI	Solapur	MH	17.774492	75.734161	150+000	252+000	227+600 RHS Inner	2	43.0000	0.2697	0.1641	0.1080	0.0714	0.0475	0.0300	0.0216	30.3	31.3		36.4
	1-5-2023	02:49:03	IL&FS	LSI	Solapur	MH	17.774492	75.734161	150+000	252+000	227+600 RHS Inner	3	43.1000	0.2516	0.1620	0.1096	0.0739	0.0474	0.0301	0.0216	30.3	31.3		36.4
906	1-5-2023	02:50:45	IL&FS	LSI	Solapur	MH	17.775468	75.732009	150+000	252+000	227+350 RHS Inner	1	41.9000	0.2306	0.1424	0.0915	0.0692	0.0443	0.0339	0.0269	30.2	31.3		36.4
	1-5-2023	02:50:45	IL&FS	LSI	Solapur	MH	17.775468	75.732009	150+000	252+000	227+350 RHS Inner	2	41.9000	0.2396	0.1367	0.0906	0.0704	0.0471	0.0351	0.0273	30.2	31.3		36.4
	1-5-2023	02:50:45	IL&FS	LSI	Solapur	MH	17.775468	75.732009	150+000	252+000	227+350 RHS Inner	3	41.7000	0.2439	0.1460	0.0968	0.0732	0.0449	0.0354	0.0287	30.2	31.3		36.4
907	1-5-2023	02:52:27	IL&FS	LSI	Solapur	MH	17.776433	75.729927	150+000	252+000	227+100 RHS Inner	1	38.8000	0.3391	0.2246	0.1623	0.1150	0.0838	0.0596	0.0436	30.0	31.6		36.4
	1-5-2023	02:52:27	IL&FS	LSI	Solapur	MH	17.776433	75.729927	150+000	252+000	227+100 RHS Inner	2	39.1000	0.3381	0.2205	0.1591	0.1176	0.0820	0.0578	0.0420	30.0	31.6		36.4
	1-5-2023	02:52:27	IL&FS	LSI	Solapur	MH	17.776433	75.729927	150+000	252+000	227+100 RHS Inner	3	39.1000	0.3460	0.2142	0.1580	0.1165	0.0818	0.0595	0.0436	30.0	31.6		36.4
908	1-5-2023	02:54:09	IL&FS	LSI	Solapur	MH	17.777500	75.727668	150+000	252+000	226+850 RHS Inner	1	42.5000	0.2987	0.1893	0.1142	0.0785	0.0545	0.0414	0.0363	30.0	31.2		36.4
	1-5-2023	02:54:09	IL&FS	LSI	Solapur	MH	17.777500	75.727668	150+000	252+000	226+850 RHS Inner	2	42.7000	0.2966	0.1777	0.1078	0.0813	0.0590	0.0414	0.0363	30.0	31.2		36.4
	1-5-2023	02:54:09	IL&FS	LSI	Solapur	MH	17.777500	75.727668	150+000	252+000	226+850 RHS Inner	3	42.2000	0.2989	0.1772	0.1077	0.0742	0.0518	0.0417	0.0365	30.0	31.2		36.4
909	1-5-2023	02:55:48	IL&FS	LSI	Solapur	MH	17.778570	75.725830	150+000	252+000	226+600 RHS Inner	1	44.6000	0.1618	0.1084	0.0731	0.0525	0.0376	0.0285	0.0221	30.0	31.3		36.4
	1-5-2023	02:55:48	IL&FS	LSI	Solapur	MH	17.778570	75.725830	150+000	252+000	226+600 RHS Inner	2	44.4000	0.1683	0.1170	0.0700	0.0522	0.0378	0.0285	0.0201	30.0	31.3		36.4
	1-5-2023	02:55:48	IL&FS	LSI	Solapur	MH	17.778570	75.725830	150+000	252+000	226+600 RHS Inner	3	44.2000	0.1683	0.1077	0.0716	0.0532	0.0358	0.0281	0.0213	30.0	31.3		36.4
910	1-5-2023	02:57:58	IL&FS	LSI	Solapur	MH	17.780040	75.723579	150+000	252+000	226+310 RHS Inner	1	41.1000	0.3035	0.1997	0.1193	0.0792	0.0582	0.0434	0.0331	30.1	31.5		36.4
	1-5-2023	02:57:58	IL&FS	LSI	Solapur	MH	17.780040	75.723579	150+000	252+000	226+310 RHS Inner	2	41.1000	0.2881	0.1898	0.1109	0.0823	0.0603	0.0438	0.0334	30.1	31.5		36.4
	1-5-2023	02:57:58	IL&FS	LSI	Solapur	MH	17.780040	75.723579	150+000	252+000	226+310 RHS Inner	3	41.0000	0.2913	0.1980	0.1079	0.0811	0.0574	0.0427	0.0324	30.1	31.5		36.4
911	1-5-2023	02:59:42	IL&FS	LSI	Solapur	MH	17.781126	75.721885	150+000	252+000	226+100 RHS Inner	1	42.4000	0.2387	0.1504	0.0991	0.0729	0.0549	0.0385	0.0271	30.3	31.7		36.4
	1-5-2023	02:59:42	IL&FS	LSI	Solapur	MH	17.781126	75.721885	150+000	252+000	226+100 RHS Inner	2	42.5000	0.2440	0.1532	0.1029	0.0763	0.0568	0.0391	0.0265	30.3	31.7		36.4
	1-5-2023	02:59:42	IL&FS	LSI	Solapur	MH	17.781126	75.721885	150+000	252+000	226+100 RHS Inner	3	42.5000	0.2393	0.1516	0.1014	0.0756	0.0597	0.0402	0.0257	30.3	31.7		36.4
912	1-5-2023	03:01:29	IL&FS	LSI	Solapur	MH	17.782199	75.719902	150+000	252+000	225+850 RHS Inner	1	40.4000	0.3826	0.2551	0.1415	0.0882	0.0587	0.0397	0.0300	30.2	31.5		36.4
	1-5-2023	03:01:29	IL&FS	LSI	Solapur	MH	17.782199	75.719902	150+000	252+000	225+850 RHS Inner	2	39.9000	0.3732	0.2563	0.1490	0.0786	0.0564	0.0407	0.0299	30.2	31.5		36.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	03:01:29	IL&FS	LSI	Solapur	MH	17.782199	75.719902	150+000	252+000	225+850 RHS Inner	3	40.6000	0.3628	0.2559	0.1443	0.0847	0.0580	0.0378	0.0315	30.2	31.5		36.4
913	1-5-2023	03:03:16	IL&FS	LSI	Solapur	MH	17.783132	75.717689	150+000	252+000	225+600 RHS Inner	1	41.1000	0.4438	0.2611	0.1481	0.0938	0.0568	0.0445	0.0350	30.2	31.3		36.4
	1-5-2023	03:03:16	IL&FS	LSI	Solapur	MH	17.783132	75.717689	150+000	252+000	225+600 RHS Inner	2	39.7000	0.4277	0.2510	0.1520	0.0942	0.0539	0.0412	0.0326	30.2	31.3		36.4
	1-5-2023	03:03:16	IL&FS	LSI	Solapur	MH	17.783132	75.717689	150+000	252+000	225+600 RHS Inner	3	40.0000	0.4118	0.2771	0.1428	0.0892	0.0562	0.0429	0.0337	30.2	31.3		36.4
914	1-5-2023	03:05:05	IL&FS	LSI	Solapur	MH	17.783866	75.715538	150+000	252+000	225+350 RHS Inner	1	40.7000	0.3266	0.2224	0.1450	0.0951	0.0580	0.0340	0.0241	30.0	31.1		36.4
	1-5-2023	03:05:05	IL&FS	LSI	Solapur	MH	17.783866	75.715538	150+000	252+000	225+350 RHS Inner	2	40.9000	0.3386	0.2200	0.1398	0.0938	0.0569	0.0329	0.0231	30.0	31.1		36.4
	1-5-2023	03:05:05	IL&FS	LSI	Solapur	MH	17.783866	75.715538	150+000	252+000	225+350 RHS Inner	3	41.3000	0.3197	0.2196	0.1452	0.1006	0.0640	0.0362	0.0261	30.0	31.1		36.4
915	1-5-2023	03:07:04	IL&FS	LSI	Solapur	MH	17.784442	75.713241	150+000	252+000	225+100 RHS Inner	1	40.5000	0.2925	0.2012	0.1243	0.0676	0.0442	0.0293	0.0202	30.1	31.3		36.4
	1-5-2023	03:07:04	IL&FS	LSI	Solapur	MH	17.784442	75.713241	150+000	252+000	225+100 RHS Inner	2	40.6000	0.3196	0.2056	0.1190	0.0686	0.0424	0.0263	0.0181	30.1	31.3		36.4
	1-5-2023	03:07:04	IL&FS	LSI	Solapur	MH	17.784442	75.713241	150+000	252+000	225+100 RHS Inner	3	40.8000	0.2980	0.1958	0.1232	0.0651	0.0448	0.0307	0.0201	30.1	31.3		36.4
916	1-5-2023	03:08:54	IL&FS	LSI	Solapur	MH	17.784732	75.710922	150+000	252+000	224+850 RHS Inner	1	40.0000	0.5002	0.3357	0.1760	0.0853	0.0565	0.0423	0.0322	30.1	31.6		36.4
	1-5-2023	03:08:54	IL&FS	LSI	Solapur	MH	17.784732	75.710922	150+000	252+000	224+850 RHS Inner	2	40.0000	0.4948	0.3218	0.1732	0.0939	0.0534	0.0405	0.0309	30.1	31.6		36.4
	1-5-2023	03:08:54	IL&FS	LSI	Solapur	MH	17.784732	75.710922	150+000	252+000	224+850 RHS Inner	3	40.2000	0.4576	0.3122	0.1705	0.0879	0.0563	0.0421	0.0321	30.1	31.6		36.4
917	1-5-2023	03:11:25	IL&FS	LSI	Solapur	MH	17.784914	75.707954	150+000	252+000	224+550 RHS Inner	1	42.9000	0.3595	0.2153	0.1166	0.0524	0.0323	0.0284	0.0256	30.0	30.7		36.4
	1-5-2023	03:11:25	IL&FS	LSI	Solapur	MH	17.784914	75.707954	150+000	252+000	224+550 RHS Inner	2	43.1000	0.3307	0.2023	0.1179	0.0533	0.0323	0.0298	0.0268	30.0	30.7		36.4
	1-5-2023	03:11:25	IL&FS	LSI	Solapur	MH	17.784914	75.707954	150+000	252+000	224+550 RHS Inner	3	43.1000	0.3590	0.2025	0.1165	0.0495	0.0300	0.0292	0.0263	30.0	30.7		36.4
918	1-5-2023	03:13:06	IL&FS	LSI	Solapur	MH	17.785058	75.706100	150+000	252+000	224+350 RHS Inner	1	40.9000	0.2604	0.1565	0.0856	0.0540	0.0345	0.0240	0.0167	29.7	31.1		36.4
	1-5-2023	03:13:06	IL&FS	LSI	Solapur	MH	17.785058	75.706100	150+000	252+000	224+350 RHS Inner	2	41.2000	0.2683	0.1571	0.0850	0.0547	0.0334	0.0228	0.0159	29.7	31.1		36.4
	1-5-2023	03:13:06	IL&FS	LSI	Solapur	MH	17.785058	75.706100	150+000	252+000	224+350 RHS Inner	3	41.0000	0.2841	0.1518	0.0847	0.0556	0.0343	0.0236	0.0166	29.7	31.1		36.4
919	1-5-2023	03:15:05	IL&FS	LSI	Solapur	MH	17.785503	75.703849	150+000	252+000	224+100 RHS Inner	1	41.6000	0.3240	0.1895	0.1113	0.0654	0.0471	0.0336	0.0257	29.9	31.3		36.4
	1-5-2023	03:15:05	IL&FS	LSI	Solapur	MH	17.785503	75.703849	150+000	252+000	224+100 RHS Inner	2	41.6000	0.3333	0.1832	0.1074	0.0627	0.0495	0.0348	0.0268	29.9	31.3		36.4
	1-5-2023	03:15:05	IL&FS	LSI	Solapur	MH	17.785503	75.703849	150+000	252+000	224+100 RHS Inner	3	41.6000	0.3272	0.1791	0.1106	0.0669	0.0512	0.0316	0.0239	29.9	31.3		36.4
920	1-5-2023	03:17:01	IL&FS	LSI	Solapur	MH	17.786571	75.701744	150+000	252+000	223+850 RHS Inner	1	42.3000	0.2508	0.1506	0.1084	0.0726	0.0499	0.0394	0.0295	30.0	31.1		36.4
	1-5-2023	03:17:01	IL&FS	LSI	Solapur	MH	17.786571	75.701744	150+000	252+000	223+850 RHS Inner	2	41.6000	0.2352	0.1487	0.1010	0.0644	0.0495	0.0392	0.0292	30.0	31.1		36.4
	1-5-2023	03:17:01	IL&FS	LSI	Solapur	MH	17.786571	75.701744	150+000	252+000	223+850 RHS Inner	3	41.3000	0.2621	0.1485	0.1004	0.0656	0.0491	0.0383	0.0284	30.0	31.1		36.4
921	1-5-2023	03:18:55	IL&FS	LSI	Solapur	MH	17.787588	75.699783	150+000	252+000	223+600 RHS Inner	1	42.2000	0.3846	0.2227	0.1200	0.0632	0.0407	0.0328	0.0249	29.9	31.1		36.4
	1-5-2023	03:18:55	IL&FS	LSI	Solapur	MH	17.787588	75.699783	150+000	252+000	223+600 RHS Inner	2	42.1000	0.3659	0.2232	0.1089	0.0583	0.0396	0.0321	0.0243	29.9	31.1		36.4
	1-5-2023	03:18:55	IL&FS	LSI	Solapur	MH	17.787588	75.699783	150+000	252+000	223+600 RHS Inner	3	41.2000	0.3443	0.2170	0.1103	0.0638	0.0388	0.0314	0.0237	29.9	31.1		36.4
922	1-5-2023	03:20:50	IL&FS	LSI	Solapur	MH	17.788633	75.697723	150+000	252+000	223+350 RHS Inner	1	42.5000	0.2183	0.1241	0.0888	0.0603	0.0348	0.0248	0.0184	29.8	31.1		36.4
	1-5-2023	03:20:50	IL&FS	LSI	Solapur	MH	17.788633	75.697723	150+000	252+000	223+350 RHS Inner	2	42.4000	0.2118	0.1272	0.0854	0.0562	0.0326	0.0237	0.0180	29.8	31.1		36.4
	1-5-2023	03:20:50	IL&FS	LSI	Solapur	MH	17.788633	75.697723	150+000	252+000	223+350 RHS Inner	3	42.8000	0.2079	0.1276	0.0849	0.0584	0.0339	0.0245	0.0185	29.8	31.1		36.4
923	1-5-2023	03:22:50	IL&FS	LSI	Solapur	MH	17.789707	75.695663	150+000	252+000	223+100 RHS Inner	1	41.9000	0.2625	0.1756	0.1093	0.0692	0.0443	0.0282	0.0200	30.0	31.4		36.4
	1-5-2023	03:22:50	IL&FS	LSI	Solapur	MH	17.789707	75.695663	150+000	252+000	223+100 RHS Inner	2	42.0000	0.2615	0.1699	0.0985	0.0694	0.0464	0.0285	0.0203	30.0	31.4		36.4
	1-5-2023	03:22:50	IL&FS	LSI	Solapur	MH	17.789707	75.695663	150+000	252+000	223+100 RHS Inner	3	42.7000	0.2416	0.1600	0.1000	0.0691	0.0450	0.0286	0.0203	30.0	31.4		36.4
924	1-5-2023	03:26:25	IL&FS	LSI	Solapur	MH	17.790685	75.693580	150+000	252+000	222+850 RHS Inner	1	42.4000	0.2939	0.1981	0.1131	0.0731	0.0579	0.0462	0.0354	30.3	32.2	T-26.8/37.5	37.5
	1-5-2023	03:26:25	IL&FS	LSI	Solapur	MH	17.790685	75.693580	150+000	252+000	222+850 RHS Inner	2	42.4000	0.2925	0.1951	0.1111	0.0798	0.0580	0.0466	0.0329	30.3	32.2	T-26.8/37.5	37.5
	1-5-2023	03:26:25	IL&FS	LSI	Solapur	MH	17.790685	75.693580	150+000	252+000	222+850 RHS Inner	3	42.5000	0.2952	0.1857	0.1185	0.0722	0.0611	0.0463	0.0326	30.3	32.2	T-26.8/37.5	37.5
925	1-5-2023	03:28:15	IL&FS	LSI	Solapur	MH	17.791027	75.691169	150+000	252+000	222+600 RHS Inner	1	41.9000	0.3032	0.1973	0.1185	0.0799	0.0497	0.0330	0.0213	30.3	31.3		37.5
	1-5-2023	03:28:15	IL&FS	LSI	Solapur	MH	17.791027	75.691169	150+000	252+000	222+600 RHS Inner	2	42.0000	0.3030	0.2056	0.1173	0.0775	0.0522	0.0330	0.0213	30.3	31.3		37.5
	1-5-2023	03:28:15	IL&FS	LSI	Solapur	MH	17.791027	75.691169	150+000	252+000	222+600 RHS Inner	3	41.5000	0.2998	0.2025	0.1146	0.0763	0.0499	0.0327	0.0210	30.3	31.3		37.5
926	1-5-2023	03:30:15	IL&FS	LSI	Solapur	MH	17.791301	75.688850	150+000	252+000	222+350 RHS Inner	1	40.1000	0.3165	0.2083	0.1349	0.0833	0.0479	0.0389	0.0324	30.2	31.3		37.5
	1-5-2023	03:30:15	IL&FS	LSI	Solapur	MH	17.791301	75.688850	150+000	252+000	222+350 RHS Inner	2	40.1000	0.3307	0.2167	0.1349	0.0840	0.0481	0.0383	0.0312	30.2	31.3		37.5
	1-5-2023	03:30:15	IL&FS	LSI	Solapur	MH	17.791301	75.688850	150+000	252+000	222+350 RHS Inner	3	40.3000	0.3232	0.2121	0.1291	0.0808	0.0501	0.0405	0.0344	30.2	31.3		37.5
927	1-5-2023	03:32:03	IL&FS	LSI	Solapur	MH	17.791570	75.686523	150+000	252+000	222+100 RHS Inner	1	43.4000	0.1776	0.1318	0.0932	0.0694	0.0492	0.0341	0.0237	30.1	31.3		37.5
	1-5-2023	03:32:03	IL&FS	LSI	Solapur	MH	17.791570	75.686523	150+000	252+000	222+100 RHS Inner	2	43.1000	0.1857	0.1317	0.0966	0.0691	0.0470	0.0332	0.0233	30.1	31.3		37.5
	1-5-2023	03:32:03	IL&FS	LSI	Solapur	MH	17.791570	75.686523	150+000	252+000	222+100 RHS Inner	3	43.4000	0.1738	0.1267	0.0922	0.0700	0.0482	0.0331	0.0234	30.1	31.3		37.5
928	1-5-2023	03:33:57	IL&FS	LSI	Solapur	MH	17.792209	75.684219	150+000	252+000	221+850 RHS Inner	1	41.0000	0.2922	0.1836	0.1166	0.0569	0.0335	0.0236	0.0171	30.2	31.4		37.5
	1-5-2023	03:33:57	IL&FS	LSI	Solapur	MH	17.792209	75.684219	150+000	252+000	221+850 RHS Inner	2	42.5000	0.2732	0.1944	0.1124	0.0658	0.0348	0.0245	0.0173	30.2	31.4		37.5
	1-5-2023	03:33:57	IL&FS	LSI	Solapur	MH	17.792209	75.684219	150+000	252+000	221+850 RHS Inner	3	42.6000	0.2954	0.1882	0.1217	0.0663	0.0368	0.0250	0.0174	30.2	31.4		37.5
929	1-5-2023	03:35:52	IL&FS	LSI	Solapur	MH	17.792898	75.681877	150+000	252+000	221+600 RHS Inner	1	40.5000	0.4944	0.3085	0.1459	0.0952	0.0647	0.0418	0.0276	30.0	31.0		37.5
	1-5-2023	03:35:52	IL&FS	LSI	Solapur	MH	17.792898	75.681877	150+000	252+000	221+600 RHS Inner	2	40.8000	0.5057	0.2748	0.1421	0.0922	0.0638	0.0422	0.0280	30.0	31.0		37.5
	1-5-2023	03:35:52	IL&FS	LSI	Solapur	MH	17.792898	75.681877	150+000	252+000	221+600 RHS Inner	3	40.9000	0.4996	0.2847	0.1436	0.0875	0.0613	0.0420	0.0278	30.0	31.0		37.5
930	1-5-2023	03:37:55	IL&FS	LSI	Solapur	MH	17.793684	75.679252	150+000	252+000	221+300 RHS Inner	1	40.0000	0.3692	0.2553	0.1374	0.0905	0.0560	0.0363	0.0235	30.0	31.0		37.5
	1-5-2023	03:37:55	IL&FS	LSI	Solapur	MH	17.793684	75.679252	150+000	252+000	221+300 RHS Inner	2	40.9000	0.3750	0.2346	0.1435	0.0908	0.0568	0.0378	0.0259	30.0	31.0		37.5
	1-5-2023	03:37:55	IL&FS	LSI	Solapur	MH	17.793684	75.679252	150+000	252+000	221+300 RHS Inner	3	39.5000	0.3492	0.2319	0.1363	0.0873	0.0561	0.0362	0.0212	30.0	31.0		37.5
931	1-5-2023	03:39:56	IL&FS	LSI	Solapur	MH	17.794240	75.677474	150+000	252+000	221+100 RHS Inner	1	42.1000	0.4062	0.2761	0.1630	0.0985	0.0555	0.0388	0.0265	30.0	31.4		37.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	03:39:56	IL&FS	LSI	Solapur	MH	17.794240	75.677474	150+000	252+000	221+100 RHS Inner	2	41.7000	0.4013	0.2660	0.1584	0.0969	0.0548	0.0377	0.0257	30.0	31.4		37.5
	1-5-2023	03:39:56	IL&FS	LSI	Solapur	MH	17.794240	75.677474	150+000	252+000	221+100 RHS Inner	3	42.4000	0.3864	0.2693	0.1632	0.1009	0.0573	0.0392	0.0270	30.0	31.4		37.5
932	1-5-2023	03:41:59	IL&FS	LSI	Solapur	MH	17.794916	75.675216	150+000	252+000	220+850 RHS Inner	1	41.6000	0.3898	0.2438	0.1328	0.0704	0.0469	0.0322	0.0290	30.1	31.4		37.5
	1-5-2023	03:41:59	IL&FS	LSI	Solapur	MH	17.794916	75.675216	150+000	252+000	220+850 RHS Inner	2	41.8000	0.3628	0.2262	0.1419	0.0778	0.0476	0.0334	0.0301	30.1	31.4		37.5
	1-5-2023	03:41:59	IL&FS	LSI	Solapur	MH	17.794916	75.675216	150+000	252+000	220+850 RHS Inner	3	42.2000	0.3633	0.2304	0.1373	0.0719	0.0479	0.0344	0.0310	30.1	31.4		37.5
933	1-5-2023	03:43:50	IL&FS	LSI	Solapur	MH	17.795583	75.672966	150+000	252+000	220+600 RHS Inner	1	39.3000	0.6979	0.4162	0.2049	0.1230	0.0896	0.0641	0.0343	29.9	30.9		37.5
	1-5-2023	03:43:50	IL&FS	LSI	Solapur	MH	17.795583	75.672966	150+000	252+000	220+600 RHS Inner	2	39.4000	0.6458	0.3985	0.2039	0.1232	0.0880	0.0636	0.0365	29.9	30.9		37.5
	1-5-2023	03:43:50	IL&FS	LSI	Solapur	MH	17.795583	75.672966	150+000	252+000	220+600 RHS Inner	3	39.5000	0.6320	0.3947	0.2004	0.1233	0.0899	0.0653	0.0331	29.9	30.9		37.5
934	1-5-2023	03:45:49	IL&FS	LSI	Solapur	MH	17.796258	75.670776	150+000	252+000	220+350 RHS Inner	1	39.6000	0.6346	0.3616	0.1850	0.1190	0.0756	0.0568	0.0450	29.8	31.0		37.5
	1-5-2023	03:45:49	IL&FS	LSI	Solapur	MH	17.796258	75.670776	150+000	252+000	220+350 RHS Inner	2	39.6000	0.6341	0.3638	0.1876	0.1221	0.0718	0.0543	0.0423	29.8	31.0		37.5
	1-5-2023	03:45:49	IL&FS	LSI	Solapur	MH	17.796258	75.670776	150+000	252+000	220+350 RHS Inner	3	40.2000	0.6533	0.3679	0.1849	0.1228	0.0759	0.0585	0.0450	29.8	31.0		37.5
935	1-5-2023	03:47:49	IL&FS	LSI	Solapur	MH	17.796930	75.668472	150+000	252+000	220+100 RHS Inner	1	41.6000	0.4403	0.2510	0.1403	0.0791	0.0530	0.0343	0.0248	29.5	30.4		37.5
	1-5-2023	03:47:49	IL&FS	LSI	Solapur	MH	17.796930	75.668472	150+000	252+000	220+100 RHS Inner	2	42.0000	0.4190	0.2401	0.1399	0.0797	0.0550	0.0374	0.0277	29.5	30.4		37.5
	1-5-2023	03:47:49	IL&FS	LSI	Solapur	MH	17.796930	75.668472	150+000	252+000	220+100 RHS Inner	3	42.2000	0.4110	0.2638	0.1402	0.0804	0.0578	0.0409	0.0308	29.5	30.4		37.5
936	1-5-2023	03:49:48	IL&FS	LSI	Solapur	MH	17.797580	75.666252	150+000	252+000	219+850 RHS Inner	1	39.3000	0.5955	0.3446	0.1925	0.1317	0.0909	0.0621	0.0432	29.6	31.0		37.5
	1-5-2023	03:49:48	IL&FS	LSI	Solapur	MH	17.797580	75.666252	150+000	252+000	219+850 RHS Inner	2	39.0000	0.5716	0.3360	0.1910	0.1359	0.0937	0.0656	0.0445	29.6	31.0		37.5
	1-5-2023	03:49:48	IL&FS	LSI	Solapur	MH	17.797580	75.666252	150+000	252+000	219+850 RHS Inner	3	39.6000	0.5460	0.3370	0.1927	0.1325	0.0900	0.0636	0.0445	29.6	31.0		37.5
937	1-5-2023	03:52:44	IL&FS	LSI	Solapur	MH	17.798290	75.663993	150+000	252+000	219+600 RHS Inner	1	42.4000	0.2581	0.1887	0.1118	0.0730	0.0490	0.0331	0.0233	29.7	30.9		37.5
	1-5-2023	03:52:44	IL&FS	LSI	Solapur	MH	17.798290	75.663993	150+000	252+000	219+600 RHS Inner	2	42.2000	0.2634	0.1778	0.1135	0.0740	0.0496	0.0340	0.0240	29.7	30.9		37.5
	1-5-2023	03:52:44	IL&FS	LSI	Solapur	MH	17.798290	75.663993	150+000	252+000	219+600 RHS Inner	3	42.4000	0.2571	0.1681	0.1140	0.0767	0.0499	0.0344	0.0242	29.7	30.9		37.5
938	1-5-2023	03:54:31	IL&FS	LSI	Solapur	MH	17.798944	75.661834	150+000	252+000	219+350 RHS Inner	1	42.8000	0.3697	0.1877	0.0861	0.0495	0.0333	0.0206	0.0185	29.8	30.2		37.5
	1-5-2023	03:54:31	IL&FS	LSI	Solapur	MH	17.798944	75.661834	150+000	252+000	219+350 RHS Inner	2	41.8000	0.3532	0.1859	0.0906	0.0464	0.0321	0.0211	0.0189	29.8	30.2		37.5
	1-5-2023	03:54:31	IL&FS	LSI	Solapur	MH	17.798944	75.661834	150+000	252+000	219+350 RHS Inner	3	43.1000	0.3720	0.1860	0.0886	0.0492	0.0325	0.0207	0.0186	29.8	30.2		37.5
939	1-5-2023	03:56:31	IL&FS	LSI	Solapur	MH	17.799621	75.659507	150+000	252+000	219+100 RHS Inner	1	41.3000	0.5772	0.3341	0.1958	0.1176	0.0853	0.0636	0.0422	29.5	30.0		37.5
	1-5-2023	03:56:31	IL&FS	LSI	Solapur	MH	17.799621	75.659507	150+000	252+000	219+100 RHS Inner	2	41.2000	0.5929	0.3313	0.1957	0.1163	0.0866	0.0675	0.0458	29.5	30.0		37.5
	1-5-2023	03:56:31	IL&FS	LSI	Solapur	MH	17.799621	75.659507	150+000	252+000	219+100 RHS Inner	3	40.9000	0.5435	0.3277	0.1946	0.1146	0.0842	0.0636	0.0422	29.5	30.0		37.5
940	1-5-2023	04:00:13	IL&FS	LSI	Solapur	MH	17.800363	75.657135	150+000	252+000	218+850 RHS Inner	1	40.2000	0.5797	0.3016	0.1613	0.0965	0.0705	0.0533	0.0290	29.5	30.5	T-26.3/33.8	33.8
	1-5-2023	04:00:13	IL&FS	LSI	Solapur	MH	17.800363	75.657135	150+000	252+000	218+850 RHS Inner	2	40.7000	0.5450	0.2966	0.1555	0.0904	0.0655	0.0495	0.0310	29.5	30.5	T-26.3/33.8	33.8
	1-5-2023	04:00:13	IL&FS	LSI	Solapur	MH	17.800363	75.657135	150+000	252+000	218+850 RHS Inner	3	40.4000	0.5149	0.2734	0.1606	0.0927	0.0646	0.0443	0.0346	29.5	30.5	T-26.3/33.8	33.8
941	1-5-2023	04:02:27	IL&FS	LSI	Solapur	MH	17.801042	75.654945	150+000	252+000	218+600 RHS Inner	1	39.9000	0.5710	0.3057	0.1957	0.1177	0.0765	0.0462	0.0216	29.4	30.3		33.8
	1-5-2023	04:02:27	IL&FS	LSI	Solapur	MH	17.801042	75.654945	150+000	252+000	218+600 RHS Inner	2	40.4000	0.5300	0.3071	0.1976	0.1231	0.0786	0.0482	0.0221	29.4	30.3		33.8
	1-5-2023	04:02:27	IL&FS	LSI	Solapur	MH	17.801042	75.654945	150+000	252+000	218+600 RHS Inner	3	38.7000	0.5062	0.3051	0.1947	0.1091	0.0719	0.0456	0.0218	29.4	30.3		33.8
942	1-5-2023	04:04:24	IL&FS	LSI	Solapur	MH	17.802045	75.652656	150+000	252+000	218+350 RHS Inner	1	39.9000	0.4817	0.2665	0.1362	0.0817	0.0612	0.0461	0.0362	29.5	30.6		33.8
	1-5-2023	04:04:24	IL&FS	LSI	Solapur	MH	17.802045	75.652656	150+000	252+000	218+350 RHS Inner	2	40.0000	0.4752	0.2554	0.1434	0.0847	0.0619	0.0492	0.0407	29.5	30.6		33.8
	1-5-2023	04:04:24	IL&FS	LSI	Solapur	MH	17.802045	75.652656	150+000	252+000	218+350 RHS Inner	3	40.3000	0.4438	0.2469	0.1364	0.0790	0.0564	0.0488	0.0435	29.5	30.6		33.8
943	1-5-2023	04:06:25	IL&FS	LSI	Solapur	MH	17.803030	75.650634	150+000	252+000	218+100 RHS Inner	1	41.2000	0.4397	0.2299	0.1459	0.0829	0.0539	0.0332	0.0239	29.6	31.1		33.8
	1-5-2023	04:06:25	IL&FS	LSI	Solapur	MH	17.803030	75.650634	150+000	252+000	218+100 RHS Inner	2	40.9000	0.4376	0.2553	0.1407	0.0812	0.0539	0.0329	0.0236	29.6	31.1		33.8
	1-5-2023	04:06:25	IL&FS	LSI	Solapur	MH	17.803030	75.650634	150+000	252+000	218+100 RHS Inner	3	39.8000	0.4003	0.2388	0.1389	0.0841	0.0523	0.0317	0.0225	29.6	31.1		33.8
944	1-5-2023	04:08:37	IL&FS	LSI	Solapur	MH	17.804042	75.648658	150+000	252+000	217+850 RHS Inner	1	40.7000	0.4106	0.2532	0.1373	0.0840	0.0465	0.0342	0.0250	29.9	31.8		33.8
	1-5-2023	04:08:37	IL&FS	LSI	Solapur	MH	17.804042	75.648658	150+000	252+000	217+850 RHS Inner	2	42.6000	0.4399	0.2640	0.1466	0.0900	0.0498	0.0365	0.0276	29.9	31.8		33.8
	1-5-2023	04:08:37	IL&FS	LSI	Solapur	MH	17.804042	75.648658	150+000	252+000	217+850 RHS Inner	3	41.0000	0.4253	0.2535	0.1414	0.0819	0.0452	0.0324	0.0240	29.9	31.8		33.8
945	1-5-2023	06:40:39	IL&FS	LSI	Solapur	MH	17.807239	75.641998	150+000	252+000	217+100 RHS Inner	1	41.4000	0.3102	0.2055	0.1235	0.0844	0.0569	0.0423	0.0317	28.1	30.4	T-27.3/36.3	36.3
	1-5-2023	06:40:39	IL&FS	LSI	Solapur	MH	17.807239	75.641998	150+000	252+000	217+100 RHS Inner	2	41.2000	0.3304	0.1851	0.1167	0.0818	0.0558	0.0405	0.0293	28.1	30.4	T-27.3/36.3	36.3
	1-5-2023	06:40:39	IL&FS	LSI	Solapur	MH	17.807239	75.641998	150+000	252+000	217+100 RHS Inner	3	41.5000	0.3225	0.1979	0.1113	0.0791	0.0552	0.0407	0.0316	28.1	30.4	T-27.3/36.3	36.3
946	1-5-2023	06:43:48	IL&FS	LSI	Solapur	MH	17.809556	75.638031	150+000	252+000	216+600 RHS Inner	1	38.8000	0.6286	0.3434	0.1669	0.1014	0.0599	0.0364	0.0201	28.2	29.6		36.3
	1-5-2023	06:43:48	IL&FS	LSI	Solapur	MH	17.809556	75.638031	150+000	252+000	216+600 RHS Inner	2	39.3000	0.5826	0.3441	0.1548	0.0982	0.0591	0.0376	0.0218	28.2	29.6		36.3
	1-5-2023	06:43:48	IL&FS	LSI	Solapur	MH	17.809556	75.638031	150+000	252+000	216+600 RHS Inner	3	38.9000	0.6150	0.3186	0.1596	0.0968	0.0571	0.0371	0.0228	28.2	29.6		36.3
947	1-5-2023	06:45:53	IL&FS	LSI	Solapur	MH	17.811323	75.636703	150+000	252+000	216+360 RHS Inner	1	41.3000	0.2996	0.1761	0.1128	0.0664	0.0422	0.0273	0.0185	28.1	29.2		36.3
	1-5-2023	06:45:53	IL&FS	LSI	Solapur	MH	17.811323	75.636703	150+000	252+000	216+360 RHS Inner	2	42.0000	0.3005	0.1941	0.1069	0.0679	0.0427	0.0264	0.0177	28.1	29.2		36.3
	1-5-2023	06:45:53	IL&FS	LSI	Solapur	MH	17.811323	75.636703	150+000	252+000	216+360 RHS Inner	3	42.0000	0.3263	0.1747	0.1155	0.0682	0.0442	0.0259	0.0173	28.1	29.2		36.3
948	1-5-2023	06:48:00	IL&FS	LSI	Solapur	MH	17.813241	75.635261	150+000	252+000	216+100 RHS Inner	1	42.0000	0.2223	0.1630	0.1189	0.0781	0.0498	0.0336	0.0222	27.4	28.4		36.3
	1-5-2023	06:48:00	IL&FS	LSI	Solapur	MH	17.813241	75.635261	150+000	252+000	216+100 RHS Inner	2	42.4000	0.2284	0.1692	0.1113	0.0753	0.0486	0.0346	0.0265	27.4	28.4		36.3
	1-5-2023	06:48:00	IL&FS	LSI	Solapur	MH	17.813241	75.635261	150+000	252+000	216+100 RHS Inner	3	42.4000	0.2126	0.1578	0.1129	0.0755	0.0475	0.0351	0.0261	27.4	28.4		36.3
949	1-5-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.814632	75.633224	150+000	252+000	215+850 RHS Inner	1	43.2000	0.3418	0.1922	0.1337	0.0911	0.0600	0.0360	0.0244	27.2	28.3		36.3
	1-5-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.814632	75.633224	150+000	252+000	215+850 RHS Inner	2	43.4000	0.3073	0.2063	0.1396	0.0932	0.0604	0.0347	0.0232	27.2	28.3		36.3
	1-5-2023	06:49:42	IL&FS	LSI	Solapur	MH	17.814632	75.633224	150+000	252+000	215+850 RHS Inner	3	43.5000	0.3192	0.2117	0.1451	0.1028	0.0625	0.0333	0.0220	27.2	28.3		36.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
950	1-5-2023	06:51:29	IL&FS	LSI	Solapur	MH	17.815757	75.631385	150+000	252+000	215+600 RHS Inner	1	40.9000	0.4030	0.2319	0.1284	0.0740	0.0382	0.0285	0.0209	27.3	28.4		36.3
	1-5-2023	06:51:29	IL&FS	LSI	Solapur	MH	17.815757	75.631385	150+000	252+000	215+600 RHS Inner	2	41.2000	0.3868	0.2477	0.1238	0.0742	0.0421	0.0297	0.0206	27.3	28.4		36.3
	1-5-2023	06:51:29	IL&FS	LSI	Solapur	MH	17.815757	75.631385	150+000	252+000	215+600 RHS Inner	3	41.4000	0.3988	0.2362	0.1224	0.0719	0.0385	0.0279	0.0207	27.3	28.4		36.3
951	1-5-2023	06:53:13	IL&FS	LSI	Solapur	MH	17.817064	75.629364	150+000	252+000	215+350 RHS Inner	1	41.9000	0.5263	0.2686	0.1384	0.0929	0.0617	0.0461	0.0355	27.4	29.8		36.3
	1-5-2023	06:53:13	IL&FS	LSI	Solapur	MH	17.817064	75.629364	150+000	252+000	215+350 RHS Inner	2	41.8000	0.4908	0.2964	0.1359	0.0940	0.0596	0.0449	0.0344	27.4	29.8		36.3
	1-5-2023	06:53:13	IL&FS	LSI	Solapur	MH	17.817064	75.629364	150+000	252+000	215+350 RHS Inner	3	41.7000	0.5162	0.2750	0.1401	0.0880	0.0605	0.0448	0.0343	27.4	29.8		36.3
952	1-5-2023	06:54:54	IL&FS	LSI	Solapur	MH	17.818208	75.627410	150+000	252+000	215+100 RHS Inner	1	43.9000	0.3041	0.1550	0.1011	0.0664	0.0455	0.0299	0.0224	27.7	29.8		36.3
	1-5-2023	06:54:54	IL&FS	LSI	Solapur	MH	17.818208	75.627410	150+000	252+000	215+100 RHS Inner	2	44.0000	0.2904	0.1617	0.1008	0.0636	0.0434	0.0281	0.0208	27.7	29.8		36.3
	1-5-2023	06:54:54	IL&FS	LSI	Solapur	MH	17.818208	75.627410	150+000	252+000	215+100 RHS Inner	3	44.1000	0.2928	0.1496	0.0973	0.0719	0.0483	0.0299	0.0224	27.7	29.8		36.3
953	1-5-2023	06:56:45	IL&FS	LSI	Solapur	MH	17.819374	75.625411	150+000	252+000	214+850 RHS Inner	1	39.3000	0.4429	0.2315	0.1302	0.0840	0.0517	0.0406	0.0365	27.9	30.9		36.3
	1-5-2023	06:56:45	IL&FS	LSI	Solapur	MH	17.819374	75.625411	150+000	252+000	214+850 RHS Inner	2	40.6000	0.4456	0.2414	0.1262	0.0831	0.0542	0.0430	0.0387	27.9	30.9		36.3
	1-5-2023	06:56:45	IL&FS	LSI	Solapur	MH	17.819374	75.625411	150+000	252+000	214+850 RHS Inner	3	39.7000	0.4324	0.2399	0.1244	0.0822	0.0515	0.0406	0.0365	27.9	30.9		36.3
954	1-5-2023	06:58:43	IL&FS	LSI	Solapur	MH	17.820575	75.623374	150+000	252+000	214+600 RHS Inner	1	39.6000	0.4687	0.2602	0.1570	0.1020	0.0666	0.0507	0.0399	28.2	30.5		36.3
	1-5-2023	06:58:43	IL&FS	LSI	Solapur	MH	17.820575	75.623374	150+000	252+000	214+600 RHS Inner	2	39.9000	0.4608	0.2598	0.1490	0.1023	0.0668	0.0492	0.0358	28.2	30.5		36.3
	1-5-2023	06:58:43	IL&FS	LSI	Solapur	MH	17.820575	75.623374	150+000	252+000	214+600 RHS Inner	3	40.2000	0.4489	0.2666	0.1521	0.1015	0.0662	0.0476	0.0399	28.2	30.5		36.3
955	1-5-2023	07:00:31	IL&FS	LSI	Solapur	MH	17.821746	75.621353	150+000	252+000	214+350 RHS Inner	1	40.9000	0.4862	0.2782	0.1577	0.0906	0.0626	0.0416	0.0374	28.3	30.9		36.3
	1-5-2023	07:00:31	IL&FS	LSI	Solapur	MH	17.821746	75.621353	150+000	252+000	214+350 RHS Inner	2	41.0000	0.4883	0.2756	0.1624	0.0907	0.0620	0.0418	0.0376	28.3	30.9		36.3
	1-5-2023	07:00:31	IL&FS	LSI	Solapur	MH	17.821746	75.621353	150+000	252+000	214+350 RHS Inner	3	41.4000	0.4765	0.2800	0.1668	0.0849	0.0605	0.0422	0.0380	28.3	30.9		36.3
956	1-5-2023	07:02:23	IL&FS	LSI	Solapur	MH	17.822896	75.619407	150+000	252+000	214+100 RHS Inner	1	41.6000	0.3999	0.2118	0.1299	0.0702	0.0469	0.0371	0.0241	28.7	31.0		36.3
	1-5-2023	07:02:23	IL&FS	LSI	Solapur	MH	17.822896	75.619407	150+000	252+000	214+100 RHS Inner	2	41.9000	0.3909	0.2078	0.1236	0.0739	0.0488	0.0358	0.0255	28.7	31.0		36.3
	1-5-2023	07:02:23	IL&FS	LSI	Solapur	MH	17.822896	75.619407	150+000	252+000	214+100 RHS Inner	3	41.9000	0.3872	0.2062	0.1310	0.0713	0.0486	0.0373	0.0263	28.7	31.0		36.3
957	1-5-2023	07:04:13	IL&FS	LSI	Solapur	MH	17.824150	75.617256	150+000	252+000	213+840 RHS Inner	1	40.7000	0.4302	0.2415	0.1361	0.0736	0.0437	0.0335	0.0265	28.8	31.6		36.3
	1-5-2023	07:04:13	IL&FS	LSI	Solapur	MH	17.824150	75.617256	150+000	252+000	213+840 RHS Inner	2	40.8000	0.4037	0.2320	0.1351	0.0755	0.0439	0.0338	0.0274	28.8	31.6		36.3
	1-5-2023	07:04:13	IL&FS	LSI	Solapur	MH	17.824150	75.617256	150+000	252+000	213+840 RHS Inner	3	40.7000	0.4080	0.2418	0.1401	0.0773	0.0426	0.0323	0.0251	28.8	31.6		36.3
958	1-5-2023	07:06:14	IL&FS	LSI	Solapur	MH	17.825309	75.615364	150+000	252+000	213+600 RHS Inner	1	42.1000	0.3084	0.1924	0.1050	0.0659	0.0455	0.0297	0.0207	29.0	31.4		36.3
	1-5-2023	07:06:14	IL&FS	LSI	Solapur	MH	17.825309	75.615364	150+000	252+000	213+600 RHS Inner	2	42.5000	0.3241	0.1840	0.1073	0.0706	0.0464	0.0302	0.0207	29.0	31.4		36.3
	1-5-2023	07:06:14	IL&FS	LSI	Solapur	MH	17.825309	75.615364	150+000	252+000	213+600 RHS Inner	3	42.9000	0.3014	0.1801	0.1110	0.0747	0.0496	0.0303	0.0202	29.0	31.4		36.3
959	1-5-2023	07:08:36	IL&FS	LSI	Solapur	MH	17.826498	75.613357	150+000	252+000	213+350 RHS Inner	1	40.7000	0.4134	0.2403	0.1190	0.0807	0.0581	0.0406	0.0365	29.1	31.1		36.3
	1-5-2023	07:08:36	IL&FS	LSI	Solapur	MH	17.826498	75.613357	150+000	252+000	213+350 RHS Inner	2	40.5000	0.4042	0.2313	0.1197	0.0803	0.0580	0.0410	0.0369	29.1	31.1		36.3
	1-5-2023	07:08:36	IL&FS	LSI	Solapur	MH	17.826498	75.613357	150+000	252+000	213+350 RHS Inner	3	40.6000	0.4113	0.2331	0.1240	0.0781	0.0600	0.0446	0.0401	29.1	31.1		36.3
960	1-5-2023	07:10:27	IL&FS	LSI	Solapur	MH	17.827724	75.611198	150+000	252+000	213+080 RHS Inner	1	41.2000	0.3298	0.2061	0.1178	0.0720	0.0556	0.0382	0.0256	29.2	31.7		36.3
	1-5-2023	07:10:27	IL&FS	LSI	Solapur	MH	17.827724	75.611198	150+000	252+000	213+080 RHS Inner	2	41.5000	0.3327	0.1911	0.1218	0.0730	0.0553	0.0371	0.0247	29.2	31.7		36.3
	1-5-2023	07:10:27	IL&FS	LSI	Solapur	MH	17.827724	75.611198	150+000	252+000	213+080 RHS Inner	3	41.4000	0.3198	0.1951	0.1180	0.0740	0.0546	0.0366	0.0251	29.2	31.7		36.3
961	1-5-2023	07:12:15	IL&FS	LSI	Solapur	MH	17.828851	75.609321	150+000	252+000	212+850 RHS Inner	1	40.6000	0.5071	0.2821	0.1473	0.0778	0.0518	0.0386	0.0347	29.4	31.8		36.3
	1-5-2023	07:12:15	IL&FS	LSI	Solapur	MH	17.828851	75.609321	150+000	252+000	212+850 RHS Inner	2	40.8000	0.5036	0.2835	0.1449	0.0799	0.0530	0.0433	0.0390	29.4	31.8		36.3
	1-5-2023	07:12:15	IL&FS	LSI	Solapur	MH	17.828851	75.609321	150+000	252+000	212+850 RHS Inner	3	40.4000	0.5012	0.2807	0.1454	0.0780	0.0519	0.0408	0.0367	29.4	31.8		36.3
962	1-5-2023	07:14:13	IL&FS	LSI	Solapur	MH	17.830121	75.607231	150+000	252+000	212+600 RHS Inner	1	41.6000	0.3750	0.2098	0.1085	0.0724	0.0499	0.0348	0.0234	29.5	31.5		36.3
	1-5-2023	07:14:13	IL&FS	LSI	Solapur	MH	17.830121	75.607231	150+000	252+000	212+600 RHS Inner	2	41.5000	0.3760	0.1915	0.1098	0.0790	0.0548	0.0378	0.0256	29.5	31.5		36.3
	1-5-2023	07:14:13	IL&FS	LSI	Solapur	MH	17.830121	75.607231	150+000	252+000	212+600 RHS Inner	3	41.7000	0.3805	0.2092	0.1069	0.0745	0.0522	0.0350	0.0242	29.5	31.5		36.3
963	1-5-2023	07:16:11	IL&FS	LSI	Solapur	MH	17.831184	75.605209	150+000	252+000	212+350 RHS Inner	1	40.3000	0.6682	0.3491	0.1703	0.1032	0.0523	0.0408	0.0320	29.8	32.3		36.3
	1-5-2023	07:16:11	IL&FS	LSI	Solapur	MH	17.831184	75.605209	150+000	252+000	212+350 RHS Inner	2	40.8000	0.6410	0.3518	0.1700	0.0962	0.0501	0.0384	0.0306	29.8	32.3		36.3
	1-5-2023	07:16:11	IL&FS	LSI	Solapur	MH	17.831184	75.605209	150+000	252+000	212+350 RHS Inner	3	40.6000	0.6490	0.3507	0.1621	0.0998	0.0528	0.0404	0.0317	29.8	32.3		36.3
964	1-5-2023	07:18:00	IL&FS	LSI	Solapur	MH	17.832025	75.603019	150+000	252+000	212+100 RHS Inner	1	39.4000	0.6323	0.3457	0.1897	0.1204	0.0671	0.0504	0.0387	30.0	32.4	T-27.1/34	34
	1-5-2023	07:18:00	IL&FS	LSI	Solapur	MH	17.832025	75.603019	150+000	252+000	212+100 RHS Inner	2	39.5000	0.6156	0.3453	0.1845	0.1181	0.0735	0.0524	0.0393	30.0	32.4	T-27.1/34	34
	1-5-2023	07:18:00	IL&FS	LSI	Solapur	MH	17.832025	75.603019	150+000	252+000	212+100 RHS Inner	3	39.1000	0.6134	0.3405	0.1789	0.1164	0.0706	0.0508	0.0386	30.0	32.4	T-27.1/34	34
965	1-5-2023	07:20:08	IL&FS	LSI	Solapur	MH	17.832847	75.600830	150+000	252+000	211+850 RHS Inner	1	42.0000	0.4831	0.2603	0.1558	0.0961	0.0546	0.0370	0.0251	30.0	32.0		34
	1-5-2023	07:20:08	IL&FS	LSI	Solapur	MH	17.832847	75.600830	150+000	252+000	211+850 RHS Inner	2	41.8000	0.4483	0.2557	0.1436	0.0916	0.0543	0.0361	0.0249	30.0	32.0		34
	1-5-2023	07:20:08	IL&FS	LSI	Solapur	MH	17.832847	75.600830	150+000	252+000	211+850 RHS Inner	3	42.1000	0.4358	0.2730	0.1518	0.0974	0.0547	0.0375	0.0251	30.0	32.0		34
966	1-5-2023	07:23:05	IL&FS	LSI	Solapur	MH	17.833665	75.598655	150+000	252+000	211+600 RHS Inner	1	42.2000	0.3349	0.1717	0.0925	0.0556	0.0413	0.0319	0.0262	30.1	33.3		34
	1-5-2023	07:23:05	IL&FS	LSI	Solapur	MH	17.833665	75.598655	150+000	252+000	211+600 RHS Inner	2	42.5000	0.3198	0.1614	0.0945	0.0522	0.0423	0.0349	0.0275	30.1	33.3		34
	1-5-2023	07:23:05	IL&FS	LSI	Solapur	MH	17.833665	75.598655	150+000	252+000	211+600 RHS Inner	3	43.5000	0.3373	0.1727	0.0958	0.0571	0.0436	0.0340	0.0266	30.1	33.3		34
967	1-5-2023	07:24:52	IL&FS	LSI	Solapur	MH	17.834478	75.596458	150+000	252+000	211+350 RHS Inner	1	43.6000	0.2629	0.1362	0.0857	0.0609	0.0415	0.0337	0.0278	30.6	33.6		34
	1-5-2023	07:24:52	IL&FS	LSI	Solapur	MH	17.834478	75.596458	150+000	252+000	211+350 RHS Inner	2	43.7000	0.2510	0.1383	0.0849	0.0598	0.0401	0.0318	0.0266	30.6	33.6		34
	1-5-2023	07:24:52	IL&FS	LSI	Solapur	MH	17.834478	75.596458	150+000	252+000	211+350 RHS Inner	3	43.4000	0.2503	0.1344	0.0819	0.0580	0.0432	0.0354	0.0297	30.6	33.6		34
968	1-5-2023	07:26:41	IL&FS	LSI	Solapur	MH	17.835325	75.594253	150+000	252+000	211+100 RHS Inner	1	42.8000	0.3484	0.1842	0.1129	0.0752	0.0498	0.0365	0.0268	30.8	33.5		34
	1-5-2023	07:26:41	IL&FS	LSI	Solapur	MH	17.835325	75.594253	150+000	252+000	211+100 RHS Inner	2	42.9000	0.3542	0.1714	0.1120	0.0749	0.0511	0.0366	0.0268	30.8	33.5		34

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	07:26:41	IL&FS	LSI	Solapur	MH	17.835325	75.594253	150+000	252+000	211+100 RHS Inner	3	43.1000	0.3524	0.1814	0.1125	0.0730	0.0474	0.0353	0.0269	30.8	33.5		34
969	1-5-2023	07:28:25	IL&FS	LSI	Solapur	MH	17.836126	75.592079	150+000	252+000	210+850 RHS Inner	1	40.4000	0.4949	0.2651	0.1638	0.1044	0.0609	0.0393	0.0251	30.5	33.3		34
	1-5-2023	07:28:25	IL&FS	LSI	Solapur	MH	17.836126	75.592079	150+000	252+000	210+850 RHS Inner	2	41.0000	0.4883	0.2638	0.1699	0.0991	0.0550	0.0371	0.0256	30.5	33.3		34
	1-5-2023	07:28:25	IL&FS	LSI	Solapur	MH	17.836126	75.592079	150+000	252+000	210+850 RHS Inner	3	41.3000	0.4933	0.2721	0.1599	0.0967	0.0578	0.0384	0.0259	30.5	33.3		34
970	1-5-2023	07:30:17	IL&FS	LSI	Solapur	MH	17.836978	75.589790	150+000	252+000	210+600 RHS Inner	1	40.6000	0.4094	0.2691	0.1269	0.0636	0.0376	0.0230	0.0128	30.6	33.9		34
	1-5-2023	07:30:17	IL&FS	LSI	Solapur	MH	17.836978	75.589790	150+000	252+000	210+600 RHS Inner	2	40.9000	0.4094	0.2715	0.1323	0.0658	0.0371	0.0227	0.0128	30.6	33.9		34
	1-5-2023	07:30:17	IL&FS	LSI	Solapur	MH	17.836978	75.589790	150+000	252+000	210+600 RHS Inner	3	40.6000	0.4057	0.2709	0.1343	0.0642	0.0367	0.0224	0.0135	30.6	33.9		34
971	1-5-2023	07:32:09	IL&FS	LSI	Solapur	MH	17.837789	75.587547	150+000	252+000	210+350 RHS Inner	1	39.1000	0.4918	0.3139	0.1861	0.1021	0.0764	0.0620	0.0506	30.6	33.9		34
	1-5-2023	07:32:09	IL&FS	LSI	Solapur	MH	17.837789	75.587547	150+000	252+000	210+350 RHS Inner	2	39.2000	0.4732	0.2971	0.1790	0.1068	0.0740	0.0605	0.0470	30.6	33.9		34
	1-5-2023	07:32:09	IL&FS	LSI	Solapur	MH	17.837789	75.587547	150+000	252+000	210+350 RHS Inner	3	40.1000	0.4974	0.3366	0.1836	0.1081	0.0748	0.0648	0.0494	30.6	33.9		34
972	1-5-2023	07:34:06	IL&FS	LSI	Solapur	MH	17.838541	75.585502	150+000	252+000	210+110 RHS Inner	1	40.5000	0.3393	0.2218	0.1284	0.0724	0.0500	0.0403	0.0362	30.9	34.3		34
	1-5-2023	07:34:06	IL&FS	LSI	Solapur	MH	17.838541	75.585502	150+000	252+000	210+110 RHS Inner	2	40.7000	0.3510	0.2232	0.1225	0.0770	0.0530	0.0421	0.0379	30.9	34.3		34
	1-5-2023	07:34:06	IL&FS	LSI	Solapur	MH	17.838541	75.585502	150+000	252+000	210+110 RHS Inner	3	40.4000	0.3381	0.2241	0.1292	0.0701	0.0560	0.0429	0.0386	30.9	34.3		34
973	1-5-2023	07:36:11	IL&FS	LSI	Solapur	MH	17.839399	75.583206	150+000	252+000	209+850 RHS Inner	1	39.9000	0.4854	0.2773	0.1525	0.0749	0.0408	0.0324	0.0291	31.1	34.3		34
	1-5-2023	07:36:11	IL&FS	LSI	Solapur	MH	17.839399	75.583206	150+000	252+000	209+850 RHS Inner	2	40.8000	0.5040	0.2994	0.1412	0.0765	0.0415	0.0330	0.0297	31.1	34.3		34
	1-5-2023	07:36:11	IL&FS	LSI	Solapur	MH	17.839399	75.583206	150+000	252+000	209+850 RHS Inner	3	39.6000	0.4788	0.2697	0.1446	0.0789	0.0412	0.0325	0.0292	31.1	34.3		34
974	1-5-2023	07:38:10	IL&FS	LSI	Solapur	MH	17.840185	75.581077	150+000	252+000	209+600 RHS Inner	1	40.5000	0.4904	0.2872	0.1485	0.0966	0.0587	0.0437	0.0325	31.1	34.3		34
	1-5-2023	07:38:10	IL&FS	LSI	Solapur	MH	17.840185	75.581077	150+000	252+000	209+600 RHS Inner	2	40.5000	0.4507	0.2652	0.1534	0.0941	0.0570	0.0387	0.0269	31.1	34.3		34
	1-5-2023	07:38:10	IL&FS	LSI	Solapur	MH	17.840185	75.581077	150+000	252+000	209+600 RHS Inner	3	40.4000	0.4673	0.2650	0.1490	0.0925	0.0545	0.0376	0.0252	31.1	34.3		34
975	1-5-2023	07:40:25	IL&FS	LSI	Solapur	MH	17.840663	75.578720	150+000	252+000	209+350 RHS Inner	1	41.5000	0.3936	0.2160	0.1192	0.0840	0.0568	0.0436	0.0292	31.0	34.4		34
	1-5-2023	07:40:25	IL&FS	LSI	Solapur	MH	17.840663	75.578720	150+000	252+000	209+350 RHS Inner	2	41.0000	0.4094	0.2073	0.1108	0.0816	0.0610	0.0472	0.0300	31.0	34.4		34
	1-5-2023	07:40:25	IL&FS	LSI	Solapur	MH	17.840663	75.578720	150+000	252+000	209+350 RHS Inner	3	41.5000	0.4068	0.2277	0.1121	0.0797	0.0595	0.0446	0.0301	31.0	34.4		34
976	1-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	17.841070	75.576507	150+000	252+000	209+100 RHS Inner	1	40.4000	0.5321	0.2874	0.1580	0.0972	0.0585	0.0371	0.0210	31.3	34.7		34
	1-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	17.841070	75.576507	150+000	252+000	209+100 RHS Inner	2	39.9000	0.4872	0.2825	0.1478	0.0934	0.0573	0.0363	0.0201	31.3	34.7		34
	1-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	17.841070	75.576507	150+000	252+000	209+100 RHS Inner	3	40.5000	0.5054	0.2604	0.1455	0.0956	0.0602	0.0360	0.0210	31.3	34.7		34
977	1-5-2023	07:44:35	IL&FS	LSI	Solapur	MH	17.841455	75.574111	150+000	252+000	208+840 RHS Inner	1	40.4000	0.6160	0.3208	0.1677	0.1087	0.0700	0.0486	0.0335	31.7	35.3		34
	1-5-2023	07:44:35	IL&FS	LSI	Solapur	MH	17.841455	75.574111	150+000	252+000	208+840 RHS Inner	2	39.5000	0.5716	0.3143	0.1559	0.1018	0.0666	0.0481	0.0354	31.7	35.3		34
	1-5-2023	07:44:35	IL&FS	LSI	Solapur	MH	17.841455	75.574111	150+000	252+000	208+840 RHS Inner	3	39.4000	0.5667	0.2915	0.1636	0.1071	0.0698	0.0476	0.0317	31.7	35.3		34
978	1-5-2023	07:46:34	IL&FS	LSI	Solapur	MH	17.841808	75.571830	150+000	252+000	208+600 RHS Inner	1	38.9000	0.5502	0.3083	0.1620	0.0732	0.0465	0.0433	0.0323	31.8	35.3		34
	1-5-2023	07:46:34	IL&FS	LSI	Solapur	MH	17.841808	75.571830	150+000	252+000	208+600 RHS Inner	2	40.7000	0.5537	0.3075	0.1573	0.0859	0.0516	0.0446	0.0342	31.8	35.3		34
	1-5-2023	07:46:34	IL&FS	LSI	Solapur	MH	17.841808	75.571830	150+000	252+000	208+600 RHS Inner	3	40.9000	0.5452	0.3091	0.1590	0.0793	0.0494	0.0450	0.0350	31.8	35.3		34
979	1-5-2023	07:48:46	IL&FS	LSI	Solapur	MH	17.842189	75.569038	150+000	252+000	208+300 RHS Inner	1	43.2000	0.3420	0.2257	0.1281	0.0879	0.0572	0.0414	0.0303	31.8	35.1		34
	1-5-2023	07:48:46	IL&FS	LSI	Solapur	MH	17.842189	75.569038	150+000	252+000	208+300 RHS Inner	2	41.9000	0.3399	0.2019	0.1295	0.0853	0.0522	0.0391	0.0295	31.8	35.1		34
	1-5-2023	07:48:46	IL&FS	LSI	Solapur	MH	17.842189	75.569038	150+000	252+000	208+300 RHS Inner	3	43.5000	0.3399	0.2156	0.1220	0.0850	0.0560	0.0416	0.0307	31.8	35.1		34
980	1-5-2023	07:50:57	IL&FS	LSI	Solapur	MH	17.842067	75.567161	150+000	252+000	208+100 RHS Inner	1	44.7000	0.2774	0.1563	0.0945	0.0594	0.0434	0.0320	0.0258	32.0	35.5		34
	1-5-2023	07:50:57	IL&FS	LSI	Solapur	MH	17.842067	75.567161	150+000	252+000	208+100 RHS Inner	2	44.7000	0.2722	0.1607	0.0905	0.0533	0.0415	0.0325	0.0254	32.0	35.5		34
	1-5-2023	07:50:57	IL&FS	LSI	Solapur	MH	17.842067	75.567161	150+000	252+000	208+100 RHS Inner	3	44.8000	0.2702	0.1511	0.0872	0.0564	0.0413	0.0302	0.0218	32.0	35.5		34
981	1-5-2023	07:53:02	IL&FS	LSI	Solapur	MH	17.841880	75.564788	150+000	252+000	207+850 RHS Inner	1	39.4000	0.5366	0.2839	0.1677	0.0896	0.0675	0.0503	0.0333	32.1	36.2		34
	1-5-2023	07:53:02	IL&FS	LSI	Solapur	MH	17.841880	75.564788	150+000	252+000	207+850 RHS Inner	2	39.2000	0.5356	0.2704	0.1632	0.0882	0.0683	0.0530	0.0357	32.1	36.2		34
	1-5-2023	07:53:02	IL&FS	LSI	Solapur	MH	17.841880	75.564788	150+000	252+000	207+850 RHS Inner	3	39.1000	0.5321	0.2952	0.1590	0.0907	0.0671	0.0502	0.0331	32.1	36.2		34
982	1-5-2023	07:55:06	IL&FS	LSI	Solapur	MH	17.841650	75.562446	150+000	252+000	207+600 RHS Inner	1	38.4000	0.7376	0.3651	0.1838	0.0963	0.0723	0.0540	0.0336	32.4	35.7		34
	1-5-2023	07:55:06	IL&FS	LSI	Solapur	MH	17.841650	75.562446	150+000	252+000	207+600 RHS Inner	2	38.9000	0.6938	0.3670	0.1984	0.0930	0.0698	0.0520	0.0318	32.4	35.7		34
	1-5-2023	07:55:06	IL&FS	LSI	Solapur	MH	17.841650	75.562446	150+000	252+000	207+600 RHS Inner	3	39.1000	0.7156	0.3886	0.1892	0.0981	0.0693	0.0504	0.0304	32.4	35.7		34
983	1-5-2023	07:57:05	IL&FS	LSI	Solapur	MH	17.841548	75.559967	150+000	252+000	207+330 RHS Inner	1	44.4000	0.2916	0.1687	0.1038	0.0646	0.0395	0.0296	0.0225	32.3	35.1		34
	1-5-2023	07:57:05	IL&FS	LSI	Solapur	MH	17.841548	75.559967	150+000	252+000	207+330 RHS Inner	2	44.3000	0.2915	0.1569	0.0997	0.0646	0.0409	0.0315	0.0244	32.3	35.1		34
	1-5-2023	07:57:05	IL&FS	LSI	Solapur	MH	17.841548	75.559967	150+000	252+000	207+330 RHS Inner	3	43.8000	0.2921	0.1657	0.1066	0.0679	0.0409	0.0309	0.0245	32.3	35.1		34
984	1-5-2023	08:01:21	IL&FS	LSI	Solapur	MH	17.842067	75.557769	150+000	252+000	207+100 RHS Inner	1	42.1000	0.3816	0.2160	0.1184	0.0642	0.0430	0.0267	0.0231	32.7	35.6	t-28.9/36.5	36.5
	1-5-2023	08:01:21	IL&FS	LSI	Solapur	MH	17.842067	75.557769	150+000	252+000	207+100 RHS Inner	2	42.2000	0.3592	0.2126	0.1181	0.0650	0.0430	0.0266	0.0232	32.7	35.6	t-28.9/36.5	36.5
	1-5-2023	08:01:21	IL&FS	LSI	Solapur	MH	17.842067	75.557769	150+000	252+000	207+100 RHS Inner	3	42.3000	0.3688	0.2072	0.1236	0.0589	0.0428	0.0268	0.0232	32.7	35.6	t-28.9/36.5	36.5
985	1-5-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.842658	75.555206	150+000	252+000	206+850 RHS Inner	1	37.7000	0.6456	0.3855	0.1953	0.0961	0.0645	0.0460	0.0364	32.7	35.8	Wide Cracking and Bleeding	36.5
	1-5-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.842658	75.555206	150+000	252+000	206+850 RHS Inner	2	37.0000	0.6146	0.3684	0.1834	0.1039	0.0644	0.0399	0.0359	32.7	35.8	Wide Cracking and Bleeding	36.5
	1-5-2023	08:04:01	IL&FS	LSI	Solapur	MH	17.842658	75.555206	150+000	252+000	206+850 RHS Inner	3	36.7000	0.5958	0.3543	0.1919	0.0947	0.0574	0.0417	0.0375	32.7	35.8	Wide Cracking and Bleeding	36.5
986	1-5-2023	08:05:59	IL&FS	LSI	Solapur	MH	17.843149	75.553276	150+000	252+000	206+600 RHS Inner	1	38.9000	0.6861	0.4200	0.2239	0.1425	0.0805	0.0491	0.0293	32.8	35.7		36.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	08:05:59	IL&FS	LSI	Solapur	MH	17.843149	75.553276	150+000	252+000	206+600 RHS Inner	2	39.1000	0.6658	0.4198	0.2257	0.1413	0.0870	0.0558	0.0339	32.8	35.7		36.5
	1-5-2023	08:05:59	IL&FS	LSI	Solapur	MH	17.843149	75.553276	150+000	252+000	206+600 RHS Inner	3	39.3000	0.6634	0.4213	0.2317	0.1442	0.0830	0.0538	0.0332	32.8	35.7		36.5
987	1-5-2023	08:08:00	IL&FS	LSI	Solapur	MH	17.843696	75.551170	150+000	252+000	206+350 RHS Inner	1	38.8000	0.7176	0.4097	0.2137	0.1108	0.0735	0.0481	0.0324	32.8	36.2		36.5
	1-5-2023	08:08:00	IL&FS	LSI	Solapur	MH	17.843696	75.551170	150+000	252+000	206+350 RHS Inner	2	39.4000	0.7097	0.4146	0.2147	0.1052	0.0711	0.0488	0.0333	32.8	36.2		36.5
	1-5-2023	08:08:00	IL&FS	LSI	Solapur	MH	17.843696	75.551170	150+000	252+000	206+350 RHS Inner	3	39.4000	0.6975	0.4113	0.2156	0.1098	0.0769	0.0516	0.0330	32.8	36.2		36.5
988	1-5-2023	08:10:11	IL&FS	LSI	Solapur	MH	17.844280	75.548896	150+000	252+000	206+100 RHS Inner	1	37.7000	0.7153	0.3834	0.1771	0.1012	0.0739	0.0564	0.0301	32.4	35.8		36.5
	1-5-2023	08:10:11	IL&FS	LSI	Solapur	MH	17.844280	75.548896	150+000	252+000	206+100 RHS Inner	2	37.9000	0.6909	0.3823	0.1835	0.0978	0.0659	0.0574	0.0305	32.4	35.8		36.5
	1-5-2023	08:10:11	IL&FS	LSI	Solapur	MH	17.844280	75.548896	150+000	252+000	206+100 RHS Inner	3	37.7000	0.6883	0.3814	0.1799	0.1013	0.0730	0.0525	0.0293	32.4	35.8		36.5
989	1-5-2023	08:12:08	IL&FS	LSI	Solapur	MH	17.844823	75.546768	150+000	252+000	205+850 RHS Inner	1	38.4000	0.6159	0.3510	0.1738	0.0910	0.0590	0.0393	0.0325	32.2	36.7		36.5
	1-5-2023	08:12:08	IL&FS	LSI	Solapur	MH	17.844823	75.546768	150+000	252+000	205+850 RHS Inner	2	38.3000	0.5880	0.3386	0.1678	0.0916	0.0572	0.0434	0.0324	32.2	36.7		36.5
	1-5-2023	08:12:08	IL&FS	LSI	Solapur	MH	17.844823	75.546768	150+000	252+000	205+850 RHS Inner	3	38.2000	0.5946	0.3441	0.1720	0.0875	0.0577	0.0366	0.0264	32.2	36.7		36.5
990	1-5-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.845420	75.544387	150+000	252+000	205+600 RHS Inner	1	39.4000	0.6102	0.3390	0.1827	0.0863	0.0638	0.0460	0.0281	32.8	36.8		36.5
	1-5-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.845420	75.544387	150+000	252+000	205+600 RHS Inner	2	39.9000	0.5937	0.3497	0.1778	0.0860	0.0602	0.0484	0.0295	32.8	36.8		36.5
	1-5-2023	08:14:20	IL&FS	LSI	Solapur	MH	17.845420	75.544387	150+000	252+000	205+600 RHS Inner	3	40.2000	0.5813	0.3451	0.1686	0.0900	0.0639	0.0481	0.0308	32.8	36.8		36.5
991	1-5-2023	08:16:43	IL&FS	LSI	Solapur	MH	17.846126	75.541587	150+000	252+000	205+285 RHS Inner	1	42.0000	0.3850	0.2201	0.1299	0.0786	0.0393	0.0267	0.0172	32.6	36.5		36.5
	1-5-2023	08:16:43	IL&FS	LSI	Solapur	MH	17.846126	75.541587	150+000	252+000	205+285 RHS Inner	2	42.1000	0.3789	0.2043	0.1351	0.0798	0.0371	0.0247	0.0164	32.6	36.5		36.5
	1-5-2023	08:16:43	IL&FS	LSI	Solapur	MH	17.846126	75.541587	150+000	252+000	205+285 RHS Inner	3	42.4000	0.3759	0.2168	0.1280	0.0754	0.0420	0.0284	0.0177	32.6	36.5		36.5
992	1-5-2023	08:18:29	IL&FS	LSI	Solapur	MH	17.846414	75.539779	150+000	252+000	205+100 RHS Inner	1	44.6000	0.2121	0.1367	0.0869	0.0518	0.0380	0.0233	0.0226	32.9	37.7		36.5
	1-5-2023	08:18:29	IL&FS	LSI	Solapur	MH	17.846414	75.539779	150+000	252+000	205+100 RHS Inner	2	44.5000	0.2107	0.1350	0.0823	0.0538	0.0361	0.0255	0.0211	32.9	37.7		36.5
	1-5-2023	08:18:29	IL&FS	LSI	Solapur	MH	17.846414	75.539779	150+000	252+000	205+100 RHS Inner	3	44.7000	0.2057	0.1301	0.0862	0.0554	0.0377	0.0256	0.0220	32.9	37.7		36.5
993	1-5-2023	08:20:29	IL&FS	LSI	Solapur	MH	17.846757	75.537498	150+000	252+000	204+850 RHS Inner	1	39.0000	0.6562	0.4005	0.1881	0.0901	0.0531	0.0415	0.0361	33.1	37.4		36.5
	1-5-2023	08:20:29	IL&FS	LSI	Solapur	MH	17.846757	75.537498	150+000	252+000	204+850 RHS Inner	2	39.3000	0.6535	0.4050	0.1839	0.0856	0.0531	0.0399	0.0353	33.1	37.4		36.5
	1-5-2023	08:20:29	IL&FS	LSI	Solapur	MH	17.846757	75.537498	150+000	252+000	204+850 RHS Inner	3	39.3000	0.6407	0.3879	0.1870	0.0874	0.0554	0.0415	0.0351	33.1	37.4		36.5
994	1-5-2023	08:24:36	IL&FS	LSI	Solapur	MH	17.847120	75.535072	150+000	252+000	204+600 RHS Inner	1	36.5000	0.5245	0.2930	0.1652	0.0897	0.0522	0.0373	0.0267	33.5	37.1		36.5
	1-5-2023	08:24:36	IL&FS	LSI	Solapur	MH	17.847120	75.535072	150+000	252+000	204+600 RHS Inner	2	36.8000	0.5050	0.2779	0.1554	0.0911	0.0536	0.0379	0.0279	33.5	37.1		36.5
	1-5-2023	08:24:36	IL&FS	LSI	Solapur	MH	17.847120	75.535072	150+000	252+000	204+600 RHS Inner	3	36.8000	0.5008	0.2830	0.1567	0.0842	0.0505	0.0371	0.0285	33.5	37.1		36.5
995	1-5-2023	08:26:35	IL&FS	LSI	Solapur	MH	17.847446	75.532859	150+000	252+000	204+350 RHS Inner	1	37.4000	0.6739	0.3825	0.1876	0.0966	0.0617	0.0460	0.0360	33.5	37.4	Bleeding and rutting	36.5
	1-5-2023	08:26:35	IL&FS	LSI	Solapur	MH	17.847446	75.532859	150+000	252+000	204+350 RHS Inner	2	37.4000	0.6352	0.3561	0.1848	0.0961	0.0605	0.0461	0.0356	33.5	37.4	Bleeding and rutting	36.5
	1-5-2023	08:26:35	IL&FS	LSI	Solapur	MH	17.847446	75.532859	150+000	252+000	204+350 RHS Inner	3	37.8000	0.6507	0.3745	0.1839	0.0984	0.0624	0.0485	0.0384	33.5	37.4	Bleeding and rutting	36.5
996	1-5-2023	08:28:17	IL&FS	LSI	Solapur	MH	17.847812	75.530570	150+000	252+000	204+100 RHS Inner	1	37.0000	0.6083	0.3566	0.1760	0.0989	0.0651	0.0482	0.0362	33.3	37.8		36.5
	1-5-2023	08:28:17	IL&FS	LSI	Solapur	MH	17.847812	75.530570	150+000	252+000	204+100 RHS Inner	2	37.1000	0.5862	0.3502	0.1709	0.0938	0.0643	0.0515	0.0424	33.3	37.8		36.5
	1-5-2023	08:28:17	IL&FS	LSI	Solapur	MH	17.847812	75.530570	150+000	252+000	204+100 RHS Inner	3	36.6000	0.5609	0.3324	0.1653	0.0990	0.0656	0.0507	0.0415	33.3	37.8		36.5
997	1-5-2023	08:30:09	IL&FS	LSI	Solapur	MH	17.848577	75.528175	150+000	252+000	203+850 RHS Inner	1	37.9000	0.6554	0.3567	0.1632	0.1040	0.0765	0.0563	0.0412	33.0	38.2		36.5
	1-5-2023	08:30:09	IL&FS	LSI	Solapur	MH	17.848577	75.528175	150+000	252+000	203+850 RHS Inner	2	37.9000	0.6371	0.3356	0.1679	0.1030	0.0731	0.0540	0.0410	33.0	38.2		36.5
	1-5-2023	08:30:09	IL&FS	LSI	Solapur	MH	17.848577	75.528175	150+000	252+000	203+850 RHS Inner	3	38.2000	0.6082	0.3415	0.1676	0.1096	0.0807	0.0629	0.0508	33.0	38.2		36.5
998	1-5-2023	08:31:58	IL&FS	LSI	Solapur	MH	17.849361	75.526039	150+000	252+000	203+600 RHS Inner	1	38.4000	0.5551	0.3017	0.1522	0.0828	0.0619	0.0408	0.0257	33.2	37.8		36.5
	1-5-2023	08:31:58	IL&FS	LSI	Solapur	MH	17.849361	75.526039	150+000	252+000	203+600 RHS Inner	2	38.9000	0.5442	0.2950	0.1616	0.0839	0.0622	0.0410	0.0258	33.2	37.8		36.5
	1-5-2023	08:31:58	IL&FS	LSI	Solapur	MH	17.849361	75.526039	150+000	252+000	203+600 RHS Inner	3	38.9000	0.5280	0.2889	0.1546	0.0839	0.0616	0.0396	0.0257	33.2	37.8		36.5
999	1-5-2023	08:34:02	IL&FS	LSI	Solapur	MH	17.850221	75.523612	150+000	252+000	203+320 RHS Inner	1	38.3000	0.7260	0.3822	0.1963	0.1222	0.0736	0.0530	0.0401	32.7	37.9		36.5
	1-5-2023	08:34:02	IL&FS	LSI	Solapur	MH	17.850221	75.523612	150+000	252+000	203+320 RHS Inner	2	38.7000	0.7126	0.3698	0.1985	0.1248	0.0774	0.0562	0.0411	32.7	37.9		36.5
	1-5-2023	08:34:02	IL&FS	LSI	Solapur	MH	17.850221	75.523612	150+000	252+000	203+320 RHS Inner	3	38.9000	0.6909	0.3453	0.2027	0.1259	0.0730	0.0565	0.0440	32.7	37.9		36.5
1000	1-5-2023	08:36:07	IL&FS	LSI	Solapur	MH	17.850999	75.521591	150+000	252+000	203+100 RHS Inner	1	40.7000	0.4290	0.2436	0.1402	0.0779	0.0571	0.0428	0.0327	32.8	37.5		36.5
	1-5-2023	08:36:07	IL&FS	LSI	Solapur	MH	17.850999	75.521591	150+000	252+000	203+100 RHS Inner	2	40.8000	0.4109	0.2390	0.1369	0.0774	0.0547	0.0405	0.0322	32.8	37.5		36.5
	1-5-2023	08:36:07	IL&FS	LSI	Solapur	MH	17.850999	75.521591	150+000	252+000	203+100 RHS Inner	3	40.7000	0.4197	0.2399	0.1419	0.0777	0.0569	0.0441	0.0346	32.8	37.5		36.5
1001	1-5-2023	08:41:18	IL&FS	LSI	Solapur	MH	17.851833	75.519508	150+000	252+000	202+850 RHS Inner	1	37.8000	0.7601	0.3935	0.1888	0.0963	0.0656	0.0412	0.0239	33.6	39.1	t-33.5/39.8	39.8
	1-5-2023	08:41:18	IL&FS	LSI	Solapur	MH	17.851833	75.519508	150+000	252+000	202+850 RHS Inner	2	38.5000	0.7376	0.3866	0.1884	0.0959	0.0638	0.0409	0.0240	33.6	39.1	t-33.5/39.8	39.8
	1-5-2023	08:41:18	IL&FS	LSI	Solapur	MH	17.851833	75.519508	150+000	252+000	202+850 RHS Inner	3	38.5000	0.7314	0.3876	0.1915	0.0933	0.0650	0.0421	0.0242	33.6	39.1	t-33.5/39.8	39.8
1002	1-5-2023	08:43:48	IL&FS	LSI	Solapur	MH	17.852714	75.517196	150+000	252+000	202+600 RHS Inner	1	38.2000	0.5715	0.3294	0.1808	0.1076	0.0728	0.0530	0.0392	33.7	38.9		39.8
	1-5-2023	08:43:48	IL&FS	LSI	Solapur	MH	17.852714	75.517196	150+000	252+000	202+600 RHS Inner	2	39.6000	0.5718	0.3402	0.1874	0.1049	0.0734	0.0530	0.0399	33.7	38.9		39.8
	1-5-2023	08:43:48	IL&FS	LSI	Solapur	MH	17.852714	75.517196	150+000	252+000	202+600 RHS Inner	3	39.1000	0.5515	0.3256	0.1896	0.1000	0.0726	0.0526	0.0403	33.7	38.9		39.8
1003	1-5-2023	08:45:47	IL&FS	LSI	Solapur	MH	17.853527	75.515106	150+000	252+000	202+350 RHS Inner	1	38.8000	0.6411	0.3261	0.1857	0.0956	0.0660	0.0463	0.0308	33.9	39.6		39.8
	1-5-2023	08:45:47	IL&FS	LSI	Solapur	MH	17.853527	75.515106	150+000	252+000	202+350 RHS Inner	2	39.3000	0.6261	0.3318	0.1879	0.1023	0.0657	0.0474	0.0349	33.9	39.6		39.8
	1-5-2023	08:45:47	IL&FS	LSI	Solapur	MH	17.853527	75.515106	150+000	252+000	202+350 RHS Inner	3	39.2000	0.6023	0.3371	0.1787	0.1050	0.0645	0.0466	0.0342	33.9	39.6		39.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1004	1-5-2023	08:47:36	IL&FS	LSI	Solapur	MH	17.854450	75.512863	150+000	252+000	202+100 RHS Inner	1	41.4000	0.3801	0.2105	0.1198	0.0679	0.0439	0.0397	0.0314	33.6	39.0		39.8
	1-5-2023	08:47:36	IL&FS	LSI	Solapur	MH	17.854450	75.512863	150+000	252+000	202+100 RHS Inner	2	42.6000	0.3912	0.2124	0.1233	0.0635	0.0460	0.0422	0.0291	33.6	39.0		39.8
	1-5-2023	08:47:36	IL&FS	LSI	Solapur	MH	17.854450	75.512863	150+000	252+000	202+100 RHS Inner	3	41.8000	0.3858	0.2080	0.1210	0.0608	0.0455	0.0379	0.0308	33.6	39.0		39.8
1005	1-5-2023	08:49:41	IL&FS	LSI	Solapur	MH	17.855258	75.510726	150+000	252+000	201+850 RHS Inner	1	40.5000	0.5453	0.3198	0.1768	0.1167	0.0823	0.0591	0.0432	33.4	39.3		39.8
	1-5-2023	08:49:41	IL&FS	LSI	Solapur	MH	17.855258	75.510726	150+000	252+000	201+850 RHS Inner	2	41.0000	0.5677	0.3397	0.1824	0.1185	0.0839	0.0607	0.0446	33.4	39.3		39.8
	1-5-2023	08:49:41	IL&FS	LSI	Solapur	MH	17.855258	75.510726	150+000	252+000	201+850 RHS Inner	3	41.6000	0.5317	0.3233	0.1788	0.1107	0.0855	0.0610	0.0449	33.4	39.3		39.8
1006	1-5-2023	08:51:42	IL&FS	LSI	Solapur	MH	17.856081	75.508697	150+000	252+000	201+600 RHS Inner	1	37.8000	0.3761	0.2011	0.1183	0.0621	0.0514	0.0362	0.0249	33.4	40.0		39.8
	1-5-2023	08:51:42	IL&FS	LSI	Solapur	MH	17.856081	75.508697	150+000	252+000	201+600 RHS Inner	2	37.5000	0.3816	0.2116	0.1111	0.0623	0.0464	0.0346	0.0265	33.4	40.0		39.8
	1-5-2023	08:51:42	IL&FS	LSI	Solapur	MH	17.856081	75.508697	150+000	252+000	201+600 RHS Inner	3	37.6000	0.3656	0.2039	0.1125	0.0629	0.0486	0.0359	0.0276	33.4	40.0		39.8
1007	1-5-2023	08:53:55	IL&FS	LSI	Solapur	MH	17.857574	75.506324	150+000	252+000	201+300 RHS Inner	1	38.9000	0.5022	0.2607	0.1501	0.1027	0.0706	0.0468	0.0313	33.4	39.6		39.8
	1-5-2023	08:53:55	IL&FS	LSI	Solapur	MH	17.857574	75.506324	150+000	252+000	201+300 RHS Inner	2	38.8000	0.5083	0.2802	0.1495	0.0980	0.0651	0.0456	0.0311	33.4	39.6		39.8
	1-5-2023	08:53:55	IL&FS	LSI	Solapur	MH	17.857574	75.506324	150+000	252+000	201+300 RHS Inner	3	38.7000	0.4752	0.2731	0.1484	0.0996	0.0682	0.0478	0.0341	33.4	39.6		39.8
1008	1-5-2023	08:56:04	IL&FS	LSI	Solapur	MH	17.858671	75.504737	150+000	252+000	201+100 RHS Inner	1	40.0000	0.5838	0.2859	0.1494	0.0924	0.0599	0.0388	0.0275	33.4	39.8		39.8
	1-5-2023	08:56:04	IL&FS	LSI	Solapur	MH	17.858671	75.504737	150+000	252+000	201+100 RHS Inner	2	39.5000	0.5451	0.3094	0.1499	0.0933	0.0606	0.0365	0.0275	33.4	39.8		39.8
	1-5-2023	08:56:04	IL&FS	LSI	Solapur	MH	17.858671	75.504737	150+000	252+000	201+100 RHS Inner	3	39.7000	0.5465	0.2988	0.1539	0.0834	0.0561	0.0370	0.0249	33.4	39.8		39.8
1009	1-5-2023	09:00:32	IL&FS	LSI	Solapur	MH	17.861101	75.501091	150+000	252+000	200+600 RHS Inner	1	39.9000	0.6648	0.3587	0.1764	0.1183	0.0785	0.0547	0.0387	34.2	40.8		39.8
	1-5-2023	09:00:32	IL&FS	LSI	Solapur	MH	17.861101	75.501091	150+000	252+000	200+600 RHS Inner	2	38.6000	0.6797	0.3556	0.1767	0.1214	0.0803	0.0555	0.0392	34.2	40.8		39.8
	1-5-2023	09:00:32	IL&FS	LSI	Solapur	MH	17.861101	75.501091	150+000	252+000	200+600 RHS Inner	3	39.0000	0.6456	0.3419	0.1722	0.1161	0.0746	0.0508	0.0356	34.2	40.8		39.8
1010	1-5-2023	09:02:40	IL&FS	LSI	Solapur	MH	17.862550	75.498954	150+000	252+000	200+350 RHS Inner	1	39.3000	0.5331	0.2919	0.1528	0.0917	0.0667	0.0504	0.0394	34.1	39.8		39.8
	1-5-2023	09:02:40	IL&FS	LSI	Solapur	MH	17.862550	75.498954	150+000	252+000	200+350 RHS Inner	2	39.2000	0.5445	0.2867	0.1459	0.0910	0.0679	0.0507	0.0396	34.1	39.8		39.8
	1-5-2023	09:02:40	IL&FS	LSI	Solapur	MH	17.862550	75.498954	150+000	252+000	200+350 RHS Inner	3	39.6000	0.5095	0.2749	0.1454	0.0921	0.0694	0.0524	0.0411	34.1	39.8		39.8
1011	1-5-2023	09:05:02	IL&FS	LSI	Solapur	MH	17.863880	75.497055	150+000	252+000	200+100 RHS Inner	1	40.4000	0.5725	0.3027	0.1893	0.1340	0.0943	0.0673	0.0406	33.7	39.9		39.8
	1-5-2023	09:05:02	IL&FS	LSI	Solapur	MH	17.863880	75.497055	150+000	252+000	200+100 RHS Inner	2	40.7000	0.5366	0.3102	0.1767	0.1206	0.0822	0.0669	0.0402	33.7	39.9		39.8
	1-5-2023	09:05:02	IL&FS	LSI	Solapur	MH	17.863880	75.497055	150+000	252+000	200+100 RHS Inner	3	41.0000	0.5384	0.3070	0.1771	0.1223	0.0845	0.0709	0.0438	33.7	39.9		39.8
1012	1-5-2023	09:07:36	IL&FS	LSI	Solapur	MH	17.865575	75.495117	150+000	252+000	199+850 RHS Inner	1	39.8000	0.4527	0.2689	0.1442	0.0938	0.0696	0.0461	0.0302	33.7	40.7		39.8
	1-5-2023	09:07:36	IL&FS	LSI	Solapur	MH	17.865575	75.495117	150+000	252+000	199+850 RHS Inner	2	39.8000	0.4420	0.2644	0.1334	0.0901	0.0694	0.0475	0.0321	33.7	40.7		39.8
	1-5-2023	09:07:36	IL&FS	LSI	Solapur	MH	17.865575	75.495117	150+000	252+000	199+850 RHS Inner	3	40.1000	0.4623	0.2574	0.1334	0.0990	0.0702	0.0457	0.0305	33.7	40.7		39.8
1013	1-5-2023	09:09:43	IL&FS	LSI	Solapur	MH	17.866977	75.493492	150+000	252+000	199+600 RHS Inner	1	38.4000	0.5091	0.3024	0.1695	0.1169	0.0822	0.0578	0.0400	33.6	41.7		39.8
	1-5-2023	09:09:43	IL&FS	LSI	Solapur	MH	17.866977	75.493492	150+000	252+000	199+600 RHS Inner	2	38.8000	0.5326	0.2890	0.1763	0.1119	0.0778	0.0555	0.0390	33.6	41.7		39.8
	1-5-2023	09:09:43	IL&FS	LSI	Solapur	MH	17.866977	75.493492	150+000	252+000	199+600 RHS Inner	3	39.4000	0.5149	0.2860	0.1761	0.1266	0.0895	0.0572	0.0373	33.6	41.7		39.8
1014	1-5-2023	09:11:33	IL&FS	LSI	Solapur	MH	17.868440	75.491783	150+000	252+000	199+350 RHS Inner	1	38.8000	0.5038	0.2919	0.1514	0.0919	0.0540	0.0397	0.0303	34.3	42.8		39.8
	1-5-2023	09:11:33	IL&FS	LSI	Solapur	MH	17.868440	75.491783	150+000	252+000	199+350 RHS Inner	2	38.5000	0.4950	0.2651	0.1555	0.0907	0.0539	0.0397	0.0304	34.3	42.8		39.8
	1-5-2023	09:11:33	IL&FS	LSI	Solapur	MH	17.868440	75.491783	150+000	252+000	199+350 RHS Inner	3	40.0000	0.4952	0.2779	0.1625	0.0862	0.0554	0.0418	0.0321	34.3	42.8		39.8
1015	1-5-2023	09:13:33	IL&FS	LSI	Solapur	MH	17.870014	75.489974	150+000	252+000	199+100 RHS Inner	1	38.9000	0.6382	0.3700	0.1875	0.1068	0.0572	0.0471	0.0324	34.9	43.9		39.8
	1-5-2023	09:13:33	IL&FS	LSI	Solapur	MH	17.870014	75.489974	150+000	252+000	199+100 RHS Inner	2	38.6000	0.6182	0.3432	0.1806	0.1082	0.0558	0.0467	0.0320	34.9	43.9		39.8
	1-5-2023	09:13:33	IL&FS	LSI	Solapur	MH	17.870014	75.489974	150+000	252+000	199+100 RHS Inner	3	38.3000	0.5991	0.3448	0.1817	0.1058	0.0552	0.0464	0.0318	34.9	43.9		39.8
1016	1-5-2023	09:15:32	IL&FS	LSI	Solapur	MH	17.871543	75.488174	150+000	252+000	198+850 RHS Inner	1	38.3000	0.6440	0.3331	0.1803	0.0936	0.0601	0.0470	0.0380	35.3	44.0		39.8
	1-5-2023	09:15:32	IL&FS	LSI	Solapur	MH	17.871543	75.488174	150+000	252+000	198+850 RHS Inner	2	38.7000	0.6043	0.3113	0.1716	0.0971	0.0569	0.0432	0.0340	35.3	44.0		39.8
	1-5-2023	09:15:32	IL&FS	LSI	Solapur	MH	17.871543	75.488174	150+000	252+000	198+850 RHS Inner	3	38.6000	0.6006	0.3254	0.1763	0.0930	0.0573	0.0432	0.0342	35.3	44.0		39.8
1017	1-5-2023	09:17:17	IL&FS	LSI	Solapur	MH	17.872966	75.486396	150+000	252+000	198+600 RHS Inner	1	38.5000	0.6164	0.3114	0.1723	0.0924	0.0468	0.0296	0.0174	35.3	43.7		39.8
	1-5-2023	09:17:17	IL&FS	LSI	Solapur	MH	17.872966	75.486396	150+000	252+000	198+600 RHS Inner	2	38.4000	0.5883	0.3309	0.1768	0.0944	0.0475	0.0305	0.0175	35.3	43.7		39.8
	1-5-2023	09:17:17	IL&FS	LSI	Solapur	MH	17.872966	75.486396	150+000	252+000	198+600 RHS Inner	3	38.6000	0.5738	0.3111	0.1614	0.0940	0.0470	0.0285	0.0168	35.3	43.7		39.8
1018	1-5-2023	09:19:18	IL&FS	LSI	Solapur	MH	17.874137	75.484489	150+000	252+000	198+350 RHS Inner	1	37.1000	0.6476	0.3415	0.1562	0.0928	0.0674	0.0509	0.0338	35.8	45.0		39.8
	1-5-2023	09:19:18	IL&FS	LSI	Solapur	MH	17.874137	75.484489	150+000	252+000	198+350 RHS Inner	2	37.6000	0.6536	0.3296	0.1720	0.0939	0.0676	0.0473	0.0306	35.8	45.0		39.8
	1-5-2023	09:19:18	IL&FS	LSI	Solapur	MH	17.874137	75.484489	150+000	252+000	198+350 RHS Inner	3	38.8000	0.6183	0.3571	0.1723	0.0967	0.0688	0.0515	0.0344	35.8	45.0		39.8
1019	1-5-2023	09:21:21	IL&FS	LSI	Solapur	MH	17.875455	75.482467	150+000	252+000	198+100 RHS Inner	1	42.9000	0.2868	0.1531	0.0917	0.0618	0.0409	0.0297	0.0222	35.8	44.2		39.8
	1-5-2023	09:21:21	IL&FS	LSI	Solapur	MH	17.875455	75.482467	150+000	252+000	198+100 RHS Inner	2	42.7000	0.2853	0.1504	0.0897	0.0602	0.0412	0.0300	0.0225	35.8	44.2		39.8
	1-5-2023	09:21:21	IL&FS	LSI	Solapur	MH	17.875455	75.482467	150+000	252+000	198+100 RHS Inner	3	43.2000	0.2809	0.1575	0.0925	0.0615	0.0422	0.0310	0.0234	35.8	44.2		39.8
1020	1-5-2023	19:40:55	IL&FS	LSI	Solapur	MH	17.876808	75.480247	150+000	252+000	197+830 RHS Inner	1	39.5000	0.4989	0.2780	0.1354	0.0714	0.0523	0.0375	0.0277	36.4	40.2	T-33.6/43.8	43.8
	1-5-2023	19:40:55	IL&FS	LSI	Solapur	MH	17.876808	75.480247	150+000	252+000	197+830 RHS Inner	2	39.8000	0.5029	0.2668	0.1294	0.0727	0.0526	0.0380	0.0282	36.4	40.2	T-33.6/43.8	43.8
	1-5-2023	19:40:55	IL&FS	LSI	Solapur	MH	17.876808	75.480247	150+000	252+000	197+830 RHS Inner	3	39.9000	0.4829	0.2518	0.1314	0.0727	0.0517	0.0384	0.0285	36.4	40.2	T-33.6/43.8	43.8
1021	1-5-2023	19:44:04	IL&FS	LSI	Solapur	MH	17.877973	75.478424	150+000	252+000	197+600 RHS Inner	1	39.6000	0.4583	0.2482	0.1310	0.0784	0.0540	0.0364	0.0322	36.6	39.7		43.8
	1-5-2023	19:44:04	IL&FS	LSI	Solapur	MH	17.877973	75.478424	150+000	252+000	197+600 RHS Inner	2	40.0000	0.4489	0.2338	0.1355	0.0793	0.0523	0.0348	0.0307	36.6	39.7		43.8
	1-5-2023	19:44:04	IL&FS	LSI	Solapur	MH	17.877973	75.478424	150+000	252+000	197+600 RHS Inner	3	40.6000	0.4311	0.2391	0.1326	0.0798	0.0533	0.0365	0.0323	36.6	39.7		43.8
1022	1-5-2023	19:45:56	IL&FS	LSI	Solapur	MH	17.879076	75.476348	150+000	252+000	197+350 RHS Inner	1	40.2000	0.5635	0.3176	0.1705	0.1124	0.0762	0.0579	0.0371	36.6	39.7		43.8
	1-5-2023	19:45:56	IL&FS	LSI	Solapur	MH	17.879076	75.476348	150+000	252+000	197+350 RHS Inner	2	40.2000	0.5710	0.3073	0.1688	0.1137	0.0762	0.0554	0.0349	36.6	39.7		43.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	19:45:56	IL&FS	LSI	Solapur	MH	17.879076	75.476348	150+000	252+000	197+350 RHS Inner	3	40.2000	0.5491	0.3176	0.1740	0.1170	0.0733	0.0565	0.0359	36.6	39.7		43.8
1023	1-5-2023	19:47:55	IL&FS	LSI	Solapur	MH	17.880144	75.474281	150+000	252+000	197+100 RHS Inner	1	39.2000	0.6175	0.3549	0.1885	0.0948	0.0656	0.0391	0.0308	36.7	39.9	Wide Cracking	43.8
	1-5-2023	19:47:55	IL&FS	LSI	Solapur	MH	17.880144	75.474281	150+000	252+000	197+100 RHS Inner	2	39.0000	0.6167	0.3500	0.1842	0.0967	0.0559	0.0343	0.0332	36.7	39.9	Wide Cracking	43.8
	1-5-2023	19:47:55	IL&FS	LSI	Solapur	MH	17.880144	75.474281	150+000	252+000	197+100 RHS Inner	3	39.3000	0.5930	0.3471	0.1762	0.0898	0.0607	0.0391	0.0374	36.7	39.9	Wide Cracking	43.8
1024	1-5-2023	19:49:48	IL&FS	LSI	Solapur	MH	17.881061	75.472114	150+000	252+000	196+850 RHS Inner	1	37.0000	0.3767	0.1859	0.0893	0.0566	0.0371	0.0232	0.0145	36.4	40.0		43.8
	1-5-2023	19:49:48	IL&FS	LSI	Solapur	MH	17.881061	75.472114	150+000	252+000	196+850 RHS Inner	2	36.7000	0.3483	0.1665	0.0923	0.0554	0.0371	0.0230	0.0144	36.4	40.0		43.8
	1-5-2023	19:49:48	IL&FS	LSI	Solapur	MH	17.881061	75.472114	150+000	252+000	196+850 RHS Inner	3	36.3000	0.3279	0.1777	0.0867	0.0510	0.0370	0.0230	0.0144	36.4	40.0		43.8
1025	1-5-2023	19:51:40	IL&FS	LSI	Solapur	MH	17.881965	75.469947	150+000	252+000	196+600 RHS Inner	1	40.0000	0.3780	0.2084	0.1059	0.0603	0.0412	0.0284	0.0256	36.3	39.6		43.8
	1-5-2023	19:51:40	IL&FS	LSI	Solapur	MH	17.881965	75.469947	150+000	252+000	196+600 RHS Inner	2	39.8000	0.3647	0.1998	0.1008	0.0600	0.0407	0.0274	0.0247	36.3	39.6		43.8
	1-5-2023	19:51:40	IL&FS	LSI	Solapur	MH	17.881965	75.469947	150+000	252+000	196+600 RHS Inner	3	39.6000	0.3602	0.1909	0.1004	0.0655	0.0411	0.0274	0.0247	36.3	39.6		43.8
1026	1-5-2023	19:53:29	IL&FS	LSI	Solapur	MH	17.882894	75.467720	150+000	252+000	196+350 RHS Inner	1	38.3000	0.6123	0.3105	0.1598	0.0888	0.0628	0.0420	0.0318	36.3	39.7		43.8
	1-5-2023	19:53:29	IL&FS	LSI	Solapur	MH	17.882894	75.467720	150+000	252+000	196+350 RHS Inner	2	38.7000	0.6070	0.3130	0.1531	0.0864	0.0650	0.0441	0.0337	36.3	39.7		43.8
	1-5-2023	19:53:29	IL&FS	LSI	Solapur	MH	17.882894	75.467720	150+000	252+000	196+350 RHS Inner	3	38.7000	0.5745	0.2997	0.1516	0.0835	0.0667	0.0412	0.0311	36.3	39.7		43.8
1027	1-5-2023	19:55:29	IL&FS	LSI	Solapur	MH	17.883821	75.465538	150+000	252+000	196+100 RHS Inner	1	41.1000	0.5341	0.2939	0.1732	0.1080	0.0645	0.0458	0.0333	36.3	39.5		43.8
	1-5-2023	19:55:29	IL&FS	LSI	Solapur	MH	17.883821	75.465538	150+000	252+000	196+100 RHS Inner	2	41.1000	0.5204	0.2925	0.1772	0.1130	0.0644	0.0471	0.0337	36.3	39.5		43.8
	1-5-2023	19:55:29	IL&FS	LSI	Solapur	MH	17.883821	75.465538	150+000	252+000	196+100 RHS Inner	3	41.6000	0.5100	0.2951	0.1665	0.1075	0.0671	0.0465	0.0315	36.3	39.5		43.8
1028	1-5-2023	19:57:54	IL&FS	LSI	Solapur	MH	17.884674	75.463455	150+000	252+000	195+850 RHS Inner	1	37.2000	0.7000	0.3582	0.1806	0.0937	0.0692	0.0530	0.0357	36.1	39.9		43.8
	1-5-2023	19:57:54	IL&FS	LSI	Solapur	MH	17.884674	75.463455	150+000	252+000	195+850 RHS Inner	2	37.7000	0.6671	0.3550	0.1821	0.0902	0.0685	0.0517	0.0345	36.1	39.9		43.8
	1-5-2023	19:57:54	IL&FS	LSI	Solapur	MH	17.884674	75.463455	150+000	252+000	195+850 RHS Inner	3	37.7000	0.6649	0.3630	0.1775	0.0927	0.0692	0.0518	0.0346	36.1	39.9		43.8
1029	1-5-2023	19:59:44	IL&FS	LSI	Solapur	MH	17.885562	75.461250	150+000	252+000	195+600 RHS Inner	1	40.2000	0.3302	0.1609	0.0973	0.0670	0.0480	0.0328	0.0233	36.3	39.5		43.8
	1-5-2023	19:59:44	IL&FS	LSI	Solapur	MH	17.885562	75.461250	150+000	252+000	195+600 RHS Inner	2	40.1000	0.3220	0.1627	0.0972	0.0695	0.0479	0.0333	0.0235	36.3	39.5		43.8
	1-5-2023	19:59:44	IL&FS	LSI	Solapur	MH	17.885562	75.461250	150+000	252+000	195+600 RHS Inner	3	40.4000	0.3206	0.1589	0.0988	0.0685	0.0482	0.0325	0.0221	36.3	39.5		43.8
1030	1-5-2023	20:01:33	IL&FS	LSI	Solapur	MH	17.886533	75.459030	150+000	252+000	195+350 RHS Inner	1	40.1000	0.4399	0.2406	0.1327	0.0844	0.0543	0.0458	0.0398	36.1	39.8		43.8
	1-5-2023	20:01:33	IL&FS	LSI	Solapur	MH	17.886533	75.459030	150+000	252+000	195+350 RHS Inner	2	40.6000	0.4356	0.2402	0.1349	0.0861	0.0543	0.0480	0.0438	36.1	39.8		43.8
	1-5-2023	20:01:33	IL&FS	LSI	Solapur	MH	17.886533	75.459030	150+000	252+000	195+350 RHS Inner	3	40.7000	0.4237	0.2317	0.1308	0.0848	0.0552	0.0482	0.0435	36.1	39.8		43.8
1031	1-5-2023	20:03:24	IL&FS	LSI	Solapur	MH	17.887788	75.457107	150+000	252+000	195+100 RHS Inner	1	39.3000	0.4888	0.2812	0.1695	0.0963	0.0665	0.0454	0.0349	36.3	39.7		43.8
	1-5-2023	20:03:24	IL&FS	LSI	Solapur	MH	17.887788	75.457107	150+000	252+000	195+100 RHS Inner	2	39.4000	0.4815	0.2917	0.1755	0.0908	0.0659	0.0484	0.0376	36.3	39.7		43.8
	1-5-2023	20:03:24	IL&FS	LSI	Solapur	MH	17.887788	75.457107	150+000	252+000	195+100 RHS Inner	3	39.2000	0.4625	0.2686	0.1767	0.0955	0.0669	0.0446	0.0341	36.3	39.7		43.8
1032	1-5-2023	20:05:18	IL&FS	LSI	Solapur	MH	17.889009	75.455245	150+000	252+000	194+850 RHS Inner	1	38.5000	0.5921	0.3024	0.1479	0.0933	0.0528	0.0398	0.0308	36.2	39.6		43.8
	1-5-2023	20:05:18	IL&FS	LSI	Solapur	MH	17.889009	75.455245	150+000	252+000	194+850 RHS Inner	2	38.5000	0.5655	0.2988	0.1542	0.0914	0.0518	0.0387	0.0302	36.2	39.6		43.8
	1-5-2023	20:05:18	IL&FS	LSI	Solapur	MH	17.889009	75.455245	150+000	252+000	194+850 RHS Inner	3	38.3000	0.5657	0.3009	0.1493	0.0886	0.0506	0.0387	0.0294	36.2	39.6		43.8
1033	1-5-2023	20:07:16	IL&FS	LSI	Solapur	MH	17.890260	75.453300	150+000	252+000	194+600 RHS Inner	1	40.8000	0.6164	0.3165	0.1668	0.1188	0.0880	0.0707	0.0517	36.2	39.6		43.8
	1-5-2023	20:07:16	IL&FS	LSI	Solapur	MH	17.890260	75.453300	150+000	252+000	194+600 RHS Inner	2	40.5000	0.6039	0.3187	0.1663	0.1177	0.0842	0.0660	0.0510	36.2	39.6		43.8
	1-5-2023	20:07:16	IL&FS	LSI	Solapur	MH	17.890260	75.453300	150+000	252+000	194+600 RHS Inner	3	40.5000	0.5754	0.3288	0.1667	0.1075	0.0794	0.0643	0.0509	36.2	39.6		43.8
1034	1-5-2023	20:09:15	IL&FS	LSI	Solapur	MH	17.891521	75.451339	150+000	252+000	194+350 RHS Inner	1	39.1000	0.5649	0.2981	0.1725	0.1070	0.0738	0.0468	0.0283	36.5	39.8		43.8
	1-5-2023	20:09:15	IL&FS	LSI	Solapur	MH	17.891521	75.451339	150+000	252+000	194+350 RHS Inner	2	39.2000	0.5525	0.2860	0.1710	0.1080	0.0741	0.0443	0.0302	36.5	39.8		43.8
	1-5-2023	20:09:15	IL&FS	LSI	Solapur	MH	17.891521	75.451339	150+000	252+000	194+350 RHS Inner	3	39.1000	0.5450	0.2784	0.1682	0.1056	0.0741	0.0475	0.0294	36.5	39.8		43.8
1035	1-5-2023	20:11:20	IL&FS	LSI	Solapur	MH	17.892864	75.449325	150+000	252+000	194+100 RHS Inner	1	38.5000	0.5531	0.3282	0.1759	0.1071	0.0618	0.0366	0.0264	36.5	40.4		43.8
	1-5-2023	20:11:20	IL&FS	LSI	Solapur	MH	17.892864	75.449325	150+000	252+000	194+100 RHS Inner	2	38.2000	0.5314	0.3140	0.1774	0.1111	0.0641	0.0394	0.0263	36.5	40.4		43.8
	1-5-2023	20:11:20	IL&FS	LSI	Solapur	MH	17.892864	75.449325	150+000	252+000	194+100 RHS Inner	3	38.6000	0.5268	0.3278	0.1713	0.1053	0.0604	0.0357	0.0264	36.5	40.4		43.8
1036	1-5-2023	20:13:35	IL&FS	LSI	Solapur	MH	17.894098	75.447402	150+000	252+000	193+850 RHS Inner	1	40.5000	0.5522	0.3138	0.1706	0.0815	0.0544	0.0431	0.0388	36.5	39.8		43.8
	1-5-2023	20:13:35	IL&FS	LSI	Solapur	MH	17.894098	75.447402	150+000	252+000	193+850 RHS Inner	2	40.6000	0.5264	0.3085	0.1656	0.0815	0.0547	0.0431	0.0388	36.5	39.8		43.8
	1-5-2023	20:13:35	IL&FS	LSI	Solapur	MH	17.894098	75.447402	150+000	252+000	193+850 RHS Inner	3	41.7000	0.5229	0.3165	0.1624	0.0838	0.0556	0.0486	0.0437	36.5	39.8		43.8
1037	1-5-2023	20:15:42	IL&FS	LSI	Solapur	MH	17.895080	75.445289	150+000	252+000	193+600 RHS Inner	1	41.5000	0.3833	0.2264	0.1192	0.0638	0.0403	0.0254	0.0141	36.5	40.2		43.8
	1-5-2023	20:15:42	IL&FS	LSI	Solapur	MH	17.895080	75.445289	150+000	252+000	193+600 RHS Inner	2	41.4000	0.3699	0.2157	0.1243	0.0641	0.0407	0.0248	0.0136	36.5	40.2		43.8
	1-5-2023	20:15:42	IL&FS	LSI	Solapur	MH	17.895080	75.445289	150+000	252+000	193+600 RHS Inner	3	41.0000	0.3765	0.2174	0.1202	0.0620	0.0369	0.0241	0.0144	36.5	40.2		43.8
1038	1-5-2023	20:17:41	IL&FS	LSI	Solapur	MH	17.895748	75.442909	150+000	252+000	193+350 RHS Inner	1	40.7000	0.4616	0.2466	0.1354	0.0778	0.0565	0.0420	0.0309	36.7	39.8	T-34.2/43.5	43.5
	1-5-2023	20:17:41	IL&FS	LSI	Solapur	MH	17.895748	75.442909	150+000	252+000	193+350 RHS Inner	2	41.3000	0.4640	0.2594	0.1395	0.0779	0.0562	0.0427	0.0304	36.7	39.8	T-34.2/43.5	43.5
	1-5-2023	20:17:41	IL&FS	LSI	Solapur	MH	17.895748	75.442909	150+000	252+000	193+350 RHS Inner	3	41.4000	0.4537	0.2492	0.1363	0.0768	0.0571	0.0447	0.0306	36.7	39.8	T-34.2/43.5	43.5
1039	1-5-2023	20:21:31	IL&FS	LSI	Solapur	MH	17.896324	75.440727	150+000	252+000	193+100 RHS Inner	1	41.2000	0.5350	0.3211	0.1589	0.0811	0.0573	0.0410	0.0332	36.8	39.5		43.5
	1-5-2023	20:21:31	IL&FS	LSI	Solapur	MH	17.896324	75.440727	150+000	252+000	193+100 RHS Inner	2	40.4000	0.5084	0.2883	0.1601	0.0777	0.0533	0.0402	0.0323	36.8	39.5		43.5
	1-5-2023	20:21:31	IL&FS	LSI	Solapur	MH	17.896324	75.440727	150+000	252+000	193+100 RHS Inner	3	40.2000	0.4942	0.2930	0.1489	0.0832	0.0494	0.0381	0.0339	36.8	39.5		43.5
1040	1-5-2023	20:23:20	IL&FS	LSI	Solapur	MH	17.896940	75.438438	150+000	252+000	192+850 RHS Inner	1	42.9000	0.2950	0.1815	0.1028	0.0562	0.0434	0.0326	0.0184	36.5	39.3		43.5
	1-5-2023	20:23:20	IL&FS	LSI	Solapur	MH	17.896940	75.438438	150+000	252+000	192+850 RHS Inner	2	43.0000	0.2883	0.1789	0.1051	0.0608	0.0422	0.0307	0.0185	36.5	39.3		43.5
	1-5-2023	20:23:20	IL&FS	LSI	Solapur	MH	17.896940	75.438438	150+000	252+000	192+850 RHS Inner	3	42.7000	0.2872	0.1821	0.1052	0.0579	0.0443	0.0296	0.0183	36.5	39.3		43.5
1041	1-5-2023	20:25:52	IL&FS	LSI	Solapur	MH	17.897563	75.436286	150+000	252+000	192+600 RHS Inner	1	42.2000	0.5086	0.2696	0.1489	0.0945	0.0546	0.0420	0.0346	36.4	39.2		43.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	20:25:52	IL&FS	LSI	Solapur	MH	17.897563	75.436286	150+000	252+000	192+600 RHS Inner	2	42.2000	0.4992	0.2716	0.1500	0.0904	0.0514	0.0392	0.0342	36.4	39.2		43.5
	1-5-2023	20:25:52	IL&FS	LSI	Solapur	MH	17.897563	75.436286	150+000	252+000	192+600 RHS Inner	3	41.8000	0.4832	0.2655	0.1487	0.0924	0.0541	0.0369	0.0350	36.4	39.2		43.5
1042	1-5-2023	20:28:10	IL&FS	LSI	Solapur	MH	17.898548	75.434028	150+000	252+000	192+350 RHS Inner	1	36.2000	0.5066	0.2955	0.1514	0.0781	0.0556	0.0417	0.0375	36.5	39.1		43.5
	1-5-2023	20:28:10	IL&FS	LSI	Solapur	MH	17.898548	75.434028	150+000	252+000	192+350 RHS Inner	2	36.5000	0.4998	0.2991	0.1575	0.0784	0.0528	0.0475	0.0428	36.5	39.1		43.5
	1-5-2023	20:28:10	IL&FS	LSI	Solapur	MH	17.898548	75.434028	150+000	252+000	192+350 RHS Inner	3	37.2000	0.4980	0.2896	0.1537	0.0796	0.0546	0.0467	0.0420	36.5	39.1		43.5
1043	1-5-2023	20:30:08	IL&FS	LSI	Solapur	MH	17.900125	75.432357	150+000	252+000	192+100 RHS Inner	1	40.4000	0.5411	0.3146	0.1574	0.1046	0.0692	0.0396	0.0380	36.8	39.3		43.5
	1-5-2023	20:30:08	IL&FS	LSI	Solapur	MH	17.900125	75.432357	150+000	252+000	192+100 RHS Inner	2	39.7000	0.5146	0.3014	0.1578	0.1045	0.0659	0.0397	0.0392	36.8	39.3		43.5
	1-5-2023	20:30:08	IL&FS	LSI	Solapur	MH	17.900125	75.432357	150+000	252+000	192+100 RHS Inner	3	39.5000	0.5100	0.3127	0.1567	0.1003	0.0612	0.0390	0.0364	36.8	39.3		43.5
1044	1-5-2023	20:32:15	IL&FS	LSI	Solapur	MH	17.901979	75.430931	150+000	252+000	191+850 RHS Inner	1	38.9000	0.5954	0.3392	0.1679	0.0836	0.0623	0.0409	0.0266	36.9	39.7		43.5
	1-5-2023	20:32:15	IL&FS	LSI	Solapur	MH	17.901979	75.430931	150+000	252+000	191+850 RHS Inner	2	38.8000	0.5686	0.3301	0.1501	0.0871	0.0613	0.0416	0.0268	36.9	39.7		43.5
	1-5-2023	20:32:15	IL&FS	LSI	Solapur	MH	17.901979	75.430931	150+000	252+000	191+850 RHS Inner	3	38.7000	0.5638	0.3303	0.1508	0.0872	0.0619	0.0405	0.0256	36.9	39.7		43.5
1045	1-5-2023	20:34:41	IL&FS	LSI	Solapur	MH	17.903820	75.429580	150+000	252+000	191+600 RHS Inner	1	39.6000	0.5648	0.3284	0.1586	0.0786	0.0572	0.0442	0.0402	36.7	39.4		43.5
	1-5-2023	20:34:41	IL&FS	LSI	Solapur	MH	17.903820	75.429580	150+000	252+000	191+600 RHS Inner	2	40.6000	0.5592	0.3137	0.1604	0.0797	0.0604	0.0441	0.0408	36.7	39.4		43.5
	1-5-2023	20:34:41	IL&FS	LSI	Solapur	MH	17.903820	75.429580	150+000	252+000	191+600 RHS Inner	3	39.8000	0.5493	0.3151	0.1595	0.0731	0.0580	0.0446	0.0368	36.7	39.4		43.5
1046	1-5-2023	20:36:41	IL&FS	LSI	Solapur	MH	17.905080	75.427742	150+000	252+000	191+350 RHS Inner	1	41.3000	0.4589	0.2730	0.1581	0.0769	0.0510	0.0385	0.0304	36.4	39.3		43.5
	1-5-2023	20:36:41	IL&FS	LSI	Solapur	MH	17.905080	75.427742	150+000	252+000	191+350 RHS Inner	2	41.3000	0.4568	0.2893	0.1533	0.0775	0.0503	0.0381	0.0292	36.4	39.3		43.5
	1-5-2023	20:36:41	IL&FS	LSI	Solapur	MH	17.905080	75.427742	150+000	252+000	191+350 RHS Inner	3	41.6000	0.4484	0.2775	0.1626	0.0770	0.0509	0.0387	0.0298	36.4	39.3		43.5
1047	1-5-2023	20:38:32	IL&FS	LSI	Solapur	MH	17.905914	75.425521	150+000	252+000	191+100 RHS Inner	1	39.4000	0.5031	0.3054	0.1468	0.0702	0.0498	0.0353	0.0320	36.1	39.4		43.5
	1-5-2023	20:38:32	IL&FS	LSI	Solapur	MH	17.905914	75.425521	150+000	252+000	191+100 RHS Inner	2	39.6000	0.4918	0.2867	0.1399	0.0757	0.0512	0.0350	0.0329	36.1	39.4		43.5
	1-5-2023	20:38:32	IL&FS	LSI	Solapur	MH	17.905914	75.425521	150+000	252+000	191+100 RHS Inner	3	39.7000	0.4792	0.2759	0.1446	0.0696	0.0498	0.0370	0.0313	36.1	39.4		43.5
1048	1-5-2023	20:40:29	IL&FS	LSI	Solapur	MH	17.906885	75.423202	150+000	252+000	190+825 RHS Inner	1	41.1000	0.5157	0.3111	0.1652	0.0722	0.0425	0.0358	0.0322	36.5	40.0		43.5
	1-5-2023	20:40:29	IL&FS	LSI	Solapur	MH	17.906885	75.423202	150+000	252+000	190+825 RHS Inner	2	40.7000	0.5118	0.3254	0.1604	0.0744	0.0415	0.0352	0.0317	36.5	40.0		43.5
	1-5-2023	20:40:29	IL&FS	LSI	Solapur	MH	17.906885	75.423202	150+000	252+000	190+825 RHS Inner	3	41.3000	0.5156	0.3252	0.1605	0.0708	0.0430	0.0351	0.0316	36.5	40.0		43.5
1049	1-5-2023	20:42:14	IL&FS	LSI	Solapur	MH	17.907665	75.421272	150+000	252+000	190+600 RHS Inner	1	41.3000	0.4338	0.2539	0.1258	0.0856	0.0627	0.0527	0.0449	36.7	39.3		43.5
	1-5-2023	20:42:14	IL&FS	LSI	Solapur	MH	17.907665	75.421272	150+000	252+000	190+600 RHS Inner	2	41.5000	0.4461	0.2610	0.1316	0.0857	0.0641	0.0526	0.0440	36.7	39.3		43.5
	1-5-2023	20:42:14	IL&FS	LSI	Solapur	MH	17.907665	75.421272	150+000	252+000	190+600 RHS Inner	3	41.2000	0.4376	0.2579	0.1294	0.0857	0.0607	0.0517	0.0458	36.7	39.3		43.5
1050	1-5-2023	20:44:13	IL&FS	LSI	Solapur	MH	17.908588	75.419059	150+000	252+000	190+350 RHS Inner	1	40.8000	0.4744	0.2728	0.1318	0.0810	0.0519	0.0434	0.0399	36.7	39.5		43.5
	1-5-2023	20:44:13	IL&FS	LSI	Solapur	MH	17.908588	75.419059	150+000	252+000	190+350 RHS Inner	2	41.2000	0.4556	0.2601	0.1358	0.0708	0.0498	0.0420	0.0185	36.7	39.5		43.5
	1-5-2023	20:44:13	IL&FS	LSI	Solapur	MH	17.908588	75.419059	150+000	252+000	190+350 RHS Inner	3	41.2000	0.4514	0.2683	0.1352	0.0673	0.0495	0.0419	0.0343	36.7	39.5		43.5
1051	1-5-2023	20:46:12	IL&FS	LSI	Solapur	MH	17.909479	75.416885	150+000	252+000	190+100 RHS Inner	1	40.6000	0.4331	0.2488	0.1374	0.0711	0.0453	0.0328	0.0231	36.8	39.7		43.5
	1-5-2023	20:46:12	IL&FS	LSI	Solapur	MH	17.909479	75.416885	150+000	252+000	190+100 RHS Inner	2	40.2000	0.4370	0.2652	0.1387	0.0649	0.0474	0.0332	0.0235	36.8	39.7		43.5
	1-5-2023	20:46:12	IL&FS	LSI	Solapur	MH	17.909479	75.416885	150+000	252+000	190+100 RHS Inner	3	40.6000	0.4313	0.2481	0.1441	0.0682	0.0461	0.0326	0.0223	36.8	39.7		43.5
1052	1-5-2023	20:48:06	IL&FS	LSI	Solapur	MH	17.910346	75.414756	150+000	252+000	189+850 RHS Inner	1	36.2000	0.1709	0.1068	0.0634	0.0366	0.0237	0.0152	0.0132	37.4	40.1		43.5
	1-5-2023	20:48:06	IL&FS	LSI	Solapur	MH	17.910346	75.414756	150+000	252+000	189+850 RHS Inner	2	36.4000	0.1753	0.1015	0.0679	0.0347	0.0237	0.0165	0.0129	37.4	40.1		43.5
	1-5-2023	20:48:06	IL&FS	LSI	Solapur	MH	17.910346	75.414756	150+000	252+000	189+850 RHS Inner	3	36.7000	0.1773	0.1088	0.0624	0.0383	0.0250	0.0167	0.0124	37.4	40.1		43.5
1053	1-5-2023	20:51:17	IL&FS	LSI	Solapur	MH	17.911258	75.412551	150+000	252+000	189+600 RHS Inner	1	41.8000	0.2956	0.1750	0.1083	0.0678	0.0436	0.0359	0.0255	37.9	39.6		43.5
	1-5-2023	20:51:17	IL&FS	LSI	Solapur	MH	17.911258	75.412551	150+000	252+000	189+600 RHS Inner	2	42.7000	0.3042	0.1873	0.1064	0.0640	0.0415	0.0361	0.0265	37.9	39.6		43.5
	1-5-2023	20:51:17	IL&FS	LSI	Solapur	MH	17.911258	75.412551	150+000	252+000	189+600 RHS Inner	3	42.8000	0.2935	0.1717	0.1044	0.0690	0.0419	0.0358	0.0264	37.9	39.6		43.5
1054	1-5-2023	20:53:20	IL&FS	LSI	Solapur	MH	17.912096	75.410392	150+000	252+000	189+350 RHS Inner	1	43.0000	0.3286	0.1830	0.1000	0.0740	0.0545	0.0395	0.0285	37.5	39.1		43.5
	1-5-2023	20:53:20	IL&FS	LSI	Solapur	MH	17.912096	75.410392	150+000	252+000	189+350 RHS Inner	2	43.0000	0.3173	0.1764	0.1016	0.0716	0.0526	0.0358	0.0288	37.5	39.1		43.5
	1-5-2023	20:53:20	IL&FS	LSI	Solapur	MH	17.912096	75.410392	150+000	252+000	189+350 RHS Inner	3	42.7000	0.3167	0.1734	0.1031	0.0742	0.0552	0.0352	0.0268	37.5	39.1		43.5
1055	1-5-2023	20:55:21	IL&FS	LSI	Solapur	MH	17.912893	75.408241	150+000	252+000	189+100 RHS Inner	1	41.3000	0.4311	0.2684	0.1480	0.0872	0.0614	0.0435	0.0272	37.1	39.6		43.5
	1-5-2023	20:55:21	IL&FS	LSI	Solapur	MH	17.912893	75.408241	150+000	252+000	189+100 RHS Inner	2	41.6000	0.4281	0.2702	0.1514	0.0805	0.0576	0.0408	0.0247	37.1	39.6		43.5
	1-5-2023	20:55:21	IL&FS	LSI	Solapur	MH	17.912893	75.408241	150+000	252+000	189+100 RHS Inner	3	41.9000	0.4205	0.2649	0.1560	0.0810	0.0603	0.0443	0.0279	37.1	39.6		43.5
1056	1-5-2023	21:01:27	IL&FS	LSI	Solapur	MH	17.913749	75.406036	150+000	252+000	188+850 RHS Inner	1	41.2000	0.4749	0.2668	0.1498	0.0970	0.0630	0.0409	0.0236	36.1	39.1	T-33.2/42.1	42.1
	1-5-2023	21:01:27	IL&FS	LSI	Solapur	MH	17.913749	75.406036	150+000	252+000	188+850 RHS Inner	2	41.6000	0.4625	0.2752	0.1470	0.0994	0.0623	0.0455	0.0229	36.1	39.1	T-33.2/42.1	42.1
	1-5-2023	21:01:27	IL&FS	LSI	Solapur	MH	17.913749	75.406036	150+000	252+000	188+850 RHS Inner	3	42.0000	0.4541	0.2719	0.1574	0.1047	0.0643	0.0463	0.0219	36.1	39.1	T-33.2/42.1	42.1
1057	1-5-2023	21:03:36	IL&FS	LSI	Solapur	MH	17.914726	75.403694	150+000	252+000	188+600 RHS Inner	1	40.9000	0.5182	0.2981	0.1776	0.0953	0.0746	0.0516	0.0314	36.2	38.9		42.1
	1-5-2023	21:03:36	IL&FS	LSI	Solapur	MH	17.914726	75.403694	150+000	252+000	188+600 RHS Inner	2	41.0000	0.4897	0.3037	0.1616	0.0991	0.0766	0.0506	0.0305	36.2	38.9		42.1
	1-5-2023	21:03:36	IL&FS	LSI	Solapur	MH	17.914726	75.403694	150+000	252+000	188+600 RHS Inner	3	40.8000	0.4841	0.2988	0.1599	0.0945	0.0783	0.0491	0.0292	36.2	38.9		42.1
1058	1-5-2023	21:05:28	IL&FS	LSI	Solapur	MH	17.915582	75.401695	150+000	252+000	188+350 RHS Inner	1	41.6000	0.4209	0.2387	0.1505	0.0929	0.0567	0.0340	0.0210	36.0	38.6		42.1
	1-5-2023	21:05:28	IL&FS	LSI	Solapur	MH	17.915582	75.401695	150+000	252+000	188+350 RHS Inner	2	41.5000	0.4161	0.2385	0.1519	0.0858	0.0550	0.0319	0.0311	36.0	38.6		42.1
	1-5-2023	21:05:28	IL&FS	LSI	Solapur	MH	17.915582	75.401695	150+000	252+000	188+350 RHS Inner	3	42.4000	0.3957	0.2326	0.1501	0.0870	0.0554	0.0311	0.0280	36.0	38.6		42.1
1059	1-5-2023	21:07:22	IL&FS	LSI	Solapur	MH	17.916503	75.399414	150+000	252+000	188+100 RHS Inner	1	42.1000	0.3660	0.2281	0.1398	0.0752	0.0570	0.0443	0.0340	35.8	38.0		42.1
	1-5-2023	21:07:22	IL&FS	LSI	Solapur	MH	17.916503	75.399414	150+000	252+000	188+100 RHS Inner	2	41.8000	0.3655	0.2254	0.1387	0.0746	0.0540	0.0453	0.0345	35.8	38.0		42.1
	1-5-2023	21:07:22	IL&FS	LSI	Solapur	MH	17.916503	75.399414	150+000	252+000	188+100 RHS Inner	3	41.7000	0.3646	0.2299	0.1387	0.0745	0.0529	0.0439	0.0333	35.8	38.0		42.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1060	1-5-2023	21:09:18	IL&FS	LSI	Solapur	MH	17.917467	75.397338	150+000	252+000	187+850 RHS Inner	1	39.5000	0.4889	0.2712	0.1471	0.0699	0.0414	0.0363	0.0327	36.2	38.6		42.1
	1-5-2023	21:09:18	IL&FS	LSI	Solapur	MH	17.917467	75.397338	150+000	252+000	187+850 RHS Inner	2	39.2000	0.4832	0.2832	0.1391	0.0633	0.0374	0.0344	0.0309	36.2	38.6		42.1
	1-5-2023	21:09:18	IL&FS	LSI	Solapur	MH	17.917467	75.397338	150+000	252+000	187+850 RHS Inner	3	39.7000	0.4693	0.2851	0.1363	0.0668	0.0372	0.0344	0.0310	36.2	38.6		42.1
1061	1-5-2023	21:11:18	IL&FS	LSI	Solapur	MH	17.918277	75.395256	150+000	252+000	187+600 RHS Inner	1	42.7000	0.3200	0.2144	0.1236	0.0586	0.0326	0.0286	0.0257	36.4	38.3		42.1
	1-5-2023	21:11:18	IL&FS	LSI	Solapur	MH	17.918277	75.395256	150+000	252+000	187+600 RHS Inner	2	42.5000	0.3090	0.2079	0.1189	0.0590	0.0319	0.0283	0.0255	36.4	38.3		42.1
	1-5-2023	21:11:18	IL&FS	LSI	Solapur	MH	17.918277	75.395256	150+000	252+000	187+600 RHS Inner	3	42.4000	0.2975	0.1967	0.1176	0.0579	0.0330	0.0286	0.0257	36.4	38.3		42.1
1062	1-5-2023	21:13:13	IL&FS	LSI	Solapur	MH	17.919151	75.392967	150+000	252+000	187+350 RHS Inner	1	42.9000	0.2073	0.1419	0.0862	0.0546	0.0395	0.0300	0.0222	36.0	38.0		42.1
	1-5-2023	21:13:13	IL&FS	LSI	Solapur	MH	17.919151	75.392967	150+000	252+000	187+350 RHS Inner	2	42.6000	0.2049	0.1382	0.0883	0.0546	0.0399	0.0294	0.0197	36.0	38.0		42.1
	1-5-2023	21:13:13	IL&FS	LSI	Solapur	MH	17.919151	75.392967	150+000	252+000	187+350 RHS Inner	3	42.7000	0.1991	0.1306	0.0951	0.0529	0.0397	0.0296	0.0205	36.0	38.0		42.1
1063	1-5-2023	21:15:09	IL&FS	LSI	Solapur	MH	17.920030	75.390830	150+000	252+000	187+100 RHS Inner	1	40.9000	0.3936	0.2361	0.1279	0.0713	0.0587	0.0491	0.0362	36.0	38.2		42.1
	1-5-2023	21:15:09	IL&FS	LSI	Solapur	MH	17.920030	75.390830	150+000	252+000	187+100 RHS Inner	2	41.2000	0.3912	0.2245	0.1314	0.0700	0.0546	0.0437	0.0393	36.0	38.2		42.1
	1-5-2023	21:15:09	IL&FS	LSI	Solapur	MH	17.920030	75.390830	150+000	252+000	187+100 RHS Inner	3	41.4000	0.3864	0.2327	0.1255	0.0725	0.0569	0.0458	0.0412	36.0	38.2		42.1
1064	1-5-2023	21:16:54	IL&FS	LSI	Solapur	MH	17.920942	75.388603	150+000	252+000	186+850 RHS Inner	1	41.2000	0.2769	0.1776	0.0977	0.0614	0.0384	0.0296	0.0266	35.6	38.1		42.1
	1-5-2023	21:16:54	IL&FS	LSI	Solapur	MH	17.920942	75.388603	150+000	252+000	186+850 RHS Inner	2	41.6000	0.2780	0.1761	0.1076	0.0573	0.0372	0.0292	0.0262	35.6	38.1		42.1
	1-5-2023	21:16:54	IL&FS	LSI	Solapur	MH	17.920942	75.388603	150+000	252+000	186+850 RHS Inner	3	41.7000	0.2792	0.1696	0.1052	0.0569	0.0365	0.0292	0.0263	35.6	38.1		42.1
1065	1-5-2023	21:18:49	IL&FS	LSI	Solapur	MH	17.921636	75.386466	150+000	252+000	186+600 RHS Inner	1	41.2000	0.3744	0.2348	0.1404	0.0698	0.0538	0.0455	0.0343	35.4	37.3		42.1
	1-5-2023	21:18:49	IL&FS	LSI	Solapur	MH	17.921636	75.386466	150+000	252+000	186+600 RHS Inner	2	41.3000	0.3697	0.2345	0.1300	0.0721	0.0553	0.0449	0.0369	35.4	37.3		42.1
	1-5-2023	21:18:49	IL&FS	LSI	Solapur	MH	17.921636	75.386466	150+000	252+000	186+600 RHS Inner	3	41.1000	0.3617	0.2337	0.1270	0.0743	0.0486	0.0450	0.0323	35.4	37.3		42.1
1066	1-5-2023	21:20:52	IL&FS	LSI	Solapur	MH	17.921983	75.384117	150+000	252+000	186+350 RHS Inner	1	39.3000	0.5633	0.3512	0.1631	0.1106	0.0731	0.0419	0.0205	35.3	37.6		42.1
	1-5-2023	21:20:52	IL&FS	LSI	Solapur	MH	17.921983	75.384117	150+000	252+000	186+350 RHS Inner	2	40.1000	0.5448	0.3326	0.1790	0.1193	0.0763	0.0455	0.0219	35.3	37.6		42.1
	1-5-2023	21:20:52	IL&FS	LSI	Solapur	MH	17.921983	75.384117	150+000	252+000	186+350 RHS Inner	3	40.1000	0.5461	0.3422	0.1676	0.1105	0.0711	0.0422	0.0202	35.3	37.6		42.1
1067	1-5-2023	21:22:49	IL&FS	LSI	Solapur	MH	17.923101	75.382034	150+000	252+000	186+100 RHS Inner	1	41.0000	0.4994	0.3243	0.1829	0.1068	0.0740	0.0530	0.0422	34.9	37.9		42.1
	1-5-2023	21:22:49	IL&FS	LSI	Solapur	MH	17.923101	75.382034	150+000	252+000	186+100 RHS Inner	2	40.6000	0.5031	0.3396	0.1829	0.1080	0.0771	0.0533	0.0479	34.9	37.9		42.1
	1-5-2023	21:22:49	IL&FS	LSI	Solapur	MH	17.923101	75.382034	150+000	252+000	186+100 RHS Inner	3	40.8000	0.4884	0.3300	0.1818	0.1077	0.0761	0.0514	0.0398	34.9	37.9		42.1
1068	1-5-2023	21:24:48	IL&FS	LSI	Solapur	MH	17.923480	75.379608	150+000	252+000	185+850 RHS Inner	1	41.7000	0.2935	0.2028	0.1175	0.0720	0.0422	0.0365	0.0277	34.8	37.6		42.1
	1-5-2023	21:24:48	IL&FS	LSI	Solapur	MH	17.923480	75.379608	150+000	252+000	185+850 RHS Inner	2	41.7000	0.2880	0.1978	0.1215	0.0753	0.0479	0.0346	0.0296	34.8	37.6		42.1
	1-5-2023	21:24:48	IL&FS	LSI	Solapur	MH	17.923480	75.379608	150+000	252+000	185+850 RHS Inner	3	41.3000	0.2854	0.2002	0.1201	0.0789	0.0447	0.0336	0.0296	34.8	37.6		42.1
1069	1-5-2023	21:27:40	IL&FS	LSI	Solapur	MH	17.924049	75.377449	150+000	252+000	185+600 RHS Inner	1	41.8000	0.4023	0.2372	0.1193	0.0762	0.0588	0.0469	0.0379	34.2	36.6		42.1
	1-5-2023	21:27:40	IL&FS	LSI	Solapur	MH	17.924049	75.377449	150+000	252+000	185+600 RHS Inner	2	42.3000	0.3856	0.2327	0.1217	0.0758	0.0567	0.0435	0.0331	34.2	36.6		42.1
	1-5-2023	21:27:40	IL&FS	LSI	Solapur	MH	17.924049	75.377449	150+000	252+000	185+600 RHS Inner	3	42.5000	0.3783	0.2221	0.1123	0.0796	0.0588	0.0436	0.0332	34.2	36.6		42.1
1070	1-5-2023	21:29:45	IL&FS	LSI	Solapur	MH	17.924863	75.375244	150+000	252+000	185+350 RHS Inner	1	39.7000	0.5096	0.3318	0.1872	0.1218	0.0774	0.0582	0.0511	34.7	37.2		42.1
	1-5-2023	21:29:45	IL&FS	LSI	Solapur	MH	17.924863	75.375244	150+000	252+000	185+350 RHS Inner	2	39.2000	0.4940	0.3020	0.1866	0.1219	0.0768	0.0581	0.0522	34.7	37.2		42.1
	1-5-2023	21:29:45	IL&FS	LSI	Solapur	MH	17.924863	75.375244	150+000	252+000	185+350 RHS Inner	3	39.5000	0.4924	0.3229	0.1867	0.1173	0.0720	0.0598	0.0515	34.7	37.2		42.1
1071	1-5-2023	21:31:49	IL&FS	LSI	Solapur	MH	17.925685	75.372962	150+000	252+000	185+100 RHS Inner	1	41.0000	0.6103	0.3792	0.2087	0.1172	0.0852	0.0642	0.0512	34.9	37.3		42.1
	1-5-2023	21:31:49	IL&FS	LSI	Solapur	MH	17.925685	75.372962	150+000	252+000	185+100 RHS Inner	2	41.3000	0.6139	0.3861	0.2097	0.1178	0.0855	0.0652	0.0519	34.9	37.3		42.1
	1-5-2023	21:31:49	IL&FS	LSI	Solapur	MH	17.925685	75.372962	150+000	252+000	185+100 RHS Inner	3	40.5000	0.5848	0.3799	0.2056	0.1098	0.0815	0.0622	0.0480	34.9	37.3		42.1
1072	1-5-2023	21:33:47	IL&FS	LSI	Solapur	MH	17.926464	75.370773	150+000	252+000	184+850 RHS Inner	1	41.0000	0.3618	0.1879	0.1071	0.0711	0.0488	0.0367	0.0326	34.8	37.2		42.1
	1-5-2023	21:33:47	IL&FS	LSI	Solapur	MH	17.926464	75.370773	150+000	252+000	184+850 RHS Inner	2	41.6000	0.3440	0.1839	0.1080	0.0762	0.0520	0.0393	0.0311	34.8	37.2		42.1
	1-5-2023	21:33:47	IL&FS	LSI	Solapur	MH	17.926464	75.370773	150+000	252+000	184+850 RHS Inner	3	42.9000	0.3782	0.1994	0.1115	0.0773	0.0503	0.0389	0.0350	34.8	37.2		42.1
1073	1-5-2023	21:35:58	IL&FS	LSI	Solapur	MH	17.927574	75.368797	150+000	252+000	184+600 RHS Inner	1	42.0000	0.2490	0.1405	0.0897	0.0689	0.0476	0.0344	0.0255	34.9	36.2		42.1
	1-5-2023	21:35:58	IL&FS	LSI	Solapur	MH	17.927574	75.368797	150+000	252+000	184+600 RHS Inner	2	41.9000	0.2512	0.1461	0.0909	0.0696	0.0488	0.0334	0.0246	34.9	36.2		42.1
	1-5-2023	21:35:58	IL&FS	LSI	Solapur	MH	17.927574	75.368797	150+000	252+000	184+600 RHS Inner	3	42.3000	0.2496	0.1528	0.0915	0.0710	0.0497	0.0340	0.0252	34.9	36.2		42.1
1074	1-5-2023	21:38:07	IL&FS	LSI	Solapur	MH	17.929048	75.367034	150+000	252+000	184+350 RHS Inner	1	39.9000	0.4764	0.3007	0.1652	0.0831	0.0600	0.0491	0.0391	34.7	36.7		42.1
	1-5-2023	21:38:07	IL&FS	LSI	Solapur	MH	17.929048	75.367034	150+000	252+000	184+350 RHS Inner	2	39.7000	0.4715	0.2926	0.1615	0.0893	0.0605	0.0467	0.0391	34.7	36.7		42.1
	1-5-2023	21:38:07	IL&FS	LSI	Solapur	MH	17.929048	75.367034	150+000	252+000	184+350 RHS Inner	3	40.1000	0.4618	0.2937	0.1673	0.0874	0.0620	0.0491	0.0400	34.7	36.7		42.1
1075	1-5-2023	21:40:36	IL&FS	LSI	Solapur	MH	17.930332	75.365562	150+000	252+000	184+100 RHS Inner	1	39.6000	0.4232	0.2599	0.1501	0.0839	0.0521	0.0419	0.0356	34.7	37.4	T-32/42.2	42.2
	1-5-2023	21:40:36	IL&FS	LSI	Solapur	MH	17.930332	75.365562	150+000	252+000	184+100 RHS Inner	2	39.7000	0.4198	0.2619	0.1487	0.0772	0.0534	0.0426	0.0343	34.7	37.4	T-32/42.2	42.2
	1-5-2023	21:40:36	IL&FS	LSI	Solapur	MH	17.930332	75.365562	150+000	252+000	184+100 RHS Inner	3	39.9000	0.4051	0.2542	0.1494	0.0786	0.0524	0.0424	0.0350	34.7	37.4	T-32/42.2	42.2
1076	1-5-2023	21:44:47	IL&FS	LSI	Solapur	MH	17.931749	75.363975	150+000	252+000	183+850 RHS Inner	1	40.3000	0.3824	0.2333	0.1348	0.0839	0.0605	0.0519	0.0456	35.0	36.7		42.2
	1-5-2023	21:44:47	IL&FS	LSI	Solapur	MH	17.931749	75.363975	150+000	252+000	183+850 RHS Inner	2	40.1000	0.3791	0.2355	0.1380	0.0760	0.0596	0.0521	0.0463	35.0	36.7		42.2
	1-5-2023	21:44:47	IL&FS	LSI	Solapur	MH	17.931749	75.363975	150+000	252+000	183+850 RHS Inner	3	40.4000	0.3663	0.2280	0.1317	0.0808	0.0601	0.0521	0.0462	35.0	36.7		42.2
1077	1-5-2023	21:46:58	IL&FS	LSI	Solapur	MH	17.933248	75.362281	150+000	252+000	183+600 RHS Inner	1	37.9000	0.5015	0.3153	0.2063	0.1185	0.0931	0.0630	0.0407	35.0	36.8		42.2
	1-5-2023	21:46:58	IL&FS	LSI	Solapur	MH	17.933248	75.362281	150+000	252+000	183+600 RHS Inner	2	38.3000	0.4854	0.3038	0.2030	0.1114	0.0843	0.0606	0.0459	35.0	36.8		42.2
	1-5-2023	21:46:58	IL&FS	LSI	Solapur	MH	17.933248	75.362281	150+000	252+000	183+600 RHS Inner	3	38.4000	0.4721	0.2839	0.1853	0.1268	0.0877	0.0637	0.0466	35.0	36.8		42.2
1078	1-5-2023	21:49:07	IL&FS	LSI	Solapur	MH	17.934764	75.360466	150+000	252+000	183+350 RHS Inner	1	42.4000	0.1915	0.1075	0.0770	0.0468	0.0361	0.0254	0.0193	35.0	36.9		42.2
	1-5-2023	21:49:07	IL&FS	LSI	Solapur	MH	17.934764	75.360466	150+000	252+000	183+350 RHS Inner	2	42.6000	0.1928	0.1210	0.0699	0.0454	0.0350	0.0246	0.0206	35.0	36.9		42.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	21:49:07	IL&FS	LSI	Solapur	MH	17.934764	75.360466	150+000	252+000	183+350 RHS Inner	3	42.2000	0.1923	0.1080	0.0758	0.0450	0.0360	0.0269	0.0198	35.0	36.9		42.2
1079	1-5-2023	21:51:02	IL&FS	LSI	Solapur	MH	17.936491	75.358444	150+000	252+000	183+100 RHS Inner	1	43.3000	0.2061	0.1307	0.0913	0.0558	0.0376	0.0285	0.0257	35.0	36.2		42.2
	1-5-2023	21:51:02	IL&FS	LSI	Solapur	MH	17.936491	75.358444	150+000	252+000	183+100 RHS Inner	2	42.9000	0.2027	0.1323	0.0934	0.0557	0.0405	0.0281	0.0253	35.0	36.2		42.2
	1-5-2023	21:51:02	IL&FS	LSI	Solapur	MH	17.936491	75.358444	150+000	252+000	183+100 RHS Inner	3	43.4000	0.2048	0.1311	0.0915	0.0566	0.0386	0.0291	0.0262	35.0	36.2		42.2
1080	1-5-2023	21:53:31	IL&FS	LSI	Solapur	MH	17.938119	75.356559	150+000	252+000	182+850 RHS Inner	1	41.9000	0.3260	0.1895	0.1158	0.0848	0.0640	0.0444	0.0307	34.8	36.2		42.2
	1-5-2023	21:53:31	IL&FS	LSI	Solapur	MH	17.938119	75.356559	150+000	252+000	182+850 RHS Inner	2	41.9000	0.3233	0.1835	0.1195	0.0876	0.0671	0.0455	0.0286	34.8	36.2		42.2
	1-5-2023	21:53:31	IL&FS	LSI	Solapur	MH	17.938119	75.356559	150+000	252+000	182+850 RHS Inner	3	41.8000	0.3199	0.1840	0.1183	0.0877	0.0651	0.0421	0.0264	34.8	36.2		42.2
1081	1-5-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.939531	75.354927	150+000	252+000	182+600 RHS Inner	1	40.9000	0.4077	0.2412	0.1264	0.0758	0.0556	0.0415	0.0348	34.7	36.3		42.2
	1-5-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.939531	75.354927	150+000	252+000	182+600 RHS Inner	2	41.6000	0.3880	0.2355	0.1297	0.0778	0.0560	0.0418	0.0357	34.7	36.3		42.2
	1-5-2023	21:55:24	IL&FS	LSI	Solapur	MH	17.939531	75.354927	150+000	252+000	182+600 RHS Inner	3	41.9000	0.3966	0.2417	0.1334	0.0698	0.0528	0.0411	0.0353	34.7	36.3		42.2
1082	1-5-2023	21:57:28	IL&FS	LSI	Solapur	MH	17.941015	75.353134	150+000	252+000	182+350 RHS Inner	1	41.7000	0.3529	0.2063	0.1257	0.0630	0.0533	0.0434	0.0335	34.7	36.4		42.2
	1-5-2023	21:57:28	IL&FS	LSI	Solapur	MH	17.941015	75.353134	150+000	252+000	182+350 RHS Inner	2	41.6000	0.3430	0.2023	0.1181	0.0614	0.0527	0.0439	0.0305	34.7	36.4		42.2
	1-5-2023	21:57:28	IL&FS	LSI	Solapur	MH	17.941015	75.353134	150+000	252+000	182+350 RHS Inner	3	41.8000	0.3466	0.2039	0.1220	0.0679	0.0531	0.0438	0.0307	34.7	36.4		42.2
1083	1-5-2023	21:59:26	IL&FS	LSI	Solapur	MH	17.942470	75.351394	150+000	252+000	182+100 RHS Inner	1	42.4000	0.2417	0.1679	0.1056	0.0658	0.0451	0.0314	0.0238	34.7	36.0		42.2
	1-5-2023	21:59:26	IL&FS	LSI	Solapur	MH	17.942470	75.351394	150+000	252+000	182+100 RHS Inner	2	42.8000	0.2361	0.1622	0.1043	0.0661	0.0459	0.0321	0.0240	34.7	36.0		42.2
	1-5-2023	21:59:26	IL&FS	LSI	Solapur	MH	17.942470	75.351394	150+000	252+000	182+100 RHS Inner	3	42.8000	0.2345	0.1558	0.1022	0.0615	0.0438	0.0302	0.0237	34.7	36.0		42.2
1084	1-5-2023	22:01:21	IL&FS	LSI	Solapur	MH	17.943906	75.349632	150+000	252+000	181+850 RHS Inner	1	39.8000	0.4784	0.3021	0.1653	0.1089	0.0708	0.0501	0.0451	34.6	36.3		42.2
	1-5-2023	22:01:21	IL&FS	LSI	Solapur	MH	17.943906	75.349632	150+000	252+000	181+850 RHS Inner	2	39.6000	0.4567	0.2867	0.1694	0.1067	0.0657	0.0501	0.0451	34.6	36.3		42.2
	1-5-2023	22:01:21	IL&FS	LSI	Solapur	MH	17.943906	75.349632	150+000	252+000	181+850 RHS Inner	3	38.0000	0.4564	0.2840	0.1598	0.1009	0.0642	0.0486	0.0468	34.6	36.3		42.2
1085	1-5-2023	22:03:25	IL&FS	LSI	Solapur	MH	17.945543	75.347824	150+000	252+000	181+600 RHS Inner	1	38.4000	0.4407	0.2665	0.1749	0.0940	0.0714	0.0557	0.0335	34.5	36.2		42.2
	1-5-2023	22:03:25	IL&FS	LSI	Solapur	MH	17.945543	75.347824	150+000	252+000	181+600 RHS Inner	2	38.6000	0.4370	0.2781	0.1702	0.0944	0.0692	0.0508	0.0357	34.5	36.2		42.2
	1-5-2023	22:03:25	IL&FS	LSI	Solapur	MH	17.945543	75.347824	150+000	252+000	181+600 RHS Inner	3	38.8000	0.4324	0.2759	0.1612	0.0892	0.0698	0.0561	0.0302	34.5	36.2		42.2
1086	1-5-2023	22:05:31	IL&FS	LSI	Solapur	MH	17.947076	75.345970	150+000	252+000	181+330 RHS Inner	1	42.7000	0.2546	0.1519	0.0906	0.0614	0.0415	0.0317	0.0264	34.5	36.6		42.2
	1-5-2023	22:05:31	IL&FS	LSI	Solapur	MH	17.947076	75.345970	150+000	252+000	181+330 RHS Inner	2	42.2000	0.2452	0.1547	0.0932	0.0623	0.0420	0.0293	0.0241	34.5	36.6		42.2
	1-5-2023	22:05:31	IL&FS	LSI	Solapur	MH	17.947076	75.345970	150+000	252+000	181+330 RHS Inner	3	42.6000	0.2609	0.1623	0.0983	0.0647	0.0413	0.0314	0.0272	34.5	36.6		42.2
1087	1-5-2023	22:07:22	IL&FS	LSI	Solapur	MH	17.948560	75.344245	150+000	252+000	181+100 RHS Inner	1	41.4000	0.3734	0.2120	0.0944	0.0595	0.0334	0.0199	0.0178	34.5	36.4		42.2
	1-5-2023	22:07:22	IL&FS	LSI	Solapur	MH	17.948560	75.344245	150+000	252+000	181+100 RHS Inner	2	41.4000	0.3755	0.2114	0.1009	0.0569	0.0341	0.0212	0.0180	34.5	36.4		42.2
	1-5-2023	22:07:22	IL&FS	LSI	Solapur	MH	17.948560	75.344245	150+000	252+000	181+100 RHS Inner	3	41.3000	0.3691	0.2131	0.1026	0.0580	0.0305	0.0208	0.0177	34.5	36.4		42.2
1088	1-5-2023	22:09:45	IL&FS	LSI	Solapur	MH	17.949985	75.342445	150+000	252+000	180+850 RHS Inner	1	39.1000	0.5634	0.3306	0.1581	0.0784	0.0628	0.0511	0.0365	34.4	36.6		42.2
	1-5-2023	22:09:45	IL&FS	LSI	Solapur	MH	17.949985	75.342445	150+000	252+000	180+850 RHS Inner	2	39.7000	0.5438	0.3215	0.1577	0.0775	0.0495	0.0413	0.0248	34.4	36.6		42.2
	1-5-2023	22:09:45	IL&FS	LSI	Solapur	MH	17.949985	75.342445	150+000	252+000	180+850 RHS Inner	3	39.6000	0.5421	0.3243	0.1547	0.0795	0.0462	0.0379	0.0235	34.4	36.6		42.2
1089	1-5-2023	22:14:18	IL&FS	LSI	Solapur	MH	17.952550	75.338546	150+000	252+000	180+350 RHS Inner	1	40.0000	0.4031	0.2412	0.1316	0.0789	0.0550	0.0345	0.0211	34.6	36.3		42.2
	1-5-2023	22:14:18	IL&FS	LSI	Solapur	MH	17.952550	75.338546	150+000	252+000	180+350 RHS Inner	2	40.7000	0.4124	0.2216	0.1342	0.0853	0.0572	0.0350	0.0189	34.6	36.3		42.2
	1-5-2023	22:14:18	IL&FS	LSI	Solapur	MH	17.952550	75.338546	150+000	252+000	180+350 RHS Inner	3	40.7000	0.4102	0.2336	0.1341	0.0907	0.0537	0.0336	0.0200	34.6	36.3		42.2
1090	1-5-2023	22:16:19	IL&FS	LSI	Solapur	MH	17.953809	75.336662	150+000	252+000	180+100 RHS Inner	1	40.6000	0.4004	0.2116	0.1273	0.0804	0.0470	0.0317	0.0211	34.5	36.1		42.2
	1-5-2023	22:16:19	IL&FS	LSI	Solapur	MH	17.953809	75.336662	150+000	252+000	180+100 RHS Inner	2	41.2000	0.3813	0.2280	0.1332	0.0854	0.0510	0.0343	0.0232	34.5	36.1		42.2
	1-5-2023	22:16:19	IL&FS	LSI	Solapur	MH	17.953809	75.336662	150+000	252+000	180+100 RHS Inner	3	41.2000	0.4001	0.2143	0.1203	0.0790	0.0503	0.0348	0.0228	34.5	36.1		42.2
1091	1-5-2023	22:18:04	IL&FS	LSI	Solapur	MH	17.955072	75.334747	150+000	252+000	179+850 RHS Inner	1	40.8000	0.4144	0.2492	0.1557	0.1117	0.0864	0.0611	0.0374	34.6	36.2		42.2
	1-5-2023	22:18:04	IL&FS	LSI	Solapur	MH	17.955072	75.334747	150+000	252+000	179+850 RHS Inner	2	41.3000	0.4200	0.2558	0.1393	0.1150	0.0915	0.0679	0.0390	34.6	36.2		42.2
	1-5-2023	22:18:04	IL&FS	LSI	Solapur	MH	17.955072	75.334747	150+000	252+000	179+850 RHS Inner	3	41.2000	0.4140	0.2515	0.1538	0.1167	0.0947	0.0700	0.0412	34.6	36.2		42.2
1092	1-5-2023	22:20:07	IL&FS	LSI	Solapur	MH	17.956239	75.332992	150+000	252+000	179+630 RHS Inner	1	44.2000	0.1551	0.1166	0.0900	0.0708	0.0585	0.0358	0.0216	34.7	36.1		42.2
	1-5-2023	22:20:07	IL&FS	LSI	Solapur	MH	17.956239	75.332992	150+000	252+000	179+630 RHS Inner	2	44.0000	0.1554	0.1183	0.0895	0.0719	0.0517	0.0340	0.0224	34.7	36.1		42.2
	1-5-2023	22:20:07	IL&FS	LSI	Solapur	MH	17.956239	75.332992	150+000	252+000	179+630 RHS Inner	3	43.8000	0.1543	0.1175	0.0861	0.0661	0.0539	0.0362	0.0239	34.7	36.1		42.2
1093	1-5-2023	22:22:15	IL&FS	LSI	Solapur	MH	17.956718	75.332229	150+000	252+000	179+530 RHS Inner	1	44.9000	0.0494	0.0408	0.0382	0.0323	0.0282	0.0242	0.0213	34.5	35.9	CC-Interior	42.2
	1-5-2023	22:22:15	IL&FS	LSI	Solapur	MH	17.956718	75.332229	150+000	252+000	179+530 RHS Inner	2	45.0000	0.0498	0.0414	0.0379	0.0324	0.0290	0.0246	0.0217	34.5	35.9	CC-Interior	42.2
	1-5-2023	22:22:15	IL&FS	LSI	Solapur	MH	17.956718	75.332229	150+000	252+000	179+530 RHS Inner	3	44.6000	0.0484	0.0393	0.0362	0.0342	0.0281	0.0259	0.0233	34.5	35.9	CC-Interior	42.2
1094	1-5-2023	23:23:52	IL&FS	LSI	Solapur	MH	17.959230	75.328475	150+000	252+000	179+050 RHS Inner	1	40.3000	0.2309	0.1460	0.0915	0.0582	0.0440	0.0342	0.0308	32.9	35.3	T-29.8/39.3	39.3
	1-5-2023	23:23:52	IL&FS	LSI	Solapur	MH	17.959230	75.328475	150+000	252+000	179+050 RHS Inner	2	40.8000	0.2295	0.1509	0.0932	0.0566	0.0415	0.0318	0.0286	32.9	35.3	T-29.8/39.3	39.3
	1-5-2023	23:23:52	IL&FS	LSI	Solapur	MH	17.959230	75.328475	150+000	252+000	179+050 RHS Inner	3	40.8000	0.2256	0.1518	0.0879	0.0603	0.0435	0.0319	0.0287	32.9	35.3	T-29.8/39.3	39.3
1095	1-5-2023	23:26:34	IL&FS	LSI	Solapur	MH	17.960443	75.327003	150+000	252+000	178+850 RHS Inner	1	40.7000	0.2587	0.1673	0.1155	0.0670	0.0515	0.0413	0.0301	32.8	33.8		39.3
	1-5-2023	23:26:34	IL&FS	LSI	Solapur	MH	17.960443	75.327003	150+000	252+000	178+850 RHS Inner	2	41.3000	0.2512	0.1655	0.1127	0.0753	0.0564	0.0425	0.0333	32.8	33.8		39.3
	1-5-2023	23:26:34	IL&FS	LSI	Solapur	MH	17.960443	75.327003	150+000	252+000	178+850 RHS Inner	3	41.2000	0.2597	0.1684	0.1122	0.0743	0.0540	0.0394	0.0304	32.8	33.8		39.3
1096	1-5-2023	23:30:43	IL&FS	LSI	Solapur	MH	17.961948	75.325416	150+000	252+000	178+600 RHS Inner	1	39.5000	0.3332	0.1991	0.1121	0.0599	0.0366	0.0252	0.0227	32.6	33.8		39.3
	1-5-2023	23:30:43	IL&FS	LSI	Solapur	MH	17.961948	75.325416	150+000	252+000	178+600 RHS Inner	2	40.6000	0.3314	0.2000	0.1103	0.0615	0.0426	0.0280	0.0273	32.6	33.8		39.3
	1-5-2023	23:30:43	IL&FS	LSI	Solapur	MH	17.961948	75.325416	150+000	252+000	178+600 RHS Inner	3	41.1000	0.3333	0.1983	0.1091	0.0570	0.0400	0.0272	0.0251	32.6	33.8		39.3
1097	1-5-2023	23:32:42	IL&FS	LSI	Solapur	MH	17.963541	75.323638	150+000	252+000	178+350 RHS Inner	1	41.5000	0.2423	0.1894	0.1258	0.0801	0.0427	0.0318	0.0257	32.5	33.6		39.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	1-5-2023	23:32:42	IL&FS	LSI	Solapur	MH	17.963541	75.323638	150+000	252+000	178+350 RHS Inner	2	41.9000	0.2448	0.2011	0.1262	0.0784	0.0453	0.0343	0.0252	32.5	33.6		39.3
	1-5-2023	23:32:42	IL&FS	LSI	Solapur	MH	17.963541	75.323638	150+000	252+000	178+350 RHS Inner	3	41.7000	0.2370	0.1862	0.1293	0.0754	0.0460	0.0355	0.0266	32.5	33.6		39.3
1098	1-5-2023	23:34:33	IL&FS	LSI	Solapur	MH	17.964984	75.321861	150+000	252+000	178+100 RHS Inner	1	40.2000	0.4477	0.2816	0.1635	0.1045	0.0682	0.0556	0.0375	32.4	33.8		39.3
	1-5-2023	23:34:33	IL&FS	LSI	Solapur	MH	17.964984	75.321861	150+000	252+000	178+100 RHS Inner	2	40.7000	0.4381	0.2815	0.1606	0.1053	0.0723	0.0542	0.0399	32.4	33.8		39.3
	1-5-2023	23:34:33	IL&FS	LSI	Solapur	MH	17.964984	75.321861	150+000	252+000	178+100 RHS Inner	3	40.9000	0.4278	0.2692	0.1610	0.1012	0.0680	0.0527	0.0393	32.4	33.8		39.3
1099	1-5-2023	23:36:41	IL&FS	LSI	Solapur	MH	17.966503	75.319923	150+000	252+000	177+830 RHS Inner	1	40.4000	0.3478	0.2238	0.1354	0.0752	0.0488	0.0355	0.0320	32.2	33.6		39.3
	1-5-2023	23:36:41	IL&FS	LSI	Solapur	MH	17.966503	75.319923	150+000	252+000	177+830 RHS Inner	2	40.2000	0.3393	0.2177	0.1314	0.0828	0.0461	0.0380	0.0338	32.2	33.6		39.3
	1-5-2023	23:36:41	IL&FS	LSI	Solapur	MH	17.966503	75.319923	150+000	252+000	177+830 RHS Inner	3	40.6000	0.3552	0.2252	0.1322	0.0791	0.0450	0.0359	0.0334	32.2	33.6		39.3
1100	1-5-2023	23:38:48	IL&FS	LSI	Solapur	MH	17.967823	75.318206	150+000	252+000	177+600 RHS Inner	1	40.2000	0.4566	0.2949	0.1724	0.1060	0.0770	0.0592	0.0356	32.4	34.1		39.3
	1-5-2023	23:38:48	IL&FS	LSI	Solapur	MH	17.967823	75.318206	150+000	252+000	177+600 RHS Inner	2	40.7000	0.4549	0.2986	0.1745	0.1021	0.0775	0.0593	0.0379	32.4	34.1		39.3
	1-5-2023	23:38:48	IL&FS	LSI	Solapur	MH	17.967823	75.318206	150+000	252+000	177+600 RHS Inner	3	40.4000	0.4474	0.2959	0.1733	0.1007	0.0754	0.0566	0.0410	32.4	34.1		39.3
1101	1-5-2023	23:40:53	IL&FS	LSI	Solapur	MH	17.969387	75.316322	150+000	252+000	177+350 RHS Inner	1	40.5000	0.4410	0.2816	0.1501	0.0999	0.0642	0.0434	0.0271	32.5	34.1		39.3
	1-5-2023	23:40:53	IL&FS	LSI	Solapur	MH	17.969387	75.316322	150+000	252+000	177+350 RHS Inner	2	40.6000	0.4307	0.2618	0.1520	0.1004	0.0609	0.0414	0.0264	32.5	34.1		39.3
	1-5-2023	23:40:53	IL&FS	LSI	Solapur	MH	17.969387	75.316322	150+000	252+000	177+350 RHS Inner	3	40.4000	0.4397	0.2774	0.1449	0.0954	0.0576	0.0374	0.0239	32.5	34.1		39.3
1102	1-5-2023	23:42:45	IL&FS	LSI	Solapur	MH	17.970849	75.314697	150+000	252+000	177+100 RHS Inner	1	40.3000	0.4895	0.2933	0.1717	0.1143	0.0715	0.0545	0.0371	32.5	34.1		39.3
	1-5-2023	23:42:45	IL&FS	LSI	Solapur	MH	17.970849	75.314697	150+000	252+000	177+100 RHS Inner	2	40.5000	0.4659	0.2871	0.1745	0.1088	0.0670	0.0505	0.0335	32.5	34.1		39.3
	1-5-2023	23:42:45	IL&FS	LSI	Solapur	MH	17.970849	75.314697	150+000	252+000	177+100 RHS Inner	3	40.3000	0.4753	0.2803	0.1711	0.1087	0.0679	0.0514	0.0342	32.5	34.1		39.3
1103	1-5-2023	23:44:48	IL&FS	LSI	Solapur	MH	17.972423	75.312957	150+000	252+000	176+850 RHS Inner	1	40.4000	0.4784	0.3040	0.1818	0.1129	0.0888	0.0597	0.0427	32.4	33.6		39.3
	1-5-2023	23:44:48	IL&FS	LSI	Solapur	MH	17.972423	75.312957	150+000	252+000	176+850 RHS Inner	2	40.5000	0.4731	0.3048	0.1747	0.1168	0.0853	0.0635	0.0477	32.4	33.6		39.3
	1-5-2023	23:44:48	IL&FS	LSI	Solapur	MH	17.972423	75.312957	150+000	252+000	176+850 RHS Inner	3	40.2000	0.4725	0.2701	0.1777	0.1238	0.0951	0.0626	0.0473	32.4	33.6		39.3
1104	2-5-2023	00:16:28	IL&FS	LSI	Solapur	MH	17.974033	75.311325	150+000	252+000	176+600 RHS Inner	1	39.0000	0.4421	0.2761	0.1549	0.0802	0.0528	0.0335	0.0247	31.4	33.6	T-28.5/37.5	37.5
	2-5-2023	00:16:28	IL&FS	LSI	Solapur	MH	17.974033	75.311325	150+000	252+000	176+600 RHS Inner	2	38.4000	0.4308	0.2500	0.1469	0.0810	0.0541	0.0336	0.0242	31.4	33.6	T-28.5/37.5	37.5
	2-5-2023	00:16:28	IL&FS	LSI	Solapur	MH	17.974033	75.311325	150+000	252+000	176+600 RHS Inner	3	38.3000	0.4202	0.2576	0.1523	0.0766	0.0510	0.0317	0.0243	31.4	33.6	T-28.5/37.5	37.5
1105	2-5-2023	00:18:46	IL&FS	LSI	Solapur	MH	17.975637	75.309425	150+000	252+000	176+350 RHS Inner	1	36.2000	0.4531	0.2955	0.1610	0.0844	0.0574	0.0364	0.0262	31.4	33.1		37.5
	2-5-2023	00:18:46	IL&FS	LSI	Solapur	MH	17.975637	75.309425	150+000	252+000	176+350 RHS Inner	2	36.2000	0.4500	0.2955	0.1518	0.0847	0.0571	0.0368	0.0260	31.4	33.1		37.5
	2-5-2023	00:18:46	IL&FS	LSI	Solapur	MH	17.975637	75.309425	150+000	252+000	176+350 RHS Inner	3	36.5000	0.4375	0.2980	0.1447	0.0805	0.0545	0.0352	0.0267	31.4	33.1		37.5
1106	2-5-2023	00:20:49	IL&FS	LSI	Solapur	MH	17.977045	75.307769	150+000	252+000	176+100 RHS Inner	1	38.6000	0.3137	0.2003	0.1175	0.0680	0.0400	0.0363	0.0318	31.3	33.0		37.5
	2-5-2023	00:20:49	IL&FS	LSI	Solapur	MH	17.977045	75.307769	150+000	252+000	176+100 RHS Inner	2	38.6000	0.3084	0.1972	0.1178	0.0669	0.0389	0.0347	0.0297	31.3	33.0		37.5
	2-5-2023	00:20:49	IL&FS	LSI	Solapur	MH	17.977045	75.307769	150+000	252+000	176+100 RHS Inner	3	38.8000	0.3019	0.1921	0.1181	0.0634	0.0433	0.0322	0.0312	31.3	33.0		37.5
1107	2-5-2023	00:22:49	IL&FS	LSI	Solapur	MH	17.978612	75.305999	150+000	252+000	175+850 RHS Inner	1	36.4000	0.4269	0.2662	0.1471	0.0858	0.0521	0.0328	0.0188	31.2	32.8		37.5
	2-5-2023	00:22:49	IL&FS	LSI	Solapur	MH	17.978612	75.305999	150+000	252+000	175+850 RHS Inner	2	36.0000	0.4108	0.2675	0.1526	0.0809	0.0511	0.0319	0.0180	31.2	32.8		37.5
	2-5-2023	00:22:49	IL&FS	LSI	Solapur	MH	17.978612	75.305999	150+000	252+000	175+850 RHS Inner	3	36.3000	0.4055	0.2703	0.1489	0.0817	0.0492	0.0316	0.0200	31.2	32.8		37.5
1108	2-5-2023	00:24:56	IL&FS	LSI	Solapur	MH	17.980175	75.304214	150+000	252+000	175+600 RHS Inner	1	39.3000	0.4174	0.2621	0.1489	0.0822	0.0554	0.0492	0.0345	31.2	32.5		37.5
	2-5-2023	00:24:56	IL&FS	LSI	Solapur	MH	17.980175	75.304214	150+000	252+000	175+600 RHS Inner	2	39.7000	0.4046	0.2564	0.1491	0.0787	0.0573	0.0491	0.0330	31.2	32.5		37.5
	2-5-2023	00:24:56	IL&FS	LSI	Solapur	MH	17.980175	75.304214	150+000	252+000	175+600 RHS Inner	3	39.9000	0.4030	0.2701	0.1391	0.0782	0.0537	0.0449	0.0284	31.2	32.5		37.5
1109	2-5-2023	00:26:43	IL&FS	LSI	Solapur	MH	17.981706	75.302589	150+000	252+000	175+350 RHS Inner	1	38.8000	0.4892	0.2907	0.1960	0.1001	0.0634	0.0408	0.0277	31.2	32.8		37.5
	2-5-2023	00:26:43	IL&FS	LSI	Solapur	MH	17.981706	75.302589	150+000	252+000	175+350 RHS Inner	2	39.2000	0.4732	0.2972	0.1863	0.1037	0.0684	0.0409	0.0278	31.2	32.8		37.5
	2-5-2023	00:26:43	IL&FS	LSI	Solapur	MH	17.981706	75.302589	150+000	252+000	175+350 RHS Inner	3	38.6000	0.4539	0.2671	0.1778	0.1072	0.0695	0.0400	0.0270	31.2	32.8		37.5
1110	2-5-2023	00:28:41	IL&FS	LSI	Solapur	MH	17.983137	75.300804	150+000	252+000	175+100 RHS Inner	1	38.4000	0.5537	0.3420	0.1822	0.0949	0.0696	0.0505	0.0389	31.2	33.3		37.5
	2-5-2023	00:28:41	IL&FS	LSI	Solapur	MH	17.983137	75.300804	150+000	252+000	175+100 RHS Inner	2	38.6000	0.5236	0.3317	0.1977	0.1055	0.0706	0.0494	0.0380	31.2	33.3		37.5
	2-5-2023	00:28:41	IL&FS	LSI	Solapur	MH	17.983137	75.300804	150+000	252+000	175+100 RHS Inner	3	38.5000	0.4989	0.3081	0.1870	0.1067	0.0697	0.0518	0.0401	31.2	33.3		37.5
1111	2-5-2023	00:30:48	IL&FS	LSI	Solapur	MH	17.984348	75.298698	150+000	252+000	174+830 RHS Inner	1	40.3000	0.3919	0.2531	0.1487	0.1028	0.0667	0.0498	0.0376	31.2	33.0		37.5
	2-5-2023	00:30:48	IL&FS	LSI	Solapur	MH	17.984348	75.298698	150+000	252+000	174+830 RHS Inner	2	40.5000	0.3696	0.2416	0.1453	0.0962	0.0671	0.0490	0.0379	31.2	33.0		37.5
	2-5-2023	00:30:48	IL&FS	LSI	Solapur	MH	17.984348	75.298698	150+000	252+000	174+830 RHS Inner	3	40.0000	0.3995	0.2344	0.1478	0.0943	0.0661	0.0489	0.0378	31.2	33.0		37.5
1112	2-5-2023	00:32:46	IL&FS	LSI	Solapur	MH	17.985282	75.296768	150+000	252+000	174+600 RHS Inner	1	40.0000	0.4979	0.3059	0.1759	0.0975	0.0631	0.0392	0.0215	31.2	32.9		37.5
	2-5-2023	00:32:46	IL&FS	LSI	Solapur	MH	17.985282	75.296768	150+000	252+000	174+600 RHS Inner	2	40.1000	0.4865	0.3029	0.1778	0.0952	0.0637	0.0424	0.0260	31.2	32.9		37.5
	2-5-2023	00:32:46	IL&FS	LSI	Solapur	MH	17.985282	75.296768	150+000	252+000	174+600 RHS Inner	3	39.7000	0.4693	0.3048	0.1701	0.0978	0.0655	0.0430	0.0231	31.2	32.9		37.5
1113	2-5-2023	00:34:51	IL&FS	LSI	Solapur	MH	17.986392	75.294670	150+000	252+000	174+350 RHS Inner	1	39.7000	0.5017	0.3034	0.1574	0.0990	0.0568	0.0408	0.0304	31.3	32.9		37.5
	2-5-2023	00:34:51	IL&FS	LSI	Solapur	MH	17.986392	75.294670	150+000	252+000	174+350 RHS Inner	2	40.4000	0.4945	0.3090	0.1589	0.0971	0.0576	0.0305	0.0112	31.3	32.9		37.5
	2-5-2023	00:34:51	IL&FS	LSI	Solapur	MH	17.986392	75.294670	150+000	252+000	174+350 RHS Inner	3	39.9000	0.4446	0.3060	0.1545	0.0970	0.0565	0.0408	0.0303	31.3	32.9		37.5
1114	2-5-2023	00:36:47	IL&FS	LSI	Solapur	MH	17.987728	75.292861	150+000	252+000	174+100 RHS Inner	1	40.6000	0.2665	0.1591	0.0989	0.0653	0.0452	0.0310	0.0279	31.3	33.1		37.5
	2-5-2023	00:36:47	IL&FS	LSI	Solapur	MH	17.987728	75.292861	150+000	252+000	174+100 RHS Inner	2	40.8000	0.2765	0.1733	0.1071	0.0649	0.0457	0.0308	0.0277	31.3	33.1		37.5
	2-5-2023	00:36:47	IL&FS	LSI	Solapur	MH	17.987728	75.292861	150+000	252+000	174+100 RHS Inner	3	41.2000	0.2754	0.1583	0.0953	0.0620	0.0428	0.0300	0.0270	31.3	33.1		37.5
1115	2-5-2023	00:38:53	IL&FS	LSI	Solapur	MH	17.988996	75.290733	150+000	252+000	173+850 RHS Inner	1	41.6000	0.2365	0.1491	0.1021	0.0728	0.0542	0.0379	0.0275	31.2	32.9		37.5
	2-5-2023	00:38:53	IL&FS	LSI	Solapur	MH	17.988996	75.290733	150+000	252+000	173+850 RHS Inner	2	42.1000	0.2448	0.1504	0.0969	0.0734	0.0550	0.0396	0.0300	31.2	32.9		37.5
	2-5-2023	00:38:53	IL&FS	LSI	Solapur	MH	17.988996	75.290733	150+000	252+000	173+850 RHS Inner	3	41.9000	0.2347	0.1404	0.0974	0.0710	0.0545	0.0410	0.0311	31.2	32.9		37.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1116	2-5-2023	00:40:48	IL&FS	LSI	Solapur	MH	17.990041	75.288841	150+000	252+000	173+600 RHS Inner	1	43.3000	0.1901	0.1328	0.0972	0.0700	0.0500	0.0379	0.0341	31.3	32.8		37.5
	2-5-2023	00:40:48	IL&FS	LSI	Solapur	MH	17.990041	75.288841	150+000	252+000	173+600 RHS Inner	2	43.0000	0.1917	0.1335	0.0942	0.0658	0.0479	0.0353	0.0317	31.3	32.8		37.5
	2-5-2023	00:40:48	IL&FS	LSI	Solapur	MH	17.990041	75.288841	150+000	252+000	173+600 RHS Inner	3	43.1000	0.2074	0.1452	0.0999	0.0676	0.0468	0.0343	0.0308	31.3	32.8		37.5
1117	2-5-2023	00:43:38	IL&FS	LSI	Solapur	MH	17.991645	75.285911	150+000	252+000	173+240 RHS Inner	1	41.6000	0.3175	0.1913	0.1273	0.0828	0.0530	0.0418	0.0376	31.7	33.8		37.5
	2-5-2023	00:43:38	IL&FS	LSI	Solapur	MH	17.991645	75.285911	150+000	252+000	173+240 RHS Inner	2	42.0000	0.3130	0.2133	0.1291	0.0813	0.0519	0.0408	0.0367	31.7	33.8		37.5
	2-5-2023	00:43:38	IL&FS	LSI	Solapur	MH	17.991645	75.285911	150+000	252+000	173+240 RHS Inner	3	42.1000	0.3288	0.2122	0.1329	0.0858	0.0525	0.0412	0.0370	31.7	33.8		37.5
1118	2-5-2023	00:45:24	IL&FS	LSI	Solapur	MH	17.992286	75.284744	150+000	252+000	173+100 RHS Inner	1	39.6000	0.5215	0.3242	0.1784	0.0968	0.0661	0.0365	0.0232	31.7	33.7		37.5
	2-5-2023	00:45:24	IL&FS	LSI	Solapur	MH	17.992286	75.284744	150+000	252+000	173+100 RHS Inner	2	39.7000	0.5425	0.3311	0.1749	0.1000	0.0676	0.0380	0.0230	31.7	33.7		37.5
	2-5-2023	00:45:24	IL&FS	LSI	Solapur	MH	17.992286	75.284744	150+000	252+000	173+100 RHS Inner	3	39.7000	0.5015	0.3220	0.1664	0.1088	0.0685	0.0386	0.0239	31.7	33.7		37.5
1119	2-5-2023	00:47:13	IL&FS	LSI	Solapur	MH	17.993413	75.282691	150+000	252+000	172+850 RHS Inner	1	40.8000	0.3786	0.2567	0.1497	0.0956	0.0605	0.0418	0.0376	31.7	33.6		37.5
	2-5-2023	00:47:13	IL&FS	LSI	Solapur	MH	17.993413	75.282691	150+000	252+000	172+850 RHS Inner	2	40.9000	0.3784	0.2434	0.1452	0.0949	0.0629	0.0419	0.0377	31.7	33.6		37.5
	2-5-2023	00:47:13	IL&FS	LSI	Solapur	MH	17.993413	75.282691	150+000	252+000	172+850 RHS Inner	3	41.1000	0.3818	0.2482	0.1505	0.1009	0.0631	0.0430	0.0387	31.7	33.6		37.5
1120	2-5-2023	00:48:56	IL&FS	LSI	Solapur	MH	17.994525	75.280708	150+000	252+000	172+600 RHS Inner	1	40.8000	0.3214	0.1982	0.0982	0.0711	0.0514	0.0439	0.0355	31.7	33.3		37.5
	2-5-2023	00:48:56	IL&FS	LSI	Solapur	MH	17.994525	75.280708	150+000	252+000	172+600 RHS Inner	2	40.4000	0.2976	0.1771	0.1049	0.0734	0.0504	0.0401	0.0328	31.7	33.3		37.5
	2-5-2023	00:48:56	IL&FS	LSI	Solapur	MH	17.994525	75.280708	150+000	252+000	172+600 RHS Inner	3	40.7000	0.3058	0.1895	0.0967	0.0707	0.0510	0.0447	0.0343	31.7	33.3		37.5
1121	2-5-2023	00:50:45	IL&FS	LSI	Solapur	MH	17.995679	75.278602	150+000	252+000	172+350 RHS Inner	1	40.3000	0.4867	0.2846	0.1717	0.1105	0.0704	0.0477	0.0321	31.7	33.2		37.5
	2-5-2023	00:50:45	IL&FS	LSI	Solapur	MH	17.995679	75.278602	150+000	252+000	172+350 RHS Inner	2	40.8000	0.4802	0.2787	0.1595	0.1051	0.0667	0.0478	0.0342	31.7	33.2		37.5
	2-5-2023	00:50:45	IL&FS	LSI	Solapur	MH	17.995679	75.278602	150+000	252+000	172+350 RHS Inner	3	40.5000	0.4731	0.2922	0.1674	0.1060	0.0680	0.0490	0.0354	31.7	33.2		37.5
1122	2-5-2023	00:52:34	IL&FS	LSI	Solapur	MH	17.996843	75.276565	150+000	252+000	172+100 RHS Inner	1	40.3000	0.4796	0.2942	0.1583	0.1027	0.0618	0.0455	0.0335	31.4	33.1		37.5
	2-5-2023	00:52:34	IL&FS	LSI	Solapur	MH	17.996843	75.276565	150+000	252+000	172+100 RHS Inner	2	40.1000	0.4429	0.2860	0.1509	0.0967	0.0581	0.0428	0.0310	31.4	33.1		37.5
	2-5-2023	00:52:34	IL&FS	LSI	Solapur	MH	17.996843	75.276565	150+000	252+000	172+100 RHS Inner	3	40.4000	0.4603	0.2954	0.1502	0.0963	0.0583	0.0426	0.0311	31.4	33.1		37.5
1123	2-5-2023	00:54:30	IL&FS	LSI	Solapur	MH	17.998008	75.274436	150+000	252+000	171+840 RHS Inner	1	41.0000	0.2980	0.1933	0.1106	0.0620	0.0459	0.0353	0.0317	30.9	32.6		37.5
	2-5-2023	00:54:30	IL&FS	LSI	Solapur	MH	17.998008	75.274436	150+000	252+000	171+840 RHS Inner	2	40.5000	0.2993	0.1809	0.1175	0.0609	0.0464	0.0350	0.0315	30.9	32.6		37.5
	2-5-2023	00:54:30	IL&FS	LSI	Solapur	MH	17.998008	75.274436	150+000	252+000	171+840 RHS Inner	3	41.1000	0.2861	0.1881	0.1206	0.0628	0.0458	0.0336	0.0302	30.9	32.6		37.5
1124	2-5-2023	00:56:18	IL&FS	LSI	Solapur	MH	17.999090	75.272499	150+000	252+000	171+600 RHS Inner	1	39.2000	0.4498	0.2762	0.1666	0.0918	0.0616	0.0426	0.0383	31.2	32.7	T-28/37.8	37.8
	2-5-2023	00:56:18	IL&FS	LSI	Solapur	MH	17.999090	75.272499	150+000	252+000	171+600 RHS Inner	2	40.3000	0.4265	0.2785	0.1719	0.0869	0.0591	0.0401	0.0360	31.2	32.7	T-28/37.8	37.8
	2-5-2023	00:56:18	IL&FS	LSI	Solapur	MH	17.999090	75.272499	150+000	252+000	171+600 RHS Inner	3	40.3000	0.4322	0.2784	0.1590	0.0883	0.0613	0.0436	0.0392	31.2	32.7	T-28/37.8	37.8
1125	2-5-2023	01:00:10	IL&FS	LSI	Solapur	MH	18.000238	75.270385	150+000	252+000	171+350 RHS Inner	1	40.8000	0.4119	0.2394	0.1442	0.0945	0.0619	0.0444	0.0399	30.9	32.4		37.8
	2-5-2023	01:00:10	IL&FS	LSI	Solapur	MH	18.000238	75.270385	150+000	252+000	171+350 RHS Inner	2	41.4000	0.4004	0.2463	0.1566	0.1006	0.0590	0.0425	0.0383	30.9	32.4		37.8
	2-5-2023	01:00:10	IL&FS	LSI	Solapur	MH	18.000238	75.270385	150+000	252+000	171+350 RHS Inner	3	41.4000	0.3869	0.2338	0.1520	0.0932	0.0571	0.0419	0.0377	30.9	32.4		37.8
1126	2-5-2023	01:02:25	IL&FS	LSI	Solapur	MH	18.001644	75.267837	150+000	252+000	171+100 RHS Inner	1	39.8000	0.3575	0.2456	0.1473	0.0966	0.0751	0.0536	0.0401	30.9	31.6		37.8
	2-5-2023	01:02:25	IL&FS	LSI	Solapur	MH	18.001644	75.267837	150+000	252+000	171+100 RHS Inner	2	41.0000	0.3643	0.2290	0.1567	0.0996	0.0777	0.0557	0.0422	30.9	31.6		37.8
	2-5-2023	01:02:25	IL&FS	LSI	Solapur	MH	18.001644	75.267837	150+000	252+000	171+100 RHS Inner	3	41.3000	0.4061	0.2597	0.1475	0.1005	0.0799	0.0538	0.0424	30.9	31.6		37.8
1127	2-5-2023	01:05:19	IL&FS	LSI	Solapur	MH	18.002359	75.265800	150+000	252+000	170+800 RHS Inner	1	39.9000	0.3648	0.1842	0.1102	0.0713	0.0597	0.0481	0.0433	30.8	31.9		37.8
	2-5-2023	01:05:19	IL&FS	LSI	Solapur	MH	18.002359	75.265800	150+000	252+000	170+800 RHS Inner	2	40.4000	0.3865	0.1855	0.1119	0.0703	0.0584	0.0464	0.0418	30.8	31.9		37.8
	2-5-2023	01:05:19	IL&FS	LSI	Solapur	MH	18.002359	75.265800	150+000	252+000	170+800 RHS Inner	3	40.5000	0.3643	0.1975	0.1171	0.0782	0.0643	0.0503	0.0452	30.8	31.9		37.8
1128	2-5-2023	01:07:39	IL&FS	LSI	Solapur	MH	18.002605	75.263999	150+000	252+000	170+600 RHS Inner	1	40.6000	0.5025	0.3219	0.1744	0.0925	0.0537	0.0430	0.0387	30.5	32.2		37.8
	2-5-2023	01:07:39	IL&FS	LSI	Solapur	MH	18.002605	75.263999	150+000	252+000	170+600 RHS Inner	2	40.9000	0.5007	0.3195	0.1769	0.0985	0.0549	0.0433	0.0390	30.5	32.2		37.8
	2-5-2023	01:07:39	IL&FS	LSI	Solapur	MH	18.002605	75.263999	150+000	252+000	170+600 RHS Inner	3	40.5000	0.4940	0.3137	0.1715	0.0941	0.0541	0.0434	0.0391	30.5	32.2		37.8
1129	2-5-2023	01:09:35	IL&FS	LSI	Solapur	MH	18.002902	75.261589	150+000	252+000	170+350 RHS Inner	1	40.9000	0.4733	0.3126	0.1671	0.1186	0.0812	0.0593	0.0443	30.5	32.5		37.8
	2-5-2023	01:09:35	IL&FS	LSI	Solapur	MH	18.002902	75.261589	150+000	252+000	170+350 RHS Inner	2	41.1000	0.4623	0.2906	0.1812	0.1247	0.0881	0.0630	0.0461	30.5	32.5		37.8
	2-5-2023	01:09:35	IL&FS	LSI	Solapur	MH	18.002902	75.261589	150+000	252+000	170+350 RHS Inner	3	40.9000	0.4711	0.3074	0.1763	0.1159	0.0785	0.0602	0.0467	30.5	32.5		37.8
1130	2-5-2023	01:11:27	IL&FS	LSI	Solapur	MH	18.003467	75.259223	150+000	252+000	170+100 RHS Inner	1	40.3000	0.5806	0.3349	0.1760	0.0949	0.0653	0.0471	0.0273	30.5	32.2		37.8
	2-5-2023	01:11:27	IL&FS	LSI	Solapur	MH	18.003467	75.259223	150+000	252+000	170+100 RHS Inner	2	40.7000	0.5575	0.3289	0.1752	0.0945	0.0680	0.0485	0.0286	30.5	32.2		37.8
	2-5-2023	01:11:27	IL&FS	LSI	Solapur	MH	18.003467	75.259223	150+000	252+000	170+100 RHS Inner	3	40.4000	0.5449	0.3228	0.1710	0.0940	0.0671	0.0472	0.0275	30.5	32.2		37.8
1131	2-5-2023	01:13:33	IL&FS	LSI	Solapur	MH	18.003957	75.256988	150+000	252+000	169+850 RHS Inner	1	40.8000	0.5252	0.3208	0.1893	0.1014	0.0678	0.0484	0.0338	30.6	32.1		37.8
	2-5-2023	01:13:33	IL&FS	LSI	Solapur	MH	18.003957	75.256988	150+000	252+000	169+850 RHS Inner	2	40.4000	0.5433	0.3281	0.1945	0.0987	0.0648	0.0462	0.0317	30.6	32.1		37.8
	2-5-2023	01:13:33	IL&FS	LSI	Solapur	MH	18.003957	75.256988	150+000	252+000	169+850 RHS Inner	3	40.8000	0.5434	0.3227	0.1896	0.1006	0.0628	0.0421	0.0290	30.6	32.1		37.8
1132	2-5-2023	01:15:29	IL&FS	LSI	Solapur	MH	18.004476	75.254684	150+000	252+000	169+600 RHS Inner	1	40.3000	0.3460	0.2195	0.1042	0.0812	0.0595	0.0366	0.0186	30.5	32.3		37.8
	2-5-2023	01:15:29	IL&FS	LSI	Solapur	MH	18.004476	75.254684	150+000	252+000	169+600 RHS Inner	2	40.2000	0.3082	0.1957	0.1067	0.0715	0.0556	0.0343	0.0193	30.5	32.3		37.8
	2-5-2023	01:15:29	IL&FS	LSI	Solapur	MH	18.004476	75.254684	150+000	252+000	169+600 RHS Inner	3	41.5000	0.3308	0.2107	0.1119	0.0814	0.0610	0.0365	0.0200	30.5	32.3		37.8
1133	2-5-2023	01:17:41	IL&FS	LSI	Solapur	MH	18.004976	75.252349	150+000	252+000	169+350 RHS Inner	1	38.5000	0.4598	0.2850	0.1694	0.1043	0.0697	0.0464	0.0315	30.5	32.5		37.8
	2-5-2023	01:17:41	IL&FS	LSI	Solapur	MH	18.004976	75.252349	150+000	252+000	169+350 RHS Inner	2	39.8000	0.4361	0.2838	0.1642	0.1027	0.0699	0.0444	0.0353	30.5	32.5		37.8
	2-5-2023	01:17:41	IL&FS	LSI	Solapur	MH	18.004976	75.252349	150+000	252+000	169+350 RHS Inner	3	38.6000	0.4127	0.2878	0.1596	0.1058	0.0711	0.0451	0.0353	30.5	32.5		37.8
1134	2-5-2023	01:19:45	IL&FS	LSI	Solapur	MH	18.005527	75.250022	150+000	252+000	169+100 RHS Inner	1	40.6000	0.3826	0.2403	0.1177	0.0895	0.0601	0.0401	0.0265	30.6	32.1		37.8
	2-5-2023	01:19:45	IL&FS	LSI	Solapur	MH	18.005527	75.250022	150+000	252+000	169+100 RHS Inner	2	40.3000	0.4142	0.2453	0.1280	0.0886	0.0594	0.0387	0.0264	30.6	32.1		37.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	01:19:45	IL&FS	LSI	Solapur	MH	18.005527	75.250022	150+000	252+000	169+100 RHS Inner	3	40.9000	0.4002	0.2461	0.1304	0.0897	0.0601	0.0415	0.0286	30.6	32.1		37.8
1135	2-5-2023	01:22:44	IL&FS	LSI	Solapur	MH	18.006065	75.247596	150+000	252+000	168+835 RHS Inner	1	41.1000	0.4951	0.2861	0.1619	0.1138	0.0964	0.0539	0.0286	30.6	31.9		37.8
	2-5-2023	01:22:44	IL&FS	LSI	Solapur	MH	18.006065	75.247596	150+000	252+000	168+835 RHS Inner	2	40.4000	0.4567	0.2676	0.1451	0.1150	0.0841	0.0569	0.0283	30.6	31.9		37.8
	2-5-2023	01:22:44	IL&FS	LSI	Solapur	MH	18.006065	75.247596	150+000	252+000	168+835 RHS Inner	3	40.3000	0.4548	0.2558	0.1548	0.1209	0.0897	0.0468	0.0280	30.6	31.9		37.8
1136	2-5-2023	01:24:43	IL&FS	LSI	Solapur	MH	18.006601	75.245468	150+000	252+000	168+600 RHS Inner	1	36.1000	0.3002	0.1826	0.0949	0.0639	0.0449	0.0341	0.0272	30.5	31.9		37.8
	2-5-2023	01:24:43	IL&FS	LSI	Solapur	MH	18.006601	75.245468	150+000	252+000	168+600 RHS Inner	2	36.1000	0.3026	0.1711	0.0974	0.0656	0.0425	0.0330	0.0266	30.5	31.9		37.8
	2-5-2023	01:24:43	IL&FS	LSI	Solapur	MH	18.006601	75.245468	150+000	252+000	168+600 RHS Inner	3	36.9000	0.2919	0.1831	0.0901	0.0634	0.0454	0.0354	0.0282	30.5	31.9		37.8
1137	2-5-2023	01:26:40	IL&FS	LSI	Solapur	MH	18.007146	75.243080	150+000	252+000	168+350 RHS Inner	1	41.5000	0.3513	0.2014	0.1372	0.0856	0.0613	0.0390	0.0227	30.4	31.5		37.8
	2-5-2023	01:26:40	IL&FS	LSI	Solapur	MH	18.007146	75.243080	150+000	252+000	168+350 RHS Inner	2	41.4000	0.3473	0.1991	0.1404	0.0914	0.0616	0.0380	0.0219	30.4	31.5		37.8
	2-5-2023	01:26:40	IL&FS	LSI	Solapur	MH	18.007146	75.243080	150+000	252+000	168+350 RHS Inner	3	41.6000	0.3246	0.2043	0.1469	0.0870	0.0590	0.0377	0.0230	30.4	31.5		37.8
1138	2-5-2023	01:28:34	IL&FS	LSI	Solapur	MH	18.007726	75.240699	150+000	252+000	168+100 RHS Inner	1	39.4000	0.4627	0.2971	0.1599	0.0893	0.0551	0.0412	0.0371	30.1	31.7		37.8
	2-5-2023	01:28:34	IL&FS	LSI	Solapur	MH	18.007726	75.240699	150+000	252+000	168+100 RHS Inner	2	40.5000	0.4709	0.2891	0.1494	0.0869	0.0609	0.0443	0.0398	30.1	31.7		37.8
	2-5-2023	01:28:34	IL&FS	LSI	Solapur	MH	18.007726	75.240699	150+000	252+000	168+100 RHS Inner	3	39.6000	0.4737	0.2895	0.1534	0.0891	0.0580	0.0421	0.0378	30.1	31.7		37.8
1139	2-5-2023	01:30:35	IL&FS	LSI	Solapur	MH	18.008342	75.238578	150+000	252+000	167+850 RHS Inner	1	40.4000	0.4615	0.2709	0.1446	0.0826	0.0603	0.0474	0.0427	30.0	31.6		37.8
	2-5-2023	01:30:35	IL&FS	LSI	Solapur	MH	18.008342	75.238578	150+000	252+000	167+850 RHS Inner	2	40.9000	0.4411	0.2829	0.1489	0.0940	0.0627	0.0487	0.0438	30.0	31.6		37.8
	2-5-2023	01:30:35	IL&FS	LSI	Solapur	MH	18.008342	75.238578	150+000	252+000	167+850 RHS Inner	3	40.8000	0.4729	0.2895	0.1535	0.0907	0.0576	0.0464	0.0417	30.0	31.6		37.8
1140	2-5-2023	01:33:05	IL&FS	LSI	Solapur	MH	18.010507	75.236160	150+000	252+000	167+505 RHS Inner	1	43.2000	0.3914	0.2474	0.1431	0.0986	0.0699	0.0511	0.0340	30.1	31.2		37.8
	2-5-2023	01:33:05	IL&FS	LSI	Solapur	MH	18.010507	75.236160	150+000	252+000	167+505 RHS Inner	2	41.0000	0.3400	0.2296	0.1356	0.0936	0.0685	0.0528	0.0355	30.1	31.2		37.8
	2-5-2023	01:33:05	IL&FS	LSI	Solapur	MH	18.010507	75.236160	150+000	252+000	167+505 RHS Inner	3	41.1000	0.3835	0.2362	0.1371	0.0938	0.0701	0.0538	0.0364	30.1	31.2		37.8
1141	2-5-2023	01:36:56	IL&FS	LSI	Solapur	MH	18.011259	75.235092	150+000	252+000	167+380 RHS Inner	1	38.9000	0.4648	0.2725	0.1570	0.1075	0.0760	0.0570	0.0439	29.5	31.3	T-28.3/35.9	35.9
	2-5-2023	01:36:56	IL&FS	LSI	Solapur	MH	18.011259	75.235092	150+000	252+000	167+380 RHS Inner	2	40.1000	0.4540	0.2650	0.1669	0.1162	0.0813	0.0591	0.0439	29.5	31.3	T-28.3/35.9	35.9
	2-5-2023	01:36:56	IL&FS	LSI	Solapur	MH	18.011259	75.235092	150+000	252+000	167+380 RHS Inner	3	40.1000	0.4368	0.2688	0.1634	0.1121	0.0804	0.0579	0.0439	29.5	31.3	T-28.3/35.9	35.9
1142	2-5-2023	01:39:27	IL&FS	LSI	Solapur	MH	18.011871	75.232276	150+000	252+000	167+070 RHS Inner	1	40.9000	0.4649	0.3132	0.1894	0.1256	0.0760	0.0549	0.0409	30.0	31.9		35.9
	2-5-2023	01:39:27	IL&FS	LSI	Solapur	MH	18.011871	75.232276	150+000	252+000	167+070 RHS Inner	2	39.8000	0.4137	0.3048	0.1883	0.1184	0.0716	0.0513	0.0385	30.0	31.9		35.9
	2-5-2023	01:39:27	IL&FS	LSI	Solapur	MH	18.011871	75.232276	150+000	252+000	167+070 RHS Inner	3	39.7000	0.4369	0.2980	0.1967	0.1207	0.0726	0.0530	0.0391	30.0	31.9		35.9
1143	2-5-2023	01:41:49	IL&FS	LSI	Solapur	MH	18.012208	75.230117	150+000	252+000	166+800 RHS Inner	1	41.1000	0.3353	0.2332	0.1438	0.1068	0.0807	0.0627	0.0513	30.5	31.7		35.9
	2-5-2023	01:41:49	IL&FS	LSI	Solapur	MH	18.012208	75.230117	150+000	252+000	166+800 RHS Inner	2	41.3000	0.3359	0.2104	0.1426	0.1050	0.0771	0.0619	0.0525	30.5	31.7		35.9
	2-5-2023	01:41:49	IL&FS	LSI	Solapur	MH	18.012208	75.230117	150+000	252+000	166+800 RHS Inner	3	43.1000	0.3516	0.2409	0.1505	0.1108	0.0816	0.0668	0.0568	30.5	31.7		35.9
1144	2-5-2023	01:43:56	IL&FS	LSI	Solapur	MH	18.012613	75.228019	150+000	252+000	166+600 RHS Inner	1	41.2000	0.3602	0.2470	0.1352	0.0688	0.0441	0.0270	0.0165	30.3	32.0		35.9
	2-5-2023	01:43:56	IL&FS	LSI	Solapur	MH	18.012613	75.228019	150+000	252+000	166+600 RHS Inner	2	41.8000	0.3714	0.2487	0.1291	0.0698	0.0448	0.0278	0.0174	30.3	32.0		35.9
	2-5-2023	01:43:56	IL&FS	LSI	Solapur	MH	18.012613	75.228019	150+000	252+000	166+600 RHS Inner	3	41.8000	0.3648	0.2446	0.1289	0.0698	0.0450	0.0277	0.0156	30.3	32.0		35.9
1145	2-5-2023	01:46:11	IL&FS	LSI	Solapur	MH	18.013267	75.225784	150+000	252+000	166+350 RHS Inner	1	39.9000	0.4476	0.2934	0.1428	0.0959	0.0635	0.0404	0.0354	30.8	32.4		35.9
	2-5-2023	01:46:11	IL&FS	LSI	Solapur	MH	18.013267	75.225784	150+000	252+000	166+350 RHS Inner	2	40.2000	0.4742	0.2814	0.1527	0.0986	0.0622	0.0395	0.0346	30.8	32.4		35.9
	2-5-2023	01:46:11	IL&FS	LSI	Solapur	MH	18.013267	75.225784	150+000	252+000	166+350 RHS Inner	3	40.0000	0.4711	0.2947	0.1563	0.1008	0.0657	0.0400	0.0350	30.8	32.4		35.9
1146	2-5-2023	01:48:18	IL&FS	LSI	Solapur	MH	18.014253	75.223579	150+000	252+000	166+100 RHS Inner	1	41.2000	0.3917	0.2685	0.1552	0.0946	0.0593	0.0389	0.0316	31.1	32.8		35.9
	2-5-2023	01:48:18	IL&FS	LSI	Solapur	MH	18.014253	75.223579	150+000	252+000	166+100 RHS Inner	2	41.5000	0.4183	0.2708	0.1517	0.0944	0.0577	0.0395	0.0339	31.1	32.8		35.9
	2-5-2023	01:48:18	IL&FS	LSI	Solapur	MH	18.014253	75.223579	150+000	252+000	166+100 RHS Inner	3	40.3000	0.4073	0.2397	0.1403	0.0926	0.0582	0.0376	0.0292	31.1	32.8		35.9
1147	2-5-2023	01:50:18	IL&FS	LSI	Solapur	MH	18.015119	75.221488	150+000	252+000	165+850 RHS Inner	1	42.9000	0.2608	0.1848	0.1262	0.0901	0.0633	0.0475	0.0428	31.1	32.6		35.9
	2-5-2023	01:50:18	IL&FS	LSI	Solapur	MH	18.015119	75.221488	150+000	252+000	165+850 RHS Inner	2	42.5000	0.2579	0.2015	0.1161	0.0865	0.0634	0.0478	0.0430	31.1	32.6		35.9
	2-5-2023	01:50:18	IL&FS	LSI	Solapur	MH	18.015119	75.221488	150+000	252+000	165+850 RHS Inner	3	41.9000	0.2498	0.1828	0.1177	0.0849	0.0635	0.0475	0.0427	31.1	32.6		35.9
1148	2-5-2023	01:52:54	IL&FS	LSI	Solapur	MH	18.016077	75.219314	150+000	252+000	165+600 RHS Inner	1	39.7000	0.4786	0.3038	0.1574	0.1088	0.0792	0.0595	0.0447	31.2	32.7		35.9
	2-5-2023	01:52:54	IL&FS	LSI	Solapur	MH	18.016077	75.219314	150+000	252+000	165+600 RHS Inner	2	41.1000	0.4576	0.2854	0.1628	0.1153	0.0868	0.0665	0.0518	31.2	32.7		35.9
	2-5-2023	01:52:54	IL&FS	LSI	Solapur	MH	18.016077	75.219314	150+000	252+000	165+600 RHS Inner	3	40.0000	0.4780	0.2872	0.1595	0.1101	0.0797	0.0564	0.0508	31.2	32.7		35.9
1149	2-5-2023	01:55:07	IL&FS	LSI	Solapur	MH	18.017036	75.217163	150+000	252+000	165+350 RHS Inner	1	40.7000	0.5147	0.3189	0.1874	0.1164	0.0825	0.0489	0.0311	31.2	32.6		35.9
	2-5-2023	01:55:07	IL&FS	LSI	Solapur	MH	18.017036	75.217163	150+000	252+000	165+350 RHS Inner	2	39.5000	0.5237	0.3212	0.1794	0.1099	0.0813	0.0511	0.0292	31.2	32.6		35.9
	2-5-2023	01:55:07	IL&FS	LSI	Solapur	MH	18.017036	75.217163	150+000	252+000	165+350 RHS Inner	3	41.0000	0.5122	0.3064	0.1749	0.1156	0.0854	0.0496	0.0308	31.2	32.6		35.9
1150	2-5-2023	01:57:21	IL&FS	LSI	Solapur	MH	18.018140	75.215042	150+000	252+000	165+100 RHS Inner	1	40.3000	0.4492	0.2724	0.1543	0.1073	0.0722	0.0525	0.0413	31.2	32.1		35.9
	2-5-2023	01:57:21	IL&FS	LSI	Solapur	MH	18.018140	75.215042	150+000	252+000	165+100 RHS Inner	2	39.6000	0.4164	0.2666	0.1487	0.1041	0.0708	0.0499	0.0389	31.2	32.1		35.9
	2-5-2023	01:57:21	IL&FS	LSI	Solapur	MH	18.018140	75.215042	150+000	252+000	165+100 RHS Inner	3	39.9000	0.4128	0.2524	0.1518	0.1021	0.0711	0.0470	0.0363	31.2	32.1		35.9
1151	2-5-2023	02:16:24	IL&FS	LSI	Solapur	MH	18.020458	75.213584	150+000	252+000	164+800 RHS Inner	1	39.9000	0.5062	0.2965	0.1686	0.1043	0.0756	0.0521	0.0317	31.3	31.1		35.9
	2-5-2023	02:16:24	IL&FS	LSI	Solapur	MH	18.020458	75.213584	150+000	252+000	164+800 RHS Inner	2	41.2000	0.4892	0.3003	0.1708	0.1117	0.0857	0.0539	0.0296	31.3	31.1		35.9
	2-5-2023	02:16:24	IL&FS	LSI	Solapur	MH	18.020458	75.213584	150+000	252+000	164+800 RHS Inner	3	41.3000	0.4848	0.2983	0.1707	0.1041	0.0808	0.0500	0.0327	31.3	31.1		35.9
1152	2-5-2023	02:18:35	IL&FS	LSI	Solapur	MH	18.021968	75.212867	150+000	252+000	164+600 RHS Inner	1	41.7000	0.4487	0.2953	0.1457	0.1066	0.0760	0.0600	0.0390	31.1	30.8		35.9
	2-5-2023	02:18:35	IL&FS	LSI	Solapur	MH	18.021968	75.212867	150+000	252+000	164+600 RHS Inner	2	40.6000	0.4194	0.2692	0.1392	0.1022	0.0738	0.0578	0.0370	31.1	30.8		35.9
	2-5-2023	02:18:35	IL&FS	LSI	Solapur	MH	18.021968	75.212867	150+000	252+000	164+600 RHS Inner	3	40.9000	0.4094	0.2568	0.1451	0.1013	0.0692	0.0612	0.0401	31.1	30.8		35.9
1153	2-5-2023	02:22:48	IL&FS	LSI	Solapur	MH	18.024036	75.211914	150+000	252+000	164+350 RHS Inner	1	38.3000	0.4545	0.2824	0.1572	0.0797	0.0466	0.0404	0.0363	30.8	31.5	T-27.8/35.8	35.8

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	02:22:48	IL&FS	LSI	Solapur	MH	18.024036	75.211914	150+000	252+000	164+350 RHS Inner	2	39.2000	0.4521	0.2947	0.1658	0.0836	0.0507	0.0424	0.0381	30.8	31.5	T-27.8/35.8	35.8
	2-5-2023	02:22:48	IL&FS	LSI	Solapur	MH	18.024036	75.211914	150+000	252+000	164+350 RHS Inner	3	39.5000	0.4482	0.2862	0.1628	0.0818	0.0543	0.0440	0.0396	30.8	31.5	T-27.8/35.8	35.8
1154	2-5-2023	02:24:59	IL&FS	LSI	Solapur	MH	18.026073	75.210983	150+000	252+000	164+100 RHS Inner	1	39.2000	0.5200	0.3314	0.1797	0.1217	0.0832	0.0538	0.0342	30.6	31.0		35.8
	2-5-2023	02:24:59	IL&FS	LSI	Solapur	MH	18.026073	75.210983	150+000	252+000	164+100 RHS Inner	2	39.5000	0.5425	0.3173	0.1793	0.1232	0.0843	0.0527	0.0305	30.6	31.0		35.8
	2-5-2023	02:24:59	IL&FS	LSI	Solapur	MH	18.026073	75.210983	150+000	252+000	164+100 RHS Inner	3	40.0000	0.5117	0.3052	0.1796	0.1235	0.0856	0.0557	0.0374	30.6	31.0		35.8
1155	2-5-2023	02:27:11	IL&FS	LSI	Solapur	MH	18.028108	75.209968	150+000	252+000	163+850 RHS Inner	1	40.0000	0.4037	0.2503	0.1485	0.0924	0.0576	0.0332	0.0239	30.7	31.4		35.8
	2-5-2023	02:27:11	IL&FS	LSI	Solapur	MH	18.028108	75.209968	150+000	252+000	163+850 RHS Inner	2	39.6000	0.4037	0.2429	0.1501	0.0929	0.0564	0.0316	0.0224	30.7	31.4		35.8
	2-5-2023	02:27:11	IL&FS	LSI	Solapur	MH	18.028108	75.209968	150+000	252+000	163+850 RHS Inner	3	40.2000	0.3930	0.2542	0.1487	0.0895	0.0552	0.0307	0.0216	30.7	31.4		35.8
1156	2-5-2023	02:29:18	IL&FS	LSI	Solapur	MH	18.029882	75.209007	150+000	252+000	163+630 RHS Inner	1	41.4000	0.4985	0.2816	0.1612	0.0762	0.0502	0.0308	0.0277	30.7	31.4		35.8
	2-5-2023	02:29:18	IL&FS	LSI	Solapur	MH	18.029882	75.209007	150+000	252+000	163+630 RHS Inner	2	41.3000	0.4832	0.2786	0.1563	0.0751	0.0470	0.0295	0.0265	30.7	31.4		35.8
	2-5-2023	02:29:18	IL&FS	LSI	Solapur	MH	18.029882	75.209007	150+000	252+000	163+630 RHS Inner	3	41.2000	0.5278	0.2667	0.1591	0.0754	0.0500	0.0324	0.0291	30.7	31.4		35.8
1157	2-5-2023	02:31:22	IL&FS	LSI	Solapur	MH	18.032163	75.207710	150+000	252+000	163+350 RHS Inner	1	40.3000	0.5960	0.3578	0.1679	0.0938	0.0737	0.0473	0.0416	30.7	30.8		35.8
	2-5-2023	02:31:22	IL&FS	LSI	Solapur	MH	18.032163	75.207710	150+000	252+000	163+350 RHS Inner	2	39.0000	0.5265	0.3391	0.1566	0.0880	0.0735	0.0420	0.0368	30.7	30.8		35.8
	2-5-2023	02:31:22	IL&FS	LSI	Solapur	MH	18.032163	75.207710	150+000	252+000	163+350 RHS Inner	3	40.6000	0.5608	0.3516	0.1610	0.0966	0.0692	0.0513	0.0452	30.7	30.8		35.8
1158	2-5-2023	02:33:27	IL&FS	LSI	Solapur	MH	18.033855	75.206558	150+000	252+000	163+120 RHS Inner	1	39.6000	0.4632	0.3076	0.1600	0.1049	0.0632	0.0335	0.0130	30.6	31.3		35.8
	2-5-2023	02:33:27	IL&FS	LSI	Solapur	MH	18.033855	75.206558	150+000	252+000	163+120 RHS Inner	2	39.8000	0.4491	0.2973	0.1629	0.1035	0.0671	0.0342	0.0131	30.6	31.3		35.8
	2-5-2023	02:33:27	IL&FS	LSI	Solapur	MH	18.033855	75.206558	150+000	252+000	163+120 RHS Inner	3	41.2000	0.4858	0.2998	0.1675	0.1072	0.0692	0.0358	0.0134	30.6	31.3		35.8
1159	2-5-2023	02:38:22	IL&FS	LSI	Solapur	MH	18.037225	75.197967	150+000	252+000	162+100 RHS Inner	1	40.8000	0.2867	0.1948	0.1260	0.0784	0.0586	0.0441	0.0321	30.8	31.3		35.8
	2-5-2023	02:38:22	IL&FS	LSI	Solapur	MH	18.037225	75.197967	150+000	252+000	162+100 RHS Inner	2	41.1000	0.2952	0.2005	0.1147	0.0876	0.0623	0.0441	0.0341	30.8	31.3		35.8
	2-5-2023	02:38:22	IL&FS	LSI	Solapur	MH	18.037225	75.197967	150+000	252+000	162+100 RHS Inner	3	41.1000	0.3249	0.1900	0.1253	0.0872	0.0617	0.0431	0.0347	30.8	31.3		35.8
1160	2-5-2023	02:40:22	IL&FS	LSI	Solapur	MH	18.037973	75.195640	150+000	252+000	161+850 RHS Inner	1	39.5000	0.3664	0.2356	0.1271	0.0874	0.0599	0.0442	0.0298	30.7	31.5		35.8
	2-5-2023	02:40:22	IL&FS	LSI	Solapur	MH	18.037973	75.195640	150+000	252+000	161+850 RHS Inner	2	39.9000	0.3789	0.2306	0.1266	0.0874	0.0605	0.0451	0.0305	30.7	31.5		35.8
	2-5-2023	02:40:22	IL&FS	LSI	Solapur	MH	18.037973	75.195640	150+000	252+000	161+850 RHS Inner	3	39.9000	0.3586	0.2352	0.1277	0.0883	0.0606	0.0453	0.0308	30.7	31.5		35.8
1161	2-5-2023	02:42:24	IL&FS	LSI	Solapur	MH	18.038579	75.193450	150+000	252+000	161+600 RHS Inner	1	39.7000	0.3279	0.2186	0.1244	0.0816	0.0575	0.0373	0.0215	30.6	31.4		35.8
	2-5-2023	02:42:24	IL&FS	LSI	Solapur	MH	18.038579	75.193450	150+000	252+000	161+600 RHS Inner	2	39.5000	0.3397	0.2136	0.1210	0.0827	0.0569	0.0356	0.0210	30.6	31.4		35.8
	2-5-2023	02:42:24	IL&FS	LSI	Solapur	MH	18.038579	75.193450	150+000	252+000	161+600 RHS Inner	3	40.1000	0.3240	0.2226	0.1202	0.0807	0.0578	0.0372	0.0215	30.6	31.4		35.8
1162	2-5-2023	02:44:26	IL&FS	LSI	Solapur	MH	18.039218	75.191146	150+000	252+000	161+350 RHS Inner	1	40.5000	0.4462	0.2540	0.1621	0.0988	0.0667	0.0433	0.0300	30.7	31.5		35.8
	2-5-2023	02:44:26	IL&FS	LSI	Solapur	MH	18.039218	75.191146	150+000	252+000	161+350 RHS Inner	2	40.4000	0.3994	0.2550	0.1621	0.0974	0.0669	0.0438	0.0304	30.7	31.5		35.8
	2-5-2023	02:44:26	IL&FS	LSI	Solapur	MH	18.039218	75.191146	150+000	252+000	161+350 RHS Inner	3	40.8000	0.4516	0.2553	0.1735	0.0986	0.0644	0.0433	0.0300	30.7	31.5		35.8
1163	2-5-2023	02:46:23	IL&FS	LSI	Solapur	MH	18.039777	75.188957	150+000	252+000	161+100 RHS Inner	1	41.3000	0.2775	0.1711	0.1084	0.0561	0.0361	0.0224	0.0142	30.7	31.1		35.8
	2-5-2023	02:46:23	IL&FS	LSI	Solapur	MH	18.039777	75.188957	150+000	252+000	161+100 RHS Inner	2	41.3000	0.2498	0.1755	0.1076	0.0555	0.0355	0.0217	0.0135	30.7	31.1		35.8
	2-5-2023	02:46:23	IL&FS	LSI	Solapur	MH	18.039777	75.188957	150+000	252+000	161+100 RHS Inner	3	41.0000	0.2688	0.1768	0.1027	0.0536	0.0336	0.0211	0.0129	30.7	31.1		35.8
1164	2-5-2023	02:48:52	IL&FS	LSI	Solapur	MH	18.040233	75.186508	150+000	252+000	160+850 RHS Inner	1	40.5000	0.3795	0.2445	0.1368	0.0814	0.0474	0.0316	0.0284	30.6	31.2		35.8
	2-5-2023	02:48:52	IL&FS	LSI	Solapur	MH	18.040233	75.186508	150+000	252+000	160+850 RHS Inner	2	40.1000	0.3460	0.2394	0.1300	0.0800	0.0468	0.0315	0.0284	30.6	31.2		35.8
	2-5-2023	02:48:52	IL&FS	LSI	Solapur	MH	18.040233	75.186508	150+000	252+000	160+850 RHS Inner	3	40.7000	0.3501	0.2370	0.1273	0.0790	0.0483	0.0326	0.0293	30.6	31.2		35.8
1165	2-5-2023	02:52:00	IL&FS	LSI	Solapur	MH	18.040504	75.183792	150+000	252+000	160+550 RHS Inner	1	40.8000	0.4149	0.2334	0.1406	0.0900	0.0588	0.0434	0.0291	30.8	32.5		35.8
	2-5-2023	02:52:00	IL&FS	LSI	Solapur	MH	18.040504	75.183792	150+000	252+000	160+550 RHS Inner	2	40.9000	0.4144	0.2475	0.1381	0.0925	0.0593	0.0432	0.0288	30.8	32.5		35.8
	2-5-2023	02:52:00	IL&FS	LSI	Solapur	MH	18.040504	75.183792	150+000	252+000	160+550 RHS Inner	3	39.4000	0.3857	0.2289	0.1361	0.0898	0.0578	0.0413	0.0271	30.8	32.5		35.8
1166	2-5-2023	02:53:51	IL&FS	LSI	Solapur	MH	18.040506	75.181877	150+000	252+000	160+350 RHS Inner	1	40.7000	0.4318	0.2599	0.1315	0.0715	0.0602	0.0452	0.0407	30.9	31.3		35.8
	2-5-2023	02:53:51	IL&FS	LSI	Solapur	MH	18.040506	75.181877	150+000	252+000	160+350 RHS Inner	2	41.1000	0.4360	0.2607	0.1338	0.0784	0.0578	0.0455	0.0410	30.9	31.3		35.8
	2-5-2023	02:53:51	IL&FS	LSI	Solapur	MH	18.040506	75.181877	150+000	252+000	160+350 RHS Inner	3	41.1000	0.4360	0.2577	0.1323	0.0769	0.0544	0.0464	0.0418	30.9	31.3		35.8
1167	2-5-2023	02:57:12	IL&FS	LSI	Solapur	MH	18.040220	75.179557	150+000	252+000	160+100 RHS Inner	1	39.4000	0.3506	0.2161	0.1270	0.0837	0.0524	0.0395	0.0310	30.4	31.1	T-26.8/33.9	33.9
	2-5-2023	02:57:12	IL&FS	LSI	Solapur	MH	18.040220	75.179557	150+000	252+000	160+100 RHS Inner	2	41.3000	0.3700	0.2204	0.1316	0.0883	0.0544	0.0426	0.0338	30.4	31.1	T-26.8/33.9	33.9
	2-5-2023	02:57:12	IL&FS	LSI	Solapur	MH	18.040220	75.179557	150+000	252+000	160+100 RHS Inner	3	41.5000	0.3918	0.2174	0.1326	0.0876	0.0581	0.0436	0.0335	30.4	31.1	T-26.8/33.9	33.9
1168	2-5-2023	02:59:45	IL&FS	LSI	Solapur	MH	18.039497	75.177253	150+000	252+000	159+850 RHS Inner	1	40.0000	0.4016	0.2489	0.1537	0.0907	0.0460	0.0352	0.0282	30.4	30.5		33.9
	2-5-2023	02:59:45	IL&FS	LSI	Solapur	MH	18.039497	75.177253	150+000	252+000	159+850 RHS Inner	2	40.4000	0.3867	0.2491	0.1407	0.0839	0.0461	0.0361	0.0287	30.4	30.5		33.9
	2-5-2023	02:59:45	IL&FS	LSI	Solapur	MH	18.039497	75.177253	150+000	252+000	159+850 RHS Inner	3	41.0000	0.4002	0.2495	0.1468	0.0864	0.0465	0.0358	0.0284	30.4	30.5		33.9
1169	2-5-2023	03:01:49	IL&FS	LSI	Solapur	MH	18.038846	75.175415	150+000	252+000	159+600 RHS Inner	1	42.7000	0.2336	0.1635	0.0981	0.0578	0.0312	0.0216	0.0194	30.0	30.2		33.9
	2-5-2023	03:01:49	IL&FS	LSI	Solapur	MH	18.038846	75.175415	150+000	252+000	159+600 RHS Inner	2	43.3000	0.2450	0.1686	0.0924	0.0552	0.0322	0.0218	0.0196	30.0	30.2		33.9
	2-5-2023	03:01:49	IL&FS	LSI	Solapur	MH	18.038846	75.175415	150+000	252+000	159+600 RHS Inner	3	43.2000	0.2471	0.1674	0.1002	0.0608	0.0331	0.0217	0.0195	30.0	30.2		33.9
1170	2-5-2023	03:03:55	IL&FS	LSI	Solapur	MH	18.038072	75.173164	150+000	252+000	159+350 RHS Inner	1	39.8000	0.3120	0.2169	0.1198	0.0728	0.0377	0.0243	0.0142	30.1	30.0		33.9
	2-5-2023	03:03:55	IL&FS	LSI	Solapur	MH	18.038072	75.173164	150+000	252+000	159+350 RHS Inner	2	39.6000	0.3002	0.1938	0.1195	0.0723	0.0378	0.0238	0.0142	30.1	30.0		33.9
	2-5-2023	03:03:55	IL&FS	LSI	Solapur	MH	18.038072	75.173164	150+000	252+000	159+350 RHS Inner	3	41.2000	0.3112	0.2136	0.1156	0.0730	0.0404	0.0267	0.0163	30.1	30.0		33.9
1171	2-5-2023	06:33:22	IL&FS	LSI	Solapur	MH	18.037143	75.170516	150+000	252+000	159+020 RHS Inner	1	41.8000	0.4244	0.2371	0.1480	0.0840	0.0519	0.0286	0.0197	25.9	27.3	T-24.2/32.3	32.3
	2-5-2023	06:33:22	IL&FS	LSI	Solapur	MH	18.037143	75.170516	150+000	252+000	159+020 RHS Inner	2	40.8000	0.4139	0.2276	0.1412	0.0771	0.0469	0.0282	0.0194	25.9	27.3	T-24.2/32.3	32.3
	2-5-2023	06:33:22	IL&FS	LSI	Solapur	MH	18.037143	75.170516	150+000	252+000	159+020 RHS Inner	3	40.6000	0.4102	0.2285	0.1422	0.0823	0.0510	0.0284	0.0196	25.9	27.3	T-24.2/32.3	32.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1172	2-5-2023	06:36:32	IL&FS	LSI	Solapur	MH	18.037258	75.168800	150+000	252+000	158+800 RHS Inner	1	41.1000	0.4561	0.2582	0.1455	0.0812	0.0340	0.0215	0.0126	26.0	26.8		32.3
	2-5-2023	06:36:32	IL&FS	LSI	Solapur	MH	18.037258	75.168800	150+000	252+000	158+800 RHS Inner	2	39.6000	0.4295	0.2652	0.1397	0.0739	0.0322	0.0194	0.0115	26.0	26.8		32.3
	2-5-2023	06:36:32	IL&FS	LSI	Solapur	MH	18.037258	75.168800	150+000	252+000	158+800 RHS Inner	3	39.7000	0.3998	0.2612	0.1305	0.0721	0.0357	0.0212	0.0115	26.0	26.8		32.3
1173	2-5-2023	06:38:31	IL&FS	LSI	Solapur	MH	18.037891	75.166694	150+000	252+000	158+625 RHS Inner	1	39.6000	0.5190	0.3104	0.1637	0.0916	0.0669	0.0484	0.0281	25.9	27.0		32.3
	2-5-2023	06:38:31	IL&FS	LSI	Solapur	MH	18.037891	75.166694	150+000	252+000	158+625 RHS Inner	2	39.9000	0.5157	0.3103	0.1582	0.0894	0.0658	0.0483	0.0275	25.9	27.0		32.3
	2-5-2023	06:38:31	IL&FS	LSI	Solapur	MH	18.037891	75.166694	150+000	252+000	158+625 RHS Inner	3	41.1000	0.5296	0.3043	0.1638	0.0977	0.0714	0.0521	0.0294	25.9	27.0		32.3
1174	2-5-2023	06:40:16	IL&FS	LSI	Solapur	MH	18.038568	75.164390	150+000	252+000	158+350 RHS Inner	1	40.1000	0.5640	0.3010	0.1897	0.1188	0.0730	0.0491	0.0292	26.0	27.2		32.3
	2-5-2023	06:40:16	IL&FS	LSI	Solapur	MH	18.038568	75.164390	150+000	252+000	158+350 RHS Inner	2	39.9000	0.5264	0.3040	0.1833	0.1212	0.0726	0.0541	0.0337	26.0	27.2		32.3
	2-5-2023	06:40:16	IL&FS	LSI	Solapur	MH	18.038568	75.164390	150+000	252+000	158+350 RHS Inner	3	40.7000	0.5310	0.3025	0.1940	0.1234	0.0740	0.0511	0.0310	26.0	27.2		32.3
1175	2-5-2023	06:42:20	IL&FS	LSI	Solapur	MH	18.039257	75.162086	150+000	252+000	158+100 RHS Inner	1	39.7000	0.4490	0.2965	0.1720	0.0809	0.0622	0.0500	0.0330	26.1	27.2		32.3
	2-5-2023	06:42:20	IL&FS	LSI	Solapur	MH	18.039257	75.162086	150+000	252+000	158+100 RHS Inner	2	40.1000	0.4587	0.2897	0.1721	0.0836	0.0601	0.0456	0.0290	26.1	27.2		32.3
	2-5-2023	06:42:20	IL&FS	LSI	Solapur	MH	18.039257	75.162086	150+000	252+000	158+100 RHS Inner	3	40.0000	0.4590	0.2806	0.1680	0.0807	0.0632	0.0502	0.0331	26.1	27.2		32.3
1176	2-5-2023	06:44:09	IL&FS	LSI	Solapur	MH	18.039894	75.159942	150+000	252+000	157+850 RHS Inner	1	40.7000	0.5091	0.2868	0.1591	0.0866	0.0611	0.0449	0.0284	26.1	27.6		32.3
	2-5-2023	06:44:09	IL&FS	LSI	Solapur	MH	18.039894	75.159942	150+000	252+000	157+850 RHS Inner	2	41.4000	0.5270	0.2881	0.1613	0.0882	0.0639	0.0481	0.0312	26.1	27.6		32.3
	2-5-2023	06:44:09	IL&FS	LSI	Solapur	MH	18.039894	75.159942	150+000	252+000	157+850 RHS Inner	3	40.4000	0.5248	0.2792	0.1538	0.0860	0.0612	0.0459	0.0293	26.1	27.6		32.3
1177	2-5-2023	06:46:06	IL&FS	LSI	Solapur	MH	18.040582	75.157707	150+000	252+000	157+600 RHS Inner	1	40.7000	0.4887	0.3097	0.1956	0.1031	0.0749	0.0488	0.0244	26.4	27.8		32.3
	2-5-2023	06:46:06	IL&FS	LSI	Solapur	MH	18.040582	75.157707	150+000	252+000	157+600 RHS Inner	2	40.9000	0.4819	0.3043	0.1914	0.1060	0.0778	0.0498	0.0255	26.4	27.8		32.3
	2-5-2023	06:46:06	IL&FS	LSI	Solapur	MH	18.040582	75.157707	150+000	252+000	157+600 RHS Inner	3	41.0000	0.4618	0.3042	0.1781	0.1079	0.0737	0.0485	0.0264	26.4	27.8		32.3
1178	2-5-2023	06:48:36	IL&FS	LSI	Solapur	MH	18.041259	75.155441	150+000	252+000	157+400 RHS Inner	1	44.5000	0.2021	0.1340	0.0986	0.0721	0.0556	0.0405	0.0290	26.6	27.7		32.3
	2-5-2023	06:48:36	IL&FS	LSI	Solapur	MH	18.041259	75.155441	150+000	252+000	157+400 RHS Inner	2	45.0000	0.1893	0.1355	0.0982	0.0717	0.0568	0.0405	0.0283	26.6	27.7		32.3
	2-5-2023	06:48:36	IL&FS	LSI	Solapur	MH	18.041259	75.155441	150+000	252+000	157+400 RHS Inner	3	44.9000	0.2000	0.1454	0.1026	0.0742	0.0526	0.0381	0.0285	26.6	27.7		32.3
1179	2-5-2023	06:50:59	IL&FS	LSI	Solapur	MH	18.042135	75.152450	150+000	252+000	157+100 RHS Inner	1	44.2000	0.1370	0.1002	0.0682	0.0402	0.0267	0.0190	0.0171	26.8	28.7		32.3
	2-5-2023	06:50:59	IL&FS	LSI	Solapur	MH	18.042135	75.152450	150+000	252+000	157+100 RHS Inner	2	44.5000	0.1358	0.0976	0.0615	0.0389	0.0266	0.0189	0.0170	26.8	28.7		32.3
	2-5-2023	06:50:59	IL&FS	LSI	Solapur	MH	18.042135	75.152450	150+000	252+000	157+100 RHS Inner	3	44.3000	0.1440	0.0989	0.0643	0.0405	0.0260	0.0185	0.0166	26.8	28.7		32.3
1180	2-5-2023	06:53:04	IL&FS	LSI	Solapur	MH	18.042776	75.150138	150+000	252+000	156+850 RHS Inner	1	42.7000	0.2366	0.1641	0.1268	0.0747	0.0398	0.0231	0.0127	27.2	28.8		32.3
	2-5-2023	06:53:04	IL&FS	LSI	Solapur	MH	18.042776	75.150138	150+000	252+000	156+850 RHS Inner	2	43.4000	0.2411	0.1699	0.1178	0.0695	0.0322	0.0204	0.0124	27.2	28.8		32.3
	2-5-2023	06:53:04	IL&FS	LSI	Solapur	MH	18.042776	75.150138	150+000	252+000	156+850 RHS Inner	3	43.6000	0.2428	0.1782	0.1169	0.0647	0.0325	0.0203	0.0127	27.2	28.8		32.3
1181	2-5-2023	06:55:02	IL&FS	LSI	Solapur	MH	18.043430	75.147834	150+000	252+000	156+600 RHS Inner	1	42.2000	0.1457	0.1070	0.0775	0.0501	0.0364	0.0270	0.0243	27.2	29.0		32.3
	2-5-2023	06:55:02	IL&FS	LSI	Solapur	MH	18.043430	75.147834	150+000	252+000	156+600 RHS Inner	2	42.1000	0.1460	0.1130	0.0694	0.0539	0.0385	0.0273	0.0245	27.2	29.0		32.3
	2-5-2023	06:55:02	IL&FS	LSI	Solapur	MH	18.043430	75.147834	150+000	252+000	156+600 RHS Inner	3	42.0000	0.1568	0.1166	0.0780	0.0481	0.0360	0.0275	0.0248	27.2	29.0		32.3
1182	2-5-2023	06:57:06	IL&FS	LSI	Solapur	MH	18.044080	75.145584	150+000	252+000	156+350 RHS Inner	1	41.6000	0.1958	0.1617	0.1182	0.0894	0.0586	0.0355	0.0260	27.4	29.3		32.3
	2-5-2023	06:57:06	IL&FS	LSI	Solapur	MH	18.044080	75.145584	150+000	252+000	156+350 RHS Inner	2	41.5000	0.2141	0.1608	0.1171	0.0900	0.0577	0.0363	0.0267	27.4	29.3		32.3
	2-5-2023	06:57:06	IL&FS	LSI	Solapur	MH	18.044080	75.145584	150+000	252+000	156+350 RHS Inner	3	41.2000	0.1927	0.1601	0.1156	0.0853	0.0554	0.0346	0.0251	27.4	29.3		32.3
1183	2-5-2023	06:59:06	IL&FS	LSI	Solapur	MH	18.044738	75.143386	150+000	252+000	156+100 RHS Inner	1	43.4000	0.1547	0.1102	0.0837	0.0631	0.0407	0.0228	0.0118	27.6	29.9		32.3
	2-5-2023	06:59:06	IL&FS	LSI	Solapur	MH	18.044738	75.143386	150+000	252+000	156+100 RHS Inner	2	42.3000	0.1528	0.1128	0.0851	0.0649	0.0424	0.0252	0.0126	27.6	29.9		32.3
	2-5-2023	06:59:06	IL&FS	LSI	Solapur	MH	18.044738	75.143386	150+000	252+000	156+100 RHS Inner	3	43.5000	0.1606	0.1135	0.0849	0.0652	0.0417	0.0249	0.0117	27.6	29.9		32.3
1184	2-5-2023	07:01:07	IL&FS	LSI	Solapur	MH	18.045436	75.141220	150+000	252+000	155+850 RHS Inner	1	41.8000	0.2497	0.1664	0.1081	0.0840	0.0685	0.0452	0.0282	27.7	29.7		32.3
	2-5-2023	07:01:07	IL&FS	LSI	Solapur	MH	18.045436	75.141220	150+000	252+000	155+850 RHS Inner	2	41.1000	0.2610	0.1574	0.1130	0.0879	0.0689	0.0448	0.0261	27.7	29.7		32.3
	2-5-2023	07:01:07	IL&FS	LSI	Solapur	MH	18.045436	75.141220	150+000	252+000	155+850 RHS Inner	3	41.2000	0.2535	0.1521	0.1119	0.0828	0.0630	0.0429	0.0306	27.7	29.7		32.3
1185	2-5-2023	07:04:55	IL&FS	LSI	Solapur	MH	18.046104	75.138908	150+000	252+000	155+600 RHS Inner	1	42.3000	0.3244	0.2154	0.1472	0.0873	0.0541	0.0405	0.0247	27.6	29.9	T-26.6/33.4	33.4
	2-5-2023	07:04:55	IL&FS	LSI	Solapur	MH	18.046104	75.138908	150+000	252+000	155+600 RHS Inner	2	42.6000	0.3058	0.2097	0.1508	0.0925	0.0547	0.0403	0.0253	27.6	29.9	T-26.6/33.4	33.4
	2-5-2023	07:04:55	IL&FS	LSI	Solapur	MH	18.046104	75.138908	150+000	252+000	155+600 RHS Inner	3	44.0000	0.3258	0.2252	0.1538	0.0960	0.0585	0.0430	0.0262	27.6	29.9	T-26.6/33.4	33.4
1186	2-5-2023	07:08:23	IL&FS	LSI	Solapur	MH	18.046787	75.136695	150+000	252+000	155+350 RHS Inner	1	43.6000	0.2524	0.1777	0.1399	0.0957	0.0639	0.0393	0.0203	27.8	29.9		33.4
	2-5-2023	07:08:23	IL&FS	LSI	Solapur	MH	18.046787	75.136695	150+000	252+000	155+350 RHS Inner	2	43.3000	0.2479	0.1774	0.1342	0.0922	0.0664	0.0379	0.0200	27.8	29.9		33.4
	2-5-2023	07:08:23	IL&FS	LSI	Solapur	MH	18.046787	75.136695	150+000	252+000	155+350 RHS Inner	3	43.4000	0.2484	0.1699	0.1407	0.1039	0.0779	0.0430	0.0199	27.8	29.9		33.4
1187	2-5-2023	07:10:15	IL&FS	LSI	Solapur	MH	18.047525	75.134361	150+000	252+000	155+100 RHS Inner	1	44.0000	0.2626	0.1716	0.1178	0.0814	0.0530	0.0294	0.0130	28.0	29.0		33.4
	2-5-2023	07:10:15	IL&FS	LSI	Solapur	MH	18.047525	75.134361	150+000	252+000	155+100 RHS Inner	2	42.4000	0.2623	0.1847	0.1102	0.0758	0.0499	0.0290	0.0128	28.0	29.0		33.4
	2-5-2023	07:10:15	IL&FS	LSI	Solapur	MH	18.047525	75.134361	150+000	252+000	155+100 RHS Inner	3	43.0000	0.2518	0.1769	0.1183	0.0769	0.0491	0.0284	0.0126	28.0	29.0		33.4
1188	2-5-2023	07:12:14	IL&FS	LSI	Solapur	MH	18.048189	75.132331	150+000	252+000	154+850 RHS Inner	1	43.0000	0.1777	0.1320	0.0784	0.0478	0.0279	0.0180	0.0104	28.0	30.2		33.4
	2-5-2023	07:12:14	IL&FS	LSI	Solapur	MH	18.048189	75.132331	150+000	252+000	154+850 RHS Inner	2	43.6000	0.1784	0.1218	0.0732	0.0439	0.0259	0.0172	0.0105	28.0	30.2		33.4
	2-5-2023	07:12:14	IL&FS	LSI	Solapur	MH	18.048189	75.132331	150+000	252+000	154+850 RHS Inner	3	41.7000	0.1680	0.1228	0.0702	0.0441	0.0270	0.0178	0.0106	28.0	30.2		33.4
1189	2-5-2023	07:14:46	IL&FS	LSI	Solapur	MH	18.048944	75.130081	150+000	252+000	154+600 RHS Inner	1	40.7000	0.5474	0.3624	0.1913	0.0929	0.0694	0.0428	0.0260	28.0	30.2		33.4
	2-5-2023	07:14:46	IL&FS	LSI	Solapur	MH	18.048944	75.130081	150+000	252+000	154+600 RHS Inner	2	40.9000	0.5474	0.3607	0.1974	0.1049	0.0712	0.0447	0.0265	28.0	30.2		33.4
	2-5-2023	07:14:46	IL&FS	LSI	Solapur	MH	18.048944	75.130081	150+000	252+000	154+600 RHS Inner	3	40.8000	0.5212	0.3479	0.1933	0.0998	0.0704	0.0416	0.0263	28.0	30.2		33.4
1190	2-5-2023	07:16:56	IL&FS	LSI	Solapur	MH	18.049654	75.127861	150+000	252+000	154+350 RHS Inner	1	42.5000	0.4616	0.2688	0.1429	0.0865	0.0526	0.0292	0.0185	28.3	30.4		33.4
	2-5-2023	07:16:56	IL&FS	LSI	Solapur	MH	18.049654	75.127861	150+000	252+000	154+350 RHS Inner	2	42.7000	0.4307	0.2746	0.1339	0.0905	0.0518	0.0245	0.0211	28.3	30.4		33.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	07:16:56	IL&FS	LSI	Solapur	MH	18.049654	75.127861	150+000	252+000	154+350 RHS Inner	3	42.6000	0.4212	0.2446	0.1345	0.0876	0.0489	0.0242	0.0207	28.3	30.4		33.4
1191	2-5-2023	07:18:58	IL&FS	LSI	Solapur	MH	18.050395	75.125503	150+000	252+000	154+100 RHS Inner	1	41.3000	0.5031	0.3121	0.1701	0.1147	0.0775	0.0574	0.0429	28.3	30.5		33.4
	2-5-2023	07:18:58	IL&FS	LSI	Solapur	MH	18.050395	75.125503	150+000	252+000	154+100 RHS Inner	2	40.8000	0.4837	0.2881	0.1660	0.1137	0.0747	0.0541	0.0404	28.3	30.5		33.4
	2-5-2023	07:18:58	IL&FS	LSI	Solapur	MH	18.050395	75.125503	150+000	252+000	154+100 RHS Inner	3	41.1000	0.5004	0.2954	0.1683	0.1147	0.0750	0.0549	0.0411	28.3	30.5		33.4
1192	2-5-2023	07:20:47	IL&FS	LSI	Solapur	MH	18.051166	75.123283	150+000	252+000	153+850 RHS Inner	1	43.1000	0.3463	0.2063	0.1222	0.0816	0.0596	0.0460	0.0418	28.6	31.0		33.4
	2-5-2023	07:20:47	IL&FS	LSI	Solapur	MH	18.051166	75.123283	150+000	252+000	153+850 RHS Inner	2	42.6000	0.3249	0.1986	0.1221	0.0807	0.0599	0.0449	0.0413	28.6	31.0		33.4
	2-5-2023	07:20:47	IL&FS	LSI	Solapur	MH	18.051166	75.123283	150+000	252+000	153+850 RHS Inner	3	43.5000	0.3104	0.2016	0.1330	0.0822	0.0616	0.0456	0.0423	28.6	31.0		33.4
1193	2-5-2023	07:22:29	IL&FS	LSI	Solapur	MH	18.052215	75.121299	150+000	252+000	153+600 RHS Inner	1	42.2000	0.3922	0.2301	0.1375	0.0894	0.0700	0.0509	0.0380	28.8	31.3		33.4
	2-5-2023	07:22:29	IL&FS	LSI	Solapur	MH	18.052215	75.121299	150+000	252+000	153+600 RHS Inner	2	42.3000	0.4015	0.2317	0.1331	0.0892	0.0688	0.0501	0.0374	28.8	31.3		33.4
	2-5-2023	07:22:29	IL&FS	LSI	Solapur	MH	18.052215	75.121299	150+000	252+000	153+600 RHS Inner	3	42.2000	0.3884	0.2231	0.1302	0.0893	0.0694	0.0554	0.0459	28.8	31.3		33.4
1194	2-5-2023	07:26:14	IL&FS	LSI	Solapur	MH	18.053684	75.119426	150+000	252+000	153+350 RHS Inner	1	43.3000	0.3210	0.2036	0.1274	0.0906	0.0701	0.0399	0.0344	28.7	30.8		33.4
	2-5-2023	07:26:14	IL&FS	LSI	Solapur	MH	18.053684	75.119426	150+000	252+000	153+350 RHS Inner	2	43.4000	0.3307	0.2152	0.1252	0.0898	0.0680	0.0397	0.0342	28.7	30.8		33.4
	2-5-2023	07:26:14	IL&FS	LSI	Solapur	MH	18.053684	75.119426	150+000	252+000	153+350 RHS Inner	3	43.2000	0.3313	0.1967	0.1304	0.0896	0.0684	0.0404	0.0349	28.7	30.8		33.4
1195	2-5-2023	07:28:02	IL&FS	LSI	Solapur	MH	18.053646	75.115036	150+000	252+000	153+100 RHS Inner	1	41.7000	0.4102	0.2545	0.1403	0.0870	0.0535	0.0373	0.0336	28.6	30.9		33.4
	2-5-2023	07:28:02	IL&FS	LSI	Solapur	MH	18.053646	75.115036	150+000	252+000	153+100 RHS Inner	2	41.7000	0.3727	0.2511	0.1428	0.0867	0.0522	0.0363	0.0327	28.6	30.9		33.4
	2-5-2023	07:28:02	IL&FS	LSI	Solapur	MH	18.053646	75.115036	150+000	252+000	153+100 RHS Inner	3	42.4000	0.3914	0.2495	0.1409	0.0911	0.0564	0.0399	0.0359	28.6	30.9		33.4
1196	2-5-2023	07:30:06	IL&FS	LSI	Solapur	MH	18.056627	75.114753	150+000	252+000	152+830 RHS Inner	1	41.8000	0.3736	0.2583	0.1331	0.0843	0.0473	0.0367	0.0285	28.7	31.0		33.4
	2-5-2023	07:30:06	IL&FS	LSI	Solapur	MH	18.056627	75.114753	150+000	252+000	152+830 RHS Inner	2	41.8000	0.3694	0.2562	0.1380	0.0819	0.0450	0.0348	0.0281	28.7	31.0		33.4
	2-5-2023	07:30:06	IL&FS	LSI	Solapur	MH	18.056627	75.114753	150+000	252+000	152+830 RHS Inner	3	41.3000	0.3819	0.2410	0.1240	0.0738	0.0427	0.0335	0.0266	28.7	31.0		33.4
1197	2-5-2023	07:32:03	IL&FS	LSI	Solapur	MH	18.058208	75.114166	150+000	252+000	152+600 RHS Inner	1	43.8000	0.1469	0.1126	0.0897	0.0758	0.0553	0.0414	0.0246	28.8	31.7		33.4
	2-5-2023	07:32:03	IL&FS	LSI	Solapur	MH	18.058208	75.114166	150+000	252+000	152+600 RHS Inner	2	43.5000	0.1525	0.1155	0.0900	0.0690	0.0523	0.0414	0.0223	28.8	31.7		33.4
	2-5-2023	07:32:03	IL&FS	LSI	Solapur	MH	18.058208	75.114166	150+000	252+000	152+600 RHS Inner	3	44.4000	0.1501	0.1138	0.0895	0.0730	0.0547	0.0416	0.0249	28.8	31.7		33.4
1198	2-5-2023	07:35:02	IL&FS	LSI	Solapur	MH	18.060581	75.111534	150+000	252+000	152+220 RHS Inner	1	42.5000	0.2559	0.1623	0.1127	0.0828	0.0731	0.0449	0.0199	29.1	31.5		33.4
	2-5-2023	07:35:02	IL&FS	LSI	Solapur	MH	18.060581	75.111534	150+000	252+000	152+220 RHS Inner	2	42.7000	0.2381	0.1618	0.1127	0.0842	0.0656	0.0455	0.0206	29.1	31.5		33.4
	2-5-2023	07:35:02	IL&FS	LSI	Solapur	MH	18.060581	75.111534	150+000	252+000	152+220 RHS Inner	3	42.6000	0.2563	0.1656	0.1084	0.0834	0.0709	0.0448	0.0194	29.1	31.5		33.4
1199	2-5-2023	07:36:54	IL&FS	LSI	Solapur	MH	18.061298	75.110870	150+000	252+000	152+100 RHS Inner	1	43.4000	0.2804	0.1946	0.1356	0.1025	0.0593	0.0345	0.0311	28.9	31.3		33.4
	2-5-2023	07:36:54	IL&FS	LSI	Solapur	MH	18.061298	75.110870	150+000	252+000	152+100 RHS Inner	2	43.7000	0.3040	0.2033	0.1411	0.1005	0.0545	0.0360	0.0324	28.9	31.3		33.4
	2-5-2023	07:36:54	IL&FS	LSI	Solapur	MH	18.061298	75.110870	150+000	252+000	152+100 RHS Inner	3	43.7000	0.3110	0.2122	0.1355	0.0932	0.0587	0.0357	0.0321	28.9	31.3		33.4
1200	2-5-2023	07:38:40	IL&FS	LSI	Solapur	MH	18.063062	75.109321	150+000	252+000	151+850 RHS Inner	1	42.7000	0.4073	0.2751	0.1745	0.1125	0.0573	0.0401	0.0296	28.9	31.4		33.4
	2-5-2023	07:38:40	IL&FS	LSI	Solapur	MH	18.063062	75.109321	150+000	252+000	151+850 RHS Inner	2	42.8000	0.4444	0.3019	0.1742	0.1110	0.0608	0.0441	0.0310	28.9	31.4		33.4
	2-5-2023	07:38:40	IL&FS	LSI	Solapur	MH	18.063062	75.109321	150+000	252+000	151+850 RHS Inner	3	42.7000	0.4299	0.2887	0.1797	0.1110	0.0564	0.0425	0.0320	28.9	31.4		33.4
1201	2-5-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.064758	75.107887	150+000	252+000	151+600 RHS Inner	1	42.9000	0.1850	0.1432	0.1070	0.0827	0.0536	0.0331	0.0163	28.7	31.9		33.4
	2-5-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.064758	75.107887	150+000	252+000	151+600 RHS Inner	2	42.9000	0.1944	0.1586	0.1090	0.0776	0.0511	0.0343	0.0174	28.7	31.9		33.4
	2-5-2023	07:40:32	IL&FS	LSI	Solapur	MH	18.064758	75.107887	150+000	252+000	151+600 RHS Inner	3	43.5000	0.2024	0.1526	0.1099	0.0812	0.0533	0.0343	0.0174	28.7	31.9		33.4
1202	2-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	18.066766	75.106582	150+000	252+000	151+350 RHS Inner	1	41.0000	0.5606	0.3282	0.1932	0.1365	0.0923	0.0612	0.0368	28.8	31.7		33.4
	2-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	18.066766	75.106582	150+000	252+000	151+350 RHS Inner	2	41.1000	0.5691	0.3265	0.1978	0.1315	0.0916	0.0659	0.0390	28.8	31.7		33.4
	2-5-2023	07:42:20	IL&FS	LSI	Solapur	MH	18.066766	75.106582	150+000	252+000	151+350 RHS Inner	3	41.4000	0.5662	0.3397	0.1919	0.1278	0.0921	0.0698	0.0400	28.8	31.7		33.4
1203	2-5-2023	07:44:24	IL&FS	LSI	Solapur	MH	18.068719	75.105361	150+000	252+000	151+100 RHS Inner	1	40.9000	0.5357	0.3451	0.1840	0.1102	0.0577	0.0356	0.0188	28.7	30.0		33.4
	2-5-2023	07:44:24	IL&FS	LSI	Solapur	MH	18.068719	75.105361	150+000	252+000	151+100 RHS Inner	2	40.9000	0.5287	0.3239	0.1825	0.1079	0.0588	0.0349	0.0188	28.7	30.0		33.4
	2-5-2023	07:44:24	IL&FS	LSI	Solapur	MH	18.068719	75.105361	150+000	252+000	151+100 RHS Inner	3	41.1000	0.5383	0.3359	0.1837	0.1131	0.0630	0.0372	0.0185	28.7	30.0		33.4
1204	2-5-2023	07:47:16	IL&FS	LSI	Solapur	MH	18.074518	75.102836	150+000	252+000	150+400 RHS Inner	1	42.4000	0.3737	0.2141	0.1394	0.0876	0.0551	0.0389	0.0264	29.1	33.0		33.4
	2-5-2023	07:47:16	IL&FS	LSI	Solapur	MH	18.074518	75.102836	150+000	252+000	150+400 RHS Inner	2	42.9000	0.3810	0.2135	0.1407	0.0933	0.0607	0.0453	0.0342	29.1	33.0		33.4
	2-5-2023	07:47:16	IL&FS	LSI	Solapur	MH	18.074518	75.102836	150+000	252+000	150+400 RHS Inner	3	43.0000	0.3789	0.2192	0.1417	0.0923	0.0605	0.0450	0.0340	29.1	33.0		33.4
1205	2-5-2023	07:49:01	IL&FS	LSI	Solapur	MH	18.075630	75.102340	150+000	252+000	150+270 RHS Inner	1	42.3000	0.3820	0.2175	0.1064	0.0696	0.0463	0.0359	0.0284	29.3	32.7		33.4
	2-5-2023	07:49:01	IL&FS	LSI	Solapur	MH	18.075630	75.102340	150+000	252+000	150+270 RHS Inner	2	42.7000	0.3708	0.2087	0.1042	0.0683	0.0460	0.0353	0.0283	29.3	32.7		33.4
	2-5-2023	07:49:01	IL&FS	LSI	Solapur	MH	18.075630	75.102340	150+000	252+000	150+270 RHS Inner	3	42.8000	0.3999	0.2108	0.1095	0.0702	0.0435	0.0338	0.0263	29.3	32.7		33.4
1206	2-5-2023	07:51:09	IL&FS	LSI	Solapur	MH	18.076856	75.101196	150+000	252+000	150+080 RHS Inner	1	42.9000	0.3722	0.2201	0.1496	0.0993	0.0780	0.0576	0.0368	29.4	33.0		33.4
	2-5-2023	07:51:09	IL&FS	LSI	Solapur	MH	18.076856	75.101196	150+000	252+000	150+080 RHS Inner	2	42.3000	0.3577	0.2154	0.1498	0.1032	0.0748	0.0586	0.0377	29.4	33.0		33.4
	2-5-2023	07:51:09	IL&FS	LSI	Solapur	MH	18.076856	75.101196	150+000	252+000	150+080 RHS Inner	3	42.8000	0.3783	0.2234	0.1463	0.0989	0.0736	0.0542	0.0338	29.4	33.0		33.4
1207	2-5-2023	08:57:31	IL&FS	LSI	Solapur	MH	18.076677	75.101608	150+000	252+000	150+140 LHS Inner	1	40.0000	0.4075	0.2485	0.1220	0.0857	0.0595	0.0452	0.0286	32.3	36.4	T-31.5/39.5	39.5
	2-5-2023	08:57:31	IL&FS	LSI	Solapur	MH	18.076677	75.101608	150+000	252+000	150+140 LHS Inner	2	40.1000	0.4230	0.2498	0.1263	0.0891	0.0614	0.0491	0.0321	32.3	36.4	T-31.5/39.5	39.5
	2-5-2023	08:57:31	IL&FS	LSI	Solapur	MH	18.076677	75.101608	150+000	252+000	150+140 LHS Inner	3	40.3000	0.4314	0.2511	0.1304	0.0867	0.0585	0.0450	0.0285	32.3	36.4	T-31.5/39.5	39.5
1208	2-5-2023	09:00:06	IL&FS	LSI	Solapur	MH	18.075147	75.102706	150+000	252+000	150+350 LHS Inner	1	42.1000	0.2547	0.1696	0.1071	0.0720	0.0503	0.0366	0.0279	32.6	38.0		39.5
	2-5-2023	09:00:06	IL&FS	LSI	Solapur	MH	18.075147	75.102706	150+000	252+000	150+350 LHS Inner	2	41.8000	0.2510	0.1591	0.1051	0.0722	0.0498	0.0362	0.0275	32.6	38.0		39.5
	2-5-2023	09:00:06	IL&FS	LSI	Solapur	MH	18.075147	75.102706	150+000	252+000	150+350 LHS Inner	3	42.3000	0.2331	0.1571	0.1002	0.0721	0.0534	0.0394	0.0304	32.6	38.0		39.5
1209	2-5-2023	09:02:27	IL&FS	LSI	Solapur	MH	18.070165	75.104629	150+000	252+000	150+950 LHS Inner	1	41.7000	0.2442	0.1746	0.1168	0.0695	0.0456	0.0269	0.0206	33.2	38.7		39.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	09:02:27	IL&FS	LSI	Solapur	MH	18.070165	75.104629	150+000	252+000	150+950 LHS Inner	2	41.6000	0.2559	0.1800	0.1146	0.0672	0.0445	0.0267	0.0200	33.2	38.7		39.5
	2-5-2023	09:02:27	IL&FS	LSI	Solapur	MH	18.070165	75.104629	150+000	252+000	150+950 LHS Inner	3	42.2000	0.2641	0.1953	0.1167	0.0696	0.0436	0.0271	0.0204	33.2	38.7		39.5
1210	2-5-2023	09:04:06	IL&FS	LSI	Solapur	MH	18.068820	75.105445	150+000	252+000	151+100 LHS Inner	1	40.4000	0.4258	0.2376	0.1418	0.0927	0.0466	0.0321	0.0215	33.1	39.1		39.5
	2-5-2023	09:04:06	IL&FS	LSI	Solapur	MH	18.068820	75.105445	150+000	252+000	151+100 LHS Inner	2	40.6000	0.4190	0.2375	0.1359	0.0950	0.0510	0.0348	0.0202	33.1	39.1		39.5
	2-5-2023	09:04:06	IL&FS	LSI	Solapur	MH	18.068820	75.105445	150+000	252+000	151+100 LHS Inner	3	40.2000	0.4074	0.2359	0.1382	0.0849	0.0490	0.0348	0.0201	33.1	39.1		39.5
1211	2-5-2023	09:05:57	IL&FS	LSI	Solapur	MH	18.067008	75.106613	150+000	252+000	151+350 LHS Inner	1	40.4000	0.3032	0.1978	0.1209	0.0756	0.0527	0.0405	0.0305	33.2	37.9		39.5
	2-5-2023	09:05:57	IL&FS	LSI	Solapur	MH	18.067008	75.106613	150+000	252+000	151+350 LHS Inner	2	40.9000	0.2800	0.1880	0.1169	0.0757	0.0526	0.0396	0.0296	33.2	37.9		39.5
	2-5-2023	09:05:57	IL&FS	LSI	Solapur	MH	18.067008	75.106613	150+000	252+000	151+350 LHS Inner	3	41.0000	0.2960	0.1770	0.1250	0.0802	0.0519	0.0409	0.0347	33.2	37.9		39.5
1212	2-5-2023	09:08:23	IL&FS	LSI	Solapur	MH	18.063541	75.109024	150+000	252+000	151+810 LHS Inner	1	43.0000	0.2943	0.2240	0.1637	0.1041	0.0634	0.0522	0.0443	33.2	38.0		39.5
	2-5-2023	09:08:23	IL&FS	LSI	Solapur	MH	18.063541	75.109024	150+000	252+000	151+810 LHS Inner	2	40.5000	0.2744	0.2061	0.1478	0.0985	0.0610	0.0494	0.0420	33.2	38.0		39.5
	2-5-2023	09:08:23	IL&FS	LSI	Solapur	MH	18.063541	75.109024	150+000	252+000	151+810 LHS Inner	3	43.1000	0.3135	0.2300	0.1564	0.1008	0.0651	0.0540	0.0460	33.2	38.0		39.5
1213	2-5-2023	09:10:07	IL&FS	LSI	Solapur	MH	18.062620	75.109840	150+000	252+000	151+950 LHS Inner	1	43.1000	0.2554	0.1763	0.1249	0.0675	0.0369	0.0289	0.0255	33.2	39.0		39.5
	2-5-2023	09:10:07	IL&FS	LSI	Solapur	MH	18.062620	75.109840	150+000	252+000	151+950 LHS Inner	2	43.4000	0.2445	0.1794	0.1193	0.0703	0.0397	0.0345	0.0262	33.2	39.0		39.5
	2-5-2023	09:10:07	IL&FS	LSI	Solapur	MH	18.062620	75.109840	150+000	252+000	151+950 LHS Inner	3	43.4000	0.2570	0.1793	0.1195	0.0670	0.0373	0.0293	0.0258	33.2	39.0		39.5
1214	2-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	18.061458	75.110832	150+000	252+000	152+100 LHS Inner	1	41.1000	0.4592	0.2861	0.1669	0.0913	0.0557	0.0316	0.0110	33.1	38.8		39.5
	2-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	18.061458	75.110832	150+000	252+000	152+100 LHS Inner	2	41.3000	0.4553	0.2875	0.1677	0.0951	0.0558	0.0332	0.0112	33.1	38.8		39.5
	2-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	18.061458	75.110832	150+000	252+000	152+100 LHS Inner	3	41.1000	0.4428	0.2861	0.1669	0.0957	0.0557	0.0337	0.0111	33.1	38.8		39.5
1215	2-5-2023	09:14:26	IL&FS	LSI	Solapur	MH	18.059581	75.112747	150+000	252+000	152+400 LHS Inner	1	42.2000	0.3272	0.2039	0.1224	0.0750	0.0508	0.0337	0.0303	33.4	39.0		39.5
	2-5-2023	09:14:26	IL&FS	LSI	Solapur	MH	18.059581	75.112747	150+000	252+000	152+400 LHS Inner	2	41.8000	0.3306	0.2082	0.1266	0.0749	0.0523	0.0356	0.0320	33.4	39.0		39.5
	2-5-2023	09:14:26	IL&FS	LSI	Solapur	MH	18.059581	75.112747	150+000	252+000	152+400 LHS Inner	3	42.5000	0.3561	0.2243	0.1275	0.0750	0.0502	0.0338	0.0304	33.4	39.0		39.5
1216	2-5-2023	09:16:38	IL&FS	LSI	Solapur	MH	18.058343	75.114135	150+000	252+000	152+600 LHS Inner	1	44.0000	0.2853	0.1614	0.0950	0.0632	0.0462	0.0316	0.0284	33.1	38.9		39.5
	2-5-2023	09:16:38	IL&FS	LSI	Solapur	MH	18.058343	75.114135	150+000	252+000	152+600 LHS Inner	2	44.0000	0.2909	0.1538	0.0949	0.0581	0.0480	0.0309	0.0257	33.1	38.9		39.5
	2-5-2023	09:16:38	IL&FS	LSI	Solapur	MH	18.058343	75.114135	150+000	252+000	152+600 LHS Inner	3	44.3000	0.2679	0.1462	0.0952	0.0581	0.0481	0.0317	0.0276	33.1	38.9		39.5
1217	2-5-2023	09:18:27	IL&FS	LSI	Solapur	MH	18.056842	75.115867	150+000	252+000	152+850 LHS Inner	1	42.6000	0.2175	0.1583	0.1058	0.0695	0.0456	0.0339	0.0255	33.3	41.1		39.5
	2-5-2023	09:18:27	IL&FS	LSI	Solapur	MH	18.056842	75.115867	150+000	252+000	152+850 LHS Inner	2	42.5000	0.2019	0.1633	0.1066	0.0697	0.0439	0.0336	0.0252	33.3	41.1		39.5
	2-5-2023	09:18:27	IL&FS	LSI	Solapur	MH	18.056842	75.115867	150+000	252+000	152+850 LHS Inner	3	42.6000	0.2168	0.1562	0.1154	0.0727	0.0420	0.0335	0.0252	33.3	41.1		39.5
1218	2-5-2023	09:20:10	IL&FS	LSI	Solapur	MH	18.055299	75.117645	150+000	252+000	153+100 LHS Inner	1	42.4000	0.1931	0.1324	0.0808	0.0603	0.0439	0.0323	0.0256	33.9	40.8		39.5
	2-5-2023	09:20:10	IL&FS	LSI	Solapur	MH	18.055299	75.117645	150+000	252+000	153+100 LHS Inner	2	42.3000	0.2163	0.1325	0.0835	0.0612	0.0434	0.0295	0.0206	33.9	40.8		39.5
	2-5-2023	09:20:10	IL&FS	LSI	Solapur	MH	18.055299	75.117645	150+000	252+000	153+100 LHS Inner	3	42.9000	0.1999	0.1315	0.0801	0.0608	0.0437	0.0323	0.0265	33.9	40.8		39.5
1219	2-5-2023	09:21:57	IL&FS	LSI	Solapur	MH	18.053836	75.119377	150+000	252+000	153+350 LHS Inner	1	42.1000	0.2746	0.1602	0.0885	0.0585	0.0387	0.0243	0.0165	33.5	40.6		39.5
	2-5-2023	09:21:57	IL&FS	LSI	Solapur	MH	18.053836	75.119377	150+000	252+000	153+350 LHS Inner	2	42.3000	0.2623	0.1588	0.0871	0.0577	0.0377	0.0240	0.0162	33.5	40.6		39.5
	2-5-2023	09:21:57	IL&FS	LSI	Solapur	MH	18.053836	75.119377	150+000	252+000	153+350 LHS Inner	3	41.9000	0.2588	0.1598	0.0877	0.0595	0.0394	0.0238	0.0160	33.5	40.6		39.5
1220	2-5-2023	09:25:53	IL&FS	LSI	Solapur	MH	18.052387	75.121200	150+000	252+000	153+600 LHS Inner	1	42.9000	0.1764	0.1161	0.0763	0.0506	0.0358	0.0316	0.0284	33.5	40.9		39.5
	2-5-2023	09:25:53	IL&FS	LSI	Solapur	MH	18.052387	75.121200	150+000	252+000	153+600 LHS Inner	2	43.4000	0.1961	0.1205	0.0815	0.0512	0.0345	0.0317	0.0285	33.5	40.9		39.5
	2-5-2023	09:25:53	IL&FS	LSI	Solapur	MH	18.052387	75.121200	150+000	252+000	153+600 LHS Inner	3	43.4000	0.1803	0.1222	0.0753	0.0475	0.0382	0.0335	0.0302	33.5	40.9		39.5
1221	2-5-2023	09:27:52	IL&FS	LSI	Solapur	MH	18.051259	75.123184	150+000	252+000	153+850 LHS Inner	1	42.6000	0.1564	0.1280	0.1011	0.0823	0.0575	0.0397	0.0327	33.5	41.2		39.5
	2-5-2023	09:27:52	IL&FS	LSI	Solapur	MH	18.051259	75.123184	150+000	252+000	153+850 LHS Inner	2	42.9000	0.1645	0.1312	0.1016	0.0819	0.0584	0.0415	0.0327	33.5	41.2		39.5
	2-5-2023	09:27:52	IL&FS	LSI	Solapur	MH	18.051259	75.123184	150+000	252+000	153+850 LHS Inner	3	42.3000	0.1538	0.1269	0.0999	0.0824	0.0576	0.0395	0.0327	33.5	41.2		39.5
1222	2-5-2023	09:29:47	IL&FS	LSI	Solapur	MH	18.050565	75.125411	150+000	252+000	154+100 LHS Inner	1	43.6000	0.1888	0.1211	0.0743	0.0568	0.0388	0.0249	0.0224	33.7	40.5		39.5
	2-5-2023	09:29:47	IL&FS	LSI	Solapur	MH	18.050565	75.125411	150+000	252+000	154+100 LHS Inner	2	43.9000	0.1899	0.1131	0.0795	0.0521	0.0359	0.0256	0.0230	33.7	40.5		39.5
	2-5-2023	09:29:47	IL&FS	LSI	Solapur	MH	18.050565	75.125411	150+000	252+000	154+100 LHS Inner	3	43.8000	0.1835	0.1198	0.0737	0.0543	0.0375	0.0257	0.0231	33.7	40.5		39.5
1223	2-5-2023	09:31:38	IL&FS	LSI	Solapur	MH	18.049846	75.127708	150+000	252+000	154+350 LHS Inner	1	43.0000	0.1549	0.1088	0.0757	0.0532	0.0371	0.0240	0.0201	33.5	40.6		39.5
	2-5-2023	09:31:38	IL&FS	LSI	Solapur	MH	18.049846	75.127708	150+000	252+000	154+350 LHS Inner	2	43.1000	0.1504	0.1080	0.0740	0.0553	0.0365	0.0255	0.0201	33.5	40.6		39.5
	2-5-2023	09:31:38	IL&FS	LSI	Solapur	MH	18.049846	75.127708	150+000	252+000	154+350 LHS Inner	3	43.2000	0.1528	0.1154	0.0735	0.0549	0.0363	0.0236	0.0201	33.5	40.6		39.5
1224	2-5-2023	09:34:56	IL&FS	LSI	Solapur	MH	18.049137	75.129867	150+000	252+000	154+600 LHS Inner	1	43.2000	0.1976	0.1372	0.0919	0.0636	0.0478	0.0409	0.0368	33.9	40.2	T-31.5/42.5	42.5
	2-5-2023	09:34:56	IL&FS	LSI	Solapur	MH	18.049137	75.129867	150+000	252+000	154+600 LHS Inner	2	42.9000	0.1904	0.1354	0.0894	0.0582	0.0496	0.0409	0.0368	33.9	40.2	T-31.5/42.5	42.5
	2-5-2023	09:34:56	IL&FS	LSI	Solapur	MH	18.049137	75.129867	150+000	252+000	154+600 LHS Inner	3	43.5000	0.1960	0.1318	0.0911	0.0604	0.0462	0.0404	0.0364	33.9	40.2	T-31.5/42.5	42.5
1225	2-5-2023	09:36:56	IL&FS	LSI	Solapur	MH	18.048431	75.132080	150+000	252+000	154+850 LHS Inner	1	40.9000	0.3391	0.2023	0.1412	0.1008	0.0663	0.0434	0.0221	33.9	41.7		42.5
	2-5-2023	09:36:56	IL&FS	LSI	Solapur	MH	18.048431	75.132080	150+000	252+000	154+850 LHS Inner	2	43.1000	0.3580	0.2095	0.1509	0.1083	0.0707	0.0467	0.0250	33.9	41.7		42.5
	2-5-2023	09:36:56	IL&FS	LSI	Solapur	MH	18.048431	75.132080	150+000	252+000	154+850 LHS Inner	3	41.4000	0.3441	0.1988	0.1443	0.1056	0.0668	0.0402	0.0218	33.9	41.7		42.5
1226	2-5-2023	09:38:49	IL&FS	LSI	Solapur	MH	18.047681	75.134414	150+000	252+000	155+100 LHS Inner	1	40.9000	0.3432	0.2138	0.1331	0.0949	0.0691	0.0497	0.0363	33.8	36.5		42.5
	2-5-2023	09:38:49	IL&FS	LSI	Solapur	MH	18.047681	75.134414	150+000	252+000	155+100 LHS Inner	2	40.9000	0.3709	0.2146	0.1289	0.0916	0.0635	0.0445	0.0317	33.8	36.5		42.5
	2-5-2023	09:38:49	IL&FS	LSI	Solapur	MH	18.047681	75.134414	150+000	252+000	155+100 LHS Inner	3	41.0000	0.3767	0.2315	0.1331	0.0961	0.0710	0.0513	0.0376	33.8	36.5		42.5
1227	2-5-2023	09:40:42	IL&FS	LSI	Solapur	MH	18.046939	75.136589	150+000	252+000	155+350 LHS Inner	1	39.3000	0.5510	0.2626	0.1497	0.1119	0.0793	0.0544	0.0422	33.3	41.4		42.5
	2-5-2023	09:40:42	IL&FS	LSI	Solapur	MH	18.046939	75.136589	150+000	252+000	155+350 LHS Inner	2	39.4000	0.5262	0.2802	0.1554	0.1095	0.0785	0.0550	0.0425	33.3	41.4		42.5
	2-5-2023	09:40:42	IL&FS	LSI	Solapur	MH	18.046939	75.136589	150+000	252+000	155+350 LHS Inner	3	39.7000	0.5390	0.2909	0.1502	0.1150	0.0780	0.0541	0.0427	33.3	41.4		42.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1228	2-5-2023	09:42:49	IL&FS	LSI	Solapur	MH	18.046234	75.138801	150+000	252+000	155+600 LHS Inner	1	40.0000	0.4152	0.2540	0.1433	0.0899	0.0625	0.0448	0.0308	33.3	41.0		42.5
	2-5-2023	09:42:49	IL&FS	LSI	Solapur	MH	18.046234	75.138801	150+000	252+000	155+600 LHS Inner	2	39.9000	0.4178	0.2354	0.1408	0.0899	0.0643	0.0431	0.0292	33.3	41.0		42.5
	2-5-2023	09:42:49	IL&FS	LSI	Solapur	MH	18.046234	75.138801	150+000	252+000	155+600 LHS Inner	3	40.1000	0.4249	0.2599	0.1421	0.0951	0.0650	0.0446	0.0326	33.3	41.0		42.5
1229	2-5-2023	09:44:43	IL&FS	LSI	Solapur	MH	18.045545	75.141090	150+000	252+000	155+850 LHS Inner	1	42.1000	0.2878	0.1886	0.1097	0.0800	0.0612	0.0411	0.0291	33.2	41.7		42.5
	2-5-2023	09:44:43	IL&FS	LSI	Solapur	MH	18.045545	75.141090	150+000	252+000	155+850 LHS Inner	2	42.3000	0.3139	0.1681	0.1046	0.0775	0.0593	0.0395	0.0277	33.2	41.7		42.5
	2-5-2023	09:44:43	IL&FS	LSI	Solapur	MH	18.045545	75.141090	150+000	252+000	155+850 LHS Inner	3	42.8000	0.2930	0.1810	0.1099	0.0732	0.0615	0.0416	0.0296	33.2	41.7		42.5
1230	2-5-2023	09:46:43	IL&FS	LSI	Solapur	MH	18.044857	75.143409	150+000	252+000	156+100 LHS Inner	1	42.5000	0.2702	0.1732	0.1093	0.0752	0.0485	0.0366	0.0288	33.5	41.4		42.5
	2-5-2023	09:46:43	IL&FS	LSI	Solapur	MH	18.044857	75.143409	150+000	252+000	156+100 LHS Inner	2	42.7000	0.2679	0.1588	0.1119	0.0761	0.0496	0.0382	0.0297	33.5	41.4		42.5
	2-5-2023	09:46:43	IL&FS	LSI	Solapur	MH	18.044857	75.143409	150+000	252+000	156+100 LHS Inner	3	42.6000	0.2674	0.1637	0.1106	0.0765	0.0498	0.0380	0.0298	33.5	41.4		42.5
1231	2-5-2023	09:48:35	IL&FS	LSI	Solapur	MH	18.044191	75.145675	150+000	252+000	156+350 LHS Inner	1	41.6000	0.1614	0.1169	0.0695	0.0553	0.0452	0.0387	0.0288	33.6	42.5		42.5
	2-5-2023	09:48:35	IL&FS	LSI	Solapur	MH	18.044191	75.145675	150+000	252+000	156+350 LHS Inner	2	41.5000	0.1655	0.1124	0.0692	0.0574	0.0486	0.0406	0.0305	33.6	42.5		42.5
	2-5-2023	09:48:35	IL&FS	LSI	Solapur	MH	18.044191	75.145675	150+000	252+000	156+350 LHS Inner	3	41.7000	0.1720	0.1204	0.0728	0.0563	0.0460	0.0392	0.0293	33.6	42.5		42.5
1232	2-5-2023	09:50:26	IL&FS	LSI	Solapur	MH	18.043550	75.147895	150+000	252+000	156+600 LHS Inner	1	43.2000	0.1620	0.1214	0.0895	0.0687	0.0559	0.0353	0.0235	33.6	42.3		42.5
	2-5-2023	09:50:26	IL&FS	LSI	Solapur	MH	18.043550	75.147895	150+000	252+000	156+600 LHS Inner	2	43.2000	0.1658	0.1299	0.0920	0.0671	0.0529	0.0349	0.0233	33.6	42.3		42.5
	2-5-2023	09:50:26	IL&FS	LSI	Solapur	MH	18.043550	75.147895	150+000	252+000	156+600 LHS Inner	3	42.9000	0.1609	0.1253	0.0913	0.0661	0.0510	0.0317	0.0231	33.6	42.3		42.5
1233	2-5-2023	09:52:21	IL&FS	LSI	Solapur	MH	18.042882	75.150222	150+000	252+000	156+850 LHS Inner	1	41.6000	0.2738	0.1591	0.1027	0.0726	0.0481	0.0380	0.0342	33.5	43.2		42.5
	2-5-2023	09:52:21	IL&FS	LSI	Solapur	MH	18.042882	75.150222	150+000	252+000	156+850 LHS Inner	2	41.8000	0.2751	0.1517	0.1081	0.0758	0.0483	0.0396	0.0356	33.5	43.2		42.5
	2-5-2023	09:52:21	IL&FS	LSI	Solapur	MH	18.042882	75.150222	150+000	252+000	156+850 LHS Inner	3	41.9000	0.2758	0.1470	0.1057	0.0725	0.0484	0.0418	0.0376	33.5	43.2		42.5
1234	2-5-2023	09:54:16	IL&FS	LSI	Solapur	MH	18.042247	75.152389	150+000	252+000	157+100 LHS Inner	1	40.9000	0.3575	0.2219	0.1328	0.0936	0.0630	0.0425	0.0383	33.8	43.0		42.5
	2-5-2023	09:54:16	IL&FS	LSI	Solapur	MH	18.042247	75.152389	150+000	252+000	157+100 LHS Inner	2	41.3000	0.3430	0.2158	0.1339	0.0998	0.0669	0.0420	0.0378	33.8	43.0		42.5
	2-5-2023	09:54:16	IL&FS	LSI	Solapur	MH	18.042247	75.152389	150+000	252+000	157+100 LHS Inner	3	41.1000	0.3530	0.2173	0.1300	0.1027	0.0662	0.0415	0.0374	33.8	43.0		42.5
1235	2-5-2023	09:56:17	IL&FS	LSI	Solapur	MH	18.041591	75.154663	150+000	252+000	157+350 LHS Inner	1	43.2000	0.1631	0.1174	0.0919	0.0738	0.0529	0.0338	0.0200	33.8	43.1		42.5
	2-5-2023	09:56:17	IL&FS	LSI	Solapur	MH	18.041591	75.154663	150+000	252+000	157+350 LHS Inner	2	43.2000	0.1641	0.1281	0.0967	0.0773	0.0572	0.0361	0.0198	33.8	43.1		42.5
	2-5-2023	09:56:17	IL&FS	LSI	Solapur	MH	18.041591	75.154663	150+000	252+000	157+350 LHS Inner	3	44.0000	0.1685	0.1273	0.0970	0.0748	0.0596	0.0376	0.0204	33.8	43.1		42.5
1236	2-5-2023	09:58:14	IL&FS	LSI	Solapur	MH	18.040914	75.156883	150+000	252+000	157+600 LHS Inner	1	43.6000	0.2223	0.1509	0.1035	0.0667	0.0421	0.0318	0.0254	33.7	43.1		42.5
	2-5-2023	09:58:14	IL&FS	LSI	Solapur	MH	18.040914	75.156883	150+000	252+000	157+600 LHS Inner	2	43.6000	0.2123	0.1582	0.1024	0.0719	0.0483	0.0341	0.0253	33.7	43.1		42.5
	2-5-2023	09:58:14	IL&FS	LSI	Solapur	MH	18.040914	75.156883	150+000	252+000	157+600 LHS Inner	3	43.6000	0.2041	0.1611	0.1007	0.0662	0.0449	0.0346	0.0277	33.7	43.1		42.5
1237	2-5-2023	10:00:09	IL&FS	LSI	Solapur	MH	18.040235	75.159187	150+000	252+000	157+850 LHS Inner	1	41.2000	0.3489	0.2027	0.1320	0.0871	0.0514	0.0304	0.0168	33.7	42.9		42.5
	2-5-2023	10:00:09	IL&FS	LSI	Solapur	MH	18.040235	75.159187	150+000	252+000	157+850 LHS Inner	2	41.0000	0.3654	0.1976	0.1303	0.0872	0.0536	0.0319	0.0175	33.7	42.9		42.5
	2-5-2023	10:00:09	IL&FS	LSI	Solapur	MH	18.040235	75.159187	150+000	252+000	157+850 LHS Inner	3	41.4000	0.3460	0.1927	0.1306	0.0837	0.0515	0.0311	0.0176	33.7	42.9		42.5
1238	2-5-2023	10:02:10	IL&FS	LSI	Solapur	MH	18.039529	75.161590	150+000	252+000	158+100 LHS Inner	1	41.8000	0.3967	0.2283	0.1429	0.0951	0.0625	0.0419	0.0263	33.9	43.3		42.5
	2-5-2023	10:02:10	IL&FS	LSI	Solapur	MH	18.039529	75.161590	150+000	252+000	158+100 LHS Inner	2	40.7000	0.3762	0.2254	0.1383	0.0936	0.0612	0.0406	0.0244	33.9	43.3		42.5
	2-5-2023	10:02:10	IL&FS	LSI	Solapur	MH	18.039529	75.161590	150+000	252+000	158+100 LHS Inner	3	40.8000	0.3905	0.2445	0.1415	0.0928	0.0619	0.0415	0.0263	33.9	43.3		42.5
1239	2-5-2023	19:42:45	IL&FS	LSI	Solapur	MH	18.038768	75.164451	150+000	252+000	158+350 LHS Inner	1	40.6000	0.3279	0.1826	0.1045	0.0711	0.0525	0.0342	0.0215	33.2	37.1	t-30.8/42.3	42.3
	2-5-2023	19:42:45	IL&FS	LSI	Solapur	MH	18.038768	75.164451	150+000	252+000	158+350 LHS Inner	2	41.8000	0.3496	0.2078	0.1135	0.0752	0.0531	0.0350	0.0220	33.2	37.1	t-30.8/42.3	42.3
	2-5-2023	19:42:45	IL&FS	LSI	Solapur	MH	18.038768	75.164451	150+000	252+000	158+350 LHS Inner	3	42.2000	0.3369	0.2025	0.1106	0.0729	0.0536	0.0351	0.0229	33.2	37.1	t-30.8/42.3	42.3
1240	2-5-2023	19:45:00	IL&FS	LSI	Solapur	MH	18.038032	75.166664	150+000	252+000	158+600 LHS Inner	1	39.5000	0.3724	0.2058	0.0974	0.0652	0.0452	0.0308	0.0203	33.2	36.3		42.3
	2-5-2023	19:45:00	IL&FS	LSI	Solapur	MH	18.038032	75.166664	150+000	252+000	158+600 LHS Inner	2	39.9000	0.3755	0.2074	0.0977	0.0673	0.0460	0.0368	0.0309	33.2	36.3		42.3
	2-5-2023	19:45:00	IL&FS	LSI	Solapur	MH	18.038032	75.166664	150+000	252+000	158+600 LHS Inner	3	40.1000	0.3781	0.2104	0.0993	0.0688	0.0468	0.0312	0.0208	33.2	36.3		42.3
1241	2-5-2023	19:47:07	IL&FS	LSI	Solapur	MH	18.037343	75.168861	150+000	252+000	158+850 LHS Inner	1	40.1000	0.4474	0.2618	0.1469	0.0976	0.0665	0.0458	0.0349	33.1	36.5		42.3
	2-5-2023	19:47:07	IL&FS	LSI	Solapur	MH	18.037343	75.168861	150+000	252+000	158+850 LHS Inner	2	39.1000	0.4391	0.2666	0.1419	0.0970	0.0630	0.0436	0.0326	33.1	36.5		42.3
	2-5-2023	19:47:07	IL&FS	LSI	Solapur	MH	18.037343	75.168861	150+000	252+000	158+850 LHS Inner	3	39.5000	0.4302	0.2566	0.1404	0.0936	0.0617	0.0422	0.0316	33.1	36.5		42.3
1242	2-5-2023	19:49:15	IL&FS	LSI	Solapur	MH	18.037467	75.171333	150+000	252+000	159+100 LHS Inner	1	39.9000	0.5386	0.2865	0.1496	0.0925	0.0661	0.0442	0.0298	33.1	37.1		42.3
	2-5-2023	19:49:15	IL&FS	LSI	Solapur	MH	18.037467	75.171333	150+000	252+000	159+100 LHS Inner	2	40.0000	0.5193	0.3210	0.1450	0.0937	0.0705	0.0498	0.0229	33.1	37.1		42.3
	2-5-2023	19:49:15	IL&FS	LSI	Solapur	MH	18.037467	75.171333	150+000	252+000	159+100 LHS Inner	3	39.9000	0.5206	0.3114	0.1536	0.0999	0.0677	0.0464	0.0267	33.1	37.1		42.3
1243	2-5-2023	19:51:08	IL&FS	LSI	Solapur	MH	18.038215	75.173423	150+000	252+000	159+350 LHS Inner	1	39.2000	0.3686	0.2433	0.1555	0.0877	0.0562	0.0315	0.0249	33.2	37.5		42.3
	2-5-2023	19:51:08	IL&FS	LSI	Solapur	MH	18.038215	75.173423	150+000	252+000	159+350 LHS Inner	2	39.7000	0.3716	0.2481	0.1526	0.0934	0.0509	0.0339	0.0240	33.2	37.5		42.3
	2-5-2023	19:51:08	IL&FS	LSI	Solapur	MH	18.038215	75.173423	150+000	252+000	159+350 LHS Inner	3	39.6000	0.3618	0.2376	0.1518	0.0873	0.0556	0.0309	0.0258	33.2	37.5		42.3
1244	2-5-2023	19:53:03	IL&FS	LSI	Solapur	MH	18.039003	75.175636	150+000	252+000	159+600 LHS Inner	1	39.3000	0.3853	0.2497	0.1457	0.1007	0.0583	0.0436	0.0247	33.5	37.1		42.3
	2-5-2023	19:53:03	IL&FS	LSI	Solapur	MH	18.039003	75.175636	150+000	252+000	159+600 LHS Inner	2	39.4000	0.3916	0.2470	0.1559	0.0983	0.0637	0.0420	0.0229	33.5	37.1		42.3
	2-5-2023	19:53:03	IL&FS	LSI	Solapur	MH	18.039003	75.175636	150+000	252+000	159+600 LHS Inner	3	38.7000	0.3814	0.2454	0.1447	0.1031	0.0643	0.0407	0.0237	33.5	37.1		42.3
1245	2-5-2023	19:55:05	IL&FS	LSI	Solapur	MH	18.039827	75.177940	150+000	252+000	159+850 LHS Inner	1	38.7000	0.3638	0.2157	0.1334	0.0707	0.0431	0.0319	0.0257	33.3	36.8		42.3
	2-5-2023	19:55:05	IL&FS	LSI	Solapur	MH	18.039827	75.177940	150+000	252+000	159+850 LHS Inner	2	39.1000	0.3493	0.2149	0.1268	0.0655	0.0445	0.0313	0.0242	33.3	36.8		42.3
	2-5-2023	19:55:05	IL&FS	LSI	Solapur	MH	18.039827	75.177940	150+000	252+000	159+850 LHS Inner	3	38.8000	0.3474	0.2129	0.1293	0.0657	0.0419	0.0329	0.0236	33.3	36.8		42.3
1246	2-5-2023	19:57:32	IL&FS	LSI	Solapur	MH	18.040426	75.180465	150+000	252+000	160+150 LHS Inner	1	39.6000	0.3386	0.2087	0.1206	0.0789	0.0597	0.0450	0.0305	33.0	36.7		42.3
	2-5-2023	19:57:32	IL&FS	LSI	Solapur	MH	18.040426	75.180465	150+000	252+000	160+150 LHS Inner	2	39.4000	0.3407	0.2038	0.1250	0.0816	0.0594	0.0436	0.0194	33.0	36.7		42.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	19:57:32	IL&FS	LSI	Solapur	MH	18.040426	75.180465	150+000	252+000	160+150 LHS Inner	3	40.8000	0.3515	0.2152	0.1267	0.0799	0.0615	0.0474	0.0327	33.0	36.7		42.3
1247	2-5-2023	19:59:35	IL&FS	LSI	Solapur	MH	18.040576	75.181922	150+000	252+000	160+350 LHS Inner	1	41.5000	0.3923	0.2430	0.1352	0.0825	0.0620	0.0403	0.0310	33.2	36.9		42.3
	2-5-2023	19:59:35	IL&FS	LSI	Solapur	MH	18.040576	75.181922	150+000	252+000	160+350 LHS Inner	2	40.7000	0.3961	0.2393	0.1347	0.0748	0.0619	0.0393	0.0299	33.2	36.9		42.3
	2-5-2023	19:59:35	IL&FS	LSI	Solapur	MH	18.040576	75.181922	150+000	252+000	160+350 LHS Inner	3	41.4000	0.3880	0.2350	0.1287	0.0830	0.0618	0.0346	0.0302	33.2	36.9		42.3
1248	2-5-2023	20:01:53	IL&FS	LSI	Solapur	MH	18.040513	75.184310	150+000	252+000	160+600 LHS Inner	1	39.4000	0.3903	0.2225	0.1104	0.0596	0.0456	0.0328	0.0291	33.4	38.4		42.3
	2-5-2023	20:01:53	IL&FS	LSI	Solapur	MH	18.040513	75.184310	150+000	252+000	160+600 LHS Inner	2	40.0000	0.3885	0.2279	0.1101	0.0645	0.0443	0.0352	0.0290	33.4	38.4		42.3
	2-5-2023	20:01:53	IL&FS	LSI	Solapur	MH	18.040513	75.184310	150+000	252+000	160+600 LHS Inner	3	40.2000	0.3744	0.2091	0.1136	0.0642	0.0448	0.0387	0.0305	33.4	38.4		42.3
1249	2-5-2023	20:03:48	IL&FS	LSI	Solapur	MH	18.040292	75.186698	150+000	252+000	160+850 LHS Inner	1	41.2000	0.3549	0.2187	0.1190	0.0688	0.0463	0.0355	0.0309	33.6	36.3		42.3
	2-5-2023	20:03:48	IL&FS	LSI	Solapur	MH	18.040292	75.186698	150+000	252+000	160+850 LHS Inner	2	41.6000	0.3600	0.2276	0.1194	0.0714	0.0464	0.0380	0.0307	33.6	36.3		42.3
	2-5-2023	20:03:48	IL&FS	LSI	Solapur	MH	18.040292	75.186698	150+000	252+000	160+850 LHS Inner	3	41.9000	0.3552	0.2217	0.1243	0.0709	0.0491	0.0371	0.0326	33.6	36.3		42.3
1250	2-5-2023	20:05:48	IL&FS	LSI	Solapur	MH	18.039758	75.189262	150+000	252+000	161+130 LHS Inner	1	39.6000	0.3591	0.2392	0.1267	0.0662	0.0424	0.0348	0.0313	33.0	36.1		42.3
	2-5-2023	20:05:48	IL&FS	LSI	Solapur	MH	18.039758	75.189262	150+000	252+000	161+130 LHS Inner	2	39.8000	0.3513	0.2143	0.1301	0.0661	0.0413	0.0334	0.0300	33.0	36.1		42.3
	2-5-2023	20:05:48	IL&FS	LSI	Solapur	MH	18.039758	75.189262	150+000	252+000	161+130 LHS Inner	3	39.9000	0.3624	0.2263	0.1271	0.0642	0.0413	0.0350	0.0315	33.0	36.1		42.3
1251	2-5-2023	20:07:36	IL&FS	LSI	Solapur	MH	18.039215	75.191322	150+000	252+000	161+350 LHS Inner	1	39.5000	0.4818	0.2980	0.1710	0.0853	0.0607	0.0438	0.0294	32.9	36.5		42.3
	2-5-2023	20:07:36	IL&FS	LSI	Solapur	MH	18.039215	75.191322	150+000	252+000	161+350 LHS Inner	2	39.7000	0.4623	0.2892	0.1584	0.0815	0.0633	0.0436	0.0292	32.9	36.5		42.3
	2-5-2023	20:07:36	IL&FS	LSI	Solapur	MH	18.039215	75.191322	150+000	252+000	161+350 LHS Inner	3	39.5000	0.4626	0.2970	0.1597	0.0798	0.0634	0.0447	0.0302	32.9	36.5		42.3
1252	2-5-2023	20:09:26	IL&FS	LSI	Solapur	MH	18.038616	75.193656	150+000	252+000	161+600 LHS Inner	1	40.1000	0.4066	0.2415	0.1475	0.0749	0.0497	0.0344	0.0292	33.0	36.7		42.3
	2-5-2023	20:09:26	IL&FS	LSI	Solapur	MH	18.038616	75.193656	150+000	252+000	161+600 LHS Inner	2	40.0000	0.4019	0.2437	0.1393	0.0743	0.0528	0.0376	0.0251	33.0	36.7		42.3
	2-5-2023	20:09:26	IL&FS	LSI	Solapur	MH	18.038616	75.193656	150+000	252+000	161+600 LHS Inner	3	40.2000	0.3909	0.2431	0.1404	0.0715	0.0452	0.0381	0.0376	33.0	36.7		42.3
1253	2-5-2023	20:11:19	IL&FS	LSI	Solapur	MH	18.037940	75.195854	150+000	252+000	161+850 LHS Inner	1	39.5000	0.4347	0.2740	0.1536	0.0816	0.0556	0.0389	0.0285	33.3	36.9		42.3
	2-5-2023	20:11:19	IL&FS	LSI	Solapur	MH	18.037940	75.195854	150+000	252+000	161+850 LHS Inner	2	39.9000	0.4133	0.2693	0.1496	0.0924	0.0605	0.0400	0.0327	33.3	36.9		42.3
	2-5-2023	20:11:19	IL&FS	LSI	Solapur	MH	18.037940	75.195854	150+000	252+000	161+850 LHS Inner	3	39.5000	0.4265	0.2615	0.1522	0.0883	0.0588	0.0396	0.0326	33.3	36.9		42.3
1254	2-5-2023	20:13:26	IL&FS	LSI	Solapur	MH	18.037239	75.198204	150+000	252+000	162+100 LHS Inner	1	41.5000	0.4300	0.2401	0.1258	0.0710	0.0563	0.0447	0.0343	33.7	36.0		42.3
	2-5-2023	20:13:26	IL&FS	LSI	Solapur	MH	18.037239	75.198204	150+000	252+000	162+100 LHS Inner	2	40.9000	0.4228	0.2478	0.1311	0.0746	0.0547	0.0441	0.0383	33.7	36.0		42.3
	2-5-2023	20:13:26	IL&FS	LSI	Solapur	MH	18.037239	75.198204	150+000	252+000	162+100 LHS Inner	3	41.3000	0.4271	0.2491	0.1323	0.0710	0.0559	0.0445	0.0369	33.7	36.0		42.3
1255	2-5-2023	20:19:42	IL&FS	LSI	Solapur	MH	18.032838	75.207443	150+000	252+000	163+255 LHS Inner	1	41.6000	0.3020	0.1817	0.1020	0.0563	0.0400	0.0310	0.0226	33.5	37.5	T-33.1/41.9	41.9
	2-5-2023	20:19:42	IL&FS	LSI	Solapur	MH	18.032838	75.207443	150+000	252+000	163+255 LHS Inner	2	41.4000	0.2919	0.1754	0.0980	0.0567	0.0389	0.0324	0.0236	33.5	37.5	T-33.1/41.9	41.9
	2-5-2023	20:19:42	IL&FS	LSI	Solapur	MH	18.032838	75.207443	150+000	252+000	163+255 LHS Inner	3	41.8000	0.2889	0.1818	0.0951	0.0534	0.0410	0.0331	0.0222	33.5	37.5	T-33.1/41.9	41.9
1256	2-5-2023	20:23:00	IL&FS	LSI	Solapur	MH	18.029767	75.209159	150+000	252+000	163+650 LHS Inner	1	41.5000	0.2882	0.1780	0.1039	0.0619	0.0470	0.0354	0.0265	33.8	37.5		41.9
	2-5-2023	20:23:00	IL&FS	LSI	Solapur	MH	18.029767	75.209159	150+000	252+000	163+650 LHS Inner	2	41.4000	0.2834	0.1742	0.1007	0.0654	0.0493	0.0356	0.0266	33.8	37.5		41.9
	2-5-2023	20:23:00	IL&FS	LSI	Solapur	MH	18.029767	75.209159	150+000	252+000	163+650 LHS Inner	3	41.2000	0.2774	0.1724	0.1078	0.0597	0.0526	0.0347	0.0258	33.8	37.5		41.9
1257	2-5-2023	20:24:57	IL&FS	LSI	Solapur	MH	18.028125	75.210052	150+000	252+000	163+850 LHS Inner	1	41.1000	0.3255	0.2013	0.1189	0.0731	0.0543	0.0409	0.0250	34.0	37.5		41.9
	2-5-2023	20:24:57	IL&FS	LSI	Solapur	MH	18.028125	75.210052	150+000	252+000	163+850 LHS Inner	2	40.8000	0.3235	0.1867	0.1202	0.0785	0.0556	0.0383	0.0258	34.0	37.5		41.9
	2-5-2023	20:24:57	IL&FS	LSI	Solapur	MH	18.028125	75.210052	150+000	252+000	163+850 LHS Inner	3	40.6000	0.3249	0.1861	0.1262	0.0736	0.0552	0.0423	0.0239	34.0	37.5		41.9
1258	2-5-2023	20:26:52	IL&FS	LSI	Solapur	MH	18.026100	75.211051	150+000	252+000	164+100 LHS Inner	1	40.2000	0.2758	0.1780	0.1035	0.0649	0.0473	0.0318	0.0247	34.0	37.6		41.9
	2-5-2023	20:26:52	IL&FS	LSI	Solapur	MH	18.026100	75.211051	150+000	252+000	164+100 LHS Inner	2	40.2000	0.2683	0.1630	0.1039	0.0626	0.0473	0.0327	0.0264	34.0	37.6		41.9
	2-5-2023	20:26:52	IL&FS	LSI	Solapur	MH	18.026100	75.211051	150+000	252+000	164+100 LHS Inner	3	40.0000	0.2791	0.1679	0.1078	0.0613	0.0471	0.0301	0.0238	34.0	37.6		41.9
1259	2-5-2023	20:28:44	IL&FS	LSI	Solapur	MH	18.023996	75.212005	150+000	252+000	164+350 LHS Inner	1	40.1000	0.2821	0.1799	0.0991	0.0673	0.0472	0.0324	0.0286	34.3	37.5		41.9
	2-5-2023	20:28:44	IL&FS	LSI	Solapur	MH	18.023996	75.212005	150+000	252+000	164+350 LHS Inner	2	40.7000	0.2837	0.1811	0.1104	0.0728	0.0443	0.0317	0.0311	34.3	37.5		41.9
	2-5-2023	20:28:44	IL&FS	LSI	Solapur	MH	18.023996	75.212005	150+000	252+000	164+350 LHS Inner	3	40.4000	0.2772	0.1788	0.1107	0.0702	0.0445	0.0350	0.0290	34.3	37.5		41.9
1260	2-5-2023	20:30:29	IL&FS	LSI	Solapur	MH	18.022016	75.212936	150+000	252+000	164+600 LHS Inner	1	40.0000	0.3810	0.2432	0.1496	0.0954	0.0558	0.0420	0.0330	34.3	37.4		41.9
	2-5-2023	20:30:29	IL&FS	LSI	Solapur	MH	18.022016	75.212936	150+000	252+000	164+600 LHS Inner	2	40.4000	0.3938	0.2484	0.1534	0.1003	0.0588	0.0430	0.0322	34.3	37.4		41.9
	2-5-2023	20:30:29	IL&FS	LSI	Solapur	MH	18.022016	75.212936	150+000	252+000	164+600 LHS Inner	3	40.6000	0.3857	0.2524	0.1514	0.0929	0.0558	0.0417	0.0328	34.3	37.4		41.9
1261	2-5-2023	20:32:56	IL&FS	LSI	Solapur	MH	18.019842	75.213905	150+000	252+000	164+850 LHS Inner	1	39.2000	0.4284	0.2495	0.1537	0.0956	0.0442	0.0296	0.0203	34.2	37.4		41.9
	2-5-2023	20:32:56	IL&FS	LSI	Solapur	MH	18.019842	75.213905	150+000	252+000	164+850 LHS Inner	2	38.9000	0.4295	0.2615	0.1529	0.0941	0.0429	0.0294	0.0202	34.2	37.4		41.9
	2-5-2023	20:32:56	IL&FS	LSI	Solapur	MH	18.019842	75.213905	150+000	252+000	164+850 LHS Inner	3	39.3000	0.4252	0.2577	0.1496	0.0953	0.0487	0.0316	0.0210	34.2	37.4		41.9
1262	2-5-2023	20:35:24	IL&FS	LSI	Solapur	MH	18.017772	75.215621	150+000	252+000	165+150 LHS Inner	1	39.0000	0.3729	0.2278	0.1339	0.0703	0.0438	0.0391	0.0325	34.3	36.6		41.9
	2-5-2023	20:35:24	IL&FS	LSI	Solapur	MH	18.017772	75.215621	150+000	252+000	165+150 LHS Inner	2	39.4000	0.3595	0.2089	0.1287	0.0748	0.0444	0.0394	0.0328	34.3	36.6		41.9
	2-5-2023	20:35:24	IL&FS	LSI	Solapur	MH	18.017772	75.215621	150+000	252+000	165+150 LHS Inner	3	39.6000	0.3526	0.2059	0.1350	0.0705	0.0453	0.0426	0.0356	34.3	36.6		41.9
1263	2-5-2023	20:37:13	IL&FS	LSI	Solapur	MH	18.016975	75.217445	150+000	252+000	165+350 LHS Inner	1	40.7000	0.2632	0.1786	0.1002	0.0580	0.0249	0.0168	0.0113	34.1	37.1		41.9
	2-5-2023	20:37:13	IL&FS	LSI	Solapur	MH	18.016975	75.217445	150+000	252+000	165+350 LHS Inner	2	41.2000	0.2772	0.1776	0.0960	0.0543	0.0248	0.0167	0.0113	34.1	37.1		41.9
	2-5-2023	20:37:13	IL&FS	LSI	Solapur	MH	18.016975	75.217445	150+000	252+000	165+350 LHS Inner	3	41.0000	0.2624	0.1625	0.0940	0.0530	0.0245	0.0164	0.0111	34.1	37.1		41.9
1264	2-5-2023	20:39:21	IL&FS	LSI	Solapur	MH	18.016050	75.219528	150+000	252+000	165+600 LHS Inner	1	40.6000	0.3094	0.1903	0.1055	0.0630	0.0341	0.0277	0.0227	34.3	37.3		41.9
	2-5-2023	20:39:21	IL&FS	LSI	Solapur	MH	18.016050	75.219528	150+000	252+000	165+600 LHS Inner	2	40.8000	0.3115	0.1787	0.1062	0.0645	0.0346	0.0272	0.0217	34.3	37.3		41.9
	2-5-2023	20:39:21	IL&FS	LSI	Solapur	MH	18.016050	75.219528	150+000	252+000	165+600 LHS Inner	3	40.8000	0.3365	0.1883	0.0951	0.0586	0.0340	0.0274	0.0223	34.3	37.3		41.9
1265	2-5-2023	20:41:08	IL&FS	LSI	Solapur	MH	18.015130	75.221641	150+000	252+000	165+850 LHS Inner	1	42.9000	0.1711	0.1229	0.0835	0.0600	0.0367	0.0241	0.0161	34.3	37.7		41.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	20:41:08	IL&FS	LSI	Solapur	MH	18.015130	75.221641	150+000	252+000	165+850 LHS Inner	2	41.8000	0.1620	0.1090	0.0789	0.0550	0.0357	0.0233	0.0147	34.3	37.7		41.9
	2-5-2023	20:41:08	IL&FS	LSI	Solapur	MH	18.015130	75.221641	150+000	252+000	165+850 LHS Inner	3	42.9000	0.1555	0.1123	0.0827	0.0532	0.0375	0.0248	0.0150	34.3	37.7		41.9
1266	2-5-2023	20:42:54	IL&FS	LSI	Solapur	MH	18.014192	75.223747	150+000	252+000	166+100 LHS Inner	1	39.9000	0.3041	0.2159	0.1545	0.1096	0.0686	0.0366	0.0239	34.3	37.6		41.9
	2-5-2023	20:42:54	IL&FS	LSI	Solapur	MH	18.014192	75.223747	150+000	252+000	166+100 LHS Inner	2	40.1000	0.3218	0.2117	0.1489	0.1077	0.0641	0.0373	0.0246	34.3	37.6		41.9
	2-5-2023	20:42:54	IL&FS	LSI	Solapur	MH	18.014192	75.223747	150+000	252+000	166+100 LHS Inner	3	40.0000	0.2831	0.2056	0.1443	0.1044	0.0641	0.0357	0.0231	34.3	37.6		41.9
1267	2-5-2023	20:44:47	IL&FS	LSI	Solapur	MH	18.013294	75.225975	150+000	252+000	166+350 LHS Inner	1	41.1000	0.2331	0.1620	0.1004	0.0636	0.0373	0.0191	0.0100	34.3	37.6		41.9
	2-5-2023	20:44:47	IL&FS	LSI	Solapur	MH	18.013294	75.225975	150+000	252+000	166+350 LHS Inner	2	41.4000	0.2317	0.1598	0.0987	0.0634	0.0390	0.0193	0.0102	34.3	37.6		41.9
	2-5-2023	20:44:47	IL&FS	LSI	Solapur	MH	18.013294	75.225975	150+000	252+000	166+350 LHS Inner	3	41.6000	0.2352	0.1632	0.0998	0.0628	0.0393	0.0193	0.0102	34.3	37.6		41.9
1268	2-5-2023	20:46:38	IL&FS	LSI	Solapur	MH	18.012586	75.228324	150+000	252+000	166+600 LHS Inner	1	41.7000	0.2126	0.1304	0.0884	0.0650	0.0474	0.0352	0.0287	34.1	36.9		41.9
	2-5-2023	20:46:38	IL&FS	LSI	Solapur	MH	18.012586	75.228324	150+000	252+000	166+600 LHS Inner	2	41.6000	0.2158	0.1212	0.0885	0.0643	0.0484	0.0356	0.0290	34.1	36.9		41.9
	2-5-2023	20:46:38	IL&FS	LSI	Solapur	MH	18.012586	75.228324	150+000	252+000	166+600 LHS Inner	3	41.6000	0.2155	0.1272	0.0901	0.0641	0.0453	0.0342	0.0277	34.1	36.9		41.9
1269	2-5-2023	20:48:39	IL&FS	LSI	Solapur	MH	18.012174	75.230728	150+000	252+000	166+860 LHS Inner	1	41.4000	0.2956	0.1875	0.1176	0.0714	0.0525	0.0456	0.0350	33.6	36.3		41.9
	2-5-2023	20:48:39	IL&FS	LSI	Solapur	MH	18.012174	75.230728	150+000	252+000	166+860 LHS Inner	2	41.3000	0.2892	0.1965	0.1166	0.0724	0.0546	0.0487	0.0378	33.6	36.3		41.9
	2-5-2023	20:48:39	IL&FS	LSI	Solapur	MH	18.012174	75.230728	150+000	252+000	166+860 LHS Inner	3	41.4000	0.2965	0.1859	0.1179	0.0714	0.0539	0.0484	0.0376	33.6	36.3		41.9
1270	2-5-2023	20:50:42	IL&FS	LSI	Solapur	MH	18.011821	75.233123	150+000	252+000	167+120 LHS Inner	1	38.8000	0.4021	0.2289	0.1308	0.0862	0.0547	0.0386	0.0276	33.3	35.4		41.9
	2-5-2023	20:50:42	IL&FS	LSI	Solapur	MH	18.011821	75.233123	150+000	252+000	167+120 LHS Inner	2	39.0000	0.4155	0.2378	0.1376	0.0876	0.0560	0.0400	0.0279	33.3	35.4		41.9
	2-5-2023	20:50:42	IL&FS	LSI	Solapur	MH	18.011821	75.233123	150+000	252+000	167+120 LHS Inner	3	39.2000	0.3971	0.2240	0.1426	0.0908	0.0566	0.0413	0.0309	33.3	35.4		41.9
1271	2-5-2023	20:52:36	IL&FS	LSI	Solapur	MH	18.011312	75.235221	150+000	252+000	167+350 LHS Inner	1	38.8000	0.4655	0.2555	0.1453	0.0800	0.0631	0.0461	0.0414	32.7	36.1		41.9
	2-5-2023	20:52:36	IL&FS	LSI	Solapur	MH	18.011312	75.235221	150+000	252+000	167+350 LHS Inner	2	38.9000	0.4699	0.2760	0.1498	0.0840	0.0627	0.0451	0.0370	32.7	36.1		41.9
	2-5-2023	20:52:36	IL&FS	LSI	Solapur	MH	18.011312	75.235221	150+000	252+000	167+350 LHS Inner	3	39.0000	0.4429	0.2643	0.1419	0.0808	0.0600	0.0461	0.0405	32.7	36.1		41.9
1272	2-5-2023	20:54:54	IL&FS	LSI	Solapur	MH	18.009214	75.237442	150+000	252+000	167+700 LHS Inner	1	38.1000	0.4590	0.2642	0.1458	0.0965	0.0708	0.0493	0.0370	33.0	35.7		41.9
	2-5-2023	20:54:54	IL&FS	LSI	Solapur	MH	18.009214	75.237442	150+000	252+000	167+700 LHS Inner	2	38.4000	0.4439	0.2564	0.1444	0.1016	0.0775	0.0494	0.0325	33.0	35.7		41.9
	2-5-2023	20:54:54	IL&FS	LSI	Solapur	MH	18.009214	75.237442	150+000	252+000	167+700 LHS Inner	3	38.4000	0.4439	0.2697	0.1367	0.0905	0.0723	0.0486	0.0317	33.0	35.7		41.9
1273	2-5-2023	20:56:40	IL&FS	LSI	Solapur	MH	18.008384	75.238723	150+000	252+000	167+860 LHS Inner	1	39.1000	0.4359	0.2727	0.1522	0.0998	0.0743	0.0563	0.0423	32.8	36.3		41.9
	2-5-2023	20:56:40	IL&FS	LSI	Solapur	MH	18.008384	75.238723	150+000	252+000	167+860 LHS Inner	2	39.3000	0.4264	0.2622	0.1594	0.1005	0.0756	0.0570	0.0419	32.8	36.3		41.9
	2-5-2023	20:56:40	IL&FS	LSI	Solapur	MH	18.008384	75.238723	150+000	252+000	167+860 LHS Inner	3	40.6000	0.4459	0.2653	0.1651	0.0987	0.0769	0.0613	0.0424	32.8	36.3		41.9
1274	2-5-2023	20:58:47	IL&FS	LSI	Solapur	MH	18.007732	75.241043	150+000	252+000	168+100 LHS Inner	1	37.6000	0.5263	0.3208	0.1757	0.1206	0.0930	0.0737	0.0619	32.9	36.5		41.9
	2-5-2023	20:58:47	IL&FS	LSI	Solapur	MH	18.007732	75.241043	150+000	252+000	168+100 LHS Inner	2	37.9000	0.5139	0.3017	0.1814	0.1208	0.0881	0.0718	0.0644	32.9	36.5		41.9
	2-5-2023	20:58:47	IL&FS	LSI	Solapur	MH	18.007732	75.241043	150+000	252+000	168+100 LHS Inner	3	38.0000	0.4750	0.3010	0.1664	0.1207	0.0950	0.0713	0.0615	32.9	36.5		41.9
1275	2-5-2023	21:00:35	IL&FS	LSI	Solapur	MH	18.007188	75.243331	150+000	252+000	168+360 LHS Inner	1	36.2000	0.1688	0.0936	0.0558	0.0316	0.0219	0.0158	0.0142	33.0	36.8		41.9
	2-5-2023	21:00:35	IL&FS	LSI	Solapur	MH	18.007188	75.243331	150+000	252+000	168+360 LHS Inner	2	36.3000	0.1487	0.0961	0.0581	0.0323	0.0227	0.0161	0.0145	33.0	36.8		41.9
	2-5-2023	21:00:35	IL&FS	LSI	Solapur	MH	18.007188	75.243331	150+000	252+000	168+360 LHS Inner	3	36.1000	0.1572	0.0927	0.0550	0.0307	0.0223	0.0163	0.0147	33.0	36.8		41.9
1276	2-5-2023	21:04:10	IL&FS	LSI	Solapur	MH	18.006669	75.245613	150+000	252+000	168+600 LHS Inner	1	44.8000	0.1455	0.0943	0.0588	0.0439	0.0341	0.0277	0.0249	33.4	37.1	T-28.8/42.2	42.2
	2-5-2023	21:04:10	IL&FS	LSI	Solapur	MH	18.006669	75.245613	150+000	252+000	168+600 LHS Inner	2	43.4000	0.1408	0.0899	0.0543	0.0425	0.0348	0.0283	0.0255	33.4	37.1	T-28.8/42.2	42.2
	2-5-2023	21:04:10	IL&FS	LSI	Solapur	MH	18.006669	75.245613	150+000	252+000	168+600 LHS Inner	3	42.8000	0.1293	0.0895	0.0607	0.0444	0.0326	0.0265	0.0239	33.4	37.1	T-28.8/42.2	42.2
1277	2-5-2023	21:06:28	IL&FS	LSI	Solapur	MH	18.006040	75.247856	150+000	252+000	168+850 LHS Inner	1	41.9000	0.2960	0.1899	0.1208	0.0750	0.0554	0.0357	0.0203	33.7	37.2		42.2
	2-5-2023	21:06:28	IL&FS	LSI	Solapur	MH	18.006040	75.247856	150+000	252+000	168+850 LHS Inner	2	40.2000	0.2982	0.1811	0.1153	0.0647	0.0488	0.0328	0.0185	33.7	37.2		42.2
	2-5-2023	21:06:28	IL&FS	LSI	Solapur	MH	18.006040	75.247856	150+000	252+000	168+850 LHS Inner	3	40.7000	0.3005	0.1848	0.1209	0.0684	0.0520	0.0355	0.0188	33.7	37.2		42.2
1278	2-5-2023	21:08:24	IL&FS	LSI	Solapur	MH	18.005523	75.250152	150+000	252+000	169+100 LHS Inner	1	39.9000	0.2900	0.2172	0.1498	0.0960	0.0666	0.0440	0.0296	33.6	36.9		42.2
	2-5-2023	21:08:24	IL&FS	LSI	Solapur	MH	18.005523	75.250152	150+000	252+000	169+100 LHS Inner	2	41.4000	0.3009	0.2097	0.1456	0.1011	0.0752	0.0487	0.0338	33.6	36.9		42.2
	2-5-2023	21:08:24	IL&FS	LSI	Solapur	MH	18.005523	75.250152	150+000	252+000	169+100 LHS Inner	3	41.4000	0.3009	0.2143	0.1369	0.0974	0.0771	0.0498	0.0348	33.6	36.9		42.2
1279	2-5-2023	21:10:19	IL&FS	LSI	Solapur	MH	18.005052	75.252449	150+000	252+000	169+350 LHS Inner	1	41.9000	0.1848	0.1281	0.1003	0.0648	0.0425	0.0311	0.0280	33.6	36.9		42.2
	2-5-2023	21:10:19	IL&FS	LSI	Solapur	MH	18.005052	75.252449	150+000	252+000	169+350 LHS Inner	2	42.3000	0.1785	0.1279	0.0971	0.0673	0.0452	0.0341	0.0307	33.6	36.9		42.2
	2-5-2023	21:10:19	IL&FS	LSI	Solapur	MH	18.005052	75.252449	150+000	252+000	169+350 LHS Inner	3	42.2000	0.1762	0.1274	0.0958	0.0633	0.0427	0.0321	0.0289	33.6	36.9		42.2
1280	2-5-2023	21:12:14	IL&FS	LSI	Solapur	MH	18.004518	75.254730	150+000	252+000	169+600 LHS Inner	1	41.7000	0.2324	0.1493	0.0951	0.0706	0.0433	0.0229	0.0106	33.9	36.4		42.2
	2-5-2023	21:12:14	IL&FS	LSI	Solapur	MH	18.004518	75.254730	150+000	252+000	169+600 LHS Inner	2	41.3000	0.2395	0.1377	0.0973	0.0690	0.0422	0.0217	0.0105	33.9	36.4		42.2
	2-5-2023	21:12:14	IL&FS	LSI	Solapur	MH	18.004518	75.254730	150+000	252+000	169+600 LHS Inner	3	42.1000	0.2390	0.1494	0.0943	0.0720	0.0383	0.0173	0.0155	33.9	36.4		42.2
1281	2-5-2023	21:14:19	IL&FS	LSI	Solapur	MH	18.003993	75.257080	150+000	252+000	169+850 LHS Inner	1	41.7000	0.3729	0.2243	0.1463	0.1059	0.0540	0.0356	0.0281	34.0	36.2		42.2
	2-5-2023	21:14:19	IL&FS	LSI	Solapur	MH	18.003993	75.257080	150+000	252+000	169+850 LHS Inner	2	41.7000	0.3893	0.2307	0.1491	0.0997	0.0524	0.0322	0.0253	34.0	36.2		42.2
	2-5-2023	21:14:19	IL&FS	LSI	Solapur	MH	18.003993	75.257080	150+000	252+000	169+850 LHS Inner	3	41.8000	0.3920	0.2384	0.1483	0.1045	0.0523	0.0340	0.0277	34.0	36.2		42.2
1282	2-5-2023	21:16:22	IL&FS	LSI	Solapur	MH	18.003492	75.259315	150+000	252+000	170+100 LHS Inner	1	41.2000	0.2332	0.1439	0.0999	0.0708	0.0516	0.0387	0.0287	33.6	36.6		42.2
	2-5-2023	21:16:22	IL&FS	LSI	Solapur	MH	18.003492	75.259315	150+000	252+000	170+100 LHS Inner	2	42.2000	0.2378	0.1541	0.0985	0.0692	0.0503	0.0354	0.0252	33.6	36.6		42.2
	2-5-2023	21:16:22	IL&FS	LSI	Solapur	MH	18.003492	75.259315	150+000	252+000	170+100 LHS Inner	3	41.0000	0.2279	0.1361	0.0969	0.0689	0.0501	0.0369	0.0266	33.6	36.6		42.2
1283	2-5-2023	21:18:12	IL&FS	LSI	Solapur	MH	18.002893	75.261856	150+000	252+000	170+350 LHS Inner	1	39.1000	0.4600	0.2570	0.1534	0.0815	0.0571	0.0359	0.0223	33.8	36.8		42.2
	2-5-2023	21:18:12	IL&FS	LSI	Solapur	MH	18.002893	75.261856	150+000	252+000	170+350 LHS Inner	2	39.0000	0.4507	0.2658	0.1517	0.0791	0.0576	0.0365	0.0229	33.8	36.8		42.2
	2-5-2023	21:18:12	IL&FS	LSI	Solapur	MH	18.002893	75.261856	150+000	252+000	170+350 LHS Inner	3	39.6000	0.4650	0.2607	0.1511	0.0827	0.0581	0.0362	0.0226	33.8	36.8		42.2

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1284	2-5-2023	21:20:26	IL&FS	LSI	Solapur	MH	18.002647	75.264038	150+000	252+000	170+600 LHS Inner	1	39.5000	0.4590	0.2765	0.1852	0.1212	0.0724	0.0422	0.0269	33.9	36.8		42.2
	2-5-2023	21:20:26	IL&FS	LSI	Solapur	MH	18.002647	75.264038	150+000	252+000	170+600 LHS Inner	2	38.4000	0.4601	0.2866	0.1920	0.1209	0.0728	0.0415	0.0263	33.9	36.8		42.2
	2-5-2023	21:20:26	IL&FS	LSI	Solapur	MH	18.002647	75.264038	150+000	252+000	170+600 LHS Inner	3	38.2000	0.4516	0.2626	0.1830	0.1214	0.0773	0.0427	0.0274	33.9	36.8		42.2
1285	2-5-2023	21:22:34	IL&FS	LSI	Solapur	MH	18.002288	75.266403	150+000	252+000	170+850 LHS Inner	1	42.1000	0.3101	0.1955	0.1186	0.0768	0.0372	0.0299	0.0133	34.1	37.1		42.2
	2-5-2023	21:22:34	IL&FS	LSI	Solapur	MH	18.002288	75.266403	150+000	252+000	170+850 LHS Inner	2	40.8000	0.3005	0.1776	0.1189	0.0741	0.0396	0.0265	0.0126	34.1	37.1		42.2
	2-5-2023	21:22:34	IL&FS	LSI	Solapur	MH	18.002288	75.266403	150+000	252+000	170+850 LHS Inner	3	40.4000	0.2976	0.1935	0.1134	0.0736	0.0361	0.0279	0.0125	34.1	37.1		42.2
1286	2-5-2023	21:24:35	IL&FS	LSI	Solapur	MH	18.001396	75.268539	150+000	252+000	171+100 LHS Inner	1	40.5000	0.3450	0.2229	0.1269	0.0790	0.0535	0.0374	0.0224	33.8	36.3		42.2
	2-5-2023	21:24:35	IL&FS	LSI	Solapur	MH	18.001396	75.268539	150+000	252+000	171+100 LHS Inner	2	39.7000	0.3084	0.2070	0.1249	0.0823	0.0570	0.0377	0.0226	33.8	36.3		42.2
	2-5-2023	21:24:35	IL&FS	LSI	Solapur	MH	18.001396	75.268539	150+000	252+000	171+100 LHS Inner	3	41.1000	0.3119	0.2037	0.1280	0.0770	0.0550	0.0386	0.0223	33.8	36.3		42.2
1287	2-5-2023	21:26:32	IL&FS	LSI	Solapur	MH	18.000205	75.270614	150+000	252+000	171+350 LHS Inner	1	40.4000	0.4103	0.2230	0.1295	0.0804	0.0525	0.0395	0.0328	33.8	36.5		42.2
	2-5-2023	21:26:32	IL&FS	LSI	Solapur	MH	18.000205	75.270614	150+000	252+000	171+350 LHS Inner	2	39.6000	0.4029	0.2289	0.1234	0.0811	0.0534	0.0386	0.0301	33.8	36.5		42.2
	2-5-2023	21:26:32	IL&FS	LSI	Solapur	MH	18.000205	75.270614	150+000	252+000	171+350 LHS Inner	3	39.7000	0.4033	0.2133	0.1175	0.0774	0.0516	0.0380	0.0296	33.8	36.5		42.2
1288	2-5-2023	21:28:30	IL&FS	LSI	Solapur	MH	17.999114	75.272598	150+000	252+000	171+600 LHS Inner	1	40.5000	0.1773	0.1244	0.0982	0.0681	0.0453	0.0281	0.0187	33.7	36.6		42.2
	2-5-2023	21:28:30	IL&FS	LSI	Solapur	MH	17.999114	75.272598	150+000	252+000	171+600 LHS Inner	2	42.4000	0.1921	0.1294	0.0972	0.0670	0.0452	0.0284	0.0192	33.7	36.6		42.2
	2-5-2023	21:28:30	IL&FS	LSI	Solapur	MH	17.999114	75.272598	150+000	252+000	171+600 LHS Inner	3	40.8000	0.1819	0.1263	0.0906	0.0677	0.0409	0.0232	0.0186	33.7	36.6		42.2
1289	2-5-2023	21:31:28	IL&FS	LSI	Solapur	MH	17.998023	75.274612	150+000	252+000	171+850 LHS Inner	1	42.2000	0.2551	0.1702	0.1067	0.0681	0.0401	0.0300	0.0230	33.7	36.3		42.2
	2-5-2023	21:31:28	IL&FS	LSI	Solapur	MH	17.998023	75.274612	150+000	252+000	171+850 LHS Inner	2	42.3000	0.2565	0.1825	0.1113	0.0696	0.0385	0.0297	0.0231	33.7	36.3		42.2
	2-5-2023	21:31:28	IL&FS	LSI	Solapur	MH	17.998023	75.274612	150+000	252+000	171+850 LHS Inner	3	41.4000	0.2411	0.1640	0.1103	0.0677	0.0402	0.0303	0.0230	33.7	36.3		42.2
1290	2-5-2023	21:33:53	IL&FS	LSI	Solapur	MH	17.996831	75.276718	150+000	252+000	172+100 LHS Inner	1	42.0000	0.2540	0.1720	0.1068	0.0673	0.0442	0.0282	0.0204	34.0	36.4		42.2
	2-5-2023	21:33:53	IL&FS	LSI	Solapur	MH	17.996831	75.276718	150+000	252+000	172+100 LHS Inner	2	42.3000	0.2761	0.1747	0.1138	0.0647	0.0439	0.0290	0.0211	34.0	36.4		42.2
	2-5-2023	21:33:53	IL&FS	LSI	Solapur	MH	17.996831	75.276718	150+000	252+000	172+100 LHS Inner	3	42.1000	0.2692	0.1674	0.1013	0.0664	0.0434	0.0290	0.0211	34.0	36.4		42.2
1291	2-5-2023	21:35:48	IL&FS	LSI	Solapur	MH	17.995767	75.278671	150+000	252+000	172+350 LHS Inner	1	42.4000	0.2893	0.1936	0.0997	0.0662	0.0420	0.0302	0.0211	33.4	36.2		42.2
	2-5-2023	21:35:48	IL&FS	LSI	Solapur	MH	17.995767	75.278671	150+000	252+000	172+350 LHS Inner	2	41.0000	0.2864	0.1882	0.1027	0.0671	0.0400	0.0280	0.0193	33.4	36.2		42.2
	2-5-2023	21:35:48	IL&FS	LSI	Solapur	MH	17.995767	75.278671	150+000	252+000	172+350 LHS Inner	3	40.9000	0.2976	0.1906	0.0903	0.0604	0.0398	0.0280	0.0188	33.4	36.2		42.2
1292	2-5-2023	21:37:46	IL&FS	LSI	Solapur	MH	17.994623	75.280754	150+000	252+000	172+600 LHS Inner	1	42.7000	0.2369	0.1511	0.0954	0.0685	0.0481	0.0371	0.0285	33.8	35.9		42.2
	2-5-2023	21:37:46	IL&FS	LSI	Solapur	MH	17.994623	75.280754	150+000	252+000	172+600 LHS Inner	2	42.0000	0.2318	0.1421	0.0935	0.0674	0.0473	0.0354	0.0277	33.8	35.9		42.2
	2-5-2023	21:37:46	IL&FS	LSI	Solapur	MH	17.994623	75.280754	150+000	252+000	172+600 LHS Inner	3	42.4000	0.2362	0.1543	0.0967	0.0673	0.0468	0.0353	0.0272	33.8	35.9		42.2
1293	2-5-2023	21:41:34	IL&FS	LSI	Solapur	MH	17.993492	75.282691	150+000	252+000	172+850 LHS Inner	1	41.9000	0.2201	0.1275	0.0879	0.0643	0.0463	0.0396	0.0346	34.8	36.9	T-28.7/41.3	41.3
	2-5-2023	21:41:34	IL&FS	LSI	Solapur	MH	17.993492	75.282691	150+000	252+000	172+850 LHS Inner	2	42.1000	0.2207	0.1350	0.0897	0.0692	0.0559	0.0441	0.0357	34.8	36.9	T-28.7/41.3	41.3
	2-5-2023	21:41:34	IL&FS	LSI	Solapur	MH	17.993492	75.282691	150+000	252+000	172+850 LHS Inner	3	42.2000	0.2215	0.1255	0.0928	0.0701	0.0553	0.0431	0.0346	34.8	36.9	T-28.7/41.3	41.3
1294	2-5-2023	21:43:50	IL&FS	LSI	Solapur	MH	17.992408	75.284774	150+000	252+000	173+100 LHS Inner	1	39.4000	0.3288	0.2109	0.1238	0.0931	0.0617	0.0391	0.0214	34.9	36.1		41.3
	2-5-2023	21:43:50	IL&FS	LSI	Solapur	MH	17.992408	75.284774	150+000	252+000	173+100 LHS Inner	2	39.6000	0.3135	0.2037	0.1312	0.0945	0.0646	0.0433	0.0216	34.9	36.1		41.3
	2-5-2023	21:43:50	IL&FS	LSI	Solapur	MH	17.992408	75.284774	150+000	252+000	173+100 LHS Inner	3	39.7000	0.3230	0.2188	0.1300	0.0975	0.0608	0.0383	0.0220	34.9	36.1		41.3
1295	2-5-2023	21:45:44	IL&FS	LSI	Solapur	MH	17.991075	75.287155	150+000	252+000	173+390 LHS Inner	1	40.3000	0.3641	0.2358	0.1212	0.0837	0.0649	0.0504	0.0359	34.5	36.1		41.3
	2-5-2023	21:45:44	IL&FS	LSI	Solapur	MH	17.991075	75.287155	150+000	252+000	173+390 LHS Inner	2	40.4000	0.3599	0.2185	0.1159	0.0875	0.0652	0.0513	0.0311	34.5	36.1		41.3
	2-5-2023	21:45:44	IL&FS	LSI	Solapur	MH	17.991075	75.287155	150+000	252+000	173+390 LHS Inner	3	40.6000	0.3674	0.2102	0.1160	0.0781	0.0615	0.0495	0.0353	34.5	36.1		41.3
1296	2-5-2023	21:52:22	IL&FS	LSI	Solapur	MH	17.990051	75.289009	150+000	252+000	173+610 LHS Inner	1	42.8000	0.3279	0.2144	0.1427	0.1048	0.0802	0.0540	0.0359	34.6	36.6		41.3
	2-5-2023	21:52:22	IL&FS	LSI	Solapur	MH	17.990051	75.289009	150+000	252+000	173+610 LHS Inner	2	40.4000	0.2958	0.2023	0.1305	0.1012	0.0785	0.0535	0.0339	34.6	36.6		41.3
	2-5-2023	21:52:22	IL&FS	LSI	Solapur	MH	17.990051	75.289009	150+000	252+000	173+610 LHS Inner	3	40.8000	0.3310	0.2048	0.1447	0.1046	0.0783	0.0518	0.0336	34.6	36.6		41.3
1297	2-5-2023	22:09:13	IL&FS	LSI	Solapur	MH	17.989019	75.290963	150+000	252+000	173+850 LHS Inner	1	40.2000	0.2299	0.1532	0.1117	0.0824	0.0639	0.0434	0.0291	32.2	34.8		41.3
	2-5-2023	22:09:13	IL&FS	LSI	Solapur	MH	17.989019	75.290963	150+000	252+000	173+850 LHS Inner	2	40.4000	0.2344	0.1583	0.1105	0.0856	0.0686	0.0455	0.0285	32.2	34.8		41.3
	2-5-2023	22:09:13	IL&FS	LSI	Solapur	MH	17.989019	75.290963	150+000	252+000	173+850 LHS Inner	3	40.2000	0.2109	0.1589	0.1019	0.0808	0.0677	0.0441	0.0283	32.2	34.8		41.3
1298	2-5-2023	22:11:58	IL&FS	LSI	Solapur	MH	17.987012	75.293952	150+000	252+000	174+240 LHS Inner	1	40.2000	0.4129	0.2739	0.1642	0.0859	0.0549	0.0432	0.0341	32.9	35.4		41.3
	2-5-2023	22:11:58	IL&FS	LSI	Solapur	MH	17.987012	75.293952	150+000	252+000	174+240 LHS Inner	2	39.3000	0.4334	0.2689	0.1537	0.0830	0.0496	0.0366	0.0275	32.9	35.4		41.3
	2-5-2023	22:11:58	IL&FS	LSI	Solapur	MH	17.987012	75.293952	150+000	252+000	174+240 LHS Inner	3	39.5000	0.4550	0.2726	0.1577	0.0853	0.0526	0.0403	0.0319	32.9	35.4		41.3
1299	2-5-2023	22:14:17	IL&FS	LSI	Solapur	MH	17.986392	75.294776	150+000	252+000	174+350 LHS Inner	1	38.1000	0.4661	0.2485	0.1577	0.1032	0.0689	0.0478	0.0314	32.5	35.0		41.3
	2-5-2023	22:14:17	IL&FS	LSI	Solapur	MH	17.986392	75.294776	150+000	252+000	174+350 LHS Inner	2	39.9000	0.4651	0.2518	0.1655	0.1146	0.0771	0.0512	0.0319	32.5	35.0		41.3
	2-5-2023	22:14:17	IL&FS	LSI	Solapur	MH	17.986392	75.294776	150+000	252+000	174+350 LHS Inner	3	40.1000	0.4393	0.2496	0.1612	0.1077	0.0731	0.0492	0.0309	32.5	35.0		41.3
1300	2-5-2023	22:16:16	IL&FS	LSI	Solapur	MH	17.985361	75.296768	150+000	252+000	174+600 LHS Inner	1	43.3000	0.1254	0.0832	0.0634	0.0509	0.0401	0.0333	0.0280	33.0	35.7		41.3
	2-5-2023	22:16:16	IL&FS	LSI	Solapur	MH	17.985361	75.296768	150+000	252+000	174+600 LHS Inner	2	42.7000	0.1140	0.0810	0.0640	0.0513	0.0395	0.0332	0.0285	33.0	35.7		41.3
	2-5-2023	22:16:16	IL&FS	LSI	Solapur	MH	17.985361	75.296768	150+000	252+000	174+600 LHS Inner	3	41.6000	0.1106	0.0806	0.0634	0.0477	0.0383	0.0321	0.0272	33.0	35.7		41.3
1301	2-5-2023	22:18:05	IL&FS	LSI	Solapur	MH	17.984292	75.298919	150+000	252+000	174+850 LHS Inner	1	41.5000	0.1766	0.1252	0.0907	0.0636	0.0466	0.0355	0.0272	33.4	36.4		41.3
	2-5-2023	22:18:05	IL&FS	LSI	Solapur	MH	17.984292	75.298919	150+000	252+000	174+850 LHS Inner	2	41.4000	0.1682	0.1264	0.0831	0.0637	0.0500	0.0355	0.0256	33.4	36.4		41.3
	2-5-2023	22:18:05	IL&FS	LSI	Solapur	MH	17.984292	75.298919	150+000	252+000	174+850 LHS Inner	3	41.7000	0.1709	0.1339	0.0810	0.0593	0.0432	0.0327	0.0261	33.4	36.4		41.3
1302	2-5-2023	22:19:54	IL&FS	LSI	Solapur	MH	17.983144	75.300872	150+000	252+000	175+100 LHS Inner	1	40.7000	0.2873	0.1804	0.1055	0.0844	0.0590	0.0429	0.0286	33.7	36.0		41.3
	2-5-2023	22:19:54	IL&FS	LSI	Solapur	MH	17.983144	75.300872	150+000	252+000	175+100 LHS Inner	2	41.0000	0.2704	0.1660	0.1144	0.0874	0.0618	0.0418	0.0276	33.7	36.0		41.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	2-5-2023	22:19:54	IL&FS	LSI	Solapur	MH	17.983144	75.300872	150+000	252+000	175+100 LHS Inner	3	41.3000	0.2799	0.1715	0.1137	0.0887	0.0617	0.0436	0.0292	33.7	36.0		41.3
1303	2-5-2023	22:21:51	IL&FS	LSI	Solapur	MH	17.981756	75.302650	150+000	252+000	175+350 LHS Inner	1	41.3000	0.1511	0.1068	0.0768	0.0556	0.0403	0.0297	0.0267	34.0	36.2		41.3
	2-5-2023	22:21:51	IL&FS	LSI	Solapur	MH	17.981756	75.302650	150+000	252+000	175+350 LHS Inner	2	40.6000	0.1391	0.1039	0.0735	0.0521	0.0373	0.0273	0.0246	34.0	36.2		41.3
	2-5-2023	22:21:51	IL&FS	LSI	Solapur	MH	17.981756	75.302650	150+000	252+000	175+350 LHS Inner	3	41.2000	0.1491	0.1106	0.0740	0.0495	0.0376	0.0290	0.0261	34.0	36.2		41.3
1304	2-5-2023	22:23:41	IL&FS	LSI	Solapur	MH	17.980268	75.304412	150+000	252+000	175+600 LHS Inner	1	40.8000	0.2687	0.1545	0.0916	0.0604	0.0453	0.0348	0.0313	34.1	36.2		41.3
	2-5-2023	22:23:41	IL&FS	LSI	Solapur	MH	17.980268	75.304412	150+000	252+000	175+600 LHS Inner	2	40.5000	0.2745	0.1635	0.0976	0.0611	0.0447	0.0332	0.0298	34.1	36.2		41.3
	2-5-2023	22:23:41	IL&FS	LSI	Solapur	MH	17.980268	75.304412	150+000	252+000	175+600 LHS Inner	3	42.1000	0.2701	0.1583	0.1046	0.0648	0.0482	0.0361	0.0325	34.1	36.2		41.3
1305	2-5-2023	22:27:13	IL&FS	LSI	Solapur	MH	17.978727	75.306159	150+000	252+000	175+850 LHS Inner	1	41.1000	0.1999	0.1515	0.1085	0.0743	0.0491	0.0356	0.0267	34.0	36.6	T-29.5/38.9	38.9
	2-5-2023	22:27:13	IL&FS	LSI	Solapur	MH	17.978727	75.306159	150+000	252+000	175+850 LHS Inner	2	41.3000	0.1952	0.1490	0.1116	0.0751	0.0486	0.0366	0.0257	34.0	36.6	T-29.5/38.9	38.9
	2-5-2023	22:27:13	IL&FS	LSI	Solapur	MH	17.978727	75.306159	150+000	252+000	175+850 LHS Inner	3	41.6000	0.2157	0.1590	0.1151	0.0738	0.0462	0.0369	0.0271	34.0	36.6	T-29.5/38.9	38.9
1306	2-5-2023	22:29:14	IL&FS	LSI	Solapur	MH	17.977203	75.307823	150+000	252+000	176+100 LHS Inner	1	40.3000	0.4404	0.2629	0.1684	0.1106	0.0762	0.0543	0.0395	34.0	36.1		38.9
	2-5-2023	22:29:14	IL&FS	LSI	Solapur	MH	17.977203	75.307823	150+000	252+000	176+100 LHS Inner	2	40.2000	0.4528	0.2599	0.1703	0.1114	0.0782	0.0576	0.0425	34.0	36.1		38.9
	2-5-2023	22:29:14	IL&FS	LSI	Solapur	MH	17.977203	75.307823	150+000	252+000	176+100 LHS Inner	3	39.3000	0.4578	0.2591	0.1635	0.1025	0.0722	0.0539	0.0397	34.0	36.1		38.9
1307	2-5-2023	22:31:11	IL&FS	LSI	Solapur	MH	17.975685	75.309532	150+000	252+000	176+350 LHS Inner	1	40.3000	0.1739	0.1400	0.1079	0.0841	0.0669	0.0550	0.0411	34.2	35.9		38.9
	2-5-2023	22:31:11	IL&FS	LSI	Solapur	MH	17.975685	75.309532	150+000	252+000	176+350 LHS Inner	2	41.0000	0.1871	0.1362	0.1087	0.0903	0.0682	0.0538	0.0429	34.2	35.9		38.9
	2-5-2023	22:31:11	IL&FS	LSI	Solapur	MH	17.975685	75.309532	150+000	252+000	176+350 LHS Inner	3	42.4000	0.1940	0.1394	0.1074	0.0844	0.0674	0.0564	0.0430	34.2	35.9		38.9
1308	2-5-2023	22:33:01	IL&FS	LSI	Solapur	MH	17.974149	75.311271	150+000	252+000	176+600 LHS Inner	1	39.8000	0.2802	0.1808	0.1185	0.0793	0.0559	0.0379	0.0309	34.5	36.1		38.9
	2-5-2023	22:33:01	IL&FS	LSI	Solapur	MH	17.974149	75.311271	150+000	252+000	176+600 LHS Inner	2	38.7000	0.2864	0.1828	0.1099	0.0784	0.0512	0.0357	0.0275	34.5	36.1		38.9
	2-5-2023	22:33:01	IL&FS	LSI	Solapur	MH	17.974149	75.311271	150+000	252+000	176+600 LHS Inner	3	39.4000	0.2862	0.1733	0.1115	0.0764	0.0532	0.0362	0.0279	34.5	36.1		38.9
1309	2-5-2023	22:34:48	IL&FS	LSI	Solapur	MH	17.972600	75.312995	150+000	252+000	176+850 LHS Inner	1	39.4000	0.4719	0.2667	0.1659	0.1137	0.0726	0.0450	0.0385	34.4	36.3		38.9
	2-5-2023	22:34:48	IL&FS	LSI	Solapur	MH	17.972600	75.312995	150+000	252+000	176+850 LHS Inner	2	39.8000	0.4380	0.2639	0.1636	0.1090	0.0780	0.0459	0.0393	34.4	36.3		38.9
	2-5-2023	22:34:48	IL&FS	LSI	Solapur	MH	17.972600	75.312995	150+000	252+000	176+850 LHS Inner	3	39.6000	0.4248	0.2745	0.1614	0.1197	0.0734	0.0469	0.0402	34.4	36.3		38.9
1310	2-5-2023	22:36:54	IL&FS	LSI	Solapur	MH	17.971014	75.314659	150+000	252+000	177+100 LHS Inner	1	40.2000	0.4405	0.2602	0.1469	0.1070	0.0806	0.0462	0.0324	34.9	36.6		38.9
	2-5-2023	22:36:54	IL&FS	LSI	Solapur	MH	17.971014	75.314659	150+000	252+000	177+100 LHS Inner	2	40.3000	0.4523	0.2666	0.1582	0.1106	0.0811	0.0517	0.0315	34.9	36.6		38.9
	2-5-2023	22:36:54	IL&FS	LSI	Solapur	MH	17.971014	75.314659	150+000	252+000	177+100 LHS Inner	3	39.3000	0.4046	0.2514	0.1531	0.1064	0.0754	0.0526	0.0325	34.9	36.6		38.9
1311	2-5-2023	22:38:56	IL&FS	LSI	Solapur	MH	17.969419	75.316444	150+000	252+000	177+350 LHS Inner	1	40.2000	0.4289	0.2556	0.1506	0.0985	0.0599	0.0429	0.0386	35.0	36.2		38.9
	2-5-2023	22:38:56	IL&FS	LSI	Solapur	MH	17.969419	75.316444	150+000	252+000	177+350 LHS Inner	2	39.9000	0.4227	0.2726	0.1503	0.0977	0.0651	0.0431	0.0388	35.0	36.2		38.9
	2-5-2023	22:38:56	IL&FS	LSI	Solapur	MH	17.969419	75.316444	150+000	252+000	177+350 LHS Inner	3	39.0000	0.3946	0.2427	0.1454	0.0924	0.0576	0.0398	0.0358	35.0	36.2		38.9
1312	2-5-2023	22:40:47	IL&FS	LSI	Solapur	MH	17.967905	75.318237	150+000	252+000	177+600 LHS Inner	1	41.5000	0.4358	0.2783	0.1515	0.0976	0.0707	0.0520	0.0368	35.1	36.3		38.9
	2-5-2023	22:40:47	IL&FS	LSI	Solapur	MH	17.967905	75.318237	150+000	252+000	177+600 LHS Inner	2	40.7000	0.4082	0.2599	0.1531	0.0958	0.0716	0.0535	0.0382	35.1	36.3		38.9
	2-5-2023	22:40:47	IL&FS	LSI	Solapur	MH	17.967905	75.318237	150+000	252+000	177+600 LHS Inner	3	40.9000	0.4160	0.2705	0.1531	0.0961	0.0718	0.0534	0.0380	35.1	36.3		38.9
1313	2-5-2023	22:42:35	IL&FS	LSI	Solapur	MH	17.966497	75.320159	150+000	252+000	177+850 LHS Inner	1	40.4000	0.3159	0.2158	0.1219	0.0781	0.0491	0.0366	0.0272	35.0	36.3		38.9
	2-5-2023	22:42:35	IL&FS	LSI	Solapur	MH	17.966497	75.320159	150+000	252+000	177+850 LHS Inner	2	39.4000	0.3090	0.2039	0.1138	0.0748	0.0481	0.0351	0.0264	35.0	36.3		38.9
	2-5-2023	22:42:35	IL&FS	LSI	Solapur	MH	17.966497	75.320159	150+000	252+000	177+850 LHS Inner	3	39.7000	0.3039	0.1968	0.1190	0.0810	0.0540	0.0382	0.0263	35.0	36.3		38.9
1314	2-5-2023	22:44:29	IL&FS	LSI	Solapur	MH	17.965120	75.321884	150+000	252+000	178+100 LHS Inner	1	39.9000	0.3061	0.2120	0.1336	0.0999	0.0517	0.0385	0.0346	35.0	36.1		38.9
	2-5-2023	22:44:29	IL&FS	LSI	Solapur	MH	17.965120	75.321884	150+000	252+000	178+100 LHS Inner	2	39.4000	0.2911	0.1993	0.1309	0.0926	0.0543	0.0393	0.0353	35.0	36.1		38.9
	2-5-2023	22:44:29	IL&FS	LSI	Solapur	MH	17.965120	75.321884	150+000	252+000	178+100 LHS Inner	3	40.0000	0.3134	0.2101	0.1327	0.0960	0.0551	0.0400	0.0360	35.0	36.1		38.9
1315	2-5-2023	22:46:25	IL&FS	LSI	Solapur	MH	17.963697	75.323699	150+000	252+000	178+350 LHS Inner	1	40.2000	0.1983	0.1342	0.0918	0.0619	0.0522	0.0424	0.0381	35.2	36.5		38.9
	2-5-2023	22:46:25	IL&FS	LSI	Solapur	MH	17.963697	75.323699	150+000	252+000	178+350 LHS Inner	2	40.1000	0.2240	0.1263	0.0869	0.0643	0.0484	0.0423	0.0345	35.2	36.5		38.9
	2-5-2023	22:46:25	IL&FS	LSI	Solapur	MH	17.963697	75.323699	150+000	252+000	178+350 LHS Inner	3	41.0000	0.2110	0.1276	0.0889	0.0670	0.0596	0.0447	0.0375	35.2	36.5		38.9
1316	2-5-2023	22:48:24	IL&FS	LSI	Solapur	MH	17.962148	75.325439	150+000	252+000	178+600 LHS Inner	1	39.3000	0.3821	0.2153	0.1086	0.0726	0.0454	0.0354	0.0283	35.4	36.1		38.9
	2-5-2023	22:48:24	IL&FS	LSI	Solapur	MH	17.962148	75.325439	150+000	252+000	178+600 LHS Inner	2	39.6000	0.3764	0.1938	0.1075	0.0706	0.0431	0.0333	0.0265	35.4	36.1		38.9
	2-5-2023	22:48:24	IL&FS	LSI	Solapur	MH	17.962148	75.325439	150+000	252+000	178+600 LHS Inner	3	39.2000	0.3598	0.2103	0.1087	0.0735	0.0464	0.0358	0.0290	35.4	36.1		38.9
1317	2-5-2023	22:50:14	IL&FS	LSI	Solapur	MH	17.960536	75.327133	150+000	252+000	178+850 LHS Inner	1	40.3000	0.4693	0.2697	0.1399	0.0917	0.0637	0.0441	0.0288	35.4	35.9		38.9
	2-5-2023	22:50:14	IL&FS	LSI	Solapur	MH	17.960536	75.327133	150+000	252+000	178+850 LHS Inner	2	40.3000	0.4779	0.2687	0.1436	0.0940	0.0632	0.0439	0.0298	35.4	35.9		38.9
	2-5-2023	22:50:14	IL&FS	LSI	Solapur	MH	17.960536	75.327133	150+000	252+000	178+850 LHS Inner	3	40.3000	0.4518	0.2541	0.1416	0.0984	0.0664	0.0443	0.0307	35.4	35.9		38.9
1318	2-5-2023	22:52:58	IL&FS	LSI	Solapur	MH	17.959131	75.328948	150+000	252+000	179+100 LHS Inner	1	42.2000	0.2873	0.2080	0.1358	0.0874	0.0573	0.0486	0.0387	35.0	35.8		38.9
	2-5-2023	22:52:58	IL&FS	LSI	Solapur	MH	17.959131	75.328948	150+000	252+000	179+100 LHS Inner	2	40.4000	0.2960	0.1856	0.1311	0.0828	0.0547	0.0470	0.0373	35.0	35.8		38.9
	2-5-2023	22:52:58	IL&FS	LSI	Solapur	MH	17.959131	75.328948	150+000	252+000	179+100 LHS Inner	3	42.1000	0.2827	0.2133	0.1324	0.0874	0.0564	0.0481	0.0383	35.0	35.8		38.9
1319	2-5-2023	22:55:28	IL&FS	LSI	Solapur	MH	17.958086	75.330413	150+000	252+000	179+300 LHS Inner	1	42.9000	0.0681	0.0587	0.0513	0.0418	0.0359	0.0335	0.0317	34.8	35.6	CC-Interior	38.9
	2-5-2023	22:55:28	IL&FS	LSI	Solapur	MH	17.958086	75.330413	150+000	252+000	179+300 LHS Inner	2	42.2000	0.0704	0.0602	0.0497	0.0422	0.0363	0.0339	0.0320	34.8	35.6	CC-Interior	38.9
	2-5-2023	22:55:28	IL&FS	LSI	Solapur	MH	17.958086	75.330413	150+000	252+000	179+300 LHS Inner	3	41.9000	0.0731	0.0612	0.0508	0.0413	0.0351	0.0327	0.0310	34.8	35.6	CC-Interior	38.9
1320	3-5-2023	00:18:05	IL&FS	LSI	Solapur	MH	17.955341	75.334579	150+000	252+000	179+850 LHS Inner	1	37.8000	0.5630	0.3521	0.2082	0.0995	0.0684	0.0499	0.0357	31.4	33.1	T-29.5/39.5	39.5
	3-5-2023	00:18:05	IL&FS	LSI	Solapur	MH	17.955341	75.334579	150+000	252+000	179+850 LHS Inner	2	38.0000	0.5410	0.3530	0.2047	0.1000	0.0688	0.0485	0.0355	31.4	33.1	T-29.5/39.5	39.5
	3-5-2023	00:18:05	IL&FS	LSI	Solapur	MH	17.955341	75.334579	150+000	252+000	179+850 LHS Inner	3	37.9000	0.5491	0.3751	0.2094	0.0998	0.0686	0.0479	0.0345	31.4	33.1	T-29.5/39.5	39.5
1321	3-5-2023	00:20:58	IL&FS	LSI	Solapur	MH	17.953775	75.336914	150+000	252+000	180+100 LHS Inner	1	39.7000	0.3794	0.2640	0.1585	0.0962	0.0540	0.0354	0.0274	31.7	33.2		39.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	00:20:58	IL&FS	LSI	Solapur	MH	17.953775	75.336914	150+000	252+000	180+100 LHS Inner	2	39.4000	0.3640	0.2441	0.1572	0.0959	0.0546	0.0378	0.0295	31.7	33.2		39.5
	3-5-2023	00:20:58	IL&FS	LSI	Solapur	MH	17.953775	75.336914	150+000	252+000	180+100 LHS Inner	3	39.3000	0.3754	0.2511	0.1593	0.0949	0.0526	0.0357	0.0276	31.7	33.2		39.5
1322	3-5-2023	00:23:21	IL&FS	LSI	Solapur	MH	17.952598	75.338668	150+000	252+000	180+350 LHS Inner	1	40.7000	0.1987	0.1252	0.0790	0.0498	0.0362	0.0261	0.0184	31.7	33.5		39.5
	3-5-2023	00:23:21	IL&FS	LSI	Solapur	MH	17.952598	75.338668	150+000	252+000	180+350 LHS Inner	2	41.0000	0.2033	0.1312	0.0805	0.0527	0.0365	0.0254	0.0179	31.7	33.5		39.5
	3-5-2023	00:23:21	IL&FS	LSI	Solapur	MH	17.952598	75.338668	150+000	252+000	180+350 LHS Inner	3	42.3000	0.2155	0.1365	0.0834	0.0529	0.0382	0.0269	0.0192	31.7	33.5		39.5
1323	3-5-2023	00:25:42	IL&FS	LSI	Solapur	MH	17.951280	75.340621	150+000	252+000	180+600 LHS Inner	1	41.2000	0.2741	0.1491	0.0936	0.0657	0.0442	0.0329	0.0250	31.6	33.5		39.5
	3-5-2023	00:25:42	IL&FS	LSI	Solapur	MH	17.951280	75.340621	150+000	252+000	180+600 LHS Inner	2	39.9000	0.2706	0.1560	0.0909	0.0627	0.0410	0.0299	0.0222	31.6	33.5		39.5
	3-5-2023	00:25:42	IL&FS	LSI	Solapur	MH	17.951280	75.340621	150+000	252+000	180+600 LHS Inner	3	41.3000	0.2824	0.1590	0.0898	0.0626	0.0447	0.0341	0.0261	31.6	33.5		39.5
1324	3-5-2023	00:27:45	IL&FS	LSI	Solapur	MH	17.950002	75.342643	150+000	252+000	180+860 LHS Inner	1	40.1000	0.3117	0.1710	0.1040	0.0590	0.0485	0.0379	0.0341	31.5	33.3		39.5
	3-5-2023	00:27:45	IL&FS	LSI	Solapur	MH	17.950002	75.342643	150+000	252+000	180+860 LHS Inner	2	39.9000	0.2913	0.1695	0.0937	0.0599	0.0491	0.0383	0.0344	31.5	33.3		39.5
	3-5-2023	00:27:45	IL&FS	LSI	Solapur	MH	17.950002	75.342643	150+000	252+000	180+860 LHS Inner	3	39.7000	0.3084	0.1706	0.0954	0.0640	0.0516	0.0392	0.0353	31.5	33.3		39.5
1325	3-5-2023	00:29:59	IL&FS	LSI	Solapur	MH	17.948570	75.344406	150+000	252+000	181+100 LHS Inner	1	42.3000	0.2498	0.1416	0.0965	0.0672	0.0475	0.0365	0.0290	31.8	33.2		39.5
	3-5-2023	00:29:59	IL&FS	LSI	Solapur	MH	17.948570	75.344406	150+000	252+000	181+100 LHS Inner	2	42.8000	0.2520	0.1514	0.0994	0.0672	0.0445	0.0347	0.0271	31.8	33.2		39.5
	3-5-2023	00:29:59	IL&FS	LSI	Solapur	MH	17.948570	75.344406	150+000	252+000	181+100 LHS Inner	3	42.5000	0.2462	0.1401	0.0980	0.0665	0.0457	0.0352	0.0279	31.8	33.2		39.5
1326	3-5-2023	00:32:01	IL&FS	LSI	Solapur	MH	17.947114	75.346076	150+000	252+000	181+350 LHS Inner	1	41.1000	0.2095	0.1153	0.0828	0.0640	0.0510	0.0348	0.0246	31.7	33.3		39.5
	3-5-2023	00:32:01	IL&FS	LSI	Solapur	MH	17.947114	75.346076	150+000	252+000	181+350 LHS Inner	2	40.9000	0.1981	0.1149	0.0881	0.0684	0.0541	0.0371	0.0248	31.7	33.3		39.5
	3-5-2023	00:32:01	IL&FS	LSI	Solapur	MH	17.947114	75.346076	150+000	252+000	181+350 LHS Inner	3	41.4000	0.1971	0.1215	0.0894	0.0667	0.0518	0.0361	0.0254	31.7	33.3		39.5
1327	3-5-2023	00:34:19	IL&FS	LSI	Solapur	MH	17.945562	75.347953	150+000	252+000	181+600 LHS Inner	1	38.9000	0.4961	0.2770	0.1696	0.1171	0.0842	0.0630	0.0469	31.5	33.6		39.5
	3-5-2023	00:34:19	IL&FS	LSI	Solapur	MH	17.945562	75.347953	150+000	252+000	181+600 LHS Inner	2	38.7000	0.4906	0.2745	0.1692	0.1222	0.0898	0.0635	0.0438	31.5	33.6		39.5
	3-5-2023	00:34:19	IL&FS	LSI	Solapur	MH	17.945562	75.347953	150+000	252+000	181+600 LHS Inner	3	39.1000	0.4695	0.2733	0.1604	0.1176	0.0860	0.0603	0.0421	31.5	33.6		39.5
1328	3-5-2023	00:36:29	IL&FS	LSI	Solapur	MH	17.944061	75.349700	150+000	252+000	181+850 LHS Inner	1	41.8000	0.3264	0.2010	0.1114	0.0762	0.0540	0.0417	0.0328	31.7	33.6		39.5
	3-5-2023	00:36:29	IL&FS	LSI	Solapur	MH	17.944061	75.349700	150+000	252+000	181+850 LHS Inner	2	42.0000	0.3460	0.1916	0.1132	0.0788	0.0543	0.0407	0.0323	31.7	33.6		39.5
	3-5-2023	00:36:29	IL&FS	LSI	Solapur	MH	17.944061	75.349700	150+000	252+000	181+850 LHS Inner	3	41.9000	0.3435	0.1948	0.1179	0.0801	0.0542	0.0405	0.0320	31.7	33.6		39.5
1329	3-5-2023	00:38:26	IL&FS	LSI	Solapur	MH	17.942655	75.351364	150+000	252+000	182+100 LHS Inner	1	39.8000	0.3819	0.2344	0.1315	0.0833	0.0675	0.0439	0.0302	31.7	33.6		39.5
	3-5-2023	00:38:26	IL&FS	LSI	Solapur	MH	17.942655	75.351364	150+000	252+000	182+100 LHS Inner	2	39.9000	0.3829	0.2350	0.1318	0.0851	0.0604	0.0403	0.0325	31.7	33.6		39.5
	3-5-2023	00:38:26	IL&FS	LSI	Solapur	MH	17.942655	75.351364	150+000	252+000	182+100 LHS Inner	3	40.1000	0.3833	0.2422	0.1367	0.0849	0.0664	0.0446	0.0319	31.7	33.6		39.5
1330	3-5-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.941114	75.353233	150+000	252+000	182+350 LHS Inner	1	39.7000	0.3958	0.2402	0.1476	0.0848	0.0590	0.0400	0.0360	31.5	33.2		39.5
	3-5-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.941114	75.353233	150+000	252+000	182+350 LHS Inner	2	39.7000	0.4127	0.2373	0.1510	0.0860	0.0584	0.0396	0.0356	31.5	33.2		39.5
	3-5-2023	00:40:17	IL&FS	LSI	Solapur	MH	17.941114	75.353233	150+000	252+000	182+350 LHS Inner	3	39.0000	0.3733	0.2244	0.1387	0.0818	0.0557	0.0386	0.0347	31.5	33.2		39.5
1331	3-5-2023	00:41:59	IL&FS	LSI	Solapur	MH	17.939563	75.355033	150+000	252+000	182+600 LHS Inner	1	39.5000	0.3536	0.2173	0.1336	0.0868	0.0664	0.0537	0.0434	31.7	33.4		39.5
	3-5-2023	00:41:59	IL&FS	LSI	Solapur	MH	17.939563	75.355033	150+000	252+000	182+600 LHS Inner	2	39.3000	0.3641	0.2264	0.1318	0.0886	0.0669	0.0533	0.0420	31.7	33.4		39.5
	3-5-2023	00:41:59	IL&FS	LSI	Solapur	MH	17.939563	75.355033	150+000	252+000	182+600 LHS Inner	3	39.2000	0.3834	0.2278	0.1354	0.0870	0.0667	0.0534	0.0435	31.7	33.4		39.5
1332	3-5-2023	00:43:51	IL&FS	LSI	Solapur	MH	17.937940	75.356887	150+000	252+000	182+890 LHS Inner	1	40.7000	0.3546	0.2003	0.1310	0.1043	0.0776	0.0482	0.0278	31.6	33.2		39.5
	3-5-2023	00:43:51	IL&FS	LSI	Solapur	MH	17.937940	75.356887	150+000	252+000	182+890 LHS Inner	2	40.7000	0.3299	0.1946	0.1240	0.1060	0.0781	0.0499	0.0276	31.6	33.2		39.5
	3-5-2023	00:43:51	IL&FS	LSI	Solapur	MH	17.937940	75.356887	150+000	252+000	182+890 LHS Inner	3	40.5000	0.3398	0.1997	0.1253	0.1000	0.0775	0.0489	0.0273	31.6	33.2		39.5
1333	3-5-2023	00:45:48	IL&FS	LSI	Solapur	MH	17.936666	75.358375	150+000	252+000	183+100 LHS Inner	1	41.8000	0.2202	0.1279	0.0857	0.0616	0.0429	0.0362	0.0315	31.4	33.3		39.5
	3-5-2023	00:45:48	IL&FS	LSI	Solapur	MH	17.936666	75.358375	150+000	252+000	183+100 LHS Inner	2	41.2000	0.2118	0.1348	0.0828	0.0608	0.0409	0.0352	0.0308	31.4	33.3		39.5
	3-5-2023	00:45:48	IL&FS	LSI	Solapur	MH	17.936666	75.358375	150+000	252+000	183+100 LHS Inner	3	42.0000	0.2329	0.1452	0.0871	0.0621	0.0434	0.0370	0.0322	31.4	33.3		39.5
1334	3-5-2023	00:49:50	IL&FS	LSI	Solapur	MH	17.935184	75.360099	150+000	252+000	183+600 LHS Inner	1	39.4000	0.4915	0.3370	0.2060	0.1325	0.0782	0.0521	0.0357	31.5	33.3		39.5
	3-5-2023	00:49:50	IL&FS	LSI	Solapur	MH	17.935184	75.360099	150+000	252+000	183+600 LHS Inner	2	39.7000	0.5033	0.3416	0.2102	0.1360	0.0801	0.0538	0.0352	31.5	33.3		39.5
	3-5-2023	00:49:50	IL&FS	LSI	Solapur	MH	17.935184	75.360099	150+000	252+000	183+600 LHS Inner	3	39.7000	0.4864	0.3361	0.2029	0.1329	0.0790	0.0524	0.0334	31.5	33.3		39.5
1335	3-5-2023	00:51:28	IL&FS	LSI	Solapur	MH	17.932228	75.363594	150+000	252+000	183+850 LHS Inner	1	38.2000	0.5013	0.3234	0.1802	0.1244	0.0879	0.0622	0.0449	31.5	33.8		39.5
	3-5-2023	00:51:28	IL&FS	LSI	Solapur	MH	17.932228	75.363594	150+000	252+000	183+850 LHS Inner	2	38.2000	0.4897	0.3004	0.1861	0.1254	0.0853	0.0597	0.0430	31.5	33.8		39.5
	3-5-2023	00:51:28	IL&FS	LSI	Solapur	MH	17.932228	75.363594	150+000	252+000	183+850 LHS Inner	3	38.3000	0.4883	0.3179	0.1839	0.1263	0.0898	0.0631	0.0466	31.5	33.8		39.5
1336	3-5-2023	00:53:27	IL&FS	LSI	Solapur	MH	17.930715	75.365257	150+000	252+000	184+100 LHS Inner	1	38.4000	0.4733	0.2854	0.1544	0.1012	0.0581	0.0422	0.0321	31.6	33.3		39.5
	3-5-2023	00:53:27	IL&FS	LSI	Solapur	MH	17.930715	75.365257	150+000	252+000	184+100 LHS Inner	2	38.2000	0.4751	0.2774	0.1499	0.0972	0.0571	0.0429	0.0327	31.6	33.3		39.5
	3-5-2023	00:53:27	IL&FS	LSI	Solapur	MH	17.930715	75.365257	150+000	252+000	184+100 LHS Inner	3	38.4000	0.4894	0.2704	0.1524	0.0956	0.0604	0.0443	0.0319	31.6	33.3		39.5
1337	3-5-2023	00:55:32	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+350 LHS Inner	1	38.9000	0.4775	0.3030	0.1765	0.1138	0.0743	0.0507	0.0329	31.5	33.3		39.5
	3-5-2023	00:55:32	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+350 LHS Inner	2	39.1000	0.4695	0.2963	0.1733	0.1153	0.0740	0.0484	0.0295	31.5	33.3		39.5
	3-5-2023	00:55:32	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+350 LHS Inner	3	39.0000	0.4391	0.2883	0.1698	0.1118	0.0738	0.0500	0.0320	31.5	33.3		39.5
1338	3-5-2023	00:58:29	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+600 LHS Inner	1	36.7000	0.4054	0.2441	0.1155	0.0769	0.0512	0.0366	0.0261	31.2	32.7		39.5
	3-5-2023	00:58:29	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+600 LHS Inner	2	36.8000	0.4340	0.2495	0.1215	0.0846	0.0591	0.0406	0.0261	31.2	32.7		39.5
	3-5-2023	00:58:29	IL&FS	LSI	Solapur	MH	17.929168	75.366989	150+000	252+000	184+600 LHS Inner	3	36.8000	0.4262	0.2525	0.1178	0.0853	0.0598	0.0383	0.0250	31.2	32.7		39.5
1339	3-5-2023	01:00:39	IL&FS	LSI	Solapur	MH	17.926513	75.370903	150+000	252+000	184+850 LHS Inner	1	43.5000	0.3814	0.2546	0.1481	0.0963	0.0606	0.0441	0.0331	31.1	32.5		39.5
	3-5-2023	01:00:39	IL&FS	LSI	Solapur	MH	17.926513	75.370903	150+000	252+000	184+850 LHS Inner	2	41.4000	0.3659	0.2432	0.1411	0.0923	0.0573	0.0417	0.0309	31.1	32.5		39.5
	3-5-2023	01:00:39	IL&FS	LSI	Solapur	MH	17.926513	75.370903	150+000	252+000	184+850 LHS Inner	3	41.3000	0.3425	0.2298	0.1341	0.0887	0.0561	0.0392	0.0286	31.1	32.5		39.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1340	3-5-2023	01:15:31	IL&FS	LSI	Solapur	MH	17.925514	75.372993	150+000	252+000	185+100 LHS Inner	1	39.2000	0.3081	0.2005	0.1345	0.0917	0.0658	0.0489	0.0440	30.4	31.9		39.5
	3-5-2023	01:15:31	IL&FS	LSI	Solapur	MH	17.925514	75.372993	150+000	252+000	185+100 LHS Inner	2	39.2000	0.3065	0.2025	0.1372	0.0908	0.0654	0.0505	0.0455	30.4	31.9		39.5
	3-5-2023	01:15:31	IL&FS	LSI	Solapur	MH	17.925514	75.372993	150+000	252+000	185+100 LHS Inner	3	39.2000	0.2858	0.2043	0.1373	0.0933	0.0646	0.0548	0.0493	30.4	31.9		39.5
1341	3-5-2023	01:17:16	IL&FS	LSI	Solapur	MH	17.924749	75.375312	150+000	252+000	185+350 LHS Inner	1	40.7000	0.2448	0.1537	0.1049	0.0860	0.0557	0.0352	0.0317	30.6	32.3	Rutting	39.5
	3-5-2023	01:17:16	IL&FS	LSI	Solapur	MH	17.924749	75.375312	150+000	252+000	185+350 LHS Inner	2	40.6000	0.2354	0.1497	0.1129	0.0888	0.0579	0.0374	0.0223	30.6	32.3	Rutting	39.5
	3-5-2023	01:17:16	IL&FS	LSI	Solapur	MH	17.924749	75.375312	150+000	252+000	185+350 LHS Inner	3	39.2000	0.2302	0.1596	0.1028	0.0883	0.0573	0.0396	0.0220	30.6	32.3	Rutting	39.5
1342	3-5-2023	01:19:09	IL&FS	LSI	Solapur	MH	17.923963	75.377693	150+000	252+000	185+600 LHS Inner	1	36.7000	0.4186	0.2263	0.1251	0.0664	0.0437	0.0333	0.0299	30.6	32.5		39.5
	3-5-2023	01:19:09	IL&FS	LSI	Solapur	MH	17.923963	75.377693	150+000	252+000	185+600 LHS Inner	2	37.2000	0.3941	0.2308	0.1267	0.0631	0.0443	0.0347	0.0312	30.6	32.5		39.5
	3-5-2023	01:19:09	IL&FS	LSI	Solapur	MH	17.923963	75.377693	150+000	252+000	185+600 LHS Inner	3	37.1000	0.4425	0.2282	0.1293	0.0617	0.0423	0.0333	0.0299	30.6	32.5		39.5
1343	3-5-2023	01:21:02	IL&FS	LSI	Solapur	MH	17.923528	75.379386	150+000	252+000	185+850 LHS Inner	1	38.7000	0.3230	0.1908	0.1063	0.0759	0.0557	0.0412	0.0302	30.6	32.5		39.5
	3-5-2023	01:21:02	IL&FS	LSI	Solapur	MH	17.923528	75.379386	150+000	252+000	185+850 LHS Inner	2	39.1000	0.3294	0.1932	0.1068	0.0752	0.0552	0.0399	0.0284	30.6	32.5		39.5
	3-5-2023	01:21:02	IL&FS	LSI	Solapur	MH	17.923528	75.379386	150+000	252+000	185+850 LHS Inner	3	39.0000	0.3230	0.1757	0.1077	0.0757	0.0526	0.0380	0.0279	30.6	32.5		39.5
1344	3-5-2023	01:23:02	IL&FS	LSI	Solapur	MH	17.923160	75.382202	150+000	252+000	186+100 LHS Inner	1	38.9000	0.2559	0.1611	0.1027	0.0736	0.0551	0.0389	0.0290	30.6	32.7		39.5
	3-5-2023	01:23:02	IL&FS	LSI	Solapur	MH	17.923160	75.382202	150+000	252+000	186+100 LHS Inner	2	39.2000	0.2629	0.1716	0.1040	0.0746	0.0549	0.0388	0.0289	30.6	32.7		39.5
	3-5-2023	01:23:02	IL&FS	LSI	Solapur	MH	17.923160	75.382202	150+000	252+000	186+100 LHS Inner	3	39.6000	0.2559	0.1719	0.1071	0.0749	0.0550	0.0389	0.0290	30.6	32.7		39.5
1345	3-5-2023	01:24:47	IL&FS	LSI	Solapur	MH	17.921991	75.384254	150+000	252+000	186+350 LHS Inner	1	37.9000	0.4920	0.3326	0.1854	0.1087	0.0583	0.0344	0.0260	30.5	32.6		39.5
	3-5-2023	01:24:47	IL&FS	LSI	Solapur	MH	17.921991	75.384254	150+000	252+000	186+350 LHS Inner	2	36.8000	0.4725	0.3316	0.1607	0.0986	0.0561	0.0329	0.0246	30.5	32.6		39.5
	3-5-2023	01:24:47	IL&FS	LSI	Solapur	MH	17.921991	75.384254	150+000	252+000	186+350 LHS Inner	3	36.7000	0.4690	0.3225	0.1748	0.1011	0.0533	0.0328	0.0245	30.5	32.6		39.5
1346	3-5-2023	01:26:38	IL&FS	LSI	Solapur	MH	17.921674	75.386573	150+000	252+000	186+600 LHS Inner	1	36.1000	0.3805	0.2569	0.1522	0.0959	0.0659	0.0417	0.0351	30.4	32.1		39.5
	3-5-2023	01:26:38	IL&FS	LSI	Solapur	MH	17.921674	75.386573	150+000	252+000	186+600 LHS Inner	2	36.3000	0.3986	0.2645	0.1545	0.0924	0.0673	0.0421	0.0332	30.4	32.1		39.5
	3-5-2023	01:26:38	IL&FS	LSI	Solapur	MH	17.921674	75.386573	150+000	252+000	186+600 LHS Inner	3	36.5000	0.3865	0.2678	0.1611	0.0970	0.0686	0.0430	0.0368	30.4	32.1		39.5
1347	3-5-2023	01:30:01	IL&FS	LSI	Solapur	MH	17.920982	75.388824	150+000	252+000	186+850 LHS Inner	1	37.8000	0.3165	0.1844	0.1128	0.0733	0.0643	0.0520	0.0433	30.4	32.4	T-30.2/36.9	36.9
	3-5-2023	01:30:01	IL&FS	LSI	Solapur	MH	17.920982	75.388824	150+000	252+000	186+850 LHS Inner	2	37.6000	0.3223	0.1982	0.1055	0.0684	0.0606	0.0478	0.0392	30.4	32.4	T-30.2/36.9	36.9
	3-5-2023	01:30:01	IL&FS	LSI	Solapur	MH	17.920982	75.388824	150+000	252+000	186+850 LHS Inner	3	38.0000	0.3508	0.2027	0.1081	0.0770	0.0638	0.0490	0.0394	30.4	32.4	T-30.2/36.9	36.9
1348	3-5-2023	01:32:01	IL&FS	LSI	Solapur	MH	17.920133	75.390953	150+000	252+000	187+100 LHS Inner	1	39.0000	0.2276	0.1393	0.0959	0.0766	0.0498	0.0387	0.0314	30.6	32.3		36.9
	3-5-2023	01:32:01	IL&FS	LSI	Solapur	MH	17.920133	75.390953	150+000	252+000	187+100 LHS Inner	2	39.4000	0.2247	0.1413	0.0926	0.0741	0.0525	0.0402	0.0304	30.6	32.3		36.9
	3-5-2023	01:32:01	IL&FS	LSI	Solapur	MH	17.920133	75.390953	150+000	252+000	187+100 LHS Inner	3	39.4000	0.2051	0.1344	0.0898	0.0718	0.0541	0.0381	0.0306	30.6	32.3		36.9
1349	3-5-2023	01:34:12	IL&FS	LSI	Solapur	MH	17.919218	75.393165	150+000	252+000	187+350 LHS Inner	1	38.4000	0.3270	0.2074	0.1164	0.0828	0.0606	0.0485	0.0365	30.5	32.1		36.9
	3-5-2023	01:34:12	IL&FS	LSI	Solapur	MH	17.919218	75.393165	150+000	252+000	187+350 LHS Inner	2	37.9000	0.3061	0.1860	0.1141	0.0762	0.0593	0.0501	0.0360	30.5	32.1		36.9
	3-5-2023	01:34:12	IL&FS	LSI	Solapur	MH	17.919218	75.393165	150+000	252+000	187+350 LHS Inner	3	38.3000	0.2890	0.1960	0.1104	0.0841	0.0632	0.0461	0.0364	30.5	32.1		36.9
1350	3-5-2023	01:36:08	IL&FS	LSI	Solapur	MH	17.918344	75.395286	150+000	252+000	187+600 LHS Inner	1	38.2000	0.3974	0.2835	0.1494	0.0878	0.0665	0.0476	0.0333	30.5	32.4		36.9
	3-5-2023	01:36:08	IL&FS	LSI	Solapur	MH	17.918344	75.395286	150+000	252+000	187+600 LHS Inner	2	37.1000	0.3909	0.2704	0.1498	0.0880	0.0663	0.0461	0.0311	30.5	32.4		36.9
	3-5-2023	01:36:08	IL&FS	LSI	Solapur	MH	17.918344	75.395286	150+000	252+000	187+600 LHS Inner	3	37.7000	0.3838	0.2774	0.1505	0.0848	0.0680	0.0463	0.0328	30.5	32.4		36.9
1351	3-5-2023	01:38:02	IL&FS	LSI	Solapur	MH	17.917467	75.397499	150+000	252+000	187+850 LHS Inner	1	37.1000	0.4714	0.2652	0.1386	0.0803	0.0601	0.0434	0.0336	30.5	32.5		36.9
	3-5-2023	01:38:02	IL&FS	LSI	Solapur	MH	17.917467	75.397499	150+000	252+000	187+850 LHS Inner	2	37.2000	0.4442	0.2724	0.1390	0.0838	0.0578	0.0434	0.0333	30.5	32.5		36.9
	3-5-2023	01:38:02	IL&FS	LSI	Solapur	MH	17.917467	75.397499	150+000	252+000	187+850 LHS Inner	3	37.0000	0.4326	0.2583	0.1417	0.0856	0.0571	0.0433	0.0318	30.5	32.5		36.9
1352	3-5-2023	01:41:23	IL&FS	LSI	Solapur	MH	17.916547	75.399612	150+000	252+000	188+100 LHS Inner	1	36.6000	0.4820	0.2574	0.1315	0.0698	0.0516	0.0429	0.0386	30.4	32.4		36.9
	3-5-2023	01:41:23	IL&FS	LSI	Solapur	MH	17.916547	75.399612	150+000	252+000	188+100 LHS Inner	2	36.6000	0.4925	0.2527	0.1204	0.0731	0.0561	0.0420	0.0378	30.4	32.4		36.9
	3-5-2023	01:41:23	IL&FS	LSI	Solapur	MH	17.916547	75.399612	150+000	252+000	188+100 LHS Inner	3	36.8000	0.4447	0.2557	0.1195	0.0727	0.0557	0.0416	0.0374	30.4	32.4		36.9
1353	3-5-2023	01:43:24	IL&FS	LSI	Solapur	MH	17.915647	75.401763	150+000	252+000	188+350 LHS Inner	1	37.3000	0.3406	0.2251	0.1339	0.0693	0.0518	0.0468	0.0357	30.5	32.3		36.9
	3-5-2023	01:43:24	IL&FS	LSI	Solapur	MH	17.915647	75.401763	150+000	252+000	188+350 LHS Inner	2	38.1000	0.3393	0.2360	0.1293	0.0689	0.0574	0.0474	0.0349	30.5	32.3		36.9
	3-5-2023	01:43:24	IL&FS	LSI	Solapur	MH	17.915647	75.401763	150+000	252+000	188+350 LHS Inner	3	37.8000	0.3284	0.2238	0.1251	0.0688	0.0552	0.0473	0.0367	30.5	32.3		36.9
1354	3-5-2023	01:45:30	IL&FS	LSI	Solapur	MH	17.914739	75.403915	150+000	252+000	188+600 LHS Inner	1	39.3000	0.3205	0.1863	0.1223	0.1002	0.0671	0.0443	0.0299	30.6	32.6		36.9
	3-5-2023	01:45:30	IL&FS	LSI	Solapur	MH	17.914739	75.403915	150+000	252+000	188+600 LHS Inner	2	39.3000	0.3421	0.2077	0.1237	0.0948	0.0652	0.0444	0.0299	30.6	32.6		36.9
	3-5-2023	01:45:30	IL&FS	LSI	Solapur	MH	17.914739	75.403915	150+000	252+000	188+600 LHS Inner	3	39.7000	0.3244	0.2099	0.1164	0.0910	0.0614	0.0426	0.0283	30.6	32.6		36.9
1355	3-5-2023	01:47:32	IL&FS	LSI	Solapur	MH	17.913827	75.406105	150+000	252+000	188+850 LHS Inner	1	38.5000	0.4322	0.2761	0.1353	0.0842	0.0592	0.0445	0.0349	30.6	32.5		36.9
	3-5-2023	01:47:32	IL&FS	LSI	Solapur	MH	17.913827	75.406105	150+000	252+000	188+850 LHS Inner	2	38.9000	0.4292	0.2525	0.1340	0.0893	0.0590	0.0462	0.0377	30.6	32.5		36.9
	3-5-2023	01:47:32	IL&FS	LSI	Solapur	MH	17.913827	75.406105	150+000	252+000	188+850 LHS Inner	3	38.9000	0.4330	0.2504	0.1428	0.0796	0.0639	0.0469	0.0344	30.6	32.5		36.9
1356	3-5-2023	01:49:21	IL&FS	LSI	Solapur	MH	17.912973	75.408248	150+000	252+000	189+100 LHS Inner	1	36.6000	0.3930	0.2617	0.1375	0.0957	0.0686	0.0397	0.0307	30.6	32.5		36.9
	3-5-2023	01:49:21	IL&FS	LSI	Solapur	MH	17.912973	75.408248	150+000	252+000	189+100 LHS Inner	2	38.1000	0.4205	0.2564	0.1465	0.0959	0.0700	0.0398	0.0308	30.6	32.5		36.9
	3-5-2023	01:49:21	IL&FS	LSI	Solapur	MH	17.912973	75.408248	150+000	252+000	189+100 LHS Inner	3	38.3000	0.4227	0.2464	0.1514	0.0922	0.0697	0.0417	0.0325	30.6	32.5		36.9
1357	3-5-2023	01:51:06	IL&FS	LSI	Solapur	MH	17.912200	75.410362	150+000	252+000	189+350 LHS Inner	1	36.7000	0.4082	0.2585	0.1579	0.1011	0.0775	0.0582	0.0524	30.5	32.3		36.9
	3-5-2023	01:51:06	IL&FS	LSI	Solapur	MH	17.912200	75.410362	150+000	252+000	189+350 LHS Inner	2	36.8000	0.3985	0.2586	0.1574	0.1041	0.0763	0.0602	0.0542	30.5	32.3		36.9
	3-5-2023	01:51:06	IL&FS	LSI	Solapur	MH	17.912200	75.410362	150+000	252+000	189+350 LHS Inner	3	36.7000	0.3990	0.2772	0.1611	0.0986	0.0757	0.0621	0.0559	30.5	32.3		36.9
1358	3-5-2023	01:53:01	IL&FS	LSI	Solapur	MH	17.911382	75.412635	150+000	252+000	189+600 LHS Inner	1	38.2000	0.1922	0.1389	0.1012	0.0691	0.0459	0.0364	0.0328	30.6	32.5		36.9
	3-5-2023	01:53:01	IL&FS	LSI	Solapur	MH	17.911382	75.412635	150+000	252+000	189+600 LHS Inner	2	38.4000	0.1749	0.1359	0.0991	0.0665	0.0454	0.0360	0.0324	30.6	32.5		36.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	01:53:01	IL&FS	LSI	Solapur	MH	17.911382	75.412635	150+000	252+000	189+600 LHS Inner	3	38.7000	0.1952	0.1434	0.0960	0.0666	0.0472	0.0405	0.0365	30.6	32.5		36.9
1359	3-5-2023	01:54:52	IL&FS	LSI	Solapur	MH	17.910444	75.414787	150+000	252+000	189+850 LHS Inner	1	36.1000	0.1589	0.1120	0.0808	0.0529	0.0326	0.0210	0.0156	30.7	32.5		36.9
	3-5-2023	01:54:52	IL&FS	LSI	Solapur	MH	17.910444	75.414787	150+000	252+000	189+850 LHS Inner	2	36.2000	0.1536	0.1187	0.0826	0.0476	0.0335	0.0235	0.0157	30.7	32.5		36.9
	3-5-2023	01:54:52	IL&FS	LSI	Solapur	MH	17.910444	75.414787	150+000	252+000	189+850 LHS Inner	3	36.2000	0.1538	0.1165	0.0810	0.0496	0.0363	0.0214	0.0155	30.7	32.5		36.9
1360	3-5-2023	01:56:50	IL&FS	LSI	Solapur	MH	17.910341	75.415046	150+000	252+000	190+100 LHS Inner	1	38.3000	0.1473	0.1128	0.0816	0.0494	0.0385	0.0276	0.0216	30.6	32.6		36.9
	3-5-2023	01:56:50	IL&FS	LSI	Solapur	MH	17.910341	75.415046	150+000	252+000	190+100 LHS Inner	2	38.3000	0.1426	0.1149	0.0753	0.0494	0.0375	0.0256	0.0217	30.6	32.6		36.9
	3-5-2023	01:56:50	IL&FS	LSI	Solapur	MH	17.910341	75.415046	150+000	252+000	190+100 LHS Inner	3	38.4000	0.1448	0.1142	0.0796	0.0542	0.0394	0.0246	0.0216	30.6	32.6		36.9
1361	3-5-2023	01:58:48	IL&FS	LSI	Solapur	MH	17.908710	75.419021	150+000	252+000	190+350 LHS Inner	1	40.6000	0.1668	0.1285	0.0877	0.0620	0.0462	0.0354	0.0271	30.5	32.1		36.9
	3-5-2023	01:58:48	IL&FS	LSI	Solapur	MH	17.908710	75.419021	150+000	252+000	190+350 LHS Inner	2	40.0000	0.1625	0.1204	0.0829	0.0556	0.0465	0.0352	0.0271	30.5	32.1		36.9
	3-5-2023	01:58:48	IL&FS	LSI	Solapur	MH	17.908710	75.419021	150+000	252+000	190+350 LHS Inner	3	40.4000	0.1599	0.1244	0.0862	0.0612	0.0443	0.0333	0.0257	30.5	32.1		36.9
1362	3-5-2023	02:00:40	IL&FS	LSI	Solapur	MH	17.907770	75.421295	150+000	252+000	190+600 LHS Inner	1	38.8000	0.1731	0.1308	0.0969	0.0635	0.0467	0.0354	0.0274	30.5	32.2		36.9
	3-5-2023	02:00:40	IL&FS	LSI	Solapur	MH	17.907770	75.421295	150+000	252+000	190+600 LHS Inner	2	39.0000	0.1766	0.1278	0.0956	0.0653	0.0479	0.0366	0.0284	30.5	32.2		36.9
	3-5-2023	02:00:40	IL&FS	LSI	Solapur	MH	17.907770	75.421295	150+000	252+000	190+600 LHS Inner	3	39.1000	0.1825	0.1274	0.0880	0.0630	0.0473	0.0368	0.0286	30.5	32.2		36.9
1363	3-5-2023	02:02:37	IL&FS	LSI	Solapur	MH	17.906717	75.423721	150+000	252+000	190+900 LHS Inner	1	39.0000	0.3715	0.2223	0.1221	0.0832	0.0536	0.0378	0.0272	30.3	31.9		36.9
	3-5-2023	02:02:37	IL&FS	LSI	Solapur	MH	17.906717	75.423721	150+000	252+000	190+900 LHS Inner	2	39.3000	0.3801	0.2152	0.1177	0.0805	0.0545	0.0400	0.0289	30.3	31.9		36.9
	3-5-2023	02:02:37	IL&FS	LSI	Solapur	MH	17.906717	75.423721	150+000	252+000	190+900 LHS Inner	3	37.9000	0.3848	0.2173	0.1153	0.0790	0.0528	0.0374	0.0277	30.3	31.9		36.9
1364	3-5-2023	02:04:27	IL&FS	LSI	Solapur	MH	17.905952	75.425582	150+000	252+000	191+100 LHS Inner	1	37.9000	0.4064	0.2614	0.1502	0.0736	0.0459	0.0264	0.0130	30.4	32.6		36.9
	3-5-2023	02:04:27	IL&FS	LSI	Solapur	MH	17.905952	75.425582	150+000	252+000	191+100 LHS Inner	2	36.9000	0.3769	0.2533	0.1480	0.0703	0.0434	0.0252	0.0119	30.4	32.6		36.9
	3-5-2023	02:04:27	IL&FS	LSI	Solapur	MH	17.905952	75.425582	150+000	252+000	191+100 LHS Inner	3	38.3000	0.4114	0.2475	0.1533	0.0821	0.0509	0.0270	0.0135	30.4	32.6		36.9
1365	3-5-2023	02:06:23	IL&FS	LSI	Solapur	MH	17.905132	75.427772	150+000	252+000	191+350 LHS Inner	1	39.1000	0.2764	0.1731	0.0986	0.0511	0.0328	0.0220	0.0143	30.5	32.5		36.9
	3-5-2023	02:06:23	IL&FS	LSI	Solapur	MH	17.905132	75.427772	150+000	252+000	191+350 LHS Inner	2	39.1000	0.2983	0.1690	0.0955	0.0510	0.0356	0.0232	0.0141	30.5	32.5		36.9
	3-5-2023	02:06:23	IL&FS	LSI	Solapur	MH	17.905132	75.427772	150+000	252+000	191+350 LHS Inner	3	39.0000	0.2718	0.1600	0.1000	0.0523	0.0349	0.0232	0.0141	30.5	32.5		36.9
1366	3-5-2023	02:08:34	IL&FS	LSI	Solapur	MH	17.903924	75.429687	150+000	252+000	191+600 LHS Inner	1	38.1000	0.3753	0.2531	0.1297	0.0777	0.0381	0.0262	0.0202	30.7	32.5		36.9
	3-5-2023	02:08:34	IL&FS	LSI	Solapur	MH	17.903924	75.429687	150+000	252+000	191+600 LHS Inner	2	36.9000	0.3791	0.2469	0.1281	0.0714	0.0358	0.0251	0.0184	30.7	32.5		36.9
	3-5-2023	02:08:34	IL&FS	LSI	Solapur	MH	17.903924	75.429687	150+000	252+000	191+600 LHS Inner	3	38.5000	0.4081	0.2601	0.1426	0.0806	0.0375	0.0262	0.0202	30.7	32.5		36.9
1367	3-5-2023	02:10:39	IL&FS	LSI	Solapur	MH	17.902149	75.431037	150+000	252+000	191+850 LHS Inner	1	38.9000	0.4826	0.2814	0.1506	0.0940	0.0667	0.0393	0.0354	31.1	32.5		36.9
	3-5-2023	02:10:39	IL&FS	LSI	Solapur	MH	17.902149	75.431037	150+000	252+000	191+850 LHS Inner	2	39.5000	0.4484	0.2612	0.1389	0.0936	0.0668	0.0399	0.0387	31.1	32.5		36.9
	3-5-2023	02:10:39	IL&FS	LSI	Solapur	MH	17.902149	75.431037	150+000	252+000	191+850 LHS Inner	3	38.8000	0.4788	0.2578	0.1452	0.0913	0.0658	0.0403	0.0363	31.1	32.5		36.9
1368	3-5-2023	02:14:04	IL&FS	LSI	Solapur	MH	17.900321	75.432342	150+000	252+000	192+100 LHS Inner	1	37.4000	0.3879	0.2543	0.1375	0.0947	0.0633	0.0407	0.0255	31.0	32.5	T-29.5/36.2	36.2
	3-5-2023	02:14:04	IL&FS	LSI	Solapur	MH	17.900321	75.432342	150+000	252+000	192+100 LHS Inner	2	37.5000	0.4313	0.2678	0.1432	0.0999	0.0668	0.0426	0.0264	31.0	32.5	T-29.5/36.2	36.2
	3-5-2023	02:14:04	IL&FS	LSI	Solapur	MH	17.900321	75.432342	150+000	252+000	192+100 LHS Inner	3	37.3000	0.3826	0.2513	0.1469	0.1004	0.0661	0.0422	0.0241	31.0	32.5	T-29.5/36.2	36.2
1369	3-5-2023	02:16:57	IL&FS	LSI	Solapur	MH	17.898681	75.433959	150+000	252+000	192+350 LHS Inner	1	39.2000	0.6339	0.3008	0.1729	0.0782	0.0514	0.0311	0.0175	31.1	32.6		36.2
	3-5-2023	02:16:57	IL&FS	LSI	Solapur	MH	17.898681	75.433959	150+000	252+000	192+350 LHS Inner	2	38.9000	0.6481	0.3091	0.1679	0.0780	0.0507	0.0329	0.0164	31.1	32.6		36.2
	3-5-2023	02:16:57	IL&FS	LSI	Solapur	MH	17.898681	75.433959	150+000	252+000	192+350 LHS Inner	3	38.7000	0.6049	0.3214	0.1723	0.0793	0.0515	0.0312	0.0169	31.1	32.6		36.2
1370	3-5-2023	02:18:42	IL&FS	LSI	Solapur	MH	17.897825	75.435874	150+000	252+000	192+600 LHS Inner	1	41.3000	0.0925	0.0650	0.0449	0.0342	0.0260	0.0192	0.0142	31.0	33.1		36.2
	3-5-2023	02:18:42	IL&FS	LSI	Solapur	MH	17.897825	75.435874	150+000	252+000	192+600 LHS Inner	2	41.5000	0.0912	0.0643	0.0458	0.0358	0.0279	0.0196	0.0137	31.0	33.1		36.2
	3-5-2023	02:18:42	IL&FS	LSI	Solapur	MH	17.897825	75.435874	150+000	252+000	192+600 LHS Inner	3	41.9000	0.0906	0.0664	0.0457	0.0349	0.0275	0.0198	0.0146	31.0	33.1		36.2
1371	3-5-2023	02:21:23	IL&FS	LSI	Solapur	MH	17.897006	75.438331	150+000	252+000	192+850 LHS Inner	1	41.8000	0.0811	0.0598	0.0439	0.0310	0.0226	0.0170	0.0133	30.9	32.5		36.2
	3-5-2023	02:21:23	IL&FS	LSI	Solapur	MH	17.897006	75.438331	150+000	252+000	192+850 LHS Inner	2	41.5000	0.0805	0.0596	0.0436	0.0317	0.0232	0.0178	0.0142	30.9	32.5		36.2
	3-5-2023	02:21:23	IL&FS	LSI	Solapur	MH	17.897006	75.438331	150+000	252+000	192+850 LHS Inner	3	41.4000	0.0804	0.0596	0.0438	0.0310	0.0219	0.0169	0.0136	30.9	32.5		36.2
1372	3-5-2023	02:23:19	IL&FS	LSI	Solapur	MH	17.896434	75.440559	150+000	252+000	193+100 LHS Inner	1	41.0000	0.1024	0.0739	0.0520	0.0379	0.0283	0.0212	0.0162	30.8	32.6		36.2
	3-5-2023	02:23:19	IL&FS	LSI	Solapur	MH	17.896434	75.440559	150+000	252+000	193+100 LHS Inner	2	42.2000	0.1002	0.0716	0.0527	0.0401	0.0299	0.0221	0.0162	30.8	32.6		36.2
	3-5-2023	02:23:19	IL&FS	LSI	Solapur	MH	17.896434	75.440559	150+000	252+000	193+100 LHS Inner	3	42.2000	0.1015	0.0732	0.0521	0.0381	0.0287	0.0213	0.0163	30.8	32.6		36.2
1373	3-5-2023	02:25:13	IL&FS	LSI	Solapur	MH	17.895835	75.442817	150+000	252+000	193+350 LHS Inner	1	39.0000	0.2095	0.1008	0.0592	0.0409	0.0297	0.0220	0.0198	30.8	32.8		36.2
	3-5-2023	02:25:13	IL&FS	LSI	Solapur	MH	17.895835	75.442817	150+000	252+000	193+350 LHS Inner	2	40.9000	0.2144	0.1093	0.0626	0.0419	0.0302	0.0221	0.0199	30.8	32.8		36.2
	3-5-2023	02:25:13	IL&FS	LSI	Solapur	MH	17.895835	75.442817	150+000	252+000	193+350 LHS Inner	3	39.7000	0.2129	0.1019	0.0624	0.0400	0.0288	0.0216	0.0194	30.8	32.8		36.2
1374	3-5-2023	02:27:17	IL&FS	LSI	Solapur	MH	17.895214	75.445114	150+000	252+000	193+600 LHS Inner	1	38.7000	0.3409	0.2033	0.1217	0.0703	0.0510	0.0370	0.0333	30.8	32.5		36.2
	3-5-2023	02:27:17	IL&FS	LSI	Solapur	MH	17.895214	75.445114	150+000	252+000	193+600 LHS Inner	2	38.7000	0.3799	0.2160	0.1218	0.0721	0.0535	0.0390	0.0351	30.8	32.5		36.2
	3-5-2023	02:27:17	IL&FS	LSI	Solapur	MH	17.895214	75.445114	150+000	252+000	193+600 LHS Inner	3	38.7000	0.3682	0.2228	0.1226	0.0734	0.0525	0.0382	0.0344	30.8	32.5		36.2
1375	3-5-2023	06:32:36	IL&FS	LSI	Solapur	MH	17.894130	75.447418	150+000	252+000	193+850 LHS Inner	1	37.6000	0.3973	0.2218	0.1213	0.0708	0.0447	0.0268	0.0241	27.5	29.1	t-26.8/34.7	34.7
	3-5-2023	06:32:36	IL&FS	LSI	Solapur	MH	17.894130	75.447418	150+000	252+000	193+850 LHS Inner	2	37.8000	0.3968	0.2232	0.1239	0.0737	0.0449	0.0271	0.0244	27.5	29.1	t-26.8/34.7	34.7
	3-5-2023	06:32:36	IL&FS	LSI	Solapur	MH	17.894130	75.447418	150+000	252+000	193+850 LHS Inner	3	37.9000	0.3943	0.2224	0.1141	0.0768	0.0489	0.0279	0.0251	27.5	29.1	t-26.8/34.7	34.7
1376	3-5-2023	06:34:43	IL&FS	LSI	Solapur	MH	17.892850	75.449440	150+000	252+000	194+100 LHS Inner	1	36.9000	0.5935	0.3256	0.1543	0.0896	0.0607	0.0505	0.0416	27.7	29.2		34.7
	3-5-2023	06:34:43	IL&FS	LSI	Solapur	MH	17.892850	75.449440	150+000	252+000	194+100 LHS Inner	2	37.0000	0.5629	0.3234	0.1638	0.0912	0.0663	0.0533	0.0402	27.7	29.2		34.7
	3-5-2023	06:34:43	IL&FS	LSI	Solapur	MH	17.892850	75.449440	150+000	252+000	194+100 LHS Inner	3	36.3000	0.5563	0.3098	0.1543	0.0909	0.0659	0.0488	0.0391	27.7	29.2		34.7
1377	3-5-2023	06:36:27	IL&FS	LSI	Solapur	MH	17.891588	75.451339	150+000	252+000	194+350 LHS Inner	1	36.2000	0.5129	0.2987	0.1533	0.0912	0.0677	0.0517	0.0406	27.8	29.3		34.7

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	06:36:27	IL&FS	LSI	Solapur	MH	17.891588	75.451339	150+000	252+000	194+350 LHS Inner	2	36.6000	0.5045	0.3061	0.1542	0.0911	0.0687	0.0501	0.0382	27.8	29.3		34.7
	3-5-2023	06:36:27	IL&FS	LSI	Solapur	MH	17.891588	75.451339	150+000	252+000	194+350 LHS Inner	3	36.5000	0.5132	0.2962	0.1652	0.0961	0.0688	0.0504	0.0384	27.8	29.3		34.7
1378	3-5-2023	06:38:33	IL&FS	LSI	Solapur	MH	17.890310	75.453361	150+000	252+000	194+600 LHS Inner	1	36.5000	0.4717	0.3046	0.1562	0.1042	0.0686	0.0448	0.0294	27.9	29.1		34.7
	3-5-2023	06:38:33	IL&FS	LSI	Solapur	MH	17.890310	75.453361	150+000	252+000	194+600 LHS Inner	2	36.7000	0.4465	0.2893	0.1635	0.1067	0.0661	0.0524	0.0431	27.9	29.1		34.7
	3-5-2023	06:38:33	IL&FS	LSI	Solapur	MH	17.890310	75.453361	150+000	252+000	194+600 LHS Inner	3	36.8000	0.4900	0.3072	0.1704	0.1067	0.0672	0.0448	0.0298	27.9	29.1		34.7
1379	3-5-2023	06:40:19	IL&FS	LSI	Solapur	MH	17.889041	75.455284	150+000	252+000	194+850 LHS Inner	1	36.4000	0.4735	0.2709	0.1658	0.0987	0.0687	0.0437	0.0312	28.0	29.4		34.7
	3-5-2023	06:40:19	IL&FS	LSI	Solapur	MH	17.889041	75.455284	150+000	252+000	194+850 LHS Inner	2	36.5000	0.4356	0.2721	0.1661	0.0985	0.0625	0.0433	0.0306	28.0	29.4		34.7
	3-5-2023	06:40:19	IL&FS	LSI	Solapur	MH	17.889041	75.455284	150+000	252+000	194+850 LHS Inner	3	36.9000	0.4448	0.2703	0.1739	0.0989	0.0705	0.0443	0.0311	28.0	29.4		34.7
1380	3-5-2023	06:42:16	IL&FS	LSI	Solapur	MH	17.887811	75.457168	150+000	252+000	195+100 LHS Inner	1	38.2000	0.4099	0.2443	0.1451	0.0989	0.0684	0.0475	0.0314	28.1	29.4		34.7
	3-5-2023	06:42:16	IL&FS	LSI	Solapur	MH	17.887811	75.457168	150+000	252+000	195+100 LHS Inner	2	36.7000	0.3971	0.2533	0.1335	0.0934	0.0658	0.0448	0.0293	28.1	29.4		34.7
	3-5-2023	06:42:16	IL&FS	LSI	Solapur	MH	17.887811	75.457168	150+000	252+000	195+100 LHS Inner	3	38.4000	0.4028	0.2433	0.1352	0.0960	0.0691	0.0477	0.0312	28.1	29.4		34.7
1381	3-5-2023	06:44:14	IL&FS	LSI	Solapur	MH	17.886590	75.459114	150+000	252+000	195+350 LHS Inner	1	36.1000	0.5458	0.3342	0.1887	0.1331	0.1079	0.0637	0.0329	28.3	29.7		34.7
	3-5-2023	06:44:14	IL&FS	LSI	Solapur	MH	17.886590	75.459114	150+000	252+000	195+350 LHS Inner	2	36.2000	0.5742	0.3459	0.1919	0.1377	0.0956	0.0568	0.0333	28.3	29.7		34.7
	3-5-2023	06:44:14	IL&FS	LSI	Solapur	MH	17.886590	75.459114	150+000	252+000	195+350 LHS Inner	3	36.3000	0.5249	0.3395	0.1896	0.1286	0.0999	0.0618	0.0319	28.3	29.7		34.7
1382	3-5-2023	06:46:11	IL&FS	LSI	Solapur	MH	17.885654	75.461334	150+000	252+000	195+600 LHS Inner	1	40.5000	0.2034	0.1322	0.0760	0.0490	0.0316	0.0244	0.0175	28.3	29.7		34.7
	3-5-2023	06:46:11	IL&FS	LSI	Solapur	MH	17.885654	75.461334	150+000	252+000	195+600 LHS Inner	2	41.1000	0.1967	0.1321	0.0767	0.0513	0.0331	0.0260	0.0189	28.3	29.7		34.7
	3-5-2023	06:46:11	IL&FS	LSI	Solapur	MH	17.885654	75.461334	150+000	252+000	195+600 LHS Inner	3	41.0000	0.2055	0.1315	0.0756	0.0503	0.0315	0.0243	0.0174	28.3	29.7		34.7
1383	3-5-2023	06:48:06	IL&FS	LSI	Solapur	MH	17.884738	75.463455	150+000	252+000	195+850 LHS Inner	1	38.4000	0.2282	0.1198	0.0658	0.0427	0.0283	0.0234	0.0210	28.2	29.6		34.7
	3-5-2023	06:48:06	IL&FS	LSI	Solapur	MH	17.884738	75.463455	150+000	252+000	195+850 LHS Inner	2	39.2000	0.2415	0.1214	0.0681	0.0443	0.0288	0.0236	0.0212	28.2	29.6		34.7
	3-5-2023	06:48:06	IL&FS	LSI	Solapur	MH	17.884738	75.463455	150+000	252+000	195+850 LHS Inner	3	39.1000	0.2215	0.1088	0.0657	0.0435	0.0288	0.0235	0.0211	28.2	29.6		34.7
1384	3-5-2023	06:50:05	IL&FS	LSI	Solapur	MH	17.883783	75.465736	150+000	252+000	196+100 LHS Inner	1	39.5000	0.2718	0.1384	0.0832	0.0579	0.0385	0.0347	0.0252	28.2	29.9		34.7
	3-5-2023	06:50:05	IL&FS	LSI	Solapur	MH	17.883783	75.465736	150+000	252+000	196+100 LHS Inner	2	39.6000	0.2458	0.1438	0.0745	0.0535	0.0390	0.0346	0.0251	28.2	29.9		34.7
	3-5-2023	06:50:05	IL&FS	LSI	Solapur	MH	17.883783	75.465736	150+000	252+000	196+100 LHS Inner	3	38.5000	0.2693	0.1430	0.0786	0.0533	0.0358	0.0347	0.0252	28.2	29.9		34.7
1385	3-5-2023	06:52:00	IL&FS	LSI	Solapur	MH	17.882932	75.467864	150+000	252+000	196+350 LHS Inner	1	40.6000	0.1117	0.0744	0.0532	0.0403	0.0311	0.0234	0.0187	28.2	30.3		34.7
	3-5-2023	06:52:00	IL&FS	LSI	Solapur	MH	17.882932	75.467864	150+000	252+000	196+350 LHS Inner	2	40.8000	0.1124	0.0728	0.0519	0.0404	0.0329	0.0253	0.0197	28.2	30.3		34.7
	3-5-2023	06:52:00	IL&FS	LSI	Solapur	MH	17.882932	75.467864	150+000	252+000	196+350 LHS Inner	3	40.6000	0.1125	0.0692	0.0525	0.0408	0.0330	0.0254	0.0194	28.2	30.3		34.7
1386	3-5-2023	06:53:49	IL&FS	LSI	Solapur	MH	17.882030	75.470077	150+000	252+000	196+600 LHS Inner	1	38.0000	0.3161	0.1891	0.1257	0.0810	0.0598	0.0443	0.0399	28.4	29.9		34.7
	3-5-2023	06:53:49	IL&FS	LSI	Solapur	MH	17.882030	75.470077	150+000	252+000	196+600 LHS Inner	2	38.6000	0.3115	0.2042	0.1302	0.0828	0.0581	0.0420	0.0378	28.4	29.9		34.7
	3-5-2023	06:53:49	IL&FS	LSI	Solapur	MH	17.882030	75.470077	150+000	252+000	196+600 LHS Inner	3	37.4000	0.3069	0.1971	0.1302	0.0796	0.0593	0.0437	0.0393	28.4	29.9		34.7
1387	3-5-2023	06:55:39	IL&FS	LSI	Solapur	MH	17.881155	75.472137	150+000	252+000	196+850 LHS Inner	1	40.1000	0.2788	0.1446	0.0936	0.0554	0.0407	0.0297	0.0267	28.4	30.4		34.7
	3-5-2023	06:55:39	IL&FS	LSI	Solapur	MH	17.881155	75.472137	150+000	252+000	196+850 LHS Inner	2	40.4000	0.2537	0.1460	0.0928	0.0532	0.0373	0.0272	0.0245	28.4	30.4		34.7
	3-5-2023	06:55:39	IL&FS	LSI	Solapur	MH	17.881155	75.472137	150+000	252+000	196+850 LHS Inner	3	40.2000	0.2682	0.1451	0.0892	0.0545	0.0399	0.0291	0.0262	28.4	30.4		34.7
1388	3-5-2023	06:57:35	IL&FS	LSI	Solapur	MH	17.880176	75.474334	150+000	252+000	197+100 LHS Inner	1	37.9000	0.3214	0.1780	0.1153	0.0671	0.0437	0.0281	0.0188	28.4	29.9		34.7
	3-5-2023	06:57:35	IL&FS	LSI	Solapur	MH	17.880176	75.474334	150+000	252+000	197+100 LHS Inner	2	37.7000	0.3228	0.1780	0.1127	0.0669	0.0450	0.0299	0.0182	28.4	29.9		34.7
	3-5-2023	06:57:35	IL&FS	LSI	Solapur	MH	17.880176	75.474334	150+000	252+000	197+100 LHS Inner	3	37.7000	0.3132	0.1780	0.1125	0.0678	0.0452	0.0281	0.0191	28.4	29.9		34.7
1389	3-5-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.879127	75.476394	150+000	252+000	197+350 LHS Inner	1	36.2000	0.4851	0.2534	0.1347	0.0702	0.0494	0.0322	0.0285	28.7	30.9		34.7
	3-5-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.879127	75.476394	150+000	252+000	197+350 LHS Inner	2	36.5000	0.4806	0.2363	0.1362	0.0703	0.0511	0.0348	0.0317	28.7	30.9		34.7
	3-5-2023	06:59:24	IL&FS	LSI	Solapur	MH	17.879127	75.476394	150+000	252+000	197+350 LHS Inner	3	36.6000	0.4740	0.2509	0.1369	0.0715	0.0482	0.0332	0.0307	28.7	30.9		34.7
1390	3-5-2023	07:01:26	IL&FS	LSI	Solapur	MH	17.877874	75.478752	150+000	252+000	197+630 LHS Inner	1	36.6000	0.4430	0.2909	0.1462	0.0915	0.0578	0.0400	0.0360	28.9	30.6		34.7
	3-5-2023	07:01:26	IL&FS	LSI	Solapur	MH	17.877874	75.478752	150+000	252+000	197+630 LHS Inner	2	37.1000	0.4419	0.2744	0.1460	0.0983	0.0543	0.0395	0.0356	28.9	30.6		34.7
	3-5-2023	07:01:26	IL&FS	LSI	Solapur	MH	17.877874	75.478752	150+000	252+000	197+630 LHS Inner	3	37.3000	0.4515	0.2616	0.1490	0.0877	0.0606	0.0379	0.0341	28.9	30.6		34.7
1391	3-5-2023	07:03:07	IL&FS	LSI	Solapur	MH	17.876773	75.480537	150+000	252+000	197+850 LHS Inner	1	41.1000	0.0956	0.0696	0.0529	0.0348	0.0218	0.0127	0.0100	28.9	30.9		34.7
	3-5-2023	07:03:07	IL&FS	LSI	Solapur	MH	17.876773	75.480537	150+000	252+000	197+850 LHS Inner	2	40.9000	0.0889	0.0678	0.0522	0.0337	0.0208	0.0123	0.0100	28.9	30.9		34.7
	3-5-2023	07:03:07	IL&FS	LSI	Solapur	MH	17.876773	75.480537	150+000	252+000	197+850 LHS Inner	3	41.6000	0.0942	0.0696	0.0511	0.0312	0.0170	0.0113	0.0104	28.9	30.9		34.7
1392	3-5-2023	07:06:20	IL&FS	LSI	Solapur	MH	17.875558	75.482406	150+000	252+000	198+100 LHS Inner	1	42.1000	0.0856	0.0617	0.0438	0.0330	0.0258	0.0181	0.0128	29.1	31.3		34.7
	3-5-2023	07:06:20	IL&FS	LSI	Solapur	MH	17.875558	75.482406	150+000	252+000	198+100 LHS Inner	2	41.6000	0.0857	0.0626	0.0453	0.0333	0.0259	0.0204	0.0162	29.1	31.3		34.7
	3-5-2023	07:06:20	IL&FS	LSI	Solapur	MH	17.875558	75.482406	150+000	252+000	198+100 LHS Inner	3	42.2000	0.0859	0.0638	0.0448	0.0334	0.0259	0.0176	0.0121	29.1	31.3		34.7
1393	3-5-2023	07:09:47	IL&FS	LSI	Solapur	MH	17.874267	75.484413	150+000	252+000	198+350 LHS Inner	1	41.3000	0.0938	0.0720	0.0514	0.0396	0.0321	0.0245	0.0191	29.1	30.7	T-27.5/35.4	35.4
	3-5-2023	07:09:47	IL&FS	LSI	Solapur	MH	17.874267	75.484413	150+000	252+000	198+350 LHS Inner	2	41.9000	0.0940	0.0727	0.0531	0.0408	0.0319	0.0247	0.0192	29.1	30.7	T-27.5/35.4	35.4
	3-5-2023	07:09:47	IL&FS	LSI	Solapur	MH	17.874267	75.484413	150+000	252+000	198+350 LHS Inner	3	42.1000	0.0931	0.0724	0.0534	0.0414	0.0328	0.0252	0.0199	29.1	30.7	T-27.5/35.4	35.4
1394	3-5-2023	07:11:46	IL&FS	LSI	Solapur	MH	17.873073	75.486351	150+000	252+000	198+600 LHS Inner	1	41.1000	0.0960	0.0716	0.0537	0.0371	0.0256	0.0165	0.0100	29.5	31.7		35.4
	3-5-2023	07:11:46	IL&FS	LSI	Solapur	MH	17.873073	75.486351	150+000	252+000	198+600 LHS Inner	2	40.8000	0.0900	0.0681	0.0536	0.0380	0.0259	0.0167	0.0102	29.5	31.7		35.4
	3-5-2023	07:11:46	IL&FS	LSI	Solapur	MH	17.873073	75.486351	150+000	252+000	198+600 LHS Inner	3	40.5000	0.0977	0.0722	0.0527	0.0371	0.0260	0.0163	0.0103	29.5	31.7		35.4
1395	3-5-2023	07:13:31	IL&FS	LSI	Solapur	MH	17.871665	75.488174	150+000	252+000	198+850 LHS Inner	1	38.8000	0.2600	0.1465	0.0760	0.0540	0.0380	0.0280	0.0212	29.7	31.8		35.4
	3-5-2023	07:13:31	IL&FS	LSI	Solapur	MH	17.871665	75.488174	150+000	252+000	198+850 LHS Inner	2	38.7000	0.2407	0.1446	0.0810	0.0547	0.0383	0.0277	0.0207	29.7	31.8		35.4
	3-5-2023	07:13:31	IL&FS	LSI	Solapur	MH	17.871665	75.488174	150+000	252+000	198+850 LHS Inner	3	39.3000	0.2548	0.1450	0.0800	0.0560	0.0385	0.0287	0.0211	29.7	31.8		35.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1396	3-5-2023	07:15:15	IL&FS	LSI	Solapur	MH	17.870052	75.490020	150+000	252+000	199+100 LHS Inner	1	38.2000	0.3938	0.2199	0.1155	0.0814	0.0546	0.0392	0.0276	29.7	32.0		35.4
	3-5-2023	07:15:15	IL&FS	LSI	Solapur	MH	17.870052	75.490020	150+000	252+000	199+100 LHS Inner	2	38.1000	0.3896	0.2410	0.1086	0.0735	0.0513	0.0372	0.0265	29.7	32.0		35.4
	3-5-2023	07:15:15	IL&FS	LSI	Solapur	MH	17.870052	75.490020	150+000	252+000	199+100 LHS Inner	3	37.7000	0.4096	0.2265	0.1093	0.0764	0.0511	0.0360	0.0261	29.7	32.0		35.4
1397	3-5-2023	07:17:26	IL&FS	LSI	Solapur	MH	17.868631	75.491668	150+000	252+000	199+350 LHS Inner	1	41.4000	0.1065	0.0757	0.0590	0.0429	0.0326	0.0279	0.0244	29.7	31.5		35.4
	3-5-2023	07:17:26	IL&FS	LSI	Solapur	MH	17.868631	75.491668	150+000	252+000	199+350 LHS Inner	2	41.5000	0.1039	0.0781	0.0597	0.0432	0.0322	0.0273	0.0243	29.7	31.5		35.4
	3-5-2023	07:17:26	IL&FS	LSI	Solapur	MH	17.868631	75.491668	150+000	252+000	199+350 LHS Inner	3	41.0000	0.1112	0.0750	0.0596	0.0425	0.0308	0.0258	0.0226	29.7	31.5		35.4
1398	3-5-2023	07:19:09	IL&FS	LSI	Solapur	MH	17.867004	75.493598	150+000	252+000	199+600 LHS Inner	1	36.4000	0.4671	0.2740	0.1763	0.1030	0.0660	0.0371	0.0334	30.0	32.4		35.4
	3-5-2023	07:19:09	IL&FS	LSI	Solapur	MH	17.867004	75.493598	150+000	252+000	199+600 LHS Inner	2	36.5000	0.4374	0.2633	0.1709	0.1115	0.0676	0.0387	0.0348	30.0	32.4		35.4
	3-5-2023	07:19:09	IL&FS	LSI	Solapur	MH	17.867004	75.493598	150+000	252+000	199+600 LHS Inner	3	36.5000	0.4359	0.2732	0.1724	0.0992	0.0624	0.0394	0.0355	30.0	32.4		35.4
1399	3-5-2023	07:20:55	IL&FS	LSI	Solapur	MH	17.865512	75.495315	150+000	252+000	199+870 LHS Inner	1	37.1000	0.4396	0.2809	0.1629	0.0892	0.0541	0.0405	0.0364	30.1	32.7		35.4
	3-5-2023	07:20:55	IL&FS	LSI	Solapur	MH	17.865512	75.495315	150+000	252+000	199+870 LHS Inner	2	37.1000	0.4145	0.2922	0.1675	0.0859	0.0548	0.0419	0.0377	30.1	32.7		35.4
	3-5-2023	07:20:55	IL&FS	LSI	Solapur	MH	17.865512	75.495315	150+000	252+000	199+870 LHS Inner	3	37.2000	0.4346	0.2900	0.1658	0.0885	0.0601	0.0432	0.0389	30.1	32.7		35.4
1400	3-5-2023	07:23:23	IL&FS	LSI	Solapur	MH	17.863300	75.497917	150+000	252+000	200+230 LHS Inner	1	37.0000	0.4074	0.2599	0.1597	0.1060	0.0679	0.0385	0.0337	30.2	31.8		35.4
	3-5-2023	07:23:23	IL&FS	LSI	Solapur	MH	17.863300	75.497917	150+000	252+000	200+230 LHS Inner	2	37.4000	0.3912	0.2754	0.1527	0.1015	0.0667	0.0359	0.0316	30.2	31.8		35.4
	3-5-2023	07:23:23	IL&FS	LSI	Solapur	MH	17.863300	75.497917	150+000	252+000	200+230 LHS Inner	3	37.4000	0.3705	0.2740	0.1573	0.1049	0.0673	0.0362	0.0332	30.2	31.8		35.4
1401	3-5-2023	07:25:04	IL&FS	LSI	Solapur	MH	17.862733	75.498771	150+000	252+000	200+350 LHS Inner	1	37.9000	0.3810	0.2380	0.1471	0.0769	0.0491	0.0305	0.0275	30.0	32.6		35.4
	3-5-2023	07:25:04	IL&FS	LSI	Solapur	MH	17.862733	75.498771	150+000	252+000	200+350 LHS Inner	2	37.8000	0.3941	0.2453	0.1442	0.0793	0.0507	0.0288	0.0259	30.0	32.6		35.4
	3-5-2023	07:25:04	IL&FS	LSI	Solapur	MH	17.862733	75.498771	150+000	252+000	200+350 LHS Inner	3	38.1000	0.3585	0.2287	0.1363	0.0794	0.0510	0.0290	0.0261	30.0	32.6		35.4
1402	3-5-2023	07:27:38	IL&FS	LSI	Solapur	MH	17.861425	75.500778	150+000	252+000	200+600 LHS Inner	1	38.6000	0.2993	0.1962	0.1208	0.0650	0.0337	0.0185	0.0167	29.9	31.5		35.4
	3-5-2023	07:27:38	IL&FS	LSI	Solapur	MH	17.861425	75.500778	150+000	252+000	200+600 LHS Inner	2	38.6000	0.3007	0.1846	0.1158	0.0652	0.0345	0.0177	0.0159	29.9	31.5		35.4
	3-5-2023	07:27:38	IL&FS	LSI	Solapur	MH	17.861425	75.500778	150+000	252+000	200+600 LHS Inner	3	38.8000	0.2873	0.1732	0.1074	0.0646	0.0376	0.0186	0.0167	29.9	31.5		35.4
1403	3-5-2023	07:29:39	IL&FS	LSI	Solapur	MH	17.860166	75.502609	150+000	252+000	200+850 LHS Inner	1	38.2000	0.3747	0.1751	0.0966	0.0675	0.0499	0.0362	0.0326	29.8	32.0		35.4
	3-5-2023	07:29:39	IL&FS	LSI	Solapur	MH	17.860166	75.502609	150+000	252+000	200+850 LHS Inner	2	38.4000	0.3566	0.1800	0.0896	0.0676	0.0493	0.0369	0.0332	29.8	32.0		35.4
	3-5-2023	07:29:39	IL&FS	LSI	Solapur	MH	17.860166	75.502609	150+000	252+000	200+850 LHS Inner	3	38.5000	0.3875	0.1745	0.0955	0.0676	0.0487	0.0366	0.0329	29.8	32.0		35.4
1404	3-5-2023	07:31:33	IL&FS	LSI	Solapur	MH	17.858812	75.504684	150+000	252+000	201+110 LHS Inner	1	36.6000	0.5613	0.2786	0.1390	0.0614	0.0420	0.0276	0.0183	29.9	32.5		35.4
	3-5-2023	07:31:33	IL&FS	LSI	Solapur	MH	17.858812	75.504684	150+000	252+000	201+110 LHS Inner	2	36.1000	0.5169	0.2915	0.1399	0.0592	0.0414	0.0280	0.0183	29.9	32.5		35.4
	3-5-2023	07:31:33	IL&FS	LSI	Solapur	MH	17.858812	75.504684	150+000	252+000	201+110 LHS Inner	3	36.5000	0.5292	0.2869	0.1387	0.0574	0.0420	0.0287	0.0183	29.9	32.5		35.4
1405	3-5-2023	07:33:29	IL&FS	LSI	Solapur	MH	17.857503	75.506561	150+000	252+000	201+350 LHS Inner	1	37.5000	0.3602	0.2244	0.1421	0.0862	0.0466	0.0324	0.0228	30.1	32.9		35.4
	3-5-2023	07:33:29	IL&FS	LSI	Solapur	MH	17.857503	75.506561	150+000	252+000	201+350 LHS Inner	2	38.3000	0.3669	0.2192	0.1371	0.0848	0.0511	0.0335	0.0223	30.1	32.9		35.4
	3-5-2023	07:33:29	IL&FS	LSI	Solapur	MH	17.857503	75.506561	150+000	252+000	201+350 LHS Inner	3	37.9000	0.3643	0.2279	0.1278	0.0819	0.0490	0.0332	0.0230	30.1	32.9		35.4
1406	3-5-2023	07:35:14	IL&FS	LSI	Solapur	MH	17.856260	75.508445	150+000	252+000	201+600 LHS Inner	1	40.2000	0.3274	0.1533	0.0914	0.0524	0.0390	0.0289	0.0260	30.2	33.2		35.4
	3-5-2023	07:35:14	IL&FS	LSI	Solapur	MH	17.856260	75.508445	150+000	252+000	201+600 LHS Inner	2	40.2000	0.3021	0.1575	0.0958	0.0540	0.0397	0.0297	0.0267	30.2	33.2		35.4
	3-5-2023	07:35:14	IL&FS	LSI	Solapur	MH	17.856260	75.508445	150+000	252+000	201+600 LHS Inner	3	40.8000	0.3144	0.1553	0.0948	0.0512	0.0376	0.0290	0.0261	30.2	33.2		35.4
1407	3-5-2023	07:37:10	IL&FS	LSI	Solapur	MH	17.855382	75.510635	150+000	252+000	201+850 LHS Inner	1	39.2000	0.2325	0.1398	0.0815	0.0557	0.0375	0.0347	0.0326	30.3	33.3		35.4
	3-5-2023	07:37:10	IL&FS	LSI	Solapur	MH	17.855382	75.510635	150+000	252+000	201+850 LHS Inner	2	39.2000	0.2189	0.1397	0.0842	0.0568	0.0368	0.0340	0.0322	30.3	33.3		35.4
	3-5-2023	07:37:10	IL&FS	LSI	Solapur	MH	17.855382	75.510635	150+000	252+000	201+850 LHS Inner	3	39.8000	0.2363	0.1378	0.0784	0.0518	0.0343	0.0318	0.0300	30.3	33.3		35.4
1408	3-5-2023	07:39:04	IL&FS	LSI	Solapur	MH	17.854530	75.512786	150+000	252+000	202+100 LHS Inner	1	40.6000	0.1817	0.0915	0.0574	0.0431	0.0343	0.0253	0.0185	30.4	33.3		35.4
	3-5-2023	07:39:04	IL&FS	LSI	Solapur	MH	17.854530	75.512786	150+000	252+000	202+100 LHS Inner	2	40.4000	0.1662	0.0889	0.0546	0.0409	0.0319	0.0236	0.0180	30.4	33.3		35.4
	3-5-2023	07:39:04	IL&FS	LSI	Solapur	MH	17.854530	75.512786	150+000	252+000	202+100 LHS Inner	3	40.4000	0.1632	0.0972	0.0583	0.0440	0.0343	0.0245	0.0182	30.4	33.3		35.4
1409	3-5-2023	07:40:58	IL&FS	LSI	Solapur	MH	17.853599	75.515151	150+000	252+000	202+370 LHS Inner	1	38.0000	0.2933	0.1700	0.0900	0.0591	0.0394	0.0295	0.0267	30.4	33.6		35.4
	3-5-2023	07:40:58	IL&FS	LSI	Solapur	MH	17.853599	75.515151	150+000	252+000	202+370 LHS Inner	2	38.2000	0.2646	0.1763	0.0933	0.0606	0.0402	0.0301	0.0263	30.4	33.6		35.4
	3-5-2023	07:40:58	IL&FS	LSI	Solapur	MH	17.853599	75.515151	150+000	252+000	202+370 LHS Inner	3	38.0000	0.2957	0.1811	0.0918	0.0623	0.0397	0.0306	0.0268	30.4	33.6		35.4
1410	3-5-2023	07:42:55	IL&FS	LSI	Solapur	MH	17.852785	75.517234	150+000	252+000	202+600 LHS Inner	1	36.3000	0.4903	0.2863	0.1395	0.0883	0.0555	0.0409	0.0319	30.3	33.3		35.4
	3-5-2023	07:42:55	IL&FS	LSI	Solapur	MH	17.852785	75.517234	150+000	252+000	202+600 LHS Inner	2	36.2000	0.5114	0.2749	0.1392	0.0900	0.0547	0.0399	0.0297	30.3	33.3		35.4
	3-5-2023	07:42:55	IL&FS	LSI	Solapur	MH	17.852785	75.517234	150+000	252+000	202+600 LHS Inner	3	36.1000	0.4819	0.2790	0.1397	0.0872	0.0547	0.0415	0.0325	30.3	33.3		35.4
1411	3-5-2023	07:44:53	IL&FS	LSI	Solapur	MH	17.851921	75.519386	150+000	252+000	202+850 LHS Inner	1	40.4000	0.1931	0.1145	0.0738	0.0523	0.0375	0.0270	0.0204	30.3	33.8		35.4
	3-5-2023	07:44:53	IL&FS	LSI	Solapur	MH	17.851921	75.519386	150+000	252+000	202+850 LHS Inner	2	40.1000	0.1993	0.1153	0.0748	0.0579	0.0398	0.0281	0.0195	30.3	33.8		35.4
	3-5-2023	07:44:53	IL&FS	LSI	Solapur	MH	17.851921	75.519386	150+000	252+000	202+850 LHS Inner	3	40.4000	0.2103	0.1145	0.0800	0.0547	0.0378	0.0265	0.0188	30.3	33.8		35.4
1412	3-5-2023	07:46:45	IL&FS	LSI	Solapur	MH	17.851003	75.521690	150+000	252+000	203+110 LHS Inner	1	37.7000	0.4061	0.2401	0.1427	0.0796	0.0541	0.0357	0.0274	30.5	33.7		35.4
	3-5-2023	07:46:45	IL&FS	LSI	Solapur	MH	17.851003	75.521690	150+000	252+000	203+110 LHS Inner	2	38.2000	0.4128	0.2353	0.1358	0.0786	0.0529	0.0350	0.0290	30.5	33.7		35.4
	3-5-2023	07:46:45	IL&FS	LSI	Solapur	MH	17.851003	75.521690	150+000	252+000	203+110 LHS Inner	3	38.1000	0.3873	0.2440	0.1357	0.0808	0.0535	0.0351	0.0287	30.5	33.7		35.4
1413	3-5-2023	07:48:26	IL&FS	LSI	Solapur	MH	17.850223	75.523773	150+000	252+000	203+350 LHS Inner	1	40.7000	0.1980	0.1106	0.0591	0.0468	0.0377	0.0323	0.0290	30.7	34.1		35.4
	3-5-2023	07:48:26	IL&FS	LSI	Solapur	MH	17.850223	75.523773	150+000	252+000	203+350 LHS Inner	2	40.8000	0.2110	0.1111	0.0634	0.0490	0.0379	0.0321	0.0289	30.7	34.1		35.4
	3-5-2023	07:48:26	IL&FS	LSI	Solapur	MH	17.850223	75.523773	150+000	252+000	203+350 LHS Inner	3	40.8000	0.1936	0.1113	0.0579	0.0465	0.0381	0.0327	0.0294	30.7	34.1		35.4
1414	3-5-2023	07:53:04	IL&FS	LSI	Solapur	MH	17.849449	75.525955	150+000	252+000	203+600 LHS Inner	1	40.3000	0.1693	0.1055	0.0591	0.0382	0.0240	0.0149	0.0134	30.6	33.1	T-29.5/38.3	38.3
	3-5-2023	07:53:04	IL&FS	LSI	Solapur	MH	17.849449	75.525955	150+000	252+000	203+600 LHS Inner	2	40.1000	0.1510	0.1058	0.0620	0.0403	0.0247	0.0151	0.0136	30.6	33.1	T-29.5/38.3	38.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	07:53:04	IL&FS	LSI	Solapur	MH	17.849449	75.525955	150+000	252+000	203+600 LHS Inner	3	40.2000	0.1634	0.1055	0.0587	0.0376	0.0248	0.0151	0.0136	30.6	33.1	T-29.5/38.3	38.3
1415	3-5-2023	07:55:05	IL&FS	LSI	Solapur	MH	17.848615	75.528282	150+000	252+000	203+850 LHS Inner	1	39.3000	0.3144	0.1788	0.1234	0.0809	0.0490	0.0275	0.0248	31.0	34.5		38.3
	3-5-2023	07:55:05	IL&FS	LSI	Solapur	MH	17.848615	75.528282	150+000	252+000	203+850 LHS Inner	2	39.2000	0.2924	0.1620	0.1051	0.0631	0.0429	0.0280	0.0252	31.0	34.5		38.3
	3-5-2023	07:55:05	IL&FS	LSI	Solapur	MH	17.848615	75.528282	150+000	252+000	203+850 LHS Inner	3	39.5000	0.3053	0.1670	0.1077	0.0652	0.0446	0.0295	0.0266	31.0	34.5		38.3
1416	3-5-2023	07:56:50	IL&FS	LSI	Solapur	MH	17.847927	75.530441	150+000	252+000	204+100 LHS Inner	1	41.2000	0.2484	0.1280	0.0855	0.0572	0.0357	0.0292	0.0209	31.0	34.7		38.3
	3-5-2023	07:56:50	IL&FS	LSI	Solapur	MH	17.847927	75.530441	150+000	252+000	204+100 LHS Inner	2	40.9000	0.2307	0.1316	0.0859	0.0569	0.0354	0.0281	0.0199	31.0	34.7		38.3
	3-5-2023	07:56:50	IL&FS	LSI	Solapur	MH	17.847927	75.530441	150+000	252+000	204+100 LHS Inner	3	43.1000	0.2563	0.1306	0.0864	0.0592	0.0373	0.0301	0.0217	31.0	34.7		38.3
1417	3-5-2023	07:58:36	IL&FS	LSI	Solapur	MH	17.847564	75.532722	150+000	252+000	204+350 LHS Inner	1	39.1000	0.1689	0.0953	0.0654	0.0530	0.0439	0.0320	0.0238	30.9	34.9		38.3
	3-5-2023	07:58:36	IL&FS	LSI	Solapur	MH	17.847564	75.532722	150+000	252+000	204+350 LHS Inner	2	39.3000	0.1610	0.1034	0.0714	0.0500	0.0417	0.0304	0.0226	30.9	34.9		38.3
	3-5-2023	07:58:36	IL&FS	LSI	Solapur	MH	17.847564	75.532722	150+000	252+000	204+350 LHS Inner	3	39.4000	0.1555	0.0957	0.0638	0.0540	0.0470	0.0338	0.0254	30.9	34.9		38.3
1418	3-5-2023	08:00:29	IL&FS	LSI	Solapur	MH	17.847211	75.535224	150+000	252+000	204+620 LHS Inner	1	39.4000	0.1267	0.0788	0.0546	0.0391	0.0296	0.0206	0.0139	31.0	34.9		38.3
	3-5-2023	08:00:29	IL&FS	LSI	Solapur	MH	17.847211	75.535224	150+000	252+000	204+620 LHS Inner	2	39.6000	0.1257	0.0796	0.0564	0.0403	0.0296	0.0201	0.0138	31.0	34.9		38.3
	3-5-2023	08:00:29	IL&FS	LSI	Solapur	MH	17.847211	75.535224	150+000	252+000	204+620 LHS Inner	3	39.7000	0.1160	0.0789	0.0555	0.0403	0.0311	0.0209	0.0135	31.0	34.9		38.3
1419	3-5-2023	08:02:32	IL&FS	LSI	Solapur	MH	17.846815	75.537635	150+000	252+000	204+850 LHS Inner	1	43.1000	0.3768	0.2089	0.1166	0.0748	0.0421	0.0307	0.0276	31.1	34.8		38.3
	3-5-2023	08:02:32	IL&FS	LSI	Solapur	MH	17.846815	75.537635	150+000	252+000	204+850 LHS Inner	2	42.8000	0.3463	0.1890	0.1138	0.0684	0.0397	0.0308	0.0277	31.1	34.8		38.3
	3-5-2023	08:02:32	IL&FS	LSI	Solapur	MH	17.846815	75.537635	150+000	252+000	204+850 LHS Inner	3	42.7000	0.3496	0.2081	0.1158	0.0725	0.0412	0.0295	0.0266	31.1	34.8		38.3
1420	3-5-2023	08:05:35	IL&FS	LSI	Solapur	MH	17.846473	75.539787	150+000	252+000	205+100 LHS Inner	1	39.3000	0.4291	0.2182	0.1045	0.0696	0.0429	0.0364	0.0327	31.5	35.4		38.3
	3-5-2023	08:05:35	IL&FS	LSI	Solapur	MH	17.846473	75.539787	150+000	252+000	205+100 LHS Inner	2	38.1000	0.4130	0.2121	0.1040	0.0694	0.0450	0.0364	0.0327	31.5	35.4		38.3
	3-5-2023	08:05:35	IL&FS	LSI	Solapur	MH	17.846473	75.539787	150+000	252+000	205+100 LHS Inner	3	38.1000	0.3970	0.2110	0.1095	0.0678	0.0412	0.0341	0.0307	31.5	35.4		38.3
1421	3-5-2023	08:07:17	IL&FS	LSI	Solapur	MH	17.846103	75.542106	150+000	252+000	205+350 LHS Inner	1	37.4000	0.4178	0.2636	0.1814	0.1184	0.0840	0.0539	0.0424	31.4	35.8		38.3
	3-5-2023	08:07:17	IL&FS	LSI	Solapur	MH	17.846103	75.542106	150+000	252+000	205+350 LHS Inner	2	37.5000	0.4106	0.2536	0.1733	0.1125	0.0843	0.0503	0.0384	31.4	35.8		38.3
	3-5-2023	08:07:17	IL&FS	LSI	Solapur	MH	17.846103	75.542106	150+000	252+000	205+350 LHS Inner	3	37.7000	0.4341	0.2632	0.1784	0.1155	0.0778	0.0491	0.0407	31.4	35.8		38.3
1422	3-5-2023	08:08:59	IL&FS	LSI	Solapur	MH	17.845508	75.544311	150+000	252+000	205+600 LHS Inner	1	38.7000	0.2947	0.1708	0.0831	0.0498	0.0343	0.0237	0.0213	31.4	35.0		38.3
	3-5-2023	08:08:59	IL&FS	LSI	Solapur	MH	17.845508	75.544311	150+000	252+000	205+600 LHS Inner	2	40.2000	0.3077	0.1758	0.0879	0.0516	0.0352	0.0241	0.0216	31.4	35.0		38.3
	3-5-2023	08:08:59	IL&FS	LSI	Solapur	MH	17.845508	75.544311	150+000	252+000	205+600 LHS Inner	3	38.9000	0.2960	0.1629	0.0785	0.0476	0.0329	0.0232	0.0209	31.4	35.0		38.3
1423	3-5-2023	08:10:52	IL&FS	LSI	Solapur	MH	17.844940	75.546592	150+000	252+000	205+850 LHS Inner	1	41.6000	0.2463	0.1303	0.0804	0.0616	0.0484	0.0425	0.0381	31.1	35.0		38.3
	3-5-2023	08:10:52	IL&FS	LSI	Solapur	MH	17.844940	75.546592	150+000	252+000	205+850 LHS Inner	2	40.0000	0.2371	0.1257	0.0822	0.0602	0.0466	0.0406	0.0364	31.1	35.0		38.3
	3-5-2023	08:10:52	IL&FS	LSI	Solapur	MH	17.844940	75.546592	150+000	252+000	205+850 LHS Inner	3	41.4000	0.2468	0.1294	0.0866	0.0625	0.0474	0.0416	0.0375	31.1	35.0		38.3
1424	3-5-2023	08:12:56	IL&FS	LSI	Solapur	MH	17.844381	75.548866	150+000	252+000	206+100 LHS Inner	1	39.1000	0.3603	0.2055	0.1122	0.0726	0.0504	0.0491	0.0441	31.1	35.3		38.3
	3-5-2023	08:12:56	IL&FS	LSI	Solapur	MH	17.844381	75.548866	150+000	252+000	206+100 LHS Inner	2	39.3000	0.3431	0.2076	0.1146	0.0708	0.0513	0.0494	0.0444	31.1	35.3		38.3
	3-5-2023	08:12:56	IL&FS	LSI	Solapur	MH	17.844381	75.548866	150+000	252+000	206+100 LHS Inner	3	39.0000	0.3311	0.2031	0.1061	0.0713	0.0513	0.0510	0.0459	31.1	35.3		38.3
1425	3-5-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.843761	75.551460	150+000	252+000	206+380 LHS Inner	1	40.3000	0.1896	0.1226	0.0905	0.0708	0.0562	0.0456	0.0383	31.6	35.8		38.3
	3-5-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.843761	75.551460	150+000	252+000	206+380 LHS Inner	2	40.6000	0.1804	0.1274	0.0919	0.0666	0.0533	0.0440	0.0369	31.6	35.8		38.3
	3-5-2023	08:16:14	IL&FS	LSI	Solapur	MH	17.843761	75.551460	150+000	252+000	206+380 LHS Inner	3	40.8000	0.1899	0.1253	0.0907	0.0685	0.0552	0.0454	0.0386	31.6	35.8		38.3
1426	3-5-2023	08:18:08	IL&FS	LSI	Solapur	MH	17.843214	75.553489	150+000	252+000	206+600 LHS Inner	1	39.7000	0.1698	0.1123	0.0766	0.0540	0.0380	0.0275	0.0248	31.7	36.0		38.3
	3-5-2023	08:18:08	IL&FS	LSI	Solapur	MH	17.843214	75.553489	150+000	252+000	206+600 LHS Inner	2	41.2000	0.1651	0.1117	0.0732	0.0510	0.0378	0.0275	0.0248	31.7	36.0		38.3
	3-5-2023	08:18:08	IL&FS	LSI	Solapur	MH	17.843214	75.553489	150+000	252+000	206+600 LHS Inner	3	41.6000	0.1718	0.1224	0.0713	0.0510	0.0382	0.0283	0.0255	31.7	36.0		38.3
1427	3-5-2023	08:20:12	IL&FS	LSI	Solapur	MH	17.842632	75.555862	150+000	252+000	206+860 LHS Inner	1	39.8000	0.2348	0.1252	0.0685	0.0416	0.0260	0.0191	0.0148	31.7	36.8		38.3
	3-5-2023	08:20:12	IL&FS	LSI	Solapur	MH	17.842632	75.555862	150+000	252+000	206+860 LHS Inner	2	40.0000	0.2360	0.1262	0.0759	0.0409	0.0257	0.0193	0.0144	31.7	36.8		38.3
	3-5-2023	08:20:12	IL&FS	LSI	Solapur	MH	17.842632	75.555862	150+000	252+000	206+860 LHS Inner	3	39.7000	0.2342	0.1122	0.0734	0.0416	0.0245	0.0186	0.0144	31.7	36.8		38.3
1428	3-5-2023	08:22:04	IL&FS	LSI	Solapur	MH	17.842082	75.558082	150+000	252+000	207+100 LHS Inner	1	38.0000	0.4500	0.2230	0.1309	0.0888	0.0576	0.0450	0.0346	32.1	36.9		38.3
	3-5-2023	08:22:04	IL&FS	LSI	Solapur	MH	17.842082	75.558082	150+000	252+000	207+100 LHS Inner	2	38.6000	0.4437	0.2054	0.1251	0.0855	0.0604	0.0478	0.0357	32.1	36.9		38.3
	3-5-2023	08:22:04	IL&FS	LSI	Solapur	MH	17.842082	75.558082	150+000	252+000	207+100 LHS Inner	3	38.8000	0.4193	0.2092	0.1245	0.0848	0.0554	0.0456	0.0345	32.1	36.9		38.3
1429	3-5-2023	08:24:26	IL&FS	LSI	Solapur	MH	17.841602	75.560455	150+000	252+000	207+350 LHS Inner	1	36.7000	0.4014	0.2550	0.1276	0.0794	0.0517	0.0318	0.0190	32.3	37.8		38.3
	3-5-2023	08:24:26	IL&FS	LSI	Solapur	MH	17.841602	75.560455	150+000	252+000	207+350 LHS Inner	2	38.2000	0.4018	0.2635	0.1308	0.0791	0.0511	0.0339	0.0197	32.3	37.8		38.3
	3-5-2023	08:24:26	IL&FS	LSI	Solapur	MH	17.841602	75.560455	150+000	252+000	207+350 LHS Inner	3	38.3000	0.4083	0.2497	0.1360	0.0797	0.0524	0.0341	0.0190	32.3	37.8		38.3
1430	3-5-2023	08:26:24	IL&FS	LSI	Solapur	MH	17.841808	75.562721	150+000	252+000	207+600 LHS Inner	1	41.0000	0.2158	0.1194	0.0729	0.0425	0.0309	0.0225	0.0203	32.3	36.8		38.3
	3-5-2023	08:26:24	IL&FS	LSI	Solapur	MH	17.841808	75.562721	150+000	252+000	207+600 LHS Inner	2	40.3000	0.2131	0.1110	0.0696	0.0410	0.0306	0.0229	0.0206	32.3	36.8		38.3
	3-5-2023	08:26:24	IL&FS	LSI	Solapur	MH	17.841808	75.562721	150+000	252+000	207+600 LHS Inner	3	39.8000	0.2072	0.1247	0.0730	0.0408	0.0310	0.0238	0.0214	32.3	36.8		38.3
1431	3-5-2023	08:30:11	IL&FS	LSI	Solapur	MH	17.842008	75.565109	150+000	252+000	207+850 LHS Inner	1	38.6000	0.3716	0.2424	0.1366	0.0958	0.0652	0.0465	0.0319	32.1	36.3	T-30.9/41.3	41.3
	3-5-2023	08:30:11	IL&FS	LSI	Solapur	MH	17.842008	75.565109	150+000	252+000	207+850 LHS Inner	2	38.7000	0.3906	0.2323	0.1313	0.0949	0.0667	0.0461	0.0320	32.1	36.3	T-30.9/41.3	41.3
	3-5-2023	08:30:11	IL&FS	LSI	Solapur	MH	17.842008	75.565109	150+000	252+000	207+850 LHS Inner	3	38.9000	0.3694	0.2252	0.1325	0.0959	0.0680	0.0463	0.0321	32.1	36.3	T-30.9/41.3	41.3
1432	3-5-2023	08:32:40	IL&FS	LSI	Solapur	MH	17.842220	75.567825	150+000	252+000	208+150 LHS Inner	1	39.1000	0.3965	0.2192	0.1248	0.0840	0.0568	0.0422	0.0286	32.2	37.2		41.3
	3-5-2023	08:32:40	IL&FS	LSI	Solapur	MH	17.842220	75.567825	150+000	252+000	208+150 LHS Inner	2	39.0000	0.3899	0.2154	0.1231	0.0769	0.0527	0.0398	0.0283	32.2	37.2		41.3
	3-5-2023	08:32:40	IL&FS	LSI	Solapur	MH	17.842220	75.567825	150+000	252+000	208+150 LHS Inner	3	39.2000	0.3881	0.2294	0.1246	0.0838	0.0503	0.0398	0.0310	32.2	37.2		41.3
1433	3-5-2023	08:34:28	IL&FS	LSI	Solapur	MH	17.842296	75.569671	150+000	252+000	208+350 LHS Inner	1	41.2000	0.1614	0.0980	0.0640	0.0450	0.0305	0.0232	0.0181	32.3	37.3		41.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	08:34:28	IL&FS	LSI	Solapur	MH	17.842296	75.569671	150+000	252+000	208+350 LHS Inner	2	39.8000	0.1605	0.0952	0.0607	0.0414	0.0290	0.0216	0.0168	32.3	37.3		41.3
	3-5-2023	08:34:28	IL&FS	LSI	Solapur	MH	17.842296	75.569671	150+000	252+000	208+350 LHS Inner	3	39.9000	0.1647	0.0902	0.0597	0.0436	0.0316	0.0237	0.0186	32.3	37.3		41.3
1434	3-5-2023	08:36:29	IL&FS	LSI	Solapur	MH	17.841840	75.572227	150+000	252+000	208+620 LHS Inner	1	40.7000	0.2919	0.1526	0.0760	0.0512	0.0322	0.0242	0.0188	32.3	37.3		41.3
	3-5-2023	08:36:29	IL&FS	LSI	Solapur	MH	17.841840	75.572227	150+000	252+000	208+620 LHS Inner	2	39.1000	0.3011	0.1407	0.0658	0.0441	0.0285	0.0209	0.0151	32.3	37.3		41.3
	3-5-2023	08:36:29	IL&FS	LSI	Solapur	MH	17.841840	75.572227	150+000	252+000	208+620 LHS Inner	3	40.6000	0.2843	0.1400	0.0728	0.0454	0.0280	0.0199	0.0145	32.3	37.3		41.3
1435	3-5-2023	08:38:28	IL&FS	LSI	Solapur	MH	17.841510	75.574478	150+000	252+000	208+850 LHS Inner	1	40.1000	0.2148	0.1031	0.0567	0.0403	0.0279	0.0178	0.0113	32.2	38.3		41.3
	3-5-2023	08:38:28	IL&FS	LSI	Solapur	MH	17.841510	75.574478	150+000	252+000	208+850 LHS Inner	2	40.4000	0.2157	0.1024	0.0565	0.0434	0.0292	0.0187	0.0114	32.2	38.3		41.3
	3-5-2023	08:38:28	IL&FS	LSI	Solapur	MH	17.841510	75.574478	150+000	252+000	208+850 LHS Inner	3	40.3000	0.2140	0.1058	0.0558	0.0416	0.0287	0.0195	0.0124	32.2	38.3		41.3
1436	3-5-2023	08:40:19	IL&FS	LSI	Solapur	MH	17.841125	75.576766	150+000	252+000	209+100 LHS Inner	1	36.6000	0.1650	0.0877	0.0457	0.0299	0.0206	0.0137	0.0104	32.4	38.2		41.3
	3-5-2023	08:40:19	IL&FS	LSI	Solapur	MH	17.841125	75.576766	150+000	252+000	209+100 LHS Inner	2	36.3000	0.1713	0.0795	0.0401	0.0301	0.0192	0.0136	0.0086	32.4	38.2		41.3
	3-5-2023	08:40:19	IL&FS	LSI	Solapur	MH	17.841125	75.576766	150+000	252+000	209+100 LHS Inner	3	36.4000	0.1677	0.0819	0.0433	0.0285	0.0189	0.0135	0.0088	32.4	38.2		41.3
1437	3-5-2023	08:42:15	IL&FS	LSI	Solapur	MH	17.840717	75.579063	150+000	252+000	209+350 LHS Inner	1	40.1000	0.1752	0.0929	0.0586	0.0336	0.0195	0.0141	0.0102	32.4	39.0		41.3
	3-5-2023	08:42:15	IL&FS	LSI	Solapur	MH	17.840717	75.579063	150+000	252+000	209+350 LHS Inner	2	40.5000	0.1787	0.0932	0.0579	0.0338	0.0197	0.0142	0.0104	32.4	39.0		41.3
	3-5-2023	08:42:15	IL&FS	LSI	Solapur	MH	17.840717	75.579063	150+000	252+000	209+350 LHS Inner	3	40.5000	0.1662	0.0920	0.0578	0.0338	0.0197	0.0139	0.0104	32.4	39.0		41.3
1438	3-5-2023	08:44:06	IL&FS	LSI	Solapur	MH	17.840185	75.581420	150+000	252+000	209+600 LHS Inner	1	39.7000	0.2492	0.1348	0.0869	0.0543	0.0470	0.0416	0.0396	32.5	36.7		41.3
	3-5-2023	08:44:06	IL&FS	LSI	Solapur	MH	17.840185	75.581420	150+000	252+000	209+600 LHS Inner	2	39.9000	0.2666	0.1359	0.0885	0.0550	0.0463	0.0399	0.0370	32.5	36.7		41.3
	3-5-2023	08:44:06	IL&FS	LSI	Solapur	MH	17.840185	75.581420	150+000	252+000	209+600 LHS Inner	3	39.9000	0.2652	0.1275	0.0857	0.0531	0.0446	0.0389	0.0350	32.5	36.7		41.3
1439	3-5-2023	08:45:59	IL&FS	LSI	Solapur	MH	17.839361	75.583650	150+000	252+000	209+850 LHS Inner	1	41.4000	0.0926	0.0642	0.0453	0.0320	0.0186	0.0142	0.0114	32.6	39.5		41.3
	3-5-2023	08:45:59	IL&FS	LSI	Solapur	MH	17.839361	75.583650	150+000	252+000	209+850 LHS Inner	2	43.4000	0.0903	0.0654	0.0469	0.0333	0.0196	0.0150	0.0115	32.6	39.5		41.3
	3-5-2023	08:45:59	IL&FS	LSI	Solapur	MH	17.839361	75.583650	150+000	252+000	209+850 LHS Inner	3	43.5000	0.0925	0.0654	0.0475	0.0341	0.0207	0.0151	0.0116	32.6	39.5		41.3
1440	3-5-2023	08:47:45	IL&FS	LSI	Solapur	MH	17.838596	75.585700	150+000	252+000	210+100 LHS Inner	1	41.3000	0.0874	0.0616	0.0430	0.0355	0.0299	0.0245	0.0206	33.0	39.2		41.3
	3-5-2023	08:47:45	IL&FS	LSI	Solapur	MH	17.838596	75.585700	150+000	252+000	210+100 LHS Inner	2	41.9000	0.0879	0.0626	0.0461	0.0364	0.0304	0.0245	0.0209	33.0	39.2		41.3
	3-5-2023	08:47:45	IL&FS	LSI	Solapur	MH	17.838596	75.585700	150+000	252+000	210+100 LHS Inner	3	40.6000	0.0782	0.0576	0.0437	0.0344	0.0273	0.0235	0.0212	33.0	39.2		41.3
1441	3-5-2023	08:49:45	IL&FS	LSI	Solapur	MH	17.837778	75.587936	150+000	252+000	210+350 LHS Inner	1	41.3000	0.3596	0.1903	0.1255	0.0792	0.0607	0.0470	0.0363	32.9	38.7		41.3
	3-5-2023	08:49:45	IL&FS	LSI	Solapur	MH	17.837778	75.587936	150+000	252+000	210+350 LHS Inner	2	41.2000	0.3511	0.1906	0.1287	0.0818	0.0603	0.0466	0.0359	32.9	38.7		41.3
	3-5-2023	08:49:45	IL&FS	LSI	Solapur	MH	17.837778	75.587936	150+000	252+000	210+350 LHS Inner	3	40.4000	0.3675	0.1860	0.1267	0.0814	0.0586	0.0440	0.0336	32.9	38.7		41.3
1442	3-5-2023	08:51:39	IL&FS	LSI	Solapur	MH	17.836896	75.590255	150+000	252+000	210+620 LHS Inner	1	36.0000	0.6503	0.3576	0.2023	0.1203	0.0691	0.0464	0.0292	32.9	39.9		41.3
	3-5-2023	08:51:39	IL&FS	LSI	Solapur	MH	17.836896	75.590255	150+000	252+000	210+620 LHS Inner	2	36.8000	0.6429	0.3492	0.2018	0.1250	0.0740	0.0531	0.0367	32.9	39.9		41.3
	3-5-2023	08:51:39	IL&FS	LSI	Solapur	MH	17.836896	75.590255	150+000	252+000	210+620 LHS Inner	3	36.2000	0.6473	0.3542	0.2015	0.1290	0.0725	0.0494	0.0317	32.9	39.9		41.3
1443	3-5-2023	08:53:31	IL&FS	LSI	Solapur	MH	17.836122	75.592422	150+000	252+000	210+850 LHS Inner	1	39.0000	0.2062	0.1210	0.0713	0.0483	0.0366	0.0276	0.0203	33.1	39.5		41.3
	3-5-2023	08:53:31	IL&FS	LSI	Solapur	MH	17.836122	75.592422	150+000	252+000	210+850 LHS Inner	2	40.7000	0.2158	0.1227	0.0668	0.0457	0.0376	0.0317	0.0240	33.1	39.5		41.3
	3-5-2023	08:53:31	IL&FS	LSI	Solapur	MH	17.836122	75.592422	150+000	252+000	210+850 LHS Inner	3	40.8000	0.2056	0.1211	0.0673	0.0502	0.0377	0.0289	0.0215	33.1	39.5		41.3
1444	3-5-2023	08:56:01	IL&FS	LSI	Solapur	MH	17.835199	75.594856	150+000	252+000	211+130 LHS Inner	1	41.1000	0.3138	0.1489	0.0861	0.0598	0.0393	0.0235	0.0124	33.0	38.8		41.3
	3-5-2023	08:56:01	IL&FS	LSI	Solapur	MH	17.835199	75.594856	150+000	252+000	211+130 LHS Inner	2	41.4000	0.2972	0.1358	0.0888	0.0538	0.0283	0.0188	0.0124	33.0	38.8		41.3
	3-5-2023	08:56:01	IL&FS	LSI	Solapur	MH	17.835199	75.594856	150+000	252+000	211+130 LHS Inner	3	41.6000	0.2910	0.1496	0.0909	0.0601	0.0409	0.0249	0.0125	33.0	38.8		41.3
1445	3-5-2023	08:58:25	IL&FS	LSI	Solapur	MH	17.834384	75.597030	150+000	252+000	211+380 LHS Inner	1	40.3000	0.2301	0.1309	0.0885	0.0568	0.0380	0.0237	0.0141	33.0	37.9		41.3
	3-5-2023	08:58:25	IL&FS	LSI	Solapur	MH	17.834384	75.597030	150+000	252+000	211+380 LHS Inner	2	40.4000	0.2322	0.1361	0.0922	0.0610	0.0392	0.0235	0.0140	33.0	37.9		41.3
	3-5-2023	08:58:25	IL&FS	LSI	Solapur	MH	17.834384	75.597030	150+000	252+000	211+380 LHS Inner	3	40.1000	0.2229	0.1374	0.0928	0.0584	0.0380	0.0231	0.0135	33.0	37.9		41.3
1446	3-5-2023	09:00:24	IL&FS	LSI	Solapur	MH	17.833698	75.598899	150+000	252+000	211+600 LHS Inner	1	40.3000	0.2408	0.1472	0.0938	0.0531	0.0385	0.0274	0.0219	33.2	39.7		41.3
	3-5-2023	09:00:24	IL&FS	LSI	Solapur	MH	17.833698	75.598899	150+000	252+000	211+600 LHS Inner	2	40.9000	0.2431	0.1475	0.0942	0.0547	0.0401	0.0288	0.0232	33.2	39.7		41.3
	3-5-2023	09:00:24	IL&FS	LSI	Solapur	MH	17.833698	75.598899	150+000	252+000	211+600 LHS Inner	3	40.8000	0.2423	0.1363	0.0871	0.0548	0.0385	0.0277	0.0222	33.2	39.7		41.3
1447	3-5-2023	09:02:20	IL&FS	LSI	Solapur	MH	17.832824	75.601196	150+000	252+000	211+850 LHS Inner	1	38.9000	0.3372	0.1950	0.1207	0.0724	0.0329	0.0246	0.0176	33.4	34.9		41.3
	3-5-2023	09:02:20	IL&FS	LSI	Solapur	MH	17.832824	75.601196	150+000	252+000	211+850 LHS Inner	2	38.7000	0.3407	0.2023	0.1201	0.0677	0.0368	0.0265	0.0194	33.4	34.9		41.3
	3-5-2023	09:02:20	IL&FS	LSI	Solapur	MH	17.832824	75.601196	150+000	252+000	211+850 LHS Inner	3	39.0000	0.3526	0.1983	0.1240	0.0705	0.0352	0.0257	0.0186	33.4	34.9		41.3
1448	3-5-2023	09:04:17	IL&FS	LSI	Solapur	MH	17.831981	75.603408	150+000	252+000	212+100 LHS Inner	1	40.1000	0.1479	0.1068	0.0740	0.0508	0.0318	0.0238	0.0193	32.9	38.3		41.3
	3-5-2023	09:04:17	IL&FS	LSI	Solapur	MH	17.831981	75.603408	150+000	252+000	212+100 LHS Inner	2	40.4000	0.1557	0.1123	0.0754	0.0504	0.0324	0.0243	0.0188	32.9	38.3		41.3
	3-5-2023	09:04:17	IL&FS	LSI	Solapur	MH	17.831981	75.603408	150+000	252+000	212+100 LHS Inner	3	38.7000	0.1513	0.0987	0.0683	0.0467	0.0323	0.0235	0.0188	32.9	38.3		41.3
1449	3-5-2023	09:06:06	IL&FS	LSI	Solapur	MH	17.831153	75.605491	150+000	252+000	212+350 LHS Inner	1	37.7000	0.2709	0.1665	0.1006	0.0510	0.0316	0.0211	0.0190	33.0	39.1		41.3
	3-5-2023	09:06:06	IL&FS	LSI	Solapur	MH	17.831153	75.605491	150+000	252+000	212+350 LHS Inner	2	37.9000	0.2647	0.1725	0.1020	0.0509	0.0288	0.0208	0.0187	33.0	39.1		41.3
	3-5-2023	09:06:06	IL&FS	LSI	Solapur	MH	17.831153	75.605491	150+000	252+000	212+350 LHS Inner	3	37.7000	0.2573	0.1623	0.0949	0.0499	0.0293	0.0215	0.0194	33.0	39.1		41.3
1450	3-5-2023	09:08:10	IL&FS	LSI	Solapur	MH	17.830051	75.607444	150+000	252+000	212+600 LHS Inner	1	38.7000	0.3912	0.2509	0.1605	0.0915	0.0700	0.0523	0.0326	33.2	39.8		41.3
	3-5-2023	09:08:10	IL&FS	LSI	Solapur	MH	17.830051	75.607444	150+000	252+000	212+600 LHS Inner	2	39.0000	0.3834	0.2506	0.1603	0.0894	0.0691	0.0504	0.0342	33.2	39.8		41.3
	3-5-2023	09:08:10	IL&FS	LSI	Solapur	MH	17.830051	75.607444	150+000	252+000	212+600 LHS Inner	3	39.2000	0.3703	0.2389	0.1451	0.0840	0.0708	0.0519	0.0343	33.2	39.8		41.3
1451	3-5-2023	09:10:06	IL&FS	LSI	Solapur	MH	17.828863	75.609451	150+000	252+000	212+850 LHS Inner	1	37.2000	0.4447	0.2726	0.1403	0.0677	0.0542	0.0406	0.0241	33.5	40.1		41.3
	3-5-2023	09:10:06	IL&FS	LSI	Solapur	MH	17.828863	75.609451	150+000	252+000	212+850 LHS Inner	2	37.1000	0.4275	0.2690	0.1287	0.0675	0.0526	0.0377	0.0240	33.5	40.1		41.3
	3-5-2023	09:10:06	IL&FS	LSI	Solapur	MH	17.828863	75.609451	150+000	252+000	212+850 LHS Inner	3	37.2000	0.4236	0.2443	0.1326	0.0674	0.0530	0.0385	0.0241	33.5	40.1		41.3

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1452	3-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	17.827386	75.611953	150+000	252+000	213+100 LHS Inner	1	38.9000	0.3367	0.1688	0.0788	0.0470	0.0391	0.0336	0.0263	33.8	40.3		41.3
	3-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	17.827386	75.611953	150+000	252+000	213+100 LHS Inner	2	39.1000	0.3294	0.1630	0.0856	0.0465	0.0403	0.0359	0.0252	33.8	40.3		41.3
	3-5-2023	09:12:15	IL&FS	LSI	Solapur	MH	17.827386	75.611953	150+000	252+000	213+100 LHS Inner	3	39.3000	0.3282	0.1609	0.0829	0.0482	0.0405	0.0345	0.0272	33.8	40.3		41.3
1453	3-5-2023	09:14:01	IL&FS	LSI	Solapur	MH	17.826377	75.613670	150+000	252+000	213+370 LHS Inner	1	38.0000	0.4464	0.2505	0.1240	0.0587	0.0448	0.0351	0.0316	34.1	40.6		41.3
	3-5-2023	09:14:01	IL&FS	LSI	Solapur	MH	17.826377	75.613670	150+000	252+000	213+370 LHS Inner	2	38.2000	0.4394	0.2549	0.1180	0.0657	0.0469	0.0351	0.0316	34.1	40.6		41.3
	3-5-2023	09:14:01	IL&FS	LSI	Solapur	MH	17.826377	75.613670	150+000	252+000	213+370 LHS Inner	3	38.0000	0.4313	0.2583	0.1198	0.0591	0.0448	0.0363	0.0322	34.1	40.6		41.3
1454	3-5-2023	19:29:22	IL&FS	LSI	Solapur	MH	17.825159	75.617103	150+000	252+000	213+680 LHS Inner	1	36.8000	0.3040	0.1724	0.0979	0.0735	0.0558	0.0488	0.0455	36.7	40.5	t-34.9/43.8	43.8
	3-5-2023	19:29:22	IL&FS	LSI	Solapur	MH	17.825159	75.617103	150+000	252+000	213+680 LHS Inner	2	36.4000	0.3045	0.1648	0.0949	0.0703	0.0528	0.0437	0.0404	36.7	40.5	t-34.9/43.8	43.8
	3-5-2023	19:29:22	IL&FS	LSI	Solapur	MH	17.825159	75.617103	150+000	252+000	213+680 LHS Inner	3	36.1000	0.2955	0.1811	0.1016	0.0731	0.0542	0.0467	0.0418	36.7	40.5	t-34.9/43.8	43.8
1455	3-5-2023	19:33:06	IL&FS	LSI	Solapur	MH	17.824186	75.617866	150+000	252+000	213+850 LHS Inner	1	36.3000	0.2863	0.1760	0.0955	0.0696	0.0529	0.0442	0.0397	36.9	39.8		43.8
	3-5-2023	19:33:06	IL&FS	LSI	Solapur	MH	17.824186	75.617866	150+000	252+000	213+850 LHS Inner	2	38.5000	0.2829	0.1762	0.1011	0.0746	0.0582	0.0499	0.0449	36.9	39.8		43.8
	3-5-2023	19:33:06	IL&FS	LSI	Solapur	MH	17.824186	75.617866	150+000	252+000	213+850 LHS Inner	3	37.5000	0.2835	0.1722	0.1012	0.0737	0.0529	0.0445	0.0400	36.9	39.8		43.8
1456	3-5-2023	19:35:11	IL&FS	LSI	Solapur	MH	17.822948	75.620033	150+000	252+000	214+120 LHS Inner	1	38.0000	0.5180	0.2968	0.1438	0.0941	0.0662	0.0513	0.0414	36.9	39.4		43.8
	3-5-2023	19:35:11	IL&FS	LSI	Solapur	MH	17.822948	75.620033	150+000	252+000	214+120 LHS Inner	2	38.2000	0.5047	0.2832	0.1486	0.0987	0.0683	0.0516	0.0403	36.9	39.4		43.8
	3-5-2023	19:35:11	IL&FS	LSI	Solapur	MH	17.822948	75.620033	150+000	252+000	214+120 LHS Inner	3	38.4000	0.5025	0.2858	0.1456	0.0884	0.0695	0.0534	0.0422	36.9	39.4		43.8
1457	3-5-2023	19:37:07	IL&FS	LSI	Solapur	MH	17.821767	75.621665	150+000	252+000	214+350 LHS Inner	1	36.1000	0.4264	0.2061	0.1091	0.0786	0.0582	0.0458	0.0368	36.8	40.7		43.8
	3-5-2023	19:37:07	IL&FS	LSI	Solapur	MH	17.821767	75.621665	150+000	252+000	214+350 LHS Inner	2	36.1000	0.4397	0.2050	0.1066	0.0800	0.0601	0.0476	0.0382	36.8	40.7		43.8
	3-5-2023	19:37:07	IL&FS	LSI	Solapur	MH	17.821767	75.621665	150+000	252+000	214+350 LHS Inner	3	36.0000	0.4184	0.1970	0.1067	0.0803	0.0640	0.0515	0.0417	36.8	40.7		43.8
1458	3-5-2023	19:38:55	IL&FS	LSI	Solapur	MH	17.820529	75.623672	150+000	252+000	214+600 LHS Inner	1	38.1000	0.3458	0.2308	0.1473	0.1084	0.0745	0.0509	0.0365	36.7	40.5		43.8
	3-5-2023	19:38:55	IL&FS	LSI	Solapur	MH	17.820529	75.623672	150+000	252+000	214+600 LHS Inner	2	38.0000	0.3449	0.2327	0.1420	0.1038	0.0770	0.0511	0.0347	36.7	40.5		43.8
	3-5-2023	19:38:55	IL&FS	LSI	Solapur	MH	17.820529	75.623672	150+000	252+000	214+600 LHS Inner	3	37.8000	0.3431	0.2273	0.1484	0.1113	0.0787	0.0520	0.0338	36.7	40.5		43.8
1459	3-5-2023	19:40:45	IL&FS	LSI	Solapur	MH	17.819395	75.625587	150+000	252+000	214+850 LHS Inner	1	40.9000	0.2354	0.1483	0.0936	0.0601	0.0412	0.0297	0.0222	37.0	40.8		43.8
	3-5-2023	19:40:45	IL&FS	LSI	Solapur	MH	17.819395	75.625587	150+000	252+000	214+850 LHS Inner	2	40.5000	0.2182	0.1604	0.0908	0.0595	0.0406	0.0303	0.0228	37.0	40.8		43.8
	3-5-2023	19:40:45	IL&FS	LSI	Solapur	MH	17.819395	75.625587	150+000	252+000	214+850 LHS Inner	3	40.8000	0.2427	0.1487	0.0919	0.0600	0.0380	0.0300	0.0225	37.0	40.8		43.8
1460	3-5-2023	19:42:42	IL&FS	LSI	Solapur	MH	17.818176	75.627647	150+000	252+000	215+100 LHS Inner	1	41.1000	0.1008	0.0645	0.0459	0.0390	0.0307	0.0253	0.0174	37.1	40.3		43.8
	3-5-2023	19:42:42	IL&FS	LSI	Solapur	MH	17.818176	75.627647	150+000	252+000	215+100 LHS Inner	2	41.3000	0.1037	0.0669	0.0453	0.0370	0.0307	0.0260	0.0180	37.1	40.3		43.8
	3-5-2023	19:42:42	IL&FS	LSI	Solapur	MH	17.818176	75.627647	150+000	252+000	215+100 LHS Inner	3	41.4000	0.1056	0.0614	0.0476	0.0385	0.0306	0.0256	0.0176	37.1	40.3		43.8
1461	3-5-2023	19:44:31	IL&FS	LSI	Solapur	MH	17.816965	75.629623	150+000	252+000	215+350 LHS Inner	1	37.7000	0.4676	0.2945	0.1740	0.1143	0.0842	0.0652	0.0456	36.8	40.0		43.8
	3-5-2023	19:44:31	IL&FS	LSI	Solapur	MH	17.816965	75.629623	150+000	252+000	215+350 LHS Inner	2	37.8000	0.4507	0.2826	0.1817	0.1134	0.0824	0.0582	0.0455	36.8	40.0		43.8
	3-5-2023	19:44:31	IL&FS	LSI	Solapur	MH	17.816965	75.629623	150+000	252+000	215+350 LHS Inner	3	37.9000	0.4479	0.2788	0.1756	0.1192	0.0857	0.0651	0.0455	36.8	40.0		43.8
1462	3-5-2023	19:46:32	IL&FS	LSI	Solapur	MH	17.815631	75.631782	150+000	252+000	215+620 LHS Inner	1	38.1000	0.4664	0.2847	0.1691	0.0978	0.0835	0.0724	0.0411	36.5	39.8		43.8
	3-5-2023	19:46:32	IL&FS	LSI	Solapur	MH	17.815631	75.631782	150+000	252+000	215+620 LHS Inner	2	38.0000	0.4516	0.2899	0.1665	0.0981	0.0812	0.0703	0.0454	36.5	39.8		43.8
	3-5-2023	19:46:32	IL&FS	LSI	Solapur	MH	17.815631	75.631782	150+000	252+000	215+620 LHS Inner	3	38.1000	0.4377	0.2684	0.1499	0.0992	0.0780	0.0626	0.0433	36.5	39.8		43.8
1463	3-5-2023	19:48:32	IL&FS	LSI	Solapur	MH	17.814567	75.633666	150+000	252+000	215+855 LHS Inner	1	36.7000	0.5930	0.3467	0.1878	0.1298	0.0908	0.0688	0.0485	36.6	40.2		43.8
	3-5-2023	19:48:32	IL&FS	LSI	Solapur	MH	17.814567	75.633666	150+000	252+000	215+855 LHS Inner	2	36.0000	0.6162	0.3563	0.1941	0.1263	0.0764	0.0640	0.0485	36.6	40.2		43.8
	3-5-2023	19:48:32	IL&FS	LSI	Solapur	MH	17.814567	75.633666	150+000	252+000	215+855 LHS Inner	3	36.1000	0.6170	0.3636	0.1883	0.1245	0.0816	0.0672	0.0497	36.6	40.2		43.8
1464	3-5-2023	19:50:29	IL&FS	LSI	Solapur	MH	17.813020	75.635635	150+000	252+000	216+130 LHS Inner	1	36.0000	0.6327	0.3037	0.1635	0.0983	0.0701	0.0540	0.0486	36.6	40.6		43.8
	3-5-2023	19:50:29	IL&FS	LSI	Solapur	MH	17.813020	75.635635	150+000	252+000	216+130 LHS Inner	2	36.2000	0.6038	0.2970	0.1552	0.0966	0.0686	0.0550	0.0495	36.6	40.6		43.8
	3-5-2023	19:50:29	IL&FS	LSI	Solapur	MH	17.813020	75.635635	150+000	252+000	216+130 LHS Inner	3	36.3000	0.5942	0.3091	0.1575	0.0952	0.0704	0.0547	0.0492	36.6	40.6		43.8
1465	3-5-2023	19:52:36	IL&FS	LSI	Solapur	MH	17.811176	75.637001	150+000	252+000	216+370 LHS Inner	1	37.3000	0.4888	0.2949	0.1413	0.0777	0.0434	0.0346	0.0311	36.9	40.6		43.8
	3-5-2023	19:52:36	IL&FS	LSI	Solapur	MH	17.811176	75.637001	150+000	252+000	216+370 LHS Inner	2	37.6000	0.4986	0.2856	0.1463	0.0742	0.0437	0.0346	0.0311	36.9	40.6		43.8
	3-5-2023	19:52:36	IL&FS	LSI	Solapur	MH	17.811176	75.637001	150+000	252+000	216+370 LHS Inner	3	37.7000	0.4653	0.2769	0.1426	0.0795	0.0439	0.0349	0.0314	36.9	40.6		43.8
1466	3-5-2023	19:54:31	IL&FS	LSI	Solapur	MH	17.809528	75.638198	150+000	252+000	216+600 LHS Inner	1	36.9000	0.4179	0.2403	0.1460	0.0736	0.0480	0.0300	0.0225	37.0	41.4		43.8
	3-5-2023	19:54:31	IL&FS	LSI	Solapur	MH	17.809528	75.638198	150+000	252+000	216+600 LHS Inner	2	36.7000	0.3897	0.2505	0.1438	0.0777	0.0491	0.0300	0.0225	37.0	41.4		43.8
	3-5-2023	19:54:31	IL&FS	LSI	Solapur	MH	17.809528	75.638198	150+000	252+000	216+600 LHS Inner	3	36.9000	0.3680	0.2367	0.1452	0.0802	0.0519	0.0299	0.0224	37.0	41.4		43.8
1467	3-5-2023	19:56:48	IL&FS	LSI	Solapur	MH	17.807926	75.640533	150+000	252+000	216+905 LHS Inner	1	37.5000	0.4291	0.2525	0.1251	0.0757	0.0423	0.0299	0.0269	37.1	40.6		43.8
	3-5-2023	19:56:48	IL&FS	LSI	Solapur	MH	17.807926	75.640533	150+000	252+000	216+905 LHS Inner	2	37.9000	0.4417	0.2411	0.1276	0.0769	0.0441	0.0315	0.0284	37.1	40.6		43.8
	3-5-2023	19:56:48	IL&FS	LSI	Solapur	MH	17.807926	75.640533	150+000	252+000	216+905 LHS Inner	3	37.8000	0.4071	0.2423	0.1218	0.0775	0.0432	0.0297	0.0267	37.1	40.6		43.8
1468	3-5-2023	19:58:31	IL&FS	LSI	Solapur	MH	17.807123	75.642303	150+000	252+000	217+120 LHS Inner	1	38.0000	0.3796	0.2420	0.1344	0.0986	0.0730	0.0516	0.0381	37.2	41.3		43.8
	3-5-2023	19:58:31	IL&FS	LSI	Solapur	MH	17.807123	75.642303	150+000	252+000	217+120 LHS Inner	2	38.1000	0.3894	0.2487	0.1350	0.0989	0.0756	0.0535	0.0391	37.2	41.3		43.8
	3-5-2023	19:58:31	IL&FS	LSI	Solapur	MH	17.807123	75.642303	150+000	252+000	217+120 LHS Inner	3	38.4000	0.3865	0.2423	0.1406	0.0998	0.0764	0.0541	0.0393	37.2	41.3		43.8
1469	3-5-2023	20:09:31	IL&FS	LSI	Solapur	MH	17.803113	75.650566	150+000	252+000	218+100 LHS Inner	1	40.7000	0.1925	0.1343	0.0849	0.0404	0.0239	0.0183	0.0164	36.2	38.9	T-34.2/43	43
	3-5-2023	20:09:31	IL&FS	LSI	Solapur	MH	17.803113	75.650566	150+000	252+000	218+100 LHS Inner	2	40.5000	0.1994	0.1239	0.0776	0.0421	0.0255	0.0187	0.0168	36.2	38.9	T-34.2/43	43
	3-5-2023	20:09:31	IL&FS	LSI	Solapur	MH	17.803113	75.650566	150+000	252+000	218+100 LHS Inner	3	40.5000	0.2003	0.1291	0.0848	0.0407	0.0247	0.0187	0.0168	36.2	38.9	T-34.2/43	43
1470	3-5-2023	20:11:59	IL&FS	LSI	Solapur	MH	17.801980	75.652969	150+000	252+000	218+380 LHS Inner	1	42.3000	0.0931	0.0618	0.0391	0.0305	0.0218	0.0156	0.0140	35.9	38.0		43
	3-5-2023	20:11:59	IL&FS	LSI	Solapur	MH	17.801980	75.652969	150+000	252+000	218+380 LHS Inner	2	42.2000	0.1002	0.0617	0.0407	0.0309	0.0211	0.0153	0.0138	35.9	38.0		43

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	20:11:59	IL&FS	LSI	Solapur	MH	17.801980	75.652969	150+000	252+000	218+380 LHS Inner	3	42.0000	0.0963	0.0614	0.0397	0.0311	0.0225	0.0159	0.0143	35.9	38.0		43
1471	3-5-2023	20:13:52	IL&FS	LSI	Solapur	MH	17.801166	75.654838	150+000	252+000	218+600 LHS Inner	1	38.0000	0.2532	0.1786	0.1203	0.0749	0.0547	0.0411	0.0290	35.4	37.8		43
	3-5-2023	20:13:52	IL&FS	LSI	Solapur	MH	17.801166	75.654838	150+000	252+000	218+600 LHS Inner	2	37.9000	0.2705	0.1678	0.1120	0.0735	0.0550	0.0414	0.0298	35.4	37.8		43
	3-5-2023	20:13:52	IL&FS	LSI	Solapur	MH	17.801166	75.654838	150+000	252+000	218+600 LHS Inner	3	38.1000	0.2478	0.1659	0.1160	0.0773	0.0566	0.0423	0.0313	35.4	37.8		43
1472	3-5-2023	20:16:04	IL&FS	LSI	Solapur	MH	17.800489	75.657226	150+000	252+000	218+850 LHS Inner	1	38.9000	0.4134	0.2160	0.1158	0.0787	0.0547	0.0406	0.0307	35.2	36.9		43
	3-5-2023	20:16:04	IL&FS	LSI	Solapur	MH	17.800489	75.657226	150+000	252+000	218+850 LHS Inner	2	38.9000	0.3853	0.2136	0.1139	0.0774	0.0540	0.0403	0.0304	35.2	36.9		43
	3-5-2023	20:16:04	IL&FS	LSI	Solapur	MH	17.800489	75.657226	150+000	252+000	218+850 LHS Inner	3	39.3000	0.3933	0.2161	0.1160	0.0780	0.0525	0.0375	0.0273	35.2	36.9		43
1473	3-5-2023	20:17:46	IL&FS	LSI	Solapur	MH	17.799781	75.659416	150+000	252+000	219+100 LHS Inner	1	41.5000	0.2275	0.1275	0.0694	0.0557	0.0458	0.0436	0.0392	34.3	37.5		43
	3-5-2023	20:17:46	IL&FS	LSI	Solapur	MH	17.799781	75.659416	150+000	252+000	219+100 LHS Inner	2	40.8000	0.2442	0.1137	0.0677	0.0551	0.0468	0.0446	0.0419	34.3	37.5		43
	3-5-2023	20:17:46	IL&FS	LSI	Solapur	MH	17.799781	75.659416	150+000	252+000	219+100 LHS Inner	3	41.4000	0.2199	0.1212	0.0673	0.0559	0.0491	0.0480	0.0432	34.3	37.5		43
1474	3-5-2023	20:20:26	IL&FS	LSI	Solapur	MH	17.799081	75.661613	150+000	252+000	219+350 LHS Inner	1	38.3000	0.3226	0.1731	0.1044	0.0642	0.0355	0.0282	0.0236	34.1	37.8		43
	3-5-2023	20:20:26	IL&FS	LSI	Solapur	MH	17.799081	75.661613	150+000	252+000	219+350 LHS Inner	2	38.6000	0.3241	0.1910	0.1038	0.0649	0.0390	0.0312	0.0258	34.1	37.8		43
	3-5-2023	20:20:26	IL&FS	LSI	Solapur	MH	17.799081	75.661613	150+000	252+000	219+350 LHS Inner	3	38.7000	0.3032	0.1827	0.1046	0.0670	0.0392	0.0318	0.0264	34.1	37.8		43
1475	3-5-2023	20:22:25	IL&FS	LSI	Solapur	MH	17.798423	75.663894	150+000	252+000	219+600 LHS Inner	1	39.3000	0.1983	0.1052	0.0567	0.0327	0.0244	0.0183	0.0111	34.5	38.8		43
	3-5-2023	20:22:25	IL&FS	LSI	Solapur	MH	17.798423	75.663894	150+000	252+000	219+600 LHS Inner	2	39.3000	0.1975	0.1038	0.0574	0.0331	0.0245	0.0187	0.0114	34.5	38.8		43
	3-5-2023	20:22:25	IL&FS	LSI	Solapur	MH	17.798423	75.663894	150+000	252+000	219+600 LHS Inner	3	39.8000	0.2015	0.0990	0.0601	0.0334	0.0246	0.0180	0.0108	34.5	38.8		43
1476	3-5-2023	20:24:27	IL&FS	LSI	Solapur	MH	17.797754	75.666145	150+000	252+000	219+850 LHS Inner	1	37.8000	0.4415	0.2277	0.1177	0.0482	0.0271	0.0259	0.0233	35.3	38.9		43
	3-5-2023	20:24:27	IL&FS	LSI	Solapur	MH	17.797754	75.666145	150+000	252+000	219+850 LHS Inner	2	37.4000	0.4479	0.2328	0.1211	0.0485	0.0288	0.0274	0.0246	35.3	38.9		43
	3-5-2023	20:24:27	IL&FS	LSI	Solapur	MH	17.797754	75.666145	150+000	252+000	219+850 LHS Inner	3	38.3000	0.4346	0.2441	0.1157	0.0534	0.0274	0.0270	0.0243	35.3	38.9		43
1477	3-5-2023	20:26:18	IL&FS	LSI	Solapur	MH	17.797082	75.668334	150+000	252+000	220+100 LHS Inner	1	40.9000	0.1349	0.0731	0.0424	0.0320	0.0255	0.0195	0.0150	35.3	38.4		43
	3-5-2023	20:26:18	IL&FS	LSI	Solapur	MH	17.797082	75.668334	150+000	252+000	220+100 LHS Inner	2	40.9000	0.1301	0.0697	0.0419	0.0318	0.0246	0.0190	0.0149	35.3	38.4		43
	3-5-2023	20:26:18	IL&FS	LSI	Solapur	MH	17.797082	75.668334	150+000	252+000	220+100 LHS Inner	3	41.0000	0.1382	0.0737	0.0418	0.0317	0.0253	0.0200	0.0160	35.3	38.4		43
1478	3-5-2023	20:29:01	IL&FS	LSI	Solapur	MH	17.796369	75.670661	150+000	252+000	220+350 LHS Inner	1	41.6000	0.1895	0.0941	0.0553	0.0386	0.0273	0.0229	0.0195	34.8	37.9		43
	3-5-2023	20:29:01	IL&FS	LSI	Solapur	MH	17.796369	75.670661	150+000	252+000	220+350 LHS Inner	2	41.6000	0.1816	0.0918	0.0549	0.0392	0.0284	0.0238	0.0202	34.8	37.9		43
	3-5-2023	20:29:01	IL&FS	LSI	Solapur	MH	17.796369	75.670661	150+000	252+000	220+350 LHS Inner	3	41.7000	0.1820	0.0910	0.0554	0.0385	0.0275	0.0230	0.0200	34.8	37.9		43
1479	3-5-2023	20:31:04	IL&FS	LSI	Solapur	MH	17.795612	75.673110	150+000	252+000	220+620 LHS Inner	1	39.8000	0.1273	0.0642	0.0381	0.0277	0.0204	0.0160	0.0136	34.9	38.6		43
	3-5-2023	20:31:04	IL&FS	LSI	Solapur	MH	17.795612	75.673110	150+000	252+000	220+620 LHS Inner	2	39.5000	0.1188	0.0612	0.0370	0.0279	0.0205	0.0168	0.0138	34.9	38.6		43
	3-5-2023	20:31:04	IL&FS	LSI	Solapur	MH	17.795612	75.673110	150+000	252+000	220+620 LHS Inner	3	39.8000	0.1214	0.0627	0.0373	0.0277	0.0208	0.0165	0.0142	34.9	38.6		43
1480	3-5-2023	20:33:36	IL&FS	LSI	Solapur	MH	17.794923	75.675117	150+000	252+000	220+850 LHS Inner	1	38.6000	0.3725	0.2084	0.1178	0.0834	0.0584	0.0454	0.0365	35.2	38.7		43
	3-5-2023	20:33:36	IL&FS	LSI	Solapur	MH	17.794923	75.675117	150+000	252+000	220+850 LHS Inner	2	38.6000	0.3521	0.1987	0.1170	0.0826	0.0594	0.0461	0.0374	35.2	38.7		43
	3-5-2023	20:33:36	IL&FS	LSI	Solapur	MH	17.794923	75.675117	150+000	252+000	220+850 LHS Inner	3	38.7000	0.3331	0.1999	0.1135	0.0830	0.0599	0.0473	0.0375	35.2	38.7		43
1481	3-5-2023	20:52:52	IL&FS	LSI	Solapur	MH	17.794443	75.677085	150+000	252+000	221+100 LHS Inner	1	36.9000	0.4839	0.3015	0.1656	0.0899	0.0591	0.0311	0.0172	35.2	37.7	T-33/42.2	42.2
	3-5-2023	20:52:52	IL&FS	LSI	Solapur	MH	17.794443	75.677085	150+000	252+000	221+100 LHS Inner	2	36.7000	0.4593	0.2719	0.1668	0.0875	0.0593	0.0323	0.0183	35.2	37.7	T-33/42.2	42.2
	3-5-2023	20:52:52	IL&FS	LSI	Solapur	MH	17.794443	75.677085	150+000	252+000	221+100 LHS Inner	3	37.2000	0.4649	0.3076	0.1684	0.0916	0.0595	0.0339	0.0197	35.2	37.7	T-33/42.2	42.2
1482	3-5-2023	20:55:46	IL&FS	LSI	Solapur	MH	17.793457	75.680099	150+000	252+000	221+400 LHS Inner	1	39.8000	0.1654	0.1317	0.0810	0.0545	0.0359	0.0263	0.0199	35.0	37.8		42.2
	3-5-2023	20:55:46	IL&FS	LSI	Solapur	MH	17.793457	75.680099	150+000	252+000	221+400 LHS Inner	2	39.5000	0.1618	0.1244	0.0850	0.0563	0.0385	0.0271	0.0199	35.0	37.8		42.2
	3-5-2023	20:55:46	IL&FS	LSI	Solapur	MH	17.793457	75.680099	150+000	252+000	221+400 LHS Inner	3	39.7000	0.1600	0.1218	0.0867	0.0561	0.0357	0.0268	0.0200	35.0	37.8		42.2
1483	3-5-2023	20:57:47	IL&FS	LSI	Solapur	MH	17.792903	75.681953	150+000	252+000	221+600 LHS Inner	1	40.2000	0.1680	0.1056	0.0612	0.0435	0.0299	0.0222	0.0174	34.9	37.8		42.2
	3-5-2023	20:57:47	IL&FS	LSI	Solapur	MH	17.792903	75.681953	150+000	252+000	221+600 LHS Inner	2	40.4000	0.1658	0.1063	0.0621	0.0436	0.0302	0.0233	0.0182	34.9	37.8		42.2
	3-5-2023	20:57:47	IL&FS	LSI	Solapur	MH	17.792903	75.681953	150+000	252+000	221+600 LHS Inner	3	39.9000	0.1741	0.1033	0.0581	0.0408	0.0298	0.0223	0.0170	34.9	37.8		42.2
1484	3-5-2023	20:59:53	IL&FS	LSI	Solapur	MH	17.792238	75.684204	150+000	252+000	221+850 LHS Inner	1	40.4000	0.0735	0.0571	0.0459	0.0368	0.0301	0.0245	0.0206	34.8	38.5		42.2
	3-5-2023	20:59:53	IL&FS	LSI	Solapur	MH	17.792238	75.684204	150+000	252+000	221+850 LHS Inner	2	42.6000	0.0783	0.0605	0.0489	0.0389	0.0320	0.0263	0.0227	34.8	38.5		42.2
	3-5-2023	20:59:53	IL&FS	LSI	Solapur	MH	17.792238	75.684204	150+000	252+000	221+850 LHS Inner	3	40.2000	0.0786	0.0614	0.0490	0.0368	0.0293	0.0241	0.0200	34.8	38.5		42.2
1485	3-5-2023	21:01:58	IL&FS	LSI	Solapur	MH	17.791629	75.686439	150+000	252+000	222+100 LHS Inner	1	40.5000	0.0834	0.0617	0.0455	0.0327	0.0256	0.0201	0.0181	34.7	38.1		42.2
	3-5-2023	21:01:58	IL&FS	LSI	Solapur	MH	17.791629	75.686439	150+000	252+000	222+100 LHS Inner	2	40.1000	0.0877	0.0624	0.0464	0.0321	0.0252	0.0202	0.0181	34.7	38.1		42.2
	3-5-2023	21:01:58	IL&FS	LSI	Solapur	MH	17.791629	75.686439	150+000	252+000	222+100 LHS Inner	3	40.3000	0.0855	0.0600	0.0433	0.0325	0.0247	0.0196	0.0176	34.7	38.1		42.2
1486	3-5-2023	21:03:50	IL&FS	LSI	Solapur	MH	17.791297	75.688743	150+000	252+000	222+350 LHS Inner	1	40.3000	0.0854	0.0616	0.0456	0.0348	0.0265	0.0214	0.0182	34.9	38.2		42.2
	3-5-2023	21:03:50	IL&FS	LSI	Solapur	MH	17.791297	75.688743	150+000	252+000	222+350 LHS Inner	2	40.6000	0.0882	0.0633	0.0443	0.0335	0.0268	0.0222	0.0186	34.9	38.2		42.2
	3-5-2023	21:03:50	IL&FS	LSI	Solapur	MH	17.791297	75.688743	150+000	252+000	222+350 LHS Inner	3	39.9000	0.0810	0.0590	0.0441	0.0335	0.0268	0.0217	0.0183	34.9	38.2		42.2
1487	3-5-2023	21:06:05	IL&FS	LSI	Solapur	MH	17.791042	75.691192	150+000	252+000	222+600 LHS Inner	1	40.8000	0.1111	0.0769	0.0519	0.0400	0.0317	0.0267	0.0230	34.8	38.1		42.2
	3-5-2023	21:06:05	IL&FS	LSI	Solapur	MH	17.791042	75.691192	150+000	252+000	222+600 LHS Inner	2	41.1000	0.1099	0.0748	0.0496	0.0388	0.0316	0.0262	0.0226	34.8	38.1		42.2
	3-5-2023	21:06:05	IL&FS	LSI	Solapur	MH	17.791042	75.691192	150+000	252+000	222+600 LHS Inner	3	41.3000	0.1068	0.0759	0.0525	0.0409	0.0321	0.0266	0.0232	34.8	38.1		42.2
1488	3-5-2023	21:08:16	IL&FS	LSI	Solapur	MH	17.790716	75.693641	150+000	252+000	222+850 LHS Inner	1	36.3000	0.3681	0.2147	0.1111	0.0729	0.0451	0.0311	0.0211	34.6	37.5		42.2
	3-5-2023	21:08:16	IL&FS	LSI	Solapur	MH	17.790716	75.693641	150+000	252+000	222+850 LHS Inner	2	36.5000	0.3775	0.2191	0.1122	0.0741	0.0451	0.0298	0.0200	34.6	37.5		42.2
	3-5-2023	21:08:16	IL&FS	LSI	Solapur	MH	17.790716	75.693641	150+000	252+000	222+850 LHS Inner	3	36.6000	0.3530	0.2133	0.1116	0.0721	0.0436	0.0291	0.0185	34.6	37.5		42.2
1489	3-5-2023	21:33:21	IL&FS	LSI	Solapur	MH	17.789674	75.695777	150+000	252+000	223+120 LHS Inner	1	37.1000	0.4098	0.2430	0.1193	0.0779	0.0534	0.0280	0.0209	33.8	36.2	T-32.7/40.9	40.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	3-5-2023	21:33:21	IL&FS	LSI	Solapur	MH	17.789674	75.695777	150+000	252+000	223+120 LHS Inner	2	38.0000	0.4079	0.2519	0.1231	0.0722	0.0540	0.0302	0.0208	33.8	36.2	T-32.7/40.9	40.9
	3-5-2023	21:33:21	IL&FS	LSI	Solapur	MH	17.789674	75.695777	150+000	252+000	223+120 LHS Inner	3	36.9000	0.3875	0.2415	0.1237	0.0734	0.0518	0.0295	0.0198	33.8	36.2	T-32.7/40.9	40.9
1490	3-5-2023	21:35:12	IL&FS	LSI	Solapur	MH	17.788684	75.697662	150+000	252+000	223+350 LHS Inner	1	40.9000	0.0923	0.0622	0.0473	0.0388	0.0327	0.0253	0.0202	33.7	36.3		40.9
	3-5-2023	21:35:12	IL&FS	LSI	Solapur	MH	17.788684	75.697662	150+000	252+000	223+350 LHS Inner	2	41.3000	0.0881	0.0636	0.0493	0.0394	0.0319	0.0262	0.0218	33.7	36.3		40.9
	3-5-2023	21:35:12	IL&FS	LSI	Solapur	MH	17.788684	75.697662	150+000	252+000	223+350 LHS Inner	3	41.5000	0.0917	0.0633	0.0479	0.0395	0.0337	0.0263	0.0215	33.7	36.3		40.9
1491	3-5-2023	21:37:19	IL&FS	LSI	Solapur	MH	17.787616	75.699806	150+000	252+000	223+600 LHS Inner	1	39.0000	0.1609	0.1014	0.0675	0.0522	0.0408	0.0334	0.0330	33.3	35.7		40.9
	3-5-2023	21:37:19	IL&FS	LSI	Solapur	MH	17.787616	75.699806	150+000	252+000	223+600 LHS Inner	2	40.5000	0.1594	0.1009	0.0689	0.0542	0.0426	0.0347	0.0324	33.3	35.7		40.9
	3-5-2023	21:37:19	IL&FS	LSI	Solapur	MH	17.787616	75.699806	150+000	252+000	223+600 LHS Inner	3	38.6000	0.1524	0.0941	0.0674	0.0534	0.0414	0.0331	0.0312	33.3	35.7		40.9
1492	3-5-2023	21:39:15	IL&FS	LSI	Solapur	MH	17.786571	75.701873	150+000	252+000	223+850 LHS Inner	1	40.0000	0.1641	0.1114	0.0710	0.0551	0.0435	0.0358	0.0253	33.0	35.4		40.9
	3-5-2023	21:39:15	IL&FS	LSI	Solapur	MH	17.786571	75.701873	150+000	252+000	223+850 LHS Inner	2	39.9000	0.1744	0.1134	0.0715	0.0552	0.0435	0.0341	0.0261	33.0	35.4		40.9
	3-5-2023	21:39:15	IL&FS	LSI	Solapur	MH	17.786571	75.701873	150+000	252+000	223+850 LHS Inner	3	40.1000	0.1655	0.1118	0.0752	0.0554	0.0417	0.0375	0.0259	33.0	35.4		40.9
1493	3-5-2023	22:24:39	IL&FS	LSI	Solapur	MH	17.785661	75.703750	150+000	252+000	224+100 LHS Inner	1	38.9000	0.1600	0.1050	0.0699	0.0529	0.0404	0.0337	0.0303	33.1	34.9	T-30.8/39.7	39.7
	3-5-2023	22:24:39	IL&FS	LSI	Solapur	MH	17.785661	75.703750	150+000	252+000	224+100 LHS Inner	2	39.3000	0.1572	0.1038	0.0706	0.0542	0.0425	0.0357	0.0321	33.1	34.9	T-30.8/39.7	39.7
	3-5-2023	22:24:39	IL&FS	LSI	Solapur	MH	17.785661	75.703750	150+000	252+000	224+100 LHS Inner	3	39.3000	0.1522	0.1060	0.0706	0.0523	0.0406	0.0340	0.0306	33.1	34.9	T-30.8/39.7	39.7
1494	3-5-2023	22:27:47	IL&FS	LSI	Solapur	MH	17.785108	75.705986	150+000	252+000	224+350 LHS Inner	1	38.2000	0.2677	0.1725	0.0908	0.0654	0.0501	0.0451	0.0413	32.9	35.1		39.7
	3-5-2023	22:27:47	IL&FS	LSI	Solapur	MH	17.785108	75.705986	150+000	252+000	224+350 LHS Inner	2	38.5000	0.2632	0.1738	0.0875	0.0622	0.0505	0.0446	0.0417	32.9	35.1		39.7
	3-5-2023	22:27:47	IL&FS	LSI	Solapur	MH	17.785108	75.705986	150+000	252+000	224+350 LHS Inner	3	38.4000	0.2611	0.1620	0.0891	0.0591	0.0499	0.0473	0.0409	32.9	35.1		39.7
1495	3-5-2023	22:29:39	IL&FS	LSI	Solapur	MH	17.785058	75.707710	150+000	252+000	224+530 LHS Inner	1	40.3000	0.0822	0.0539	0.0418	0.0307	0.0229	0.0179	0.0149	32.8	35.3		39.7
	3-5-2023	22:29:39	IL&FS	LSI	Solapur	MH	17.785058	75.707710	150+000	252+000	224+530 LHS Inner	2	40.6000	0.0812	0.0539	0.0427	0.0344	0.0251	0.0183	0.0152	32.8	35.3		39.7
	3-5-2023	22:29:39	IL&FS	LSI	Solapur	MH	17.785058	75.707710	150+000	252+000	224+530 LHS Inner	3	40.8000	0.0804	0.0539	0.0407	0.0321	0.0244	0.0189	0.0158	32.8	35.3		39.7
1496	3-5-2023	22:34:25	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	224+890 LHS Inner	1	38.0000	0.3335	0.1744	0.0882	0.0511	0.0324	0.0275	0.0248	32.4	34.8		39.7
	3-5-2023	22:34:25	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	224+890 LHS Inner	2	39.4000	0.3309	0.1660	0.0877	0.0529	0.0339	0.0290	0.0261	32.4	34.8		39.7
	3-5-2023	22:34:25	IL&FS	LSI	Solapur	MH	0.000000	0.000000	150+000	252+000	224+890 LHS Inner	3	39.5000	0.3368	0.1717	0.0944	0.0495	0.0341	0.0297	0.0267	32.4	34.8		39.7
1497	3-5-2023	22:36:39	IL&FS	LSI	Solapur	MH	17.784540	75.713203	150+000	252+000	225+100 LHS Inner	1	36.0000	0.3567	0.2004	0.1124	0.0746	0.0493	0.0353	0.0261	32.3	35.7		39.7
	3-5-2023	22:36:39	IL&FS	LSI	Solapur	MH	17.784540	75.713203	150+000	252+000	225+100 LHS Inner	2	37.4000	0.3560	0.2011	0.1093	0.0750	0.0521	0.0396	0.0300	32.3	35.7		39.7
	3-5-2023	22:36:39	IL&FS	LSI	Solapur	MH	17.784540	75.713203	150+000	252+000	225+100 LHS Inner	3	36.6000	0.3385	0.1948	0.1118	0.0770	0.0506	0.0375	0.0278	32.3	35.7		39.7
1498	3-5-2023	22:38:34	IL&FS	LSI	Solapur	MH	17.783954	75.715415	150+000	252+000	225+350 LHS Inner	1	38.0000	0.5338	0.3264	0.1601	0.0825	0.0506	0.0425	0.0334	32.6	35.7		39.7
	3-5-2023	22:38:34	IL&FS	LSI	Solapur	MH	17.783954	75.715415	150+000	252+000	225+350 LHS Inner	2	38.6000	0.5469	0.3295	0.1665	0.0879	0.0556	0.0402	0.0344	32.6	35.7		39.7
	3-5-2023	22:38:34	IL&FS	LSI	Solapur	MH	17.783954	75.715415	150+000	252+000	225+350 LHS Inner	3	38.8000	0.5446	0.3387	0.1632	0.0841	0.0499	0.0437	0.0339	32.6	35.7		39.7
1499	3-5-2023	22:40:26	IL&FS	LSI	Solapur	MH	17.783267	75.717575	150+000	252+000	225+600 LHS Inner	1	36.0000	0.5065	0.2903	0.1576	0.0747	0.0405	0.0358	0.0308	32.3	34.8		39.7
	3-5-2023	22:40:26	IL&FS	LSI	Solapur	MH	17.783267	75.717575	150+000	252+000	225+600 LHS Inner	2	36.0000	0.4814	0.2801	0.1517	0.0720	0.0417	0.0369	0.0335	32.3	34.8		39.7
	3-5-2023	22:40:26	IL&FS	LSI	Solapur	MH	17.783267	75.717575	150+000	252+000	225+600 LHS Inner	3	36.8000	0.4991	0.2966	0.1604	0.0743	0.0457	0.0359	0.0338	32.3	34.8		39.7
1500	3-5-2023	22:42:33	IL&FS	LSI	Solapur	MH	17.782258	75.719749	150+000	252+000	225+850 LHS Inner	1	39.6000	0.2857	0.1579	0.0952	0.0641	0.0503	0.0366	0.0330	32.5	35.4		39.7
	3-5-2023	22:42:33	IL&FS	LSI	Solapur	MH	17.782258	75.719749	150+000	252+000	225+850 LHS Inner	2	38.5000	0.2702	0.1511	0.0908	0.0609	0.0482	0.0364	0.0335	32.5	35.4		39.7
	3-5-2023	22:42:33	IL&FS	LSI	Solapur	MH	17.782258	75.719749	150+000	252+000	225+850 LHS Inner	3	38.5000	0.2581	0.1509	0.0876	0.0571	0.0489	0.0362	0.0326	32.5	35.4		39.7
1501	3-5-2023	22:44:27	IL&FS	LSI	Solapur	MH	17.781250	75.721755	150+000	252+000	226+100 LHS Inner	1	38.2000	0.3723	0.2244	0.1135	0.0754	0.0499	0.0408	0.0340	32.5	35.5		39.7
	3-5-2023	22:44:27	IL&FS	LSI	Solapur	MH	17.781250	75.721755	150+000	252+000	226+100 LHS Inner	2	36.9000	0.3507	0.2135	0.1157	0.0779	0.0492	0.0367	0.0284	32.5	35.5		39.7
	3-5-2023	22:44:27	IL&FS	LSI	Solapur	MH	17.781250	75.721755	150+000	252+000	226+100 LHS Inner	3	38.1000	0.3516	0.2101	0.1159	0.0759	0.0485	0.0394	0.0337	32.5	35.5		39.7
1502	3-5-2023	22:46:31	IL&FS	LSI	Solapur	MH	17.779758	75.724090	150+000	252+000	226+390 LHS Inner	1	37.1000	0.4556	0.2892	0.1531	0.0839	0.0586	0.0416	0.0312	32.7	36.6		39.7
	3-5-2023	22:46:31	IL&FS	LSI	Solapur	MH	17.779758	75.724090	150+000	252+000	226+390 LHS Inner	2	37.1000	0.4405	0.2848	0.1589	0.0833	0.0575	0.0403	0.0288	32.7	36.6		39.7
	3-5-2023	22:46:31	IL&FS	LSI	Solapur	MH	17.779758	75.724090	150+000	252+000	226+390 LHS Inner	3	37.6000	0.4484	0.2822	0.1684	0.0847	0.0591	0.0391	0.0279	32.7	36.6		39.7
1503	3-5-2023	22:48:30	IL&FS	LSI	Solapur	MH	17.778694	75.725784	150+000	252+000	226+600 LHS Inner	1	38.2000	0.3340	0.1916	0.1070	0.0618	0.0409	0.0277	0.0197	33.1	35.9		39.7
	3-5-2023	22:48:30	IL&FS	LSI	Solapur	MH	17.778694	75.725784	150+000	252+000	226+600 LHS Inner	2	38.1000	0.3222	0.1970	0.0984	0.0624	0.0421	0.0262	0.0186	33.1	35.9		39.7
	3-5-2023	22:48:30	IL&FS	LSI	Solapur	MH	17.778694	75.725784	150+000	252+000	226+600 LHS Inner	3	37.4000	0.3188	0.1968	0.1059	0.0605	0.0406	0.0282	0.0199	33.1	35.9		39.7
1504	3-5-2023	22:50:18	IL&FS	LSI	Solapur	MH	17.777532	75.727775	150+000	252+000	226+850 LHS Inner	1	39.8000	0.1729	0.0978	0.0561	0.0377	0.0263	0.0183	0.0116	33.1	36.0		39.7
	3-5-2023	22:50:18	IL&FS	LSI	Solapur	MH	17.777532	75.727775	150+000	252+000	226+850 LHS Inner	2	39.9000	0.1709	0.0892	0.0561	0.0360	0.0258	0.0186	0.0118	33.1	36.0		39.7
	3-5-2023	22:50:18	IL&FS	LSI	Solapur	MH	17.777532	75.727775	150+000	252+000	226+850 LHS Inner	3	40.1000	0.1691	0.0924	0.0532	0.0399	0.0274	0.0183	0.0123	33.1	36.0		39.7
1505	3-5-2023	22:51:59	IL&FS	LSI	Solapur	MH	17.776548	75.729843	150+000	252+000	227+100 LHS Inner	1	40.8000	0.1518	0.0783	0.0428	0.0313	0.0226	0.0158	0.0142	33.1	35.9		39.7
	3-5-2023	22:51:59	IL&FS	LSI	Solapur	MH	17.776548	75.729843	150+000	252+000	227+100 LHS Inner	2	39.3000	0.1432	0.0731	0.0459	0.0294	0.0208	0.0150	0.0135	33.1	35.9		39.7
	3-5-2023	22:51:59	IL&FS	LSI	Solapur	MH	17.776548	75.729843	150+000	252+000	227+100 LHS Inner	3	40.8000	0.1494	0.0747	0.0442	0.0326	0.0237	0.0171	0.0154	33.1	35.9		39.7
1506	3-5-2023	22:53:41	IL&FS	LSI	Solapur	MH	17.775560	75.731971	150+000	252+000	227+350 LHS Inner	1	41.4000	0.1421	0.0966	0.0504	0.0362	0.0256	0.0191	0.0146	33.2	36.4		39.7
	3-5-2023	22:53:41	IL&FS	LSI	Solapur	MH	17.775560	75.731971	150+000	252+000	227+350 LHS Inner	2	41.7000	0.1492	0.0899	0.0545	0.0367	0.0254	0.0188	0.0147	33.2	36.4		39.7
	3-5-2023	22:53:41	IL&FS	LSI	Solapur	MH	17.775560	75.731971	150+000	252+000	227+350 LHS Inner	3	39.9000	0.1334	0.0870	0.0528	0.0356	0.0250	0.0191	0.0144	33.2	36.4		39.7
1507	3-5-2023	22:55:41	IL&FS	LSI	Solapur	MH	17.774513	75.734283	150+000	252+000	227+600 LHS Inner	1	41.2000	0.1379	0.0740	0.0519	0.0302	0.0235	0.0185	0.0106	33.6	36.1		39.7
	3-5-2023	22:55:41	IL&FS	LSI	Solapur	MH	17.774513	75.734283	150+000	252+000	227+600 LHS Inner	2	40.1000	0.1309	0.0746	0.0492	0.0332	0.0246	0.0187	0.0100	33.6	36.1		39.7
	3-5-2023	22:55:41	IL&FS	LSI	Solapur	MH	17.774513	75.734283	150+000	252+000	227+600 LHS Inner	3	39.7000	0.1343	0.0736	0.0467	0.0306	0.0223	0.0172	0.0099	33.6	36.1		39.7

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1508	3-5-2023	22:57:26	IL&FS	LSI	Solapur	MH	17.773658	75.736160	150+000	252+000	227+850 LHS Inner	1	40.5000	0.1332	0.0809	0.0562	0.0377	0.0290	0.0235	0.0204	34.3	37.2		39.7
	3-5-2023	22:57:26	IL&FS	LSI	Solapur	MH	17.773658	75.736160	150+000	252+000	227+850 LHS Inner	2	40.7000	0.1292	0.0818	0.0542	0.0419	0.0333	0.0265	0.0211	34.3	37.2		39.7
	3-5-2023	22:57:26	IL&FS	LSI	Solapur	MH	17.773658	75.736160	150+000	252+000	227+850 LHS Inner	3	40.1000	0.1357	0.0795	0.0595	0.0420	0.0315	0.0241	0.0205	34.3	37.2		39.7
1509	3-5-2023	22:59:19	IL&FS	LSI	Solapur	MH	17.772613	75.738479	150+000	252+000	228+120 LHS Inner	1	40.1000	0.1680	0.1135	0.0696	0.0396	0.0194	0.0121	0.0071	34.7	37.1		39.7
	3-5-2023	22:59:19	IL&FS	LSI	Solapur	MH	17.772613	75.738479	150+000	252+000	228+120 LHS Inner	2	40.1000	0.1624	0.1082	0.0669	0.0392	0.0188	0.0118	0.0071	34.7	37.1		39.7
	3-5-2023	22:59:19	IL&FS	LSI	Solapur	MH	17.772613	75.738479	150+000	252+000	228+120 LHS Inner	3	40.1000	0.1623	0.1186	0.0684	0.0391	0.0183	0.0119	0.0073	34.7	37.1		39.7
1510	3-5-2023	23:00:59	IL&FS	LSI	Solapur	MH	17.771718	75.740440	150+000	252+000	228+350 LHS Inner	1	41.3000	0.0926	0.0619	0.0387	0.0256	0.0204	0.0143	0.0102	34.3	37.1		39.7
	3-5-2023	23:00:59	IL&FS	LSI	Solapur	MH	17.771718	75.740440	150+000	252+000	228+350 LHS Inner	2	40.2000	0.0907	0.0610	0.0381	0.0250	0.0198	0.0147	0.0096	34.3	37.1		39.7
	3-5-2023	23:00:59	IL&FS	LSI	Solapur	MH	17.771718	75.740440	150+000	252+000	228+350 LHS Inner	3	39.8000	0.0931	0.0586	0.0361	0.0239	0.0196	0.0136	0.0104	34.3	37.1		39.7
1511	3-5-2023	23:02:58	IL&FS	LSI	Solapur	MH	17.770774	75.742500	150+000	252+000	228+600 LHS Inner	1	41.7000	0.1034	0.0634	0.0413	0.0280	0.0241	0.0238	0.0184	34.1	36.7		39.7
	3-5-2023	23:02:58	IL&FS	LSI	Solapur	MH	17.770774	75.742500	150+000	252+000	228+600 LHS Inner	2	40.8000	0.1035	0.0627	0.0372	0.0273	0.0232	0.0204	0.0183	34.1	36.7		39.7
	3-5-2023	23:02:58	IL&FS	LSI	Solapur	MH	17.770774	75.742500	150+000	252+000	228+600 LHS Inner	3	40.5000	0.0988	0.0620	0.0405	0.0275	0.0234	0.0202	0.0181	34.1	36.7		39.7
1512	4-5-2023	00:27:04	IL&FS	LSI	Solapur	MH	17.769752	75.744705	150+000	252+000	228+850 LHS Inner	1	40.9000	0.0979	0.0614	0.0397	0.0228	0.0168	0.0126	0.0086	31.8	33.6	T-31.2/38.7	38.7
	4-5-2023	00:27:04	IL&FS	LSI	Solapur	MH	17.769752	75.744705	150+000	252+000	228+850 LHS Inner	2	40.5000	0.0964	0.0620	0.0391	0.0226	0.0168	0.0124	0.0084	31.8	33.6	T-31.2/38.7	38.7
	4-5-2023	00:27:04	IL&FS	LSI	Solapur	MH	17.769752	75.744705	150+000	252+000	228+850 LHS Inner	3	41.1000	0.0979	0.0663	0.0402	0.0233	0.0167	0.0126	0.0086	31.8	33.6	T-31.2/38.7	38.7
1513	4-5-2023	00:29:30	IL&FS	LSI	Solapur	MH	17.768781	75.746940	150+000	252+000	229+100 LHS Inner	1	40.2000	0.0948	0.0605	0.0389	0.0256	0.0211	0.0185	0.0138	31.7	33.6		38.7
	4-5-2023	00:29:30	IL&FS	LSI	Solapur	MH	17.768781	75.746940	150+000	252+000	229+100 LHS Inner	2	40.6000	0.0940	0.0601	0.0358	0.0253	0.0207	0.0169	0.0134	31.7	33.6		38.7
	4-5-2023	00:29:30	IL&FS	LSI	Solapur	MH	17.768781	75.746940	150+000	252+000	229+100 LHS Inner	3	40.5000	0.0932	0.0583	0.0368	0.0250	0.0205	0.0163	0.0137	31.7	33.6		38.7
1514	4-5-2023	00:31:35	IL&FS	LSI	Solapur	MH	17.767841	75.749069	150+000	252+000	229+350 LHS Inner	1	40.9000	0.0967	0.0608	0.0393	0.0241	0.0199	0.0173	0.0129	31.8	33.3		38.7
	4-5-2023	00:31:35	IL&FS	LSI	Solapur	MH	17.767841	75.749069	150+000	252+000	229+350 LHS Inner	2	41.4000	0.0956	0.0595	0.0365	0.0242	0.0193	0.0158	0.0129	31.8	33.3		38.7
	4-5-2023	00:31:35	IL&FS	LSI	Solapur	MH	17.767841	75.749069	150+000	252+000	229+350 LHS Inner	3	41.5000	0.0941	0.0610	0.0392	0.0246	0.0192	0.0157	0.0127	31.8	33.3		38.7
1515	4-5-2023	00:33:25	IL&FS	LSI	Solapur	MH	17.766836	75.751327	150+000	252+000	229+600 LHS Inner	1	40.2000	0.1618	0.0920	0.0589	0.0386	0.0235	0.0137	0.0069	31.7	33.2		38.7
	4-5-2023	00:33:25	IL&FS	LSI	Solapur	MH	17.766836	75.751327	150+000	252+000	229+600 LHS Inner	2	40.2000	0.1617	0.0943	0.0574	0.0397	0.0244	0.0137	0.0069	31.7	33.2		38.7
	4-5-2023	00:33:25	IL&FS	LSI	Solapur	MH	17.766836	75.751327	150+000	252+000	229+600 LHS Inner	3	40.1000	0.1636	0.0928	0.0527	0.0332	0.0221	0.0137	0.0069	31.7	33.2		38.7
1516	4-5-2023	00:35:25	IL&FS	LSI	Solapur	MH	17.765913	75.753387	150+000	252+000	229+850 LHS Inner	1	36.1000	0.3947	0.2462	0.1561	0.0911	0.0637	0.0449	0.0354	31.6	32.8		38.7
	4-5-2023	00:35:25	IL&FS	LSI	Solapur	MH	17.765913	75.753387	150+000	252+000	229+850 LHS Inner	2	37.3000	0.4125	0.2641	0.1595	0.0841	0.0627	0.0470	0.0373	31.6	32.8		38.7
	4-5-2023	00:35:25	IL&FS	LSI	Solapur	MH	17.765913	75.753387	150+000	252+000	229+850 LHS Inner	3	36.2000	0.3857	0.2523	0.1511	0.0859	0.0614	0.0463	0.0367	31.6	32.8		38.7
1517	4-5-2023	00:42:10	IL&FS	LSI	Solapur	MH	17.763694	75.758308	150+000	252+000	230+380 LHS Inner	1	36.4000	0.3399	0.2147	0.1310	0.0835	0.0572	0.0370	0.0215	31.8	33.9		38.7
	4-5-2023	00:42:10	IL&FS	LSI	Solapur	MH	17.763694	75.758308	150+000	252+000	230+380 LHS Inner	2	36.3000	0.3288	0.2166	0.1337	0.0790	0.0562	0.0354	0.0219	31.8	33.9		38.7
	4-5-2023	00:42:10	IL&FS	LSI	Solapur	MH	17.763694	75.758308	150+000	252+000	230+380 LHS Inner	3	36.1000	0.3395	0.2236	0.1335	0.0795	0.0595	0.0372	0.0204	31.8	33.9		38.7
1518	4-5-2023	00:44:07	IL&FS	LSI	Solapur	MH	17.762838	75.760246	150+000	252+000	230+600 LHS Inner	1	36.9000	0.3863	0.2254	0.1194	0.0726	0.0582	0.0484	0.0424	31.9	33.7		38.7
	4-5-2023	00:44:07	IL&FS	LSI	Solapur	MH	17.762838	75.760246	150+000	252+000	230+600 LHS Inner	2	37.0000	0.3873	0.2342	0.1195	0.0743	0.0590	0.0485	0.0399	31.9	33.7		38.7
	4-5-2023	00:44:07	IL&FS	LSI	Solapur	MH	17.762838	75.760246	150+000	252+000	230+600 LHS Inner	3	36.8000	0.3853	0.2365	0.1262	0.0687	0.0563	0.0483	0.0444	31.9	33.7		38.7
1519	4-5-2023	00:45:59	IL&FS	LSI	Solapur	MH	17.762073	75.761940	150+000	252+000	230+800 LHS Inner	1	38.3000	0.3247	0.1877	0.1316	0.0887	0.0669	0.0529	0.0522	31.8	33.1		38.7
	4-5-2023	00:45:59	IL&FS	LSI	Solapur	MH	17.762073	75.761940	150+000	252+000	230+800 LHS Inner	2	38.2000	0.2953	0.1771	0.1245	0.0898	0.0687	0.0535	0.0510	31.8	33.1		38.7
	4-5-2023	00:45:59	IL&FS	LSI	Solapur	MH	17.762073	75.761940	150+000	252+000	230+800 LHS Inner	3	38.5000	0.3038	0.1723	0.1239	0.0903	0.0697	0.0547	0.0543	31.8	33.1		38.7
1520	4-5-2023	00:50:09	IL&FS	LSI	Solapur	MH	17.761182	75.763870	150+000	252+000	231+100 LHS Inner	1	38.0000	0.2358	0.1522	0.1059	0.0774	0.0619	0.0431	0.0307	31.4	32.7		38.7
	4-5-2023	00:50:09	IL&FS	LSI	Solapur	MH	17.761182	75.763870	150+000	252+000	231+100 LHS Inner	2	37.4000	0.2287	0.1530	0.1028	0.0748	0.0584	0.0449	0.0326	31.4	32.7		38.7
	4-5-2023	00:50:09	IL&FS	LSI	Solapur	MH	17.761182	75.763870	150+000	252+000	231+100 LHS Inner	3	38.3000	0.2272	0.1461	0.1051	0.0770	0.0628	0.0491	0.0330	31.4	32.7		38.7
1521	4-5-2023	00:52:04	IL&FS	LSI	Solapur	MH	17.760173	75.766036	150+000	252+000	231+350 LHS Inner	1	38.3000	0.2834	0.1792	0.1025	0.0657	0.0517	0.0365	0.0305	31.4	33.1		38.7
	4-5-2023	00:52:04	IL&FS	LSI	Solapur	MH	17.760173	75.766036	150+000	252+000	231+350 LHS Inner	2	37.9000	0.2673	0.1716	0.1063	0.0631	0.0452	0.0352	0.0304	31.4	33.1		38.7
	4-5-2023	00:52:04	IL&FS	LSI	Solapur	MH	17.760173	75.766036	150+000	252+000	231+350 LHS Inner	3	38.5000	0.2741	0.1709	0.1009	0.0660	0.0476	0.0374	0.0317	31.4	33.1		38.7
1522	4-5-2023	00:54:35	IL&FS	LSI	Solapur	MH	17.758203	75.770416	150+000	252+000	231+850 LHS Inner	1	37.5000	0.2689	0.1702	0.0994	0.0688	0.0483	0.0375	0.0304	31.6	33.1		38.7
	4-5-2023	00:54:35	IL&FS	LSI	Solapur	MH	17.758203	75.770416	150+000	252+000	231+850 LHS Inner	2	37.7000	0.2689	0.1587	0.1092	0.0725	0.0464	0.0365	0.0299	31.6	33.1		38.7
	4-5-2023	00:54:35	IL&FS	LSI	Solapur	MH	17.758203	75.770416	150+000	252+000	231+850 LHS Inner	3	38.0000	0.2719	0.1596	0.1078	0.0736	0.0471	0.0372	0.0298	31.6	33.1		38.7
1523	4-5-2023	00:56:38	IL&FS	LSI	Solapur	MH	17.757226	75.772529	150+000	252+000	232+100 LHS Inner	1	37.8000	0.2730	0.1781	0.0934	0.0627	0.0419	0.0341	0.0228	31.6	32.8		38.7
	4-5-2023	00:56:38	IL&FS	LSI	Solapur	MH	17.757226	75.772529	150+000	252+000	232+100 LHS Inner	2	36.8000	0.2853	0.1717	0.0911	0.0572	0.0393	0.0333	0.0222	31.6	32.8		38.7
	4-5-2023	00:56:38	IL&FS	LSI	Solapur	MH	17.757226	75.772529	150+000	252+000	232+100 LHS Inner	3	38.2000	0.3104	0.1735	0.0951	0.0578	0.0405	0.0311	0.0230	31.6	32.8		38.7
1524	4-5-2023	00:58:33	IL&FS	LSI	Solapur	MH	17.756288	75.774620	150+000	252+000	232+350 LHS Inner	1	38.4000	0.1855	0.1300	0.0757	0.0547	0.0404	0.0293	0.0223	31.5	33.3		38.7
	4-5-2023	00:58:33	IL&FS	LSI	Solapur	MH	17.756288	75.774620	150+000	252+000	232+350 LHS Inner	2	38.1000	0.1820	0.1316	0.0753	0.0535	0.0396	0.0286	0.0219	31.5	33.3		38.7
	4-5-2023	00:58:33	IL&FS	LSI	Solapur	MH	17.756288	75.774620	150+000	252+000	232+350 LHS Inner	3	38.2000	0.1845	0.1341	0.0762	0.0551	0.0400	0.0292	0.0225	31.5	33.3		38.7
1525	4-5-2023	01:00:20	IL&FS	LSI	Solapur	MH	17.755300	75.776702	150+000	252+000	232+600 LHS Inner	1	38.6000	0.3112	0.2012	0.1137	0.0681	0.0576	0.0464	0.0392	31.6	33.1		38.7
	4-5-2023	01:00:20	IL&FS	LSI	Solapur	MH	17.755300	75.776702	150+000	252+000	232+600 LHS Inner	2	39.0000	0.2868	0.1893	0.1119	0.0727	0.0623	0.0508	0.0421	31.6	33.1		38.7
	4-5-2023	01:00:20	IL&FS	LSI	Solapur	MH	17.755300	75.776702	150+000	252+000	232+600 LHS Inner	3	38.8000	0.3160	0.1997	0.1081	0.0691	0.0617	0.0471	0.0378	31.6	33.1		38.7
1526	4-5-2023	01:02:21	IL&FS	LSI	Solapur	MH	17.754144	75.779212	150+000	252+000	232+890 LHS Inner	1	38.4000	0.1801	0.1033	0.0702	0.0499	0.0365	0.0288	0.0240	31.6	32.6		38.7
	4-5-2023	01:02:21	IL&FS	LSI	Solapur	MH	17.754144	75.779212	150+000	252+000	232+890 LHS Inner	2	38.6000	0.1727	0.1031	0.0673	0.0485	0.0362	0.0274	0.0219	31.6	32.6		38.7

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	01:02:21	IL&FS	LSI	Solapur	MH	17.754144	75.779212	150+000	252+000	232+890 LHS Inner	3	39.7000	0.1675	0.1043	0.0673	0.0494	0.0363	0.0278	0.0224	31.6	32.6		38.7
1527	4-5-2023	01:11:32	IL&FS	LSI	Solapur	MH	17.753309	75.781097	150+000	252+000	233+100 LHS Inner	1	40.2000	0.1907	0.1106	0.0771	0.0547	0.0446	0.0354	0.0319	31.1	32.8	T-30.2/37.1	37.1
	4-5-2023	01:11:32	IL&FS	LSI	Solapur	MH	17.753309	75.781097	150+000	252+000	233+100 LHS Inner	2	39.9000	0.1917	0.1167	0.0776	0.0510	0.0449	0.0354	0.0318	31.1	32.8	T-30.2/37.1	37.1
	4-5-2023	01:11:32	IL&FS	LSI	Solapur	MH	17.753309	75.781097	150+000	252+000	233+100 LHS Inner	3	38.4000	0.1837	0.1121	0.0745	0.0480	0.0436	0.0345	0.0311	31.1	32.8	T-30.2/37.1	37.1
1528	4-5-2023	01:13:42	IL&FS	LSI	Solapur	MH	17.752313	75.783111	150+000	252+000	233+350 LHS Inner	1	38.3000	0.2846	0.1779	0.0979	0.0629	0.0438	0.0309	0.0209	31.3	33.1		37.1
	4-5-2023	01:13:42	IL&FS	LSI	Solapur	MH	17.752313	75.783111	150+000	252+000	233+350 LHS Inner	2	37.1000	0.2641	0.1586	0.0957	0.0597	0.0412	0.0262	0.0160	31.3	33.1		37.1
	4-5-2023	01:13:42	IL&FS	LSI	Solapur	MH	17.752313	75.783111	150+000	252+000	233+350 LHS Inner	3	37.0000	0.2509	0.1548	0.0946	0.0602	0.0412	0.0265	0.0167	31.3	33.1		37.1
1529	4-5-2023	01:15:33	IL&FS	LSI	Solapur	MH	17.751302	75.785285	150+000	252+000	233+600 LHS Inner	1	37.5000	0.3147	0.2113	0.1198	0.0626	0.0379	0.0213	0.0174	31.3	33.2		37.1
	4-5-2023	01:15:33	IL&FS	LSI	Solapur	MH	17.751302	75.785285	150+000	252+000	233+600 LHS Inner	2	37.9000	0.3058	0.1963	0.1284	0.0630	0.0376	0.0214	0.0175	31.3	33.2		37.1
	4-5-2023	01:15:33	IL&FS	LSI	Solapur	MH	17.751302	75.785285	150+000	252+000	233+600 LHS Inner	3	38.7000	0.3112	0.2084	0.1241	0.0646	0.0400	0.0221	0.0181	31.3	33.2		37.1
1530	4-5-2023	01:17:31	IL&FS	LSI	Solapur	MH	17.750425	75.787246	150+000	252+000	233+835 LHS Inner	1	41.8000	0.1371	0.1066	0.0769	0.0571	0.0417	0.0343	0.0297	31.3	32.7		37.1
	4-5-2023	01:17:31	IL&FS	LSI	Solapur	MH	17.750425	75.787246	150+000	252+000	233+835 LHS Inner	2	40.1000	0.1425	0.0999	0.0686	0.0515	0.0399	0.0331	0.0284	31.3	32.7		37.1
	4-5-2023	01:17:31	IL&FS	LSI	Solapur	MH	17.750425	75.787246	150+000	252+000	233+835 LHS Inner	3	40.1000	0.1419	0.1024	0.0752	0.0538	0.0400	0.0335	0.0285	31.3	32.7		37.1
1531	4-5-2023	01:19:26	IL&FS	LSI	Solapur	MH	17.749410	75.789527	150+000	252+000	234+100 LHS Inner	1	38.4000	0.3403	0.1961	0.1278	0.0850	0.0615	0.0452	0.0291	31.3	32.7		37.1
	4-5-2023	01:19:26	IL&FS	LSI	Solapur	MH	17.749410	75.789527	150+000	252+000	234+100 LHS Inner	2	37.4000	0.3070	0.1988	0.1219	0.0853	0.0599	0.0430	0.0283	31.3	32.7		37.1
	4-5-2023	01:19:26	IL&FS	LSI	Solapur	MH	17.749410	75.789527	150+000	252+000	234+100 LHS Inner	3	38.4000	0.3585	0.2043	0.1241	0.0829	0.0609	0.0458	0.0291	31.3	32.7		37.1
1532	4-5-2023	01:21:15	IL&FS	LSI	Solapur	MH	17.748434	75.791664	150+000	252+000	234+350 LHS Inner	1	36.7000	0.2683	0.1545	0.0911	0.0578	0.0344	0.0229	0.0206	31.2	33.0		37.1
	4-5-2023	01:21:15	IL&FS	LSI	Solapur	MH	17.748434	75.791664	150+000	252+000	234+350 LHS Inner	2	36.8000	0.2378	0.1477	0.0918	0.0588	0.0326	0.0242	0.0218	31.2	33.0		37.1
	4-5-2023	01:21:15	IL&FS	LSI	Solapur	MH	17.748434	75.791664	150+000	252+000	234+350 LHS Inner	3	38.5000	0.2649	0.1596	0.0890	0.0628	0.0371	0.0237	0.0213	31.2	33.0		37.1
1533	4-5-2023	01:23:05	IL&FS	LSI	Solapur	MH	17.747455	75.793891	150+000	252+000	234+600 LHS Inner	1	38.7000	0.2877	0.1734	0.0961	0.0574	0.0350	0.0195	0.0176	31.2	33.1		37.1
	4-5-2023	01:23:05	IL&FS	LSI	Solapur	MH	17.747455	75.793891	150+000	252+000	234+600 LHS Inner	2	38.7000	0.2637	0.1717	0.0983	0.0550	0.0328	0.0187	0.0168	31.2	33.1		37.1
	4-5-2023	01:23:05	IL&FS	LSI	Solapur	MH	17.747455	75.793891	150+000	252+000	234+600 LHS Inner	3	38.9000	0.2804	0.1697	0.0885	0.0513	0.0311	0.0176	0.0158	31.2	33.1		37.1
1534	4-5-2023	01:25:01	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	234+850 LHS Inner	1	37.7000	0.3193	0.1882	0.1206	0.0864	0.0587	0.0385	0.0197	31.3	33.3		37.1
	4-5-2023	01:25:01	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	234+850 LHS Inner	2	37.9000	0.3005	0.1878	0.1155	0.0877	0.0618	0.0444	0.0200	31.3	33.3		37.1
	4-5-2023	01:25:01	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	234+850 LHS Inner	3	38.0000	0.3109	0.1914	0.1154	0.0861	0.0589	0.0396	0.0202	31.3	33.3		37.1
1535	4-5-2023	01:27:02	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	235+100 LHS Inner	1	36.9000	0.3405	0.2180	0.1329	0.0927	0.0704	0.0510	0.0341	31.4	33.4		37.1
	4-5-2023	01:27:02	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	235+100 LHS Inner	2	38.1000	0.3571	0.2111	0.1287	0.0888	0.0695	0.0525	0.0337	31.4	33.4		37.1
	4-5-2023	01:27:02	IL&FS	LSI	Solapur	MH	17.746480	75.796005	150+000	252+000	235+100 LHS Inner	3	37.1000	0.3465	0.2085	0.1301	0.0897	0.0650	0.0513	0.0339	31.4	33.4		37.1
1536	4-5-2023	01:29:05	IL&FS	LSI	Solapur	MH	17.744543	75.800308	150+000	252+000	235+350 LHS Inner	1	38.7000	0.3564	0.2468	0.1407	0.0809	0.0582	0.0429	0.0397	31.5	33.7		37.1
	4-5-2023	01:29:05	IL&FS	LSI	Solapur	MH	17.744543	75.800308	150+000	252+000	235+350 LHS Inner	2	38.8000	0.3518	0.2466	0.1434	0.0852	0.0597	0.0423	0.0392	31.5	33.7		37.1
	4-5-2023	01:29:05	IL&FS	LSI	Solapur	MH	17.744543	75.800308	150+000	252+000	235+350 LHS Inner	3	39.4000	0.3654	0.2572	0.1407	0.0892	0.0566	0.0432	0.0412	31.5	33.7		37.1
1537	4-5-2023	01:30:47	IL&FS	LSI	Solapur	MH	17.743616	75.802368	150+000	252+000	235+600 LHS Inner	1	38.4000	0.3040	0.2175	0.1442	0.0941	0.0578	0.0343	0.0255	31.5	33.4		37.1
	4-5-2023	01:30:47	IL&FS	LSI	Solapur	MH	17.743616	75.802368	150+000	252+000	235+600 LHS Inner	2	38.3000	0.3142	0.2180	0.1437	0.0960	0.0604	0.0327	0.0240	31.5	33.4		37.1
	4-5-2023	01:30:47	IL&FS	LSI	Solapur	MH	17.743616	75.802368	150+000	252+000	235+600 LHS Inner	3	37.3000	0.2837	0.2151	0.1418	0.0951	0.0588	0.0320	0.0234	31.5	33.4		37.1
1538	4-5-2023	01:32:37	IL&FS	LSI	Solapur	MH	17.742675	75.804496	150+000	252+000	235+850 LHS Inner	1	36.5000	0.3711	0.2353	0.1389	0.0836	0.0540	0.0330	0.0243	31.5	33.4		37.1
	4-5-2023	01:32:37	IL&FS	LSI	Solapur	MH	17.742675	75.804496	150+000	252+000	235+850 LHS Inner	2	37.8000	0.4045	0.2199	0.1495	0.0888	0.0565	0.0342	0.0254	31.5	33.4		37.1
	4-5-2023	01:32:37	IL&FS	LSI	Solapur	MH	17.742675	75.804496	150+000	252+000	235+850 LHS Inner	3	37.8000	0.3924	0.2431	0.1433	0.0923	0.0561	0.0322	0.0235	31.5	33.4		37.1
1539	4-5-2023	01:34:40	IL&FS	LSI	Solapur	MH	17.741737	75.806808	150+000	252+000	236+120 LHS Inner	1	39.8000	0.2253	0.1596	0.1054	0.0681	0.0435	0.0265	0.0182	31.5	33.1		37.1
	4-5-2023	01:34:40	IL&FS	LSI	Solapur	MH	17.741737	75.806808	150+000	252+000	236+120 LHS Inner	2	40.4000	0.2170	0.1592	0.1023	0.0641	0.0420	0.0271	0.0189	31.5	33.1		37.1
	4-5-2023	01:34:40	IL&FS	LSI	Solapur	MH	17.741737	75.806808	150+000	252+000	236+120 LHS Inner	3	39.9000	0.2420	0.1633	0.1055	0.0653	0.0419	0.0261	0.0191	31.5	33.1		37.1
1540	4-5-2023	01:36:34	IL&FS	LSI	Solapur	MH	17.740819	75.808906	150+000	252+000	236+350 LHS Inner	1	38.6000	0.2894	0.2009	0.1147	0.0557	0.0381	0.0270	0.0209	31.5	33.3		37.1
	4-5-2023	01:36:34	IL&FS	LSI	Solapur	MH	17.740819	75.808906	150+000	252+000	236+350 LHS Inner	2	38.8000	0.3114	0.2074	0.1097	0.0592	0.0417	0.0310	0.0227	31.5	33.3		37.1
	4-5-2023	01:36:34	IL&FS	LSI	Solapur	MH	17.740819	75.808906	150+000	252+000	236+350 LHS Inner	3	38.8000	0.2989	0.1908	0.1013	0.0538	0.0390	0.0280	0.0217	31.5	33.3		37.1
1541	4-5-2023	01:38:23	IL&FS	LSI	Solapur	MH	17.739904	75.810981	150+000	252+000	236+600 LHS Inner	1	39.7000	0.2598	0.1714	0.1077	0.0757	0.0613	0.0504	0.0453	31.6	33.1		37.1
	4-5-2023	01:38:23	IL&FS	LSI	Solapur	MH	17.739904	75.810981	150+000	252+000	236+600 LHS Inner	2	39.7000	0.2658	0.1713	0.1031	0.0706	0.0624	0.0518	0.0379	31.6	33.1		37.1
	4-5-2023	01:38:23	IL&FS	LSI	Solapur	MH	17.739904	75.810981	150+000	252+000	236+600 LHS Inner	3	39.8000	0.2607	0.1702	0.1104	0.0726	0.0664	0.0490	0.0459	31.6	33.1		37.1
1542	4-5-2023	01:40:16	IL&FS	LSI	Solapur	MH	17.738868	75.813331	150+000	252+000	236+880 LHS Inner	1	40.0000	0.1147	0.0741	0.0477	0.0300	0.0216	0.0152	0.0137	31.6	33.1		37.1
	4-5-2023	01:40:16	IL&FS	LSI	Solapur	MH	17.738868	75.813331	150+000	252+000	236+880 LHS Inner	2	39.9000	0.1178	0.0741	0.0510	0.0331	0.0225	0.0144	0.0129	31.6	33.1		37.1
	4-5-2023	01:40:16	IL&FS	LSI	Solapur	MH	17.738868	75.813331	150+000	252+000	236+880 LHS Inner	3	39.9000	0.1154	0.0741	0.0499	0.0319	0.0218	0.0144	0.0129	31.6	33.1		37.1
1543	4-5-2023	01:42:20	IL&FS	LSI	Solapur	MH	17.738059	75.815238	150+000	252+000	237+100 LHS Inner	1	39.7000	0.1451	0.0966	0.0626	0.0485	0.0389	0.0273	0.0198	31.6	33.6		37.1
	4-5-2023	01:42:20	IL&FS	LSI	Solapur	MH	17.738059	75.815238	150+000	252+000	237+100 LHS Inner	2	39.9000	0.1370	0.0916	0.0632	0.0508	0.0417	0.0293	0.0217	31.6	33.6		37.1
	4-5-2023	01:42:20	IL&FS	LSI	Solapur	MH	17.738059	75.815238	150+000	252+000	237+100 LHS Inner	3	39.7000	0.1499	0.0990	0.0632	0.0503	0.0403	0.0284	0.0205	31.6	33.6		37.1
1544	4-5-2023	01:44:07	IL&FS	LSI	Solapur	MH	17.737102	75.817405	150+000	252+000	237+350 LHS Inner	1	39.7000	0.1391	0.0916	0.0506	0.0338	0.0220	0.0137	0.0084	31.7	33.6		37.1
	4-5-2023	01:44:07	IL&FS	LSI	Solapur	MH	17.737102	75.817405	150+000	252+000	237+350 LHS Inner	2	39.6000	0.1435	0.0886	0.0504	0.0343	0.0221	0.0139	0.0085	31.7	33.6		37.1
	4-5-2023	01:44:07	IL&FS	LSI	Solapur	MH	17.737102	75.817405	150+000	252+000	237+350 LHS Inner	3	39.2000	0.1377	0.0926	0.0500	0.0338	0.0216	0.0138	0.0082	31.7	33.6		37.1
1545	4-5-2023	01:47:10	IL&FS	LSI	Solapur	MH	17.736125	75.819633	150+000	252+000	237+620 LHS Inner	1	41.0000	0.1519	0.0922	0.0551	0.0392	0.0321	0.0259	0.0233	31.6	33.3	T-31.1/38.7	38.7

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	01:47:10	IL&FS	LSI	Solapur	MH	17.736125	75.819633	150+000	252+000	237+620 LHS Inner	2	41.0000	0.1572	0.0953	0.0605	0.0357	0.0295	0.0226	0.0203	31.6	33.3	T-31.1/38.7	38.7
	4-5-2023	01:47:10	IL&FS	LSI	Solapur	MH	17.736125	75.819633	150+000	252+000	237+620 LHS Inner	3	41.3000	0.1559	0.0938	0.0548	0.0381	0.0327	0.0266	0.0239	31.6	33.3	T-31.1/38.7	38.7
1546	4-5-2023	01:49:25	IL&FS	LSI	Solapur	MH	17.735158	75.821701	150+000	252+000	237+850 LHS Inner	1	43.1000	0.1197	0.0741	0.0435	0.0296	0.0225	0.0164	0.0130	31.8	33.3		38.7
	4-5-2023	01:49:25	IL&FS	LSI	Solapur	MH	17.735158	75.821701	150+000	252+000	237+850 LHS Inner	2	41.0000	0.1241	0.0763	0.0456	0.0283	0.0207	0.0150	0.0118	31.8	33.3		38.7
	4-5-2023	01:49:25	IL&FS	LSI	Solapur	MH	17.735158	75.821701	150+000	252+000	237+850 LHS Inner	3	41.6000	0.1193	0.0750	0.0429	0.0299	0.0217	0.0162	0.0133	31.8	33.3		38.7
1547	4-5-2023	01:51:17	IL&FS	LSI	Solapur	MH	17.734272	75.823722	150+000	252+000	238+100 LHS Inner	1	38.7000	0.2654	0.1654	0.1052	0.0714	0.0504	0.0300	0.0216	31.7	32.9		38.7
	4-5-2023	01:51:17	IL&FS	LSI	Solapur	MH	17.734272	75.823722	150+000	252+000	238+100 LHS Inner	2	38.5000	0.2644	0.1601	0.1079	0.0765	0.0526	0.0304	0.0220	31.7	32.9		38.7
	4-5-2023	01:51:17	IL&FS	LSI	Solapur	MH	17.734272	75.823722	150+000	252+000	238+100 LHS Inner	3	38.8000	0.2583	0.1660	0.1023	0.0717	0.0502	0.0300	0.0216	31.7	32.9		38.7
1548	4-5-2023	01:53:33	IL&FS	LSI	Solapur	MH	17.733247	75.825920	150+000	252+000	238+350 LHS Inner	1	37.0000	0.2521	0.1826	0.0995	0.0666	0.0423	0.0292	0.0203	31.5	33.2		38.7
	4-5-2023	01:53:33	IL&FS	LSI	Solapur	MH	17.733247	75.825920	150+000	252+000	238+350 LHS Inner	2	38.0000	0.2543	0.1749	0.1040	0.0685	0.0428	0.0310	0.0227	31.5	33.2		38.7
	4-5-2023	01:53:33	IL&FS	LSI	Solapur	MH	17.733247	75.825920	150+000	252+000	238+350 LHS Inner	3	38.2000	0.2652	0.1659	0.1010	0.0653	0.0423	0.0307	0.0234	31.5	33.2		38.7
1549	4-5-2023	01:55:30	IL&FS	LSI	Solapur	MH	17.732141	75.828361	150+000	252+000	238+640 LHS Inner	1	37.1000	0.3839	0.2119	0.1221	0.0738	0.0367	0.0241	0.0155	31.5	33.1		38.7
	4-5-2023	01:55:30	IL&FS	LSI	Solapur	MH	17.732141	75.828361	150+000	252+000	238+640 LHS Inner	2	37.8000	0.3707	0.2296	0.1147	0.0673	0.0354	0.0231	0.0142	31.5	33.1		38.7
	4-5-2023	01:55:30	IL&FS	LSI	Solapur	MH	17.732141	75.828361	150+000	252+000	238+640 LHS Inner	3	37.9000	0.3892	0.2259	0.1263	0.0743	0.0356	0.0239	0.0148	31.5	33.1		38.7
1550	4-5-2023	01:57:24	IL&FS	LSI	Solapur	MH	17.731327	75.830253	150+000	252+000	238+850 LHS Inner	1	37.5000	0.3982	0.2338	0.1337	0.0866	0.0513	0.0412	0.0371	31.4	32.7		38.7
	4-5-2023	01:57:24	IL&FS	LSI	Solapur	MH	17.731327	75.830253	150+000	252+000	238+850 LHS Inner	2	37.6000	0.4038	0.2322	0.1358	0.0829	0.0473	0.0396	0.0356	31.4	32.7		38.7
	4-5-2023	01:57:24	IL&FS	LSI	Solapur	MH	17.731327	75.830253	150+000	252+000	238+850 LHS Inner	3	37.7000	0.4033	0.2166	0.1250	0.0786	0.0482	0.0368	0.0331	31.4	32.7		38.7
1551	4-5-2023	01:59:30	IL&FS	LSI	Solapur	MH	17.730400	75.832420	150+000	252+000	239+100 LHS Inner	1	40.9000	0.1596	0.0993	0.0662	0.0414	0.0261	0.0157	0.0117	31.4	32.7		38.7
	4-5-2023	01:59:30	IL&FS	LSI	Solapur	MH	17.730400	75.832420	150+000	252+000	239+100 LHS Inner	2	40.9000	0.1709	0.0986	0.0646	0.0410	0.0251	0.0154	0.0111	31.4	32.7		38.7
	4-5-2023	01:59:30	IL&FS	LSI	Solapur	MH	17.730400	75.832420	150+000	252+000	239+100 LHS Inner	3	41.2000	0.1546	0.0996	0.0690	0.0477	0.0278	0.0152	0.0117	31.4	32.7		38.7
1552	4-5-2023	02:01:13	IL&FS	LSI	Solapur	MH	17.729454	75.834556	150+000	252+000	239+350 LHS Inner	1	40.8000	0.1227	0.0845	0.0600	0.0450	0.0357	0.0278	0.0219	31.4	32.9		38.7
	4-5-2023	02:01:13	IL&FS	LSI	Solapur	MH	17.729454	75.834556	150+000	252+000	239+350 LHS Inner	2	41.3000	0.1224	0.0844	0.0582	0.0430	0.0325	0.0245	0.0191	31.4	32.9		38.7
	4-5-2023	02:01:13	IL&FS	LSI	Solapur	MH	17.729454	75.834556	150+000	252+000	239+350 LHS Inner	3	41.2000	0.1264	0.0881	0.0592	0.0442	0.0328	0.0248	0.0191	31.4	32.9		38.7
1553	4-5-2023	02:03:20	IL&FS	LSI	Solapur	MH	17.728479	75.836761	150+000	252+000	239+610 LHS Inner	1	41.0000	0.0922	0.0593	0.0410	0.0280	0.0199	0.0142	0.0107	31.3	32.6		38.7
	4-5-2023	02:03:20	IL&FS	LSI	Solapur	MH	17.728479	75.836761	150+000	252+000	239+610 LHS Inner	2	41.4000	0.0948	0.0585	0.0400	0.0271	0.0187	0.0129	0.0097	31.3	32.6		38.7
	4-5-2023	02:03:20	IL&FS	LSI	Solapur	MH	17.728479	75.836761	150+000	252+000	239+610 LHS Inner	3	41.5000	0.0897	0.0608	0.0418	0.0296	0.0195	0.0128	0.0101	31.3	32.6		38.7
1554	4-5-2023	02:05:19	IL&FS	LSI	Solapur	MH	17.727598	75.838745	150+000	252+000	239+850 LHS Inner	1	39.8000	0.1623	0.0892	0.0542	0.0364	0.0253	0.0191	0.0147	31.4	33.1		38.7
	4-5-2023	02:05:19	IL&FS	LSI	Solapur	MH	17.727598	75.838745	150+000	252+000	239+850 LHS Inner	2	40.4000	0.1734	0.0921	0.0571	0.0396	0.0266	0.0202	0.0154	31.4	33.1		38.7
	4-5-2023	02:05:19	IL&FS	LSI	Solapur	MH	17.727598	75.838745	150+000	252+000	239+850 LHS Inner	3	40.4000	0.1793	0.0905	0.0561	0.0391	0.0258	0.0194	0.0150	31.4	33.1		38.7
1555	4-5-2023	02:07:32	IL&FS	LSI	Solapur	MH	17.726493	75.840782	150+000	252+000	240+100 LHS Inner	1	40.6000	0.2147	0.1410	0.0918	0.0566	0.0386	0.0304	0.0242	31.4	32.5		38.7
	4-5-2023	02:07:32	IL&FS	LSI	Solapur	MH	17.726493	75.840782	150+000	252+000	240+100 LHS Inner	2	41.1000	0.2137	0.1482	0.1013	0.0595	0.0377	0.0289	0.0232	31.4	32.5		38.7
	4-5-2023	02:07:32	IL&FS	LSI	Solapur	MH	17.726493	75.840782	150+000	252+000	240+100 LHS Inner	3	40.6000	0.2063	0.1410	0.0901	0.0608	0.0391	0.0302	0.0241	31.4	32.5		38.7
1556	4-5-2023	02:09:25	IL&FS	LSI	Solapur	MH	17.724739	75.842498	150+000	252+000	240+350 LHS Inner	1	40.8000	0.1393	0.0803	0.0424	0.0330	0.0258	0.0196	0.0155	31.3	32.9		38.7
	4-5-2023	02:09:25	IL&FS	LSI	Solapur	MH	17.724739	75.842498	150+000	252+000	240+350 LHS Inner	2	41.1000	0.1449	0.0768	0.0440	0.0333	0.0250	0.0189	0.0149	31.3	32.9		38.7
	4-5-2023	02:09:25	IL&FS	LSI	Solapur	MH	17.724739	75.842498	150+000	252+000	240+350 LHS Inner	3	40.9000	0.1348	0.0791	0.0468	0.0350	0.0259	0.0197	0.0156	31.3	32.9		38.7
1557	4-5-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.723203	75.843971	150+000	252+000	240+600 LHS Inner	1	40.0000	0.1832	0.1097	0.0707	0.0538	0.0414	0.0331	0.0274	31.3	32.9		38.7
	4-5-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.723203	75.843971	150+000	252+000	240+600 LHS Inner	2	40.3000	0.2015	0.1181	0.0776	0.0538	0.0410	0.0341	0.0290	31.3	32.9		38.7
	4-5-2023	02:11:06	IL&FS	LSI	Solapur	MH	17.723203	75.843971	150+000	252+000	240+600 LHS Inner	3	40.2000	0.1985	0.1136	0.0758	0.0538	0.0466	0.0350	0.0276	31.3	32.9		38.7
1558	4-5-2023	02:16:11	IL&FS	LSI	Solapur	MH	17.721496	75.845748	150+000	252+000	240+850 LHS Inner	1	39.4000	0.1940	0.1184	0.0744	0.0397	0.0280	0.0191	0.0145	30.8	32.1	T-30.2/36	36
	4-5-2023	02:16:11	IL&FS	LSI	Solapur	MH	17.721496	75.845748	150+000	252+000	240+850 LHS Inner	2	39.6000	0.1776	0.1190	0.0738	0.0399	0.0261	0.0209	0.0161	30.8	32.1	T-30.2/36	36
	4-5-2023	02:16:11	IL&FS	LSI	Solapur	MH	17.721496	75.845748	150+000	252+000	240+850 LHS Inner	3	39.3000	0.1826	0.1181	0.0742	0.0433	0.0264	0.0205	0.0158	30.8	32.1	T-30.2/36	36
1559	4-5-2023	02:18:15	IL&FS	LSI	Solapur	MH	17.719787	75.847305	150+000	252+000	241+100 LHS Inner	1	38.6000	0.2735	0.1547	0.0996	0.0668	0.0472	0.0344	0.0164	31.0	32.5		36
	4-5-2023	02:18:15	IL&FS	LSI	Solapur	MH	17.719787	75.847305	150+000	252+000	241+100 LHS Inner	2	39.1000	0.2885	0.1562	0.0996	0.0714	0.0507	0.0349	0.0158	31.0	32.5		36
	4-5-2023	02:18:15	IL&FS	LSI	Solapur	MH	17.719787	75.847305	150+000	252+000	241+100 LHS Inner	3	39.5000	0.2958	0.1739	0.0971	0.0767	0.0522	0.0351	0.0170	31.0	32.5		36
1560	4-5-2023	02:20:06	IL&FS	LSI	Solapur	MH	17.718164	75.848899	150+000	252+000	241+350 LHS Inner	1	39.0000	0.2192	0.1458	0.0901	0.0583	0.0355	0.0291	0.0243	30.9	32.5		36
	4-5-2023	02:20:06	IL&FS	LSI	Solapur	MH	17.718164	75.848899	150+000	252+000	241+350 LHS Inner	2	39.0000	0.2333	0.1460	0.0907	0.0577	0.0349	0.0283	0.0238	30.9	32.5		36
	4-5-2023	02:20:06	IL&FS	LSI	Solapur	MH	17.718164	75.848899	150+000	252+000	241+350 LHS Inner	3	39.0000	0.2290	0.1534	0.0868	0.0587	0.0366	0.0300	0.0252	30.9	32.5		36
1561	4-5-2023	02:22:16	IL&FS	LSI	Solapur	MH	17.716432	75.850440	150+000	252+000	241+600 LHS Inner	1	38.7000	0.3370	0.2029	0.1248	0.0826	0.0528	0.0377	0.0268	31.0	32.6		36
	4-5-2023	02:22:16	IL&FS	LSI	Solapur	MH	17.716432	75.850440	150+000	252+000	241+600 LHS Inner	2	39.4000	0.3307	0.2101	0.1280	0.0828	0.0512	0.0349	0.0248	31.0	32.6		36
	4-5-2023	02:22:16	IL&FS	LSI	Solapur	MH	17.716432	75.850440	150+000	252+000	241+600 LHS Inner	3	39.4000	0.3283	0.2048	0.1305	0.0885	0.0588	0.0400	0.0272	31.0	32.6		36
1562	4-5-2023	02:25:01	IL&FS	LSI	Solapur	MH	17.714788	75.852058	150+000	252+000	241+870 LHS Inner	1	38.4000	0.3983	0.2317	0.1385	0.0910	0.0547	0.0365	0.0323	30.8	32.1		36
	4-5-2023	02:25:01	IL&FS	LSI	Solapur	MH	17.714788	75.852058	150+000	252+000	241+870 LHS Inner	2	38.0000	0.4037	0.2295	0.1495	0.0899	0.0520	0.0351	0.0311	30.8	32.1		36
	4-5-2023	02:25:01	IL&FS	LSI	Solapur	MH	17.714788	75.852058	150+000	252+000	241+870 LHS Inner	3	37.9000	0.3668	0.2284	0.1372	0.0853	0.0497	0.0338	0.0299	30.8	32.1		36
1563	4-5-2023	02:27:00	IL&FS	LSI	Solapur	MH	17.713331	75.853500	150+000	252+000	242+100 LHS Inner	1	40.1000	0.1394	0.1101	0.0649	0.0384	0.0208	0.0137	0.0090	30.6	32.0		36
	4-5-2023	02:27:00	IL&FS	LSI	Solapur	MH	17.713331	75.853500	150+000	252+000	242+100 LHS Inner	2	38.8000	0.1429	0.1056	0.0634	0.0379	0.0210	0.0142	0.0091	30.6	32.0		36
	4-5-2023	02:27:00	IL&FS	LSI	Solapur	MH	17.713331	75.853500	150+000	252+000	242+100 LHS Inner	3	40.1000	0.1533	0.1097	0.0686	0.0397	0.0213	0.0140	0.0094	30.6	32.0		36

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1564	4-5-2023	02:28:46	IL&FS	LSI	Solapur	MH	17.711509	75.855194	150+000	252+000	242+350 LHS Inner	1	40.2000	0.1786	0.1094	0.0738	0.0511	0.0443	0.0396	0.0356	30.5	32.6		36
	4-5-2023	02:28:46	IL&FS	LSI	Solapur	MH	17.711509	75.855194	150+000	252+000	242+350 LHS Inner	2	40.2000	0.1803	0.1199	0.0811	0.0521	0.0442	0.0389	0.0350	30.5	32.6		36
	4-5-2023	02:28:46	IL&FS	LSI	Solapur	MH	17.711509	75.855194	150+000	252+000	242+350 LHS Inner	3	40.4000	0.1681	0.1208	0.0811	0.0518	0.0435	0.0384	0.0346	30.5	32.6		36
1565	4-5-2023	02:30:36	IL&FS	LSI	Solapur	MH	17.709739	75.856948	150+000	252+000	242+600 LHS Inner	1	40.3000	0.1585	0.0968	0.0679	0.0457	0.0378	0.0326	0.0293	30.7	32.8		36
	4-5-2023	02:30:36	IL&FS	LSI	Solapur	MH	17.709739	75.856948	150+000	252+000	242+600 LHS Inner	2	40.2000	0.1550	0.0894	0.0645	0.0463	0.0370	0.0302	0.0272	30.7	32.8		36
	4-5-2023	02:30:36	IL&FS	LSI	Solapur	MH	17.709739	75.856948	150+000	252+000	242+600 LHS Inner	3	40.0000	0.1561	0.0911	0.0636	0.0452	0.0362	0.0302	0.0272	30.7	32.8		36
1566	4-5-2023	02:33:04	IL&FS	LSI	Solapur	MH	17.708322	75.858375	150+000	252+000	242+850 LHS Inner	1	39.4000	0.1922	0.1334	0.0981	0.0722	0.0454	0.0375	0.0338	30.7	32.0		36
	4-5-2023	02:33:04	IL&FS	LSI	Solapur	MH	17.708322	75.858375	150+000	252+000	242+850 LHS Inner	2	39.4000	0.1920	0.1258	0.0919	0.0683	0.0485	0.0386	0.0347	30.7	32.0		36
	4-5-2023	02:33:04	IL&FS	LSI	Solapur	MH	17.708322	75.858375	150+000	252+000	242+850 LHS Inner	3	39.3000	0.1925	0.1237	0.0931	0.0734	0.0435	0.0369	0.0332	30.7	32.0		36
1567	4-5-2023	02:34:50	IL&FS	LSI	Solapur	MH	17.706659	75.860000	150+000	252+000	243+100 LHS Inner	1	39.1000	0.2438	0.1144	0.0619	0.0454	0.0341	0.0278	0.0250	30.8	32.2		36
	4-5-2023	02:34:50	IL&FS	LSI	Solapur	MH	17.706659	75.860000	150+000	252+000	243+100 LHS Inner	2	39.8000	0.2561	0.1123	0.0686	0.0506	0.0367	0.0302	0.0271	30.8	32.2		36
	4-5-2023	02:34:50	IL&FS	LSI	Solapur	MH	17.706659	75.860000	150+000	252+000	243+100 LHS Inner	3	39.7000	0.2417	0.1205	0.0652	0.0461	0.0328	0.0299	0.0269	30.8	32.2		36
1568	4-5-2023	02:36:29	IL&FS	LSI	Solapur	MH	17.705110	75.861465	150+000	252+000	243+350 LHS Inner	1	40.5000	0.1284	0.0823	0.0517	0.0369	0.0245	0.0193	0.0155	30.7	32.5		36
	4-5-2023	02:36:29	IL&FS	LSI	Solapur	MH	17.705110	75.861465	150+000	252+000	243+350 LHS Inner	2	41.3000	0.1251	0.0795	0.0506	0.0367	0.0246	0.0195	0.0156	30.7	32.5		36
	4-5-2023	02:36:29	IL&FS	LSI	Solapur	MH	17.705110	75.861465	150+000	252+000	243+350 LHS Inner	3	41.1000	0.1274	0.0827	0.0515	0.0410	0.0246	0.0194	0.0156	30.7	32.5		36
1569	4-5-2023	02:38:59	IL&FS	LSI	Solapur	MH	17.703351	75.863159	150+000	252+000	243+600 LHS Inner	1	40.1000	0.1198	0.0706	0.0528	0.0407	0.0290	0.0224	0.0178	30.7	32.3		36
	4-5-2023	02:38:59	IL&FS	LSI	Solapur	MH	17.703351	75.863159	150+000	252+000	243+600 LHS Inner	2	40.1000	0.1119	0.0678	0.0509	0.0395	0.0277	0.0223	0.0180	30.7	32.3		36
	4-5-2023	02:38:59	IL&FS	LSI	Solapur	MH	17.703351	75.863159	150+000	252+000	243+600 LHS Inner	3	40.0000	0.1205	0.0675	0.0500	0.0367	0.0273	0.0217	0.0182	30.7	32.3		36
1570	4-5-2023	02:40:40	IL&FS	LSI	Solapur	MH	17.701669	75.864738	150+000	252+000	243+850 LHS Inner	1	39.7000	0.2210	0.1165	0.0736	0.0497	0.0318	0.0201	0.0146	30.8	32.9		36
	4-5-2023	02:40:40	IL&FS	LSI	Solapur	MH	17.701669	75.864738	150+000	252+000	243+850 LHS Inner	2	39.8000	0.1967	0.1209	0.0755	0.0494	0.0308	0.0200	0.0141	30.8	32.9		36
	4-5-2023	02:40:40	IL&FS	LSI	Solapur	MH	17.701669	75.864738	150+000	252+000	243+850 LHS Inner	3	40.2000	0.2163	0.1158	0.0766	0.0509	0.0307	0.0200	0.0144	30.8	32.9		36
1571	4-5-2023	02:42:32	IL&FS	LSI	Solapur	MH	17.700181	75.866577	150+000	252+000	244+100 LHS Inner	1	40.5000	0.1510	0.0857	0.0591	0.0404	0.0277	0.0208	0.0156	30.9	32.6		36
	4-5-2023	02:42:32	IL&FS	LSI	Solapur	MH	17.700181	75.866577	150+000	252+000	244+100 LHS Inner	2	40.9000	0.1576	0.0933	0.0630	0.0407	0.0246	0.0186	0.0148	30.9	32.6		36
	4-5-2023	02:42:32	IL&FS	LSI	Solapur	MH	17.700181	75.866577	150+000	252+000	244+100 LHS Inner	3	41.0000	0.1453	0.0957	0.0675	0.0426	0.0266	0.0197	0.0154	30.9	32.6		36
1572	4-5-2023	02:44:18	IL&FS	LSI	Solapur	MH	17.699062	75.868553	150+000	252+000	244+350 LHS Inner	1	36.8000	0.3304	0.2175	0.1470	0.0987	0.0653	0.0398	0.0272	30.8	33.3		36
	4-5-2023	02:44:18	IL&FS	LSI	Solapur	MH	17.699062	75.868553	150+000	252+000	244+350 LHS Inner	2	36.7000	0.3289	0.2189	0.1492	0.0975	0.0636	0.0412	0.0255	30.8	33.3		36
	4-5-2023	02:44:18	IL&FS	LSI	Solapur	MH	17.699062	75.868553	150+000	252+000	244+350 LHS Inner	3	36.5000	0.2995	0.1981	0.1378	0.0986	0.0665	0.0441	0.0270	30.8	33.3		36
1573	4-5-2023	02:50:17	IL&FS	LSI	Solapur	MH	17.697917	75.870742	150+000	252+000	244+620 LHS Inner	1	39.0000	0.2366	0.1317	0.0845	0.0621	0.0461	0.0398	0.0352	29.9	31.5	T-30.1/36.5	36.5
	4-5-2023	02:50:17	IL&FS	LSI	Solapur	MH	17.697917	75.870742	150+000	252+000	244+620 LHS Inner	2	38.8000	0.2357	0.1325	0.0835	0.0614	0.0456	0.0394	0.0348	29.9	31.5	T-30.1/36.5	36.5
	4-5-2023	02:50:17	IL&FS	LSI	Solapur	MH	17.697917	75.870742	150+000	252+000	244+620 LHS Inner	3	39.1000	0.2385	0.1437	0.0833	0.0609	0.0462	0.0376	0.0321	29.9	31.5	T-30.1/36.5	36.5
1574	4-5-2023	02:52:14	IL&FS	LSI	Solapur	MH	17.696847	75.872657	150+000	252+000	244+870 LHS Inner	1	36.7000	0.4010	0.2467	0.1331	0.0995	0.0709	0.0541	0.0429	30.2	32.5		36.5
	4-5-2023	02:52:14	IL&FS	LSI	Solapur	MH	17.696847	75.872657	150+000	252+000	244+870 LHS Inner	2	37.0000	0.3918	0.2327	0.1365	0.0946	0.0781	0.0511	0.0334	30.2	32.5		36.5
	4-5-2023	02:52:14	IL&FS	LSI	Solapur	MH	17.696847	75.872657	150+000	252+000	244+870 LHS Inner	3	37.0000	0.4064	0.2456	0.1393	0.0973	0.0740	0.0564	0.0448	30.2	32.5		36.5
1575	4-5-2023	02:54:17	IL&FS	LSI	Solapur	MH	17.695611	75.874801	150+000	252+000	245+100 LHS Inner	1	37.4000	0.4491	0.2642	0.1346	0.0829	0.0514	0.0419	0.0351	30.7	33.1		36.5
	4-5-2023	02:54:17	IL&FS	LSI	Solapur	MH	17.695611	75.874801	150+000	252+000	245+100 LHS Inner	2	37.2000	0.4378	0.2691	0.1416	0.0739	0.0472	0.0383	0.0327	30.7	33.1		36.5
	4-5-2023	02:54:17	IL&FS	LSI	Solapur	MH	17.695611	75.874801	150+000	252+000	245+100 LHS Inner	3	37.2000	0.4328	0.2506	0.1456	0.0800	0.0537	0.0414	0.0338	30.7	33.1		36.5
1576	4-5-2023	02:56:06	IL&FS	LSI	Solapur	MH	17.694623	75.876609	150+000	252+000	245+325 LHS Inner	1	38.6000	0.2983	0.2120	0.1264	0.0818	0.0481	0.0352	0.0252	31.0	33.2		36.5
	4-5-2023	02:56:06	IL&FS	LSI	Solapur	MH	17.694623	75.876609	150+000	252+000	245+325 LHS Inner	2	38.7000	0.3054	0.2063	0.1211	0.0757	0.0476	0.0347	0.0253	31.0	33.2		36.5
	4-5-2023	02:56:06	IL&FS	LSI	Solapur	MH	17.694623	75.876609	150+000	252+000	245+325 LHS Inner	3	38.7000	0.2986	0.1926	0.1240	0.0785	0.0477	0.0339	0.0254	31.0	33.2		36.5
1577	4-5-2023	02:57:53	IL&FS	LSI	Solapur	MH	17.693885	75.879112	150+000	252+000	245+600 LHS Inner	1	36.4000	0.3714	0.2247	0.1137	0.0671	0.0513	0.0407	0.0380	31.2	32.8		36.5
	4-5-2023	02:57:53	IL&FS	LSI	Solapur	MH	17.693885	75.879112	150+000	252+000	245+600 LHS Inner	2	36.9000	0.3655	0.2221	0.1105	0.0713	0.0543	0.0412	0.0371	31.2	32.8		36.5
	4-5-2023	02:57:53	IL&FS	LSI	Solapur	MH	17.693885	75.879112	150+000	252+000	245+600 LHS Inner	3	36.6000	0.3619	0.2148	0.1049	0.0750	0.0559	0.0411	0.0395	31.2	32.8		36.5
1578	4-5-2023	03:00:38	IL&FS	LSI	Solapur	MH	17.691457	75.883033	150+000	252+000	246+100 LHS Inner	1	37.4000	0.2929	0.1720	0.1033	0.0710	0.0470	0.0334	0.0300	31.4	31.6		36.5
	4-5-2023	03:00:38	IL&FS	LSI	Solapur	MH	17.691457	75.883033	150+000	252+000	246+100 LHS Inner	2	37.8000	0.2840	0.1688	0.1007	0.0719	0.0504	0.0379	0.0341	31.4	31.6		36.5
	4-5-2023	03:00:38	IL&FS	LSI	Solapur	MH	17.691457	75.883033	150+000	252+000	246+100 LHS Inner	3	37.9000	0.2858	0.1703	0.0961	0.0689	0.0501	0.0376	0.0338	31.4	31.6		36.5
1579	4-5-2023	03:02:27	IL&FS	LSI	Solapur	MH	17.690944	75.885261	150+000	252+000	246+350 LHS Inner	1	39.7000	0.1800	0.1279	0.0937	0.0671	0.0440	0.0296	0.0221	31.0	32.1		36.5
	4-5-2023	03:02:27	IL&FS	LSI	Solapur	MH	17.690944	75.885261	150+000	252+000	246+350 LHS Inner	2	39.1000	0.1585	0.1285	0.0913	0.0659	0.0440	0.0287	0.0213	31.0	32.1		36.5
	4-5-2023	03:02:27	IL&FS	LSI	Solapur	MH	17.690944	75.885261	150+000	252+000	246+350 LHS Inner	3	39.3000	0.1718	0.1272	0.0911	0.0673	0.0445	0.0291	0.0217	31.0	32.1		36.5
1580	4-5-2023	03:04:32	IL&FS	LSI	Solapur	MH	17.689788	75.887344	150+000	252+000	246+600 LHS Inner	1	38.1000	0.2613	0.1895	0.1282	0.0814	0.0513	0.0389	0.0311	30.9	32.1		36.5
	4-5-2023	03:04:32	IL&FS	LSI	Solapur	MH	17.689788	75.887344	150+000	252+000	246+600 LHS Inner	2	37.6000	0.2656	0.1714	0.1221	0.0828	0.0573	0.0433	0.0325	30.9	32.1		36.5
	4-5-2023	03:04:32	IL&FS	LSI	Solapur	MH	17.689788	75.887344	150+000	252+000	246+600 LHS Inner	3	38.2000	0.2663	0.1754	0.1259	0.0854	0.0564	0.0418	0.0328	30.9	32.1		36.5
1581	4-5-2023	03:06:31	IL&FS	LSI	Solapur	MH	17.688241	75.889114	150+000	252+000	246+850 LHS Inner	1	40.2000	0.1459	0.0981	0.0651	0.0478	0.0320	0.0223	0.0171	30.9	32.0		36.5
	4-5-2023	03:06:31	IL&FS	LSI	Solapur	MH	17.688241	75.889114	150+000	252+000	246+850 LHS Inner	2	40.1000	0.1312	0.0968	0.0615	0.0461	0.0312	0.0218	0.0166	30.9	32.0		36.5
	4-5-2023	03:06:31	IL&FS	LSI	Solapur	MH	17.688241	75.889114	150+000	252+000	246+850 LHS Inner	3	39.7000	0.1409	0.0976	0.0666	0.0452	0.0308	0.0210	0.0159	30.9	32.0		36.5
1582	4-5-2023	03:08:43	IL&FS	LSI	Solapur	MH	17.686525	75.891937	150+000	252+000	247+200 LHS Inner	1	38.2000	0.3734	0.1969	0.1010	0.0676	0.0443	0.0341	0.0269	31.0	32.6		36.5
	4-5-2023	03:08:43	IL&FS	LSI	Solapur	MH	17.686525	75.891937	150+000	252+000	247+200 LHS Inner	2	38.5000	0.3585	0.1769	0.1023	0.0703	0.0463	0.0356	0.0288	31.0	32.6		36.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	03:08:43	IL&FS	LSI	Solapur	MH	17.686525	75.891937	150+000	252+000	247+200 LHS Inner	3	38.6000	0.3477	0.1926	0.1038	0.0729	0.0489	0.0379	0.0306	31.0	32.6		36.5
1583	4-5-2023	03:14:19	IL&FS	LSI	Solapur	MH	17.685998	75.893821	150+000	252+000	247+430 LHS Inner	1	37.5000	0.3304	0.1964	0.1172	0.0767	0.0462	0.0322	0.0213	30.8	32.5		36.5
	4-5-2023	03:14:19	IL&FS	LSI	Solapur	MH	17.685998	75.893821	150+000	252+000	247+430 LHS Inner	2	37.7000	0.3328	0.1940	0.1219	0.0753	0.0459	0.0300	0.0203	30.8	32.5		36.5
	4-5-2023	03:14:19	IL&FS	LSI	Solapur	MH	17.685998	75.893821	150+000	252+000	247+430 LHS Inner	3	37.8000	0.3311	0.2004	0.1133	0.0757	0.0464	0.0316	0.0207	30.8	32.5		36.5
1584	4-5-2023	03:16:13	IL&FS	LSI	Solapur	MH	17.687070	75.895385	150+000	252+000	247+620 LHS Inner	1	38.3000	0.3244	0.1610	0.1034	0.0601	0.0433	0.0359	0.0310	31.0	32.7		36.5
	4-5-2023	03:16:13	IL&FS	LSI	Solapur	MH	17.687070	75.895385	150+000	252+000	247+620 LHS Inner	2	38.1000	0.2979	0.1683	0.0956	0.0599	0.0451	0.0370	0.0311	31.0	32.7		36.5
	4-5-2023	03:16:13	IL&FS	LSI	Solapur	MH	17.687070	75.895385	150+000	252+000	247+620 LHS Inner	3	37.9000	0.3046	0.1690	0.0984	0.0596	0.0452	0.0366	0.0308	31.0	32.7		36.5
1585	4-5-2023	03:17:55	IL&FS	LSI	Solapur	MH	17.688579	75.897026	150+000	252+000	247+850 LHS Inner	1	38.9000	0.2462	0.1437	0.0757	0.0558	0.0367	0.0245	0.0201	30.8	32.8		36.5
	4-5-2023	03:17:55	IL&FS	LSI	Solapur	MH	17.688579	75.897026	150+000	252+000	247+850 LHS Inner	2	38.7000	0.2658	0.1368	0.0817	0.0535	0.0371	0.0252	0.0207	30.8	32.8		36.5
	4-5-2023	03:17:55	IL&FS	LSI	Solapur	MH	17.688579	75.897026	150+000	252+000	247+850 LHS Inner	3	38.8000	0.2445	0.1386	0.0723	0.0510	0.0348	0.0243	0.0199	30.8	32.8		36.5
1586	4-5-2023	03:19:45	IL&FS	LSI	Solapur	MH	17.689931	75.898773	150+000	252+000	248+110 LHS Inner	1	38.0000	0.2979	0.1931	0.1112	0.0659	0.0502	0.0336	0.0208	31.0	32.7		36.5
	4-5-2023	03:19:45	IL&FS	LSI	Solapur	MH	17.689931	75.898773	150+000	252+000	248+110 LHS Inner	2	37.9000	0.2930	0.1853	0.1066	0.0690	0.0474	0.0315	0.0203	31.0	32.7		36.5
	4-5-2023	03:19:45	IL&FS	LSI	Solapur	MH	17.689931	75.898773	150+000	252+000	248+110 LHS Inner	3	37.9000	0.3088	0.1870	0.1074	0.0675	0.0520	0.0340	0.0200	31.0	32.7		36.5
1587	4-5-2023	03:21:44	IL&FS	LSI	Solapur	MH	17.691015	75.900672	150+000	252+000	248+350 LHS Inner	1	37.5000	0.4655	0.2817	0.1540	0.1090	0.0748	0.0575	0.0462	31.2	32.6		36.5
	4-5-2023	03:21:44	IL&FS	LSI	Solapur	MH	17.691015	75.900672	150+000	252+000	248+350 LHS Inner	2	37.6000	0.4878	0.2783	0.1561	0.1086	0.0745	0.0581	0.0457	31.2	32.6		36.5
	4-5-2023	03:21:44	IL&FS	LSI	Solapur	MH	17.691015	75.900672	150+000	252+000	248+350 LHS Inner	3	37.6000	0.4370	0.2765	0.1506	0.1066	0.0791	0.0628	0.0502	31.2	32.6		36.5
1588	4-5-2023	03:23:26	IL&FS	LSI	Solapur	MH	17.691953	75.902885	150+000	252+000	248+600 LHS Inner	1	37.6000	0.3310	0.2072	0.1174	0.0810	0.0569	0.0430	0.0323	31.2	33.0		36.5
	4-5-2023	03:23:26	IL&FS	LSI	Solapur	MH	17.691953	75.902885	150+000	252+000	248+600 LHS Inner	2	37.9000	0.3347	0.1960	0.1136	0.0833	0.0626	0.0466	0.0340	31.2	33.0		36.5
	4-5-2023	03:23:26	IL&FS	LSI	Solapur	MH	17.691953	75.902885	150+000	252+000	248+600 LHS Inner	3	37.7000	0.3280	0.1933	0.1164	0.0859	0.0637	0.0438	0.0314	31.2	33.0		36.5
1589	4-5-2023	03:25:15	IL&FS	LSI	Solapur	MH	17.692588	75.905364	150+000	252+000	248+870 LHS Inner	1	36.7000	0.4373	0.2545	0.1627	0.1174	0.0790	0.0599	0.0462	31.2	32.9		36.5
	4-5-2023	03:25:15	IL&FS	LSI	Solapur	MH	17.692588	75.905364	150+000	252+000	248+870 LHS Inner	2	36.6000	0.3960	0.2483	0.1546	0.1103	0.0769	0.0563	0.0422	31.2	32.9		36.5
	4-5-2023	03:25:15	IL&FS	LSI	Solapur	MH	17.692588	75.905364	150+000	252+000	248+870 LHS Inner	3	37.1000	0.3975	0.2460	0.1524	0.1237	0.0824	0.0602	0.0463	31.2	32.9		36.5
1590	4-5-2023	03:28:31	IL&FS	LSI	Solapur	MH	17.692840	75.907447	150+000	252+000	249+100 LHS Inner	1	37.4000	0.3753	0.2257	0.1245	0.0760	0.0444	0.0344	0.0310	31.0	32.6		36.5
	4-5-2023	03:28:31	IL&FS	LSI	Solapur	MH	17.692840	75.907447	150+000	252+000	249+100 LHS Inner	2	37.6000	0.3907	0.2422	0.1213	0.0832	0.0575	0.0347	0.0312	31.0	32.6		36.5
	4-5-2023	03:28:31	IL&FS	LSI	Solapur	MH	17.692840	75.907447	150+000	252+000	249+100 LHS Inner	3	37.6000	0.3983	0.2369	0.1260	0.0790	0.0436	0.0341	0.0307	31.0	32.6		36.5
1591	4-5-2023	03:30:28	IL&FS	LSI	Solapur	MH	17.692955	75.909858	150+000	252+000	249+370 LHS Inner	1	39.3000	0.4163	0.2534	0.1377	0.0940	0.0600	0.0389	0.0350	31.1	33.2		36.5
	4-5-2023	03:30:28	IL&FS	LSI	Solapur	MH	17.692955	75.909858	150+000	252+000	249+370 LHS Inner	2	39.4000	0.4174	0.2624	0.1322	0.0883	0.0586	0.0364	0.0328	31.1	33.2		36.5
	4-5-2023	03:30:28	IL&FS	LSI	Solapur	MH	17.692955	75.909858	150+000	252+000	249+370 LHS Inner	3	39.0000	0.4131	0.2564	0.1323	0.0857	0.0553	0.0382	0.0344	31.1	33.2		36.5
1592	4-5-2023	03:32:24	IL&FS	LSI	Solapur	MH	17.692903	75.912185	150+000	252+000	249+600 LHS Inner	1	37.7000	0.3953	0.2022	0.1003	0.0632	0.0400	0.0339	0.0305	31.5	33.5	T-30.1/36.5	36.5
	4-5-2023	03:32:24	IL&FS	LSI	Solapur	MH	17.692903	75.912185	150+000	252+000	249+600 LHS Inner	2	38.0000	0.3812	0.1966	0.0936	0.0623	0.0409	0.0344	0.0310	31.5	33.5	T-30.1/36.5	36.5
	4-5-2023	03:32:24	IL&FS	LSI	Solapur	MH	17.692903	75.912185	150+000	252+000	249+600 LHS Inner	3	38.1000	0.4078	0.2020	0.1005	0.0658	0.0416	0.0348	0.0313	31.5	33.5	T-30.1/36.5	36.5
1593	4-5-2023	03:35:57	IL&FS	LSI	Solapur	MH	17.693027	75.914634	150+000	252+000	249+870 LHS Inner	1	37.4000	0.3913	0.2315	0.1215	0.0825	0.0536	0.0421	0.0344	31.8	33.3		36.5
	4-5-2023	03:35:57	IL&FS	LSI	Solapur	MH	17.693027	75.914634	150+000	252+000	249+870 LHS Inner	2	37.0000	0.3960	0.2276	0.1214	0.0817	0.0572	0.0428	0.0317	31.8	33.3		36.5
	4-5-2023	03:35:57	IL&FS	LSI	Solapur	MH	17.693027	75.914634	150+000	252+000	249+870 LHS Inner	3	37.4000	0.4041	0.2306	0.1226	0.0853	0.0587	0.0445	0.0334	31.8	33.3		36.5
1594	4-5-2023	03:37:49	IL&FS	LSI	Solapur	MH	17.693019	75.916770	150+000	252+000	250+100 LHS Inner	1	39.1000	0.1014	0.0764	0.0583	0.0454	0.0317	0.0224	0.0176	32.1	33.1		36.5
	4-5-2023	03:37:49	IL&FS	LSI	Solapur	MH	17.693019	75.916770	150+000	252+000	250+100 LHS Inner	2	39.3000	0.0992	0.0791	0.0601	0.0483	0.0348	0.0248	0.0174	32.1	33.1		36.5
	4-5-2023	03:37:49	IL&FS	LSI	Solapur	MH	17.693019	75.916770	150+000	252+000	250+100 LHS Inner	3	39.0000	0.1089	0.0830	0.0591	0.0444	0.0314	0.0228	0.0167	32.1	33.1		36.5
1595	4-5-2023	03:40:42	IL&FS	LSI	Solapur	MH	17.692541	75.918945	150+000	252+000	250+350 LHS Inner	1	39.4000	0.1320	0.0936	0.0665	0.0470	0.0337	0.0204	0.0118	31.6	33.5		36.5
	4-5-2023	03:40:42	IL&FS	LSI	Solapur	MH	17.692541	75.918945	150+000	252+000	250+350 LHS Inner	2	39.2000	0.1397	0.0969	0.0686	0.0488	0.0366	0.0195	0.0117	31.6	33.5		36.5
	4-5-2023	03:40:42	IL&FS	LSI	Solapur	MH	17.692541	75.918945	150+000	252+000	250+350 LHS Inner	3	38.9000	0.1448	0.0897	0.0735	0.0469	0.0344	0.0218	0.0117	31.6	33.5		36.5
1596	4-5-2023	03:42:37	IL&FS	LSI	Solapur	MH	17.691896	75.921272	150+000	252+000	250+600 LHS Inner	1	40.5000	0.1667	0.1114	0.0720	0.0530	0.0388	0.0284	0.0216	31.5	33.7		36.5
	4-5-2023	03:42:37	IL&FS	LSI	Solapur	MH	17.691896	75.921272	150+000	252+000	250+600 LHS Inner	2	40.4000	0.1672	0.1012	0.0651	0.0496	0.0377	0.0284	0.0214	31.5	33.7		36.5
	4-5-2023	03:42:37	IL&FS	LSI	Solapur	MH	17.691896	75.921272	150+000	252+000	250+600 LHS Inner	3	40.5000	0.1685	0.1104	0.0664	0.0486	0.0357	0.0265	0.0195	31.5	33.7		36.5
1597	4-5-2023	03:44:45	IL&FS	LSI	Solapur	MH	17.690637	75.923439	150+000	252+000	250+880 LHS Inner	1	38.7000	0.2619	0.1416	0.0805	0.0603	0.0465	0.0399	0.0359	31.6	33.6		36.5
	4-5-2023	03:44:45	IL&FS	LSI	Solapur	MH	17.690637	75.923439	150+000	252+000	250+880 LHS Inner	2	38.5000	0.2395	0.1428	0.0847	0.0593	0.0436	0.0372	0.0335	31.6	33.6		36.5
	4-5-2023	03:44:45	IL&FS	LSI	Solapur	MH	17.690637	75.923439	150+000	252+000	250+880 LHS Inner	3	38.5000	0.2691	0.1457	0.0886	0.0628	0.0461	0.0394	0.0355	31.6	33.6		36.5
1598	4-5-2023	03:46:33	IL&FS	LSI	Solapur	MH	17.689195	75.924850	150+000	252+000	251+100 LHS Inner	1	40.1000	0.3323	0.2027	0.1255	0.0731	0.0490	0.0306	0.0275	31.8	33.9		36.5
	4-5-2023	03:46:33	IL&FS	LSI	Solapur	MH	17.689195	75.924850	150+000	252+000	251+100 LHS Inner	2	40.2000	0.3368	0.2012	0.1256	0.0711	0.0485	0.0316	0.0284	31.8	33.9		36.5
	4-5-2023	03:46:33	IL&FS	LSI	Solapur	MH	17.689195	75.924850	150+000	252+000	251+100 LHS Inner	3	40.6000	0.3417	0.1948	0.1237	0.0734	0.0465	0.0298	0.0268	31.8	33.9		36.5
1599	4-5-2023	03:48:22	IL&FS	LSI	Solapur	MH	17.687170	75.926078	150+000	252+000	251+350 LHS Inner	1	36.8000	0.3868	0.2313	0.1263	0.0829	0.0497	0.0367	0.0279	32.3	34.3		36.5
	4-5-2023	03:48:22	IL&FS	LSI	Solapur	MH	17.687170	75.926078	150+000	252+000	251+350 LHS Inner	2	36.5000	0.3814	0.2238	0.1240	0.0808	0.0482	0.0365	0.0280	32.3	34.3		36.5
	4-5-2023	03:48:22	IL&FS	LSI	Solapur	MH	17.687170	75.926078	150+000	252+000	251+350 LHS Inner	3	36.7000	0.3712	0.2366	0.1204	0.0829	0.0569	0.0356	0.0212	32.3	34.3		36.5
1600	4-5-2023	03:50:10	IL&FS	LSI	Solapur	MH	17.685182	75.926826	150+000	252+000	251+600 LHS Inner	1	38.1000	0.2382	0.1565	0.0986	0.0644	0.0421	0.0322	0.0254	32.3	34.1		36.5
	4-5-2023	03:50:10	IL&FS	LSI	Solapur	MH	17.685182	75.926826	150+000	252+000	251+600 LHS Inner	2	37.8000	0.2518	0.1536	0.1086	0.0708	0.0420	0.0318	0.0251	32.3	34.1		36.5
	4-5-2023	03:50:10	IL&FS	LSI	Solapur	MH	17.685182	75.926826	150+000	252+000	251+600 LHS Inner	3	38.3000	0.2496	0.1582	0.0984	0.0652	0.0399	0.0301	0.0231	32.3	34.1		36.5
1601	4-5-2023	03:52:01	IL&FS	LSI	Solapur	MH	17.683219	75.927452	150+000	252+000	251+820 LHS Inner	1	38.6000	0.2393	0.1589	0.0898	0.0608	0.0434	0.0396	0.0363	32.5	35.0		36.5

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	03:52:01	IL&FS	LSI	Solapur	MH	17.683219	75.927452	150+000	252+000	251+820 LHS Inner	2	38.7000	0.2400	0.1604	0.0927	0.0599	0.0433	0.0402	0.0353	32.5	35.0		36.5
	4-5-2023	03:52:01	IL&FS	LSI	Solapur	MH	17.683219	75.927452	150+000	252+000	251+820 LHS Inner	3	39.0000	0.2250	0.1556	0.0881	0.0623	0.0453	0.0398	0.0389	32.5	35.0		36.5
1602	4-5-2023	03:54:08	IL&FS	LSI	Solapur	MH	17.683198	75.928588	150+000	252+000	251+970 LHS Inner	1	36.5000	0.3078	0.1955	0.1201	0.0749	0.0468	0.0427	0.0384	32.3	33.1	4 Lane	36.5
	4-5-2023	03:54:08	IL&FS	LSI	Solapur	MH	17.683198	75.928588	150+000	252+000	251+970 LHS Inner	2	36.9000	0.3211	0.1968	0.1340	0.0812	0.0473	0.0436	0.0392	32.3	33.1	4 Lane	36.5
	4-5-2023	03:54:08	IL&FS	LSI	Solapur	MH	17.683198	75.928588	150+000	252+000	251+970 LHS Inner	3	36.9000	0.2977	0.1943	0.1212	0.0770	0.0473	0.0437	0.0393	32.3	33.1	4 Lane	36.5
1603	4-5-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.685037	75.926803	150+000	252+000	251+605 RHS Middle	1	39.4000	0.2215	0.1474	0.0977	0.0662	0.0438	0.0286	0.0257	32.4	33.2	T-28.9/38.4	38.4
	4-5-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.685037	75.926803	150+000	252+000	251+605 RHS Middle	2	39.1000	0.2196	0.1348	0.0985	0.0646	0.0423	0.0267	0.0240	32.4	33.2	T-28.9/38.4	38.4
	4-5-2023	04:23:17	IL&FS	LSI	Solapur	MH	17.685037	75.926803	150+000	252+000	251+605 RHS Middle	3	39.0000	0.2228	0.1376	0.0944	0.0634	0.0430	0.0278	0.0250	32.4	33.2	T-28.9/38.4	38.4
1604	4-5-2023	04:26:00	IL&FS	LSI	Solapur	MH	17.687591	75.925827	150+000	252+000	251+300 RHS Middle	1	38.5000	0.3258	0.2173	0.1096	0.0638	0.0391	0.0377	0.0339	32.2	33.0		38.4
	4-5-2023	04:26:00	IL&FS	LSI	Solapur	MH	17.687591	75.925827	150+000	252+000	251+300 RHS Middle	2	39.0000	0.3529	0.2006	0.1087	0.0641	0.0438	0.0371	0.0334	32.2	33.0		38.4
	4-5-2023	04:26:00	IL&FS	LSI	Solapur	MH	17.687591	75.925827	150+000	252+000	251+300 RHS Middle	3	38.9000	0.3282	0.2151	0.1013	0.0609	0.0402	0.0394	0.0355	32.2	33.0		38.4
1605	4-5-2023	04:30:30	IL&FS	LSI	Solapur	MH	17.691831	75.921249	150+000	252+000	250+605 RHS Middle	1	38.3000	0.3845	0.2308	0.1059	0.0722	0.0466	0.0329	0.0296	32.1	32.6		38.4
	4-5-2023	04:30:30	IL&FS	LSI	Solapur	MH	17.691831	75.921249	150+000	252+000	250+605 RHS Middle	2	38.3000	0.4168	0.2104	0.1064	0.0686	0.0436	0.0324	0.0292	32.1	32.6		38.4
	4-5-2023	04:30:30	IL&FS	LSI	Solapur	MH	17.691831	75.921249	150+000	252+000	250+605 RHS Middle	3	37.8000	0.3853	0.2021	0.1000	0.0665	0.0451	0.0329	0.0296	32.1	32.6		38.4
1606	4-5-2023	04:32:29	IL&FS	LSI	Solapur	MH	17.692644	75.918601	150+000	252+000	250+300 RHS Middle	1	39.4000	0.2028	0.1341	0.0814	0.0629	0.0496	0.0388	0.0349	32.2	32.8		38.4
	4-5-2023	04:32:29	IL&FS	LSI	Solapur	MH	17.692644	75.918601	150+000	252+000	250+300 RHS Middle	2	39.7000	0.2004	0.1323	0.0783	0.0593	0.0457	0.0355	0.0320	32.2	32.8		38.4
	4-5-2023	04:32:29	IL&FS	LSI	Solapur	MH	17.692644	75.918601	150+000	252+000	250+300 RHS Middle	3	39.6000	0.2020	0.1282	0.0824	0.0612	0.0475	0.0364	0.0327	32.2	32.8		38.4
1607	4-5-2023	04:34:57	IL&FS	LSI	Solapur	MH	17.692838	75.911941	150+000	252+000	249+600 RHS Middle	1	39.2000	0.3380	0.1866	0.0990	0.0696	0.0495	0.0389	0.0321	32.1	32.5		38.4
	4-5-2023	04:34:57	IL&FS	LSI	Solapur	MH	17.692838	75.911941	150+000	252+000	249+600 RHS Middle	2	39.6000	0.3202	0.1881	0.0969	0.0673	0.0482	0.0376	0.0309	32.1	32.5		38.4
	4-5-2023	04:34:57	IL&FS	LSI	Solapur	MH	17.692838	75.911941	150+000	252+000	249+600 RHS Middle	3	39.3000	0.3341	0.1868	0.0988	0.0707	0.0510	0.0432	0.0381	32.1	32.5		38.4
1608	4-5-2023	04:36:50	IL&FS	LSI	Solapur	MH	17.692850	75.908690	150+000	252+000	249+260 RHS Middle	1	37.7000	0.3736	0.2301	0.1217	0.0836	0.0546	0.0387	0.0348	31.9	32.0		38.4
	4-5-2023	04:36:50	IL&FS	LSI	Solapur	MH	17.692850	75.908690	150+000	252+000	249+260 RHS Middle	2	37.6000	0.3570	0.2244	0.1203	0.0807	0.0516	0.0411	0.0370	31.9	32.0		38.4
	4-5-2023	04:36:50	IL&FS	LSI	Solapur	MH	17.692850	75.908690	150+000	252+000	249+260 RHS Middle	3	38.0000	0.3464	0.2227	0.1208	0.0786	0.0488	0.0399	0.0359	31.9	32.0		38.4
1609	4-5-2023	04:39:19	IL&FS	LSI	Solapur	MH	17.691766	75.902709	150+000	252+000	248+605 RHS Middle	1	37.8000	0.2364	0.1617	0.0833	0.0497	0.0317	0.0195	0.0176	31.7	32.1		38.4
	4-5-2023	04:39:19	IL&FS	LSI	Solapur	MH	17.691766	75.902709	150+000	252+000	248+605 RHS Middle	2	38.1000	0.2604	0.1625	0.0828	0.0502	0.0330	0.0196	0.0176	31.7	32.1		38.4
	4-5-2023	04:39:19	IL&FS	LSI	Solapur	MH	17.691766	75.902709	150+000	252+000	248+605 RHS Middle	3	38.0000	0.2500	0.1468	0.0880	0.0471	0.0311	0.0199	0.0179	31.7	32.1		38.4
1610	4-5-2023	04:41:07	IL&FS	LSI	Solapur	MH	17.690652	75.900115	150+000	252+000	248+300 RHS Middle	1	38.8000	0.2542	0.1576	0.0995	0.0668	0.0448	0.0334	0.0256	31.6	32.6		38.4
	4-5-2023	04:41:07	IL&FS	LSI	Solapur	MH	17.690652	75.900115	150+000	252+000	248+300 RHS Middle	2	38.9000	0.2856	0.1637	0.0965	0.0664	0.0450	0.0336	0.0257	31.6	32.6		38.4
	4-5-2023	04:41:07	IL&FS	LSI	Solapur	MH	17.690652	75.900115	150+000	252+000	248+300 RHS Middle	3	38.6000	0.2783	0.1643	0.0983	0.0675	0.0438	0.0327	0.0249	31.6	32.6		38.4
1611	4-5-2023	04:43:43	IL&FS	LSI	Solapur	MH	17.686582	75.895095	150+000	252+000	247+590 RHS Middle	1	39.8000	0.1442	0.1094	0.0771	0.0522	0.0385	0.0278	0.0250	32.0	32.6		38.4
	4-5-2023	04:43:43	IL&FS	LSI	Solapur	MH	17.686582	75.895095	150+000	252+000	247+590 RHS Middle	2	39.7000	0.1435	0.1041	0.0725	0.0498	0.0387	0.0303	0.0273	32.0	32.6		38.4
	4-5-2023	04:43:43	IL&FS	LSI	Solapur	MH	17.686582	75.895095	150+000	252+000	247+590 RHS Middle	3	39.6000	0.1442	0.1077	0.0752	0.0542	0.0400	0.0299	0.0279	32.0	32.6		38.4
1612	4-5-2023	04:48:10	IL&FS	LSI	Solapur	MH	17.686079	75.892387	150+000	252+000	247+300 RHS Middle	1	39.3000	0.2004	0.1364	0.0932	0.0627	0.0405	0.0368	0.0340	32.0	32.4		38.4
	4-5-2023	04:48:10	IL&FS	LSI	Solapur	MH	17.686079	75.892387	150+000	252+000	247+300 RHS Middle	2	39.5000	0.2057	0.1360	0.0973	0.0640	0.0405	0.0369	0.0326	32.0	32.4		38.4
	4-5-2023	04:48:10	IL&FS	LSI	Solapur	MH	17.686079	75.892387	150+000	252+000	247+300 RHS Middle	3	39.7000	0.1946	0.1417	0.0926	0.0650	0.0455	0.0372	0.0335	32.0	32.4		38.4
1613	4-5-2023	04:50:33	IL&FS	LSI	Solapur	MH	17.689876	75.887054	150+000	252+000	246+605 RHS Middle	1	36.5000	0.3800	0.2412	0.1191	0.0731	0.0433	0.0378	0.0336	31.9	31.6		38.4
	4-5-2023	04:50:33	IL&FS	LSI	Solapur	MH	17.689876	75.887054	150+000	252+000	246+605 RHS Middle	2	36.6000	0.3965	0.2296	0.1192	0.0778	0.0465	0.0383	0.0328	31.9	31.6		38.4
	4-5-2023	04:50:33	IL&FS	LSI	Solapur	MH	17.689876	75.887054	150+000	252+000	246+605 RHS Middle	3	36.7000	0.3749	0.2294	0.1196	0.0759	0.0441	0.0395	0.0360	31.9	31.6		38.4
1614	4-5-2023	04:52:23	IL&FS	LSI	Solapur	MH	17.691041	75.884613	150+000	252+000	246+300 RHS Middle	1	39.0000	0.2050	0.1426	0.0922	0.0569	0.0383	0.0247	0.0222	31.3	31.5		38.4
	4-5-2023	04:52:23	IL&FS	LSI	Solapur	MH	17.691041	75.884613	150+000	252+000	246+300 RHS Middle	2	39.1000	0.2066	0.1424	0.0903	0.0570	0.0395	0.0262	0.0236	31.3	31.5		38.4
	4-5-2023	04:52:23	IL&FS	LSI	Solapur	MH	17.691041	75.884613	150+000	252+000	246+300 RHS Middle	3	39.1000	0.2070	0.1348	0.0866	0.0570	0.0375	0.0252	0.0227	31.3	31.5		38.4
1615	4-5-2023	04:54:53	IL&FS	LSI	Solapur	MH	17.693931	75.878837	150+000	252+000	245+590 RHS Middle	1	37.2000	0.3974	0.2437	0.1152	0.0681	0.0368	0.0292	0.0237	31.3	31.7		38.4
	4-5-2023	04:54:53	IL&FS	LSI	Solapur	MH	17.693931	75.878837	150+000	252+000	245+590 RHS Middle	2	37.5000	0.4151	0.2313	0.1240	0.0718	0.0371	0.0293	0.0237	31.3	31.7		38.4
	4-5-2023	04:54:53	IL&FS	LSI	Solapur	MH	17.693931	75.878837	150+000	252+000	245+590 RHS Middle	3	37.5000	0.3731	0.2288	0.1182	0.0687	0.0371	0.0294	0.0238	31.3	31.7		38.4
1616	4-5-2023	04:56:52	IL&FS	LSI	Solapur	MH	17.694704	75.876304	150+000	252+000	245+300 RHS Middle	1	37.7000	0.3536	0.2142	0.1221	0.0606	0.0387	0.0287	0.0258	31.5	32.4		38.4
	4-5-2023	04:56:52	IL&FS	LSI	Solapur	MH	17.694704	75.876304	150+000	252+000	245+300 RHS Middle	2	37.7000	0.3588	0.2179	0.1257	0.0604	0.0397	0.0311	0.0280	31.5	32.4		38.4
	4-5-2023	04:56:52	IL&FS	LSI	Solapur	MH	17.694704	75.876304	150+000	252+000	245+300 RHS Middle	3	37.9000	0.3401	0.2058	0.1214	0.0603	0.0397	0.0281	0.0253	31.5	32.4		38.4
1617	4-5-2023	04:59:08	IL&FS	LSI	Solapur	MH	17.697927	75.870574	150+000	252+000	244+610 RHS Middle	1	36.0000	0.4198	0.2725	0.1630	0.1029	0.0732	0.0501	0.0301	31.8	32.3		38.4
	4-5-2023	04:59:08	IL&FS	LSI	Solapur	MH	17.697927	75.870574	150+000	252+000	244+610 RHS Middle	2	36.0000	0.4369	0.2803	0.1480	0.1123	0.0758	0.0512	0.0311	31.8	32.3		38.4
	4-5-2023	04:59:08	IL&FS	LSI	Solapur	MH	17.697927	75.870574	150+000	252+000	244+610 RHS Middle	3	36.6000	0.4168	0.2575	0.1599	0.1060	0.0735	0.0506	0.0305	31.8	32.3		38.4
1618	4-5-2023	05:00:56	IL&FS	LSI	Solapur	MH	17.699270	75.868034	150+000	252+000	244+300 RHS Middle	1	39.8000	0.1848	0.1185	0.0718	0.0553	0.0381	0.0275	0.0248	31.5	32.3		38.4
	4-5-2023	05:00:56	IL&FS	LSI	Solapur	MH	17.699270	75.868034	150+000	252+000	244+300 RHS Middle	2	39.6000	0.1833	0.1141	0.0717	0.0554	0.0346	0.0241	0.0217	31.5	32.3		38.4
	4-5-2023	05:00:56	IL&FS	LSI	Solapur	MH	17.699270	75.868034	150+000	252+000	244+300 RHS Middle	3	39.5000	0.1705	0.1159	0.0728	0.0551	0.0352	0.0256	0.0230	31.5	32.3		38.4
1619	4-5-2023	05:03:18	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+605 RHS Middle	1	38.6000	0.3231	0.2055	0.1158	0.0733	0.0465	0.0332	0.0299	31.6	32.3		38.4
	4-5-2023	05:03:18	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+605 RHS Middle	2	38.2000	0.3521	0.2140	0.1102	0.0739	0.0467	0.0334	0.0300	31.6	32.3		38.4
	4-5-2023	05:03:18	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+605 RHS Middle	3	38.6000	0.3175	0.2018	0.1179	0.0746	0.0472	0.0340	0.0306	31.6	32.3		38.4

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
1620	4-5-2023	05:05:11	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+300 RHS Middle	1	40.9000	0.1301	0.0873	0.0667	0.0491	0.0380	0.0294	0.0241	31.4	31.5		38.4
	4-5-2023	05:05:11	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+300 RHS Middle	2	40.6000	0.1247	0.0853	0.0642	0.0473	0.0366	0.0285	0.0230	31.4	31.5		38.4
	4-5-2023	05:05:11	IL&FS	LSI	Solapur	MH	17.703319	75.863059	150+000	252+000	243+300 RHS Middle	3	41.3000	0.1235	0.0893	0.0662	0.0509	0.0395	0.0318	0.0259	31.4	31.5		38.4
1621	4-5-2023	05:09:45	IL&FS	LSI	Solapur	MH	17.709880	75.856712	150+000	252+000	242+600 RHS Middle	1	36.0000	0.3852	0.2546	0.1400	0.0940	0.0620	0.0393	0.0300	30.8	32.3	T-28.3/38.2	38.2
	4-5-2023	05:09:45	IL&FS	LSI	Solapur	MH	17.709880	75.856712	150+000	252+000	242+600 RHS Middle	2	36.5000	0.4075	0.2510	0.1381	0.0947	0.0631	0.0389	0.0296	30.8	32.3	T-28.3/38.2	38.2
	4-5-2023	05:09:45	IL&FS	LSI	Solapur	MH	17.709880	75.856712	150+000	252+000	242+600 RHS Middle	3	36.7000	0.4094	0.2457	0.1374	0.0928	0.0607	0.0399	0.0305	30.8	32.3	T-28.3/38.2	38.2
1622	4-5-2023	05:11:47	IL&FS	LSI	Solapur	MH	17.711952	75.854698	150+000	252+000	242+300 RHS Middle	1	37.0000	0.4154	0.2307	0.1236	0.0868	0.0586	0.0425	0.0382	31.0	32.0		38.2
	4-5-2023	05:11:47	IL&FS	LSI	Solapur	MH	17.711952	75.854698	150+000	252+000	242+300 RHS Middle	2	37.5000	0.4209	0.2373	0.1284	0.0872	0.0589	0.0426	0.0383	31.0	32.0		38.2
	4-5-2023	05:11:47	IL&FS	LSI	Solapur	MH	17.711952	75.854698	150+000	252+000	242+300 RHS Middle	3	37.4000	0.3790	0.2462	0.1251	0.0863	0.0609	0.0441	0.0397	31.0	32.0		38.2
1623	4-5-2023	05:14:00	IL&FS	LSI	Solapur	MH	17.716478	75.850242	150+000	252+000	241+610 RHS Middle	1	36.2000	0.3930	0.2319	0.1297	0.0820	0.0454	0.0329	0.0254	30.9	32.2		38.2
	4-5-2023	05:14:00	IL&FS	LSI	Solapur	MH	17.716478	75.850242	150+000	252+000	241+610 RHS Middle	2	36.4000	0.3712	0.2303	0.1303	0.0824	0.0459	0.0314	0.0241	30.9	32.2		38.2
	4-5-2023	05:14:00	IL&FS	LSI	Solapur	MH	17.716478	75.850242	150+000	252+000	241+610 RHS Middle	3	36.3000	0.3501	0.2138	0.1334	0.0814	0.0455	0.0347	0.0270	30.9	32.2		38.2
1624	4-5-2023	05:16:35	IL&FS	LSI	Solapur	MH	17.718570	75.848281	150+000	252+000	241+300 RHS Middle	1	38.9000	0.2471	0.1284	0.0676	0.0467	0.0328	0.0269	0.0228	30.7	31.0		38.2
	4-5-2023	05:16:35	IL&FS	LSI	Solapur	MH	17.718570	75.848281	150+000	252+000	241+300 RHS Middle	2	39.1000	0.2413	0.1292	0.0681	0.0479	0.0334	0.0278	0.0239	30.7	31.0		38.2
	4-5-2023	05:16:35	IL&FS	LSI	Solapur	MH	17.718570	75.848281	150+000	252+000	241+300 RHS Middle	3	39.2000	0.2585	0.1323	0.0734	0.0509	0.0333	0.0278	0.0235	30.7	31.0		38.2
1625	4-5-2023	05:18:53	IL&FS	LSI	Solapur	MH	17.723161	75.843948	150+000	252+000	240+605 RHS Middle	1	38.7000	0.2606	0.1545	0.0987	0.0697	0.0487	0.0381	0.0316	30.8	31.2		38.2
	4-5-2023	05:18:53	IL&FS	LSI	Solapur	MH	17.723161	75.843948	150+000	252+000	240+605 RHS Middle	2	38.8000	0.2746	0.1597	0.0966	0.0668	0.0467	0.0360	0.0292	30.8	31.2		38.2
	4-5-2023	05:18:53	IL&FS	LSI	Solapur	MH	17.723161	75.843948	150+000	252+000	240+605 RHS Middle	3	38.8000	0.2794	0.1711	0.0974	0.0677	0.0492	0.0385	0.0303	30.8	31.2		38.2
1626	4-5-2023	05:21:00	IL&FS	LSI	Solapur	MH	17.725130	75.841972	150+000	252+000	240+300 RHS Middle	1	36.1000	0.3024	0.1924	0.1183	0.0708	0.0410	0.0291	0.0208	30.6	31.5		38.2
	4-5-2023	05:21:00	IL&FS	LSI	Solapur	MH	17.725130	75.841972	150+000	252+000	240+300 RHS Middle	2	36.6000	0.3119	0.1929	0.1102	0.0708	0.0416	0.0315	0.0236	30.6	31.5		38.2
	4-5-2023	05:21:00	IL&FS	LSI	Solapur	MH	17.725130	75.841972	150+000	252+000	240+300 RHS Middle	3	36.4000	0.3010	0.1831	0.1075	0.0691	0.0407	0.0316	0.0248	30.6	31.5		38.2
1627	4-5-2023	05:23:14	IL&FS	LSI	Solapur	MH	17.728593	75.836349	150+000	252+000	239+610 RHS Middle	1	37.4000	0.3521	0.2343	0.1113	0.0736	0.0477	0.0369	0.0299	30.5	31.5		38.2
	4-5-2023	05:23:14	IL&FS	LSI	Solapur	MH	17.728593	75.836349	150+000	252+000	239+610 RHS Middle	2	37.2000	0.3781	0.2165	0.1158	0.0745	0.0456	0.0356	0.0278	30.5	31.5		38.2
	4-5-2023	05:23:14	IL&FS	LSI	Solapur	MH	17.728593	75.836349	150+000	252+000	239+610 RHS Middle	3	37.1000	0.3667	0.2241	0.1238	0.0765	0.0433	0.0330	0.0267	30.5	31.5		38.2
1628	4-5-2023	05:25:02	IL&FS	LSI	Solapur	MH	17.729648	75.833892	150+000	252+000	239+300 RHS Middle	1	39.3000	0.2218	0.1476	0.0916	0.0616	0.0434	0.0310	0.0213	30.6	31.2		38.2
	4-5-2023	05:25:02	IL&FS	LSI	Solapur	MH	17.729648	75.833892	150+000	252+000	239+300 RHS Middle	2	39.3000	0.2037	0.1332	0.0916	0.0635	0.0444	0.0308	0.0219	30.6	31.2		38.2
	4-5-2023	05:25:02	IL&FS	LSI	Solapur	MH	17.729648	75.833892	150+000	252+000	239+300 RHS Middle	3	39.3000	0.1983	0.1367	0.0848	0.0673	0.0435	0.0300	0.0212	30.6	31.2		38.2
1629	4-5-2023	05:29:15	IL&FS	LSI	Solapur	MH	17.732248	75.827911	150+000	252+000	238+605 RHS Middle	1	36.7000	0.3299	0.2335	0.1398	0.0967	0.0609	0.0445	0.0353	30.9	31.5		38.2
	4-5-2023	05:29:15	IL&FS	LSI	Solapur	MH	17.732248	75.827911	150+000	252+000	238+605 RHS Middle	2	37.1000	0.3330	0.2416	0.1417	0.1002	0.0693	0.0492	0.0395	30.9	31.5		38.2
	4-5-2023	05:29:15	IL&FS	LSI	Solapur	MH	17.732248	75.827911	150+000	252+000	238+605 RHS Middle	3	36.8000	0.3401	0.2252	0.1412	0.0936	0.0640	0.0452	0.0358	30.9	31.5		38.2
1630	4-5-2023	05:31:03	IL&FS	LSI	Solapur	MH	17.733371	75.825393	150+000	252+000	238+300 RHS Middle	1	38.5000	0.3004	0.1955	0.1019	0.0629	0.0350	0.0303	0.0273	30.8	31.6		38.2
	4-5-2023	05:31:03	IL&FS	LSI	Solapur	MH	17.733371	75.825393	150+000	252+000	238+300 RHS Middle	2	38.4000	0.3004	0.1729	0.1030	0.0601	0.0352	0.0290	0.0261	30.8	31.6		38.2
	4-5-2023	05:31:03	IL&FS	LSI	Solapur	MH	17.733371	75.825393	150+000	252+000	238+300 RHS Middle	3	38.3000	0.2930	0.1804	0.1015	0.0592	0.0350	0.0303	0.0273	30.8	31.6		38.2
1631	4-5-2023	05:33:25	IL&FS	LSI	Solapur	MH	17.736194	75.819206	150+000	252+000	237+580 RHS Middle	1	37.7000	0.2260	0.1472	0.1046	0.0725	0.0552	0.0397	0.0272	30.3	31.4		38.2
	4-5-2023	05:33:25	IL&FS	LSI	Solapur	MH	17.736194	75.819206	150+000	252+000	237+580 RHS Middle	2	38.0000	0.2174	0.1518	0.1017	0.0657	0.0555	0.0428	0.0278	30.3	31.4		38.2
	4-5-2023	05:33:25	IL&FS	LSI	Solapur	MH	17.736194	75.819206	150+000	252+000	237+580 RHS Middle	3	37.9000	0.2323	0.1607	0.1042	0.0675	0.0554	0.0382	0.0277	30.3	31.4		38.2
1632	4-5-2023	05:35:42	IL&FS	LSI	Solapur	MH	17.737300	75.816703	150+000	252+000	237+300 RHS Middle	1	37.5000	0.3375	0.2098	0.1149	0.0653	0.0511	0.0371	0.0357	30.1	31.3		38.2
	4-5-2023	05:35:42	IL&FS	LSI	Solapur	MH	17.737300	75.816703	150+000	252+000	237+300 RHS Middle	2	37.7000	0.3281	0.1940	0.1193	0.0664	0.0510	0.0418	0.0316	30.1	31.3		38.2
	4-5-2023	05:35:42	IL&FS	LSI	Solapur	MH	17.737300	75.816703	150+000	252+000	237+300 RHS Middle	3	37.6000	0.3431	0.2109	0.1106	0.0658	0.0507	0.0389	0.0340	30.1	31.3		38.2
1633	4-5-2023	05:38:03	IL&FS	LSI	Solapur	MH	17.739866	75.810783	150+000	252+000	236+605 RHS Middle	1	37.9000	0.3037	0.2153	0.1263	0.0858	0.0562	0.0393	0.0284	30.2	31.3		38.2
	4-5-2023	05:38:03	IL&FS	LSI	Solapur	MH	17.739866	75.810783	150+000	252+000	236+605 RHS Middle	2	37.6000	0.2954	0.2017	0.1193	0.0816	0.0582	0.0424	0.0307	30.2	31.3		38.2
	4-5-2023	05:38:03	IL&FS	LSI	Solapur	MH	17.739866	75.810783	150+000	252+000	236+605 RHS Middle	3	38.2000	0.3088	0.2021	0.1320	0.0935	0.0657	0.0437	0.0286	30.2	31.3		38.2
1634	4-5-2023	05:39:54	IL&FS	LSI	Solapur	MH	17.740989	75.808250	150+000	252+000	236+300 RHS Middle	1	37.7000	0.3173	0.1664	0.0806	0.0553	0.0379	0.0315	0.0283	30.3	31.8		38.2
	4-5-2023	05:39:54	IL&FS	LSI	Solapur	MH	17.740989	75.808250	150+000	252+000	236+300 RHS Middle	2	37.4000	0.3061	0.1691	0.0803	0.0526	0.0347	0.0289	0.0260	30.3	31.8		38.2
	4-5-2023	05:39:54	IL&FS	LSI	Solapur	MH	17.740989	75.808250	150+000	252+000	236+300 RHS Middle	3	37.7000	0.3172	0.1591	0.0786	0.0505	0.0351	0.0291	0.0261	30.3	31.8		38.2
1635	4-5-2023	05:42:40	IL&FS	LSI	Solapur	MH	17.743528	75.802192	150+000	252+000	235+610 RHS Middle	1	38.8000	0.2752	0.1785	0.1080	0.0687	0.0444	0.0350	0.0277	30.7	31.3		38.2
	4-5-2023	05:42:40	IL&FS	LSI	Solapur	MH	17.743528	75.802192	150+000	252+000	235+610 RHS Middle	2	39.1000	0.2757	0.1857	0.1042	0.0655	0.0416	0.0309	0.0241	30.7	31.3		38.2
	4-5-2023	05:42:40	IL&FS	LSI	Solapur	MH	17.743528	75.802192	150+000	252+000	235+610 RHS Middle	3	38.8000	0.2760	0.1751	0.1048	0.0694	0.0430	0.0322	0.0251	30.7	31.3		38.2
1636	4-5-2023	05:44:44	IL&FS	LSI	Solapur	MH	17.744703	75.799484	150+000	252+000	235+300 RHS Middle	1	37.1000	0.4214	0.2347	0.1154	0.0624	0.0510	0.0333	0.0195	30.6	31.6		38.2
	4-5-2023	05:44:44	IL&FS	LSI	Solapur	MH	17.744703	75.799484	150+000	252+000	235+300 RHS Middle	2	37.1000	0.3892	0.2194	0.1167	0.0634	0.0468	0.0308	0.0208	30.6	31.6		38.2
	4-5-2023	05:44:44	IL&FS	LSI	Solapur	MH	17.744703	75.799484	150+000	252+000	235+300 RHS Middle	3	37.5000	0.3882	0.2293	0.1124	0.0636	0.0513	0.0344	0.0212	30.6	31.6		38.2
1637	4-5-2023	06:12:49	IL&FS	LSI	Solapur	MH	17.744663	75.800048	150+000	252+000	235+330 LHS Middle	1	39.2000	0.2782	0.1840	0.1200	0.0807	0.0532	0.0402	0.0314	28.5	29.7	T-26.8/35.9	35.9
	4-5-2023	06:12:49	IL&FS	LSI	Solapur	MH	17.744663	75.800048	150+000	252+000	235+330 LHS Middle	2	39.2000	0.2801	0.1759	0.1152	0.0773	0.0537	0.0408	0.0323	28.5	29.7	T-26.8/35.9	35.9
	4-5-2023	06:12:49	IL&FS	LSI	Solapur	MH	17.744663	75.800048	150+000	252+000	235+330 LHS Middle	3	38.8000	0.2610	0.1714	0.1167	0.0791	0.0518	0.0390	0.0298	28.5	29.7	T-26.8/35.9	35.9
1638	4-5-2023	06:15:41	IL&FS	LSI	Solapur	MH	17.743690	75.802330	150+000	252+000	235+605 LHS Middle	1	38.9000	0.2491	0.1806	0.1111	0.0641	0.0498	0.0405	0.0364	28.8	29.9		35.9
	4-5-2023	06:15:41	IL&FS	LSI	Solapur	MH	17.743690	75.802330	150+000	252+000	235+605 LHS Middle	2	38.0000	0.2452	0.1751	0.1025	0.0641	0.0494	0.0388	0.0349	28.8	29.9		35.9

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	06:15:41	IL&FS	LSI	Solapur	MH	17.743690	75.802330	150+000	252+000	235+605 LHS Middle	3	38.1000	0.2466	0.1755	0.1100	0.0615	0.0481	0.0380	0.0342	28.8	29.9		35.9
1639	4-5-2023	06:19:05	IL&FS	LSI	Solapur	MH	17.741050	75.808403	150+000	252+000	236+300 LHS Middle	1	38.8000	0.2549	0.1669	0.1034	0.0528	0.0298	0.0210	0.0189	29.1	31.0		35.9
	4-5-2023	06:19:05	IL&FS	LSI	Solapur	MH	17.741050	75.808403	150+000	252+000	236+300 LHS Middle	2	38.8000	0.2526	0.1740	0.0975	0.0524	0.0334	0.0220	0.0198	29.1	31.0		35.9
	4-5-2023	06:19:05	IL&FS	LSI	Solapur	MH	17.741050	75.808403	150+000	252+000	236+300 LHS Middle	3	38.5000	0.2416	0.1660	0.0970	0.0523	0.0302	0.0223	0.0201	29.1	31.0		35.9
1640	4-5-2023	06:20:47	IL&FS	LSI	Solapur	MH	17.739925	75.810981	150+000	252+000	236+610 LHS Middle	1	38.1000	0.2158	0.1398	0.0972	0.0620	0.0386	0.0287	0.0214	29.0	30.4		35.9
	4-5-2023	06:20:47	IL&FS	LSI	Solapur	MH	17.739925	75.810981	150+000	252+000	236+610 LHS Middle	2	38.2000	0.2137	0.1389	0.0926	0.0626	0.0420	0.0320	0.0252	29.0	30.4		35.9
	4-5-2023	06:20:47	IL&FS	LSI	Solapur	MH	17.739925	75.810981	150+000	252+000	236+610 LHS Middle	3	39.3000	0.2159	0.1497	0.0980	0.0620	0.0382	0.0285	0.0212	29.0	30.4		35.9
1641	4-5-2023	06:23:10	IL&FS	LSI	Solapur	MH	17.737375	75.816947	150+000	252+000	237+300 LHS Middle	1	40.1000	0.1251	0.0920	0.0639	0.0448	0.0328	0.0241	0.0126	29.1	31.0		35.9
	4-5-2023	06:23:10	IL&FS	LSI	Solapur	MH	17.737375	75.816947	150+000	252+000	237+300 LHS Middle	2	40.3000	0.1260	0.0883	0.0655	0.0499	0.0343	0.0229	0.0116	29.1	31.0		35.9
	4-5-2023	06:23:10	IL&FS	LSI	Solapur	MH	17.737375	75.816947	150+000	252+000	237+300 LHS Middle	3	40.0000	0.1254	0.0859	0.0639	0.0467	0.0339	0.0241	0.0126	29.1	31.0		35.9
1642	4-5-2023	06:25:00	IL&FS	LSI	Solapur	MH	17.736175	75.819580	150+000	252+000	237+600 LHS Middle	1	41.4000	0.1365	0.0904	0.0583	0.0421	0.0322	0.0297	0.0279	28.8	30.7		35.9
	4-5-2023	06:25:00	IL&FS	LSI	Solapur	MH	17.736175	75.819580	150+000	252+000	237+600 LHS Middle	2	41.3000	0.1397	0.0941	0.0597	0.0439	0.0322	0.0297	0.0278	28.8	30.7		35.9
	4-5-2023	06:25:00	IL&FS	LSI	Solapur	MH	17.736175	75.819580	150+000	252+000	237+600 LHS Middle	3	41.7000	0.1320	0.0880	0.0593	0.0438	0.0319	0.0296	0.0278	28.8	30.7		35.9
1643	4-5-2023	06:27:22	IL&FS	LSI	Solapur	MH	17.733375	75.825637	150+000	252+000	238+300 LHS Middle	1	38.2000	0.3006	0.1833	0.1223	0.0761	0.0475	0.0341	0.0307	29.1	30.5		35.9
	4-5-2023	06:27:22	IL&FS	LSI	Solapur	MH	17.733375	75.825637	150+000	252+000	238+300 LHS Middle	2	39.0000	0.3151	0.1898	0.1212	0.0782	0.0492	0.0388	0.0349	29.1	30.5		35.9
	4-5-2023	06:27:22	IL&FS	LSI	Solapur	MH	17.733375	75.825637	150+000	252+000	238+300 LHS Middle	3	39.2000	0.3211	0.1916	0.1186	0.0782	0.0498	0.0362	0.0326	29.1	30.5		35.9
1644	4-5-2023	06:29:18	IL&FS	LSI	Solapur	MH	17.732324	75.828125	150+000	252+000	238+600 LHS Middle	1	39.0000	0.3746	0.2358	0.1555	0.0933	0.0610	0.0468	0.0381	29.0	30.7		35.9
	4-5-2023	06:29:18	IL&FS	LSI	Solapur	MH	17.732324	75.828125	150+000	252+000	238+600 LHS Middle	2	38.4000	0.3659	0.2289	0.1486	0.0890	0.0591	0.0443	0.0376	29.0	30.7		35.9
	4-5-2023	06:29:18	IL&FS	LSI	Solapur	MH	17.732324	75.828125	150+000	252+000	238+600 LHS Middle	3	38.8000	0.3603	0.2269	0.1431	0.0876	0.0554	0.0452	0.0379	29.0	30.7		35.9
1645	4-5-2023	06:31:45	IL&FS	LSI	Solapur	MH	17.729648	75.834205	150+000	252+000	239+300 LHS Middle	1	40.9000	0.1138	0.0847	0.0491	0.0320	0.0216	0.0212	0.0190	29.4	31.2		35.9
	4-5-2023	06:31:45	IL&FS	LSI	Solapur	MH	17.729648	75.834205	150+000	252+000	239+300 LHS Middle	2	41.3000	0.1187	0.0868	0.0494	0.0314	0.0211	0.0207	0.0186	29.4	31.2		35.9
	4-5-2023	06:31:45	IL&FS	LSI	Solapur	MH	17.729648	75.834205	150+000	252+000	239+300 LHS Middle	3	40.7000	0.1130	0.0861	0.0483	0.0307	0.0204	0.0201	0.0180	29.4	31.2		35.9
1646	4-5-2023	06:33:43	IL&FS	LSI	Solapur	MH	17.728542	75.836700	150+000	252+000	239+600 LHS Middle	1	41.1000	0.1337	0.0831	0.0575	0.0325	0.0231	0.0195	0.0165	29.4	31.3		35.9
	4-5-2023	06:33:43	IL&FS	LSI	Solapur	MH	17.728542	75.836700	150+000	252+000	239+600 LHS Middle	2	41.2000	0.1350	0.0828	0.0553	0.0304	0.0224	0.0186	0.0162	29.4	31.3		35.9
	4-5-2023	06:33:43	IL&FS	LSI	Solapur	MH	17.728542	75.836700	150+000	252+000	239+600 LHS Middle	3	40.9000	0.1326	0.0789	0.0553	0.0299	0.0212	0.0187	0.0155	29.4	31.3		35.9
1647	4-5-2023	06:36:11	IL&FS	LSI	Solapur	MH	17.725116	75.842239	150+000	252+000	240+300 LHS Middle	1	40.6000	0.0899	0.0630	0.0402	0.0262	0.0193	0.0155	0.0136	29.6	31.5		35.9
	4-5-2023	06:36:11	IL&FS	LSI	Solapur	MH	17.725116	75.842239	150+000	252+000	240+300 LHS Middle	2	40.3000	0.0918	0.0631	0.0407	0.0250	0.0188	0.0151	0.0133	29.6	31.5		35.9
	4-5-2023	06:36:11	IL&FS	LSI	Solapur	MH	17.725116	75.842239	150+000	252+000	240+300 LHS Middle	3	40.5000	0.0909	0.0615	0.0392	0.0242	0.0177	0.0150	0.0126	29.6	31.5		35.9
1648	4-5-2023	06:41:40	IL&FS	LSI	Solapur	MH	17.723194	75.844078	150+000	252+000	240+605 LHS Middle	1	40.8000	0.1290	0.0916	0.0614	0.0412	0.0317	0.0248	0.0223	29.1	30.8		35.9
	4-5-2023	06:41:40	IL&FS	LSI	Solapur	MH	17.723194	75.844078	150+000	252+000	240+605 LHS Middle	2	40.7000	0.1292	0.0839	0.0587	0.0405	0.0323	0.0259	0.0233	29.1	30.8		35.9
	4-5-2023	06:41:40	IL&FS	LSI	Solapur	MH	17.723194	75.844078	150+000	252+000	240+605 LHS Middle	3	40.7000	0.1318	0.0918	0.0615	0.0423	0.0339	0.0279	0.0251	29.1	30.8		35.9
1649	4-5-2023	06:43:47	IL&FS	LSI	Solapur	MH	17.718580	75.848487	150+000	252+000	241+300 LHS Middle	1	38.6000	0.2252	0.1408	0.0744	0.0565	0.0428	0.0305	0.0275	29.6	31.5		35.9
	4-5-2023	06:43:47	IL&FS	LSI	Solapur	MH	17.718580	75.848487	150+000	252+000	241+300 LHS Middle	2	38.8000	0.2271	0.1322	0.0820	0.0590	0.0424	0.0299	0.0269	29.6	31.5		35.9
	4-5-2023	06:43:47	IL&FS	LSI	Solapur	MH	17.718580	75.848487	150+000	252+000	241+300 LHS Middle	3	38.8000	0.2253	0.1410	0.0807	0.0579	0.0427	0.0303	0.0273	29.6	31.5		35.9
1650	4-5-2023	06:45:37	IL&FS	LSI	Solapur	MH	17.716516	75.850418	150+000	252+000	241+605 LHS Middle	1	39.1000	0.2978	0.1882	0.1145	0.0821	0.0560	0.0358	0.0205	29.7	31.6		35.9
	4-5-2023	06:45:37	IL&FS	LSI	Solapur	MH	17.716516	75.850418	150+000	252+000	241+605 LHS Middle	2	39.5000	0.2759	0.1801	0.1147	0.0807	0.0572	0.0374	0.0221	29.7	31.6		35.9
	4-5-2023	06:45:37	IL&FS	LSI	Solapur	MH	17.716516	75.850418	150+000	252+000	241+605 LHS Middle	3	39.2000	0.2683	0.1800	0.1062	0.0775	0.0559	0.0365	0.0222	29.7	31.6		35.9
1651	4-5-2023	06:47:53	IL&FS	LSI	Solapur	MH	17.711980	75.854858	150+000	252+000	242+300 LHS Middle	1	41.1000	0.1243	0.0812	0.0491	0.0366	0.0284	0.0222	0.0199	30.3	32.0		35.9
	4-5-2023	06:47:53	IL&FS	LSI	Solapur	MH	17.711980	75.854858	150+000	252+000	242+300 LHS Middle	2	41.1000	0.1256	0.0824	0.0528	0.0385	0.0289	0.0226	0.0203	30.3	32.0		35.9
	4-5-2023	06:47:53	IL&FS	LSI	Solapur	MH	17.711980	75.854858	150+000	252+000	242+300 LHS Middle	3	40.9000	0.1204	0.0782	0.0502	0.0371	0.0284	0.0222	0.0199	30.3	32.0		35.9
1652	4-5-2023	06:49:46	IL&FS	LSI	Solapur	MH	17.709831	75.856941	150+000	252+000	242+620 LHS Middle	1	40.0000	0.1456	0.0898	0.0596	0.0472	0.0357	0.0277	0.0200	30.3	32.0		35.9
	4-5-2023	06:49:46	IL&FS	LSI	Solapur	MH	17.709831	75.856941	150+000	252+000	242+620 LHS Middle	2	39.8000	0.1541	0.0887	0.0593	0.0413	0.0370	0.0270	0.0190	30.3	32.0		35.9
	4-5-2023	06:49:46	IL&FS	LSI	Solapur	MH	17.709831	75.856941	150+000	252+000	242+620 LHS Middle	3	39.9000	0.1498	0.0905	0.0544	0.0448	0.0344	0.0260	0.0211	30.3	32.0		35.9
1653	4-5-2023	06:56:23	IL&FS	LSI	Solapur	MH	17.705047	75.861610	150+000	252+000	243+300 LHS Middle	1	41.0000	0.1087	0.0781	0.0573	0.0416	0.0299	0.0219	0.0164	29.8	30.6	T-27.9/35.1	35.1
	4-5-2023	06:56:23	IL&FS	LSI	Solapur	MH	17.705047	75.861610	150+000	252+000	243+300 LHS Middle	2	39.0000	0.0949	0.0729	0.0533	0.0411	0.0295	0.0216	0.0161	29.8	30.6	T-27.9/35.1	35.1
	4-5-2023	06:56:23	IL&FS	LSI	Solapur	MH	17.705047	75.861610	150+000	252+000	243+300 LHS Middle	3	40.8000	0.1054	0.0773	0.0582	0.0460	0.0322	0.0230	0.0165	29.8	30.6	T-27.9/35.1	35.1
1654	4-5-2023	06:58:09	IL&FS	LSI	Solapur	MH	17.703256	75.863357	150+000	252+000	243+620 LHS Middle	1	40.7000	0.0923	0.0623	0.0428	0.0332	0.0278	0.0223	0.0200	30.1	31.6		35.1
	4-5-2023	06:58:09	IL&FS	LSI	Solapur	MH	17.703256	75.863357	150+000	252+000	243+620 LHS Middle	2	40.4000	0.0915	0.0641	0.0446	0.0358	0.0299	0.0240	0.0216	30.1	31.6		35.1
	4-5-2023	06:58:09	IL&FS	LSI	Solapur	MH	17.703256	75.863357	150+000	252+000	243+620 LHS Middle	3	41.7000	0.0941	0.0634	0.0473	0.0345	0.0296	0.0247	0.0222	30.1	31.6		35.1
1655	4-5-2023	07:00:33	IL&FS	LSI	Solapur	MH	17.699310	75.868301	150+000	252+000	244+320 LHS Middle	1	39.1000	0.2961	0.1800	0.1225	0.0922	0.0725	0.0501	0.0343	30.6	32.3		35.1
	4-5-2023	07:00:33	IL&FS	LSI	Solapur	MH	17.699310	75.868301	150+000	252+000	244+320 LHS Middle	2	39.2000	0.2811	0.1833	0.1319	0.0958	0.0728	0.0531	0.0382	30.6	32.3		35.1
	4-5-2023	07:00:33	IL&FS	LSI	Solapur	MH	17.699310	75.868301	150+000	252+000	244+320 LHS Middle	3	39.5000	0.3101	0.1973	0.1326	0.0941	0.0697	0.0513	0.0393	30.6	32.3		35.1
1656	4-5-2023	07:02:25	IL&FS	LSI	Solapur	MH	17.697998	75.870689	150+000	252+000	244+600 LHS Middle	1	38.1000	0.2863	0.1774	0.1011	0.0593	0.0473	0.0392	0.0352	30.4	31.8		35.1
	4-5-2023	07:02:25	IL&FS	LSI	Solapur	MH	17.697998	75.870689	150+000	252+000	244+600 LHS Middle	2	38.2000	0.2822	0.1730	0.0942	0.0583	0.0461	0.0371	0.0334	30.4	31.8		35.1
	4-5-2023	07:02:25	IL&FS	LSI	Solapur	MH	17.697998	75.870689	150+000	252+000	244+600 LHS Middle	3	38.3000	0.3167	0.1795	0.0974	0.0575	0.0466	0.0383	0.0345	30.4	31.8		35.1
1657	4-5-2023	07:05:28	IL&FS	LSI	Solapur	MH	17.694820	75.876419	150+000	252+000	245+300 LHS Middle	1	36.7000	0.4470	0.2770	0.1478	0.1034	0.0746	0.0585	0.0481	30.5	32.0		35.1

A-1: FWD Data

Sl No.	Date	Time	Organization	Performer Name	District	Place	Laltitude	Longitude	Start Point	End Point	Location	Drop	Load (kN)	Geophone 1 (mm)	Geophone2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Remarks	Manual Temp. (°C)
	4-5-2023	07:05:28	IL&FS	LSI	Solapur	MH	17.694820	75.876419	150+000	252+000	245+300 LHS Middle	2	36.9000	0.4426	0.2632	0.1495	0.1065	0.0795	0.0588	0.0444	30.5	32.0		35.1
	4-5-2023	07:05:28	IL&FS	LSI	Solapur	MH	17.694820	75.876419	150+000	252+000	245+300 LHS Middle	3	37.3000	0.4179	0.2652	0.1448	0.1051	0.0751	0.0588	0.0487	30.5	32.0		35.1
1658	4-5-2023	07:07:17	IL&FS	LSI	Solapur	MH	17.693956	75.879074	150+000	252+000	245+605 LHS Middle	1	37.1000	0.5422	0.3175	0.1479	0.0761	0.0539	0.0372	0.0334	30.4	32.2		35.1
	4-5-2023	07:07:17	IL&FS	LSI	Solapur	MH	17.693956	75.879074	150+000	252+000	245+605 LHS Middle	2	37.4000	0.5139	0.3107	0.1425	0.0767	0.0526	0.0372	0.0334	30.4	32.2		35.1
	4-5-2023	07:07:17	IL&FS	LSI	Solapur	MH	17.693956	75.879074	150+000	252+000	245+605 LHS Middle	3	36.1000	0.4954	0.2984	0.1342	0.0742	0.0526	0.0363	0.0326	30.4	32.2		35.1
1659	4-5-2023	07:09:51	IL&FS	LSI	Solapur	MH	17.691061	75.885002	150+000	252+000	246+320 LHS Middle	1	38.0000	0.1710	0.1174	0.0652	0.0465	0.0350	0.0259	0.0198	30.7	32.3		35.1
	4-5-2023	07:09:51	IL&FS	LSI	Solapur	MH	17.691061	75.885002	150+000	252+000	246+320 LHS Middle	2	37.8000	0.1849	0.1123	0.0625	0.0460	0.0359	0.0270	0.0212	30.7	32.3		35.1
	4-5-2023	07:09:51	IL&FS	LSI	Solapur	MH	17.691061	75.885002	150+000	252+000	246+320 LHS Middle	3	39.3000	0.1910	0.1230	0.0708	0.0497	0.0352	0.0266	0.0198	30.7	32.3		35.1
1660	4-5-2023	07:11:33	IL&FS	LSI	Solapur	MH	17.689807	75.887420	150+000	252+000	246+610 LHS Middle	1	38.6000	0.1595	0.1152	0.0915	0.0685	0.0538	0.0456	0.0375	30.4	32.0		35.1
	4-5-2023	07:11:33	IL&FS	LSI	Solapur	MH	17.689807	75.887420	150+000	252+000	246+610 LHS Middle	2	37.6000	0.1558	0.1187	0.0885	0.0660	0.0513	0.0437	0.0349	30.4	32.0		35.1
	4-5-2023	07:11:33	IL&FS	LSI	Solapur	MH	17.689807	75.887420	150+000	252+000	246+610 LHS Middle	3	38.8000	0.1487	0.1255	0.0872	0.0665	0.0531	0.0438	0.0346	30.4	32.0		35.1
1661	4-5-2023	07:14:02	IL&FS	LSI	Solapur	MH	17.686145	75.892692	150+000	252+000	247+300 LHS Middle	1	36.4000	0.4518	0.2386	0.1277	0.0659	0.0454	0.0327	0.0204	30.9	33.3		35.1
	4-5-2023	07:14:02	IL&FS	LSI	Solapur	MH	17.686145	75.892692	150+000	252+000	247+300 LHS Middle	2	36.7000	0.4332	0.2658	0.1230	0.0659	0.0476	0.0345	0.0221	30.9	33.3		35.1
	4-5-2023	07:14:02	IL&FS	LSI	Solapur	MH	17.686145	75.892692	150+000	252+000	247+300 LHS Middle	3	36.7000	0.4337	0.2616	0.1183	0.0716	0.0496	0.0333	0.0210	30.9	33.3		35.1
1662	4-5-2023	07:15:52	IL&FS	LSI	Solapur	MH	17.686876	75.895164	150+000	252+000	247+600 LHS Middle	1	39.1000	0.2014	0.1216	0.0655	0.0534	0.0393	0.0283	0.0254	30.7	33.3		35.1
	4-5-2023	07:15:52	IL&FS	LSI	Solapur	MH	17.686876	75.895164	150+000	252+000	247+600 LHS Middle	2	38.5000	0.2117	0.1123	0.0680	0.0522	0.0350	0.0241	0.0217	30.7	33.3		35.1
	4-5-2023	07:15:52	IL&FS	LSI	Solapur	MH	17.686876	75.895164	150+000	252+000	247+600 LHS Middle	3	39.0000	0.2015	0.1164	0.0731	0.0532	0.0374	0.0267	0.0240	30.7	33.3		35.1
1663	4-5-2023	07:18:11	IL&FS	LSI	Solapur	MH	17.690908	75.900321	150+000	252+000	248+300 LHS Middle	1	40.4000	0.1703	0.1105	0.0730	0.0530	0.0376	0.0268	0.0199	31.0	33.4		35.1
	4-5-2023	07:18:11	IL&FS	LSI	Solapur	MH	17.690908	75.900321	150+000	252+000	248+300 LHS Middle	2	40.5000	0.1605	0.1063	0.0743	0.0545	0.0399	0.0293	0.0216	31.0	33.4		35.1
	4-5-2023	07:18:11	IL&FS	LSI	Solapur	MH	17.690908	75.900321	150+000	252+000	248+300 LHS Middle	3	39.8000	0.1768	0.1037	0.0774	0.0527	0.0373	0.0270	0.0196	31.0	33.4		35.1
1664	4-5-2023	07:19:59	IL&FS	LSI	Solapur	MH	17.692037	75.902992	150+000	252+000	248+620 LHS Middle	1	37.1000	0.2552	0.1568	0.1014	0.0674	0.0437	0.0360	0.0307	30.6	33.3		35.1
	4-5-2023	07:19:59	IL&FS	LSI	Solapur	MH	17.692037	75.902992	150+000	252+000	248+620 LHS Middle	2	36.7000	0.2584	0.1492	0.0889	0.0640	0.0454	0.0369	0.0310	30.6	33.3		35.1
	4-5-2023	07:19:59	IL&FS	LSI	Solapur	MH	17.692037	75.902992	150+000	252+000	248+620 LHS Middle	3	36.0000	0.2418	0.1542	0.0904	0.0634	0.0444	0.0362	0.0308	30.6	33.3		35.1
1665	4-5-2023	07:22:32	IL&FS	LSI	Solapur	MH	17.693002	75.909576	150+000	252+000	249+320 LHS Middle	1	37.0000	0.3810	0.2217	0.1103	0.0704	0.0571	0.0346	0.0273	31.1	33.7		35.1
	4-5-2023	07:22:32	IL&FS	LSI	Solapur	MH	17.693002	75.909576	150+000	252+000	249+320 LHS Middle	2	37.3000	0.3566	0.2238	0.1111	0.0759	0.0516	0.0382	0.0254	31.1	33.7		35.1
	4-5-2023	07:22:32	IL&FS	LSI	Solapur	MH	17.693002	75.909576	150+000	252+000	249+320 LHS Middle	3	37.3000	0.3500	0.2148	0.1048	0.0741	0.0547	0.0340	0.0274	31.1	33.7		35.1
1666	4-5-2023	07:24:18	IL&FS	LSI	Solapur	MH	17.692996	75.912185	150+000	252+000	249+610 LHS Middle	1	38.3000	0.3528	0.2014	0.1119	0.0674	0.0373	0.0265	0.0238	30.9	33.8		35.1
	4-5-2023	07:24:18	IL&FS	LSI	Solapur	MH	17.692996	75.912185	150+000	252+000	249+610 LHS Middle	2	38.7000	0.3740	0.2050	0.1140	0.0676	0.0364	0.0258	0.0232	30.9	33.8		35.1
	4-5-2023	07:24:18	IL&FS	LSI	Solapur	MH	17.692996	75.912185	150+000	252+000	249+610 LHS Middle	3	39.1000	0.3747	0.2063	0.1144	0.0677	0.0389	0.0277	0.0249	30.9	33.8		35.1
1667	4-5-2023	07:26:43	IL&FS	LSI	Solapur	MH	17.692708	75.918823	150+000	252+000	250+300 LHS Middle	1	39.4000	0.1261	0.0770	0.0476	0.0374	0.0310	0.0260	0.0223	31.1	34.3		35.1
	4-5-2023	07:26:43	IL&FS	LSI	Solapur	MH	17.692708	75.918823	150+000	252+000	250+300 LHS Middle	2	40.9000	0.1292	0.0811	0.0497	0.0389	0.0319	0.0266	0.0232	31.1	34.3		35.1
	4-5-2023	07:26:43	IL&FS	LSI	Solapur	MH	17.692708	75.918823	150+000	252+000	250+300 LHS Middle	3	40.9000	0.1275	0.0819	0.0495	0.0401	0.0328	0.0277	0.0243	31.1	34.3		35.1
1668	4-5-2023	07:28:36	IL&FS	LSI	Solapur	MH	17.691904	75.921577	150+000	252+000	250+620 LHS Middle	1	36.9000	0.3753	0.2086	0.1160	0.0814	0.0543	0.0442	0.0371	31.0	33.7		35.1
	4-5-2023	07:28:36	IL&FS	LSI	Solapur	MH	17.691904	75.921577	150+000	252+000	250+620 LHS Middle	2	37.1000	0.3417	0.2066	0.1147	0.0776	0.0543	0.0442	0.0374	31.0	33.7		35.1
	4-5-2023	07:28:36	IL&FS	LSI	Solapur	MH	17.691904	75.921577	150+000	252+000	250+620 LHS Middle	3	37.5000	0.3534	0.2050	0.1138	0.0784	0.0545	0.0443	0.0367	31.0	33.7		35.1
1669	4-5-2023	07:30:56	IL&FS	LSI	Solapur	MH	17.687425	75.926094	150+000	252+000	251+320 LHS Middle	1	36.7000	0.3655	0.2225	0.1159	0.0651	0.0434	0.0271	0.0199	31.5	34.5		35.1
	4-5-2023	07:30:56	IL&FS	LSI	Solapur	MH	17.687425	75.926094	150+000	252+000	251+320 LHS Middle	2	37.2000	0.3700	0.2263	0.1116	0.0663	0.0423	0.0274	0.0202	31.5	34.5		35.1
	4-5-2023	07:30:56	IL&FS	LSI	Solapur	MH	17.687425	75.926094	150+000	252+000	251+320 LHS Middle	3	37.3000	0.3743	0.2341	0.1221	0.0663	0.0438	0.0271	0.0199	31.5	34.5		35.1
1670	4-5-2023	07:32:47	IL&FS	LSI	Solapur	MH	17.685081	75.926994	150+000	252+000	251+610 LHS Middle	1	38.5000	0.1821	0.1201	0.0806	0.0574	0.0402	0.0316	0.0284	31.8	34.7		35.1
	4-5-2023	07:32:47	IL&FS	LSI	Solapur	MH	17.685081	75.926994	150+000	252+000	251+610 LHS Middle	2	37.9000	0.1612	0.1209	0.0793	0.0560	0.0407	0.0325	0.0293	31.8	34.7		35.1
	4-5-2023	07:32:47	IL&FS	LSI	Solapur	MH	17.685081	75.926994	150+000	252+000	251+610 LHS Middle	3	38.2000	0.1675	0.1152	0.0828	0.0593	0.0416	0.0334	0.0300	31.8	34.7		35.1

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1	MH	150+000	252+000	252+000	RHS	Outer	T-34.5/41.4	40	0.4282	0.2625	0.1723	0.1109	0.0634	0.0305	0.0274	38.3	40.2	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1237.6	150.0	149.6	1237.6	104.0	119.5	Poor
2	MH	150+000	252+000	251+930	RHS	Outer		40	0.4228	0.2487	0.147	0.0768	0.053	0.0451	0.0406	38.3	40.4	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	888.2	150.2	149.3	888.2	104.2	119.3	Poor
3	MH	150+000	252+000	251+850	RHS	Outer		40	0.3088	0.1957	0.1215	0.0856	0.0615	0.0541	0.05	38.4	40.3	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	274.1	137.8	1495.7	207.2	109.4	Poor
4	MH	150+000	252+000	251+770	RHS	Outer		40	0.3772	0.2379	0.1517	0.098	0.059	0.0388	0.0256	38.4	41.5	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	152.0	149.9	1445.2	105.8	119.8	Poor
5	MH	150+000	252+000	251+500	RHS	Outer		40	0.2387	0.1599	0.1034	0.0769	0.0609	0.049	0.0441	37.9	39.9	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.8	149.4	2022.2	301.5	119.3	Good
6	MH	150+000	252+000	251+250	RHS	Outer		40	0.3039	0.1785	0.0925	0.0626	0.0426	0.0295	0.0209	37.9	40.0	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1373.1	216.0	150.0	1855.1	160.0	119.8	Good
7	MH	150+000	252+000	251+000	RHS	Outer		40	0.2988	0.1912	0.101	0.0549	0.0426	0.0345	0.031	37.7	39.7	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1309.7	274.1	150.0	1769.4	207.2	119.8	Good
8	MH	150+000	252+000	250+750	RHS	Outer		40	0.2555	0.1442	0.0824	0.055	0.042	0.0325	0.0281	37.5	39.4	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	382.2	150.0	2010.6	289.5	119.8	Good
9	MH	150+000	252+000	250+500	RHS	Outer		40	0.1255	0.0813	0.0469	0.0308	0.0229	0.0174	0.0156	37.4	39.5	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	392.9	149.9	2009.1	297.3	119.8	Good
10	MH	150+000	252+000	250+250	RHS	Outer		40	0.1756	0.1191	0.0827	0.0558	0.0421	0.0329	0.0296	37.5	40.0	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.1	150.0	2010.6	298.1	119.8	Good
11	MH	150+000	252+000	250+000	RHS	Outer		40	0.2164	0.1346	0.0848	0.0542	0.0311	0.0232	0.0209	37.7	39.8	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	394.1	150.0	1955.3	298.1	119.8	Good
12	MH	150+000	252+000	249+740	RHS	Outer		40	0.2657	0.1734	0.1062	0.0704	0.0458	0.0328	0.0243	37.9	39.9	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	267.3	150.0	1948.1	201.8	119.8	Good
13	MH	150+000	252+000	249+500	RHS	Outer		40	0.2113	0.1284	0.0792	0.0531	0.0384	0.0283	0.0226	38.0	39.9	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	394.6	150.0	2013.4	298.5	119.8	Good
14	MH	150+000	252+000	249+240	RHS	Outer		40	0.2553	0.1537	0.0815	0.0503	0.0402	0.0342	0.0312	38.0	39.8	41.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1357.0	393.2	150.0	1833.3	297.5	119.8	Good
15	MH	150+000	252+000	249+000	RHS	Outer	T-34.8/41.2	40	0.2995	0.1818	0.1006	0.0654	0.04	0.0286	0.0245	37.7	39.2	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	204.0	150.0	1994.7	150.0	119.8	Good
16	MH	150+000	252+000	248+750	RHS	Outer		40	0.3097	0.1768	0.096	0.0538	0.0373	0.0325	0.0293	37.3	38.3	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1234.4	276.6	150.0	1651.0	209.2	119.8	Good
17	MH	150+000	252+000	248+500	RHS	Outer		40	0.2541	0.1484	0.0859	0.0592	0.0419	0.036	0.0324	37.2	38.0	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1354.8	398.3	150.0	1812.0	301.1	119.8	Good
18	MH	150+000	252+000	248+250	RHS	Outer		40	0.202	0.1199	0.0746	0.0444	0.0324	0.0244	0.0219	37.2	39.0	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	395.1	150.0	1948.7	298.8	119.8	Good
19	MH	150+000	252+000	248+000	RHS	Outer		40	0.2298	0.1309	0.0844	0.0554	0.0396	0.029	0.0261	37.4	39.1	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	398.5	150.0	2004.8	301.3	119.8	Good
20	MH	150+000	252+000	247+750	RHS	Outer		40	0.2253	0.148	0.0885	0.051	0.0298	0.0222	0.02	37.6	39.7	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	351.6	150.0	1999.0	266.9	119.8	Good
21	MH	150+000	252+000	247+500	RHS	Outer		40	0.1323	0.1098	0.0861	0.0695	0.0511	0.0392	0.0251	37.4	39.2	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.8	149.5	1994.7	301.5	119.4	Good
22	MH	150+000	252+000	247+250	RHS	Outer		40	0.2199	0.1358	0.0797	0.0499	0.0364	0.0276	0.0195	37.4	39.3	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	393.6	150.0	1974.5	297.8	119.8	Good
23	MH	150+000	252+000	247+000	RHS	Outer		40	0.2779	0.1832	0.1172	0.0721	0.0507	0.0352	0.0193	37.2	38.7	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	208.7	150.0	1993.3	154.0	119.8	Good
24	MH	150+000	252+000	246+750	RHS	Outer		40	0.1984	0.1307	0.0809	0.061	0.0464	0.0415	0.0374	37.1	38.1	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	395.4	149.8	1966.0	299.1	119.7	Good
25	MH	150+000	252+000	246+490	RHS	Outer		40	0.1896	0.1111	0.0719	0.0458	0.0268	0.0211	0.019	36.7	37.5	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	394.4	150.0	1938.7	298.3	119.8	Good
26	MH	150+000	252+000	246+250	RHS	Outer		40	0.2153	0.1237	0.0714	0.0452	0.0337	0.0254	0.0228	36.5	37.3	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	395.8	149.8	1993.3	299.3	119.7	Good
27	MH	150+000	252+000	246+000	RHS	Outer		40	0.3793	0.2276	0.1194	0.0779	0.0626	0.0453	0.0332	36.5	37.1	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1348.4	160.8	150.0	1803.5	113.4	119.8	Good
28	MH	150+000	252+000	245+750	RHS	Outer		40	0.2633	0.1408	0.0769	0.0532	0.0419	0.0342	0.023	36.2	36.7	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	399.8	150.0	1951.5	302.2	119.8	Good
29	MH	150+000	252+000	245+500	RHS	Outer		40	0.3896	0.23	0.1316	0.0703	0.0491	0.0428	0.0359	35.9	37.3	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	150.5	149.9	1632.3	104.5	119.8	Good
30	MH	150+000	252+000	245+250	RHS	Outer		40	0.3422	0.2018	0.1144	0.0715	0.0533	0.0402	0.032	36.2	37.7	41.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1353.8	208.9	150.0	1810.7	154.1	119.8	Good
31	MH	150+000	252+000	245+000	RHS	Outer	T-32.5/39.4	40	0.2182	0.1437	0.1036	0.0808	0.0652	0.0573	0.052	35.9	37.8	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	400.0	144.8	1811.5	302.4	115.4	Good
32	MH	150+000	252+000	244+750	RHS	Outer		40	0.2982	0.1846	0.1074	0.065	0.0446	0.0305	0.0274	35.8	36.7	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	213.3	150.0	1794.4	157.8	119.8	Good
33	MH	150+000	252+000	244+500	RHS	Outer		40	0.3176	0.2006	0.1266	0.085	0.0549	0.0429	0.0347	35.6	36.4	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	212.8	149.9	1833.8	157.4	119.8	Good
34	MH	150+000	252+000	244+250	RHS	Outer		40	0.178	0.1159	0.0778	0.0624	0.0516	0.0401	0.0315	35.7	37.3	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	399.3	149.7	1783.8	301.9	119.6	Good
35	MH	150+000	252+000	244+000	RHS	Outer		40	0.1622	0.0981	0.0625	0.0432	0.0282	0.0227	0.0188	35.8	37.8	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1365.6	398.5	150.0	1671.9	301.3	119.8	Good
36	MH	150+000	252+000	243+750	RHS	Outer		40	0.1886	0.1177	0.0738	0.049	0.037	0.0307	0.0276	35.6	37.2	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.0	149.9	1829.9	301.7	119.8	Good
37	MH	150+000	252+000	243+500	RHS	Outer		40	0.2114	0.1221	0.0752	0.0493	0.0312	0.0243	0.0193	35.7	37.5	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	387.0	150.0	1803.5	293.0	119.8	Good
38	MH	150+000	252+000	243+250	RHS	Outer		40	0.2222	0.1414	0.0892	0.0522	0.0359	0.0271	0.0207	35.6	37.5	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	400.0	149.9	1819.3	302.4	119.8	Good
39	MH	150+000	252+000	243+000	RHS	Outer		40	0.1755	0.1093	0.0729	0.0475	0.0361	0.0285	0.0203	35.7	37.4	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	398.8	150.0	1818.0	301.5	119.8	Good
40	MH	150+000	252+000	242+750	RHS	Outer		40	0.1857	0.1315	0.093	0.0654	0.047	0.0313	0.02	35.4	36.2	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	399.3	150.0	1775.9	301.9	119.8	Good
41	MH	150+000	252+000	242+500	RHS	Outer		40	0.4287	0.2634	0.1412	0.0977	0.0666	0.0506	0.0389	35.7	37.4	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	150.2	136.3	1323.0	104.2	108.1	Good
42	MH	150+000	252+000	242+250	RHS	Outer		40	0.3512	0.2	0.1121	0.0746	0.0481	0.0383	0.0315	35.8	37.2	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1206.5	203.3	150.0	1477.1	149.5	119.8	Good
43	MH	150+000	252+000	242+000	RHS	Outer		40	0.3185	0.1903	0.1104	0.0634	0.0394	0.0274	0.0247	35.8	37.3	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	169.1	150.0	1804.9	120.5	119.8	Good
44	MH	150+000	252+000	241+750	RHS	Outer		40	0.3612	0.2108	0.1196	0.0826	0.0589	0.0526	0.0433	35.9	36.9	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1128.0	221.1	145.5	1381.0	164.2	116.0	Good
45	MH	150+000	252+000	241+500	RHS	Outer		40	0.3312	0.2087	0.1173	0.0686	0.0495	0.0357	0.0321	35.7	36.7	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	200.3	150.0	1779.9	146.9	119.8	Good
46	MH	150+000	252+000	241+250	RHS	Outer		40	0.2164	0.1253	0.0693	0.0459	0.0368	0.0344	0.0296	35.8	37.3	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	395.8	149.9	1825.9	299.3	119.8	Good
47	MH	150+000	252+000	241+000	RHS	Outer		40	0.4021	0.2199	0.1385	0.0816	0.057	0.0477	0.0372	35.6	36.6	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1315.1	150.0	150.0	1610.1	104.0	119.8	Good
48	MH	150+000	252+000	240+750	RHS	Outer		40	0.3604	0.1937	0.1074	0.0614	0.0457	0.0351	0.0249	35.5	36.8	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1259.1	197.4	150.0	1541.5	144.5	119.8	Good
49	MH	150+000	252+000	240+500	RHS	Outer		40	0.2829	0.1666	0.0986	0.0576	0.0397	0.027	0.0243	35.6	37.2	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1434.4	256.3	150.0	1756.2	192.9	119.8	Good
50	MH	150+000	252+000	240+250	RHS	Outer		40	0.1287	0.0837	0.0564	0.039	0.0273	0.0225	0.0202	35.5	38.0	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	396.1	150.0	1798.3	299.6	119.8	Good
51	MH	150+000	252+000	240+000	RHS	Outer		40	0.1575	0.1023	0.0628	0.0449	0.0325	0.026	0.0212	35.5	37.2	39.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	398.8	149.9	1803.5	301.5	119.8	Good
52	MH	150+000	252+000	239+750	RHS	Outer	T-31.5/40.8	40	0.266	0.1393	0.0795	0.0494	0.033	0.0215	0.0193	35.3	36.8	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	304.9	150.0	1929.8	231.3	119.8	Good
53	MH	150+000	252+000	239+500	RHS	Outer		40	0.1609	0.1034	0.0725	0.0468	0.0365	0.029	0.0231	35.5	36.7	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	391.4	150.0	1942.5	296.2	119.8	Good
54	MH	150+000	252+000	239+250	RHS	Outer		40	0.2997	0.1901	0.1269	0.0859	0.0575	0.0443	0.0356	35.3	36.7	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	241.9	149.7	1966.5	181.3	119.6	Good
55	MH	150+000	252+000	239+000	RHS	Outer		40	0.2276	0.1438	0.0965	0.0622	0.0414	0.0272	0.0244	35.4	36.5	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	378.7	150.0	1927.1	286.9	119.8	Good
56	MH	150+000	252+000	238+730	RHS	Outer		40	0.2165	0.1384	0.0928	0.0615	0.0453	0.0337	0.0301	35.3	35.7	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	393.9	150.0	1952.4	298.0	119.8	Good
57	MH	150+000	252+000	238+500	RHS	Outer		40	0.2949	0.1797	0.1085	0.0593	0.0398	0.026	0.0234	35.3	36.2	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	196.9	150.0	1922.9	144.1	119.8	Good
58	MH	150+000	252+000	238+250	RHS	Outer		40	0.2047	0.1257	0.0748	0.0468	0.0335	0.024	0.0216	35.2	36.3	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.5	150.0	1962.3	301.3	119.8	Good
59	MH	150+000	252+000	238+000	RHS	Outer		40	0.1518	0.096	0.0625	0.0387	0.0281	0.0205	0.0184	35.2	35.9	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	399.3	150.0	1918.6	301.9	119.8	Good
60	MH	150+000	252+000	237+750	RHS	Outer		40	0.1633	0.1059	0.0777	0.0544	0.0376	0.0255	0.0171	34.9	36.2	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	398.5	150.0	1956.7	301.3	119.8	Good
61	MH	150+000	252+000	237+500	RHS	Outer		40	0.2117	0.1382	0.0868	0.0578	0.0461	0.0376	0.0338	34.8	36.4	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	150.0	1963.7	299.1	119.8	Good
62	MH	150+000	252+000	237+250	RHS	Outer		40	0.2051	0.1287	0.0833	0.0479	0.0382	0.0315	0.0278	34.9	36.5	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	398.5	150.0	1908.7	301.3	119.8	Good
63	MH	150+000	252+000	237+000	RHS	Outer		40	0.2132	0.1386	0.092	0.0567	0.037	0.0257	0.0209	34.8	36.0	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	395.6	150.0	1903.1	299.2	119.8	Good
64	MH	150+000	252+000	236+750	RHS	Outer		40	0.3071	0.1811	0.0975	0.0529	0.0378	0.0274	0.0247	34.9	36.0	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1426.9	217.7	150.0	1870.7	161.4	119.8	Good
65	MH	150+000	252+000	236+500	RHS	Outer		40	0.1364	0.0874	0.0656	0.0472	0.0359	0.0286	0.0229	35.1	36.0	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	398.3	149.6	1904.5	301.1	119.5	Good
66	MH	150+000	252+000	236+235	RHS	Outer		40	0.373	0.2163	0.1334	0.0762	0.0514	0.0351	0.0315	35.0	36.3	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1335.5	150.2	150.0	1750.9	104.2	119.8	Good
67	MH	150+000	252+000	236+000	RHS	Outer		40	0.3638	0.2283	0.1289	0.0704	0.0455	0.0322	0.029	35.1	35.9	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	152.4	149.9	1882.0	106.1	119.8	Good
68	MH	150+000	252+000	235+680	RHS	Outer		40	0.2934	0.185	0.1226	0.0814	0.051	0.0363	0.0332	35.1	35.9	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	246.5	150.0	1882.0	185.0	119.8	Good
69	MH	150+000	252+000	235+500	RHS	Outer		40	0.3252	0.2054	0.1205	0.0727	0.0459	0.0336	0.0302	35.2	35.4	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	187.4	150.0	1956.7	136.1	119.8	Good
70	MH	150+000	252+000	235+250	RHS	Outer		40	0.2342	0.1402	0.0872	0.057	0.0348	0.0239	0.0215	35.2	36.0	40.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	391.9	150.0	1952.4	296.5	119.8	Good

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
71	MH	150+000	252+000	235+000	RHS	Outer	T-31.5/39.5	40	0.2954	0.1745	0.0898	0.0542	0.0381	0.0334	0.0271	34.7	35.8	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	309.3	150.0	1731.5	234.7	119.8	Good
72	MH	150+000	252+000	234+750	RHS	Outer		40	0.1405	0.0899	0.0577	0.0422	0.0344	0.0294	0.0197	34.4	35.0	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	399.8	150.0	1784.4	302.2	119.8	Good
73	MH	150+000	252+000	234+500	RHS	Outer		40	0.1217	0.0728	0.0431	0.0292	0.0196	0.0143	0.0129	34.0	34.7	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	397.8	150.0	1784.4	300.8	119.8	Good
74	MH	150+000	252+000	234+250	RHS	Outer		40	0.2337	0.1532	0.0893	0.0498	0.0315	0.0232	0.0202	33.8	34.5	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	299.3	150.0	1844.0	227.0	119.8	Good
75	MH	150+000	252+000	234+030	RHS	Outer		40	0.4305	0.2642	0.1501	0.0839	0.0599	0.046	0.0365	33.7	34.6	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1074.2	150.0	147.8	1321.5	104.0	118.0	Good
76	MH	150+000	252+000	233+750	RHS	Outer		40	0.3302	0.2077	0.1132	0.0658	0.051	0.0403	0.0305	33.6	34.5	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1446.2	193.0	150.0	1779.1	140.8	119.8	Good
77	MH	150+000	252+000	233+500	RHS	Outer		40	0.1793	0.1253	0.0751	0.0532	0.0378	0.0244	0.022	33.4	34.6	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	395.1	150.0	1810.9	298.8	119.8	Good
78	MH	150+000	252+000	233+250	RHS	Outer		40	0.1841	0.1257	0.0807	0.0452	0.0316	0.0217	0.0195	33.5	34.8	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.6	150.0	1842.6	300.6	119.8	Good
79	MH	150+000	252+000	233+000	RHS	Outer		40	0.4204	0.2625	0.158	0.0869	0.0617	0.0452	0.0244	33.4	34.8	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1222.6	150.2	149.9	1504.1	104.2	119.8	Good
80	MH	150+000	252+000	232+750	RHS	Outer		40	0.2182	0.1296	0.0805	0.0493	0.0336	0.0244	0.0182	33.4	34.3	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	391.0	150.0	1836.1	295.9	119.8	Good
81	MH	150+000	252+000	232+500	RHS	Outer		40	0.2306	0.1499	0.1005	0.0658	0.0473	0.0346	0.0315	33.0	34.7	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1417.2	399.8	150.0	1743.5	302.2	119.8	Good
82	MH	150+000	252+000	232+250	RHS	Outer		40	0.1302	0.0812	0.0535	0.0327	0.023	0.016	0.0144	32.9	34.4	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	399.3	150.0	1818.9	301.9	119.8	Good
83	MH	150+000	252+000	232+000	RHS	Outer		40	0.2638	0.1541	0.0791	0.0521	0.0327	0.0221	0.0189	33.0	34.4	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	285.9	150.0	1825.5	216.5	119.8	Good
84	MH	150+000	252+000	231+750	RHS	Outer		40	0.4488	0.2605	0.1393	0.0889	0.0556	0.0399	0.0374	32.8	34.3	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	906.5	150.2	150.0	1115.2	104.2	119.8	Good
85	MH	150+000	252+000	231+500	RHS	Outer		40	0.5243	0.3208	0.1537	0.0883	0.057	0.0311	0.0279	32.9	34.3	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	593.5	150.0	149.9	730.1	104.0	119.8	Good
86	MH	150+000	252+000	231+210	RHS	Outer		40	0.4508	0.2689	0.137	0.0761	0.0647	0.0602	0.0524	33.0	34.4	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	158.1	133.6	1030.4	111.0	105.8	Good
87	MH	150+000	252+000	231+000	RHS	Outer		40	0.4627	0.261	0.1274	0.0863	0.0592	0.041	0.0313	32.9	34.3	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	859.1	151.5	149.8	1056.9	105.3	119.7	Good
88	MH	150+000	252+000	230+750	RHS	Outer		40	0.4004	0.2452	0.1183	0.0766	0.0458	0.0307	0.0276	32.9	34.5	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1168.8	152.9	150.0	1437.9	106.5	119.8	Good
89	MH	150+000	252+000	230+500	RHS	Outer		40	0.4245	0.2677	0.1276	0.0636	0.0439	0.0286	0.0258	32.9	34.7	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	871.0	151.0	150.0	1071.5	104.9	119.8	Good
90	MH	150+000	252+000	230+360	RHS	Outer		40	0.2853	0.1934	0.1158	0.0731	0.0535	0.0402	0.0329	32.9	34.5	39.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	247.0	150.0	1826.8	185.4	119.8	Good
91	MH	150+000	252+000	229+890	RHS	Outer	T-30.1/39.2	40	0.1347	0.0849	0.059	0.0436	0.0311	0.0219	0.0157	33.1	34.4	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	399.0	150.0	1802.0	301.7	119.8	Good
92	MH	150+000	252+000	229+750	RHS	Outer		40	0.4286	0.2776	0.1524	0.0752	0.0505	0.0338	0.0303	32.9	33.9	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1198.9	151.2	150.0	1453.8	105.1	119.8	Good
93	MH	150+000	252+000	229+500	RHS	Outer		40	0.3665	0.2241	0.1147	0.0649	0.0492	0.0385	0.0308	32.7	33.2	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1262.4	171.0	150.0	1530.8	122.1	119.8	Good
94	MH	150+000	252+000	229+250	RHS	Outer		40	0.4289	0.2761	0.1614	0.1037	0.063	0.0437	0.0393	32.5	33.7	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1107.5	150.5	139.1	1343.0	104.5	110.5	Good
95	MH	150+000	252+000	229+000	RHS	Outer		40	0.4374	0.262	0.1283	0.086	0.0576	0.044	0.0306	32.4	34.1	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	905.4	152.4	149.7	1097.9	106.1	119.6	Good
96	MH	150+000	252+000	228+750	RHS	Outer		40	0.5145	0.2726	0.1197	0.0521	0.0402	0.0249	0.0225	32.4	33.9	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	562.4	150.5	149.8	682.0	104.5	119.7	Good
97	MH	150+000	252+000	228+500	RHS	Outer		40	0.4034	0.2402	0.1155	0.051	0.0404	0.0282	0.0253	32.4	33.8	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	863.4	153.9	150.0	1047.0	107.4	119.8	Good
98	MH	150+000	252+000	228+250	RHS	Outer		40	0.4676	0.2911	0.1531	0.074	0.0615	0.0409	0.0367	32.3	33.4	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	771.0	150.5	149.4	934.9	104.5	119.3	Good
99	MH	150+000	252+000	228+000	RHS	Outer		40	0.4159	0.2631	0.1477	0.0975	0.0636	0.0592	0.0551	32.2	33.3	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1164.5	159.0	124.5	1412.1	111.8	98.0	Good
100	MH	150+000	252+000	227+750	RHS	Outer		40	0.4148	0.2668	0.1367	0.084	0.0466	0.0264	0.0238	32.1	33.6	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1050.5	150.5	150.0	1273.9	104.5	119.8	Good
101	MH	150+000	252+000	227+500	RHS	Outer		40	0.2476	0.1662	0.1039	0.0705	0.0497	0.0358	0.0231	31.9	33.4	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	334.0	150.0	1748.5	253.6	119.8	Good
102	MH	150+000	252+000	227+250	RHS	Outer		40	0.3349	0.2001	0.1087	0.0718	0.0461	0.0311	0.0224	31.9	33.4	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	171.5	150.0	1748.5	122.6	119.8	Good
103	MH	150+000	252+000	227+000	RHS	Outer		40	0.2785	0.1729	0.0888	0.0576	0.0404	0.0291	0.0212	31.8	33.2	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	296.4	150.0	1781.1	224.7	119.8	Good
104	MH	150+000	252+000	226+750	RHS	Outer		40	0.1935	0.1326	0.0799	0.0471	0.0319	0.0215	0.0193	31.9	33.2	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	394.6	150.0	1802.0	298.5	119.8	Good
105	MH	150+000	252+000	226+550	RHS	Outer		40	0.1878	0.1291	0.0794	0.0441	0.0308	0.0232	0.0176	31.6	33.3	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	397.3	150.0	1779.8	300.4	119.8	Good
106	MH	150+000	252+000	226+250	RHS	Outer		40	0.2202	0.1563	0.1053	0.0697	0.0442	0.0341	0.027	31.8	33.1	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	387.3	150.0	1779.8	293.2	119.8	Good
107	MH	150+000	252+000	226+000	RHS	Outer		40	0.1974	0.1393	0.082	0.0503	0.0391	0.0344	0.0295	31.8	33.2	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	390.5	150.0	1785.0	295.5	119.8	Good
108	MH	150+000	252+000	225+750	RHS	Outer		40	0.4271	0.2406	0.1178	0.054	0.0318	0.0294	0.0264	31.6	33.1	39.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	760.2	150.2	150.0	921.8	104.2	119.8	Good
109	MH	150+000	252+000	225+500	RHS	Outer	T-27.6/36.8	40	0.2956	0.2032	0.1175	0.0655	0.0458	0.0321	0.0294	30.5	32.2	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	211.3	149.9	1612.2	156.1	119.8	Good
110	MH	150+000	252+000	225+250	RHS	Outer		40	0.3936	0.2637	0.1484	0.0815	0.0537	0.0386	0.0348	30.9	33.1	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	150.0	149.8	1380.2	104.0	119.7	Good
111	MH	150+000	252+000	225+000	RHS	Outer		40	0.4612	0.2832	0.1717	0.1094	0.0635	0.0388	0.0241	31.2	33.1	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	864.5	150.5	149.7	937.2	104.5	119.6	Good
112	MH	150+000	252+000	224+820	RHS	Outer	Approach	40	0.1319	0.084	0.0506	0.0348	0.0235	0.0172	0.0129	30.9	32.7	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.3	150.0	1611.0	300.4	119.8	Good
113	MH	150+000	252+000	224+500	RHS	Outer		40	0.2703	0.1567	0.0929	0.061	0.038	0.0236	0.0139	31.0	32.4	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	185.7	150.0	1586.5	134.6	119.8	Good
114	MH	150+000	252+000	224+250	RHS	Outer		40	0.3708	0.2063	0.1336	0.0954	0.0622	0.0402	0.0262	31.1	32.9	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	152.4	150.0	1606.3	106.1	119.8	Fair
115	MH	150+000	252+000	224+000	RHS	Outer		40	0.2696	0.1595	0.1089	0.0702	0.0433	0.0331	0.026	31.1	32.6	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	321.3	150.0	1578.4	244.0	119.8	Fair
116	MH	150+000	252+000	223+750	RHS	Outer		40	0.2183	0.1364	0.089	0.055	0.0367	0.0238	0.0214	30.8	32.9	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	386.8	150.0	1608.7	292.8	119.8	Good
117	MH	150+000	252+000	223+500	RHS	Outer		40	0.3018	0.2083	0.1304	0.0745	0.0463	0.0341	0.0309	30.8	32.8	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	188.1	150.0	1620.3	136.7	119.8	Good
118	MH	150+000	252+000	223+250	RHS	Outer		40	0.264	0.1689	0.11	0.0815	0.0616	0.0504	0.0431	31.0	33.1	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	385.6	146.6	1625.0	292.0	116.9	Good
119	MH	150+000	252+000	223+000	RHS	Outer		40	0.3517	0.2209	0.1289	0.084	0.0541	0.0299	0.0142	31.2	33.9	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	152.0	149.9	1578.4	105.8	119.8	Fair
120	MH	150+000	252+000	222+750	RHS	Outer		40	0.3267	0.1951	0.1151	0.0615	0.0433	0.031	0.0206	31.4	33.9	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	157.8	150.0	1621.5	110.8	119.8	Fair
121	MH	150+000	252+000	222+500	RHS	Outer		40	0.4691	0.2957	0.1656	0.0953	0.0665	0.0505	0.0383	31.5	33.5	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	150.0	135.0	969.9	104.0	107.0	Fair
122	MH	150+000	252+000	222+250	RHS	Outer		40	0.2897	0.1816	0.1087	0.0715	0.0454	0.0289	0.0175	31.3	33.3	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	177.6	150.0	1580.8	127.8	119.8	Good
123	MH	150+000	252+000	222+000	RHS	Outer		40	0.2289	0.1429	0.0921	0.0567	0.0406	0.0291	0.0262	31.4	33.2	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	398.0	150.0	1584.2	300.9	119.8	Good
124	MH	150+000	252+000	221+750	RHS	Outer		40	0.4613	0.2696	0.135	0.0744	0.0344	0.0239	0.0216	31.3	32.7	36.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	636.6	152.2	150.0	690.1	105.9	119.8	Fair
125	MH	150+000	252+000	221+500	RHS	Outer	T-26.2/35.3	40	0.2263	0.1468	0.0907	0.0573	0.0353	0.0239	0.0215	28.3	29.6	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	364.6	150.0	1507.0	276.6	119.8	Fair
126	MH	150+000	252+000	221+250	RHS	Outer		40	0.2784	0.1834	0.1223	0.0837	0.0562	0.0376	0.0255	28.2	29.9	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	241.2	149.9	1508.1	180.7	119.8	Fair
127	MH	150+000	252+000	221+000	RHS	Outer		40	0.4098	0.2641	0.1479	0.0917	0.0535	0.0383	0.0283	28.1	30.1	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1103.2	150.0	149.9	1118.0	104.0	119.8	Fair
128	MH	150+000	252+000	220+750	RHS	Outer		40	0.4664	0.2871	0.1595	0.0967	0.0635	0.0441	0.0301	28.1	29.8	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	848.4	150.2	149.9	859.8	104.2	119.8	Fair
129	MH	150+000	252+000	220+500	RHS	Outer		40	0.5768	0.3432	0.1871	0.1279	0.0848	0.0622	0.0467	28.1	29.5	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	534.4	150.5	108.1	541.6	104.5	84.0	Fair
130	MH	150+000	252+000	220+240	RHS	Outer		40	0.6526	0.3207	0.1753	0.1236	0.0856	0.06	0.0476	28.1	29.8	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	433.3	150.0	110.4	439.1	104.0	86.0	Fair
131	MH	150+000	252+000	220+000	RHS	Outer		40	0.4885	0.2635	0.1383	0.0776	0.0488	0.0441	0.0397	28.1	29.6	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	693.5	150.5	149.3	702.8	104.5	119.3	Fair
132	MH	150+000	252+000	219+730	RHS	Outer		40	0.4492	0.2073	0.1044	0.0645	0.0485	0.0373	0.0334	28.0	30.4	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	587.1	203.3	150.0	595.0	149.5	119.8	Fair
133	MH	150+000	252+000	219+500	RHS	Outer		40	0.4385	0.2638	0.1409	0.0937	0.0624	0.0369	0.019	28.3	30.4	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1115.1	150.2	149.9	1130.0	104.2	119.8	Fair
134	MH	150+000	252+000	219+250	RHS	Outer		40	0.3204	0.1932	0.1133	0.0705	0.0429	0.0293	0.0199	28.6	30.3	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	163.9	150.0	1496.1	116.0	119.8	Fair
135	MH	150+000	252+000	219+000	RHS	Outer		40	0.5259	0.3069	0.166	0.0955	0.0664	0.0444	0.0308	28.8	30.2	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	618.3	150.5	149.0	626.6	104.5	119.0	Good
136	MH	150+000	252+000	218+750	RHS	Outer	Patch	40	0.4963	0.2577	0.1358	0.0881	0.0536	0.0463	0.037	28.9	30.2	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	669.9	150.0	148.5	678.9	104.0	118.6	Good
137	MH	150+000	252+000	218+500	RHS	Outer		40	0.4123	0.2313	0.1314	0.0967	0.0744	0.0487	0.031	28.8	30.1	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1322.6	150.2	149.7	1340.3	104.2	119.6	Fair
138	MH	150+000	252+000	218+250	RHS	Outer		40	0.4478	0.2534	0.1424	0.085	0.0624	0.0487	0.039	28.8	30.7	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	150.0	141.6	950.1	104.0	112.7	Good
139	MH	150+000	252+000	218+000	RHS	Outer		40	0.5832	0.3292	0.1642	0.1033	0.0623	0.0413	0.0266	29.0	31.4	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	497.8	150.7	149.7	504.5	104.6	119.6	Good
140	MH	150+000	252+000	217+200	RHS	Outer		40	0.4942	0.2807	0.1355	0.0967	0.0686	0.0502	0.0374	30.1	33.0	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	681.7	150.0	136.9	690.8	104.0	108.6	Fair

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
141	MH	150+000	252+000	217+000	RHS	Outer		40	0.3702	0.2176	0.1195	0.0745	0.0531	0.039	0.0304	30.1	33.3	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1360.2	165.2	150.0	1378.4	117.2	119.8	Fair
142	MH	150+000	252+000	216+590	RHS	Outer		40	0.6168	0.3707	0.19	0.1235	0.0777	0.0401	0.0125	30.2	32.3	35.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	150.5	150.0	797.6	104.5	119.8	Fair
143	MH	150+000	252+000	216+500	RHS	Outer	T-28.5/35.2	40	0.411	0.2269	0.1166	0.066	0.049	0.0375	0.0319	30.5	32.6	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	852.7	158.6	150.0	860.3	111.5	119.8	Fair
144	MH	150+000	252+000	216+210	RHS	Outer	Bleeding	40	0.6543	0.3698	0.1876	0.115	0.0665	0.0516	0.0299	30.6	32.2	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.5	141.9	407.9	104.5	112.9	Fair
145	MH	150+000	252+000	216+000	RHS	Outer		40	0.3348	0.1894	0.1177	0.0765	0.0474	0.0364	0.0291	30.4	31.3	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	197.4	150.0	1473.2	144.5	119.8	Fair
146	MH	150+000	252+000	215+750	RHS	Outer		40	0.4757	0.2758	0.1605	0.1008	0.0564	0.0406	0.0301	30.0	31.3	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	755.9	150.0	149.5	762.6	104.0	119.4	Good
147	MH	150+000	252+000	215+500	RHS	Outer		40	0.5236	0.2949	0.1478	0.0768	0.0586	0.0411	0.0289	29.9	32.0	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	596.8	150.0	149.8	602.1	104.0	119.7	Good
148	MH	150+000	252+000	215+250	RHS	Outer		40	0.3356	0.1805	0.1053	0.0581	0.041	0.0288	0.0264	30.1	32.2	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1338.7	206.0	150.0	1350.6	151.7	119.8	Good
149	MH	150+000	252+000	215+000	RHS	Outer		40	0.2953	0.1911	0.1172	0.0647	0.0452	0.0313	0.0272	30.5	32.8	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	210.4	150.0	1512.2	155.4	119.8	Good
150	MH	150+000	252+000	214+750	RHS	Outer		40	0.477	0.2609	0.1258	0.08	0.0551	0.0388	0.0349	30.4	32.7	35.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.5	149.6	751.8	104.5	119.5	Fair
151	MH	150+000	252+000	214+480	RHS	Outer		40	0.4936	0.2735	0.1408	0.0953	0.062	0.0462	0.0356	30.4	32.8	35.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	664.5	150.5	146.6	670.4	104.5	116.9	Good
152	MH	150+000	252+000	214+250	RHS	Outer		40	0.5349	0.3111	0.159	0.1086	0.0743	0.0571	0.0448	30.5	33.2	35.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	609.7	150.0	120.5	615.1	104.0	94.6	Good
153	MH	150+000	252+000	214+000	RHS	Outer		40	0.3602	0.1809	0.1066	0.0719	0.0452	0.0438	0.0394	30.5	32.8	35.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	892.5	267.8	150.0	900.4	202.2	119.8	Good
154	MH	150+000	252+000	213+750	RHS	Outer		40	0.3396	0.1665	0.102	0.0689	0.0446	0.0398	0.036	30.8	33.2	35.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	950.5	304.2	150.0	959.0	230.8	119.8	Good
155	MH	150+000	252+000	213+500	RHS	Outer		40	0.4714	0.2492	0.1325	0.0826	0.061	0.0425	0.0383	30.8	33.6	35.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	688.2	150.5	149.6	694.3	104.5	119.5	Good
156	MH	150+000	252+000	213+230	RHS	Outer	T-30.2/37.6	40	0.4354	0.2365	0.1338	0.0882	0.0563	0.0376	0.0312	31.8	34.3	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1063.4	152.2	150.0	1196.0	105.9	119.8	Good
157	MH	150+000	252+000	213+000	RHS	Outer		40	0.4592	0.2679	0.1432	0.092	0.0589	0.0399	0.0274	32.1	35.7	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	851.6	150.7	150.0	957.8	104.6	119.8	Good
158	MH	150+000	252+000	212+750	RHS	Outer		40	0.633	0.3378	0.1567	0.0983	0.0597	0.0412	0.0295	32.4	35.7	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	417.2	151.5	149.4	469.2	105.3	119.3	Good
159	MH	150+000	252+000	212+500	RHS	Outer		40	0.7395	0.4268	0.2389	0.1615	0.1045	0.0664	0.0417	32.7	35.8	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	151.5	103.3	462.0	105.3	79.9	Good
160	MH	150+000	252+000	212+250	RHS	Outer		40	0.5798	0.357	0.2115	0.1503	0.1055	0.0693	0.0445	32.8	36.2	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	495.7	150.0	101.5	557.5	104.0	78.4	Fair
161	MH	150+000	252+000	211+980	RHS	Outer		40	0.5844	0.3117	0.1554	0.097	0.0672	0.0443	0.0377	33.0	35.9	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	458.1	150.5	138.4	515.2	104.5	109.9	Good
162	MH	150+000	252+000	211+750	RHS	Outer		40	0.2914	0.1654	0.0924	0.0549	0.037	0.0274	0.0247	32.9	36.0	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	256.5	150.0	1625.4	193.1	119.8	Good
163	MH	150+000	252+000	211+500	RHS	Outer		40	0.2786	0.1516	0.0894	0.0536	0.0287	0.0182	0.0107	33.1	36.7	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	150.7	150.0	1597.5	104.6	119.8	Good
164	MH	150+000	252+000	211+240	RHS	Outer		40	0.3516	0.201	0.1055	0.0787	0.0608	0.0416	0.0288	33.2	36.4	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1201.1	221.4	150.0	1350.9	164.5	119.8	Good
165	MH	150+000	252+000	211+000	RHS	Outer		40	0.3685	0.2023	0.1065	0.0711	0.0453	0.0337	0.0254	33.2	36.4	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1192.5	182.5	150.0	1341.2	131.9	119.8	Good
166	MH	150+000	252+000	210+750	RHS	Outer		40	0.4967	0.2503	0.1372	0.0929	0.0623	0.0418	0.0287	33.4	37.1	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	645.2	151.2	150.0	725.6	105.1	119.8	Good
167	MH	150+000	252+000	210+500	RHS	Outer		40	0.2294	0.1333	0.081	0.0548	0.0368	0.0309	0.0278	33.5	36.9	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.8	149.8	1678.6	302.2	119.7	Good
168	MH	150+000	252+000	210+250	RHS	Outer		40	0.4621	0.2644	0.1311	0.0827	0.0499	0.0326	0.0309	33.6	37.0	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	738.7	151.2	149.9	830.8	105.1	119.8	Fair
169	MH	150+000	252+000	209+950	RHS	Outer		40	0.4804	0.2948	0.154	0.0978	0.0573	0.0405	0.0291	33.5	37.0	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	749.5	153.4	149.8	843.0	107.0	119.7	Fair
170	MH	150+000	252+000	209+750	RHS	Outer		40	0.4768	0.3039	0.1423	0.0926	0.0596	0.0385	0.0241	33.6	37.5	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	733.3	150.7	149.9	824.7	104.6	119.8	Fair
171	MH	150+000	252+000	209+500	RHS	Outer		40	0.3443	0.2145	0.1241	0.0693	0.0532	0.0419	0.0377	33.7	37.9	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1295.7	181.5	150.0	1457.3	131.1	119.8	Fair
172	MH	150+000	252+000	209+250	RHS	Outer		40	0.3477	0.1886	0.1066	0.074	0.0535	0.0407	0.0315	33.6	37.8	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	989.2	247.5	150.0	1112.5	185.8	119.8	Fair
173	MH	150+000	252+000	209+000	RHS	Outer		40	0.63	0.3465	0.1865	0.1115	0.0574	0.0425	0.032	33.6	37.5	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.2	146.3	463.1	104.2	116.7	Good
174	MH	150+000	252+000	208+750	RHS	Outer		40	0.638	0.3583	0.1816	0.0904	0.0509	0.0409	0.0359	33.6	37.9	37.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.7	147.3	462.0	104.6	117.5	Fair
175	MH	150+000	252+000	208+500	RHS	Outer	T-30.8/40.2	40	0.6976	0.3845	0.1879	0.0951	0.0617	0.0381	0.0312	33.9	37.8	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.7	149.5	510.5	104.6	119.4	Fair
176	MH	150+000	252+000	208+250	RHS	Outer		40	0.1996	0.1243	0.0789	0.0496	0.0284	0.0182	0.0107	34.0	38.8	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	219.9	150.0	1892.7	163.3	119.8	Fair
177	MH	150+000	252+000	208+000	RHS	Outer		40	0.4082	0.2347	0.1349	0.089	0.0565	0.0303	0.0128	34.2	38.7	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1281.7	151.5	150.0	1631.3	105.3	119.8	Fair
178	MH	150+000	252+000	207+750	RHS	Outer		40	0.6169	0.3257	0.1706	0.0945	0.0667	0.0476	0.0343	34.2	39.1	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	405.4	150.2	141.8	516.0	104.2	112.8	Fair
179	MH	150+000	252+000	207+520	RHS	Outer		40	0.8689	0.569	0.3715	0.214	0.1026	0.0687	0.044	34.3	38.6	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.5	97.5	522.9	104.5	74.9	Fair
180	MH	150+000	252+000	207+250	RHS	Outer		40	0.3023	0.1783	0.09	0.0546	0.0299	0.0201	0.0133	34.4	39.2	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	150.5	150.0	1894.1	104.5	119.8	Fair
181	MH	150+000	252+000	207+000	RHS	Outer		40	0.3671	0.2242	0.1265	0.067	0.0392	0.034	0.0317	34.5	38.6	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1047.3	152.4	150.0	1333.0	106.1	119.8	Fair
182	MH	150+000	252+000	206+750	RHS	Outer	Local Settlement	40	0.6105	0.3598	0.1859	0.0936	0.0689	0.0507	0.0409	34.3	39.0	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	439.8	150.0	129.0	439.8	104.0	101.9	Poor
183	MH	150+000	252+000	206+500	RHS	Outer		40	0.6029	0.3838	0.2307	0.1239	0.0889	0.065	0.0569	34.3	39.1	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	501.1	150.2	97.5	501.1	104.2	74.9	Poor
184	MH	150+000	252+000	206+250	RHS	Outer		40	0.3226	0.1987	0.1128	0.0659	0.0493	0.0379	0.0289	34.4	40.0	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1402.2	212.8	150.0	1402.2	157.4	119.8	Poor
185	MH	150+000	252+000	206+000	RHS	Outer		40	0.6443	0.2901	0.1583	0.0999	0.0597	0.0517	0.0463	34.7	41.0	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	416.1	150.0	129.6	416.1	104.0	102.4	Poor
186	MH	150+000	252+000	205+750	RHS	Outer		40	0.4295	0.2224	0.1281	0.0767	0.0495	0.0376	0.0335	34.7	40.5	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	916.1	157.1	150.0	916.1	110.2	119.8	Poor
187	MH	150+000	252+000	205+500	RHS	Outer		40	0.6097	0.3427	0.1738	0.0893	0.0654	0.0519	0.0351	34.8	40.4	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	139.4	404.3	104.0	110.8	Poor
188	MH	150+000	252+000	205+250	RHS	Outer		40	0.2146	0.136	0.091	0.0572	0.0365	0.0275	0.0216	35.2	40.9	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	398.5	150.0	1489.2	301.3	119.8	Poor
189	MH	150+000	252+000	205+000	RHS	Outer		40	0.3501	0.1882	0.1009	0.0648	0.0397	0.0308	0.025	35.5	41.7	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1194.6	194.7	150.0	1194.6	142.2	119.8	Poor
190	MH	150+000	252+000	204+750	RHS	Outer		40	0.2235	0.139	0.081	0.0573	0.0378	0.0246	0.0139	35.4	41.3	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	283.7	150.0	1481.7	214.8	119.8	Poor
191	MH	150+000	252+000	204+500	RHS	Outer		40	0.5924	0.3164	0.1547	0.0966	0.0573	0.0418	0.0309	35.3	40.8	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.7	149.4	411.8	104.6	119.3	Poor
192	MH	150+000	252+000	204+250	RHS	Outer		40	0.3523	0.1957	0.1187	0.0718	0.0556	0.0444	0.0399	35.4	41.4	40.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1065.6	229.2	150.0	1065.6	170.9	119.8	Poor
193	MH	150+000	252+000	204+000	RHS	Outer	T-35.5/42	40	0.4738	0.2539	0.1417	0.0785	0.0541	0.0361	0.0182	35.8	40.5	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	602.2	150.7	149.9	602.2	104.6	119.8	Poor
194	MH	150+000	252+000	203+750	RHS	Outer		40	0.5642	0.2981	0.1524	0.1046	0.0707	0.0529	0.0398	35.9	41.7	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	451.6	150.0	129.6	451.6	104.0	102.4	Poor
195	MH	150+000	252+000	203+500	RHS	Outer		40	0.723	0.3784	0.1846	0.0928	0.0585	0.0441	0.0339	35.8	42.6	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.7	145.4	404.3	104.6	115.9	Poor
196	MH	150+000	252+000	203+250	RHS	Outer		40	0.6329	0.3204	0.1696	0.1066	0.0635	0.0475	0.0357	35.7	41.7	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.5	137.0	400.0	104.5	108.7	Poor
197	MH	150+000	252+000	203+000	RHS	Outer		40	0.3967	0.2213	0.129	0.0839	0.0527	0.0433	0.0366	35.7	43.1	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1107.5	159.5	149.9	1107.5	112.2	119.8	Poor
198	MH	150+000	252+000	202+750	RHS	Outer		40	0.5873	0.3262	0.1822	0.1019	0.0718	0.0564	0.0454	36.1	43.0	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	487.1	150.0	121.6	487.1	104.0	95.6	Poor
199	MH	150+000	252+000	202+500	RHS	Outer		40	0.562	0.323	0.1753	0.1199	0.0796	0.0617	0.0491	36.1	42.2	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	557.0	150.0	111.3	557.0	104.0	86.7	Poor
200	MH	150+000	252+000	202+220	RHS	Outer		40	0.5605	0.3075	0.1672	0.0855	0.0589	0.0543	0.0489	36.2	42.6	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	466.7	150.0	132.1	466.7	104.0	104.5	Poor
201	MH	150+000	252+000	202+000	RHS	Outer		40	0.5238	0.2988	0.1608	0.0791	0.0577	0.0504	0.0454	36.2	43.6	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	497.8	151.2	139.4	497.8	105.1	110.8	Poor
202	MH	150+000	252+000	201+750	RHS	Outer		40	0.6117	0.3382	0.1617	0.0823	0.0426	0.0143	0.0129	36.2	43.1	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	567.7	150.2	149.9	567.7	104.2	119.8	Poor
203	MH	150+000	252+000	201+500	RHS	Outer		40	0.5663	0.3046	0.1531	0.0797	0.0624	0.0491	0.0457	36.3	43.7	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	448.4	150.0	137.5	448.4	104.0	109.2	Poor
204	MH	150+000	252+000	201+250	RHS	Outer		40	0.3619	0.1633	0.0842	0.0597	0.0432	0.0361	0.0247	36.5	43.7	42	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	607.5	302.5	150.0	607.5	229.5	119.8	Poor
205	MH	150+000	252+000	201+000	RHS	Outer	T-31/43.8	40	0.6021	0.3163	0.1575	0.0905	0.0718	0.0582	0.0494	32.4	36.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	151.0	122.5	624.1	104.9	96.3	Fair
206	MH	150+000	252+000	200+750	RHS	Outer		40	0.5558	0.2611	0.1401	0.0834	0.0469	0.0368	0.0298	32.3	36.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	425.8	150.7	149.8	652.1	104.6	119.7	Fair
207	MH	150+000	252+000	200+520	RHS	Outer		40	0.6038	0.3021	0.1595	0.1058	0.0729	0.052	0.0376	32.4	37.2	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	435.5	151.7	129.2	666.9	105.5	102.1	Fair
208	MH	150+000	252+000	200+160	RHS	Outer		40	0.4399	0.2432	0.1394	0.0857	0.0516	0.0273	0.0201	32.4	37.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1089.2	150.0	150.0	1668.0	104.0	119.8	Fair
209	MH	150+000	252+000	200+000	RHS	Outer		40	0.3569	0.2167	0.1194	0.0636	0.0413	0.0263	0.0189	32.4	36.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.5	150.0	1832.8	104.5	119.8	Fair
210	MH	150+000	252+000	199+750	RHS	Outer		40	0.5471	0.2855	0.1692	0.0987	0.0727	0.0597	0.054	32.2	37.1	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	590.3	150.7	117.4	590.3	104.6	92.0	Poor

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
211	MH	150+000	252+000	199+500	RHS	Outer		40	0.524	0.2709	0.14	0.0895	0.0514	0.0406	0.0365	32.2	36.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	486.0	150.0	149.8	486.0	104.0	119.7	Poor
212	MH	150+000	252+000	199+250	RHS	Outer		40	0.6755	0.3842	0.1783	0.1076	0.0552	0.0383	0.0254	32.0	37.2	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	431.2	150.5	149.3	431.2	104.5	119.3	Poor
213	MH	150+000	252+000	199+000	RHS	Outer	Wide cracking	40	0.7191	0.3861	0.1991	0.0892	0.044	0.0309	0.0219	32.1	36.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.7	149.3	407.5	104.6	119.3	Poor
214	MH	150+000	252+000	198+750	RHS	Outer		40	0.516	0.2893	0.1546	0.0755	0.0505	0.0341	0.0307	32.1	37.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	483.9	151.5	149.9	483.9	105.3	119.8	Poor
215	MH	150+000	252+000	198+500	RHS	Outer		40	0.5134	0.2529	0.132	0.0841	0.0553	0.0374	0.0246	32.2	37.3	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	592.5	152.9	149.9	592.5	106.5	119.8	Poor
216	MH	150+000	252+000	198+250	RHS	Outer		40	0.3457	0.2265	0.1422	0.0729	0.0482	0.0369	0.0331	32.1	36.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	150.2	149.8	1469.9	104.2	119.7	Poor
217	MH	150+000	252+000	198+000	RHS	Outer		40	0.6639	0.3807	0.1851	0.0912	0.0689	0.0438	0.0291	32.1	36.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	409.7	150.7	149.7	409.7	104.6	119.6	Poor
218	MH	150+000	252+000	197+750	RHS	Outer	Wide cracking	40	0.6856	0.4116	0.2086	0.1108	0.0696	0.0469	0.0306	32.0	35.9	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	151.0	141.5	404.3	104.9	112.6	Poor
219	MH	150+000	252+000	197+500	RHS	Outer		40	0.4416	0.1946	0.1174	0.0616	0.041	0.0273	0.0197	32.1	35.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	593.5	150.0	150.0	593.5	104.0	119.8	Poor
220	MH	150+000	252+000	197+250	RHS	Outer		40	0.4218	0.2688	0.1479	0.097	0.0617	0.0452	0.0349	32.0	35.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1077.4	150.0	147.0	1077.4	104.0	117.3	Poor
221	MH	150+000	252+000	197+000	RHS	Outer		40	0.5612	0.3182	0.1524	0.0854	0.0649	0.0428	0.0269	31.8	35.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	431.2	150.5	149.8	431.2	104.5	119.7	Poor
222	MH	150+000	252+000	196+750	RHS	Outer		40	0.4175	0.2043	0.1251	0.0673	0.0423	0.0253	0.0153	31.8	35.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1222.6	150.7	150.0	1222.6	104.6	119.8	Poor
223	MH	150+000	252+000	196+500	RHS	Outer	T-30.5/40	40	0.5061	0.253	0.1222	0.0702	0.0427	0.0245	0.0135	31.1	34.8	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	698.9	150.7	150.0	880.9	104.6	119.8	Fair
224	MH	150+000	252+000	196+250	RHS	Outer		40	0.5121	0.2292	0.123	0.0753	0.0526	0.0377	0.0318	31.5	35.7	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	153.7	149.9	619.4	107.2	119.8	Fair
225	MH	150+000	252+000	196+000	RHS	Outer		40	0.5794	0.3245	0.1744	0.0954	0.0659	0.0459	0.0345	31.7	35.5	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	420.4	150.2	140.3	529.9	104.2	111.6	Fair
226	MH	150+000	252+000	195+750	RHS	Outer		40	0.4239	0.2426	0.1297	0.0865	0.0567	0.036	0.0217	31.8	36.3	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1315.1	150.5	150.0	1657.5	104.5	119.8	Fair
227	MH	150+000	252+000	195+500	RHS	Outer		40	0.4749	0.2517	0.1413	0.0743	0.0589	0.0489	0.0342	31.6	35.8	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.7	148.8	939.2	104.6	118.8	Fair
228	MH	150+000	252+000	195+230	RHS	Outer		40	0.4527	0.2551	0.1325	0.0827	0.059	0.0425	0.0276	31.7	35.3	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	734.4	150.7	149.8	925.6	104.6	119.7	Fair
229	MH	150+000	252+000	195+000	RHS	Outer		40	0.5547	0.2966	0.1499	0.0848	0.0516	0.0289	0.0188	31.7	35.5	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	447.3	152.2	150.0	563.8	105.9	119.8	Fair
230	MH	150+000	252+000	194+740	RHS	Outer		40	0.5108	0.2483	0.1394	0.0869	0.0481	0.0222	0.013	31.8	35.7	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	718.3	151.0	150.0	905.3	104.9	119.8	Fair
231	MH	150+000	252+000	194+500	RHS	Outer		40	0.5499	0.2664	0.1687	0.1018	0.0702	0.0486	0.0333	31.8	36.0	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	514.0	150.0	140.8	647.8	104.0	112.0	Fair
232	MH	150+000	252+000	194+250	RHS	Outer		40	0.593	0.2989	0.1462	0.0636	0.0424	0.027	0.012	31.8	36.6	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	549.5	150.5	149.9	692.6	104.5	119.8	Fair
233	MH	150+000	252+000	194+000	RHS	Outer		40	0.3521	0.1899	0.0989	0.0559	0.0389	0.0232	0.0123	32.0	36.5	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1350.5	151.5	150.0	1350.5	105.3	119.8	Poor
234	MH	150+000	252+000	193+750	RHS	Outer		40	0.3142	0.1577	0.0979	0.0592	0.0415	0.0325	0.0293	31.9	36.8	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	312.8	150.0	1565.3	237.4	119.8	Fair
235	MH	150+000	252+000	193+500	RHS	Outer		40	0.5053	0.2783	0.139	0.0697	0.0492	0.0351	0.0221	31.8	36.1	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	487.1	152.7	149.9	613.9	106.4	119.8	Fair
236	MH	150+000	252+000	193+250	RHS	Outer		40	0.484	0.287	0.1487	0.0918	0.0524	0.0345	0.0217	31.6	35.7	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.7	150.0	819.4	104.6	119.8	Poor
237	MH	150+000	252+000	193+000	RHS	Outer		40	0.4327	0.2227	0.1213	0.0682	0.0447	0.0308	0.0277	31.6	35.4	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	802.2	155.4	150.0	1011.1	108.7	119.8	Fair
238	MH	150+000	252+000	192+750	RHS	Outer		40	0.4279	0.2639	0.1377	0.0848	0.0475	0.0336	0.0242	31.5	35.7	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	150.2	149.9	1057.1	104.2	119.8	Fair
239	MH	150+000	252+000	192+500	RHS	Outer		40	0.3928	0.2223	0.1209	0.0668	0.049	0.0385	0.0347	31.4	35.3	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1028.0	171.7	150.0	1295.7	122.7	119.8	Fair
240	MH	150+000	252+000	192+250	RHS	Outer		40	0.6074	0.3522	0.1685	0.0907	0.0572	0.0345	0.0286	31.3	35.3	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.5	150.0	513.6	104.5	119.8	Fair
241	MH	150+000	252+000	192+000	RHS	Outer		40	0.57	0.3325	0.1917	0.1016	0.0722	0.0522	0.0453	31.5	35.5	40	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	498.9	150.0	122.6	628.8	104.0	96.4	Fair
242	MH	150+000	252+000	191+730	RHS	Outer	T-29.3/40.8	40	0.5106	0.315	0.1662	0.0733	0.0457	0.0254	0.0178	31.2	34.8	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	654.8	150.7	150.0	858.5	104.6	119.8	Fair
243	MH	150+000	252+000	191+500	RHS	Outer		40	0.5649	0.333	0.1737	0.1063	0.0652	0.0558	0.0503	31.3	34.9	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	496.8	150.5	121.9	651.3	104.5	95.8	Fair
244	MH	150+000	252+000	191+250	RHS	Outer		40	0.4523	0.2752	0.1386	0.0811	0.0474	0.0304	0.0258	31.2	35.4	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	726.9	153.4	150.0	953.0	107.0	119.8	Fair
245	MH	150+000	252+000	191+020	RHS	Outer	Approach	40	0.5281	0.3201	0.1555	0.0799	0.0585	0.0413	0.0227	31.0	34.0	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	484.9	150.2	149.7	635.7	104.2	119.6	Fair
246	MH	150+000	252+000	190+740	RHS	Outer		40	0.5117	0.3111	0.167	0.1112	0.073	0.0484	0.0307	30.9	33.9	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	675.3	150.0	142.1	885.3	104.0	113.1	Fair
247	MH	150+000	252+000	190+500	RHS	Outer		40	0.4248	0.2696	0.1298	0.072	0.0472	0.0251	0.0193	30.8	33.8	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	150.2	150.0	1600.0	104.2	119.8	Fair
248	MH	150+000	252+000	190+250	RHS	Outer		40	0.2897	0.1883	0.117	0.0759	0.0467	0.0333	0.0243	30.9	32.1	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	197.9	150.0	1917.2	144.9	119.8	Fair
249	MH	150+000	252+000	190+000	RHS	Outer		40	0.4555	0.224	0.1114	0.0773	0.0516	0.0363	0.0258	30.5	31.2	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	790.3	150.0	150.0	1036.1	104.0	119.8	Fair
250	MH	150+000	252+000	189+750	RHS	Outer		40	0.3966	0.2447	0.1327	0.0861	0.0528	0.0406	0.032	30.4	31.1	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1106.5	152.7	150.0	1450.6	106.4	119.8	Fair
251	MH	150+000	252+000	189+500	RHS	Outer		40	0.5343	0.3196	0.1946	0.1044	0.0759	0.0515	0.0344	30.2	31.0	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.0	131.4	659.7	104.0	103.9	Fair
252	MH	150+000	252+000	189+000	RHS	Outer		40	0.4074	0.2594	0.1627	0.1004	0.0665	0.0404	0.0262	30.2	30.2	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.0	149.9	1629.6	104.0	119.8	Fair
253	MH	150+000	252+000	188+680	RHS	Outer	6 Lane VUP Start	40	0.4395	0.2682	0.1468	0.0969	0.0611	0.0411	0.0274	29.9	30.1	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	953.8	151.0	149.6	1250.5	104.9	119.5	Fair
254	MH	150+000	252+000	188+500	RHS	Outer		40	0.4712	0.3052	0.1631	0.112	0.0733	0.0524	0.0378	29.8	30.3	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	888.2	150.2	128.4	1164.5	104.2	101.4	Fair
255	MH	150+000	252+000	188+250	RHS	Outer	6 Lane VUP End	40	0.4324	0.2525	0.1197	0.0851	0.0599	0.0386	0.023	29.8	29.9	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	868.8	154.2	150.0	1139.0	107.7	119.8	Fair
256	MH	150+000	252+000	188+000	RHS	Outer		40	0.4743	0.2812	0.1434	0.0851	0.0558	0.0413	0.0315	29.7	30.4	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	736.6	151.0	150.0	965.7	104.9	119.8	Fair
257	MH	150+000	252+000	187+730	RHS	Outer		40	0.3493	0.2285	0.1357	0.086	0.0655	0.0505	0.0373	29.5	29.6	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	164.4	145.2	1936.9	116.5	115.7	Good
258	MH	150+000	252+000	187+500	RHS	Outer		40	0.4055	0.2052	0.1269	0.0791	0.0566	0.0411	0.0348	29.5	29.6	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	949.5	174.4	150.0	1244.8	125.0	119.8	Good
259	MH	150+000	252+000	187+250	RHS	Outer		40	0.2084	0.1407	0.0964	0.0683	0.0478	0.0366	0.0283	29.4	29.6	40.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.8	149.8	1955.3	300.8	119.7	Good
260	MH	150+000	252+000	187+000	RHS	Outer	T-27.8/35.9	40	0.4446	0.277	0.1386	0.0807	0.0517	0.0384	0.0296	29.2	29.2	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	151.5	149.9	847.3	105.3	119.8	Fair
261	MH	150+000	252+000	186+750	RHS	Outer		40	0.4871	0.2973	0.1487	0.0782	0.0546	0.0382	0.0328	29.0	29.7	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	663.4	151.5	149.9	690.5	105.3	119.8	Fair
262	MH	150+000	252+000	186+500	RHS	Outer		40	0.3039	0.1872	0.1091	0.0696	0.0426	0.0311	0.0231	29.1	29.5	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1417.2	191.3	150.0	1475.1	139.4	119.8	Good
263	MH	150+000	252+000	186+250	RHS	Outer		40	0.6142	0.3549	0.174	0.1078	0.0763	0.0522	0.0348	28.9	30.1	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	414.0	150.0	130.8	430.9	104.0	103.4	Fair
264	MH	150+000	252+000	186+000	RHS	Outer		40	0.4725	0.3106	0.169	0.0883	0.0531	0.0398	0.0307	29.1	29.9	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	673.1	150.7	150.0	700.6	104.6	119.8	Fair
265	MH	150+000	252+000	185+750	RHS	Outer		40	0.4503	0.2725	0.1419	0.0679	0.044	0.0355	0.0299	28.9	30.4	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	880.6	150.7	150.0	916.6	104.6	119.8	Fair
266	MH	150+000	252+000	185+500	RHS	Outer		40	0.4742	0.2634	0.1391	0.0867	0.0615	0.0411	0.0269	28.8	29.9	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	816.1	150.5	149.4	849.5	104.5	119.3	Fair
267	MH	150+000	252+000	185+230	RHS	Outer		40	0.5035	0.3304	0.1817	0.1099	0.0618	0.0455	0.0334	28.8	29.8	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	651.6	150.0	143.7	678.2	104.0	114.5	Fair
268	MH	150+000	252+000	185+000	RHS	Outer		40	0.4042	0.2354	0.1489	0.1121	0.0834	0.0587	0.0421	28.6	29.3	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	158.8	123.6	1550.1	111.6	97.3	Fair
269	MH	150+000	252+000	184+750	RHS	Outer		40	0.3475	0.21	0.1361	0.0882	0.0688	0.0539	0.0379	28.5	28.9	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	191.5	140.8	1547.9	139.5	112.0	Good
270	MH	150+000	252+000	184+530	RHS	Outer		40	0.4418	0.2491	0.1433	0.0952	0.0599	0.0465	0.0367	28.5	29.9	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	958.1	150.2	145.5	997.3	104.2	116.0	Good
271	MH	150+000	252+000	184+250	RHS	Outer		40	0.4309	0.2885	0.1741	0.0956	0.0717	0.0505	0.0352	28.6	30.3	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	980.6	150.2	137.2	1020.7	104.2	108.9	Fair
272	MH	150+000	252+000	184+000	RHS	Outer		40	0.5427	0.3295	0.1725	0.1058	0.0766	0.0571	0.0514	28.6	31.6	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	575.3	150.0	114.1	598.8	104.0	89.1	Fair
273	MH	150+000	252+000	183+750	RHS	Outer		40	0.4397	0.2571	0.1414	0.1006	0.0728	0.0478	0.0318	28.7	30.2	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	944.1	150.2	146.3	982.7	104.2	116.7	Good
274	MH	150+000	252+000	183+500	RHS	Outer		40	0.4088	0.261	0.146	0.0916	0.0633	0.0447	0.0275	28.8	31.0	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1281.7	151.2	150.0	1334.1	105.1	119.8	Fair
275	MH	150+000	252+000	183+250	RHS	Outer		40	0.2228	0.1442	0.0933	0.0609	0.0386	0.0271	0.0192	28.8	31.6	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	373.4	149.9	1555.7	283.0	119.8	Good
276	MH	150+000	252+000	183+000	RHS	Outer		40	0.3238	0.2089	0.127	0.0724	0.0521	0.0393	0.0305	28.8	31.2	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	174.4	150.0	1550.1	125.0	119.8	Good
277	MH	150+000	252+000	182+750	RHS	Outer		40	0.3055	0.1928	0.1159	0.0668	0.0467	0.032	0.0277	28.6	31.0	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1419.4	205.7	150.0	1477.4	151.5	119.8	Good
278	MH	150+000	252+000	182+500	RHS	Outer	T-26/34.1	40	0.4221	0.2332	0.1457	0.0738	0.0496	0.0382	0.0302	28.2	31.0	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	857.0	152.4	150.0	823.8	106.1	119.8	Good
279	MH	150+000	252+000	182+250	RHS	Outer		40	0.2705	0.1373	0.089	0.0579	0.0411	0.0292	0.0262	28.3	30.9	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.4	150.0	1419.1	299.1	119.8	Good
280	MH	150+000	252+000	182+000	RHS	Outer		40	0.5103	0.2787	0.1634	0.1057	0.0644	0.037	0.0241	28.4	31.4	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	735.5	150.5	149.9	707.0	104.5	119.8	Good

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
281	MH	150+000	252+000	181+750	RHS	Outer		40	0.3737	0.2605	0.1505	0.1006	0.0607	0.0439	0.0314	28.5	31.4	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	150.2	150.0	1350.9	104.2	119.8	Good
282	MH	150+000	252+000	181+500	RHS	Outer		40	0.4638	0.2827	0.1538	0.0987	0.0602	0.0415	0.0281	28.4	30.9	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	969.9	150.0	149.8	932.3	104.0	119.7	Fair
283	MH	150+000	252+000	181+250	RHS	Outer		40	0.2264	0.1403	0.1005	0.0667	0.0405	0.0233	0.0161	28.6	31.3	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	266.6	150.0	1425.4	201.2	119.8	Good
284	MH	150+000	252+000	181+000	RHS	Outer		40	0.3108	0.195	0.1151	0.0621	0.0426	0.0301	0.0252	28.6	31.3	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	182.3	150.0	1433.6	131.8	119.8	Good
285	MH	150+000	252+000	180+750	RHS	Outer		40	0.1895	0.1332	0.0876	0.0568	0.0416	0.0314	0.0283	28.6	31.4	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.1	149.8	1433.6	300.3	119.7	Good
286	MH	150+000	252+000	180+500	RHS	Outer		40	0.4985	0.2884	0.177	0.1032	0.0517	0.0386	0.0297	28.7	32.0	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	731.2	150.2	149.7	702.9	104.2	119.6	Good
287	MH	150+000	252+000	180+250	RHS	Outer		40	0.2536	0.1624	0.1066	0.0629	0.0467	0.0357	0.0224	28.8	31.8	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	313.5	150.0	1433.6	238.0	119.8	Good
288	MH	150+000	252+000	180+000	RHS	Outer		40	0.1964	0.135	0.0941	0.0587	0.0398	0.0328	0.0296	28.8	31.3	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	400.0	149.8	1425.4	302.4	119.7	Good
289	MH	150+000	252+000	179+750	RHS	Outer		40	0.3102	0.2091	0.1377	0.0808	0.0566	0.0388	0.0229	28.4	31.2	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	153.2	150.0	1407.8	106.8	119.8	Good
290	MH	150+000	252+000	179+600	RHS	Outer		40	0.1663	0.1117	0.0727	0.0523	0.0399	0.0282	0.02	28.6	31.2	34.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	399.5	149.7	1424.3	302.0	119.6	Good
291	MH	150+000	252+000	179+140	RHS	Outer	T-26.6/36.8	40	0.3366	0.2082	0.1346	0.0921	0.0613	0.0443	0.0325	28.6	32.2	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	168.8	149.4	1595.8	120.2	119.3	Good
292	MH	150+000	252+000	179+000	RHS	Outer		40	0.3393	0.2193	0.1367	0.0879	0.0548	0.041	0.0314	28.6	31.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	156.8	149.9	1593.5	109.9	119.8	Good
293	MH	150+000	252+000	178+750	RHS	Outer		40	0.3651	0.2252	0.132	0.0803	0.0614	0.0409	0.027	28.8	31.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1376.3	155.1	150.0	1492.1	108.4	119.8	Good
294	MH	150+000	252+000	178+500	RHS	Outer		40	0.3233	0.2248	0.1363	0.0847	0.0617	0.045	0.0328	28.7	31.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	163.9	150.0	1626.2	116.0	119.8	Good
295	MH	150+000	252+000	178+250	RHS	Outer		40	0.2952	0.2112	0.1312	0.0724	0.0547	0.0407	0.0306	28.8	31.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	195.9	149.9	1600.5	143.2	119.8	Good
296	MH	150+000	252+000	178+000	RHS	Outer		40	0.3706	0.2529	0.1546	0.1106	0.0727	0.0461	0.0375	28.9	31.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	150.5	138.2	1607.5	104.5	109.8	Good
297	MH	150+000	252+000	177+750	RHS	Outer		40	0.4519	0.2865	0.1444	0.096	0.0636	0.0473	0.0271	28.8	31.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.5	149.3	849.8	104.5	119.3	Good
298	MH	150+000	252+000	177+500	RHS	Outer		40	0.4186	0.2725	0.1582	0.0867	0.0543	0.0412	0.025	28.9	31.7	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1171.0	150.5	149.9	1269.5	104.5	119.8	Good
299	MH	150+000	252+000	177+230	RHS	Outer		40	0.3918	0.2406	0.1374	0.079	0.0399	0.0279	0.0197	28.9	32.2	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1280.6	150.5	150.0	1388.3	104.5	119.8	Fair
300	MH	150+000	252+000	177+000	RHS	Outer		40	0.3591	0.2275	0.1491	0.103	0.0698	0.0518	0.0389	28.9	32.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	164.2	137.0	1621.5	116.3	108.7	Fair
301	MH	150+000	252+000	176+750	RHS	Outer		40	0.4152	0.2619	0.1586	0.0907	0.0544	0.0382	0.0276	29.0	32.5	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1186.0	151.7	150.0	1285.8	105.5	119.8	Fair
302	MH	150+000	252+000	176+500	RHS	Outer		40	0.5029	0.3112	0.141	0.0733	0.0416	0.0312	0.0234	29.1	32.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	475.3	152.4	150.0	475.3	106.1	119.8	Poor
303	MH	150+000	252+000	176+230	RHS	Outer		40	0.1732	0.1185	0.082	0.0596	0.0448	0.03	0.0196	29.1	32.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	397.8	150.0	1454.8	300.8	119.8	Poor
304	MH	150+000	252+000	176+000	RHS	Outer		40	0.4757	0.2884	0.1539	0.0871	0.065	0.049	0.0286	29.1	33.0	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	692.5	150.0	150.0	692.5	104.0	119.8	Poor
305	MH	150+000	252+000	175+750	RHS	Outer		40	0.4474	0.2975	0.1586	0.0961	0.0723	0.0509	0.0356	29.1	32.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	911.8	150.5	136.4	911.8	104.5	108.2	Poor
306	MH	150+000	252+000	175+500	RHS	Outer		40	0.3775	0.2459	0.1337	0.0771	0.0625	0.0466	0.0359	29.1	32.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1246.2	150.7	150.0	1246.2	104.6	119.8	Poor
307	MH	150+000	252+000	175+250	RHS	Outer		40	0.3945	0.2605	0.1396	0.0917	0.0547	0.0395	0.0254	29.1	32.5	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1408.6	150.2	150.0	1527.1	104.2	119.8	Fair
308	MH	150+000	252+000	175+000	RHS	Outer		40	0.4659	0.3071	0.1646	0.1063	0.068	0.0449	0.0289	29.1	32.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	791.4	150.2	148.8	858.0	104.2	118.8	Fair
309	MH	150+000	252+000	174+750	RHS	Outer	T-27.3/38.1	40	0.4877	0.3056	0.1523	0.0911	0.0761	0.0504	0.0313	29.1	32.3	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	734.4	150.0	143.7	845.4	104.0	114.5	Fair
310	MH	150+000	252+000	174+500	RHS	Outer		40	0.249	0.1678	0.0961	0.0671	0.0487	0.0361	0.0271	29.3	32.6	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	360.2	150.0	1726.7	273.3	119.8	Good
311	MH	150+000	252+000	174+250	RHS	Outer		40	0.4617	0.3026	0.1675	0.1093	0.0671	0.0451	0.0305	29.4	33.1	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	917.2	150.2	143.5	1055.8	104.2	114.3	Good
312	MH	150+000	252+000	174+000	RHS	Outer		40	0.436	0.2841	0.1583	0.0761	0.0558	0.0366	0.0221	29.5	33.3	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	936.6	151.0	150.0	1078.2	104.9	119.8	Fair
313	MH	150+000	252+000	173+750	RHS	Outer		40	0.1878	0.127	0.0873	0.063	0.0455	0.0319	0.0229	29.6	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	399.0	150.0	1709.3	301.7	119.8	Fair
314	MH	150+000	252+000	173+500	RHS	Outer		40	0.4263	0.2449	0.1104	0.0715	0.0431	0.0322	0.0242	29.6	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	867.7	151.2	149.9	998.9	105.1	119.8	Good
315	MH	150+000	252+000	173+230	RHS	Outer		40	0.4986	0.3163	0.1737	0.1073	0.0701	0.0525	0.0483	29.6	33.0	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	749.5	150.2	121.4	862.8	104.2	95.4	Fair
316	MH	150+000	252+000	173+000	RHS	Outer		40	0.1854	0.1269	0.0828	0.0568	0.0422	0.032	0.0211	29.8	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	397.3	149.8	1708.2	300.4	119.7	Fair
317	MH	150+000	252+000	172+750	RHS	Outer		40	0.2394	0.1648	0.102	0.0743	0.0541	0.0406	0.0267	29.7	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	370.4	150.0	1704.4	280.8	119.8	Fair
318	MH	150+000	252+000	172+500	RHS	Outer		40	0.606	0.4046	0.2106	0.1351	0.0828	0.0466	0.0333	29.8	32.5	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	486.0	150.2	130.9	559.5	104.2	103.5	Good
319	MH	150+000	252+000	172+250	RHS	Outer		40	0.2171	0.1432	0.0978	0.0591	0.0463	0.0372	0.0239	29.7	32.5	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	395.1	150.0	1647.5	298.8	119.8	Good
320	MH	150+000	252+000	172+000	RHS	Outer		40	0.2439	0.1452	0.0974	0.071	0.0512	0.0336	0.0206	29.7	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	371.2	150.0	1719.2	281.4	119.8	Good
321	MH	150+000	252+000	171+750	RHS	Outer		40	0.1448	0.1058	0.0797	0.0557	0.0379	0.0258	0.019	29.7	32.5	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	399.5	150.0	1694.5	302.0	119.8	Good
322	MH	150+000	252+000	171+500	RHS	Outer		40	0.402	0.2611	0.1602	0.1152	0.0705	0.0385	0.0246	29.6	32.5	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1212.9	150.0	149.6	1396.2	104.0	119.5	Good
323	MH	150+000	252+000	171+250	RHS	Outer		40	0.3883	0.257	0.13	0.0703	0.0467	0.0292	0.0246	29.6	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1214.0	154.2	150.0	1397.5	107.7	119.8	Good
324	MH	150+000	252+000	171+000	RHS	Outer		40	0.3773	0.2086	0.1117	0.064	0.0504	0.0378	0.0264	29.6	32.4	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	904.3	185.2	150.0	1041.0	134.2	119.8	Good
325	MH	150+000	252+000	170+750	RHS	Outer		40	0.4539	0.2276	0.1376	0.1062	0.094	0.0599	0.0356	29.7	32.4	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	811.8	176.1	131.3	934.5	126.5	103.9	Good
326	MH	150+000	252+000	170+500	RHS	Outer		40	0.1869	0.1314	0.0856	0.0579	0.038	0.0291	0.0236	30.0	33.0	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	399.3	150.0	1676.0	301.9	119.8	Fair
327	MH	150+000	252+000	170+250	RHS	Outer		40	0.3532	0.2186	0.1149	0.06	0.0478	0.0356	0.035	30.0	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1100.0	183.0	150.0	1266.3	132.4	119.8	Good
328	MH	150+000	252+000	170+000	RHS	Outer		40	0.4897	0.311	0.1744	0.1023	0.0521	0.0412	0.0309	29.8	32.7	38.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	150.0	149.9	893.6	104.0	119.8	Good
329	MH	150+000	252+000	169+750	RHS	Outer	T-27.3/36.4	40	0.5798	0.3574	0.1888	0.1	0.0676	0.0445	0.0344	29.8	32.8	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	506.5	150.0	139.7	539.2	104.0	111.0	Good
330	MH	150+000	252+000	169+500	RHS	Outer		40	0.2624	0.1705	0.1041	0.0707	0.0478	0.0287	0.0203	29.3	32.3	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	221.4	150.0	1590.0	164.5	119.8	Fair
331	MH	150+000	252+000	169+240	RHS	Outer		40	0.2617	0.1714	0.0996	0.0699	0.0498	0.0356	0.0306	29.3	32.2	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	349.4	150.0	1574.0	265.3	119.8	Fair
332	MH	150+000	252+000	169+000	RHS	Outer		40	0.4815	0.298	0.1887	0.1136	0.0742	0.054	0.0398	29.3	31.8	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	801.1	150.0	125.1	852.9	104.0	98.5	Fair
333	MH	150+000	252+000	168+750	RHS	Outer		40	0.4586	0.2696	0.1484	0.0928	0.07	0.0572	0.0514	29.2	31.9	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	904.3	150.5	124.7	962.7	104.5	98.2	Fair
334	MH	150+000	252+000	168+500	RHS	Outer		40	0.2926	0.1825	0.1118	0.0628	0.0467	0.0359	0.0323	29.1	31.8	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	249.2	150.0	1583.2	187.2	119.8	Fair
335	MH	150+000	252+000	168+250	RHS	Outer	6 Lane VUP Start	40	0.4176	0.2638	0.1525	0.0938	0.0616	0.0473	0.037	29.2	32.0	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	150.7	142.7	1150.4	104.6	113.6	Fair
336	MH	150+000	252+000	168+000	RHS	Outer	Approach	40	0.5207	0.3295	0.1859	0.0931	0.0596	0.0367	0.0276	29.0	32.0	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	646.2	150.7	149.9	687.9	104.6	119.8	Fair
337	MH	150+000	252+000	167+740	RHS	Outer	6 Lane VUP End	40	0.4063	0.2432	0.124	0.0687	0.0519	0.0399	0.0297	29.1	32.3	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1058.1	155.6	149.9	1126.5	108.9	119.8	Good
338	MH	150+000	252+000	167+480	RHS	Outer		40	0.4568	0.2787	0.1598	0.0886	0.055	0.038	0.029	29.3	31.9	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	790.3	151.0	150.0	841.4	104.9	119.8	Good
339	MH	150+000	252+000	167+250	RHS	Outer		40	0.4403	0.2771	0.1597	0.1037	0.0547	0.0227	0.0165	29.3	32.3	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1304.3	150.5	149.9	1388.6	104.5	119.8	Good
340	MH	150+000	252+000	167+000	RHS	Outer		40	0.2658	0.166	0.09	0.0636	0.0463	0.0346	0.0234	29.5	32.5	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	339.4	150.0	1547.7	257.7	119.8	Good
341	MH	150+000	252+000	166+750	RHS	Outer		40	0.3921	0.2491	0.1451	0.0963	0.06	0.0428	0.0305	29.7	32.7	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1358.1	150.2	149.6	1445.8	104.2	119.5	Good
342	MH	150+000	252+000	166+500	RHS	Outer		40	0.2217	0.1613	0.1045	0.0584	0.0409	0.0283	0.0195	29.9	33.0	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	359.7	150.0	1551.1	272.9	119.8	Good
343	MH	150+000	252+000	166+250	RHS	Outer		40	0.2746	0.1906	0.1218	0.088	0.0555	0.0401	0.0291	30.0	32.7	36.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	250.2	149.9	1596.9	188.0	119.8	Good
344	MH	150+000	252+000	166+000	RHS	Outer	T-26.8/36.9	40	0.173	0.1251	0.0893	0.0564	0.0389	0.0275	0.0197	29.6	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.3	149.9	1621.9	301.9	119.8	Good
345	MH	150+000	252+000	165+750	RHS	Outer		40	0.4386	0.2339	0.1274	0.07	0.0513	0.0381	0.0284	29.6	32.3	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	834.4	152.2	150.0	908.7	105.9	119.8	Good
346	MH	150+000	252+000	165+500	RHS	Outer		40	0.4789	0.3159	0.174	0.1164	0.081	0.056	0.0504	30.1	32.2	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	150.7	113.3	913.4	104.6	88.5	Good
347	MH	150+000	252+000	165+250	RHS	Outer		40	0.4793	0.3032	0.1786	0.119	0.0798	0.0512	0.0297	29.8	32.2	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	800.0	150.0	141.8	871.3	104.0	112.8	Good
348	MH	150+000	252+000	165+000	RHS	Outer		40	0.3998	0.2544	0.1415	0.0815	0.0554	0.0345	0.0295	29.9	32.0	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1228.0	150.7	149.9	1337.4	104.6	119.8	Fair
349	MH	150+000	252+000	164+720	RHS	Outer		40	0.4549	0.2944	0.161	0.0874	0.0547	0.034	0.026	30.1	32.0	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	944.1	150.7	149.9	1028.2	104.6	119.8	Good
350	MH	150+000	252+000	164+500	RHS	Outer		40	0.443	0.2787	0.1492	0.1005	0.0653	0.0387	0.02	29.8	31.2	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	955.9	150.5	149.9	1041.0	104.5	119.8	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
351	MH	150+000	252+000	164+250	RHS	Outer		40	0.4336	0.2852	0.1617	0.1042	0.0755	0.0587	0.0377	29.6	31.0	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1204.3	150.5	127.6	1311.6	104.5	100.7	Good
352	MH	150+000	252+000	164+000	RHS	Outer		40	0.6161	0.3562	0.187	0.1073	0.0662	0.0476	0.0309	29.5	31.0	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.0	144.1	436.8	104.0	114.8	Fair
353	MH	150+000	252+000	163+750	RHS	Outer	6 Lane VUP	40	0.492	0.3098	0.1718	0.0958	0.0516	0.0393	0.0353	29.3	28.9	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	588.2	150.0	149.7	640.6	104.0	119.6	Fair
354	MH	150+000	252+000	163+500	RHS	Outer		40	0.209	0.1526	0.1144	0.08	0.0564	0.0376	0.0242	29.3	29.8	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	381.9	150.0	1609.0	289.3	119.8	Fair
355	MH	150+000	252+000	163+250	RHS	Outer		40	0.4772	0.3031	0.1754	0.1114	0.0764	0.0508	0.0331	29.3	30.4	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	943.0	150.2	135.3	1027.0	104.2	107.3	Fair
356	MH	150+000	252+000	163+020	RHS	Outer		40	0.4531	0.2805	0.1403	0.094	0.0607	0.0432	0.0311	28.3	30.4	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	861.3	151.2	150.0	861.3	105.1	119.8	Poor
357	MH	150+000	252+000	162+145	RHS	Outer	T-25.8/34.8	40	0.3459	0.2232	0.1325	0.0741	0.0534	0.0395	0.0294	28.4	30.7	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	158.3	150.0	1450.5	111.2	119.8	Good
358	MH	150+000	252+000	162+000	RHS	Outer		40	0.4096	0.2434	0.1362	0.0826	0.0605	0.0448	0.0291	28.2	30.7	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1208.6	151.7	150.0	1198.0	105.5	119.8	Good
359	MH	150+000	252+000	161+750	RHS	Outer		40	0.4638	0.2907	0.1492	0.0846	0.0563	0.0402	0.0209	28.4	31.0	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	781.7	150.5	149.4	774.8	104.5	119.3	Fair
360	MH	150+000	252+000	161+500	RHS	Outer		40	0.3699	0.2108	0.13	0.0777	0.0423	0.0308	0.0226	28.6	31.1	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1339.8	154.6	150.0	1328.0	108.0	119.8	Good
361	MH	150+000	252+000	161+250	RHS	Outer	6 Lane VUP Ends	40	0.4022	0.2613	0.1391	0.086	0.0564	0.0352	0.0215	29.1	31.3	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	155.1	150.0	1225.7	108.4	119.8	Good
362	MH	150+000	252+000	161+000	RHS	Outer		40	0.297	0.1927	0.1077	0.0705	0.0471	0.0313	0.0282	29.2	31.1	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	212.1	150.0	1459.1	156.8	119.8	Good
363	MH	150+000	252+000	160+750	RHS	Outer		40	0.3664	0.2178	0.1199	0.0756	0.0511	0.0351	0.0303	29.0	31.3	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1302.2	161.5	150.0	1290.8	114.0	119.8	Good
364	MH	150+000	252+000	160+500	RHS	Outer		40	0.343	0.2215	0.1102	0.0772	0.06	0.0362	0.0268	28.8	31.0	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1434.4	156.4	150.0	1421.8	109.6	119.8	Good
365	MH	150+000	252+000	160+250	RHS	Outer		40	0.3677	0.2416	0.1467	0.0855	0.0585	0.0447	0.0359	28.9	30.8	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	150.2	150.0	1449.5	104.2	119.8	Fair
366	MH	150+000	252+000	160+000	RHS	Outer		40	0.3779	0.2367	0.1202	0.0622	0.0459	0.0348	0.0213	28.7	30.8	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1239.8	153.4	149.9	1228.9	107.0	119.8	Fair
367	MH	150+000	252+000	159+750	RHS	Outer		40	0.3332	0.2162	0.1202	0.0738	0.0501	0.0352	0.024	28.4	30.1	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	160.8	150.0	1446.3	113.4	119.8	Good
368	MH	150+000	252+000	159+500	RHS	Outer		40	0.3257	0.2126	0.1211	0.0773	0.0467	0.0355	0.024	28.3	30.2	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	157.1	149.9	1475.1	110.2	119.8	Good
369	MH	150+000	252+000	159+250	RHS	Outer		40	0.3189	0.2136	0.1167	0.0679	0.0458	0.0374	0.0312	28.2	30.3	34.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1371.0	194.0	150.0	1359.0	141.6	119.8	Good
370	MH	150+000	252+000	159+000	RHS	Outer	T-25.8/33.4	40	0.5083	0.3123	0.1781	0.1036	0.0704	0.0475	0.0311	27.2	28.6	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	702.2	150.0	141.6	654.8	104.0	112.7	Fair
371	MH	150+000	252+000	158+750	RHS	Outer		40	0.4619	0.2942	0.1755	0.0929	0.07	0.0433	0.0249	27.3	28.8	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	818.3	151.2	149.6	763.1	105.1	119.5	Fair
372	MH	150+000	252+000	158+500	RHS	Outer		40	0.5782	0.3381	0.1735	0.1112	0.0689	0.0509	0.0433	27.4	29.6	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	502.2	150.5	124.1	468.3	104.5	97.7	Fair
373	MH	150+000	252+000	158+250	RHS	Outer		40	0.5774	0.3563	0.1876	0.1205	0.0787	0.055	0.0351	27.4	29.2	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	479.6	150.2	127.8	447.2	104.2	100.9	Fair
374	MH	150+000	252+000	157+950	RHS	Outer		40	0.4538	0.2857	0.1685	0.1199	0.087	0.0549	0.045	27.3	29.2	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1092.5	150.0	117.4	1018.7	104.0	92.0	Fair
375	MH	150+000	252+000	157+750	RHS	Outer		40	0.4819	0.3013	0.164	0.1031	0.0747	0.054	0.0334	27.4	29.3	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	733.3	150.0	136.5	683.8	104.0	108.3	Fair
376	MH	150+000	252+000	157+500	RHS	Outer		40	0.2289	0.1284	0.0843	0.0531	0.0437	0.0343	0.0205	27.5	30.1	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1378.5	393.6	150.0	1285.4	297.8	119.8	Fair
377	MH	150+000	252+000	157+250	RHS	Outer		40	0.1434	0.1044	0.0746	0.0513	0.0361	0.0257	0.0174	27.6	30.4	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	391.2	150.0	1396.7	296.0	119.8	Fair
378	MH	150+000	252+000	157+000	RHS	Outer		40	0.2487	0.1695	0.1088	0.0761	0.0565	0.0396	0.0279	27.7	30.4	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	339.9	150.0	1388.7	258.1	119.8	Fair
379	MH	150+000	252+000	156+750	RHS	Outer		40	0.2755	0.1787	0.1116	0.063	0.0471	0.0352	0.0273	27.8	30.9	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	262.7	150.0	1380.6	198.1	119.8	Fair
380	MH	150+000	252+000	156+480	RHS	Outer		40	0.3079	0.2069	0.1197	0.0763	0.0503	0.0393	0.0296	27.8	31.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	191.3	150.0	1352.6	139.4	119.8	Fair
381	MH	150+000	252+000	156+250	RHS	Outer		40	0.1658	0.1162	0.0831	0.0577	0.0397	0.0297	0.0229	27.9	30.6	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	398.8	150.0	1363.7	301.5	119.8	Fair
382	MH	150+000	252+000	156+000	RHS	Outer		40	0.2022	0.1415	0.0935	0.0645	0.044	0.0323	0.0196	28.0	31.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	398.0	149.9	1385.7	300.9	119.8	Fair
383	MH	150+000	252+000	155+750	RHS	Outer		40	0.1867	0.1358	0.0878	0.0607	0.041	0.03	0.0226	28.1	31.3	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	398.0	149.9	1358.6	300.9	119.8	Fair
384	MH	150+000	252+000	155+500	RHS	Outer		40	0.173	0.1249	0.0852	0.0534	0.0313	0.0271	0.0244	28.3	31.3	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.8	149.8	1390.7	301.5	119.7	Fair
385	MH	150+000	252+000	155+250	RHS	Outer		40	0.1877	0.128	0.084	0.0607	0.0438	0.033	0.0253	28.3	31.5	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	149.9	1395.8	298.1	119.8	Fair
386	MH	150+000	252+000	155+000	RHS	Outer		40	0.1891	0.1281	0.0878	0.0666	0.0521	0.0412	0.0336	28.4	31.5	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.8	149.7	1397.7	300.8	119.6	Fair
387	MH	150+000	252+000	154+720	RHS	Outer		40	0.1722	0.1248	0.0863	0.0607	0.0429	0.0304	0.0247	28.2	31.1	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.6	150.0	1395.8	298.5	119.8	Fair
388	MH	150+000	252+000	154+500	RHS	Outer		40	0.1767	0.1251	0.0914	0.0674	0.0451	0.0297	0.021	28.4	31.7	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	399.8	149.7	1310.5	302.2	119.6	Fair
389	MH	150+000	252+000	154+250	RHS	Outer		40	0.2751	0.1794	0.1145	0.0739	0.0485	0.0297	0.0209	28.7	31.7	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	181.3	150.0	1392.7	130.9	119.8	Fair
390	MH	150+000	252+000	154+000	RHS	Outer	T-27.5/35.1	40	0.3966	0.2595	0.1579	0.1093	0.0743	0.0484	0.0303	28.5	31.1	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1337.6	150.2	146.1	1343.5	104.2	116.5	Good
391	MH	150+000	252+000	153+750	RHS	Outer		40	0.367	0.2241	0.1295	0.0748	0.0522	0.0339	0.025	28.7	31.8	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	150.2	150.0	1493.7	104.2	119.8	Good
392	MH	150+000	252+000	153+500	RHS	Outer		40	0.2943	0.2002	0.1248	0.086	0.0602	0.0424	0.0333	29.0	31.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	215.0	150.0	1468.9	159.2	119.8	Good
393	MH	150+000	252+000	153+250	RHS	Outer		40	0.2194	0.1512	0.1078	0.0668	0.0493	0.0372	0.0236	29.0	31.6	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	376.1	150.0	1489.4	285.0	119.8	Fair
394	MH	150+000	252+000	153+000	RHS	Outer		40	0.1884	0.1263	0.0829	0.0544	0.0338	0.023	0.0201	29.1	31.8	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	396.1	150.0	1488.3	299.6	119.8	Fair
395	MH	150+000	252+000	152+750	RHS	Outer		40	0.1428	0.1036	0.0732	0.0474	0.0299	0.0207	0.0143	29.2	32.4	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	399.8	149.9	1482.8	302.2	119.8	Fair
396	MH	150+000	252+000	152+475	RHS	Outer		40	0.1744	0.1259	0.0919	0.0673	0.0403	0.0197	0.0128	29.4	33.3	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	354.1	150.0	1490.3	268.8	119.8	Poor
397	MH	150+000	252+000	152+250	RHS	Outer		40	0.2519	0.1731	0.1194	0.0777	0.0484	0.0287	0.0229	29.6	33.0	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	255.3	150.0	1486.0	192.1	119.8	Poor
398	MH	150+000	252+000	152+000	RHS	Outer		40	0.1172	0.0804	0.054	0.0389	0.0286	0.0195	0.0135	29.6	32.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.8	149.8	1495.8	302.2	119.7	Fair
399	MH	150+000	252+000	151+750	RHS	Outer		40	0.2305	0.1481	0.0984	0.066	0.0419	0.0265	0.02	29.5	32.6	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	332.3	150.0	1504.4	252.4	119.8	Good
400	MH	150+000	252+000	151+500	RHS	Outer		40	0.233	0.1522	0.0964	0.0664	0.0474	0.0346	0.0311	29.6	33.0	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1444.1	392.4	150.0	1450.5	296.9	119.8	Good
401	MH	150+000	252+000	151+250	RHS	Outer		40	0.435	0.2406	0.1369	0.0725	0.0574	0.0425	0.0389	29.6	32.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	949.5	155.1	149.8	953.7	108.4	119.7	Fair
402	MH	150+000	252+000	151+000	RHS	Outer	heema Bridge Approa	40	0.3694	0.2341	0.125	0.0636	0.0414	0.0355	0.032	29.7	33.1	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1189.2	154.2	150.0	1194.5	107.7	119.8	Fair
403	MH	150+000	252+000	150+750	RHS	Outer		40	0.3624	0.2228	0.1161	0.0704	0.0384	0.0287	0.02	30.1	33.6	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1239.8	151.5	150.0	1245.3	105.3	119.8	Fair
404	MH	150+000	252+000	150+250	RHS	Outer		40	0.4355	0.254	0.1316	0.0802	0.0456	0.0316	0.0284	30.1	33.6	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	810.8	150.0	149.9	814.4	104.0	119.8	Good
405	MH	150+000	252+000	150+000	RHS	Outer		40	0.2466	0.1671	0.0981	0.0487	0.036	0.0266	0.0239	30.0	33.1	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	339.1	150.0	1492.6	257.5	119.8	Good
406	MH	150+000	252+000	150+100	LHS	Outer	T-29.1/37.8	40	0.2253	0.1644	0.1055	0.0726	0.0502	0.0342	0.025	30.9	33.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	390.5	150.0	1702.8	295.5	119.8	Good
407	MH	150+000	252+000	150+250	LHS	Outer		40	0.1941	0.1357	0.0877	0.0542	0.039	0.0272	0.0185	31.1	34.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	381.7	149.9	1699.1	289.1	119.8	Good
408	MH	150+000	252+000	150+450	LHS	Outer	heema Bridge Approa	40	0.3793	0.2489	0.1448	0.0862	0.0556	0.0397	0.0291	31.2	34.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	150.2	149.9	1597.7	104.2	119.8	Good
409	MH	150+000	252+000	151+000	LHS	Outer		40	0.2047	0.1421	0.0983	0.0639	0.041	0.0303	0.0227	31.3	34.8	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	395.8	150.0	1694.2	299.3	119.8	Good
410	MH	150+000	252+000	151+250	LHS	Outer		40	0.4789	0.2661	0.1704	0.1019	0.0702	0.0474	0.0304	31.2	34.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	903.2	150.0	146.1	1025.3	104.0	116.5	Good
411	MH	150+000	252+000	151+500	LHS	Outer		40	0.1753	0.1377	0.101	0.0699	0.0479	0.032	0.0231	31.4	34.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	392.9	150.0	1683.2	297.3	119.8	Good
412	MH	150+000	252+000	151+730	LHS	Outer		40	0.1462	0.1061	0.0777	0.0531	0.0364	0.0272	0.0228	31.5	34.5	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	397.3	149.7	1674.7	300.4	119.6	Good
413	MH	150+000	252+000	152+000	LHS	Outer		40	0.1577	0.1138	0.0841	0.0607	0.0399	0.026	0.0166	31.8	35.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	396.3	149.9	1640.5	299.7	119.8	Good
414	MH	150+000	252+000	152+250	LHS	Outer		40	0.2276	0.1532	0.1048	0.071	0.0477	0.0343	0.0247	32.0	36.4	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	368.5	150.0	1689.4	279.4	119.8	Good
415	MH	150+000	252+000	152+500	LHS	Outer		40	0.353	0.2285	0.1444	0.0975	0.0663	0.0393	0.0216	32.1	35.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1425.8	152.0	149.8	1618.5	105.8	119.7	Good
416	MH	150+000	252+000	152+700	LHS	Outer		40	0.2659	0.1681	0.0995	0.0632	0.0479	0.0365	0.0284	31.9	35.4	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	326.7	150.0	1696.6	248.1	119.8	Good
417	MH	150+000	252+000	153+000	LHS	Outer		40	0.2596	0.1922	0.1257	0.0808	0.0539	0.0421	0.0335	31.9	35.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	288.1	149.9	1697.9	218.2	119.8	Good
418	MH	150+000	252+000	153+250	LHS	Outer		40	0.1187	0.0937	0.075	0.0515	0.0355	0.0248	0.0171	31.9	35.3	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1410.8	399.8	150.0	1601.5	302.2	119.8	Good
419	MH	150+000	252+000	153+500	LHS	Outer		40	0.1255	0.0894	0.0627	0.0489	0.0388	0.0287	0.022	31.9	35.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	397.1	149.9	1666.1	300.3	119.8	Good
420	MH	150+000	252+000	153+750	LHS	Outer		40	0.1315	0.0939	0.0651	0.05	0.0383	0.0297	0.0233	31.8	35.8	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.3	149.8	1701.5	301.9	119.7	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
421	MH	150+000	252+000	154+000	LHS	Outer		40	0.1519	0.1037	0.0692	0.0463	0.0346	0.0277	0.0244	32.0	35.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	391.9	149.9	1683.2	296.5	119.8	Good
422	MH	150+000	252+000	154+250	LHS	Outer		40	0.1171	0.0845	0.0615	0.047	0.0325	0.0259	0.0211	32.3	36.8	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.5	149.5	1701.5	302.0	119.4	Good
423	MH	150+000	252+000	154+500	LHS	Outer		40	0.1935	0.1434	0.0992	0.0702	0.0485	0.0333	0.0299	32.5	36.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.0	149.9	1699.1	300.9	119.8	Good
424	MH	150+000	252+000	154+750	LHS	Outer	T-30.8/39.1	40	0.3016	0.1906	0.1131	0.0677	0.0456	0.0307	0.0267	32.6	36.4	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	193.0	150.0	1803.7	140.8	119.8	Good
425	MH	150+000	252+000	155+000	LHS	Outer		40	0.2634	0.1641	0.1028	0.0646	0.0492	0.0338	0.0261	32.8	37.1	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	315.2	150.0	1784.3	239.3	119.8	Good
426	MH	150+000	252+000	155+250	LHS	Outer		40	0.2575	0.1733	0.1155	0.083	0.0523	0.0372	0.025	32.9	36.3	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	268.8	150.0	1758.4	203.0	119.8	Good
427	MH	150+000	252+000	155+550	LHS	Outer		40	0.2869	0.1893	0.1191	0.0745	0.0585	0.0476	0.0329	33.0	36.6	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	256.8	150.0	1746.7	193.3	119.8	Good
428	MH	150+000	252+000	155+750	LHS	Outer		40	0.1133	0.0862	0.0619	0.0458	0.0374	0.0289	0.023	33.0	37.7	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.5	149.9	1801.2	302.0	119.8	Good
429	MH	150+000	252+000	156+000	LHS	Outer		40	0.1516	0.114	0.0886	0.06	0.0416	0.0315	0.024	33.0	38.1	39.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	396.8	149.8	1794.7	300.1	119.7	Good
430	MH	150+000	252+000	156+250	LHS	Outer	T-31.5/40.5	40	0.1571	0.1104	0.0758	0.0527	0.0362	0.028	0.0219	33.0	37.8	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	395.1	150.0	1930.6	298.8	119.8	Good
431	MH	150+000	252+000	156+500	LHS	Outer		40	0.2358	0.1656	0.1036	0.0771	0.0591	0.0454	0.0357	32.9	38.2	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.3	149.8	1932.0	299.7	119.7	Good
432	MH	150+000	252+000	156+750	LHS	Outer		40	0.1927	0.1353	0.0933	0.0635	0.0448	0.031	0.0222	33.3	40.1	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	399.0	150.0	1922.3	301.7	119.8	Good
433	MH	150+000	252+000	157+000	LHS	Outer		40	0.2745	0.1933	0.13	0.0783	0.0587	0.0409	0.0311	33.6	40.7	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	236.3	150.0	1926.4	176.7	119.8	Good
434	MH	150+000	252+000	157+250	LHS	Outer		40	0.192	0.1251	0.0817	0.0554	0.0436	0.0332	0.0258	33.9	40.9	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	397.6	150.0	1913.9	300.6	119.8	Good
435	MH	150+000	252+000	157+500	LHS	Outer		40	0.3215	0.2379	0.151	0.0881	0.0715	0.0554	0.0449	33.9	40.5	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	201.3	129.4	1923.6	147.8	102.2	Good
436	MH	150+000	252+000	157+750	LHS	Outer		40	0.41	0.2439	0.1373	0.0757	0.061	0.0415	0.0281	34.1	41.0	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.0	150.0	1545.9	104.0	119.8	Good
437	MH	150+000	252+000	158+000	LHS	Outer		40	0.3821	0.2254	0.1228	0.0647	0.0476	0.0364	0.0318	34.1	40.9	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	157.8	150.0	1559.7	110.8	119.8	Good
438	MH	150+000	252+000	158+250	LHS	Outer		40	0.3596	0.2234	0.1265	0.0863	0.0593	0.04	0.0269	34.4	42.0	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	151.0	149.9	1927.8	104.9	119.8	Good
439	MH	150+000	252+000	158+500	LHS	Outer		40	0.4071	0.2519	0.1338	0.086	0.0696	0.0463	0.03	34.8	42.4	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1283.9	150.0	149.4	1658.4	104.0	119.3	Good
440	MH	150+000	252+000	158+750	LHS	Outer		40	0.3999	0.231	0.1192	0.0579	0.0474	0.0337	0.0243	35.0	43.0	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	154.6	150.0	1155.5	108.0	119.8	Good
441	MH	150+000	252+000	159+050	LHS	Outer		40	0.419	0.2553	0.1313	0.0806	0.0595	0.0417	0.03	35.1	41.7	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	998.9	151.2	149.8	1290.3	105.1	119.7	Good
442	MH	150+000	252+000	159+250	LHS	Outer		40	0.4752	0.2878	0.1612	0.0831	0.0566	0.038	0.027	35.0	41.6	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	748.4	152.0	149.7	966.7	105.8	119.6	Good
443	MH	150+000	252+000	159+500	LHS	Outer		40	0.4046	0.2552	0.1482	0.0734	0.0503	0.0352	0.0246	34.8	40.9	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1007.5	151.0	149.9	1301.4	104.9	119.8	Good
444	MH	150+000	252+000	159+750	LHS	Outer		40	0.3432	0.2136	0.1295	0.0684	0.0455	0.0322	0.0251	34.3	41.2	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1444.1	154.9	150.0	1865.3	108.3	119.8	Good
445	MH	150+000	252+000	160+000	LHS	Outer		40	0.2733	0.1814	0.1118	0.0744	0.0473	0.0335	0.0242	34.6	41.0	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	246.5	150.0	1920.9	185.0	119.8	Good
446	MH	150+000	252+000	160+250	LHS	Outer		40	0.3781	0.2439	0.1451	0.0927	0.062	0.0416	0.0276	34.4	41.0	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1338.7	152.4	149.9	1729.2	106.1	119.8	Good
447	MH	150+000	252+000	160+500	LHS	Outer		40	0.478	0.2763	0.1419	0.0905	0.0543	0.0395	0.0281	34.3	41.2	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	753.8	152.2	149.9	973.7	105.9	119.8	Fair
448	MH	150+000	252+000	160+750	LHS	Outer		40	0.3891	0.2419	0.1349	0.0825	0.0569	0.0394	0.0286	34.5	40.9	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	150.7	149.4	1581.9	104.6	119.3	Good
449	MH	150+000	252+000	161+000	LHS	Outer		40	0.3679	0.2258	0.1185	0.077	0.0468	0.0348	0.0234	34.6	40.9	40.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1394.6	156.8	150.0	1801.4	109.9	119.8	Good
450	MH	150+000	252+000	161+250	LHS	Outer	T.4/37.5;6 Lane VUP	40	0.474	0.302	0.164	0.0998	0.0631	0.0373	0.032	29.8	32.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	752.7	150.7	149.9	842.6	104.6	119.8	Good
451	MH	150+000	252+000	161+500	LHS	Outer		40	0.4177	0.278	0.1461	0.0866	0.064	0.0413	0.0287	29.7	33.0	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1083.9	150.2	149.9	1213.4	104.2	119.8	Good
452	MH	150+000	252+000	161+750	LHS	Outer	6 Lane VUP End	40	0.4092	0.2543	0.131	0.0813	0.0623	0.0379	0.0274	29.6	32.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1086.0	150.5	150.0	1215.8	104.5	119.8	Fair
453	MH	150+000	252+000	162+000	LHS	Outer		40	0.4457	0.2963	0.1579	0.0997	0.0564	0.0369	0.0241	29.5	32.3	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	877.4	152.4	150.0	982.3	106.1	119.8	Fair
454	MH	150+000	252+000	162+200	LHS	Outer		40	0.4431	0.2779	0.15	0.0977	0.0674	0.0473	0.0297	29.2	31.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	892.5	150.2	149.4	999.2	104.2	119.3	Fair
455	MH	150+000	252+000	163+260	LHS	Outer		40	0.2717	0.1697	0.102	0.0612	0.0398	0.0241	0.0159	29.1	31.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	170.0	150.0	1652.7	121.3	119.8	Good
456	MH	150+000	252+000	163+500	LHS	Outer		40	0.4329	0.284	0.1489	0.0858	0.0549	0.0312	0.0269	29.1	32.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.2	149.8	1006.3	104.2	119.7	Good
457	MH	150+000	252+000	163+760	LHS	Outer		40	0.3556	0.238	0.1257	0.0875	0.0616	0.0393	0.0242	29.0	32.0	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1406.5	151.5	150.0	1574.6	105.3	119.8	Good
458	MH	150+000	252+000	164+000	LHS	Outer		40	0.3635	0.2343	0.1339	0.0799	0.0504	0.0404	0.0305	28.8	31.3	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	150.0	149.8	1625.1	104.0	119.7	Good
459	MH	150+000	252+000	164+250	LHS	Outer		40	0.3056	0.2058	0.1323	0.0842	0.0508	0.0281	0.0171	28.5	31.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1409.7	154.2	150.0	1578.2	107.7	119.8	Good
460	MH	150+000	252+000	164+500	LHS	Outer		40	0.3024	0.1998	0.1228	0.0813	0.0531	0.0404	0.0316	28.5	31.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	214.8	150.0	1615.4	159.0	119.8	Good
461	MH	150+000	252+000	164+750	LHS	Outer		40	0.4076	0.2456	0.135	0.0886	0.057	0.0389	0.0289	28.6	32.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1115.1	153.4	150.0	1248.4	107.0	119.8	Good
462	MH	150+000	252+000	165+000	LHS	Outer		40	0.3465	0.2111	0.1236	0.0847	0.0604	0.0382	0.0266	28.9	32.3	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	152.7	150.0	1637.2	106.4	119.8	Good
463	MH	150+000	252+000	165+250	LHS	Outer		40	0.3716	0.2367	0.1338	0.0844	0.0519	0.0357	0.0245	29.0	32.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1392.5	151.2	150.0	1558.9	105.1	119.8	Good
464	MH	150+000	252+000	165+500	LHS	Outer		40	0.3392	0.2081	0.1216	0.0716	0.0523	0.0342	0.0211	29.3	32.5	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	152.4	150.0	1633.5	106.1	119.8	Good
465	MH	150+000	252+000	165+750	LHS	Outer		40	0.4124	0.2646	0.1568	0.0897	0.0495	0.0236	0.0186	29.4	32.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1172.0	150.5	150.0	1312.1	104.5	119.8	Good
466	MH	150+000	252+000	165+980	LHS	Outer	T-26.6/37.8	40	0.1774	0.1234	0.0777	0.0464	0.0332	0.0246	0.0215	29.6	31.4	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	391.2	150.0	1695.4	296.0	119.8	Good
467	MH	150+000	252+000	166+250	LHS	Outer		40	0.163	0.1243	0.0938	0.067	0.0478	0.034	0.0242	29.3	32.0	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	398.8	150.0	1685.6	301.5	119.8	Good
468	MH	150+000	252+000	166+500	LHS	Outer		40	0.2437	0.1618	0.1045	0.0735	0.0495	0.0339	0.0247	29.5	31.8	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	350.9	150.0	1672.2	266.4	119.8	Good
469	MH	150+000	252+000	166+750	LHS	Outer		40	0.1868	0.1313	0.0946	0.0704	0.0502	0.0362	0.025	29.2	31.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.4	149.8	1691.7	296.9	119.7	Good
470	MH	150+000	252+000	167+000	LHS	Outer		40	0.2238	0.1547	0.1002	0.0696	0.0464	0.0398	0.0349	29.2	31.6	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	399.3	149.9	1656.3	301.9	119.8	Good
471	MH	150+000	252+000	167+250	LHS	Outer		40	0.3723	0.2203	0.1257	0.0907	0.0643	0.0459	0.0291	29.1	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1415.1	155.1	150.0	1606.4	108.4	119.8	Good
472	MH	150+000	252+000	167+470	LHS	Outer		40	0.3329	0.2327	0.1332	0.0726	0.0448	0.0354	0.0287	29.3	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	151.7	149.9	1630.8	105.5	119.8	Good
473	MH	150+000	252+000	167+750	LHS	Outer		40	0.4573	0.2674	0.1382	0.0838	0.0558	0.0334	0.0182	29.3	32.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	667.7	151.0	150.0	758.0	104.9	119.8	Good
474	MH	150+000	252+000	168+000	LHS	Outer		40	0.4749	0.2982	0.1686	0.0947	0.0593	0.0395	0.0261	29.2	32.3	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	594.6	150.2	150.0	675.0	104.2	119.8	Good
475	MH	150+000	252+000	168+250	LHS	Outer		40	0.1244	0.0815	0.0538	0.0403	0.0314	0.0254	0.0173	29.1	32.4	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	394.9	149.9	1691.7	298.7	119.8	Good
476	MH	150+000	252+000	168+500	LHS	Outer		40	0.0975	0.0623	0.0369	0.0258	0.0185	0.0127	0.0114	29.1	32.6	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	398.5	149.9	1661.2	301.3	119.8	Good
477	MH	150+000	252+000	168+750	LHS	Outer		40	0.1888	0.1328	0.0964	0.0713	0.0423	0.0263	0.0155	29.3	32.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	390.5	149.9	1679.6	295.5	119.8	Good
478	MH	150+000	252+000	169+000	LHS	Outer		40	0.2038	0.1348	0.0882	0.0624	0.0439	0.0282	0.0241	29.3	32.0	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	396.8	150.0	1634.4	300.1	119.8	Good
479	MH	150+000	252+000	169+250	LHS	Outer		40	0.1362	0.1004	0.0766	0.0546	0.0389	0.0326	0.0267	29.2	32.0	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.1	149.7	1697.9	299.6	119.6	Good
480	MH	150+000	252+000	169+500	LHS	Outer		40	0.1696	0.1219	0.0876	0.0603	0.0478	0.0392	0.0303	29.1	32.0	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.5	1700.3	299.1	119.4	Good
481	MH	150+000	252+000	169+750	LHS	Outer		40	0.3365	0.2172	0.1298	0.0858	0.0473	0.0326	0.0258	29.0	31.5	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	152.9	150.0	1647.8	106.5	119.8	Good
482	MH	150+000	252+000	170+000	LHS	Outer		40	0.2344	0.1773	0.1172	0.0793	0.0616	0.0423	0.0304	29.0	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	375.6	149.9	1701.5	284.7	119.8	Good
483	MH	150+000	252+000	170+250	LHS	Outer	T-26.1/38.4	40	0.214	0.1475	0.1016	0.0704	0.0478	0.0342	0.0262	29.0	31.6	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	393.9	150.0	1689.7	298.0	119.8	Good
484	MH	150+000	252+000	170+500	LHS	Outer		40	0.4763	0.2929	0.1571	0.082	0.0562	0.0392	0.0237	28.8	31.9	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	722.6	150.2	149.9	843.6	104.2	119.8	Good
485	MH	150+000	252+000	170+750	LHS	Outer		40	0.3351	0.2126	0.1213	0.0775	0.0523	0.0346	0.0236	29.1	31.9	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	160.0	150.0	1738.6	112.7	119.8	Good
486	MH	150+000	252+000	170+980	LHS	Outer		40	0.1612	0.1123	0.0777	0.0557	0.0413	0.0315	0.0239	28.7	31.1	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	397.8	150.0	1704.7	300.8	119.8	Good
487	MH	150+000	252+000	171+250	LHS	Outer		40	0.2553	0.1557	0.098	0.0682	0.0469	0.0324	0.0272	28.9	31.6	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	382.6	150.0	1736.1	289.8	119.8	Good
488	MH	150+000	252+000	171+500	LHS	Outer		40	0.2105	0.1514	0.1128	0.0817	0.0605	0.0365	0.0323	29.2	31.7	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	399.3	150.0	1708.5	301.9	119.8	Good
489	MH	150+000	252+000	171+750	LHS	Outer		40	0.3184	0.2048	0.1339	0.0919	0.0631	0.0464	0.0318	28.8	31.8	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	180.3	149.9	1749.9	130.1	119.8	Good
490	MH	150+000	252+000	172+000	LHS	Outer		40	0.1798	0.1195	0.0754	0.0513	0.0363	0.0269	0.0237	28.9	31.4	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	391.7	150.0	1687.2	296.4	119.8	Good

Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			Pavement Condition
																				BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	
491	MH	150+000	252+000	172+250	LHS	Outer		40	0.2206	0.1433	0.0976	0.067	0.0462	0.0324	0.0292	28.7	31.2	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	384.4	150.0	1749.9	291.1	119.8	Good
492	MH	150+000	252+000	172+500	LHS	Outer		40	0.1908	0.1318	0.0786	0.0476	0.0338	0.0215	0.0132	28.7	31.5	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	344.5	150.0	1711.0	261.6	119.8	Good
493	MH	150+000	252+000	172+750	LHS	Outer		40	0.1311	0.0923	0.0626	0.0418	0.0278	0.0212	0.0153	28.7	31.5	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	396.1	150.0	1680.9	299.6	119.8	Good
494	MH	150+000	252+000	173+000	LHS	Outer		40	0.1389	0.0957	0.0674	0.0507	0.0392	0.0319	0.0231	28.9	31.8	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.8	1748.6	299.1	119.7	Good
495	MH	150+000	252+000	173+250	LHS	Outer		40	0.3244	0.203	0.1226	0.0699	0.0492	0.0313	0.0276	28.7	31.3	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	171.3	150.0	1703.4	122.4	119.8	Good
496	MH	150+000	252+000	173+500	LHS	Outer		40	0.3516	0.2317	0.1386	0.0871	0.0652	0.0397	0.0302	29.0	31.5	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	150.0	149.6	1748.6	104.0	119.5	Good
497	MH	150+000	252+000	173+750	LHS	Outer		40	0.2835	0.1954	0.1188	0.0751	0.0462	0.0286	0.0157	29.0	31.2	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	156.1	149.8	1731.1	109.3	119.7	Good
498	MH	150+000	252+000	174+000	LHS	Outer		40	0.4184	0.2523	0.1432	0.1033	0.078	0.053	0.0387	29.1	31.4	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	150.7	133.5	1419.7	104.6	105.7	Good
499	MH	150+000	252+000	174+280	LHS	Outer	T-26/34.5	40	0.2851	0.1813	0.1016	0.0606	0.0326	0.0253	0.0204	27.2	29.1	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	167.6	150.0	1400.0	119.2	119.8	Good
500	MH	150+000	252+000	174+500	LHS	Outer		40	0.1288	0.0945	0.0713	0.0488	0.0338	0.0277	0.0211	27.2	29.0	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	399.5	149.6	1452.6	302.0	119.5	Good
501	MH	150+000	252+000	174+750	LHS	Outer		40	0.2091	0.132	0.0968	0.0703	0.0503	0.0365	0.0306	27.2	29.2	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	397.8	149.8	1455.8	300.8	119.7	Good
502	MH	150+000	252+000	175+000	LHS	Outer		40	0.1401	0.1014	0.0765	0.0584	0.0454	0.0356	0.0292	27.3	29.3	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	399.8	150.0	1431.5	302.2	119.8	Good
503	MH	150+000	252+000	175+250	LHS	Outer		40	0.1739	0.1308	0.0939	0.0678	0.0494	0.0364	0.0271	27.4	29.6	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	400.0	149.7	1466.3	302.4	119.6	Good
504	MH	150+000	252+000	175+500	LHS	Outer		40	0.1583	0.1178	0.0894	0.0661	0.0508	0.0397	0.0273	27.3	29.3	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	149.9	1439.0	302.4	119.8	Good
505	MH	150+000	252+000	175+750	LHS	Outer		40	0.152	0.1083	0.0778	0.0572	0.0423	0.028	0.0183	27.2	29.3	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	396.3	149.9	1461.0	299.7	119.8	Good
506	MH	150+000	252+000	176+000	LHS	Outer		40	0.1415	0.1003	0.0731	0.0554	0.0435	0.0261	0.019	27.1	29.2	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	399.5	149.9	1449.4	302.0	119.8	Good
507	MH	150+000	252+000	176+250	LHS	Outer		40	0.2581	0.192	0.1438	0.0967	0.0623	0.0391	0.0248	27.2	29.8	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	213.0	149.9	1453.6	157.5	119.8	Good
508	MH	150+000	252+000	176+500	LHS	Outer		40	0.2173	0.1522	0.1097	0.0793	0.0582	0.0414	0.0268	27.3	29.7	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	398.3	150.0	1451.6	301.1	119.8	Good
509	MH	150+000	252+000	176+750	LHS	Outer		40	0.3683	0.2252	0.1444	0.0855	0.0656	0.0422	0.0261	27.3	29.8	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	150.5	150.0	1433.7	104.5	119.8	Good
510	MH	150+000	252+000	177+000	LHS	Outer		40	0.4205	0.2653	0.1394	0.0838	0.0481	0.0357	0.0272	27.4	30.2	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	877.4	150.5	149.9	858.3	104.5	119.8	Fair
511	MH	150+000	252+000	177+300	LHS	Outer		40	0.4467	0.2863	0.1596	0.1135	0.068	0.0423	0.0258	27.7	30.1	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.0	149.8	954.1	104.0	119.7	Fair
512	MH	150+000	252+000	177+500	LHS	Outer		40	0.411	0.2683	0.1553	0.0894	0.0589	0.0369	0.0242	27.7	30.2	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1173.1	150.2	149.9	1147.6	104.2	119.8	Fair
513	MH	150+000	252+000	177+750	LHS	Outer		40	0.4045	0.2455	0.1457	0.091	0.0632	0.0476	0.0345	27.7	29.9	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1217.2	150.2	145.5	1190.7	104.2	116.0	Fair
514	MH	150+000	252+000	178+000	LHS	Outer		40	0.2019	0.1407	0.0952	0.0677	0.0426	0.0288	0.019	27.7	29.9	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	398.3	150.0	1415.8	301.1	119.8	Fair
515	MH	150+000	252+000	178+250	LHS	Outer		40	0.4234	0.2787	0.1781	0.1205	0.0834	0.0581	0.0347	27.6	30.0	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	151.0	128.2	1214.9	104.9	101.2	Good
516	MH	150+000	252+000	178+500	LHS	Outer		40	0.1705	0.1148	0.0775	0.0514	0.0366	0.0266	0.0192	27.5	30.4	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.5	149.9	1462.1	302.0	119.8	Good
517	MH	150+000	252+000	178+750	LHS	Outer		40	0.228	0.159	0.0989	0.0599	0.0453	0.032	0.0224	27.8	30.5	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	378.5	150.0	1458.9	286.8	119.8	Good
518	MH	150+000	252+000	179+000	LHS	Outer		40	0.1686	0.1125	0.0702	0.0477	0.0366	0.0292	0.0239	27.8	30.1	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	400.0	149.9	1452.6	302.4	119.8	Good
519	MH	150+000	252+000	179+080	LHS	Outer		40	0.2563	0.1486	0.1032	0.072	0.0469	0.0382	0.0295	27.8	29.7	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	396.1	150.0	1452.6	299.6	119.8	Good
520	MH	150+000	252+000	179+630	LHS	Outer		40	0.3001	0.2115	0.1291	0.0863	0.0547	0.0297	0.0255	27.7	29.3	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	158.6	149.9	1450.5	111.5	119.8	Good
521	MH	150+000	252+000	179+750	LHS	Outer		40	0.47	0.332	0.1988	0.1308	0.0893	0.063	0.0444	27.6	29.4	34.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	914.0	150.0	109.0	894.1	104.0	84.8	Good
522	MH	150+000	252+000	180+000	LHS	Outer	T-25.9/33	40	0.3733	0.2453	0.1481	0.0866	0.0598	0.0398	0.0279	27.1	28.9	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1325.8	151.5	150.0	1215.2	105.3	119.8	Good
523	MH	150+000	252+000	180+250	LHS	Outer		40	0.2011	0.151	0.1158	0.0857	0.0637	0.042	0.0298	27.1	28.8	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.0	149.3	1368.0	301.7	119.3	Good
524	MH	150+000	252+000	180+500	LHS	Outer		40	0.1548	0.1051	0.0709	0.0485	0.0322	0.0234	0.017	27.3	29.2	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1424.7	399.5	150.0	1305.8	302.0	119.8	Good
525	MH	150+000	252+000	180+750	LHS	Outer		40	0.1986	0.1346	0.0876	0.0563	0.0402	0.0289	0.026	27.2	28.6	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	393.9	149.9	1373.8	298.0	119.8	Good
526	MH	150+000	252+000	181+000	LHS	Outer		40	0.1686	0.1045	0.0646	0.0441	0.0295	0.0212	0.0141	27.3	28.9	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	394.6	150.0	1351.2	298.5	119.8	Good
527	MH	150+000	252+000	181+250	LHS	Outer		40	0.1591	0.1092	0.0717	0.0551	0.0434	0.0337	0.0303	27.2	29.4	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	398.5	150.0	1356.1	301.3	119.8	Good
528	MH	150+000	252+000	181+500	LHS	Outer		40	0.2992	0.1927	0.1083	0.0788	0.0622	0.0457	0.0283	27.1	29.2	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	250.0	150.0	1341.3	187.9	119.8	Good
529	MH	150+000	252+000	181+770	LHS	Outer		40	0.24	0.168	0.1227	0.0938	0.0728	0.0596	0.0537	27.2	29.2	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	399.8	126.7	1361.0	302.2	99.9	Good
530	MH	150+000	252+000	182+000	LHS	Outer		40	0.3317	0.2197	0.1318	0.0975	0.0745	0.0487	0.0339	27.2	29.3	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	179.1	146.5	1363.0	129.0	116.9	Good
531	MH	150+000	252+000	182+250	LHS	Outer		40	0.3408	0.2237	0.1248	0.0842	0.0581	0.0388	0.0233	27.2	28.9	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	151.0	149.9	1331.5	104.9	119.8	Good
532	MH	150+000	252+000	182+500	LHS	Outer		40	0.2488	0.1511	0.0948	0.069	0.0513	0.0403	0.0326	27.2	29.1	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	396.6	150.0	1367.0	299.9	119.8	Good
533	MH	150+000	252+000	182+750	LHS	Outer		40	0.2357	0.1561	0.1015	0.0747	0.0483	0.0364	0.0275	27.2	28.5	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	382.4	150.0	1345.2	289.6	119.8	Good
534	MH	150+000	252+000	183+000	LHS	Outer		40	0.2736	0.1831	0.1131	0.0689	0.0485	0.0422	0.0352	27.0	28.5	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	308.1	149.9	1330.5	233.8	119.8	Good
535	MH	150+000	252+000	183+250	LHS	Outer		40	0.2124	0.1419	0.0852	0.0571	0.0404	0.0298	0.0217	26.9	28.7	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.5	150.0	1359.1	302.0	119.8	Good
536	MH	150+000	252+000	183+500	LHS	Outer		40	0.323	0.2155	0.1429	0.0944	0.0717	0.0556	0.0465	26.8	28.5	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	223.8	128.3	1372.8	166.5	101.3	Good
537	MH	150+000	252+000	183+750	LHS	Outer		40	0.3776	0.2243	0.1086	0.0676	0.0529	0.0354	0.0226	26.8	28.9	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	153.4	150.0	1110.7	107.0	119.8	Good
538	MH	150+000	252+000	184+000	LHS	Outer		40	0.3258	0.2201	0.138	0.0981	0.0727	0.0452	0.0273	26.7	28.7	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	161.5	149.9	1369.9	114.0	119.8	Good
539	MH	150+000	252+000	184+250	LHS	Outer		40	0.3743	0.2304	0.1445	0.0932	0.057	0.0328	0.0161	26.7	28.8	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	150.2	149.8	1448.4	104.2	119.7	Poor
540	MH	150+000	252+000	184+500	LHS	Outer		40	0.664	0.4029	0.2206	0.139	0.0963	0.0829	0.0625	26.9	28.6	33	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	417.2	150.5	88.0	382.4	104.5	66.8	Fair
541	MH	150+000	252+000	184+750	LHS	Outer	T-25.8/33.3	40	0.2331	0.1586	0.1016	0.0683	0.0498	0.0363	0.0291	26.7	28.3	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	395.8	150.0	1383.7	299.3	119.8	Good
542	MH	150+000	252+000	185+000	LHS	Outer		40	0.4713	0.2736	0.1622	0.1125	0.0865	0.0644	0.0505	26.5	28.1	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	954.8	152.2	111.1	886.5	105.9	86.6	Good
543	MH	150+000	252+000	185+250	LHS	Outer		40	0.252	0.1667	0.1044	0.0756	0.0572	0.0441	0.03	26.7	28.3	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	367.7	149.9	1372.7	278.9	119.8	Fair
544	MH	150+000	252+000	185+500	LHS	Outer		40	0.1741	0.1276	0.0878	0.0584	0.0392	0.0304	0.0246	26.4	28.0	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	398.5	149.7	1387.7	301.3	119.6	Fair
545	MH	150+000	252+000	185+750	LHS	Outer		40	0.4719	0.2981	0.1675	0.107	0.0753	0.054	0.0392	26.3	27.9	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	125.4	834.6	104.0	98.8	Fair
546	MH	150+000	252+000	186+000	LHS	Outer		40	0.2598	0.145	0.087	0.0617	0.0372	0.0302	0.0272	26.2	27.8	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	393.6	150.0	1367.7	297.8	119.8	Fair
547	MH	150+000	252+000	186+250	LHS	Outer		40	0.3532	0.2229	0.1361	0.0888	0.0576	0.0417	0.0308	26.3	27.7	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	152.9	150.0	1383.7	106.5	119.8	Fair
548	MH	150+000	252+000	186+510	LHS	Outer		40	0.4088	0.2785	0.1819	0.1303	0.0933	0.0681	0.05	26.4	28.0	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	152.2	104.6	1371.7	105.9	81.0	Fair
549	MH	150+000	252+000	186+750	LHS	Outer		40	0.3779	0.2158	0.1363	0.0936	0.0748	0.0512	0.0355	26.4	28.5	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	165.9	142.5	1384.7	117.8	113.4	Fair
550	MH	150+000	252+000	187+000	LHS	Outer		40	0.3816	0.2383	0.1632	0.1134	0.0771	0.0526	0.043	26.5	27.8	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	151.0	127.7	1357.8	104.9	100.8	Fair
551	MH	150+000	252+000	187+250	LHS	Outer		40	0.3104	0.2023	0.1301	0.0936	0.0661	0.0493	0.0369	26.4	28.0	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	215.7	145.9	1389.7	159.8	116.3	Fair
552	MH	150+000	252+000	187+500	LHS	Outer		40	0.1475	0.1048	0.0758	0.0605	0.0427	0.0303	0.0206	26.5	27.9	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	399.0	150.0	1367.7	301.7	119.8	Fair
553	MH	150+000	252+000	187+740	LHS	Outer		40	0.5317	0.3382	0.1916	0.1254	0.0806	0.0522	0.0315	26.3	28.1	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	605.4	150.0	135.7	562.1	104.0	107.6	Fair
554	MH	150+000	252+000	188+000	LHS	Outer		40	0.3744	0.2139	0.1153	0.0749	0.0466	0.0342	0.0261	26.5	28.6	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	151.5	150.0	1119.2	105.3	119.8	Fair
555	MH	150+000	252+000	188+250	LHS	Outer		40	0.3491	0.2255	0.1303	0.0741	0.0515	0.0355	0.0276	26.5	28.4	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	157.6	150.0	1386.7	110.6	119.8	Fair
556	MH	150+000	252+000	188+500	LHS	Outer		40	0.3881	0.2416	0.132	0.0847	0.0551	0.0392	0.0275	26.6	28.8	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1274.2	150.0	149.9	1183.1	104.0	119.8	Fair
557	MH	150+000	252+000	188+820	LHS	Outer		40	0.4358	0.2645	0.1329	0.0651	0.0452	0.0331	0.0251	26.9	28.8	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	858.1	153.2	149.9	796.7	106.8	119.8	Fair
558	MH	150+000	252+000	189+000	LHS	Outer		40	0.4309	0.2532	0.1402	0.0952	0.0719	0.0453	0.0277	26.9	28.5	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1003.2	151.0	150.0	931.4	104.9	119.8	Good
559	MH	150+000	252+000	189+250	LHS	Outer		40	0.3097	0.1933	0.1385	0.0986	0.0629	0.0391	0.0219	26.7	28.4	33.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	171.0	149.8	1381.8	122.1	119.7	Good
560	MH	150+000	252+000	189+500	LHS	Outer	T-25.2/32.8	40	0.1852	0.1305	0.087	0.0599	0.0413	0.0263	0.0158	26.6	28.0	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	381.7	150.0	1354.3	289.1	119.8	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
561	MH	150+000	252+000	189+750	LHS	Outer		40	0.1393	0.1105	0.0784	0.0521	0.0329	0.0248	0.019	26.6	27.6	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	391.2	149.9	1354.3	296.0	119.8	Good
562	MH	150+000	252+000	190+010	LHS	Outer		40	0.1449	0.0957	0.0586	0.0436	0.0294	0.0209	0.0151	26.3	27.5	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	392.9	150.0	1318.1	297.3	119.8	Fair
563	MH	150+000	252+000	190+250	LHS	Outer		40	0.1389	0.0943	0.07	0.0493	0.0314	0.0225	0.0162	26.3	27.6	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	396.6	149.9	1362.1	299.9	119.8	Fair
564	MH	150+000	252+000	190+500	LHS	Outer		40	0.2438	0.1504	0.0996	0.0628	0.0534	0.0427	0.0396	26.3	27.4	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.1	150.0	1341.6	298.8	119.8	Fair
565	MH	150+000	252+000	190+750	LHS	Outer		40	0.3826	0.2288	0.117	0.068	0.0495	0.0364	0.0234	26.3	27.6	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	153.2	150.0	1127.6	106.8	119.8	Fair
566	MH	150+000	252+000	190+950	LHS	Outer		40	0.4181	0.2817	0.1615	0.1025	0.0572	0.0333	0.0169	26.0	27.4	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	150.7	150.0	1344.5	104.6	119.8	Fair
567	MH	150+000	252+000	191+250	LHS	Outer		40	0.4772	0.2881	0.1575	0.0836	0.05	0.0351	0.0243	26.2	27.5	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	909.7	150.2	150.0	826.7	104.2	119.8	Good
568	MH	150+000	252+000	191+500	LHS	Outer		40	0.4143	0.2654	0.1447	0.0943	0.0582	0.039	0.0253	26.1	27.9	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1202.2	150.5	149.8	1092.5	104.5	119.7	Good
569	MH	150+000	252+000	191+750	LHS	Outer		40	0.3951	0.2425	0.1489	0.082	0.061	0.0416	0.0284	26.2	27.4	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1335.5	150.5	150.0	1213.6	104.5	119.8	Good
570	MH	150+000	252+000	192+000	LHS	Outer		40	0.2094	0.1342	0.093	0.0713	0.0451	0.0319	0.019	26.3	27.1	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	392.2	150.0	1348.5	296.7	119.8	Good
571	MH	150+000	252+000	192+250	LHS	Outer		40	0.2179	0.1483	0.0933	0.0586	0.0437	0.0335	0.0209	26.1	27.0	32.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	393.2	150.0	1327.9	297.5	119.8	Fair
572	MH	150+000	252+000	192+530	LHS	Outer	T-25.8/31.3	40	0.1066	0.0665	0.0389	0.0265	0.0197	0.0161	0.012	26.0	27.6	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	397.8	150.0	1253.3	300.8	119.8	Good
573	MH	150+000	252+000	192+750	LHS	Outer		40	0.0945	0.061	0.0368	0.0251	0.016	0.0142	0.0117	26.5	28.0	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	395.4	149.8	1260.6	299.1	119.7	Good
574	MH	150+000	252+000	193+000	LHS	Outer		40	0.0969	0.0627	0.0361	0.0216	0.0172	0.016	0.0141	26.6	27.9	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	399.8	150.0	1278.9	302.2	119.8	Good
575	MH	150+000	252+000	193+250	LHS	Outer		40	0.1342	0.0695	0.0357	0.0287	0.0217	0.0201	0.0181	26.7	29.0	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	392.7	150.0	1227.6	297.1	119.8	Good
576	MH	150+000	252+000	193+500	LHS	Outer		40	0.132	0.0877	0.0546	0.0375	0.0267	0.0196	0.0176	26.9	29.0	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	400.0	150.0	1242.3	302.4	119.8	Good
577	MH	150+000	252+000	193+750	LHS	Outer		40	0.1453	0.0948	0.052	0.0368	0.0265	0.0199	0.0153	26.9	28.9	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	397.3	150.0	1204.7	300.4	119.8	Fair
578	MH	150+000	252+000	194+000	LHS	Outer		40	0.4775	0.2907	0.1421	0.0967	0.0638	0.045	0.0312	27.0	29.0	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	710.8	150.0	149.2	606.0	104.0	119.2	Fair
579	MH	150+000	252+000	194+250	LHS	Outer		40	0.4879	0.2852	0.1712	0.1267	0.0934	0.0692	0.0532	27.1	29.2	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	946.2	151.5	104.2	806.7	105.3	80.7	Fair
580	MH	150+000	252+000	194+500	LHS	Outer		40	0.4673	0.2421	0.1489	0.1032	0.0724	0.0514	0.0313	27.2	29.8	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	910.8	151.0	144.1	776.6	104.9	114.8	Fair
581	MH	150+000	252+000	194+750	LHS	Outer		40	0.4433	0.2692	0.1638	0.0934	0.0651	0.0456	0.0259	27.2	29.4	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	955.9	151.0	150.0	815.0	104.9	119.8	Fair
582	MH	150+000	252+000	195+000	LHS	Outer		40	0.1138	0.0816	0.0592	0.0412	0.0286	0.02	0.0146	27.3	28.9	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	389.7	150.0	1255.0	294.9	119.8	Fair
583	MH	150+000	252+000	195+250	LHS	Outer		40	0.5169	0.3138	0.1745	0.1237	0.0994	0.0752	0.0486	27.4	29.8	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	782.8	150.2	103.2	667.4	104.2	79.8	Fair
584	MH	150+000	252+000	195+500	LHS	Outer		40	0.22	0.1317	0.0771	0.0564	0.0391	0.0299	0.0236	27.7	29.9	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.6	149.9	1268.9	298.5	119.8	Fair
585	MH	150+000	252+000	195+750	LHS	Outer		40	0.5319	0.3325	0.1648	0.1083	0.0679	0.0579	0.051	27.8	30.0	31.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	590.3	150.7	119.4	503.3	104.6	93.7	Fair
586	MH	150+000	252+000	196+000	LHS	Outer	T-26.4/33.6	40	0.3152	0.1572	0.0937	0.0488	0.0324	0.0265	0.0162	27.9	29.3	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1341.9	195.2	150.0	1262.2	142.7	119.8	Fair
587	MH	150+000	252+000	196+250	LHS	Outer		40	0.1261	0.0736	0.0389	0.0304	0.0239	0.0169	0.0122	27.7	29.2	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	395.8	150.0	1371.5	299.3	119.8	Fair
588	MH	150+000	252+000	196+500	LHS	Outer	Wide Cracking	40	0.3675	0.2229	0.1229	0.0554	0.0421	0.0286	0.0258	27.7	29.4	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1108.6	152.0	150.0	1042.7	105.8	119.8	Fair
589	MH	150+000	252+000	196+750	LHS	Outer		40	0.2763	0.1165	0.0591	0.041	0.0289	0.0239	0.0148	27.7	29.8	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	378.5	150.0	1377.5	286.8	119.8	Fair
590	MH	150+000	252+000	197+000	LHS	Outer		40	0.3283	0.1601	0.0771	0.058	0.0384	0.0358	0.0324	27.6	29.4	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	400.0	150.0	788.9	302.4	119.8	Fair
591	MH	150+000	252+000	197+250	LHS	Outer		40	0.4839	0.2884	0.1527	0.0687	0.0407	0.0332	0.0298	27.8	29.9	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	676.3	152.2	150.0	636.1	105.9	119.8	Fair
592	MH	150+000	252+000	197+500	LHS	Outer		40	0.4828	0.2549	0.1468	0.0816	0.0497	0.0273	0.0255	27.9	29.9	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	612.9	150.0	150.0	576.5	104.0	119.8	Fair
593	MH	150+000	252+000	197+750	LHS	Outer		40	0.2622	0.1204	0.0726	0.0535	0.0403	0.03	0.0228	28.1	30.0	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1386.0	396.3	150.0	1303.7	299.7	119.8	Fair
594	MH	150+000	252+000	198+000	LHS	Outer		40	0.0783	0.0579	0.0441	0.0328	0.0253	0.0186	0.0142	28.1	30.1	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	394.6	150.0	1405.8	298.5	119.8	Fair
595	MH	150+000	252+000	198+250	LHS	Outer		40	0.0879	0.0653	0.0495	0.0364	0.0279	0.0212	0.015	28.4	31.1	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.8	150.0	1408.8	299.3	119.8	Good
596	MH	150+000	252+000	198+500	LHS	Outer		40	0.0885	0.0651	0.0494	0.0366	0.028	0.021	0.0123	28.5	30.5	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	397.8	149.8	1383.6	300.8	119.7	Good
597	MH	150+000	252+000	198+750	LHS	Outer		40	0.0884	0.0659	0.05	0.0367	0.0281	0.0214	0.0137	28.5	30.9	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	392.2	150.0	1410.9	296.7	119.8	Good
598	MH	150+000	252+000	199+000	LHS	Outer		40	0.0937	0.0689	0.0525	0.0389	0.0295	0.0223	0.0137	28.9	31.5	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	399.3	149.8	1383.6	301.9	119.7	Good
599	MH	150+000	252+000	199+250	LHS	Outer		40	0.1496	0.0984	0.0645	0.0475	0.0356	0.0274	0.0219	29.1	32.0	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	391.9	150.0	1392.6	296.5	119.8	Fair
600	MH	150+000	252+000	199+500	LHS	Outer		40	0.195	0.1422	0.1019	0.0746	0.047	0.0282	0.016	29.1	32.0	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	333.8	150.0	1392.6	253.5	119.8	Fair
601	MH	150+000	252+000	199+750	LHS	Outer		40	0.2274	0.1428	0.1066	0.0826	0.0539	0.0409	0.0317	29.2	31.3	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	393.6	150.0	1369.4	297.8	119.8	Fair
602	MH	150+000	252+000	200+000	LHS	Outer		40	0.4346	0.2303	0.1252	0.0934	0.0697	0.0492	0.0367	29.1	31.7	33.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	163.9	144.0	833.4	116.0	114.7	Fair
603	MH	150+000	252+000	200+250	LHS	Outer	T-29.3/35.3	40	0.3561	0.1861	0.0927	0.0652	0.0444	0.0297	0.0198	29.5	32.7	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1230.1	197.9	150.0	1246.6	144.9	119.8	Fair
604	MH	150+000	252+000	200+500	LHS	Outer		40	0.2683	0.1669	0.0943	0.0701	0.0519	0.0426	0.0318	29.8	33.3	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	382.9	150.0	1468.9	290.0	119.8	Fair
605	MH	150+000	252+000	200+750	LHS	Outer		40	0.3641	0.1828	0.0921	0.0642	0.0479	0.0376	0.0303	30.0	33.6	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	764.5	273.9	150.0	774.7	207.0	119.8	Fair
606	MH	150+000	252+000	201+000	LHS	Outer		40	0.4004	0.2122	0.1476	0.1021	0.0704	0.0484	0.0377	30.1	33.5	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	150.7	140.0	1517.8	104.6	111.3	Fair
607	MH	150+000	252+000	201+250	LHS	Outer		40	0.5334	0.2601	0.1336	0.0723	0.0498	0.0351	0.0248	30.1	33.6	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	471.0	151.5	149.9	477.3	105.3	119.8	Fair
608	MH	150+000	252+000	201+500	LHS	Outer		40	0.2865	0.1805	0.1117	0.0727	0.0593	0.0414	0.0372	30.0	32.0	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	283.2	150.0	1489.6	214.4	119.8	Fair
609	MH	150+000	252+000	201+750	LHS	Outer		40	0.1904	0.1016	0.0614	0.0476	0.0403	0.0352	0.0243	29.8	33.0	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	398.8	149.5	1509.1	301.5	119.4	Good
610	MH	150+000	252+000	202+000	LHS	Outer		40	0.1905	0.1044	0.0718	0.0493	0.0375	0.0289	0.0222	30.1	34.3	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	394.1	150.0	1426.3	298.1	119.8	Good
611	MH	150+000	252+000	202+250	LHS	Outer		40	0.3576	0.2136	0.1352	0.0723	0.052	0.0377	0.0236	30.3	33.3	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	150.5	149.9	1426.3	104.5	119.8	Good
612	MH	150+000	252+000	202+500	LHS	Outer		40	0.431	0.2541	0.1327	0.079	0.047	0.0339	0.0305	30.6	34.4	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	955.9	152.2	150.0	968.7	105.9	119.8	Fair
613	MH	150+000	252+000	202+750	LHS	Outer		40	0.1467	0.0936	0.0698	0.0491	0.0378	0.0295	0.0249	30.9	35.0	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.8	149.9	1519.0	300.8	119.8	Good
614	MH	150+000	252+000	203+000	LHS	Outer		40	0.1239	0.0912	0.0685	0.0505	0.0372	0.0279	0.0195	31.0	34.4	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	399.8	150.0	1517.8	302.2	119.8	Good
615	MH	150+000	252+000	203+250	LHS	Outer		40	0.1333	0.0801	0.0537	0.0366	0.0287	0.0233	0.0155	31.2	35.7	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	395.6	150.0	1505.9	299.2	119.8	Good
616	MH	150+000	252+000	203+500	LHS	Outer		40	0.1337	0.0805	0.0571	0.0403	0.0259	0.0159	0.0094	31.1	34.9	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.3	150.0	1516.8	301.1	119.8	Good
617	MH	150+000	252+000	203+750	LHS	Outer		40	0.1383	0.0866	0.0516	0.0369	0.0277	0.0234	0.0204	31.2	35.5	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	400.0	150.0	1448.1	302.4	119.8	Good
618	MH	150+000	252+000	204+000	LHS	Outer		40	0.1678	0.1159	0.0831	0.0627	0.0457	0.0332	0.0202	31.3	35.9	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	393.4	149.9	1519.0	297.6	119.8	Good
619	MH	150+000	252+000	204+250	LHS	Outer		40	0.153	0.1132	0.0706	0.0426	0.0292	0.0166	0.0134	31.7	36.4	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	384.8	150.0	1471.0	291.4	119.8	Good
620	MH	150+000	252+000	204+530	LHS	Outer		40	0.1572	0.1022	0.0676	0.0415	0.0302	0.0224	0.0156	31.8	36.3	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.8	1517.8	299.1	119.7	Good
621	MH	150+000	252+000	204+750	LHS	Outer		40	0.1225	0.0776	0.0452	0.0309	0.0203	0.0173	0.012	31.9	36.8	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	397.1	149.7	1513.5	300.3	119.6	Good
622	MH	150+000	252+000	205+000	LHS	Outer		40	0.1725	0.128	0.0881	0.0649	0.0446	0.0311	0.0223	32.0	36.8	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	398.0	150.0	1515.7	300.9	119.8	Good
623	MH	150+000	252+000	205+250	LHS	Outer		40	0.324	0.2133	0.1319	0.0795	0.049	0.0268	0.0198	32.1	36.4	35.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	154.2	150.0	1431.8	107.7	119.8	Good
624	MH	150+000	252+000	205+500	LHS	Outer	T-29.9/36.8	40	0.2837	0.1619	0.1054	0.0682	0.0433	0.033	0.0201	32.2	35.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	238.7	150.0	1607.5	178.7	119.8	Good
625	MH	150+000	252+000	205+750	LHS	Outer		40	0.1618	0.0921	0.0564	0.0428	0.0339	0.0226	0.0149	32.2	35.9	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	400.0	149.8	1625.0	302.4	119.7	Good
626	MH	150+000	252+000	206+000	LHS	Outer		40	0.1558	0.1023	0.0688	0.0456	0.0316	0.022	0.0152	32.2	35.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	395.1	149.9	1626.2	298.8	119.8	Good
627	MH	150+000	252+000	206+250	LHS	Outer		40	0.2056	0.1113	0.0703	0.0534	0.0301	0.0201	0.018	32.1	35.2	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	399.0	150.0	1590.1	301.7	119.8	Fair
628	MH	150+000	252+000	206+500	LHS	Outer		40	0.1955	0.1266	0.0897	0.0691	0.0399	0.0273	0.0224	32.2	35.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	398.8	149.7	1587.7	301.5	119.6	Fair
629	MH	150+000	252+000	206+750	LHS	Outer		40	0.3541	0.1941	0.0965	0.0608	0.0341	0.0216	0.0145	32.3	35.9	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1248.4	152.0	150.0	1353.4	105.8	119.8	Fair
630	MH	150+000	252+000	207+000	LHS	Outer		40	0.4639	0.2383	0.1173	0.0691	0.0544	0.0392	0.0253	32.5	37.1	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	700.0	150.2	150.0	758.9	104.2	119.8	Fair

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
631	MH	150+000	252+000	207+250	LHS	Outer		40	0.5526	0.3024	0.1562	0.0782	0.047	0.031	0.0201	32.8	38.2	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	492.5	150.7	150.0	492.5	104.6	119.8	Poor
632	MH	150+000	252+000	207+500	LHS	Outer		40	0.1958	0.1202	0.0676	0.0477	0.0315	0.0205	0.0184	33.4	38.7	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	394.6	150.0	1604.1	298.5	119.8	Fair
633	MH	150+000	252+000	207+750	LHS	Outer		40	0.376	0.1843	0.0878	0.0561	0.0344	0.0234	0.0154	33.5	38.8	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	957.0	150.5	150.0	1037.5	104.5	119.8	Fair
634	MH	150+000	252+000	208+000	LHS	Outer		40	0.2558	0.175	0.112	0.0687	0.047	0.0283	0.0177	33.7	39.4	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	213.3	149.9	1573.7	157.8	119.8	Fair
635	MH	150+000	252+000	208+250	LHS	Outer		40	0.3321	0.2081	0.1303	0.0867	0.0544	0.0287	0.0155	33.7	39.3	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1421.5	151.5	150.0	1541.1	105.3	119.8	Fair
636	MH	150+000	252+000	208+500	LHS	Outer		40	0.3761	0.2622	0.162	0.0958	0.0489	0.0309	0.0198	33.9	39.7	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	151.2	149.9	1574.9	105.1	119.8	Fair
637	MH	150+000	252+000	208+750	LHS	Outer		40	0.1881	0.0909	0.0487	0.0383	0.0262	0.0185	0.0134	34.0	40.1	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	396.6	150.0	1611.0	299.9	119.8	Fair
638	MH	150+000	252+000	209+000	LHS	Outer		40	0.1511	0.1075	0.0607	0.0369	0.0256	0.0178	0.0132	34.1	39.6	36.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	398.3	149.8	1615.7	301.1	119.7	Fair
639	MH	150+000	252+000	209+250	LHS	Outer	T-32.2/41.2	40	0.1205	0.0812	0.0548	0.0359	0.0238	0.0182	0.0164	34.4	39.7	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	396.3	150.0	1973.2	299.7	119.8	Fair
640	MH	150+000	252+000	209+500	LHS	Outer		40	0.2694	0.1265	0.0634	0.0407	0.036	0.0327	0.0283	34.6	40.3	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1378.5	399.8	149.9	1843.7	302.2	119.8	Fair
641	MH	150+000	252+000	209+750	LHS	Outer		40	0.0937	0.0673	0.0482	0.0367	0.0286	0.0189	0.0116	34.6	41.3	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	393.2	150.0	1993.3	297.5	119.8	Fair
642	MH	150+000	252+000	209+950	LHS	Outer		40	0.0992	0.0722	0.0513	0.0397	0.0321	0.0239	0.0183	34.7	35.8	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.1	149.8	1980.3	299.6	119.7	Fair
643	MH	150+000	252+000	210+250	LHS	Outer		40	0.0941	0.0659	0.0469	0.0362	0.0287	0.019	0.0124	34.8	41.9	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	392.7	150.0	1991.8	297.1	119.8	Good
644	MH	150+000	252+000	210+500	LHS	Outer		40	0.6247	0.3528	0.167	0.1025	0.0741	0.051	0.0338	34.9	42.7	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	424.7	150.0	134.8	568.0	104.0	106.8	Fair
645	MH	150+000	252+000	210+750	LHS	Outer		40	0.4016	0.226	0.1285	0.0887	0.0623	0.0428	0.0292	35.2	43.0	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	150.2	149.8	1731.5	104.2	119.7	Fair
646	MH	150+000	252+000	211+020	LHS	Outer		40	0.4096	0.2101	0.0858	0.0461	0.0302	0.0217	0.0195	35.3	39.0	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	610.8	153.9	150.0	816.9	107.4	119.8	Fair
647	MH	150+000	252+000	211+250	LHS	Outer		40	0.2176	0.1098	0.0748	0.0516	0.0346	0.0226	0.0147	35.3	42.4	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	393.9	150.0	1987.5	298.0	119.8	Fair
648	MH	150+000	252+000	211+500	LHS	Outer		40	0.3514	0.1569	0.0716	0.0386	0.0285	0.018	0.0162	35.4	42.3	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	874.2	190.8	150.0	1169.2	139.0	119.8	Fair
649	MH	150+000	252+000	211+750	LHS	Outer		40	0.3094	0.1739	0.0813	0.0442	0.0295	0.0195	0.013	34.9	40.4	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	980.6	153.7	150.0	1311.5	107.2	119.8	Fair
650	MH	150+000	252+000	211+985	LHS	Outer		40	0.1825	0.1183	0.0758	0.0467	0.0314	0.021	0.0188	34.8	40.6	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	398.3	150.0	1889.7	301.1	119.8	Fair
651	MH	150+000	252+000	212+250	LHS	Outer	Bleeding	40	0.3479	0.1991	0.1108	0.0672	0.0485	0.032	0.0208	34.7	41.5	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1337.6	162.0	150.0	1789.0	114.4	119.8	Fair
652	MH	150+000	252+000	212+500	LHS	Outer		40	0.1941	0.1302	0.0937	0.0662	0.0485	0.0316	0.0194	35.1	41.7	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	385.3	150.0	1999.0	291.7	119.8	Fair
653	MH	150+000	252+000	212+750	LHS	Outer		40	0.2184	0.133	0.0799	0.0607	0.048	0.0316	0.0193	35.1	40.9	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	395.8	150.0	1987.5	299.3	119.8	Fair
654	MH	150+000	252+000	213+000	LHS	Outer		40	0.4858	0.249	0.1076	0.0611	0.0504	0.0387	0.0249	34.9	40.8	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	608.6	150.0	150.0	814.0	104.0	119.8	Fair
655	MH	150+000	252+000	213+250	LHS	Outer		40	0.2675	0.1254	0.0662	0.0468	0.0334	0.0276	0.0203	34.8	41.4	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	396.6	150.0	1917.0	299.9	119.8	Fair
656	MH	150+000	252+000	213+500	LHS	Outer		40	0.1609	0.0942	0.0626	0.0384	0.0284	0.0214	0.0146	35.0	41.0	41.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	400.0	150.0	1983.2	302.4	119.8	Fair
657	MH	150+000	252+000	213+750	LHS	Outer	T-28.5/38.6	40	0.3019	0.1791	0.1108	0.0734	0.0459	0.0355	0.0291	30.8	34.3	38.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	244.6	150.0	1764.0	183.5	119.8	Fair
658	MH	150+000	252+000	214+000	LHS	Outer		40	0.1688	0.1143	0.0746	0.0521	0.037	0.0306	0.0246	30.7	33.7	38.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.5	149.6	1755.0	302.0	119.5	Fair
659	MH	150+000	252+000	214+250	LHS	Outer		40	0.3028	0.1934	0.1126	0.0745	0.0464	0.0262	0.0189	30.7	34.2	38.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	152.9	150.0	1717.1	106.5	119.8	Fair
660	MH	150+000	252+000	214+500	LHS	Outer		40	0.3214	0.2019	0.1175	0.0818	0.0498	0.0325	0.0256	30.7	33.9	38.6	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	175.4	149.9	1734.8	125.9	119.8	Fair
661	MH	150+000	252+000	214+750	LHS	Outer		40	0.1879	0.1308	0.0915	0.0682	0.0524	0.0384	0.0355	30.7	33.8	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	396.1	150.0	1720.9	299.6	119.8	Fair
662	MH	150+000	252+000	215+000	LHS	Outer		40	0.264	0.1634	0.1156	0.0816	0.0584	0.0439	0.0333	30.7	34.2	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	366.5	149.9	1766.5	278.0	119.8	Fair
663	MH	150+000	252+000	215+250	LHS	Outer		40	0.494	0.2887	0.1748	0.1057	0.0748	0.0585	0.0337	30.8	34.0	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	830.1	150.0	132.9	978.3	104.0	105.2	Fair
664	MH	150+000	252+000	215+500	LHS	Outer		40	0.3318	0.1668	0.0945	0.059	0.0353	0.0228	0.0147	30.8	34.5	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1440.9	157.8	150.0	1698.1	110.8	119.8	Fair
665	MH	150+000	252+000	215+850	LHS	Outer		40	0.5607	0.3149	0.1727	0.1102	0.0661	0.0467	0.0285	30.7	33.8	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	493.5	150.2	147.9	581.6	104.2	118.1	Fair
666	MH	150+000	252+000	216+000	LHS	Outer		40	0.4664	0.2835	0.1598	0.1056	0.0599	0.026	0.0172	30.7	33.8	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1272.0	150.0	149.9	1499.1	104.0	119.8	Fair
667	MH	150+000	252+000	216+350	LHS	Outer		40	0.568	0.3137	0.1615	0.0759	0.0481	0.0327	0.0283	30.8	33.9	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	469.9	152.0	149.9	553.8	105.8	119.8	Fair
668	MH	150+000	252+000	216+500	LHS	Outer		40	0.451	0.2252	0.1289	0.079	0.0463	0.0311	0.0209	30.7	34.4	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	794.6	151.2	150.0	936.5	105.1	119.8	Good
669	MH	150+000	252+000	216+900	LHS	Outer		40	0.4902	0.2838	0.1331	0.0701	0.0478	0.0383	0.0317	30.8	34.3	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	622.6	150.0	149.5	733.7	104.0	119.4	Good
670	MH	150+000	252+000	217+000	LHS	Outer		40	0.4779	0.2183	0.1017	0.0513	0.0423	0.0307	0.0276	30.9	34.3	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	544.1	150.7	150.0	641.2	104.6	119.8	Good
671	MH	150+000	252+000	217+250	LHS	Outer		40	0.1251	0.0775	0.0518	0.034	0.0283	0.024	0.0179	31.0	34.5	38.6	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	399.3	150.0	1720.9	301.9	119.8	Good
672	MH	150+000	252+000	218+000	LHS	Outer	T-28.5/38	40	0.2845	0.1782	0.1062	0.0626	0.0512	0.046	0.0368	31.1	33.5	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	329.6	150.0	1663.2	250.3	119.8	Fair
673	MH	150+000	252+000	218+250	LHS	Outer		40	0.1006	0.0717	0.0515	0.0354	0.0247	0.0184	0.0141	31.0	33.6	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	394.9	150.0	1675.6	298.7	119.8	Fair
674	MH	150+000	252+000	218+500	LHS	Outer		40	0.4303	0.2523	0.1531	0.08	0.0589	0.0396	0.0261	30.7	33.6	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1229.0	151.2	149.9	1408.2	105.1	119.8	Fair
675	MH	150+000	252+000	218+750	LHS	Outer		40	0.259	0.1277	0.0723	0.0479	0.0313	0.0236	0.0183	30.9	33.3	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	380.4	150.0	1711.2	288.2	119.8	Fair
676	MH	150+000	252+000	219+000	LHS	Outer		40	0.2541	0.1557	0.1069	0.0767	0.059	0.042	0.0319	30.8	33.3	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	398.3	150.0	1703.9	301.1	119.8	Fair
677	MH	150+000	252+000	219+250	LHS	Outer		40	0.4177	0.2242	0.12	0.0731	0.0564	0.0446	0.0334	30.6	32.3	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	867.7	169.3	150.0	994.2	120.7	119.8	Fair
678	MH	150+000	252+000	219+500	LHS	Outer		40	0.3386	0.1656	0.0904	0.05	0.0308	0.0215	0.0194	30.4	33.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1202.2	192.3	150.0	1377.5	140.2	119.8	Fair
679	MH	150+000	252+000	219+750	LHS	Outer		40	0.2151	0.1323	0.0733	0.0475	0.0295	0.0233	0.0192	30.3	32.4	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	394.4	150.0	1703.9	298.3	119.8	Fair
680	MH	150+000	252+000	220+000	LHS	Outer		40	0.0971	0.0722	0.0537	0.0386	0.0275	0.0215	0.0174	30.3	32.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	398.3	149.9	1652.1	301.1	119.8	Good
681	MH	150+000	252+000	220+250	LHS	Outer		40	0.2293	0.152	0.1168	0.082	0.0573	0.0326	0.0197	30.1	32.3	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	332.6	149.9	1713.8	252.6	119.8	Good
682	MH	150+000	252+000	220+500	LHS	Outer		40	0.1137	0.0776	0.0591	0.0426	0.0298	0.0188	0.013	29.9	32.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.3	149.6	1708.8	301.1	119.5	Fair
683	MH	150+000	252+000	220+750	LHS	Outer		40	0.1201	0.0804	0.0617	0.044	0.0306	0.0182	0.0117	30.0	32.5	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	396.8	150.0	1710.1	300.1	119.8	Fair
684	MH	150+000	252+000	221+000	LHS	Outer	T-27.7/38	40	0.4269	0.2209	0.1345	0.0858	0.0509	0.0383	0.03	29.9	32.2	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1068.8	150.0	149.9	1224.6	104.0	119.8	Fair
685	MH	150+000	252+000	221+250	LHS	Outer		40	0.5083	0.3071	0.1699	0.1161	0.0776	0.0566	0.0413	29.9	32.5	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	748.4	150.0	119.9	857.5	104.0	94.1	Fair
686	MH	150+000	252+000	221+500	LHS	Outer		40	0.4267	0.2494	0.1503	0.081	0.0591	0.0444	0.0343	30.0	32.4	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1166.7	150.2	149.5	1336.8	104.2	119.4	Fair
687	MH	150+000	252+000	221+750	LHS	Outer		40	0.0965	0.0759	0.0568	0.042	0.0341	0.0263	0.0202	29.8	32.6	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	400.0	149.6	1712.5	302.4	119.5	Good
688	MH	150+000	252+000	222+000	LHS	Outer		40	0.1153	0.0718	0.046	0.0275	0.0209	0.0159	0.0122	29.9	33.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	399.3	150.0	1637.3	301.9	119.8	Good
689	MH	150+000	252+000	222+250	LHS	Outer		40	0.1267	0.0779	0.0484	0.0359	0.028	0.0208	0.016	30.0	33.2	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.1	150.0	1705.2	298.1	119.8	Good
690	MH	150+000	252+000	222+500	LHS	Outer		40	0.0885	0.0596	0.0403	0.0304	0.0233	0.0167	0.012	30.0	33.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	399.8	150.0	1695.3	302.2	119.8	Good
691	MH	150+000	252+000	222+750	LHS	Outer		40	0.1218	0.0823	0.0538	0.0409	0.0315	0.0213	0.0134	29.9	32.7	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	399.0	149.9	1646.0	301.7	119.8	Good
692	MH	150+000	252+000	223+000	LHS	Outer		40	0.212	0.113	0.0711	0.0506	0.0353	0.0281	0.0209	30.0	32.4	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	398.3	149.9	1658.3	301.1	119.8	Good
693	MH	150+000	252+000	223+250	LHS	Outer		40	0.1158	0.0801	0.049	0.0279	0.0193	0.0159	0.0143	30.0	32.7	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	395.1	149.9	1686.6	298.8	119.8	Good
694	MH	150+000	252+000	223+500	LHS	Outer		40	0.2262	0.1375	0.1022	0.0781	0.0576	0.0355	0.0212	29.9	32.2	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	397.6	150.0	1705.2	300.6	119.8	Good
695	MH	150+000	252+000	223+750	LHS	Outer		40	0.2026	0.1341	0.0859	0.0605	0.0426	0.0301	0.0217	29.7	32.2	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	398.8	150.0	1670.7	301.5	119.8	Good
696	MH	150+000	252+000	224+000	LHS	Outer		40	0.2305	0.1537	0.1044	0.076	0.0516	0.034	0.0212	29.6	32.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	369.7	150.0	1678.0	280.3	119.8	Fair
697	MH	150+000	252+000	224+250	LHS	Outer		40	0.1033	0.0712	0.0469	0.0346	0.0241	0.0166	0.0104	29.8	32.4	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1432.3	400.0	150.0	1641.1	302.4	119.8	Good
698	MH	150+000	252+000	224+500	LHS	Outer		40	0.0931	0.0609	0.041	0.0311	0.0237	0.0185	0.0106	29.7	32.7	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	394.1	150.0	1702.6	298.1	119.8	Good
699	MH	150+000	252+000	224+750	LHS	Outer		40	0.3013	0.1795	0.1044	0.0755	0.0549	0.0388	0.0249	29.8	32.6	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	248.5	150.0	1686.6	186.6	119.8	Good
700	MH	150+000	252+000	225+000	LHS	Outer		40	0.4354	0.2421	0.1582	0.1011	0.0627	0.0418	0.0245	29.9	32.0	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1235.5	150.2	149.7	1415.6	104.2	119.6	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
701	MH	150+000	252+000	225+250	LHS	Outer		40	0.5357	0.3248	0.175	0.1137	0.0694	0.0432	0.0265	29.9	32.6	38	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	619.4	150.2	149.6	709.7	104.2	119.5	Fair
702	MH	150+000	252+000	225+500	LHS	Outer	T-28.2/37.5	40	0.1061	0.0753	0.0532	0.0397	0.0307	0.0258	0.0223	29.9	32.2	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	398.3	149.7	1663.6	301.1	119.6	Fair
703	MH	150+000	252+000	225+750	LHS	Outer		40	0.2163	0.1372	0.0808	0.0541	0.0375	0.0249	0.0166	29.6	32.2	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	381.9	150.0	1664.8	289.3	119.8	Good
704	MH	150+000	252+000	226+000	LHS	Outer		40	0.2753	0.1769	0.1061	0.0662	0.0472	0.0378	0.0308	29.9	32.6	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	287.8	150.0	1678.0	218.0	119.8	Good
705	MH	150+000	252+000	226+250	LHS	Outer		40	0.4265	0.2489	0.1434	0.0895	0.0593	0.0399	0.0359	30.0	32.7	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1021.5	150.5	149.4	1143.6	104.5	119.3	Good
706	MH	150+000	252+000	226+530	LHS	Outer		40	0.4577	0.2967	0.1631	0.1025	0.0612	0.0433	0.039	30.2	32.7	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	935.5	150.5	141.4	1047.3	104.5	112.5	Good
707	MH	150+000	252+000	226+750	LHS	Outer		40	0.1933	0.1378	0.0895	0.058	0.0434	0.0328	0.0295	30.3	32.7	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	383.9	150.0	1650.4	290.7	119.8	Good
708	MH	150+000	252+000	227+000	LHS	Outer	T-27.3/34.2	40	0.0805	0.0465	0.0334	0.0254	0.0195	0.0173	0.0156	29.6	32.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	400.0	149.6	1358.9	302.4	119.5	Good
709	MH	150+000	252+000	227+250	LHS	Outer		40	0.0756	0.0493	0.0342	0.0238	0.0184	0.0155	0.0125	29.6	31.7	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	395.6	149.9	1409.8	299.2	119.8	Good
710	MH	150+000	252+000	227+500	LHS	Outer		40	0.0901	0.0501	0.0315	0.0236	0.0189	0.0168	0.0127	29.8	31.9	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	397.6	149.8	1441.0	300.6	119.7	Good
711	MH	150+000	252+000	227+750	LHS	Outer		40	0.0899	0.0682	0.0494	0.0379	0.0273	0.0179	0.0126	29.9	31.8	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.0	149.7	1443.0	301.7	119.6	Good
712	MH	150+000	252+000	228+000	LHS	Outer		40	0.0812	0.0447	0.0302	0.0244	0.0201	0.0163	0.0114	29.8	31.9	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	399.5	150.0	1395.3	302.0	119.8	Good
713	MH	150+000	252+000	228+250	LHS	Outer		40	0.0795	0.0467	0.0319	0.0236	0.0185	0.016	0.0132	30.1	32.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.6	150.0	1446.1	300.6	119.8	Good
714	MH	150+000	252+000	228+500	LHS	Outer		40	0.0764	0.0543	0.0373	0.0276	0.0209	0.0162	0.0122	30.1	31.5	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	394.4	150.0	1432.6	298.3	119.8	Good
715	MH	150+000	252+000	228+750	LHS	Outer		40	0.0766	0.0521	0.0353	0.027	0.021	0.0163	0.0117	30.2	31.6	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	400.0	150.0	1421.2	302.4	119.8	Good
716	MH	150+000	252+000	229+000	LHS	Outer		40	0.074	0.0512	0.0357	0.0273	0.021	0.0145	0.013	30.3	31.7	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	398.5	149.9	1408.7	301.3	119.8	Good
717	MH	150+000	252+000	229+250	LHS	Outer		40	0.0762	0.0465	0.0321	0.024	0.019	0.0154	0.0093	30.0	31.7	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	398.0	149.9	1430.5	300.9	119.8	Good
718	MH	150+000	252+000	229+500	LHS	Outer		40	0.0693	0.0515	0.036	0.027	0.018	0.0116	0.0104	30.1	31.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	400.0	149.9	1379.6	302.4	119.8	Good
719	MH	150+000	252+000	229+750	LHS	Outer		40	0.2957	0.1651	0.0856	0.06	0.0382	0.0299	0.0192	30.2	31.6	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	256.8	150.0	1420.2	193.3	119.8	Good
720	MH	150+000	252+000	229+920	LHS	Outer		40	0.1667	0.1083	0.0765	0.0533	0.0418	0.0365	0.034	30.0	31.4	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	398.3	149.9	1441.0	301.1	119.8	Good
722	MH	150+000	252+000	230+500	LHS	Outer		40	0.3682	0.1991	0.1146	0.0709	0.0429	0.0286	0.0163	31.1	32.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1345.2	150.2	150.0	1298.7	104.2	119.8	Good
723	MH	150+000	252+000	230+750	LHS	Outer		40	0.4031	0.2216	0.1096	0.055	0.0301	0.0156	0.0108	31.2	32.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	984.9	150.7	149.9	950.9	104.6	119.8	Good
724	MH	150+000	252+000	231+000	LHS	Outer		40	0.2138	0.1319	0.0741	0.0475	0.0285	0.0192	0.0126	31.2	31.9	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1401.1	258.5	150.0	1352.7	194.7	119.8	Good
725	MH	150+000	252+000	231+250	LHS	Outer		40	0.2987	0.1906	0.0972	0.0548	0.0294	0.0207	0.015	31.2	31.8	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	157.6	150.0	1379.6	110.6	119.8	Good
726	MH	150+000	252+000	231+500	LHS	Outer		40	0.1408	0.086	0.0538	0.0371	0.0303	0.0221	0.0164	31.0	31.4	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	399.3	149.7	1416.0	301.9	119.6	Good
727	MH	150+000	252+000	231+750	LHS	Outer		40	0.2602	0.1525	0.078	0.0376	0.0262	0.0212	0.0191	30.8	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	305.7	150.0	1437.8	232.0	119.8	Good
728	MH	150+000	252+000	232+000	LHS	Outer	T-27.7/34.2	40	0.3618	0.2002	0.1197	0.0665	0.0397	0.0146	0.0086	30.4	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	150.0	149.9	1395.3	104.0	119.8	Good
729	MH	150+000	252+000	232+250	LHS	Outer		40	0.2694	0.1796	0.1182	0.0715	0.0406	0.0222	0.0098	30.3	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	151.2	150.0	1409.8	105.1	119.8	Good
730	MH	150+000	252+000	232+500	LHS	Outer		40	0.2233	0.139	0.0858	0.0571	0.0351	0.0203	0.0101	30.5	30.8	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	188.4	150.0	1420.2	136.9	119.8	Good
731	MH	150+000	252+000	232+750	LHS	Outer		40	0.442	0.2366	0.131	0.0677	0.0405	0.0223	0.0119	30.4	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	150.2	150.0	1433.6	104.2	119.8	Good
732	MH	150+000	252+000	233+000	LHS	Outer		40	0.1459	0.0868	0.0591	0.042	0.0343	0.0278	0.0209	30.5	31.3	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	398.0	150.0	1428.5	300.9	119.8	Good
733	MH	150+000	252+000	233+250	LHS	Outer		40	0.2803	0.1401	0.0835	0.0469	0.0289	0.016	0.0098	30.2	31.2	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	153.2	149.9	1426.4	106.8	119.8	Good
734	MH	150+000	252+000	233+500	LHS	Outer		40	0.0886	0.0554	0.0363	0.0243	0.0205	0.018	0.0162	30.2	31.2	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	394.4	150.0	1426.4	298.3	119.8	Good
735	MH	150+000	252+000	233+750	LHS	Outer		40	0.1977	0.1167	0.0665	0.0426	0.0256	0.0143	0.0098	30.3	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	209.6	150.0	1436.8	154.7	119.8	Good
736	MH	150+000	252+000	234+000	LHS	Outer		40	0.1064	0.0693	0.0431	0.0317	0.0238	0.0173	0.0159	30.3	30.9	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	396.1	150.0	1437.8	299.6	119.8	Good
737	MH	150+000	252+000	234+250	LHS	Outer		40	0.352	0.2191	0.1272	0.0675	0.0331	0.0187	0.0092	30.3	31.2	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1320.4	150.2	150.0	1274.8	104.2	119.8	Good
738	MH	150+000	252+000	234+500	LHS	Outer		40	0.1227	0.0707	0.0484	0.0369	0.0247	0.0182	0.0136	30.3	31.3	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	399.3	150.0	1444.0	301.9	119.8	Good
739	MH	150+000	252+000	234+750	LHS	Outer		40	0.1366	0.1147	0.0988	0.0807	0.0668	0.0572	0.0519	30.4	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	400.0	149.6	1441.0	302.4	119.5	Good
740	MH	150+000	252+000	235+000	LHS	Outer		40	0.3844	0.2086	0.1198	0.069	0.0314	0.0186	0.0094	30.3	31.1	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	150.0	150.0	1174.1	104.0	119.8	Good
741	MH	150+000	252+000	235+250	LHS	Outer	6 Lane Start	40	0.1759	0.1121	0.0714	0.0475	0.0306	0.0156	0.0115	30.2	31.0	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	354.8	150.0	1422.2	269.3	119.8	Good
742	MH	150+000	252+000	235+500	LHS	Outer		40	0.2034	0.1444	0.0955	0.064	0.0402	0.0288	0.0193	30.1	30.6	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	387.5	150.0	1435.7	293.3	119.8	Good
743	MH	150+000	252+000	235+700	LHS	Outer		40	0.2476	0.1517	0.1004	0.0619	0.0389	0.0241	0.0186	30.1	30.6	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	258.0	150.0	1444.0	194.3	119.8	Good
744	MH	150+000	252+000	236+000	LHS	Outer		40	0.2181	0.149	0.0967	0.0649	0.0449	0.0313	0.0178	30.0	30.8	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	391.0	150.0	1432.6	295.9	119.8	Good
745	MH	150+000	252+000	236+250	LHS	Outer		40	0.1944	0.1299	0.085	0.0515	0.0288	0.0209	0.0161	30.2	30.7	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	366.3	150.0	1441.9	277.8	119.8	Good
746	MH	150+000	252+000	236+500	LHS	Outer		40	0.1821	0.1255	0.0862	0.0567	0.0337	0.024	0.0173	30.0	30.4	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	393.6	150.0	1423.3	297.8	119.8	Good
747	MH	150+000	252+000	236+750	LHS	Outer		40	0.0716	0.0584	0.0479	0.037	0.026	0.0192	0.0145	30.0	30.2	34.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	396.8	150.0	1447.1	300.1	119.8	Good
748	MH	150+000	252+000	237+000	LHS	Outer	T-27.2/33.3	40	0.125	0.0885	0.0628	0.0426	0.0289	0.0183	0.0094	29.9	30.9	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	387.0	150.0	1381.8	293.0	119.8	Good
749	MH	150+000	252+000	237+250	LHS	Outer		40	0.1287	0.0816	0.0547	0.0429	0.0347	0.0293	0.0229	30.1	30.3	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.3	150.0	1387.7	301.9	119.8	Good
750	MH	150+000	252+000	237+500	LHS	Outer		40	0.1162	0.0616	0.0375	0.0213	0.014	0.0137	0.0123	29.9	30.6	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	397.6	149.9	1380.7	300.6	119.8	Good
751	MH	150+000	252+000	237+750	LHS	Outer		40	0.1561	0.1096	0.0687	0.0536	0.0374	0.0268	0.0165	29.9	30.4	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	396.1	150.0	1347.8	299.6	119.8	Good
752	MH	150+000	252+000	238+000	LHS	Outer		40	0.1069	0.0602	0.0422	0.0284	0.0205	0.0177	0.0154	29.8	30.3	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	399.3	150.0	1368.8	301.9	119.8	Good
753	MH	150+000	252+000	238+250	LHS	Outer		40	0.1975	0.1344	0.089	0.0628	0.0343	0.0212	0.0116	29.8	30.1	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	261.4	150.0	1389.7	197.0	119.8	Good
754	MH	150+000	252+000	238+510	LHS	Outer		40	0.3409	0.1931	0.1206	0.0723	0.0452	0.0251	0.0215	29.6	29.4	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1362.4	157.8	150.0	1265.0	110.8	119.8	Good
755	MH	150+000	252+000	238+740	LHS	Outer	Approach	40	0.2403	0.1771	0.1097	0.0599	0.037	0.0211	0.0159	29.6	28.1	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	180.3	150.0	1362.7	130.1	119.8	Good
756	MH	150+000	252+000	239+000	LHS	Outer		40	0.3006	0.1977	0.1204	0.0743	0.0468	0.0279	0.0124	29.6	27.6	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	151.5	149.7	1371.7	105.3	119.6	Good
757	MH	150+000	252+000	239+250	LHS	Outer		40	0.0904	0.0705	0.0514	0.0378	0.0314	0.025	0.0225	29.3	27.9	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	398.0	149.7	1388.7	300.9	119.6	Good
758	MH	150+000	252+000	239+500	LHS	Outer		40	0.0744	0.0509	0.0351	0.025	0.0194	0.0152	0.0137	29.2	27.6	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	392.4	149.8	1386.7	296.9	119.7	Good
759	MH	150+000	252+000	239+750	LHS	Outer		40	0.0911	0.0659	0.0462	0.0327	0.0234	0.0191	0.0171	29.0	27.8	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.3	150.0	1390.7	300.4	119.8	Good
760	MH	150+000	252+000	240+000	LHS	Outer		40	0.0903	0.0571	0.0341	0.02	0.0149	0.0114	0.0102	29.0	27.8	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	399.3	149.6	1383.7	301.9	119.5	Good
761	MH	150+000	252+000	240+250	LHS	Outer		40	0.0972	0.0676	0.043	0.0309	0.0226	0.0195	0.0175	29.0	27.4	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	395.8	149.8	1359.8	299.3	119.7	Good
762	MH	150+000	252+000	240+500	LHS	Outer		40	0.1301	0.0882	0.0617	0.049	0.0399	0.0334	0.0311	28.8	27.5	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	396.3	149.8	1362.7	299.7	119.7	Good
763	MH	150+000	252+000	240+750	LHS	Outer		40	0.1699	0.103	0.0701	0.0444	0.0289	0.0184	0.0104	28.7	27.5	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	382.9	150.0	1381.8	290.0	119.8	Good
764	MH	150+000	252+000	241+000	LHS	Outer		40	0.1194	0.079	0.0558	0.0396	0.0274	0.0193	0.0174	28.7	27.6	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	398.0	149.9	1383.7	300.9	119.8	Good
765	MH	150+000	252+000	241+250	LHS	Outer		40	0.1458	0.0888	0.0567	0.0409	0.0302	0.0232	0.0209	28.7	27.6	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	398.3	150.0	1370.7	301.1	119.8	Good
766	MH	150+000	252+000	241+500	LHS	Outer		40	0.1561	0.1072	0.0742	0.0505	0.0341	0.0207	0.0118	28.6	27.7	33.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.1	149.9	1370.7	298.8	119.8	Good
767	MH	150+000	252+000	241+750	LHS	Outer	T-26.5/31.8	40	0.1349	0.0915	0.0701	0.0525	0.0331	0.0198	0.0134	28.5	27.6	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	396.8	149.9	1292.2	300.1	119.8	Good
768	MH	150+000	252+000	242+000	LHS	Outer		40	0.1219	0.0801	0.05	0.0337	0.0228	0.0148	0.0133	28.6	27.6	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	391.4	150.0	1287.5	296.2	119.8	Good
769	MH	150+000	252+000	242+280	LHS	Outer		40	0.1249	0.0833	0.0535	0.0421	0.0385	0.031	0.0277	28.5	27.8	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	395.6	150.0	1266.0	299.2	119.8	Good
770	MH	150+000	252+000	242+500	LHS	Outer		40	0.089	0.0639	0.0506	0.0379	0.0291	0.0185	0.0115	28.5	27.9	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	399.5	150.0	1276.3	302.0	119.8	Good
771	MH	150+000	252+000	242+770	LHS	Outer		40	0.1498	0.0931	0.0649	0.0476	0.0314	0.0203	0.0165	28.5	28.4	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	397.3	149.9	1255.6	300.4	119.8	Good

Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			Pavement Condition
																				BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	
772	MH	150+000	252+000	243+000	LHS	Outer		40	0.0842	0.061	0.0451	0.0314	0.0217	0.0162	0.0125	28.6	28.0	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	399.5	149.8	1298.7	302.0	119.7	Good
773	MH	150+000	252+000	243+250	LHS	Outer		40	0.0766	0.0621	0.0535	0.0449	0.037	0.0335	0.0302	28.4	27.5	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	399.3	149.9	1303.4	301.9	119.8	Good
774	MH	150+000	252+000	243+500	LHS	Outer		40	0.1174	0.0814	0.0433	0.0325	0.0293	0.0212	0.019	28.4	28.1	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.6	150.0	1297.8	299.9	119.8	Good
775	MH	150+000	252+000	243+750	LHS	Outer		40	0.1056	0.0725	0.0495	0.0343	0.0258	0.0211	0.0177	28.5	27.7	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	397.3	149.9	1283.8	300.4	119.8	Good
776	MH	150+000	252+000	244+000	LHS	Outer		40	0.1698	0.1077	0.0664	0.0437	0.0286	0.0231	0.0207	28.4	28.4	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	393.9	150.0	1293.1	298.0	119.8	Good
777	MH	150+000	252+000	244+250	LHS	Outer		40	0.1497	0.0982	0.076	0.0564	0.0372	0.0249	0.0177	28.3	28.5	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	398.5	149.9	1270.6	301.3	119.8	Good
778	MH	150+000	252+000	244+500	LHS	Outer		40	0.2856	0.199	0.1154	0.0698	0.048	0.0299	0.0172	28.3	27.9	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	161.0	149.9	1265.0	113.5	119.8	Good
779	MH	150+000	252+000	244+750	LHS	Outer		40	0.1305	0.0847	0.0477	0.0343	0.0272	0.0188	0.0142	28.2	27.2	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	150.0	1303.4	298.1	119.8	Good
780	MH	150+000	252+000	245+000	LHS	Outer		40	0.3583	0.2419	0.162	0.0997	0.0587	0.037	0.0218	28.2	27.5	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	150.0	150.0	1223.8	104.0	119.8	Good
781	MH	150+000	252+000	245+250	LHS	Outer		40	0.2934	0.1969	0.1248	0.0661	0.0389	0.0256	0.0153	28.5	27.9	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	150.5	150.0	1275.3	104.5	119.8	Good
782	MH	150+000	252+000	245+500	LHS	Outer		40	0.2599	0.1803	0.1105	0.0688	0.0391	0.0284	0.0212	28.5	27.9	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	260.9	150.0	1278.1	196.6	119.8	Good
783	MH	150+000	252+000	245+750	LHS	Outer		40	0.2698	0.1673	0.092	0.0577	0.0341	0.0245	0.0228	28.7	27.8	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	247.8	150.0	1292.2	186.1	119.8	Good
784	MH	150+000	252+000	246+000	LHS	Outer		40	0.5018	0.299	0.1382	0.066	0.0409	0.0232	0.0179	28.8	27.5	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	521.5	150.0	150.0	454.1	104.0	119.8	Good
785	MH	150+000	252+000	246+250	LHS	Outer		40	0.215	0.1519	0.107	0.0776	0.0587	0.0421	0.0342	28.7	27.7	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	397.3	150.0	1273.5	300.4	119.8	Good
786	MH	150+000	252+000	246+500	LHS	Outer		40	0.1797	0.1297	0.0775	0.0418	0.0278	0.0179	0.0161	28.7	28.4	31.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	394.9	150.0	1291.2	298.7	119.8	Good
787	MH	150+000	252+000	246+750	LHS	Outer		40	0.1379	0.0966	0.0708	0.0517	0.0388	0.0285	0.0164	28.7	28.5	31.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.6	150.0	1295.9	298.5	119.8	Good
788	MH	150+000	252+000	247+000	LHS	Outer		40	0.1659	0.1125	0.0679	0.0415	0.0317	0.0247	0.0192	28.5	27.9	31.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	398.0	149.8	1282.8	300.9	119.7	Good
789	MH	150+000	252+000	247+250	LHS	Outer	T-26.5/30.3	40	0.3505	0.2187	0.1036	0.0535	0.0328	0.0195	0.0144	28.7	28.7	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1193.5	152.7	150.0	975.8	106.4	119.8	Good
790	MH	150+000	252+000	247+500	LHS	Outer		40	0.1524	0.1075	0.0719	0.0436	0.0308	0.0216	0.0147	28.7	28.9	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	391.4	150.0	1211.4	296.2	119.8	Good
791	MH	150+000	252+000	247+750	LHS	Outer		40	0.1835	0.1337	0.1003	0.077	0.057	0.0349	0.0209	28.8	28.5	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	150.0	1202.7	302.4	119.8	Good
792	MH	150+000	252+000	247+980	LHS	Outer		40	0.202	0.1265	0.0895	0.0634	0.0439	0.0291	0.0246	28.5	28.0	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.1	150.0	1222.9	299.6	119.8	Good
793	MH	150+000	252+000	248+250	LHS	Outer		40	0.1338	0.0994	0.0646	0.0436	0.0334	0.0265	0.0191	28.4	28.6	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.3	149.8	1198.3	301.1	119.7	Good
794	MH	150+000	252+000	248+500	LHS	Outer		40	0.2057	0.1427	0.0889	0.0481	0.031	0.019	0.0137	28.4	29.0	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	249.2	150.0	1211.4	187.2	119.8	Good
795	MH	150+000	252+000	248+750	LHS	Outer		40	0.2203	0.1496	0.0911	0.0665	0.0447	0.0286	0.0201	28.5	28.9	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	378.0	150.0	1217.6	286.4	119.8	Good
796	MH	150+000	252+000	249+000	LHS	Outer		40	0.2566	0.1653	0.0959	0.0696	0.0509	0.0376	0.0286	28.6	28.1	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	371.4	150.0	1218.5	281.6	119.8	Good
797	MH	150+000	252+000	249+250	LHS	Outer		40	0.2171	0.1475	0.0992	0.0701	0.044	0.026	0.0164	28.7	27.8	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	287.6	150.0	1216.7	217.8	119.8	Good
798	MH	150+000	252+000	249+500	LHS	Outer		40	0.2223	0.1615	0.093	0.0556	0.0343	0.0195	0.0147	28.8	28.3	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	223.6	150.0	1190.3	166.3	119.8	Good
799	MH	150+000	252+000	249+730	LHS	Outer		40	0.1884	0.1324	0.0805	0.0557	0.0383	0.0182	0.0108	28.6	28.3	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	234.6	150.0	1209.7	175.3	119.8	Good
800	MH	150+000	252+000	250+000	LHS	Outer		40	0.2928	0.1867	0.1034	0.0673	0.0419	0.0274	0.0169	28.6	28.1	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	154.2	150.0	1192.1	107.7	119.8	Good
801	MH	150+000	252+000	250+250	LHS	Outer		40	0.1093	0.0726	0.0547	0.0374	0.0279	0.021	0.0174	28.9	29.0	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	399.5	149.3	1223.8	302.0	119.3	Good
802	MH	150+000	252+000	250+500	LHS	Outer		40	0.1492	0.1025	0.0686	0.0421	0.0273	0.0178	0.0136	28.9	27.5	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	392.4	150.0	1210.5	296.9	119.8	Good
803	MH	150+000	252+000	250+750	LHS	Outer		40	0.3378	0.1885	0.1202	0.0708	0.0419	0.0247	0.0123	28.7	28.8	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	153.4	150.0	1216.7	107.0	119.8	Good
804	MH	150+000	252+000	251+000	LHS	Outer		40	0.4175	0.2467	0.1352	0.0805	0.0473	0.0231	0.0149	28.8	29.2	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1296.8	150.2	150.0	1060.3	104.2	119.8	Good
805	MH	150+000	252+000	251+250	LHS	Outer		40	0.2963	0.2036	0.121	0.0706	0.0364	0.0198	0.0158	28.9	29.4	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	157.8	149.9	1220.3	110.8	119.8	Good
806	MH	150+000	252+000	251+500	LHS	Outer		40	0.2208	0.1526	0.0955	0.0545	0.04	0.0295	0.0186	28.9	28.8	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	352.6	150.0	1224.6	267.6	119.8	Good
807	MH	150+000	252+000	251+750	LHS	Outer		40	0.221	0.138	0.0878	0.0514	0.0306	0.0224	0.0131	28.9	28.1	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	246.5	150.0	1218.5	185.0	119.8	Fair
808	MH	150+000	252+000	251+950	LHS	Outer		40	0.5327	0.3307	0.1631	0.0943	0.0461	0.0307	0.0195	28.7	27.2	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	531.2	150.7	149.8	434.3	104.6	119.7	Fair
809	MH	150+000	252+000	252+000	LHS	Outer		40	0.2135	0.1316	0.0768	0.0509	0.0327	0.0207	0.0132	28.5	27.2	30.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	302.7	150.0	1201.8	229.6	119.8	Fair
810	MH	150+000	252+000	251+935	RHS	Inner	T-25.7/31	40	0.1348	0.0877	0.0546	0.0388	0.0273	0.0188	0.0129	27.9	27.6	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	397.8	149.8	1465.6	300.8	119.7	Poor
811	MH	150+000	252+000	251+600	RHS	Inner		40	0.243	0.157	0.1003	0.0668	0.0369	0.022	0.0156	27.9	28.0	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	211.8	150.0	1243.8	156.5	119.8	Good
812	MH	150+000	252+000	251+350	RHS	Inner		40	0.3241	0.2115	0.1103	0.0644	0.03	0.0191	0.0124	27.3	27.6	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1233.3	150.7	149.9	1038.3	104.6	119.8	Good
813	MH	150+000	252+000	251+100	RHS	Inner		40	0.4462	0.2365	0.1211	0.0772	0.0439	0.0294	0.0193	27.2	27.5	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	648.4	150.0	150.0	545.9	104.0	119.8	Good
814	MH	150+000	252+000	250+850	RHS	Inner		40	0.2533	0.1533	0.0981	0.0637	0.0384	0.0225	0.0187	27.2	28.1	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	228.0	150.0	1239.3	169.9	119.8	Good
815	MH	150+000	252+000	250+600	RHS	Inner		40	0.3221	0.1618	0.0885	0.0542	0.0282	0.0206	0.0154	27.2	27.8	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1244.1	160.8	150.0	1047.4	113.4	119.8	Good
816	MH	150+000	252+000	250+350	RHS	Inner		40	0.2571	0.1693	0.1056	0.0672	0.0402	0.0232	0.0121	27.2	28.4	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1434.4	159.3	150.0	1207.6	112.1	119.8	Good
817	MH	150+000	252+000	250+100	RHS	Inner		40	0.3395	0.2036	0.0973	0.0592	0.0314	0.021	0.0136	27.4	28.5	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1280.6	155.9	150.0	1078.2	109.1	119.8	Good
818	MH	150+000	252+000	249+850	RHS	Inner		40	0.265	0.1403	0.0731	0.0436	0.0231	0.0131	0.0106	27.4	28.7	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	152.9	150.0	1041.1	106.5	119.8	Good
819	MH	150+000	252+000	249+420	RHS	Inner		40	0.1934	0.1315	0.0734	0.0368	0.0235	0.0139	0.013	27.6	28.4	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	266.6	150.0	1257.4	201.2	119.8	Good
820	MH	150+000	252+000	249+350	RHS	Inner		40	0.4296	0.2545	0.1138	0.0618	0.0264	0.0175	0.0113	27.5	28.0	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	588.2	151.5	150.0	495.2	105.3	119.8	Good
821	MH	150+000	252+000	249+100	RHS	Inner		40	0.4146	0.2651	0.1305	0.0723	0.0298	0.0199	0.0129	27.5	28.0	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1074.2	150.0	150.0	904.4	104.0	119.8	Good
822	MH	150+000	252+000	248+850	RHS	Inner		40	0.3631	0.2129	0.1225	0.0723	0.0393	0.0234	0.012	27.5	28.1	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1219.4	152.4	150.0	1026.6	106.1	119.8	Good
823	MH	150+000	252+000	248+600	RHS	Inner		40	0.4667	0.2714	0.1574	0.0835	0.0335	0.0255	0.0195	27.6	28.1	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	976.3	150.0	150.0	822.0	104.0	119.8	Good
824	MH	150+000	252+000	248+350	RHS	Inner		40	0.3559	0.2183	0.1211	0.0713	0.043	0.0248	0.0137	27.6	28.5	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1339.8	151.2	150.0	1128.0	105.1	119.8	Good
825	MH	150+000	252+000	248+075	RHS	Inner		40	0.3086	0.1757	0.1092	0.0627	0.0317	0.0237	0.0183	27.7	28.9	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	165.9	150.0	1260.2	117.8	119.8	Good
826	MH	150+000	252+000	247+830	RHS	Inner		40	0.432	0.2655	0.1313	0.0748	0.0366	0.0242	0.0156	27.9	29.1	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	958.1	150.5	150.0	806.6	104.5	119.8	Good
827	MH	150+000	252+000	247+600	RHS	Inner		40	0.3016	0.1623	0.0925	0.0729	0.0516	0.0376	0.018	28.1	28.8	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	216.2	150.0	1251.1	160.2	119.8	Good
828	MH	150+000	252+000	247+350	RHS	Inner		40	0.1692	0.1157	0.0758	0.0449	0.0309	0.0211	0.019	28.1	29.1	31	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	397.8	150.0	1233.9	300.8	119.8	Good
829	MH	150+000	252+000	247+060	RHS	Inner	T-26.9/32.1	40	0.1761	0.1096	0.0642	0.0451	0.0311	0.0214	0.0141	27.9	28.0	32.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	397.3	150.0	1293.6	300.4	119.8	Good
830	MH	150+000	252+000	246+850	RHS	Inner		40	0.3685	0.2361	0.1226	0.0757	0.0428	0.0277	0.017	27.6	26.6	32.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.2	150.0	1096.3	104.2	119.8	Good
831	MH	150+000	252+000	246+600	RHS	Inner		40	0.3564	0.2228	0.1153	0.0705	0.0396	0.0248	0.0148	27.8	28.7	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1408.6	150.2	149.7	1242.3	104.2	119.6	Good
832	MH	150+000	252+000	246+325	RHS	Inner		40	0.1887	0.1345	0.0904	0.0569	0.0356	0.0214	0.0144	27.8	28.4	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	356.7	150.0	1315.4	270.7	119.8	Good
833	MH	150+000	252+000	246+100	RHS	Inner		40	0.1894	0.1253	0.0817	0.0501	0.037	0.0215	0.011	27.7	28.4	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	258.3	150.0	1288.8	194.6	119.8	Good
834	MH	150+000	252+000	245+730	RHS	Inner		40	0.3439	0.2121	0.1176	0.0667	0.0315	0.0211	0.014	27.7	28.8	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1423.7	153.4	150.0	1255.7	107.0	119.8	Good
835	MH	150+000	252+000	245+600	RHS	Inner		40	0.4158	0.2312	0.1182	0.078	0.0401	0.024	0.0133	27.6	28.9	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1167.7	150.7	150.0	1029.9	104.6	119.8	Good
836	MH	150+000	252+000	245+330	RHS	Inner		40	0.3535	0.2113	0.1078	0.0624	0.0325	0.0224	0.0151	27.8	29.7	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1394.6	152.2	150.0	1230.0	105.9	119.8	Good
837	MH	150+000	252+000	245+100	RHS	Inner		40	0.4004	0.2403	0.1381	0.0794	0.0391	0.0297	0.0187	27.9	29.4	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1302.2	150.7	149.9	1148.5	104.6	119.8	Good
838	MH	150+000	252+000	244+850	RHS	Inner		40	0.4198	0.2376	0.1163	0.0793	0.0538	0.0345	0.021	27.9	29.4	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	918.3	150.7	149.8	809.9	104.6	119.7	Good
839	MH	150+000	252+000	244+600	RHS	Inner		40	0.4215	0.2499	0.1377	0.0819	0.041	0.0277	0.0188	27.8	29.2	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	151.0	150.0	1068.8	104.9	119.8	Good
840	MH	150+000	252+000	244+350	RHS	Inner		40	0.4179	0.2479	0.1256	0.075	0.0373	0.0248	0.0158	27.8	29.4	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	951.6	150.5	150.0	839.3	104.5	119.8	Good
841	MH	150+000	252+000	244+080	RHS	Inner		40	0.16	0.1045	0.0775	0.0502	0.0315	0.021	0.0136	27.8	29.7	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	384.8	150.0	1319.2	291.4	119.8	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
842	MH	150+000	252+000	243+850	RHS	Inner		40	0.4909	0.3258	0.1764	0.1047	0.0538	0.0323	0.0169	27.9	29.7	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	149.9	792.8	104.0	119.8	Good
843	MH	150+000	252+000	243+600	RHS	Inner		40	0.246	0.1393	0.0874	0.0551	0.0409	0.0346	0.0256	27.9	29.8	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	392.2	150.0	1284.1	296.7	119.8	Good
844	MH	150+000	252+000	243+350	RHS	Inner		40	0.3457	0.216	0.1075	0.0654	0.0355	0.0224	0.0132	28.1	30.0	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	151.2	150.0	1141.8	105.1	119.8	Good
845	MH	150+000	252+000	243+100	RHS	Inner		40	0.1258	0.0877	0.0618	0.0416	0.027	0.0182	0.0123	28.0	29.9	32.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	389.2	149.9	1316.3	294.6	119.8	Good
846	MH	150+000	252+000	242+850	RHS	Inner	T-27.5/35	40	0.3306	0.1963	0.0967	0.0511	0.0317	0.0225	0.016	28.1	30.5	35	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1340.9	153.2	150.0	1340.9	106.8	119.8	Good
847	MH	150+000	252+000	242+350	RHS	Inner	T-28.8/37	40	0.4314	0.3053	0.1817	0.0974	0.058	0.0311	0.0252	28.7	32.2	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	972.0	150.0	149.6	1063.4	104.0	119.5	Good
848	MH	150+000	252+000	242+100	RHS	Inner		40	0.4063	0.2287	0.141	0.0867	0.0505	0.0358	0.0262	29.1	33.5	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1208.6	150.5	149.9	1322.3	104.5	119.8	Good
849	MH	150+000	252+000	241+850	RHS	Inner		40	0.3603	0.2493	0.1388	0.0989	0.0709	0.0495	0.0445	29.2	33.5	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	164.2	134.3	1639.9	116.3	106.4	Good
850	MH	150+000	252+000	241+600	RHS	Inner		40	0.3213	0.2153	0.1292	0.0882	0.0669	0.0531	0.0478	29.3	33.2	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	242.6	134.6	1638.7	181.9	106.7	Good
851	MH	150+000	252+000	241+350	RHS	Inner		40	0.422	0.258	0.1632	0.105	0.071	0.0469	0.0422	29.5	33.7	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.0	131.8	1359.9	104.0	104.3	Good
852	MH	150+000	252+000	241+100	RHS	Inner		40	0.4642	0.2623	0.1531	0.1026	0.0723	0.0514	0.0462	29.7	33.8	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1002.2	150.5	127.6	1096.5	104.5	100.7	Good
853	MH	150+000	252+000	240+850	RHS	Inner		40	0.454	0.2639	0.1421	0.0914	0.0576	0.0445	0.0355	29.7	33.9	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	874.2	150.0	148.2	956.4	104.0	118.3	Good
854	MH	150+000	252+000	240+600	RHS	Inner		40	0.2607	0.1763	0.0952	0.062	0.0458	0.0359	0.0305	29.6	34.1	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	371.4	150.0	1637.6	281.6	119.8	Good
855	MH	150+000	252+000	240+350	RHS	Inner		40	0.3637	0.2185	0.1433	0.0831	0.0576	0.0387	0.0177	29.7	33.3	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	150.2	149.9	1628.2	104.2	119.8	Good
856	MH	150+000	252+000	240+100	RHS	Inner		40	0.1868	0.1227	0.0788	0.0567	0.0415	0.0278	0.018	29.7	34.3	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1440.9	396.3	150.0	1576.4	299.7	119.8	Good
857	MH	150+000	252+000	239+850	RHS	Inner		40	0.3454	0.2203	0.122	0.0739	0.0576	0.0353	0.0178	29.7	34.1	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	153.7	150.0	1638.7	107.2	119.8	Good
858	MH	150+000	252+000	239+600	RHS	Inner		40	0.4312	0.2422	0.1528	0.099	0.0608	0.0368	0.0183	29.9	34.4	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1296.8	150.0	150.0	1418.8	104.0	119.8	Good
859	MH	150+000	252+000	239+350	RHS	Inner		40	0.3627	0.2386	0.1296	0.0788	0.0538	0.037	0.0333	30.0	33.7	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	152.9	150.0	1634.0	106.5	119.8	Good
860	MH	150+000	252+000	239+075	RHS	Inner		40	0.16	0.112	0.0718	0.0427	0.0294	0.0193	0.0125	30.0	33.9	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	396.1	150.0	1616.4	299.6	119.8	Good
861	MH	150+000	252+000	238+850	RHS	Inner		40	0.3295	0.1969	0.1231	0.0823	0.0535	0.0422	0.0343	30.3	34.5	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	207.2	150.0	1623.5	152.7	119.8	Good
862	MH	150+000	252+000	238+600	RHS	Inner		40	0.3829	0.2623	0.1506	0.0957	0.056	0.0395	0.0283	30.5	34.5	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	150.7	149.9	1518.8	104.6	119.8	Good
863	MH	150+000	252+000	238+350	RHS	Inner		40	0.3154	0.2096	0.1396	0.0944	0.0644	0.0421	0.0333	30.7	35.5	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	194.0	150.0	1638.7	141.6	119.8	Good
864	MH	150+000	252+000	238+100	RHS	Inner		40	0.2517	0.1692	0.1098	0.0803	0.0523	0.0317	0.0194	30.7	35.3	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	259.2	150.0	1622.3	195.3	119.8	Good
865	MH	150+000	252+000	237+850	RHS	Inner		40	0.2355	0.1593	0.1014	0.0655	0.0394	0.0256	0.0158	30.8	35.6	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	225.5	150.0	1623.5	167.9	119.8	Good
866	MH	150+000	252+000	237+600	RHS	Inner		40	0.5116	0.3042	0.1858	0.1288	0.0864	0.052	0.029	30.8	36.1	37	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	735.5	150.0	139.0	804.7	104.0	110.4	Good
867	MH	150+000	252+000	237+350	RHS	Inner	T-30.5/37.9	40	0.3823	0.2455	0.1399	0.0969	0.0555	0.0344	0.0184	31.0	35.9	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1310.8	153.2	149.6	1494.9	106.8	119.5	Good
868	MH	150+000	252+000	237+100	RHS	Inner		40	0.2654	0.1663	0.1102	0.0801	0.0578	0.0433	0.0327	31.2	35.9	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	354.3	150.0	1680.0	268.9	119.8	Good
869	MH	150+000	252+000	236+820	RHS	Inner		40	0.3775	0.2365	0.1525	0.0999	0.0712	0.0477	0.0307	31.4	36.5	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	150.2	149.9	1645.7	104.2	119.8	Good
870	MH	150+000	252+000	236+600	RHS	Inner		40	0.5152	0.3196	0.1822	0.115	0.071	0.0587	0.0392	31.5	37.5	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	150.0	122.1	885.3	104.0	96.0	Good
871	MH	150+000	252+000	236+350	RHS	Inner		40	0.3214	0.1769	0.0985	0.0654	0.0413	0.0261	0.0234	31.5	37.0	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1395.7	197.4	150.0	1591.7	144.5	119.8	Good
872	MH	150+000	252+000	236+100	RHS	Inner		40	0.421	0.2351	0.1197	0.0756	0.0463	0.0318	0.0232	31.8	38.2	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	150.2	150.0	955.2	104.2	119.8	Good
873	MH	150+000	252+000	235+850	RHS	Inner		40	0.4899	0.3102	0.1677	0.1086	0.0671	0.0501	0.0436	32.1	37.9	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	763.4	150.2	126.9	870.6	104.2	100.1	Good
874	MH	150+000	252+000	235+600	RHS	Inner		40	0.2656	0.1955	0.113	0.0688	0.0372	0.0253	0.0227	32.1	37.8	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	189.1	150.0	1709.4	137.5	119.8	Good
875	MH	150+000	252+000	235+350	RHS	Inner		40	0.3174	0.2169	0.1237	0.0909	0.0672	0.0528	0.0421	32.2	38.8	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	229.7	138.6	1708.2	171.3	110.1	Good
876	MH	150+000	252+000	235+100	RHS	Inner		40	0.3022	0.165	0.1026	0.0701	0.0471	0.0354	0.0261	32.3	38.7	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	271.5	150.0	1670.2	205.1	119.8	Good
877	MH	150+000	252+000	234+850	RHS	Inner		40	0.5038	0.2791	0.142	0.0977	0.0678	0.0517	0.0406	32.3	38.4	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	733.3	150.0	134.1	836.3	104.0	106.2	Good
878	MH	150+000	252+000	234+600	RHS	Inner		40	0.1115	0.0782	0.0545	0.0391	0.0284	0.0258	0.0226	32.5	39.1	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	395.1	149.9	1661.7	298.8	119.8	Good
879	MH	150+000	252+000	234+350	RHS	Inner		40	0.1105	0.0763	0.0531	0.0361	0.029	0.0239	0.0205	32.7	38.7	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	397.8	149.8	1683.7	300.8	119.7	Good
880	MH	150+000	252+000	234+100	RHS	Inner		40	0.3807	0.2119	0.1117	0.0731	0.0473	0.0391	0.0335	32.6	39.0	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1019.4	188.1	150.0	1162.6	136.7	119.8	Good
881	MH	150+000	252+000	233+850	RHS	Inner		40	0.3179	0.1871	0.106	0.0744	0.0519	0.0425	0.0361	32.9	38.9	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	271.7	150.0	1391.8	205.3	119.8	Good
882	MH	150+000	252+000	233+600	RHS	Inner		40	0.1771	0.1159	0.0805	0.0549	0.0338	0.0195	0.0122	32.8	38.7	37.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	372.1	150.0	1698.4	282.1	119.8	Good
883	MH	150+000	252+000	233+350	RHS	Inner	T-31.5/40.9	40	0.4097	0.2657	0.1602	0.0878	0.0586	0.0387	0.0289	33.1	39.5	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	150.2	149.4	1677.4	104.2	119.3	Good
884	MH	150+000	252+000	233+100	RHS	Inner		40	0.4085	0.2103	0.1399	0.0847	0.0473	0.0318	0.0202	33.0	39.7	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1234.4	150.0	149.8	1626.4	104.0	119.7	Good
885	MH	150+000	252+000	232+800	RHS	Inner		40	0.464	0.2861	0.1547	0.1019	0.0616	0.0417	0.0356	33.2	39.5	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	906.5	150.0	147.1	1194.4	104.0	117.4	Good
886	MH	150+000	252+000	232+600	RHS	Inner		40	0.2969	0.1718	0.1044	0.0665	0.0406	0.032	0.023	33.3	40.5	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	249.5	150.0	1955.1	187.5	119.8	Good
887	MH	150+000	252+000	232+330	RHS	Inner		40	0.1857	0.1268	0.0876	0.0674	0.0532	0.0348	0.0218	33.4	40.1	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	397.6	150.0	1976.3	300.6	119.8	Good
888	MH	150+000	252+000	232+100	RHS	Inner		40	0.1244	0.0817	0.0643	0.0448	0.0321	0.0264	0.0237	33.4	40.0	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	398.3	149.8	1974.9	301.1	119.7	Good
889	MH	150+000	252+000	231+850	RHS	Inner		40	0.2597	0.1739	0.1144	0.0854	0.065	0.0416	0.0255	33.7	40.9	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	304.7	150.0	1955.1	231.2	119.8	Good
890	MH	150+000	252+000	231+600	RHS	Inner		40	0.5261	0.3374	0.1713	0.0987	0.062	0.0418	0.0338	33.6	41.3	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	629.0	150.2	147.1	828.7	104.2	117.4	Good
891	MH	150+000	252+000	231+300	RHS	Inner		40	0.3827	0.2239	0.1369	0.071	0.0521	0.0405	0.0365	33.6	40.9	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1238.7	155.4	150.0	1632.1	108.7	119.8	Good
892	MH	150+000	252+000	231+100	RHS	Inner		40	0.4723	0.2935	0.1519	0.0947	0.054	0.0419	0.0332	33.5	40.9	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	836.6	151.7	149.7	1102.3	105.5	119.6	Good
893	MH	150+000	252+000	230+850	RHS	Inner		40	0.4012	0.2355	0.1256	0.0891	0.0633	0.0504	0.0358	33.6	41.5	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1288.2	151.2	148.0	1697.3	105.1	118.1	Good
894	MH	150+000	252+000	230+600	RHS	Inner		40	0.4369	0.2859	0.1383	0.0684	0.0389	0.0244	0.0172	33.6	41.4	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	915.1	151.0	150.0	1205.7	104.9	119.8	Good
895	MH	150+000	252+000	230+380	RHS	Inner		40	0.2061	0.0962	0.0589	0.0411	0.0301	0.0225	0.0129	33.6	42.2	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	393.2	150.0	1923.9	297.5	119.8	Good
896	MH	150+000	252+000	229+850	RHS	Inner		40	0.4524	0.2776	0.1522	0.1002	0.0649	0.0422	0.0273	34.4	42.4	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	951.6	150.7	150.0	1253.8	104.6	119.8	Good
897	MH	150+000	252+000	229+600	RHS	Inner		40	0.3571	0.2141	0.1119	0.0601	0.0421	0.0301	0.0224	34.5	42.7	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	155.1	150.0	1585.3	108.4	119.8	Good
898	MH	150+000	252+000	229+350	RHS	Inner		40	0.4654	0.268	0.1563	0.0989	0.0601	0.0413	0.0329	34.4	43.1	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	896.8	150.0	149.2	1181.6	104.0	119.2	Good
899	MH	150+000	252+000	229+100	RHS	Inner		40	0.43	0.2171	0.1187	0.0626	0.0388	0.0231	0.0163	35.1	44.2	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	151.5	150.0	1423.8	105.3	119.8	Good
900	MH	150+000	252+000	228+850	RHS	Inner		40	0.2916	0.1774	0.1073	0.0742	0.0511	0.0392	0.0305	35.3	43.6	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	285.9	149.9	1976.3	216.5	119.8	Good
901	MH	150+000	252+000	228+600	RHS	Inner		40	0.4327	0.2471	0.1349	0.0785	0.0554	0.0378	0.025	35.0	43.1	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	854.8	150.5	150.0	1126.3	104.5	119.8	Good
902	MH	150+000	252+000	228+350	RHS	Inner		40	0.3715	0.2339	0.1337	0.0881	0.0571	0.0452	0.0363	34.7	42.3	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	151.5	149.6	1922.5	105.3	119.5	Good
903	MH	150+000	252+000	228+100	RHS	Inner		40	0.4686	0.2913	0.1756	0.097	0.0721	0.0545	0.0374	34.7	42.7	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	900.0	150.5	129.2	1185.8	104.5	102.1	Good
904	MH	150+000	252+000	227+850	RHS	Inner	T-27.8/36.4	40	0.3467	0.2213	0.1216	0.075	0.0418	0.0297	0.0214	30.3	31.8	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1389.2	153.4	150.0	1478.9	107.0	119.8	Good
905	MH	150+000	252+000	227+600	RHS	Inner		40	0.2367	0.1521	0.1019	0.0685	0.0443	0.0276	0.0198	30.3	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	311.0	150.0	1578.6	236.1	119.8	Good
906	MH	150+000	252+000	227+350	RHS	Inner		40	0.2276	0.1355	0.0889	0.0678	0.0434	0.0333	0.0264	30.2	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.9	150.0	1586.6	297.3	119.8	Good
907	MH	150+000	252+000	227+100	RHS	Inner		40	0.3498	0.2254	0.1639	0.1193	0.0847	0.0605	0.0442	30.0	31.6	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	207.4	117.9	1584.3	152.9	92.4	Good
908	MH	150+000	252+000	226+850	RHS	Inner		40	0.2808	0.1709	0.1035	0.0735	0.0519	0.0391	0.0343	30.0	31.2	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	324.0	150.0	1556.9	246.0	119.8	Good
909	MH	150+000	252+000	226+600	RHS	Inner		40	0.1497	0.1	0.0645	0.0474	0.0334	0.0256	0.0191	30.0	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	400.0	150.0	1560.3	302.4	119.8	Good
910	MH	150+000	252+000	226+310	RHS	Inner		40	0.2867	0.1907	0.1098	0.0788	0.0571	0.0422	0.0321	30.1	31.5	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	276.1	149.9	1584.3	208.8	119.8	Good
911	MH	150+000	252+000	226+100	RHS	Inner		40	0.2267	0.1429	0.0953	0.0706	0.0538	0.037	0.0249	30.3	31.7	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	391.4	150.0	1596.9	296.2	119.8	Good

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
912	MH	150+000	252+000	225+850	RHS	Inner		40	0.3701	0.2539	0.1439	0.0832	0.0573	0.0391	0.0302	30.2	31.5	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	151.0	149.8	1574.0	104.9	119.7	Good
913	MH	150+000	252+000	225+600	RHS	Inner		40	0.4249	0.2614	0.1467	0.0918	0.0553	0.0426	0.0335	30.2	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1150.5	151.0	149.4	1224.8	104.9	119.3	Good
914	MH	150+000	252+000	225+350	RHS	Inner		40	0.3206	0.2155	0.14	0.0942	0.0582	0.0336	0.0239	30.0	31.1	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	150.5	150.0	1582.0	104.5	119.8	Good
915	MH	150+000	252+000	225+100	RHS	Inner		40	0.2986	0.1977	0.1203	0.0661	0.0431	0.0283	0.0192	30.1	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	154.6	150.0	1560.3	108.0	119.8	Good
916	MH	150+000	252+000	224+850	RHS	Inner		40	0.4834	0.3227	0.173	0.0889	0.0553	0.0416	0.0317	30.1	31.6	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	800.0	150.2	149.8	851.7	104.2	119.7	Good
917	MH	150+000	252+000	224+550	RHS	Inner		40	0.3251	0.1921	0.1088	0.0481	0.0293	0.0271	0.0244	30.0	30.7	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	159.5	150.0	1323.3	112.2	119.8	Good
918	MH	150+000	252+000	224+350	RHS	Inner		40	0.2641	0.1512	0.083	0.0534	0.0332	0.0229	0.016	29.7	31.1	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	257.8	150.0	1525.9	194.1	119.8	Fair
919	MH	150+000	252+000	224+100	RHS	Inner		40	0.3155	0.1769	0.1055	0.0625	0.0474	0.0321	0.0245	29.9	31.3	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1376.3	223.3	150.0	1465.2	166.1	119.8	Fair
920	MH	150+000	252+000	223+850	RHS	Inner		40	0.2391	0.1431	0.099	0.0647	0.0474	0.0373	0.0278	30.0	31.1	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	385.3	150.0	1569.4	291.7	119.8	Good
921	MH	150+000	252+000	223+600	RHS	Inner		40	0.3488	0.2113	0.1081	0.0591	0.038	0.0307	0.0232	29.9	31.1	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1315.1	162.7	150.0	1400.1	115.0	119.8	Good
922	MH	150+000	252+000	223+350	RHS	Inner		40	0.1999	0.1187	0.0812	0.0548	0.0317	0.0229	0.0172	29.8	31.1	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	397.1	150.0	1593.5	300.3	119.8	Good
923	MH	150+000	252+000	223+100	RHS	Inner		40	0.242	0.1598	0.0973	0.0656	0.0429	0.027	0.0191	30.0	31.4	36.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	305.4	150.0	1570.6	231.7	119.8	Fair
924	MH	150+000	252+000	222+850	RHS	Inner	T-26.8/37.5	40	0.277	0.1819	0.1077	0.0707	0.0556	0.0437	0.0317	30.3	32.2	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	303.7	150.0	1667.2	230.4	119.8	Fair
925	MH	150+000	252+000	222+600	RHS	Inner		40	0.289	0.1931	0.1118	0.0745	0.0484	0.0315	0.0203	30.3	31.3	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	180.8	150.0	1590.1	130.5	119.8	Fair
926	MH	150+000	252+000	222+350	RHS	Inner		40	0.3221	0.2115	0.1324	0.0824	0.0485	0.0391	0.0325	30.2	31.3	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	172.7	149.9	1634.7	123.6	119.8	Good
927	MH	150+000	252+000	222+100	RHS	Inner		40	0.1654	0.1202	0.0868	0.0642	0.0445	0.0309	0.0217	30.1	31.3	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	400.0	149.8	1640.7	302.4	119.7	Good
928	MH	150+000	252+000	221+850	RHS	Inner		40	0.2732	0.1796	0.1113	0.0599	0.0333	0.0232	0.0164	30.2	31.4	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	162.7	150.0	1646.8	115.0	119.8	Fair
929	MH	150+000	252+000	221+600	RHS	Inner		40	0.4909	0.2842	0.1413	0.09	0.0621	0.0412	0.0273	30.0	31.0	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	753.8	152.2	149.9	843.9	105.9	119.8	Fair
930	MH	150+000	252+000	221+300	RHS	Inner		40	0.3632	0.2399	0.1386	0.0892	0.0561	0.0366	0.0234	30.0	31.0	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1276.3	151.2	150.0	1428.8	105.1	119.8	Fair
931	MH	150+000	252+000	221+100	RHS	Inner		40	0.3785	0.2572	0.1536	0.0939	0.0531	0.0367	0.0251	30.0	31.4	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	150.0	150.0	1657.5	104.0	119.8	Fair
932	MH	150+000	252+000	220+850	RHS	Inner		40	0.3554	0.2231	0.1312	0.0701	0.0453	0.0318	0.0287	30.1	31.4	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	150.7	150.0	1651.6	104.6	119.8	Fair
933	MH	150+000	252+000	220+600	RHS	Inner		40	0.6687	0.4093	0.2062	0.125	0.0905	0.0653	0.0352	29.9	30.9	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	425.8	150.0	119.4	476.7	104.0	93.7	Fair
934	MH	150+000	252+000	220+350	RHS	Inner		40	0.6439	0.3663	0.1868	0.1219	0.0748	0.0568	0.0443	29.8	31.0	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	440.9	150.2	116.7	493.6	104.2	91.4	Fair
935	MH	150+000	252+000	220+100	RHS	Inner		40	0.404	0.24	0.1337	0.0761	0.0527	0.0358	0.0265	29.5	30.4	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1102.2	152.0	150.0	1233.9	105.8	119.8	Fair
936	MH	150+000	252+000	219+850	RHS	Inner		40	0.5813	0.3453	0.1955	0.1358	0.0932	0.0649	0.0449	29.6	31.0	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.2	105.6	548.9	104.2	81.9	Fair
937	MH	150+000	252+000	219+600	RHS	Inner		40	0.2452	0.1684	0.1069	0.0705	0.0468	0.032	0.0225	29.7	30.9	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	291.7	150.0	1635.9	221.0	119.8	Fair
938	MH	150+000	252+000	219+350	RHS	Inner		40	0.3429	0.1753	0.0831	0.0454	0.0307	0.0196	0.0175	29.8	30.2	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1200.0	162.0	150.0	1343.4	114.4	119.8	Fair
939	MH	150+000	252+000	219+100	RHS	Inner		40	0.5554	0.3219	0.19	0.113	0.083	0.0631	0.0422	29.5	30.0	37.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	588.2	150.0	114.9	658.5	104.0	89.8	Good
940	MH	150+000	252+000	218+850	RHS	Inner	T-26.3/33.8	40	0.5407	0.2874	0.1574	0.0922	0.0662	0.0485	0.0312	29.5	30.5	33.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.0	145.4	477.4	104.0	115.9	Good
941	MH	150+000	252+000	218+600	RHS	Inner		40	0.5401	0.3086	0.1977	0.1175	0.0763	0.0471	0.022	29.4	30.3	33.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.7	149.6	477.4	104.6	119.5	Fair
942	MH	150+000	252+000	218+350	RHS	Inner		40	0.4662	0.2559	0.1384	0.0817	0.0597	0.048	0.0401	29.5	30.6	33.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	801.1	150.0	146.1	760.1	104.0	116.5	Good
943	MH	150+000	252+000	218+100	RHS	Inner		40	0.4191	0.2376	0.1396	0.0815	0.0525	0.0321	0.023	29.6	31.1	33.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1362.4	151.5	150.0	1292.6	105.3	119.8	Good
944	MH	150+000	252+000	217+850	RHS	Inner		40	0.4105	0.248	0.1368	0.0823	0.0455	0.0332	0.0246	29.9	31.8	33.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1194.6	150.5	149.9	1133.4	104.5	119.8	Good
945	MH	150+000	252+000	217+100	RHS	Inner	T-27.3/36.3	40	0.3104	0.1897	0.1133	0.0791	0.0541	0.0398	0.0298	28.1	30.4	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	228.2	150.0	1544.1	170.1	119.8	Fair
946	MH	150+000	252+000	216+600	RHS	Inner		40	0.6245	0.344	0.1646	0.1013	0.0602	0.038	0.0221	28.2	29.6	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.2	149.7	423.9	104.2	119.6	Fair
947	MH	150+000	252+000	216+360	RHS	Inner		40	0.2957	0.1739	0.107	0.0646	0.0412	0.0254	0.0171	28.1	29.2	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1430.1	175.7	150.0	1515.6	126.1	119.8	Fair
948	MH	150+000	252+000	216+100	RHS	Inner		40	0.2093	0.1546	0.1082	0.0722	0.046	0.0326	0.0236	27.4	28.4	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	380.2	150.0	1580.6	288.0	119.8	Fair
949	MH	150+000	252+000	215+850	RHS	Inner		40	0.2977	0.1876	0.1286	0.0883	0.0562	0.032	0.0214	27.2	28.3	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	173.0	150.0	1568.1	123.8	119.8	Good
950	MH	150+000	252+000	215+600	RHS	Inner		40	0.385	0.2318	0.1213	0.0713	0.0385	0.0279	0.0201	27.3	28.4	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1238.7	152.4	150.0	1312.8	106.1	119.8	Good
951	MH	150+000	252+000	215+350	RHS	Inner		40	0.4891	0.2679	0.1322	0.0877	0.058	0.0433	0.0332	27.4	29.8	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	675.3	150.0	149.9	715.7	104.0	119.8	Good
952	MH	150+000	252+000	215+100	RHS	Inner		40	0.2689	0.1413	0.0907	0.0612	0.0416	0.0266	0.0199	27.7	29.8	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	329.6	150.0	1574.9	250.3	119.8	Good
953	MH	150+000	252+000	214+850	RHS	Inner		40	0.4418	0.2384	0.1274	0.0834	0.0526	0.0415	0.0374	27.9	30.9	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	883.9	150.5	149.9	936.8	104.5	119.8	Fair
954	MH	150+000	252+000	214+600	RHS	Inner		40	0.4607	0.2629	0.1531	0.1022	0.0667	0.0493	0.0386	28.2	30.5	36.3	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	938.7	151.5	136.6	994.8	105.3	108.4	Good
955	MH	150+000	252+000	214+350	RHS	Inner		40	0.4708	0.2705	0.1579	0.0864	0.0601	0.0407	0.0367	28.3	30.9	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.5	148.8	868.4	104.5	118.8	Good
956	MH	150+000	252+000	214+100	RHS	Inner		40	0.3758	0.1996	0.1227	0.0687	0.046	0.0352	0.0242	28.7	31.0	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1306.5	152.7	150.0	1384.6	106.4	119.8	Good
957	MH	150+000	252+000	213+840	RHS	Inner		40	0.4065	0.2341	0.1346	0.0741	0.0426	0.0326	0.0259	28.8	31.6	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	936.6	151.7	149.9	992.6	105.5	119.8	Good
958	MH	150+000	252+000	213+600	RHS	Inner		40	0.293	0.1746	0.1014	0.0662	0.0444	0.0283	0.0193	29.0	31.4	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	189.8	150.0	1577.2	138.1	119.8	Good
959	MH	150+000	252+000	213+350	RHS	Inner		40	0.4036	0.2314	0.1191	0.0785	0.0578	0.0414	0.0373	29.1	31.1	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	992.5	159.3	150.0	1051.9	112.1	119.8	Good
960	MH	150+000	252+000	213+080	RHS	Inner		40	0.3166	0.1909	0.1153	0.0706	0.0533	0.0361	0.0243	29.2	31.7	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	183.7	150.0	1565.7	132.9	119.8	Good
961	MH	150+000	252+000	212+850	RHS	Inner		40	0.4965	0.2779	0.1437	0.0774	0.0515	0.0403	0.0363	29.4	31.8	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	625.8	150.7	149.6	663.2	104.6	119.5	Good
962	MH	150+000	252+000	212+600	RHS	Inner		40	0.3627	0.1957	0.1042	0.0724	0.0503	0.0345	0.0235	29.5	31.5	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1291.4	176.1	150.0	1368.6	126.5	119.8	Good
963	MH	150+000	252+000	212+350	RHS	Inner		40	0.6437	0.3456	0.1651	0.0984	0.051	0.0393	0.031	29.8	32.3	36.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	403.2	151.0	150.0	427.3	104.9	119.8	Fair
964	MH	150+000	252+000	212+100	RHS	Inner	T-27.1/34	40	0.6309	0.3497	0.1875	0.1203	0.0716	0.0521	0.0395	30.0	32.4	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	402.2	150.2	122.2	384.9	104.2	96.1	Fair
965	MH	150+000	252+000	211+850	RHS	Inner		40	0.4344	0.2507	0.1433	0.0906	0.052	0.0351	0.0239	30.0	32.0	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	862.4	150.7	149.9	825.4	104.6	119.8	Good
966	MH	150+000	252+000	211+600	RHS	Inner		40	0.3095	0.1578	0.0882	0.0514	0.0397	0.0314	0.0251	30.1	33.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1229.0	341.8	150.0	1176.2	259.5	119.8	Good
967	MH	150+000	252+000	211+350	RHS	Inner		40	0.2339	0.1251	0.0773	0.0547	0.0382	0.0309	0.0257	30.6	33.6	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	392.7	150.0	1397.5	297.1	119.8	Good
968	MH	150+000	252+000	211+100	RHS	Inner		40	0.3276	0.1668	0.1048	0.0693	0.0461	0.0337	0.025	30.8	33.5	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1361.3	233.8	150.0	1302.9	174.7	119.8	Good
969	MH	150+000	252+000	210+850	RHS	Inner		40	0.4814	0.2611	0.1609	0.0979	0.0566	0.0374	0.025	30.5	33.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	889.2	151.7	149.9	851.0	105.5	119.8	Good
970	MH	150+000	252+000	210+600	RHS	Inner		40	0.4011	0.2658	0.1289	0.0634	0.0365	0.0223	0.0128	30.6	33.9	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	997.8	151.0	150.0	955.0	104.9	119.8	Good
971	MH	150+000	252+000	210+350	RHS	Inner		40	0.494	0.32	0.1854	0.1071	0.0761	0.0633	0.0497	30.6	33.9	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	853.8	150.5	112.9	817.2	104.5	88.1	Fair
972	MH	150+000	252+000	210+110	RHS	Inner		40	0.3383	0.2201	0.125	0.0722	0.0523	0.0412	0.0371	30.9	34.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1421.5	170.0	149.9	1360.5	121.3	119.8	Fair
973	MH	150+000	252+000	209+850	RHS	Inner		40	0.4881	0.2813	0.1458	0.0766	0.0411	0.0326	0.0293	31.1	34.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	705.4	153.4	150.0	675.1	107.0	119.8	Fair
974	MH	150+000	252+000	209+600	RHS	Inner		40	0.4641	0.2693	0.1486	0.0933	0.0561	0.0395	0.0279	31.1	34.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	778.5	151.2	149.9	745.1	105.1	119.8	Fair
975	MH	150+000	252+000	209+350	RHS	Inner		40	0.3903	0.21	0.1103	0.0791	0.0572	0.0437	0.0288	31.0	34.4	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	941.9	196.9	150.0	901.5	144.1	119.8	Fair
976	MH	150+000	252+000	209+100	RHS	Inner		40	0.5048	0.275	0.1494	0.0948	0.0583	0.0362	0.0206	31.3	34.7	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	151.5	149.9	743.0	105.3	119.8	Good
977	MH	150+000	252+000	208+840	RHS	Inner		40	0.588	0.3106	0.1633	0.1065	0.0692	0.0484	0.0337	31.7	35.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	496.8	150.0	138.4	475.5	104.0	109.9	Fair
978	MH	150+000	252+000	208+600	RHS	Inner		40	0.5477	0.3072	0.1589	0.0791	0.0489	0.0441	0.0337	31.8	35.3	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	502.2	150.7	149.6	480.6	104.6	119.5	Fair
979	MH	150+000	252+000	208+300	RHS	Inner		40	0.3179	0.2	0.1181	0.0803	0.0514	0.038	0.0281	31.8	35.1	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1440.9	197.4	150.0	1379.1	144.5	119.8	Fair
980	MH	150+000	252+000	208+100	RHS	Inner		40	0.2444	0.1395	0.0811	0.0504	0.0376	0.0282	0.0218	32.0	35.5	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	395.6	150.0	1395.5	299.2	119.8	Fair
981	MH	150+000	252+000	207+850	RHS	Inner		40	0.5452	0.2887	0.1665	0.0913	0.069	0.0522	0.0347	32.1	36.2	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	504.3	150.2	139.1	482.7	104.2	110.5	Fair

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
982	MH	150+000	252+000	207+600	RHS	Inner		40	0.7379	0.3851	0.1963	0.0988	0.0727	0.0538	0.0329	32.4	35.7	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	403.2	150.0	130.8	385.9	104.0	103.4	Fair
983	MH	150+000	252+000	207+330	RHS	Inner		40	0.2642	0.1483	0.0936	0.0595	0.0366	0.0278	0.0216	32.3	35.1	34	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	319.1	150.0	1419.2	242.3	119.8	Fair
984	MH	150+000	252+000	207+100	RHS	Inner	t-28.9/36.5	40	0.3506	0.2009	0.1138	0.0594	0.0407	0.0253	0.022	32.7	35.6	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1371.0	153.2	150.0	1466.2	106.8	119.8	Fair
985	MH	150+000	252+000	206+850	RHS	Inner	le Cracking and Blee	40	0.6663	0.3978	0.2049	0.1058	0.0669	0.0458	0.0394	32.7	35.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.0	128.1	411.8	104.0	101.1	Poor
986	MH	150+000	252+000	206+600	RHS	Inner		40	0.6873	0.43	0.2323	0.146	0.0854	0.0541	0.0329	32.8	35.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	418.3	150.2	126.4	418.3	104.2	99.7	Poor
987	MH	150+000	252+000	206+350	RHS	Inner		40	0.7228	0.4203	0.2191	0.1108	0.0753	0.0505	0.0336	32.8	36.2	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.0	130.4	407.5	104.0	103.1	Poor
988	MH	150+000	252+000	206+100	RHS	Inner		40	0.7395	0.405	0.1908	0.106	0.0751	0.0587	0.0317	32.4	35.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.5	132.2	411.8	104.5	104.6	Poor
989	MH	150+000	252+000	205+850	RHS	Inner		40	0.6261	0.3599	0.1788	0.094	0.0605	0.0415	0.0318	32.2	36.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	464.5	150.0	148.6	464.5	104.0	118.7	Poor
990	MH	150+000	252+000	205+600	RHS	Inner		40	0.5977	0.346	0.1772	0.0878	0.0629	0.0477	0.0296	32.8	36.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	429.0	150.0	150.0	429.0	104.0	119.8	Poor
991	MH	150+000	252+000	205+285	RHS	Inner		40	0.3604	0.2028	0.1243	0.0739	0.0374	0.0252	0.0162	32.6	36.5	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1383.9	150.2	150.0	1383.9	104.2	119.8	Poor
992	MH	150+000	252+000	205+100	RHS	Inner		40	0.1879	0.1201	0.0764	0.0481	0.0334	0.0222	0.0196	32.9	37.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	395.6	150.0	1500.0	299.2	119.8	Poor
993	MH	150+000	252+000	204+850	RHS	Inner		40	0.6634	0.4059	0.1901	0.0895	0.055	0.0418	0.0362	33.1	37.4	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.5	147.6	400.0	104.5	117.8	Poor
994	MH	150+000	252+000	204+600	RHS	Inner		40	0.556	0.3103	0.1734	0.0963	0.0568	0.0408	0.0302	33.5	37.1	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	439.8	152.4	149.8	439.8	106.1	119.7	Poor
995	MH	150+000	252+000	204+350	RHS	Inner	Bleeding and rutting	40	0.6962	0.3954	0.1976	0.1034	0.0656	0.0499	0.0391	33.5	37.4	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	412.9	150.0	130.0	412.9	104.0	102.7	Poor
996	MH	150+000	252+000	204+100	RHS	Inner		40	0.6342	0.3755	0.1851	0.1054	0.0705	0.0543	0.0434	33.3	37.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	419.4	150.0	120.5	419.4	104.0	94.6	Poor
997	MH	150+000	252+000	203+850	RHS	Inner		40	0.667	0.3628	0.175	0.1111	0.0808	0.0608	0.0466	33.0	38.2	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.7	112.8	410.8	104.6	88.0	Poor
998	MH	150+000	252+000	203+600	RHS	Inner		40	0.5602	0.3049	0.1612	0.0863	0.0639	0.0418	0.0266	33.2	37.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	152.0	149.2	491.4	105.8	119.2	Poor
999	MH	150+000	252+000	203+320	RHS	Inner		40	0.7351	0.3788	0.2062	0.1287	0.0773	0.0572	0.0432	32.7	37.9	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.0	113.7	401.1	104.0	88.8	Poor
1000	MH	150+000	252+000	203+100	RHS	Inner		40	0.4123	0.2365	0.1372	0.0763	0.0552	0.0417	0.0326	32.8	37.5	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	996.8	154.6	150.0	996.8	108.0	119.8	Poor
1001	MH	150+000	252+000	202+850	RHS	Inner	t-33.5/39.8	40	0.7769	0.4069	0.1982	0.0995	0.0677	0.0433	0.0251	33.6	39.1	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	151.2	148.9	406.5	105.1	118.9	Poor
1002	MH	150+000	252+000	202+600	RHS	Inner		40	0.5801	0.3406	0.1909	0.107	0.0749	0.0543	0.0409	33.7	38.9	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	448.4	150.0	121.0	448.4	104.0	95.0	Poor
1003	MH	150+000	252+000	202+350	RHS	Inner		40	0.6376	0.3393	0.1883	0.1033	0.0669	0.0478	0.0341	33.9	39.6	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	136.6	404.3	104.0	108.4	Poor
1004	MH	150+000	252+000	202+100	RHS	Inner		40	0.3679	0.2006	0.1158	0.0611	0.043	0.0381	0.029	33.6	39.0	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	986.0	194.7	150.0	986.0	142.2	119.8	Poor
1005	MH	150+000	252+000	201+850	RHS	Inner		40	0.5346	0.3194	0.1748	0.1124	0.0818	0.0587	0.0431	33.4	39.3	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	601.1	150.0	115.5	601.1	104.0	90.3	Poor
1006	MH	150+000	252+000	201+600	RHS	Inner		40	0.398	0.2185	0.1211	0.0664	0.0519	0.0378	0.028	33.4	40.0	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	161.0	150.0	937.6	113.5	119.8	Poor
1007	MH	150+000	252+000	201+300	RHS	Inner		40	0.5105	0.2797	0.154	0.1032	0.0701	0.0482	0.0332	33.4	39.6	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	615.1	150.5	139.4	615.1	104.5	110.8	Poor
1008	MH	150+000	252+000	201+100	RHS	Inner		40	0.5621	0.3001	0.1521	0.0903	0.0593	0.0377	0.0268	33.4	39.8	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	467.7	151.0	149.6	583.8	104.9	119.5	Fair
1009	MH	150+000	252+000	200+600	RHS	Inner		40	0.6777	0.3596	0.1789	0.1212	0.0795	0.0548	0.0386	34.2	40.8	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	408.6	150.5	118.4	510.0	104.5	92.8	Fair
1010	MH	150+000	252+000	200+350	RHS	Inner		40	0.5376	0.2891	0.1504	0.0931	0.0691	0.052	0.0407	34.1	39.8	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	504.3	151.0	133.2	629.5	104.9	105.5	Fair
1011	MH	150+000	252+000	200+100	RHS	Inner		40	0.5398	0.3014	0.178	0.1235	0.0855	0.0672	0.0408	33.7	39.9	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	603.2	150.0	114.0	752.9	104.0	89.1	Fair
1012	MH	150+000	252+000	199+850	RHS	Inner		40	0.4534	0.2642	0.1374	0.0945	0.0699	0.0466	0.031	33.7	40.7	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	949.5	150.0	149.9	949.5	104.0	119.8	Poor
1013	MH	150+000	252+000	199+600	RHS	Inner		40	0.534	0.3011	0.179	0.1219	0.0856	0.0585	0.0399	33.6	41.7	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	641.9	150.0	117.7	641.9	104.0	92.2	Poor
1014	MH	150+000	252+000	199+350	RHS	Inner		40	0.5096	0.2848	0.16	0.0917	0.0557	0.0413	0.0316	34.3	42.8	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	590.3	150.2	149.5	590.3	104.2	119.4	Poor
1015	MH	150+000	252+000	199+100	RHS	Inner		40	0.6409	0.3654	0.1899	0.1108	0.0581	0.0484	0.0332	34.9	43.9	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	140.0	404.3	104.0	111.3	Poor
1016	MH	150+000	252+000	198+850	RHS	Inner		40	0.6399	0.3356	0.1828	0.0982	0.0603	0.0462	0.0368	35.3	44.0	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	416.1	150.0	138.2	416.1	104.0	109.8	Poor
1017	MH	150+000	252+000	198+600	RHS	Inner		40	0.6159	0.3302	0.1768	0.0972	0.0489	0.0307	0.0179	35.3	43.7	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	150.0	149.8	406.5	104.0	119.7	Poor
1018	MH	150+000	252+000	198+350	RHS	Inner		40	0.677	0.3623	0.1763	0.0999	0.0718	0.0528	0.0348	35.8	45.0	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.2	128.3	410.8	104.2	101.3	Poor
1019	MH	150+000	252+000	198+100	RHS	Inner		40	0.2649	0.1432	0.0851	0.057	0.0386	0.0282	0.0211	35.8	44.2	39.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	363.1	150.0	1496.8	275.5	119.8	Poor
1020	MH	150+000	252+000	197+830	RHS	Inner	T-33.6/43.8	40	0.4983	0.2674	0.133	0.0728	0.0526	0.0382	0.0283	36.4	40.2	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	589.2	151.0	149.7	589.2	104.9	119.6	Poor
1021	MH	150+000	252+000	197+600	RHS	Inner		40	0.4455	0.24	0.1328	0.079	0.0531	0.0358	0.0317	36.6	39.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	824.7	151.7	149.7	824.7	105.5	119.6	Poor
1022	MH	150+000	252+000	197+350	RHS	Inner		40	0.5584	0.3126	0.1702	0.1138	0.0749	0.0563	0.0358	36.6	39.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	537.6	150.0	126.4	537.6	104.0	99.7	Poor
1023	MH	150+000	252+000	197+100	RHS	Inner	Wide Cracking	40	0.6221	0.3581	0.1869	0.0958	0.062	0.0383	0.0345	36.7	39.9	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	418.3	151.0	149.4	418.3	104.9	119.3	Poor
1024	MH	150+000	252+000	196+850	RHS	Inner		40	0.3827	0.1928	0.0976	0.0593	0.0404	0.0252	0.0157	36.4	40.0	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	911.8	158.1	150.0	911.8	111.0	119.8	Poor
1025	MH	150+000	252+000	196+600	RHS	Inner		40	0.3695	0.2007	0.1029	0.0623	0.0412	0.0279	0.0251	36.3	39.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	161.2	150.0	1900.3	113.7	119.8	Fair
1026	MH	150+000	252+000	196+350	RHS	Inner		40	0.6202	0.3192	0.1606	0.0894	0.0672	0.044	0.0334	36.3	39.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	402.2	150.7	143.6	615.9	104.6	114.4	Fair
1027	MH	150+000	252+000	196+100	RHS	Inner		40	0.5056	0.2848	0.167	0.1062	0.0633	0.045	0.0318	36.3	39.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	614.0	150.0	147.4	940.3	104.0	117.6	Fair
1028	MH	150+000	252+000	195+850	RHS	Inner		40	0.722	0.3823	0.1919	0.0983	0.0735	0.0556	0.0372	36.1	39.9	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	150.7	124.5	622.5	104.6	98.0	Fair
1029	MH	150+000	252+000	195+600	RHS	Inner		40	0.3224	0.1599	0.0972	0.0679	0.0478	0.0327	0.0228	36.3	39.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	256.1	150.0	1849.2	192.8	119.8	Fair
1030	MH	150+000	252+000	195+350	RHS	Inner		40	0.4281	0.2348	0.1313	0.0841	0.054	0.0468	0.0419	36.1	39.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	983.9	150.5	149.4	1506.8	104.5	119.3	Fair
1031	MH	150+000	252+000	195+100	RHS	Inner		40	0.4861	0.2855	0.177	0.0959	0.0676	0.047	0.0362	36.3	39.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	788.2	150.0	138.7	1207.1	104.0	110.2	Fair
1032	MH	150+000	252+000	194+850	RHS	Inner		40	0.5978	0.313	0.1566	0.0948	0.0538	0.0407	0.0314	36.2	39.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	478.5	151.2	150.0	732.8	105.1	119.8	Fair
1033	MH	150+000	252+000	194+600	RHS	Inner		40	0.5897	0.3166	0.1641	0.113	0.0826	0.066	0.0504	36.2	39.6	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	484.9	150.2	109.7	742.6	104.2	85.4	Fair
1034	MH	150+000	252+000	194+350	RHS	Inner		40	0.5664	0.2939	0.1743	0.1092	0.0756	0.0472	0.0299	36.5	39.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	494.6	150.0	144.5	757.4	104.0	115.1	Fair
1035	MH	150+000	252+000	194+100	RHS	Inner		40	0.559	0.3365	0.182	0.1122	0.0646	0.0388	0.0274	36.5	40.4	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.0	148.1	490.3	104.0	118.2	Poor
1036	MH	150+000	252+000	193+850	RHS	Inner		40	0.5219	0.3058	0.1625	0.0804	0.0537	0.0439	0.0395	36.5	39.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	564.5	150.0	148.8	864.5	104.0	118.8	Fair
1037	MH	150+000	252+000	193+600	RHS	Inner		40	0.3647	0.2129	0.1174	0.0613	0.0381	0.024	0.0136	36.5	40.2	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1209.7	156.1	150.0	1852.6	109.3	119.8	Fair
1038	MH	150+000	252+000	193+350	RHS	Inner	T-34.2/43.5	40	0.4471	0.2448	0.1333	0.0754	0.055	0.0419	0.0298	36.7	39.8	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	768.8	152.7	150.0	768.8	106.4	119.8	Poor
1039	MH	150+000	252+000	193+100	RHS	Inner		40	0.5048	0.2962	0.1536	0.0795	0.0525	0.0392	0.0326	36.8	39.5	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	549.5	150.0	149.8	828.0	104.0	119.7	Fair
1040	MH	150+000	252+000	192+850	RHS	Inner		40	0.2708	0.1687	0.0974	0.0544	0.0404	0.0289	0.0172	36.5	39.3	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	203.5	150.0	2239.2	149.6	119.8	Fair
1041	MH	150+000	252+000	192+600	RHS	Inner		40	0.4726	0.2557	0.1419	0.0879	0.0507	0.0374	0.0329	36.4	39.2	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	807.5	151.0	149.7	1216.8	104.9	119.6	Fair
1042	MH	150+000	252+000	192+350	RHS	Inner		40	0.5477	0.3219	0.1684	0.0859	0.0593	0.0494	0.0445	36.5	39.1	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	468.8	150.0	135.4	706.4	104.0	107.4	Fair
1043	MH	150+000	252+000	192+100	RHS	Inner		40	0.5236	0.3106	0.1578	0.1035	0.0656	0.0396	0.038	36.8	39.3	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	612.9	150.0	143.2	923.6	104.0	114.0	Fair
1044	MH	150+000	252+000	191+850	RHS	Inner		40	0.5937	0.3435	0.1611	0.0886	0.0637	0.0423	0.0271	36.9	39.7	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	150.2	149.5	740.5	104.2	119.4	Fair
1045	MH	150+000	252+000	191+600	RHS	Inner		40	0.5578	0.3192	0.1595	0.0771	0.0585	0.0443	0.0393	36.7	39.4	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	472.0	150.0	144.8	711.2	104.0	115.4	Fair
1046	MH	150+000	252+000	191+350	RHS	Inner		40	0.4393	0.2705	0.1526	0.0745	0.049	0.0371	0.0288	36.4	39.3	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	150.7	149.9	1445.3	104.6	119.8	Fair
1047	MH	150+000	252+000	191+100	RHS	Inner		40	0.4968	0.2925	0.1453	0.0726	0.0508	0.0362	0.0324	36.1	39.4	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	488.2	151.0	150.0	735.7	104.9	119.8	Fair
1048	MH	150+000	252+000	190+825	RHS	Inner		40	0.5014	0.3125	0.158	0.0707	0.0413	0.0345	0.031	36.5	40.0	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	489.2	150.0	150.0	737.2	104.0	119.8	Fair
1049	MH	150+000	252+000	190+600	RHS	Inner		40	0.425	0.2493	0.1248	0.0829	0.0605	0.0506	0.0435	36.7	39.3	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	887.1	163.7	143.7	1336.8	115.9	114.5	Fair
1050	MH	150+000	252+000	190+350	RHS	Inner		40	0.4486	0.2602	0.1308	0.0712	0.0491	0.0413	0.0301	36.7	39.5	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	851.6	151.5	150.0	1283.3	105.3	119.8	Fair
1051	MH	150+000	252+000	190+100	RHS	Inner		40	0.4288	0.2511	0.1384	0.0673	0.0457	0.0325	0.0227	36.8	39.7	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	890.3	150.0	149.8	1341.6	104.0	119.7	Fair

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1052	MH	150+000	252+000	189+850	RHS	Inner		40	0.1916	0.116	0.0709	0.0401	0.0265	0.0177	0.0141	37.4	40.1	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	366.0	150.0	2237.6	277.6	119.8	Fair
1053	MH	150+000	252+000	189+600	RHS	Inner		40	0.2807	0.1678	0.1003	0.0631	0.0399	0.0339	0.0246	37.9	39.6	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	266.1	150.0	2156.7	200.8	119.8	Fair
1054	MH	150+000	252+000	189+350	RHS	Inner		40	0.2992	0.1656	0.0947	0.0683	0.0504	0.0343	0.0261	37.5	39.1	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1444.1	284.9	150.0	2176.1	215.7	119.8	Fair
1055	MH	150+000	252+000	189+100	RHS	Inner		40	0.4102	0.2575	0.1459	0.0797	0.0575	0.0412	0.0256	37.1	39.6	43.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1262.4	150.2	149.9	1902.3	104.2	119.8	Fair
1056	MH	150+000	252+000	188+850	RHS	Inner	T-33.2/42.1	40	0.4461	0.2609	0.1456	0.0965	0.0608	0.0425	0.0219	36.1	39.1	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	150.7	150.0	1312.7	104.6	119.8	Fair
1057	MH	150+000	252+000	188+600	RHS	Inner		40	0.4864	0.2936	0.1627	0.0942	0.0748	0.0493	0.0297	36.2	38.9	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.0	146.2	1043.4	104.0	116.6	Fair
1058	MH	150+000	252+000	188+350	RHS	Inner		40	0.393	0.2263	0.1442	0.0847	0.0533	0.0309	0.0255	36.0	38.6	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1308.6	154.2	150.0	1832.2	107.7	119.8	Fair
1059	MH	150+000	252+000	188+100	RHS	Inner		40	0.3491	0.2176	0.1329	0.0714	0.0522	0.0425	0.0324	35.8	38.0	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	162.2	150.0	2098.6	114.6	119.8	Fair
1060	MH	150+000	252+000	187+850	RHS	Inner		40	0.487	0.2836	0.1427	0.0676	0.0392	0.0355	0.032	36.2	38.6	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.5	149.5	873.2	104.5	119.4	Fair
1061	MH	150+000	252+000	187+600	RHS	Inner		40	0.2904	0.194	0.1129	0.055	0.0306	0.0268	0.0241	36.4	38.3	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	173.9	150.0	2092.6	124.6	119.8	Good
1062	MH	150+000	252+000	187+350	RHS	Inner		40	0.1907	0.1281	0.0841	0.0506	0.0372	0.0278	0.0195	36.0	38.0	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	394.9	150.0	2062.5	298.7	119.8	Good
1063	MH	150+000	252+000	187+100	RHS	Inner		40	0.3794	0.2246	0.1246	0.0692	0.0551	0.0449	0.0378	36.0	38.2	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1141.9	174.4	150.0	1598.8	125.0	119.8	Fair
1064	MH	150+000	252+000	186+850	RHS	Inner		40	0.268	0.1681	0.0997	0.0564	0.036	0.0283	0.0254	35.6	38.1	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	291.3	150.0	2098.6	220.7	119.8	Fair
1065	MH	150+000	252+000	186+600	RHS	Inner		40	0.3579	0.2275	0.1286	0.07	0.051	0.0438	0.0335	35.4	37.3	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1335.5	153.2	150.0	1869.8	106.8	119.8	Good
1066	MH	150+000	252+000	186+350	RHS	Inner		40	0.5538	0.3435	0.1706	0.1139	0.0738	0.0434	0.021	35.3	37.6	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	505.4	150.0	149.2	707.6	104.0	119.2	Fair
1067	MH	150+000	252+000	186+100	RHS	Inner		40	0.4872	0.3248	0.179	0.1054	0.0743	0.0515	0.0425	34.9	37.9	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	775.3	150.0	125.5	1085.5	104.0	98.9	Fair
1068	MH	150+000	252+000	185+850	RHS	Inner		40	0.2781	0.1927	0.1152	0.0726	0.0432	0.0336	0.0279	34.8	37.6	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	219.9	150.0	2083.6	163.3	119.8	Fair
1069	MH	150+000	252+000	185+600	RHS	Inner		40	0.3686	0.2187	0.1116	0.0732	0.0551	0.0424	0.0329	34.2	36.6	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1198.9	184.5	150.0	1678.6	133.6	119.8	Fair
1070	MH	150+000	252+000	185+350	RHS	Inner		40	0.5054	0.3232	0.1894	0.122	0.0764	0.0595	0.0523	34.7	37.2	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	767.7	150.2	110.1	1074.9	104.2	85.7	Fair
1071	MH	150+000	252+000	185+100	RHS	Inner		40	0.5892	0.373	0.2033	0.1123	0.0821	0.0624	0.0492	34.9	37.3	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	472.0	150.0	107.4	660.8	104.0	83.4	Fair
1072	MH	150+000	252+000	184+850	RHS	Inner		40	0.3455	0.182	0.1041	0.0716	0.0482	0.0366	0.0314	34.8	37.2	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	983.9	237.0	150.0	1377.6	177.3	119.8	Good
1073	MH	150+000	252+000	184+600	RHS	Inner		40	0.2377	0.1393	0.0862	0.0664	0.0463	0.0323	0.0239	34.9	36.2	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	390.2	150.0	2006.8	295.3	119.8	Good
1074	MH	150+000	252+000	184+350	RHS	Inner		40	0.4711	0.2964	0.1651	0.0868	0.061	0.0484	0.0395	34.7	36.7	42.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	761.3	150.0	139.1	1065.9	104.0	110.5	Fair
1075	MH	150+000	252+000	184+100	RHS	Inner	T-32/42.2	40	0.4189	0.2604	0.1504	0.0804	0.053	0.0426	0.0352	34.7	37.4	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1098.9	150.2	149.8	1546.5	104.2	119.7	Fair
1076	MH	150+000	252+000	183+850	RHS	Inner		40	0.3735	0.2307	0.1339	0.0797	0.0597	0.0517	0.0457	35.0	36.7	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1267.7	171.7	143.4	1784.1	122.7	114.2	Good
1077	MH	150+000	252+000	183+600	RHS	Inner		40	0.5093	0.3153	0.2076	0.1245	0.0926	0.0654	0.0465	35.0	36.8	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	847.3	150.5	107.0	1192.4	104.5	83.1	Fair
1078	MH	150+000	252+000	183+350	RHS	Inner		40	0.1813	0.1058	0.07	0.0431	0.0337	0.0242	0.0188	35.0	36.9	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	390.5	149.9	2109.5	295.5	119.8	Good
1079	MH	150+000	252+000	183+100	RHS	Inner		40	0.1894	0.1216	0.0853	0.0519	0.036	0.0264	0.0238	35.0	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	397.3	150.0	2085.2	300.4	119.8	Good
1080	MH	150+000	252+000	182+850	RHS	Inner		40	0.3087	0.1774	0.1126	0.0828	0.0625	0.042	0.0273	34.8	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	244.8	150.0	2074.7	183.6	119.8	Good
1081	MH	150+000	252+000	182+600	RHS	Inner		40	0.3835	0.231	0.1252	0.0719	0.0529	0.04	0.034	34.7	36.3	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	154.2	150.0	1711.5	107.7	119.8	Good
1082	MH	150+000	252+000	182+350	RHS	Inner		40	0.3333	0.1958	0.117	0.0615	0.0509	0.0419	0.0303	34.7	36.4	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1223.7	218.2	150.0	1722.2	161.9	119.8	Good
1083	MH	150+000	252+000	182+100	RHS	Inner		40	0.2226	0.1519	0.0975	0.0604	0.0421	0.0293	0.0223	34.7	36.0	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	383.1	149.9	2092.8	290.1	119.8	Good
1084	MH	150+000	252+000	181+850	RHS	Inner		40	0.4742	0.2974	0.1685	0.1078	0.0684	0.0507	0.0467	34.6	36.3	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	889.2	150.2	125.0	1251.4	104.2	98.5	Good
1085	MH	150+000	252+000	181+600	RHS	Inner		40	0.4526	0.2834	0.1749	0.0959	0.0727	0.0562	0.0343	34.5	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	932.3	150.2	135.3	1312.1	104.2	107.3	Fair
1086	MH	150+000	252+000	181+330	RHS	Inner		40	0.2386	0.1471	0.0885	0.0591	0.0392	0.029	0.0244	34.5	36.6	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	380.4	150.0	2070.2	288.2	119.8	Good
1087	MH	150+000	252+000	181+100	RHS	Inner		40	0.3604	0.2052	0.096	0.0562	0.0316	0.02	0.0172	34.5	36.4	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	150.0	150.0	1383.1	104.0	119.8	Good
1088	MH	150+000	252+000	180+850	RHS	Inner		40	0.5573	0.3299	0.159	0.0795	0.0536	0.0441	0.0287	34.4	36.6	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.0	149.8	690.0	104.0	119.7	Good
1089	MH	150+000	252+000	180+350	RHS	Inner		40	0.4039	0.2295	0.1318	0.084	0.0547	0.034	0.0198	34.6	36.3	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	152.2	149.9	1821.9	105.9	119.8	Good
1090	MH	150+000	252+000	180+100	RHS	Inner		40	0.3844	0.2126	0.1238	0.0796	0.0482	0.0328	0.0218	34.5	36.1	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1297.8	151.0	150.0	1826.4	104.9	119.8	Good
1091	MH	150+000	252+000	179+850	RHS	Inner		40	0.405	0.2454	0.1456	0.1114	0.0884	0.0645	0.0381	34.6	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	150.5	125.1	2109.5	104.5	98.5	Good
1092	MH	150+000	252+000	179+630	RHS	Inner		40	0.1408	0.1068	0.0805	0.0633	0.0497	0.0321	0.0206	34.7	36.1	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	395.4	149.8	2089.7	299.1	119.7	Good
1094	MH	150+000	252+000	179+050	RHS	Inner	T-29.8/39.3	40	0.2251	0.1472	0.0895	0.0575	0.0423	0.0321	0.0289	32.9	35.3	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	398.8	150.0	1767.4	301.5	119.8	Good
1095	MH	150+000	252+000	178+850	RHS	Inner		40	0.2499	0.1627	0.1105	0.0703	0.0526	0.04	0.0304	32.8	33.8	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	358.9	150.0	1822.4	272.3	119.8	Good
1096	MH	150+000	252+000	178+600	RHS	Inner		40	0.3294	0.1972	0.1095	0.0589	0.0393	0.0265	0.0248	32.6	33.8	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1250.5	176.4	150.0	1523.7	126.7	119.8	Good
1097	MH	150+000	252+000	178+350	RHS	Inner		40	0.2315	0.1844	0.1219	0.0748	0.0428	0.0325	0.0248	32.5	33.6	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	283.7	149.9	1825.0	214.8	119.8	Good
1098	MH	150+000	252+000	178+100	RHS	Inner		40	0.4315	0.2734	0.1593	0.1021	0.0685	0.0534	0.0383	32.4	33.8	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1144.1	150.0	133.0	1394.0	104.0	105.3	Good
1099	MH	150+000	252+000	177+830	RHS	Inner		40	0.344	0.22	0.1317	0.0783	0.0462	0.0361	0.0327	32.2	33.6	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	151.0	149.9	1800.1	104.9	119.8	Good
1100	MH	150+000	252+000	177+600	RHS	Inner		40	0.4481	0.2933	0.1715	0.1018	0.0758	0.0577	0.0378	32.4	34.1	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	976.3	150.0	126.2	1189.6	104.0	99.5	Good
1101	MH	150+000	252+000	177+350	RHS	Inner		40	0.4317	0.2702	0.1472	0.0973	0.0601	0.0402	0.0255	32.5	34.1	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1037.6	152.2	150.0	1264.3	105.9	119.8	Good
1102	MH	150+000	252+000	177+100	RHS	Inner		40	0.4726	0.2843	0.1709	0.1096	0.0682	0.0517	0.0346	32.5	34.1	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	876.3	150.0	135.0	1067.7	104.0	107.0	Fair
1103	MH	150+000	252+000	176+850	RHS	Inner		40	0.4704	0.2903	0.1765	0.1168	0.0889	0.0614	0.0455	32.4	33.6	39.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	948.4	150.5	113.0	1155.6	104.5	88.2	Fair
1104	MH	150+000	252+000	176+600	RHS	Inner	T-28.5/37.5	40	0.447	0.2709	0.157	0.0822	0.0546	0.0342	0.0253	31.4	33.6	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	817.2	150.0	149.8	817.2	104.0	119.7	Poor
1105	MH	150+000	252+000	176+350	RHS	Inner		40	0.4925	0.3265	0.1681	0.0917	0.0621	0.0398	0.029	31.4	33.1	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	676.3	150.5	149.3	676.3	104.5	119.3	Poor
1106	MH	150+000	252+000	176+100	RHS	Inner		40	0.3186	0.2033	0.1219	0.0684	0.0421	0.0356	0.032	31.3	33.0	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	181.3	150.0	1482.8	130.9	119.8	Poor
1107	MH	150+000	252+000	175+850	RHS	Inner		40	0.4575	0.2959	0.1651	0.0914	0.0561	0.0354	0.0209	31.2	32.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	864.5	150.7	149.6	864.5	104.6	119.5	Poor
1108	MH	150+000	252+000	175+600	RHS	Inner		40	0.4122	0.2653	0.1471	0.0805	0.056	0.0482	0.0323	31.2	32.5	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1038.7	150.5	149.6	1038.7	104.5	119.5	Poor
1109	MH	150+000	252+000	175+350	RHS	Inner		40	0.4858	0.2932	0.1921	0.1067	0.0691	0.0417	0.0283	31.2	32.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	874.2	150.0	149.4	978.7	104.0	119.3	Fair
1110	MH	150+000	252+000	175+100	RHS	Inner		40	0.5459	0.34	0.1963	0.1063	0.0727	0.0525	0.0405	31.2	33.3	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	500.0	150.7	124.0	559.8	104.6	97.6	Fair
1111	MH	150+000	252+000	174+830	RHS	Inner		40	0.3845	0.2414	0.1463	0.0971	0.0662	0.0489	0.0375	31.2	33.0	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	150.2	140.3	1629.9	104.2	111.6	Fair
1112	MH	150+000	252+000	174+600	RHS	Inner		40	0.4853	0.305	0.1749	0.097	0.0642	0.0416	0.0236	31.2	32.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	152.0	149.7	881.2	105.8	119.6	Good
1113	MH	150+000	252+000	174+350	RHS	Inner		40	0.4803	0.3061	0.1569	0.0977	0.057	0.0374	0.024	31.3	32.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.7	150.0	698.2	104.6	119.8	Good
1114	MH	150+000	252+000	174+100	RHS	Inner		40	0.267	0.1601	0.0983	0.0627	0.0436	0.03	0.027	31.3	33.1	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	315.2	150.0	1675.7	239.3	119.8	Fair
1115	MH	150+000	252+000	173+850	RHS	Inner		40	0.228	0.1401	0.0944	0.0692	0.0521	0.0377	0.0282	31.2	32.9	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1424.7	398.8	150.0	1595.0	301.5	119.8	Fair
1116	MH	150+000	252+000	173+600	RHS	Inner		40	0.1821	0.1272	0.09	0.0629	0.0447	0.0332	0.0299	31.3	32.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	398.0	150.0	1654.0	300.9	119.8	Good
1117	MH	150+000	252+000	173+240	RHS	Inner		40	0.3053	0.1962	0.1239	0.0795	0.0501	0.0394	0.0354	31.7	33.8	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	209.4	150.0	1667.2	154.5	119.8	Fair
1118	MH	150+000	252+000	173+100	RHS	Inner		40	0.5262	0.3285	0.1747	0.1027	0.068	0.038	0.0236	31.7	33.7	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	603.2	151.7	150.0	675.3	105.5	119.8	Fair
1119	MH	150+000	252+000	172+850	RHS	Inner		40	0.3709	0.2438	0.1451	0.0949	0.0607	0.0413	0.0371	31.7	33.6	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	150.5	149.4	1622.7	104.5	119.3	Fair
1120	MH	150+000	252+000	172+600	RHS	Inner		40	0.3034	0.1853	0.0984	0.0706	0.0501	0.0422	0.0337	31.7	33.3	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1197.8	291.5	150.0	1340.9	220.9	119.8	Good
1121	MH	150+000	252+000	172+350	RHS	Inner		40	0.4737	0.2814	0.164	0.1058	0.0675	0.0475	0.0335	31.7	33.2	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	943.0	150.0	141.6	1055.7	104.0	112.7	Good
1122	MH	150+000	252+000	172+100	RHS	Inner		40	0.4579	0.2899	0.1521	0.0979	0.059	0.0433	0.0317	31.4	33.1	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.5	149.6	1091.8	104.5	119.5	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1123	MH	150+000	252+000	171+840	RHS	Inner		40	0.2883	0.1834	0.1138	0.0606	0.0451	0.0339	0.0305	30.9	32.6	37.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1378.5	248.5	150.0	1543.2	186.6	119.8	Good
1124	MH	150+000	252+000	171+600	RHS	Inner	T-28/37.8	40	0.4371	0.2782	0.1661	0.0892	0.0608	0.0422	0.0379	31.2	32.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	921.5	150.0	145.8	1046.1	104.0	116.3	Good
1125	MH	150+000	252+000	171+350	RHS	Inner		40	0.3882	0.2329	0.1465	0.0933	0.0576	0.0417	0.0375	30.9	32.4	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1395.7	150.5	149.5	1584.4	104.5	119.4	Good
1126	MH	150+000	252+000	171+100	RHS	Inner		40	0.3693	0.2406	0.1479	0.0972	0.0762	0.0534	0.0408	30.9	31.6	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	151.2	132.0	1694.2	105.1	104.5	Good
1127	MH	150+000	252+000	170+800	RHS	Inner		40	0.3694	0.1878	0.1123	0.0728	0.0604	0.0479	0.0431	30.8	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	768.8	268.5	149.7	872.7	202.7	119.6	Good
1128	MH	150+000	252+000	170+600	RHS	Inner		40	0.4909	0.3131	0.1714	0.0935	0.0533	0.0425	0.0383	30.5	32.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	672.0	150.2	147.2	762.8	104.2	117.5	Fair
1129	MH	150+000	252+000	170+350	RHS	Inner		40	0.4578	0.2964	0.1707	0.1169	0.0806	0.0594	0.0446	30.5	32.5	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	991.4	150.0	117.2	1125.4	104.0	91.8	Good
1130	MH	150+000	252+000	170+100	RHS	Inner		40	0.5546	0.3251	0.1721	0.0934	0.066	0.047	0.0275	30.5	32.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	498.9	150.5	149.5	566.3	104.5	119.4	Good
1131	MH	150+000	252+000	169+850	RHS	Inner		40	0.5285	0.3186	0.188	0.0986	0.0641	0.0448	0.031	30.6	32.1	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	578.5	150.0	147.8	656.7	104.0	118.0	Good
1132	MH	150+000	252+000	169+600	RHS	Inner		40	0.323	0.2052	0.1058	0.0767	0.0577	0.0352	0.019	30.5	32.3	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	158.6	150.0	1680.7	111.5	119.8	Fair
1133	MH	150+000	252+000	169+350	RHS	Inner		40	0.4479	0.2932	0.1688	0.1071	0.0721	0.0465	0.0349	30.5	32.5	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	951.6	150.2	136.8	1080.2	104.2	108.6	Fair
1134	MH	150+000	252+000	169+100	RHS	Inner		40	0.3932	0.2403	0.1235	0.0879	0.059	0.0395	0.0268	30.6	32.1	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1288.2	151.0	150.0	1462.3	104.9	119.8	Fair
1135	MH	150+000	252+000	168+835	RHS	Inner		40	0.4618	0.2658	0.1516	0.1149	0.0887	0.0517	0.0279	30.6	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	914.0	150.5	147.1	1037.5	104.5	117.4	Fair
1136	MH	150+000	252+000	168+600	RHS	Inner		40	0.3281	0.1968	0.1036	0.0707	0.0487	0.0376	0.0301	30.5	31.9	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1317.2	223.3	150.0	1495.2	166.1	119.8	Fair
1137	MH	150+000	252+000	168+350	RHS	Inner		40	0.3288	0.1943	0.1364	0.0848	0.0584	0.0369	0.0217	30.4	31.5	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	170.3	149.9	1702.8	121.5	119.8	Fair
1138	MH	150+000	252+000	168+100	RHS	Inner		40	0.4711	0.2932	0.1549	0.0888	0.0582	0.0427	0.0384	30.1	31.7	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	150.0	146.7	924.0	104.0	117.0	Fair
1139	MH	150+000	252+000	167+850	RHS	Inner		40	0.4507	0.2762	0.1464	0.0875	0.0592	0.0467	0.042	30.0	31.6	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	923.7	150.5	143.0	1048.6	104.5	113.9	Good
1140	MH	150+000	252+000	167+505	RHS	Inner		40	0.3558	0.2277	0.1327	0.0913	0.0666	0.0504	0.0338	30.1	31.2	37.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	155.1	149.0	1697.9	108.4	119.0	Good
1141	MH	150+000	252+000	167+380	RHS	Inner	T-28.3/35.9	40	0.4555	0.2709	0.1636	0.1128	0.0798	0.0584	0.0442	29.5	31.3	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.2	119.5	1015.2	104.2	93.8	Good
1142	MH	150+000	252+000	167+070	RHS	Inner		40	0.4369	0.3043	0.1909	0.1211	0.0731	0.0529	0.0394	30.0	31.9	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1104.3	150.7	124.7	1149.5	104.6	98.2	Good
1143	MH	150+000	252+000	166+800	RHS	Inner		40	0.326	0.2181	0.1392	0.1028	0.0763	0.061	0.0512	30.5	31.7	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	256.3	118.7	1502.0	192.9	93.1	Good
1144	MH	150+000	252+000	166+600	RHS	Inner		40	0.3514	0.2373	0.1261	0.0668	0.0429	0.0264	0.0159	30.3	32.0	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	150.7	150.0	1486.4	104.6	119.8	Good
1145	MH	150+000	252+000	166+350	RHS	Inner		40	0.4639	0.2896	0.1505	0.0983	0.0637	0.0399	0.035	30.8	32.4	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	150.0	149.7	847.3	104.0	119.6	Good
1146	MH	150+000	252+000	166+100	RHS	Inner		40	0.3959	0.2532	0.1454	0.0916	0.057	0.0377	0.0308	31.1	32.8	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1306.5	150.2	149.9	1359.9	104.2	119.8	Good
1147	MH	150+000	252+000	165+850	RHS	Inner		40	0.2415	0.1788	0.1131	0.0822	0.0598	0.0449	0.0404	31.1	32.6	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	374.1	150.0	1561.3	283.6	119.8	Good
1148	MH	150+000	252+000	165+600	RHS	Inner		40	0.4685	0.2904	0.1588	0.1106	0.0813	0.0604	0.0488	31.2	32.7	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	930.1	152.2	114.4	968.1	105.9	89.4	Good
1149	MH	150+000	252+000	165+350	RHS	Inner		40	0.512	0.3125	0.1788	0.1128	0.0822	0.0494	0.0301	31.2	32.6	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	725.8	150.0	138.0	755.5	104.0	109.6	Good
1150	MH	150+000	252+000	165+100	RHS	Inner		40	0.4268	0.2642	0.1518	0.1047	0.0715	0.0499	0.0389	31.2	32.1	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1219.4	150.2	134.3	1269.3	104.2	106.4	Fair
1151	MH	150+000	252+000	164+800	RHS	Inner		40	0.484	0.2926	0.1667	0.1046	0.0791	0.051	0.0307	31.3	31.1	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	832.3	150.0	140.4	866.3	104.0	111.6	Fair
1152	MH	150+000	252+000	164+600	RHS	Inner		40	0.4147	0.2665	0.1396	0.1007	0.0711	0.0581	0.0377	31.1	30.8	35.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1257.0	150.0	133.0	1308.4	104.0	105.3	Good
1153	MH	150+000	252+000	164+350	RHS	Inner	T-27.8/35.8	40	0.4633	0.2952	0.1661	0.0838	0.0518	0.0433	0.039	30.8	31.5	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	791.4	150.0	149.7	820.1	104.0	119.6	Good
1154	MH	150+000	252+000	164+100	RHS	Inner		40	0.5306	0.3216	0.1815	0.1241	0.0853	0.0547	0.0344	30.6	31.0	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.0	127.7	646.3	104.0	100.8	Fair
1155	MH	150+000	252+000	163+850	RHS	Inner		40	0.4008	0.2495	0.1494	0.0918	0.0565	0.0319	0.0227	30.7	31.4	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	151.0	150.0	1285.9	104.9	119.8	Fair
1156	MH	150+000	252+000	163+630	RHS	Inner		40	0.4874	0.2669	0.1539	0.0732	0.0475	0.0299	0.0269	30.7	31.4	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	595.7	152.7	150.0	617.3	106.4	119.8	Fair
1157	MH	150+000	252+000	163+350	RHS	Inner		40	0.5614	0.3498	0.162	0.0928	0.0722	0.0469	0.0412	30.7	30.8	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.0	132.5	521.4	104.0	104.9	Fair
1158	MH	150+000	252+000	163+120	RHS	Inner		40	0.4636	0.3002	0.1627	0.1047	0.0662	0.0343	0.0131	30.6	31.3	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	973.1	151.7	150.0	1008.4	105.5	119.8	Fair
1159	MH	150+000	252+000	162+100	RHS	Inner		40	0.2949	0.1903	0.119	0.0823	0.0594	0.0427	0.0328	30.8	31.3	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	239.2	149.9	1502.0	179.1	119.8	Good
1160	MH	150+000	252+000	161+850	RHS	Inner		40	0.3701	0.2352	0.1279	0.0882	0.0607	0.0451	0.0305	30.7	31.5	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	151.5	149.9	1504.2	105.3	119.8	Fair
1161	MH	150+000	252+000	161+600	RHS	Inner		40	0.3325	0.2195	0.1226	0.0822	0.0577	0.0369	0.0215	30.6	31.4	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	152.2	150.0	1548.8	105.9	119.8	Good
1162	MH	150+000	252+000	161+350	RHS	Inner		40	0.4263	0.2512	0.1636	0.0969	0.0651	0.0429	0.0297	30.7	31.5	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.2	148.9	1246.8	104.2	118.9	Good
1163	MH	150+000	252+000	161+100	RHS	Inner		40	0.2576	0.1694	0.1031	0.0535	0.034	0.0211	0.0131	30.7	31.1	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	161.5	150.0	1551.0	114.0	119.8	Good
1164	MH	150+000	252+000	160+850	RHS	Inner		40	0.3547	0.2377	0.13	0.0793	0.047	0.0316	0.0284	30.6	31.2	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1422.6	151.7	150.0	1474.1	105.5	119.8	Good
1165	MH	150+000	252+000	160+550	RHS	Inner		40	0.4012	0.2344	0.137	0.09	0.0581	0.0422	0.0281	30.8	32.5	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	150.2	150.0	1281.4	104.2	119.8	Good
1166	MH	150+000	252+000	160+350	RHS	Inner		40	0.4243	0.2533	0.1294	0.0738	0.0561	0.0446	0.0402	30.9	31.3	35.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	152.2	149.8	918.1	105.9	119.7	Fair
1167	MH	150+000	252+000	160+100	RHS	Inner	T-26.8/33.9	40	0.364	0.2141	0.1281	0.085	0.054	0.0411	0.0322	30.4	31.1	33.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1422.6	158.6	150.0	1355.6	111.5	119.8	Fair
1168	MH	150+000	252+000	159+850	RHS	Inner		40	0.3916	0.2463	0.1454	0.086	0.0457	0.0353	0.0281	30.4	30.5	33.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1180.6	150.2	150.0	1125.0	104.2	119.8	Good
1169	MH	150+000	252+000	159+600	RHS	Inner		40	0.2247	0.1546	0.09	0.0538	0.0299	0.0202	0.0181	30.0	30.2	33.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	255.8	150.0	1379.2	192.5	119.8	Good
1170	MH	150+000	252+000	159+350	RHS	Inner		40	0.3063	0.207	0.1178	0.0724	0.0384	0.0248	0.0148	30.1	30.0	33.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	152.7	150.0	1389.5	106.4	119.8	Good
1171	MH	150+000	252+000	159+020	RHS	Inner	T-24.2/32.3	40	0.4053	0.2251	0.1401	0.079	0.0486	0.0277	0.0191	25.9	27.3	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	151.2	149.9	1072.2	105.1	119.8	Fair
1172	MH	150+000	252+000	158+800	RHS	Inner		40	0.4269	0.2608	0.1381	0.0754	0.0339	0.0206	0.0118	26.0	26.8	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1209.7	153.2	150.0	1076.0	106.8	119.8	Fair
1173	MH	150+000	252+000	158+625	RHS	Inner		40	0.5189	0.3069	0.1611	0.0924	0.0677	0.0493	0.0282	25.9	27.0	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.2	148.7	447.6	104.2	118.7	Fair
1174	MH	150+000	252+000	158+350	RHS	Inner		40	0.5374	0.3008	0.1879	0.1204	0.0728	0.0511	0.0311	26.0	27.2	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	598.9	150.2	138.0	532.7	104.2	109.6	Fair
1175	MH	150+000	252+000	158+100	RHS	Inner		40	0.4563	0.2894	0.171	0.0819	0.0619	0.0487	0.0318	26.1	27.2	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	841.9	150.0	147.8	748.9	104.0	118.0	Fair
1176	MH	150+000	252+000	157+850	RHS	Inner		40	0.5097	0.2789	0.1548	0.0852	0.0608	0.0453	0.029	26.1	27.6	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	693.5	150.0	150.0	616.9	104.0	119.8	Fair
1177	MH	150+000	252+000	157+600	RHS	Inner		40	0.4674	0.2996	0.1844	0.1034	0.0739	0.048	0.0249	26.4	27.8	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	857.0	150.0	149.1	762.3	104.0	119.1	Fair
1178	MH	150+000	252+000	157+400	RHS	Inner		40	0.176	0.1235	0.0891	0.0649	0.0491	0.0354	0.0255	26.6	27.7	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	398.5	149.8	1309.4	301.3	119.7	Fair
1179	MH	150+000	252+000	157+100	RHS	Inner		40	0.1254	0.0892	0.0584	0.036	0.0238	0.017	0.0152	26.8	28.7	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.3	149.9	1333.3	300.4	119.8	Fair
1180	MH	150+000	252+000	156+850	RHS	Inner		40	0.2222	0.1579	0.1115	0.0645	0.0323	0.0197	0.0117	27.2	28.8	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	167.6	150.0	1323.8	119.2	119.8	Fair
1181	MH	150+000	252+000	156+600	RHS	Inner		40	0.1421	0.1066	0.0712	0.0482	0.0351	0.0259	0.0233	27.2	29.0	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	399.5	149.7	1287.4	302.0	119.6	Fair
1182	MH	150+000	252+000	156+350	RHS	Inner		40	0.1939	0.1553	0.1129	0.0852	0.0552	0.0342	0.025	27.4	29.3	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	392.9	149.8	1332.3	297.3	119.7	Fair
1183	MH	150+000	252+000	156+100	RHS	Inner		40	0.1449	0.1042	0.0786	0.0598	0.0387	0.0226	0.0112	27.6	29.9	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	388.5	150.0	1327.6	294.1	119.8	Fair
1184	MH	150+000	252+000	155+850	RHS	Inner		40	0.2464	0.1534	0.1074	0.0821	0.0646	0.0428	0.0274	27.7	29.7	32.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	354.8	150.0	1328.5	269.3	119.8	Fair
1185	MH	150+000	252+000	155+600	RHS	Inner	T-26.6/33.4	40	0.2967	0.2018	0.1402	0.0856	0.0519	0.0384	0.0236	27.6	29.9	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	167.8	150.0	1375.7	119.4	119.8	Fair
1186	MH	150+000	252+000	155+350	RHS	Inner		40	0.2298	0.1612	0.1273	0.0896	0.0639	0.0369	0.0185	27.8	29.9	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	265.3	150.0	1394.7	200.2	119.8	Fair
1187	MH	150+000	252+000	155+100	RHS	Inner		40	0.2401	0.1649	0.107	0.0723	0.047	0.0268	0.0119	28.0	29.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	167.1	149.9	1385.7	118.8	119.8	Fair
1188	MH	150+000	252+000	154+850	RHS	Inner		40	0.1634	0.1174	0.0691	0.0423	0.0252	0.0165	0.0098	28.0	30.2	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	296.9	150.0	1397.7	225.1	119.8	Fair
1189	MH	150+000	252+000	154+600	RHS	Inner		40	0.5281	0.35	0.1902	0.0972	0.069	0.0422	0.0258	28.0	30.2	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	558.1	151.0	150.0	520.4	104.9	119.8	Fair
1190	MH	150+000	252+000	154+350	RHS	Inner		40	0.4111	0.2466	0.1287	0.0828	0.048	0.0244	0.0189	28.3	30.4	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	153.4	149.9	1130.0	107.0	119.8	Fair
1191	MH	150+000	252+000	154+100	RHS	Inner		40	0.4828	0.2907	0.1638	0.1114	0.0738	0.054	0.0404	28.3	30.5	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	858.1	150.5	124.3	800.2	104.5	97.9	Good
1192	MH	150+000	252+000	153+850	RHS	Inner		40	0.304	0.1878	0.1168	0.0757	0.0561	0.0423	0.0388	28.6	31.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1425.8	262.9	149.9	1329.5	198.2	119.8	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1193	MH	150+000	252+000	153+600	RHS	Inner		40	0.3732	0.2162	0.1265	0.0846	0.0657	0.0494	0.0383	28.8	31.3	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1234.4	186.9	145.8	1151.1	135.7	116.3	Good
1194	MH	150+000	252+000	153+350	RHS	Inner		40	0.3027	0.1895	0.1179	0.0831	0.0636	0.037	0.0319	28.7	30.8	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	220.1	149.9	1395.8	163.4	119.8	Fair
1195	MH	150+000	252+000	153+100	RHS	Inner		40	0.3734	0.2401	0.1348	0.0842	0.0515	0.0361	0.0325	28.6	30.9	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1251.6	152.0	149.8	1167.1	105.8	119.7	Fair
1196	MH	150+000	252+000	152+830	RHS	Inner		40	0.3603	0.2419	0.1265	0.0768	0.0432	0.0336	0.0266	28.7	31.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	151.7	150.0	1187.2	105.5	119.8	Fair
1197	MH	150+000	252+000	152+600	RHS	Inner		40	0.1365	0.1039	0.0818	0.0661	0.0493	0.0378	0.0218	28.8	31.7	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	398.3	150.0	1382.7	301.1	119.8	Fair
1198	MH	150+000	252+000	152+220	RHS	Inner		40	0.2348	0.1533	0.1045	0.0784	0.0656	0.0423	0.0187	29.1	31.5	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	334.8	150.0	1397.7	254.3	119.8	Fair
1199	MH	150+000	252+000	152+100	RHS	Inner		40	0.2738	0.1866	0.1261	0.0906	0.0528	0.0325	0.0292	28.9	31.3	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	249.2	150.0	1397.7	187.2	119.8	Fair
1200	MH	150+000	252+000	151+850	RHS	Inner		40	0.3999	0.2701	0.1649	0.1044	0.0544	0.0395	0.0289	28.9	31.4	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1191.4	151.5	150.0	1111.0	105.3	119.8	Good
1201	MH	150+000	252+000	151+600	RHS	Inner		40	0.18	0.1406	0.1008	0.0747	0.0489	0.0315	0.0158	28.7	31.9	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	394.1	150.0	1347.6	298.1	119.8	Good
1202	MH	150+000	252+000	151+350	RHS	Inner		40	0.5493	0.3221	0.1888	0.1282	0.0894	0.0638	0.0375	28.8	31.7	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	597.8	151.0	116.3	557.4	104.9	91.0	Fair
1203	MH	150+000	252+000	151+100	RHS	Inner		40	0.5216	0.3271	0.1791	0.1078	0.0584	0.0351	0.0183	28.7	30.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	152.4	149.9	469.2	106.1	119.8	Fair
1204	MH	150+000	252+000	150+400	RHS	Inner		40	0.3534	0.2017	0.1315	0.0852	0.055	0.0403	0.0295	29.1	33.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	171.0	149.9	1385.7	122.1	119.8	Good
1205	MH	150+000	252+000	150+270	RHS	Inner		40	0.3608	0.1994	0.1002	0.0651	0.0425	0.0329	0.026	29.3	32.7	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	966.7	202.1	150.0	901.4	148.5	119.8	Good
1206	MH	150+000	252+000	150+080	RHS	Inner		40	0.3463	0.2059	0.1393	0.0942	0.0707	0.0533	0.0339	29.4	33.0	33.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	175.4	144.7	1393.7	125.9	115.3	Good
1207	MH	150+000	252+000	150+140	LHS	Inner	T-31.5/39.5	40	0.4192	0.249	0.1258	0.0869	0.0596	0.0463	0.0296	32.3	36.4	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	151.2	149.5	1209.1	105.1	119.4	Good
1208	MH	150+000	252+000	150+350	LHS	Inner		40	0.2342	0.154	0.099	0.0686	0.0486	0.0356	0.0272	32.6	38.0	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	388.5	150.0	1830.8	294.1	119.8	Good
1209	MH	150+000	252+000	150+950	LHS	Inner		40	0.2435	0.1752	0.1109	0.0658	0.0426	0.0257	0.0194	33.2	38.7	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	237.7	150.0	1833.4	177.9	119.8	Good
1210	MH	150+000	252+000	151+100	LHS	Inner		40	0.4133	0.2347	0.1373	0.09	0.0484	0.0336	0.0204	33.1	39.1	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	150.5	149.9	1482.9	104.5	119.8	Good
1211	MH	150+000	252+000	151+350	LHS	Inner		40	0.2876	0.1841	0.1187	0.0757	0.0514	0.0396	0.031	33.2	37.9	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	251.7	149.9	1830.8	189.2	119.8	Good
1212	MH	150+000	252+000	151+810	LHS	Inner		40	0.2786	0.2085	0.1478	0.0959	0.0599	0.0492	0.0418	33.2	38.0	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	236.3	141.6	1838.7	176.7	112.7	Good
1213	MH	150+000	252+000	151+950	LHS	Inner		40	0.2331	0.1647	0.112	0.0631	0.0351	0.0285	0.0239	33.2	39.0	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	307.9	150.0	1841.4	233.7	119.8	Good
1214	MH	150+000	252+000	152+100	LHS	Inner		40	0.4396	0.2784	0.1624	0.0914	0.0542	0.0319	0.0108	33.1	38.8	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	150.0	150.0	1767.3	104.0	119.8	Good
1215	MH	150+000	252+000	152+400	LHS	Inner		40	0.3206	0.2012	0.1191	0.0711	0.0485	0.0326	0.0293	33.4	39.0	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1375.3	187.6	150.0	1691.9	136.2	119.8	Good
1216	MH	150+000	252+000	152+600	LHS	Inner		40	0.2552	0.1395	0.0862	0.0542	0.043	0.0285	0.0247	33.1	38.9	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	385.1	150.0	1799.1	291.6	119.8	Good
1217	MH	150+000	252+000	152+850	LHS	Inner		40	0.1993	0.1497	0.1027	0.0664	0.0412	0.0316	0.0238	33.3	41.1	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	389.5	149.7	1840.0	294.8	119.6	Good
1218	MH	150+000	252+000	153+100	LHS	Inner		40	0.191	0.1243	0.0766	0.0571	0.0411	0.0295	0.0228	33.9	40.8	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	396.8	149.9	1805.6	300.1	119.8	Good
1219	MH	150+000	252+000	153+350	LHS	Inner		40	0.252	0.1516	0.0834	0.0556	0.0367	0.0228	0.0154	33.5	40.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	243.1	150.0	1826.8	182.3	119.8	Good
1220	MH	150+000	252+000	153+600	LHS	Inner		40	0.1705	0.1106	0.0719	0.046	0.0335	0.0299	0.0269	33.5	40.9	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	396.6	149.6	1793.8	299.9	119.5	Good
1221	MH	150+000	252+000	153+850	LHS	Inner		40	0.1486	0.1208	0.0947	0.0772	0.0543	0.0378	0.0307	33.5	41.2	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	394.4	150.0	1810.9	298.3	119.8	Good
1222	MH	150+000	252+000	154+100	LHS	Inner		40	0.1713	0.1079	0.0693	0.0497	0.0342	0.0232	0.0209	33.7	40.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	395.4	150.0	1824.2	299.1	119.8	Good
1223	MH	150+000	252+000	154+350	LHS	Inner		40	0.1417	0.1028	0.0691	0.0505	0.034	0.0226	0.0187	33.5	40.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	399.8	149.9	1814.9	302.2	119.8	Good
1224	MH	150+000	252+000	154+600	LHS	Inner	T-31.5/42.5	40	0.1802	0.1248	0.0841	0.0562	0.0443	0.0377	0.034	33.9	40.2	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.3	150.0	2094.9	301.1	119.8	Good
1225	MH	150+000	252+000	154+850	LHS	Inner		40	0.3321	0.1948	0.1392	0.1004	0.065	0.0415	0.022	33.9	41.7	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	153.4	149.9	2117.9	107.0	119.8	Good
1226	MH	150+000	252+000	155+100	LHS	Inner		40	0.3553	0.2149	0.1287	0.0921	0.0663	0.0474	0.0344	33.8	36.5	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	170.5	150.0	2117.9	121.7	119.8	Good
1227	MH	150+000	252+000	155+350	LHS	Inner		40	0.546	0.2816	0.1538	0.1136	0.0797	0.0552	0.043	33.3	41.4	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	506.5	150.0	121.7	724.0	104.0	95.6	Good
1228	MH	150+000	252+000	155+600	LHS	Inner		40	0.4193	0.2497	0.1421	0.0916	0.0639	0.0442	0.0309	33.3	41.0	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1159.1	151.2	149.8	1656.8	105.1	119.7	Good
1229	MH	150+000	252+000	155+850	LHS	Inner		40	0.2814	0.1691	0.102	0.0726	0.0572	0.0384	0.0272	33.2	41.7	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	292.7	150.0	2136.4	221.8	119.8	Good
1230	MH	150+000	252+000	156+100	LHS	Inner		40	0.2521	0.1552	0.1038	0.0713	0.0463	0.0353	0.0276	33.5	41.4	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	377.8	150.0	2087.2	286.3	119.8	Good
1231	MH	150+000	252+000	156+350	LHS	Inner		40	0.1599	0.1121	0.0678	0.0542	0.0448	0.038	0.0284	33.6	42.5	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	400.0	149.5	2128.6	302.4	119.4	Good
1232	MH	150+000	252+000	156+600	LHS	Inner		40	0.1512	0.1165	0.0844	0.0625	0.0494	0.0315	0.0216	33.6	42.3	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	399.8	149.6	2125.6	302.2	119.5	Good
1233	MH	150+000	252+000	156+850	LHS	Inner		40	0.2633	0.1462	0.101	0.0705	0.0462	0.0381	0.0343	33.5	43.2	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	391.9	150.0	2122.5	296.5	119.8	Good
1234	MH	150+000	252+000	157+100	LHS	Inner		40	0.3418	0.2125	0.1287	0.0961	0.0636	0.0409	0.0368	33.8	43.0	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	172.5	149.9	2131.8	123.4	119.8	Good
1235	MH	150+000	252+000	157+350	LHS	Inner		40	0.152	0.1143	0.0876	0.0693	0.052	0.033	0.0185	33.8	43.1	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	398.8	150.0	2140.9	301.5	119.8	Good
1236	MH	150+000	252+000	157+600	LHS	Inner		40	0.1953	0.1438	0.0938	0.0626	0.0414	0.0307	0.024	33.7	43.1	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	388.5	150.0	2134.8	294.1	119.8	Good
1237	MH	150+000	252+000	157+850	LHS	Inner		40	0.3432	0.1919	0.1272	0.0835	0.0507	0.0302	0.0168	33.7	42.9	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	150.7	150.0	2081.0	104.6	119.8	Good
1238	MH	150+000	252+000	158+100	LHS	Inner		40	0.3774	0.2266	0.1371	0.0913	0.0602	0.0402	0.025	33.9	43.3	42.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1416.1	150.2	150.0	2024.1	104.2	119.8	Good
1239	MH	150+000	252+000	158+350	LHS	Inner	t-30.8/42.3	40	0.3256	0.1902	0.1055	0.0704	0.0511	0.0335	0.0213	33.2	37.1	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	188.9	150.0	2009.3	137.3	119.8	Good
1240	MH	150+000	252+000	158+600	LHS	Inner		40	0.3769	0.2087	0.0985	0.0674	0.0462	0.0331	0.0241	33.2	36.3	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	967.7	181.5	150.0	1368.9	131.1	119.8	Good
1241	MH	150+000	252+000	158+850	LHS	Inner		40	0.4437	0.2646	0.1446	0.0971	0.0644	0.0443	0.0334	33.1	36.5	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	981.7	150.0	147.3	1388.7	104.0	117.5	Good
1242	MH	150+000	252+000	159+100	LHS	Inner		40	0.5271	0.3068	0.1497	0.0955	0.0682	0.0469	0.0265	33.1	37.1	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	567.7	150.0	148.7	803.1	104.0	118.7	Good
1243	MH	150+000	252+000	159+350	LHS	Inner		40	0.372	0.2461	0.1553	0.0906	0.0549	0.0325	0.0252	33.2	37.5	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1260.2	152.2	149.7	1782.7	105.9	119.6	Good
1244	MH	150+000	252+000	159+600	LHS	Inner		40	0.3946	0.2529	0.152	0.103	0.0635	0.043	0.0243	33.5	37.1	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	151.5	150.0	1756.8	105.3	119.8	Good
1245	MH	150+000	252+000	159+850	LHS	Inner		40	0.3638	0.2208	0.1336	0.0693	0.0444	0.033	0.0252	33.3	36.8	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1317.2	151.0	150.0	1863.3	104.9	119.8	Good
1246	MH	150+000	252+000	160+150	LHS	Inner		40	0.3442	0.2096	0.1243	0.0803	0.0603	0.0454	0.0275	33.0	36.7	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	170.8	150.0	2047.4	122.0	119.8	Good
1247	MH	150+000	252+000	160+350	LHS	Inner		40	0.3808	0.2322	0.129	0.0777	0.0601	0.037	0.0295	33.2	36.9	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1218.3	152.0	150.0	1723.4	105.8	119.8	Good
1248	MH	150+000	252+000	160+600	LHS	Inner		40	0.3858	0.2206	0.1117	0.063	0.0451	0.0357	0.0296	33.4	38.4	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	904.3	169.8	150.0	1279.2	121.1	119.8	Fair
1249	MH	150+000	252+000	160+850	LHS	Inner		40	0.3433	0.2143	0.1163	0.0677	0.0455	0.0355	0.0302	33.6	36.3	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1355.9	171.5	150.0	1918.1	122.6	119.8	Good
1250	MH	150+000	252+000	161+130	LHS	Inner		40	0.3597	0.228	0.1287	0.0659	0.0419	0.0346	0.0311	33.0	36.1	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1237.6	156.1	150.0	1750.7	109.3	119.8	Good
1251	MH	150+000	252+000	161+350	LHS	Inner		40	0.474	0.298	0.1648	0.0831	0.0631	0.0445	0.0299	32.9	36.5	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	747.3	150.7	149.9	1057.1	104.6	119.8	Good
1252	MH	150+000	252+000	161+600	LHS	Inner		40	0.3988	0.2422	0.142	0.0734	0.0491	0.0366	0.0305	33.0	36.7	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1278.5	151.0	150.0	1808.6	104.9	119.8	Good
1253	MH	150+000	252+000	161+850	LHS	Inner		40	0.4288	0.2708	0.1532	0.0882	0.0588	0.0399	0.0316	33.3	36.9	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1050.5	150.0	150.0	1486.1	104.0	119.8	Fair
1254	MH	150+000	252+000	162+100	LHS	Inner		40	0.4139	0.2383	0.1259	0.0701	0.054	0.0431	0.0354	33.7	36.0	42.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	150.0	149.9	1356.8	104.0	119.8	Fair
1255	MH	150+000	252+000	163+255	LHS	Inner	T-33.1/41.9	40	0.283	0.1727	0.0946	0.0533	0.0384	0.0309	0.0219	33.5	37.5	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	254.8	150.0	2077.2	191.7	119.8	Good
1256	MH	150+000	252+000	163+650	LHS	Inner		40	0.2736	0.1691	0.1007	0.0603	0.048	0.0341	0.0254	33.8	37.5	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	288.6	150.0	2035.5	218.6	119.8	Good
1257	MH	150+000	252+000	163+850	LHS	Inner		40	0.318	0.1874	0.1193	0.0735	0.0539	0.0397	0.0244	34.0	37.5	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	195.5	150.0	2054.9	142.9	119.8	Good
1258	MH	150+000	252+000	164+100	LHS	Inner		40	0.2735	0.1691	0.1047	0.0627	0.0471	0.0314	0.0249	34.0	37.6	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	296.1	150.0	1998.2	224.5	119.8	Good
1259	MH	150+000	252+000	164+350	LHS	Inner		40	0.2782	0.1782	0.1057	0.0694	0.0449	0.0327	0.0293	34.3	37.5	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	280.0	150.0	2069.7	211.8	119.8	Good
1260	MH	150+000	252+000	164+600	LHS	Inner		40	0.3836	0.2459	0.1502	0.0954	0.0563	0.0419	0.0324	34.3	37.4	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1384.9	152.2	150.0	1919.2	105.9	119.8	Good
1261	MH	150+000	252+000	164+850	LHS	Inner		40	0.4372	0.2619	0.1554	0.0971	0.0463	0.0309	0.021	34.2	37.4	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.5	150.0	1658.5	104.5	119.8	Good
1262	MH	150+000	252+000	165+150	LHS	Inner		40	0.3679	0.2179	0.1348	0.0731	0.0453	0.041	0.0342	34.3	36.6	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	163.0	150.0	1691.2	115.3	119.8	Good

Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			Pavement Condition
																				BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	
1263	MH	150+000	252+000	165+350	LHS	Inner		40	0.2613	0.1688	0.0945	0.0538	0.0242	0.0162	0.011	34.1	37.1	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1319.4	150.7	150.0	1828.4	104.6	119.8	Good
1264	MH	150+000	252+000	165+600	LHS	Inner		40	0.3134	0.1824	0.1004	0.0609	0.0336	0.0269	0.0218	34.3	37.3	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1352.7	186.4	150.0	1874.6	135.2	119.8	Good
1265	MH	150+000	252+000	165+850	LHS	Inner		40	0.1532	0.1079	0.0768	0.0527	0.0344	0.0226	0.0144	34.3	37.7	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	391.4	149.9	2072.7	296.2	119.8	Good
1266	MH	150+000	252+000	166+100	LHS	Inner		40	0.303	0.2111	0.1492	0.1072	0.0656	0.0365	0.0239	34.3	37.6	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	159.5	149.7	2066.8	112.2	119.6	Good
1267	MH	150+000	252+000	166+350	LHS	Inner		40	0.2256	0.1563	0.0963	0.0612	0.0373	0.0186	0.0098	34.3	37.6	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	152.0	149.9	2066.8	105.8	119.8	Good
1268	MH	150+000	252+000	166+600	LHS	Inner		40	0.2062	0.1213	0.0855	0.0619	0.0452	0.0336	0.0273	34.1	36.9	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	394.6	149.9	2069.7	298.5	119.8	Good
1269	MH	150+000	252+000	166+860	LHS	Inner		40	0.2841	0.1837	0.1135	0.0694	0.0519	0.046	0.0356	33.6	36.3	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	293.9	150.0	2033.9	222.8	119.8	Good
1270	MH	150+000	252+000	167+120	LHS	Inner		40	0.4153	0.2361	0.1405	0.0905	0.0572	0.041	0.0295	33.3	35.4	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1007.5	152.2	149.7	1396.2	105.9	119.6	Good
1271	MH	150+000	252+000	167+350	LHS	Inner		40	0.4724	0.2728	0.1498	0.0839	0.0637	0.0471	0.0408	32.7	36.1	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	722.6	150.2	141.3	1001.4	104.2	112.4	Good
1272	MH	150+000	252+000	167+700	LHS	Inner		40	0.4689	0.2751	0.1486	0.1005	0.0768	0.0513	0.0352	33.0	35.7	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	150.7	135.6	1227.8	104.6	107.5	Good
1273	MH	150+000	252+000	167+860	LHS	Inner		40	0.4397	0.2691	0.1602	0.1005	0.0762	0.0587	0.0426	32.8	36.3	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1119.4	150.5	125.3	1551.3	104.5	98.7	Good
1274	MH	150+000	252+000	168+100	LHS	Inner		40	0.5341	0.3255	0.1845	0.1276	0.0973	0.0764	0.0662	32.9	36.5	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	150.2	93.5	1090.8	104.2	71.5	Good
1275	MH	150+000	252+000	168+360	LHS	Inner		40	0.1749	0.104	0.0622	0.0348	0.0246	0.0178	0.016	33.0	36.8	41.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	393.4	150.0	2045.9	297.6	119.8	Good
1276	MH	150+000	252+000	168+600	LHS	Inner	T-28.8/42.2	40	0.1268	0.0836	0.0531	0.04	0.031	0.0252	0.0227	33.4	37.1	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	396.8	149.8	2103.4	300.1	119.7	Good
1277	MH	150+000	252+000	168+850	LHS	Inner		40	0.2915	0.181	0.1163	0.0677	0.0509	0.0339	0.0188	33.7	37.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	177.4	150.0	2080.7	127.6	119.8	Good
1278	MH	150+000	252+000	169+100	LHS	Inner		40	0.2907	0.2091	0.141	0.096	0.0713	0.0464	0.032	33.6	36.9	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	208.9	149.9	2098.9	154.1	119.8	Good
1279	MH	150+000	252+000	169+350	LHS	Inner		40	0.1707	0.1213	0.0928	0.0618	0.0413	0.0308	0.0277	33.6	36.9	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	399.8	149.7	1999.0	302.2	119.6	Good
1280	MH	150+000	252+000	169+600	LHS	Inner		40	0.2273	0.1395	0.0917	0.0677	0.0396	0.0198	0.0117	33.9	36.4	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	199.6	150.0	2097.3	146.4	119.8	Good
1281	MH	150+000	252+000	169+850	LHS	Inner		40	0.3687	0.2215	0.1418	0.0991	0.0507	0.0325	0.0259	34.0	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1383.9	150.7	149.9	1947.6	104.6	119.8	Good
1282	MH	150+000	252+000	170+100	LHS	Inner		40	0.2247	0.1395	0.095	0.0672	0.0489	0.0357	0.0259	33.6	36.6	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	391.7	150.0	2098.9	296.4	119.8	Good
1283	MH	150+000	252+000	170+350	LHS	Inner		40	0.4675	0.2663	0.155	0.0827	0.0587	0.0369	0.023	33.8	36.8	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	686.0	150.0	149.9	965.4	104.0	119.8	Good
1284	MH	150+000	252+000	170+600	LHS	Inner		40	0.4723	0.2845	0.1931	0.1253	0.0767	0.0436	0.0278	33.9	36.8	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	863.4	150.5	150.0	1215.1	104.5	119.8	Good
1285	MH	150+000	252+000	170+850	LHS	Inner		40	0.2946	0.1838	0.1138	0.0728	0.0366	0.0273	0.0125	34.1	37.1	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1391.4	152.0	150.0	1958.2	105.8	119.8	Good
1286	MH	150+000	252+000	171+100	LHS	Inner		40	0.3183	0.209	0.1253	0.0786	0.0546	0.0375	0.0222	33.8	36.3	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	152.4	150.0	2111.0	106.1	119.8	Good
1287	MH	150+000	252+000	171+350	LHS	Inner		40	0.4065	0.2223	0.1238	0.0798	0.0526	0.0388	0.0309	33.8	36.5	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	926.9	156.1	150.0	1304.5	109.3	119.8	Good
1288	MH	150+000	252+000	171+600	LHS	Inner		40	0.1782	0.1229	0.0925	0.0656	0.0425	0.0258	0.0183	33.7	36.6	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	387.3	150.0	2098.9	293.2	119.8	Good
1289	MH	150+000	252+000	171+850	LHS	Inner		40	0.2391	0.1641	0.1043	0.0653	0.0378	0.0286	0.022	33.7	36.3	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	314.7	150.0	2030.8	238.9	119.8	Good
1290	MH	150+000	252+000	172+100	LHS	Inner		40	0.2529	0.1627	0.1019	0.0628	0.0416	0.0273	0.0198	34.0	36.4	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	254.3	150.0	2097.3	191.3	119.8	Good
1291	MH	150+000	252+000	172+350	LHS	Inner		40	0.2811	0.1842	0.0942	0.0623	0.0392	0.0277	0.019	33.4	36.2	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	194.5	150.0	2064.1	142.1	119.8	Good
1292	MH	150+000	252+000	172+600	LHS	Inner		40	0.2218	0.1408	0.0899	0.0639	0.0448	0.0339	0.0262	33.8	35.9	42.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.1	149.9	2097.3	299.6	119.8	Good
1293	MH	150+000	252+000	172+850	LHS	Inner	T-28.7/41.3	40	0.2099	0.123	0.0857	0.0645	0.0499	0.0402	0.0332	34.8	36.9	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	399.0	149.9	2016.4	301.7	119.8	Good
1294	MH	150+000	252+000	173+100	LHS	Inner		40	0.3253	0.2134	0.1297	0.0961	0.0631	0.0407	0.0219	34.9	36.1	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	161.0	149.9	1970.1	113.5	119.8	Good
1295	MH	150+000	252+000	173+390	LHS	Inner		40	0.3599	0.2192	0.1164	0.0822	0.0632	0.0499	0.0337	34.5	36.1	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1329.0	183.0	150.0	1786.5	132.4	119.8	Good
1296	MH	150+000	252+000	173+610	LHS	Inner		40	0.3079	0.2005	0.1348	0.1002	0.0765	0.0514	0.0334	34.6	36.6	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	213.0	144.2	1993.2	157.5	114.9	Good
1297	MH	150+000	252+000	173+850	LHS	Inner		40	0.2236	0.1558	0.1073	0.0824	0.0663	0.044	0.0284	32.2	34.8	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.8	150.0	2010.6	300.8	119.8	Good
1298	MH	150+000	252+000	174+240	LHS	Inner		40	0.4376	0.2741	0.1598	0.0854	0.0528	0.0403	0.0314	32.9	35.4	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	880.6	150.5	150.0	1183.7	104.5	119.8	Good
1299	MH	150+000	252+000	174+350	LHS	Inner		40	0.4646	0.2541	0.1641	0.1102	0.0742	0.0502	0.0319	32.5	35.0	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	905.4	150.0	139.6	1217.1	104.0	111.0	Good
1300	MH	150+000	252+000	174+600	LHS	Inner		40	0.1097	0.0767	0.0598	0.047	0.037	0.0309	0.0262	33.0	35.7	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.6	149.9	1997.5	300.6	119.8	Good
1301	MH	150+000	252+000	174+850	LHS	Inner		40	0.1656	0.1237	0.0818	0.0599	0.0449	0.0333	0.0253	33.4	36.4	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	397.6	150.0	2003.3	300.6	119.8	Good
1302	MH	150+000	252+000	175+100	LHS	Inner		40	0.2724	0.1685	0.1085	0.0847	0.0593	0.0417	0.0278	33.7	36.0	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	307.1	150.0	1994.7	233.0	119.8	Good
1303	MH	150+000	252+000	175+350	LHS	Inner		40	0.1427	0.1044	0.0729	0.0511	0.0374	0.0279	0.0251	34.0	36.2	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.1	149.7	2010.6	300.3	119.6	Good
1304	MH	150+000	252+000	175+600	LHS	Inner		40	0.2637	0.1545	0.0952	0.0604	0.0448	0.0337	0.0303	34.1	36.2	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	384.4	150.0	1967.2	291.1	119.8	Good
1305	MH	150+000	252+000	175+850	LHS	Inner	T-29.5/38.9	40	0.197	0.1482	0.1081	0.072	0.0464	0.0352	0.0256	34.0	36.6	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.1	149.9	1790.5	298.8	119.8	Good
1306	MH	150+000	252+000	176+100	LHS	Inner		40	0.4512	0.2611	0.1677	0.1083	0.0756	0.0554	0.0406	34.0	36.1	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1057.0	150.2	126.7	1263.5	104.2	99.9	Good
1307	MH	150+000	252+000	176+350	LHS	Inner		40	0.1794	0.1344	0.1048	0.0837	0.0655	0.0534	0.0411	34.2	35.9	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	398.5	149.7	1769.9	301.3	119.6	Good
1308	MH	150+000	252+000	176+600	LHS	Inner		40	0.2894	0.1822	0.1153	0.0794	0.0544	0.0372	0.0293	34.5	36.1	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	256.5	150.0	1780.2	193.1	119.8	Good
1309	MH	150+000	252+000	176+850	LHS	Inner		40	0.4495	0.2711	0.1653	0.1153	0.0754	0.0464	0.0397	34.4	36.3	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1005.4	150.0	131.0	1201.8	104.0	103.6	Good
1310	MH	150+000	252+000	177+100	LHS	Inner		40	0.433	0.2598	0.153	0.1082	0.0791	0.0503	0.0322	34.9	36.6	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.5	141.0	1430.6	104.5	112.2	Fair
1311	MH	150+000	252+000	177+350	LHS	Inner		40	0.4184	0.2588	0.1499	0.0969	0.0613	0.0422	0.038	35.0	36.2	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1163.4	150.0	146.0	1390.7	104.0	116.4	Fair
1312	MH	150+000	252+000	177+600	LHS	Inner		40	0.4094	0.2627	0.1487	0.0941	0.0696	0.0516	0.0367	35.1	36.3	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	150.7	138.1	1448.6	104.6	109.7	Fair
1313	MH	150+000	252+000	177+850	LHS	Inner		40	0.3109	0.2063	0.1187	0.0783	0.0506	0.0368	0.0267	35.0	36.3	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	192.0	149.9	1780.2	140.0	119.8	Fair
1314	MH	150+000	252+000	178+100	LHS	Inner		40	0.3053	0.2083	0.1332	0.0967	0.054	0.0395	0.0355	35.0	36.1	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	187.4	150.0	1786.6	136.1	119.8	Fair
1315	MH	150+000	252+000	178+350	LHS	Inner		40	0.2089	0.128	0.0883	0.0637	0.0528	0.0427	0.0363	35.2	36.5	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.6	149.8	1760.9	299.2	119.7	Good
1316	MH	150+000	252+000	178+600	LHS	Inner		40	0.3788	0.2098	0.11	0.0734	0.0457	0.0354	0.0284	35.4	36.1	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1197.8	167.1	150.0	1431.8	118.8	119.8	Good
1317	MH	150+000	252+000	178+850	LHS	Inner		40	0.4629	0.2622	0.1406	0.094	0.064	0.0438	0.0295	35.4	35.9	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	811.8	150.5	149.8	970.4	104.5	119.7	Good
1318	MH	150+000	252+000	179+100	LHS	Inner		40	0.278	0.1945	0.1281	0.0826	0.054	0.0461	0.0367	35.0	35.8	38.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	252.2	149.9	1749.3	189.6	119.8	Good
1320	MH	150+000	252+000	179+850	LHS	Inner	T-29.5/39.5	40	0.5816	0.38	0.2189	0.1053	0.0724	0.0515	0.0372	31.4	33.1	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	457.0	150.2	129.8	562.2	104.2	102.6	Good
1321	MH	150+000	252+000	180+100	LHS	Inner		40	0.378	0.2565	0.1605	0.097	0.0545	0.0368	0.0285	31.7	33.2	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1319.4	150.5	150.0	1623.2	104.5	119.8	Good
1322	MH	150+000	252+000	180+350	LHS	Inner		40	0.1991	0.1267	0.0783	0.0501	0.0358	0.0253	0.0179	31.7	33.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	391.4	149.9	1842.6	296.2	119.8	Good
1323	MH	150+000	252+000	180+600	LHS	Inner		40	0.2703	0.1517	0.0897	0.0624	0.0424	0.0316	0.0239	31.6	33.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	337.2	150.0	1814.9	256.1	119.8	Good
1324	MH	150+000	252+000	180+860	LHS	Inner		40	0.3046	0.1708	0.0979	0.0611	0.0499	0.0386	0.0347	31.5	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	333.8	150.0	1527.8	253.5	119.8	Good
1325	MH	150+000	252+000	181+100	LHS	Inner		40	0.2345	0.1358	0.0921	0.063	0.0432	0.0334	0.0263	31.8	33.2	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	395.6	150.0	1821.5	299.2	119.8	Good
1326	MH	150+000	252+000	181+350	LHS	Inner		40	0.196	0.114	0.0844	0.0645	0.0509	0.035	0.0242	31.7	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	400.0	149.8	1844.0	302.4	119.7	Good
1327	MH	150+000	252+000	181+600	LHS	Inner		40	0.4992	0.2827	0.1711	0.1223	0.0891	0.064	0.0455	31.5	33.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	151.5	111.1	1030.4	105.3	86.6	Good
1328	MH	150+000	252+000	181+850	LHS	Inner		40	0.3233	0.1869	0.109	0.0748	0.0517	0.0391	0.0309	31.7	33.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1415.1	227.2	150.0	1740.9	169.3	119.8	Good
1329	MH	150+000	252+000	182+100	LHS	Inner		40	0.3833	0.2376	0.1336	0.0846	0.0649	0.043	0.0316	31.7	33.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1396.8	150.2	150.0	1718.4	104.2	119.8	Good
1330	MH	150+000	252+000	182+350	LHS	Inner		40	0.3992	0.2371	0.1477	0.0853	0.0585	0.0399	0.0359	31.5	33.2	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1338.7	150.0	150.0	1646.9	104.0	119.8	Good
1331	MH	150+000	252+000	182+600	LHS	Inner		40	0.3733	0.2276	0.1359	0.089	0.0678	0.0544	0.0437	31.7	33.4	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1369.9	181.3	135.2	1685.3	130.9	107.2	Good
1332	MH	150+000	252+000	182+890	LHS	Inner		40	0.3361	0.1951	0.1248	0.1018	0.0765	0.0482	0.0271	31.6	33.2	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	194.0	149.9	1840.0	141.6	119.8	Good
1333	MH	150+000	252+000	183+100	LHS	Inner		40	0.2127	0.1305	0.0818	0.059	0.0407	0.0347	0.0302	31.4	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	399.3	149.9	1840.0	301.9	119.8	Good

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1334	MH	150+000	252+000	183+600	LHS	Inner		40	0.4987	0.3417	0.2085	0.1351	0.0799	0.0533	0.0351	31.5	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	848.4	150.0	125.6	1043.7	104.0	99.0	Good
1335	MH	150+000	252+000	183+850	LHS	Inner		40	0.5159	0.3284	0.1919	0.1312	0.0917	0.0645	0.0469	31.5	33.8	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.0	106.5	964.4	104.0	82.6	Good
1336	MH	150+000	252+000	184+100	LHS	Inner		40	0.5001	0.2898	0.1588	0.1023	0.0611	0.045	0.0336	31.6	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	625.8	150.2	145.3	769.9	104.2	115.8	Good
1337	MH	150+000	252+000	184+350	LHS	Inner		40	0.4739	0.3035	0.1776	0.1165	0.0759	0.051	0.0323	31.5	33.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	150.0	136.4	894.6	104.0	108.2	Poor
1338	MH	150+000	252+000	184+600	LHS	Inner		40	0.459	0.2706	0.1287	0.0895	0.0617	0.0419	0.028	31.2	32.7	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.2	149.9	964.4	104.2	119.8	Fair
1339	MH	150+000	252+000	184+850	LHS	Inner		40	0.3453	0.2306	0.1341	0.0879	0.0551	0.0396	0.0293	31.1	32.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	150.7	150.0	1781.8	104.6	119.8	Good
1340	MH	150+000	252+000	185+100	LHS	Inner		40	0.3063	0.2066	0.1391	0.0938	0.0666	0.0524	0.0472	30.4	31.9	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	248.0	132.5	1840.0	186.2	104.9	Good
1341	MH	150+000	252+000	185+350	LHS	Inner	Rutting	40	0.2358	0.1538	0.1064	0.0874	0.0568	0.0373	0.0252	30.6	32.3	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	359.9	150.0	1821.5	273.1	119.8	Fair
1342	MH	150+000	252+000	185+600	LHS	Inner		40	0.4524	0.247	0.1373	0.0689	0.047	0.0365	0.0328	30.6	32.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	668.8	150.0	150.0	822.8	104.0	119.8	Fair
1343	MH	150+000	252+000	185+850	LHS	Inner		40	0.334	0.1917	0.1099	0.0777	0.056	0.0408	0.0296	30.6	32.5	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1334.4	216.0	149.9	1641.6	160.0	119.8	Fair
1344	MH	150+000	252+000	186+100	LHS	Inner		40	0.2633	0.1715	0.1066	0.0758	0.0561	0.0396	0.0295	30.6	32.7	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	324.7	149.9	1842.6	246.6	119.8	Fair
1345	MH	150+000	252+000	186+350	LHS	Inner		40	0.5147	0.3543	0.187	0.1107	0.0602	0.0359	0.027	30.5	32.6	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	607.5	150.2	149.5	747.4	104.2	119.4	Fair
1346	MH	150+000	252+000	186+600	LHS	Inner		40	0.4281	0.2899	0.1718	0.1048	0.0741	0.0466	0.0386	30.4	32.1	39.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	150.2	132.5	1506.6	104.2	104.9	Fair
1347	MH	150+000	252+000	186+850	LHS	Inner	T-30.2/36.9	40	0.349	0.2065	0.1151	0.0771	0.0666	0.0525	0.043	30.4	32.4	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1071.0	242.4	144.2	1166.4	181.7	114.9	Fair
1348	MH	150+000	252+000	187+100	LHS	Inner		40	0.2233	0.1409	0.0945	0.0756	0.0531	0.0397	0.0314	30.6	32.3	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	398.3	149.8	1603.1	301.1	119.7	Fair
1349	MH	150+000	252+000	187+350	LHS	Inner		40	0.3218	0.2057	0.119	0.0848	0.0639	0.0505	0.038	30.5	32.1	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	214.5	147.0	1633.6	158.8	117.3	Fair
1350	MH	150+000	252+000	187+600	LHS	Inner		40	0.4149	0.2942	0.1592	0.0923	0.0711	0.0496	0.0344	30.5	32.4	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	150.5	138.8	1319.7	104.5	110.3	Fair
1351	MH	150+000	252+000	187+850	LHS	Inner		40	0.4845	0.286	0.1507	0.0897	0.0629	0.0468	0.0355	30.5	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	673.1	150.0	144.0	733.1	104.0	114.7	Fair
1352	MH	150+000	252+000	188+100	LHS	Inner		40	0.5161	0.2785	0.1351	0.0784	0.0594	0.046	0.0414	30.4	32.4	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	569.9	150.2	146.5	620.7	104.2	116.9	Fair
1353	MH	150+000	252+000	188+350	LHS	Inner		40	0.3563	0.242	0.1372	0.0732	0.0581	0.05	0.0379	30.5	32.3	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	151.0	150.0	1591.5	104.9	119.8	Fair
1354	MH	150+000	252+000	188+600	LHS	Inner		40	0.3338	0.2042	0.1226	0.0967	0.0655	0.0444	0.0298	30.6	32.6	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	188.4	150.0	1617.2	136.9	119.8	Fair
1355	MH	150+000	252+000	188+850	LHS	Inner		40	0.4452	0.268	0.1417	0.0871	0.0626	0.0473	0.0368	30.6	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	150.0	144.2	912.2	104.0	114.9	Fair
1356	MH	150+000	252+000	189+100	LHS	Inner		40	0.4375	0.2708	0.1541	0.1005	0.0738	0.0429	0.0333	30.6	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	997.8	150.0	143.9	1086.7	104.0	114.6	Good
1357	MH	150+000	252+000	189+350	LHS	Inner		40	0.4376	0.2883	0.1729	0.1103	0.0833	0.0655	0.059	30.5	32.3	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1215.1	151.0	108.2	1323.3	104.9	84.1	Good
1358	MH	150+000	252+000	189+600	LHS	Inner		40	0.1951	0.1451	0.1028	0.0702	0.048	0.0392	0.0353	30.6	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	391.0	150.0	1620.8	295.9	119.8	Good
1359	MH	150+000	252+000	189+850	LHS	Inner		40	0.1719	0.128	0.0901	0.0553	0.0377	0.0243	0.0173	30.7	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	150.0	1602.0	302.4	119.8	Good
1360	MH	150+000	252+000	190+100	LHS	Inner		40	0.1512	0.1189	0.0823	0.0532	0.0401	0.0271	0.0226	30.6	32.6	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	399.0	149.6	1620.8	301.7	119.5	Fair
1361	MH	150+000	252+000	190+350	LHS	Inner		40	0.1617	0.1234	0.0849	0.0591	0.0453	0.0343	0.0264	30.5	32.1	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	399.0	149.8	1611.4	301.7	119.7	Fair
1362	MH	150+000	252+000	190+600	LHS	Inner		40	0.1821	0.1321	0.096	0.0656	0.0486	0.0372	0.0289	30.5	32.2	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	393.4	149.7	1625.4	297.6	119.6	Fair
1363	MH	150+000	252+000	190+900	LHS	Inner		40	0.3913	0.2255	0.1222	0.0835	0.0554	0.0397	0.0288	30.3	31.9	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.2	150.0	1310.4	104.2	119.8	Fair
1364	MH	150+000	252+000	191+100	LHS	Inner		40	0.4224	0.2696	0.1597	0.0799	0.0495	0.0278	0.0136	30.4	32.6	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1308.6	150.0	149.8	1425.2	104.0	119.7	Good
1365	MH	150+000	252+000	191+350	LHS	Inner		40	0.2889	0.1714	0.1004	0.0527	0.0353	0.0233	0.0145	30.5	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1419.4	159.5	150.0	1545.8	112.2	119.8	Good
1366	MH	150+000	252+000	191+600	LHS	Inner		40	0.4097	0.2679	0.1411	0.0809	0.0393	0.0273	0.0207	30.7	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1024.7	150.2	150.0	1116.0	104.2	119.8	Good
1367	MH	150+000	252+000	191+850	LHS	Inner		40	0.4813	0.2732	0.1484	0.0952	0.068	0.0408	0.0377	31.1	32.5	36.9	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	706.5	150.2	145.6	769.4	104.2	116.1	Good
1368	MH	150+000	252+000	192+100	LHS	Inner	T-29.5/36.2	40	0.4284	0.2757	0.1524	0.1052	0.0699	0.0447	0.0271	31.0	32.5	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1195.7	150.0	149.7	1261.5	104.0	119.6	Good
1369	MH	150+000	252+000	192+350	LHS	Inner		40	0.6462	0.319	0.1757	0.0807	0.0526	0.0326	0.0174	31.1	32.6	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	452.7	150.0	149.8	477.6	104.0	119.7	Fair
1370	MH	150+000	252+000	192+600	LHS	Inner		40	0.088	0.0628	0.0438	0.0336	0.0261	0.0188	0.0136	31.0	33.1	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	393.9	150.0	1574.6	298.0	119.8	Good
1371	MH	150+000	252+000	192+850	LHS	Inner		40	0.0776	0.0574	0.0421	0.0301	0.0217	0.0166	0.0132	30.9	32.5	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.3	150.0	1562.1	299.7	119.8	Good
1372	MH	150+000	252+000	193+100	LHS	Inner		40	0.097	0.0698	0.05	0.037	0.0277	0.0206	0.0155	30.8	32.6	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	400.0	149.7	1578.0	302.4	119.6	Good
1373	MH	150+000	252+000	193+350	LHS	Inner		40	0.213	0.1043	0.0616	0.0411	0.0297	0.022	0.0198	30.8	32.8	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	386.6	150.0	1576.8	292.7	119.8	Good
1374	MH	150+000	252+000	193+600	LHS	Inner		40	0.3752	0.2212	0.1261	0.0743	0.0541	0.0393	0.0354	30.8	32.5	36.2	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1247.3	167.4	150.0	1315.9	119.0	119.8	Good
1375	MH	150+000	252+000	193+850	LHS	Inner	t-26.8/34.7	40	0.4196	0.2356	0.1269	0.0781	0.0489	0.0289	0.026	27.5	29.1	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1082.8	151.0	150.0	1068.6	104.9	119.8	Fair
1376	MH	150+000	252+000	194+100	LHS	Inner		40	0.6216	0.348	0.1715	0.0986	0.07	0.0554	0.0439	27.7	29.2	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	421.5	150.5	124.4	416.0	104.5	98.0	Fair
1377	MH	150+000	252+000	194+350	LHS	Inner		40	0.5602	0.3297	0.173	0.1019	0.0751	0.0557	0.0429	27.8	29.3	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	481.7	151.5	122.4	475.4	105.3	96.2	Fair
1378	MH	150+000	252+000	194+600	LHS	Inner		40	0.5121	0.3277	0.1782	0.1155	0.0734	0.0516	0.0372	27.9	29.1	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	694.6	150.0	126.9	685.5	104.0	100.1	Fair
1379	MH	150+000	252+000	194+850	LHS	Inner		40	0.4933	0.2963	0.1842	0.1079	0.0735	0.0478	0.0338	28.0	29.4	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	759.1	150.5	136.1	749.1	104.5	108.0	Fair
1380	MH	150+000	252+000	195+100	LHS	Inner		40	0.4272	0.2618	0.1461	0.1018	0.0718	0.0494	0.0324	28.1	29.4	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1124.7	150.0	143.5	1109.9	104.0	114.3	Fair
1381	MH	150+000	252+000	195+350	LHS	Inner		40	0.6059	0.3755	0.21	0.1471	0.1118	0.0671	0.0361	28.3	29.7	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	500.0	150.2	110.6	493.4	104.2	86.1	Fair
1382	MH	150+000	252+000	195+600	LHS	Inner		40	0.1976	0.1291	0.0745	0.0491	0.0314	0.0244	0.0176	28.3	29.7	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	396.8	150.0	1473.9	300.1	119.8	Fair
1383	MH	150+000	252+000	195+850	LHS	Inner		40	0.2369	0.12	0.0684	0.0447	0.0294	0.0242	0.0217	28.2	29.6	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1423.7	398.0	150.0	1405.0	300.9	119.8	Fair
1384	MH	150+000	252+000	196+100	LHS	Inner		40	0.2678	0.1447	0.0804	0.056	0.0385	0.0354	0.0257	28.2	29.9	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	389.7	150.0	1472.9	294.9	119.8	Fair
1385	MH	150+000	252+000	196+350	LHS	Inner		40	0.1104	0.071	0.0517	0.0398	0.0318	0.0243	0.019	28.2	30.3	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	397.8	150.0	1453.7	300.8	119.8	Fair
1386	MH	150+000	252+000	196+600	LHS	Inner		40	0.3279	0.2072	0.1355	0.0854	0.0622	0.0456	0.0411	28.4	29.9	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	193.5	146.5	1476.0	141.2	116.9	Fair
1387	MH	150+000	252+000	196+850	LHS	Inner		40	0.2654	0.1444	0.0913	0.0541	0.0391	0.0285	0.0257	28.4	30.4	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	387.3	150.0	1466.5	293.2	119.8	Fair
1388	MH	150+000	252+000	197+100	LHS	Inner		40	0.338	0.1885	0.1202	0.0712	0.0473	0.0304	0.0198	28.4	29.9	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	152.0	150.0	1447.4	105.8	119.8	Fair
1389	MH	150+000	252+000	197+350	LHS	Inner		40	0.5269	0.2711	0.1492	0.0776	0.0544	0.0367	0.0333	28.7	30.9	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	543.0	150.2	149.9	535.9	104.2	119.8	Fair
1390	MH	150+000	252+000	197+630	LHS	Inner		40	0.4816	0.2981	0.159	0.1	0.0622	0.0423	0.0381	28.9	30.6	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	798.9	150.0	144.5	788.4	104.0	115.1	Fair
1391	MH	150+000	252+000	197+850	LHS	Inner		40	0.0902	0.067	0.0506	0.0323	0.0193	0.0118	0.0098	28.9	30.9	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	400.0	149.7	1469.6	302.4	119.6	Fair
1392	MH	150+000	252+000	198+100	LHS	Inner		40	0.0817	0.0598	0.0425	0.0317	0.0247	0.0178	0.0131	29.1	31.3	34.7	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	399.3	149.8	1429.4	301.9	119.7	Fair
1393	MH	150+000	252+000	198+350	LHS	Inner	T-27.5/35.4	40	0.0897	0.0693	0.0504	0.0389	0.0309	0.0238	0.0186	29.1	30.7	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.8	149.9	1512.6	300.8	119.8	Good
1394	MH	150+000	252+000	198+600	LHS	Inner		40	0.0927	0.0693	0.0523	0.0367	0.0253	0.0162	0.01	29.5	31.7	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	399.0	149.9	1462.3	301.7	119.8	Good
1395	MH	150+000	252+000	198+850	LHS	Inner		40	0.2587	0.1494	0.0812	0.0564	0.0393	0.0289	0.0216	29.7	31.8	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	388.5	150.0	1523.6	294.1	119.8	Good
1396	MH	150+000	252+000	199+100	LHS	Inner		40	0.4187	0.2412	0.117	0.0812	0.0551	0.0394	0.0281	29.7	32.0	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1034.4	151.0	149.9	1052.9	104.9	119.8	Good
1397	MH	150+000	252+000	199+350	LHS	Inner		40	0.1038	0.0739	0.0576	0.0415	0.0309	0.0261	0.023	29.7	31.5	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	395.8	150.0	1523.6	299.3	119.8	Fair
1398	MH	150+000	252+000	199+600	LHS	Inner		40	0.4901	0.2963	0.19	0.1147	0.0717	0.0421	0.0379	30.0	32.4	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.0	137.5	834.1	104.0	109.2	Fair
1399	MH	150+000	252+000	199+870	LHS	Inner		40	0.4627	0.3099	0.1782	0.0946	0.0607	0.0451	0.0406	30.1	32.7	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	923.7	150.0	139.2	940.2	104.0	110.6	Fair
1400	MH	150+000	252+000	200+230	LHS	Inner		40	0.4184	0.2895	0.1681	0.1118	0.0722	0.0396	0.0352	30.2	31.8	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	150.0	143.9	1258.7	104.0	114.6	Fair
1401	MH	150+000	252+000	200+350	LHS	Inner		40	0.3985	0.2503	0.1503	0.0828	0.053	0.031	0.0279	30.0	32.6	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1297.8	151.2	150.0	1321.0	105.1	119.8	Fair
1402	MH	150+000	252+000	200+600	LHS	Inner		40	0.306	0.1911	0.1186	0.0672	0.0365	0.0189	0.017	29.9	31.5	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1261.3	151.5	150.0	1283.9	105.3	119.8	Fair
1403	MH	150+000	252+000	200+850	LHS	Inner		40	0.3888	0.184	0.0979	0.0704	0.0514	0.0381	0.0343	29.8	32.0	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	592.5	273.4	150.0	603.1	206.6	119.8	Fair

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1404	MH	150+000	252+000	201+110	LHS	Inner		40	0.5887	0.314	0.153	0.0652	0.0459	0.0309	0.0201	29.9	32.5	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	479.6	151.5	150.0	488.2	105.3	119.8	Fair
1405	MH	150+000	252+000	201+350	LHS	Inner		40	0.384	0.2363	0.1432	0.089	0.0516	0.0349	0.024	30.1	32.9	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1202.2	150.7	149.6	1223.7	104.6	119.5	Fair
1406	MH	150+000	252+000	201+600	LHS	Inner		40	0.3115	0.1538	0.0931	0.052	0.0384	0.0289	0.026	30.2	33.2	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1231.2	308.1	150.0	1253.2	233.8	119.8	Fair
1407	MH	150+000	252+000	201+850	LHS	Inner		40	0.2327	0.1412	0.0826	0.0556	0.0368	0.034	0.0321	30.3	33.3	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	398.3	150.0	1524.6	301.1	119.8	Good
1408	MH	150+000	252+000	202+100	LHS	Inner		40	0.1684	0.0915	0.0561	0.0422	0.0331	0.0242	0.018	30.4	33.3	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	393.6	150.0	1456.8	297.8	119.8	Good
1409	MH	150+000	252+000	202+370	LHS	Inner		40	0.299	0.1847	0.0964	0.0637	0.0418	0.0316	0.028	30.4	33.6	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	244.1	150.0	1475.4	183.1	119.8	Good
1410	MH	150+000	252+000	202+600	LHS	Inner		40	0.5464	0.3095	0.1541	0.0978	0.0607	0.045	0.0347	30.3	33.3	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	477.4	151.0	144.5	485.9	104.9	115.1	Fair
1411	MH	150+000	252+000	202+850	LHS	Inner		40	0.1994	0.1139	0.0756	0.0546	0.0381	0.027	0.0194	30.3	33.8	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	393.2	150.0	1525.7	297.5	119.8	Good
1412	MH	150+000	252+000	203+110	LHS	Inner		40	0.4232	0.2524	0.1454	0.0839	0.0563	0.0371	0.0299	30.5	33.7	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1018.3	151.2	149.9	1036.5	105.1	119.8	Good
1413	MH	150+000	252+000	203+350	LHS	Inner		40	0.1971	0.1089	0.059	0.0465	0.0372	0.0318	0.0286	30.7	34.1	35.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.5	149.8	1491.8	301.3	119.7	Good
1414	MH	150+000	252+000	203+600	LHS	Inner	T-29.5/38.3	40	0.1604	0.1051	0.0596	0.0385	0.0244	0.015	0.0135	30.6	33.1	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	381.9	150.0	1700.5	289.3	119.8	Good
1415	MH	150+000	252+000	203+850	LHS	Inner		40	0.3092	0.1721	0.114	0.0709	0.0463	0.0288	0.026	31.0	34.5	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	207.9	150.0	1733.0	153.3	119.8	Good
1416	MH	150+000	252+000	204+100	LHS	Inner		40	0.2349	0.1247	0.0824	0.0554	0.0346	0.0279	0.02	31.0	34.7	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	400.0	150.0	1725.4	302.4	119.8	Good
1417	MH	150+000	252+000	204+350	LHS	Inner		40	0.1648	0.1	0.0681	0.0533	0.045	0.0327	0.0244	30.9	34.9	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	397.3	149.8	1730.4	300.4	119.7	Good
1418	MH	150+000	252+000	204+620	LHS	Inner		40	0.1242	0.08	0.0561	0.0403	0.0304	0.0208	0.0139	31.0	34.9	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	397.1	150.0	1696.7	300.3	119.8	Good
1419	MH	150+000	252+000	204+850	LHS	Inner		40	0.3336	0.1885	0.1077	0.0671	0.0383	0.0283	0.0255	31.1	34.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	180.1	150.0	1686.7	129.9	119.8	Good
1420	MH	150+000	252+000	205+100	LHS	Inner		40	0.429	0.2221	0.1102	0.0716	0.0447	0.037	0.0333	31.5	35.4	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	706.5	166.9	150.0	820.9	118.6	119.8	Good
1421	MH	150+000	252+000	205+350	LHS	Inner		40	0.4485	0.2772	0.1894	0.1231	0.0874	0.0545	0.0432	31.4	35.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1231.2	150.0	117.4	1430.6	104.0	92.0	Good
1422	MH	150+000	252+000	205+600	LHS	Inner		40	0.305	0.173	0.0847	0.0506	0.0348	0.0241	0.0217	31.4	35.0	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1191.4	243.4	150.0	1384.4	182.5	119.8	Good
1423	MH	150+000	252+000	205+850	LHS	Inner		40	0.2375	0.1253	0.0811	0.0599	0.0463	0.0406	0.0364	31.1	35.0	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	398.8	149.9	1659.3	301.5	119.8	Good
1424	MH	150+000	252+000	206+100	LHS	Inner		40	0.3525	0.2099	0.1134	0.0732	0.0521	0.0509	0.0458	31.1	35.3	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1004.3	233.1	149.9	1167.0	174.1	119.8	Good
1425	MH	150+000	252+000	206+380	LHS	Inner		40	0.184	0.1233	0.0898	0.0677	0.0541	0.0444	0.0374	31.6	35.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.0	149.9	1723.0	301.7	119.8	Fair
1426	MH	150+000	252+000	206+600	LHS	Inner		40	0.1655	0.1131	0.0723	0.051	0.0372	0.0272	0.0245	31.7	36.0	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	396.6	149.7	1740.4	299.9	119.6	Fair
1427	MH	150+000	252+000	206+860	LHS	Inner		40	0.236	0.1217	0.0729	0.0415	0.0255	0.0191	0.0146	31.7	36.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	326.9	150.0	1713.0	248.3	119.8	Fair
1428	MH	150+000	252+000	207+100	LHS	Inner		40	0.4552	0.2211	0.1319	0.0898	0.0601	0.048	0.0363	32.1	36.9	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	844.1	154.6	148.9	980.8	108.0	118.9	Fair
1429	MH	150+000	252+000	207+350	LHS	Inner		40	0.4282	0.2715	0.1394	0.0842	0.0549	0.0353	0.0204	32.3	37.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	933.3	152.2	149.9	933.3	105.9	119.8	Poor
1430	MH	150+000	252+000	207+600	LHS	Inner		40	0.2101	0.1173	0.0712	0.0411	0.0306	0.0229	0.0206	32.3	36.8	38.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1446.2	397.8	149.9	1680.5	300.8	119.8	Fair
1431	MH	150+000	252+000	207+850	LHS	Inner	T-30.9/41.3	40	0.3895	0.241	0.1378	0.0987	0.0688	0.0478	0.033	32.1	36.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1404.3	150.2	146.5	1887.7	104.2	116.9	Fair
1432	MH	150+000	252+000	208+150	LHS	Inner		40	0.4005	0.2264	0.127	0.0834	0.0545	0.0415	0.03	32.2	37.2	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1252.7	150.7	149.9	1683.9	104.6	119.8	Fair
1433	MH	150+000	252+000	208+350	LHS	Inner		40	0.161	0.0938	0.061	0.043	0.0301	0.0227	0.0177	32.3	37.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1411.8	397.3	150.0	1897.8	300.4	119.8	Fair
1434	MH	150+000	252+000	208+620	LHS	Inner		40	0.2917	0.1439	0.0712	0.0467	0.0295	0.0216	0.0161	32.3	37.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	269.7	150.0	1668.1	203.7	119.8	Fair
1435	MH	150+000	252+000	208+850	LHS	Inner		40	0.2134	0.1031	0.056	0.0415	0.0284	0.0185	0.0116	32.2	38.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	393.9	149.9	1983.1	298.0	119.8	Fair
1436	MH	150+000	252+000	209+100	LHS	Inner		40	0.1845	0.0912	0.0472	0.0324	0.0215	0.0149	0.0102	32.4	38.2	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	397.6	150.0	1961.4	300.6	119.8	Fair
1437	MH	150+000	252+000	209+350	LHS	Inner		40	0.1718	0.0919	0.0576	0.0334	0.0195	0.0139	0.0102	32.4	39.0	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	376.5	150.0	1996.1	285.3	119.8	Fair
1438	MH	150+000	252+000	209+600	LHS	Inner		40	0.2614	0.1333	0.0874	0.0544	0.0462	0.0403	0.0374	32.5	36.7	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.8	150.0	2004.8	300.8	119.8	Fair
1439	MH	150+000	252+000	209+850	LHS	Inner		40	0.0859	0.0608	0.0436	0.031	0.0184	0.0138	0.0108	32.6	39.5	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.4	150.0	1980.2	299.1	119.8	Fair
1440	MH	150+000	252+000	210+100	LHS	Inner		40	0.0819	0.0587	0.0429	0.0343	0.0283	0.0234	0.0203	33.0	39.2	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	399.5	150.0	1994.7	302.0	119.8	Good
1441	MH	150+000	252+000	210+350	LHS	Inner		40	0.351	0.1845	0.124	0.0789	0.0585	0.0448	0.0344	32.9	38.7	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1210.8	220.1	150.0	1627.6	163.4	119.8	Good
1442	MH	150+000	252+000	210+620	LHS	Inner		40	0.7122	0.3894	0.2223	0.1374	0.0791	0.0546	0.0358	32.9	39.9	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	412.9	150.7	122.7	555.0	104.6	96.5	Fair
1443	MH	150+000	252+000	210+850	LHS	Inner		40	0.2084	0.1211	0.0683	0.0479	0.0372	0.0293	0.0218	33.1	39.5	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	378.0	150.0	2014.9	286.4	119.8	Fair
1444	MH	150+000	252+000	211+130	LHS	Inner		40	0.2908	0.14	0.0857	0.056	0.035	0.0217	0.012	33.0	38.8	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	176.4	150.0	1996.1	126.7	119.8	Fair
1445	MH	150+000	252+000	211+380	LHS	Inner		40	0.2269	0.1339	0.0906	0.0583	0.0381	0.0233	0.0138	33.0	37.9	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	281.0	150.0	2014.9	212.6	119.8	Fair
1446	MH	150+000	252+000	211+600	LHS	Inner		40	0.2381	0.1413	0.0902	0.0533	0.0384	0.0275	0.0221	33.2	39.7	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	398.0	150.0	2013.4	300.9	119.8	Fair
1447	MH	150+000	252+000	211+850	LHS	Inner		40	0.3535	0.2043	0.1251	0.0722	0.036	0.0263	0.0191	33.4	34.9	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1352.7	151.5	150.0	1818.3	105.3	119.8	Fair
1448	MH	150+000	252+000	212+100	LHS	Inner		40	0.1527	0.1066	0.073	0.0496	0.0324	0.024	0.0191	32.9	38.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	394.1	150.0	1990.3	298.1	119.8	Fair
1449	MH	150+000	252+000	212+350	LHS	Inner		40	0.2799	0.177	0.105	0.0536	0.0317	0.0224	0.0202	33.0	39.1	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	178.6	150.0	2010.6	128.6	119.8	Fair
1450	MH	150+000	252+000	212+600	LHS	Inner		40	0.3918	0.2534	0.1595	0.0907	0.0718	0.0529	0.0346	33.2	39.8	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	150.0	139.1	1949.8	104.0	110.5	Fair
1451	MH	150+000	252+000	212+850	LHS	Inner		40	0.4649	0.2819	0.1441	0.0727	0.0573	0.0419	0.0259	33.5	40.1	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	751.6	150.5	149.9	1010.3	104.5	119.8	Fair
1452	MH	150+000	252+000	213+100	LHS	Inner		40	0.3391	0.168	0.0843	0.0483	0.0409	0.0355	0.0268	33.8	40.3	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	871.0	342.1	150.0	1170.8	259.8	119.8	Fair
1453	MH	150+000	252+000	213+370	LHS	Inner		40	0.4613	0.2675	0.1267	0.0643	0.0478	0.0373	0.0334	34.1	40.6	41.3	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	617.2	150.0	150.0	829.7	104.0	119.8	Fair
1454	MH	150+000	252+000	213+680	LHS	Inner	t-34.9/43.8	40	0.3308	0.1897	0.1078	0.0794	0.0596	0.0509	0.0467	36.7	40.5	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	996.8	295.7	146.2	1526.5	224.2	116.6	Fair
1455	MH	150+000	252+000	213+850	LHS	Inner		40	0.3039	0.1869	0.1061	0.0776	0.0584	0.0493	0.0444	36.9	39.8	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	303.7	150.0	1875.5	230.4	119.8	Fair
1456	MH	150+000	252+000	214+120	LHS	Inner		40	0.5324	0.3022	0.1529	0.0982	0.0712	0.0546	0.0432	36.9	39.4	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	624.7	150.5	126.2	956.7	104.5	99.5	Fair
1457	MH	150+000	252+000	214+350	LHS	Inner		40	0.4749	0.2248	0.1192	0.0883	0.0674	0.0536	0.0431	36.8	40.7	43.8	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	478.5	217.7	137.6	732.8	161.4	109.2	Fair
1458	MH	150+000	252+000	214+600	LHS	Inner		40	0.3631	0.2426	0.1537	0.1136	0.0808	0.0541	0.0369	36.7	40.5	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	155.4	132.2	2280.6	108.7	104.6	Fair
1459	MH	150+000	252+000	214+850	LHS	Inner		40	0.2279	0.1497	0.0904	0.0588	0.0392	0.0295	0.0221	37.0	40.8	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	361.4	150.0	2293.8	274.2	119.8	Fair
1460	MH	150+000	252+000	215+100	LHS	Inner		40	0.1002	0.0623	0.0448	0.037	0.0297	0.0248	0.0171	37.1	40.3	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	393.9	149.6	2292.2	298.0	119.5	Fair
1461	MH	150+000	252+000	215+350	LHS	Inner		40	0.4819	0.3019	0.1874	0.1224	0.089	0.0665	0.0482	36.8	40.0	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	966.7	150.0	107.6	1480.4	104.0	83.6	Fair
1462	MH	150+000	252+000	215+620	LHS	Inner		40	0.4749	0.2953	0.1701	0.1034	0.085	0.0719	0.0455	36.5	39.8	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	969.9	150.2	113.6	1485.3	104.2	88.7	Fair
1463	MH	150+000	252+000	215+855	LHS	Inner		40	0.6715	0.3922	0.2097	0.1399	0.0914	0.0735	0.0539	36.6	40.2	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	420.4	150.5	95.6	643.8	104.5	73.3	Fair
1464	MH	150+000	252+000	216+130	LHS	Inner		40	0.675	0.3354	0.1756	0.107	0.0771	0.0603	0.0543	36.6	40.6	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	152.0	111.2	614.3	105.8	86.7	Fair
1465	MH	150+000	252+000	216+370	LHS	Inner		40	0.5161	0.3046	0.1528	0.0822	0.0465	0.037	0.0333	36.9	40.6	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	528.0	151.5	149.8	808.6	105.3	119.7	Fair
1466	MH	150+000	252+000	216+600	LHS	Inner		40	0.4256	0.2634	0.1575	0.0838	0.0539	0.0325	0.0244	37.0	41.4	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1096.8	150.7	150.0	1679.7	104.6	119.8	Good
1467	MH	150+000	252+000	216+905	LHS	Inner		40	0.4516	0.2601	0.1323	0.0813	0.0458	0.0322	0.029	37.1	40.6	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	823.7	154.4	150.0	1261.4	107.8	119.8	Good
1468	MH	150+000	252+000	217+120	LHS	Inner		40	0.4037	0.2561	0.1432	0.1039	0.0786	0.0556	0.0407	37.2	41.3	43.8	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	152.0	129.1	2226.4	105.8	102.0	Good
1469	MH	150+000	252+000	218+100	LHS	Inner	T-34.2/43	40	0.1947	0.1273	0.0813	0.0405	0.0244	0.0183	0.0164	36.2	38.9	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	384.8	150.0	2183.7	291.4	119.8	Fair
1470	MH	150+000	252+000	218+380	LHS	Inner		40	0.0916	0.0585	0.0378	0.0292	0.0207	0.0148	0.0133	35.9	38.0	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.6	150.0	2161.5	299.2	119.8	Fair
1471	MH	150+000	252+000	218+600	LHS	Inner		40	0.2707	0.1798	0.1222	0.0792	0.0583	0.0438	0.0316	35.4	37.8	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	306.6	150.0	2196.3	232.7	119.8	Fair
1472	MH	150+000	252+000	218+850	LHS	Inner		40	0.4072	0.2206	0.1181	0.08	0.0551	0.0405	0.0302	35.2	36.9	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	165.4	150.0	1407.3	117.3	119.8	Fair
1473	MH	150+000	252+000	219+100	LHS	Inner		40	0.2237	0.1172	0.0661	0.0539	0.0458	0.044	0.0402	34.3	37.5	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	393.6	149.9	2133.2	297.8	119.8	Fair

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1474	MH	150+000	252+000	219+350	LHS	Inner		40	0.3287	0.1892	0.1082	0.0679	0.0393	0.0316	0.0262	34.1	37.8	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1328.0	198.4	150.0	1948.6	145.3	119.8	Fair
1475	MH	150+000	252+000	219+600	LHS	Inner		40	0.2018	0.1041	0.0588	0.0335	0.0248	0.0186	0.0113	34.5	38.8	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	391.7	150.0	2169.5	296.4	119.8	Fair
1476	MH	150+000	252+000	219+850	LHS	Inner		40	0.4667	0.2483	0.125	0.0529	0.0294	0.0283	0.0254	35.3	38.9	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	614.0	150.0	149.9	900.9	104.0	119.8	Fair
1477	MH	150+000	252+000	220+100	LHS	Inner		40	0.1313	0.0705	0.0411	0.0311	0.0246	0.0191	0.015	35.3	38.4	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	399.0	149.9	2095.4	301.7	119.8	Good
1478	MH	150+000	252+000	220+350	LHS	Inner		40	0.1771	0.0887	0.053	0.0372	0.0266	0.0223	0.0191	34.8	37.9	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	398.8	150.0	2128.4	301.5	119.8	Good
1479	MH	150+000	252+000	220+620	LHS	Inner		40	0.1234	0.0632	0.0377	0.028	0.0207	0.0166	0.014	34.9	38.6	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	394.4	150.0	2163.1	298.3	119.8	Fair
1480	MH	150+000	252+000	220+850	LHS	Inner		40	0.3651	0.2095	0.1202	0.0859	0.0613	0.0479	0.0384	35.2	38.7	43	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	193.7	149.4	1899.6	141.4	119.3	Fair
1481	MH	150+000	252+000	221+100	LHS	Inner	T-33/42.2	40	0.5083	0.318	0.1808	0.0971	0.0642	0.0351	0.0199	35.2	37.7	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	610.8	150.5	149.8	859.6	104.5	119.7	Fair
1482	MH	150+000	252+000	221+400	LHS	Inner		40	0.1638	0.127	0.0849	0.0561	0.037	0.027	0.0201	35.0	37.8	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	398.8	149.9	2067.1	301.5	119.8	Fair
1483	MH	150+000	252+000	221+600	LHS	Inner		40	0.1686	0.1046	0.0602	0.0425	0.0298	0.0225	0.0175	34.9	37.8	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	391.9	150.0	2053.4	296.5	119.8	Fair
1484	MH	150+000	252+000	221+850	LHS	Inner		40	0.0748	0.0581	0.0467	0.0365	0.0297	0.0243	0.0205	34.8	38.5	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	398.5	149.8	2076.2	301.3	119.7	Good
1485	MH	150+000	252+000	222+100	LHS	Inner		40	0.0849	0.0609	0.0447	0.0322	0.025	0.0198	0.0178	34.7	38.1	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	399.8	150.0	2101.9	302.2	119.8	Good
1486	MH	150+000	252+000	222+350	LHS	Inner		40	0.0843	0.0609	0.0444	0.0337	0.0265	0.0216	0.0182	34.9	38.2	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	397.8	150.0	2021.8	300.8	119.8	Good
1487	MH	150+000	252+000	222+600	LHS	Inner		40	0.1064	0.0739	0.05	0.0389	0.031	0.0258	0.0223	34.8	38.1	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	399.5	150.0	2056.5	302.0	119.8	Good
1488	MH	150+000	252+000	222+850	LHS	Inner		40	0.4017	0.2366	0.1225	0.0801	0.0489	0.0329	0.0218	34.6	37.5	42.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1210.8	150.0	150.0	1704.0	104.0	119.8	Good
1489	MH	150+000	252+000	223+120	LHS	Inner	T-32.7/40.9	40	0.4304	0.263	0.1308	0.0799	0.0569	0.0313	0.022	33.8	36.2	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	974.2	150.7	149.9	1283.6	104.6	119.8	Good
1490	MH	150+000	252+000	223+350	LHS	Inner		40	0.088	0.0611	0.0467	0.0381	0.0318	0.0252	0.0205	33.7	36.3	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	399.5	150.0	1959.4	302.0	119.8	Good
1491	MH	150+000	252+000	223+600	LHS	Inner		40	0.1601	0.1004	0.069	0.0541	0.0423	0.0343	0.0327	33.3	35.7	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	396.1	149.7	1957.9	299.6	119.6	Good
1492	MH	150+000	252+000	223+850	LHS	Inner		40	0.168	0.1122	0.0726	0.0552	0.0429	0.0358	0.0258	33.0	35.4	40.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	399.3	149.8	1901.2	301.9	119.7	Good
1493	MH	150+000	252+000	224+100	LHS	Inner	T-30.8/39.7	40	0.1598	0.1072	0.0719	0.0543	0.042	0.0352	0.0317	33.1	34.9	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.5	149.9	1859.3	301.3	119.8	Fair
1494	MH	150+000	252+000	224+350	LHS	Inner		40	0.2752	0.1766	0.0929	0.0649	0.0523	0.0476	0.0431	32.9	35.1	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1397.8	397.1	150.0	1736.3	300.3	119.8	Good
1495	MH	150+000	252+000	224+530	LHS	Inner		40	0.0801	0.0531	0.0412	0.0319	0.0238	0.0181	0.0151	32.8	35.3	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	396.1	149.6	1843.2	299.6	119.5	Good
1496	MH	150+000	252+000	224+890	LHS	Inner		40	0.3427	0.1753	0.0925	0.0525	0.0344	0.0295	0.0265	32.4	34.8	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	979.6	234.6	150.0	1216.8	175.3	119.8	Good
1497	MH	150+000	252+000	225+100	LHS	Inner		40	0.3823	0.2169	0.1213	0.0824	0.0553	0.0409	0.0305	32.3	35.7	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	154.9	150.0	1755.0	108.3	119.8	Good
1498	MH	150+000	252+000	225+350	LHS	Inner		40	0.5634	0.3447	0.1698	0.0882	0.0541	0.0438	0.0353	32.6	35.7	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	473.1	150.0	149.6	587.7	104.0	119.5	Fair
1499	MH	150+000	252+000	225+600	LHS	Inner		40	0.5467	0.3187	0.1727	0.0813	0.047	0.0399	0.0361	32.3	34.8	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	502.2	151.2	149.8	623.8	105.1	119.7	Fair
1500	MH	150+000	252+000	225+850	LHS	Inner		40	0.2792	0.1578	0.0938	0.0624	0.0506	0.0375	0.034	32.5	35.4	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1403.2	393.6	150.0	1743.0	297.8	119.8	Good
1501	MH	150+000	252+000	226+100	LHS	Inner		40	0.3797	0.229	0.122	0.081	0.0522	0.0413	0.0339	32.5	35.5	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1318.3	150.7	150.0	1637.5	104.6	119.8	Good
1502	MH	150+000	252+000	226+390	LHS	Inner		40	0.4811	0.3064	0.1718	0.0901	0.0627	0.0433	0.0315	32.7	36.6	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	148.7	1116.6	104.0	118.7	Good
1503	MH	150+000	252+000	226+600	LHS	Inner		40	0.343	0.206	0.1095	0.065	0.0435	0.0289	0.0205	33.1	35.9	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	152.2	150.0	1815.2	105.9	119.8	Good
1504	MH	150+000	252+000	226+850	LHS	Inner		40	0.1713	0.0933	0.0552	0.0379	0.0265	0.0184	0.0119	33.1	36.0	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	383.9	150.0	1836.5	290.7	119.8	Good
1505	MH	150+000	252+000	227+100	LHS	Inner		40	0.147	0.0748	0.044	0.0309	0.0222	0.0158	0.0143	33.1	35.9	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	399.8	150.0	1775.0	302.2	119.8	Good
1506	MH	150+000	252+000	227+350	LHS	Inner		40	0.138	0.0889	0.0513	0.0353	0.0247	0.0185	0.0142	33.2	36.4	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	396.6	150.0	1820.5	299.9	119.8	Good
1507	MH	150+000	252+000	227+600	LHS	Inner		40	0.1333	0.0735	0.0488	0.0311	0.0233	0.018	0.0101	33.6	36.1	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1387.1	400.0	150.0	1723.0	302.4	119.8	Good
1508	MH	150+000	252+000	227+850	LHS	Inner		40	0.1313	0.0799	0.056	0.0401	0.0309	0.0244	0.0204	34.3	37.2	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	398.5	150.0	1856.5	301.3	119.8	Good
1509	MH	150+000	252+000	228+120	LHS	Inner		40	0.1638	0.1132	0.0681	0.0392	0.0188	0.0119	0.0071	34.7	37.1	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	151.7	149.9	1829.8	105.5	119.8	Good
1510	MH	150+000	252+000	228+350	LHS	Inner		40	0.0912	0.0598	0.0372	0.0246	0.0197	0.014	0.01	34.3	37.1	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	398.8	149.9	1837.9	301.5	119.8	Good
1511	MH	150+000	252+000	228+600	LHS	Inner		40	0.0994	0.0612	0.0387	0.0269	0.023	0.0209	0.0178	34.1	36.7	39.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	400.0	150.0	1783.1	302.4	119.8	Good
1512	MH	150+000	252+000	228+850	LHS	Inner	T-31.2/38.7	40	0.0954	0.0619	0.0389	0.0224	0.0164	0.0123	0.0084	31.8	33.6	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.3	150.0	1766.0	301.1	119.8	Good
1513	MH	150+000	252+000	229+100	LHS	Inner		40	0.093	0.059	0.0368	0.025	0.0205	0.0171	0.0135	31.7	33.6	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	398.0	150.0	1731.6	300.9	119.8	Good
1514	MH	150+000	252+000	229+350	LHS	Inner		40	0.0925	0.0586	0.0372	0.0236	0.0189	0.0158	0.0124	31.8	33.3	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	394.4	149.7	1763.4	298.3	119.6	Good
1515	MH	150+000	252+000	229+600	LHS	Inner		40	0.1617	0.0926	0.0561	0.037	0.0232	0.0136	0.0069	31.7	33.2	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	213.5	150.0	1723.9	158.0	119.8	Good
1516	MH	150+000	252+000	229+850	LHS	Inner		40	0.4353	0.2783	0.1703	0.0953	0.0686	0.0504	0.0399	31.6	32.8	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1109.7	150.0	133.5	1314.0	104.0	105.7	Good
1517	MH	150+000	252+000	230+380	LHS	Inner		40	0.3707	0.2408	0.1464	0.089	0.0636	0.0403	0.0235	31.8	33.9	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	156.1	149.9	1727.7	109.3	119.8	Good
1518	MH	150+000	252+000	230+600	LHS	Inner		40	0.4188	0.2515	0.1319	0.0779	0.0627	0.0525	0.0458	31.9	33.7	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1019.4	156.6	140.8	1207.1	109.7	112.0	Good
1519	MH	150+000	252+000	230+800	LHS	Inner		40	0.3213	0.1868	0.1322	0.0935	0.0714	0.056	0.0548	31.8	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1155.9	349.9	125.1	1368.7	265.6	98.5	Good
1520	MH	150+000	252+000	231+100	LHS	Inner		40	0.2434	0.1588	0.1104	0.0806	0.0644	0.0482	0.0339	31.4	32.7	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.8	149.7	1774.9	302.2	119.6	Good
1521	MH	150+000	252+000	231+350	LHS	Inner		40	0.2876	0.1819	0.108	0.0679	0.0504	0.038	0.0323	31.4	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	261.9	150.0	1764.7	197.4	119.8	Good
1522	MH	150+000	252+000	231+850	LHS	Inner		40	0.2861	0.1726	0.1118	0.0759	0.0501	0.0393	0.0318	31.6	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	285.4	150.0	1764.7	216.1	119.8	Good
1523	MH	150+000	252+000	232+100	LHS	Inner		40	0.308	0.1856	0.0991	0.063	0.0432	0.0349	0.0241	31.6	32.8	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1417.2	239.4	150.0	1678.1	179.3	119.8	Good
1524	MH	150+000	252+000	232+350	LHS	Inner		40	0.1925	0.138	0.0792	0.0569	0.0418	0.0304	0.0233	31.5	33.3	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.6	149.9	1771.1	299.9	119.8	Good
1525	MH	150+000	252+000	232+600	LHS	Inner		40	0.3141	0.2028	0.1147	0.0721	0.0624	0.0496	0.0409	31.6	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	249.7	150.0	1736.7	187.6	119.8	Good
1526	MH	150+000	252+000	232+890	LHS	Inner		40	0.1784	0.1065	0.0702	0.0507	0.0374	0.0288	0.0234	31.6	32.6	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	389.0	150.0	1753.2	294.4	119.8	Good
1527	MH	150+000	252+000	233+100	LHS	Inner	T-30.2/37.1	40	0.1911	0.1146	0.0774	0.0519	0.0449	0.0356	0.032	31.1	32.8	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1425.8	399.8	149.9	1567.1	302.2	119.8	Good
1528	MH	150+000	252+000	233+350	LHS	Inner		40	0.2844	0.1747	0.1026	0.065	0.0449	0.0297	0.019	31.3	33.1	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	229.7	150.0	1612.0	171.3	119.8	Good
1529	MH	150+000	252+000	233+600	LHS	Inner		40	0.3267	0.216	0.1305	0.0667	0.0405	0.0227	0.0186	31.3	33.2	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	153.4	150.0	1584.8	107.0	119.8	Good
1530	MH	150+000	252+000	233+835	LHS	Inner		40	0.1383	0.1013	0.0723	0.0532	0.0399	0.0331	0.0284	31.3	32.7	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1446.2	399.0	149.7	1589.5	301.7	119.6	Good
1531	MH	150+000	252+000	234+100	LHS	Inner		40	0.3521	0.2099	0.1309	0.0887	0.0639	0.0469	0.0303	31.3	32.7	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	166.1	149.8	1641.5	117.9	119.7	Good
1532	MH	150+000	252+000	234+350	LHS	Inner		40	0.2754	0.1649	0.0972	0.0641	0.0372	0.0253	0.0228	31.2	33.0	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	229.7	150.0	1547.0	171.3	119.8	Good
1533	MH	150+000	252+000	234+600	LHS	Inner		40	0.2861	0.1771	0.0973	0.0563	0.034	0.0192	0.0173	31.2	33.1	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	156.6	150.0	1609.6	109.7	119.8	Good
1534	MH	150+000	252+000	234+850	LHS	Inner		40	0.3277	0.1998	0.1238	0.0916	0.0632	0.0431	0.0211	31.3	33.3	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	175.9	150.0	1634.5	126.3	119.8	Good
1535	MH	150+000	252+000	235+100	LHS	Inner		40	0.3725	0.2276	0.1398	0.0968	0.0731	0.0552	0.0363	31.4	33.4	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	166.9	138.1	1629.7	118.6	109.7	Good
1536	MH	150+000	252+000	235+350	LHS	Inner		40	0.3673	0.2568	0.1454	0.0873	0.0597	0.0439	0.0411	31.5	33.7	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	150.0	145.9	1640.4	104.0	116.3	Good
1537	MH	150+000	252+000	235+600	LHS	Inner		40	0.3163	0.2283	0.1508	0.1001	0.0621	0.0347	0.0256	31.5	33.4	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	153.7	149.9	1638.0	107.2	119.8	Good
1538	MH	150+000	252+000	235+850	LHS	Inner		40	0.4167	0.2493	0.154	0.0944	0.0594	0.0355	0.0261	31.5	33.4	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.7	149.9	1322.4	104.6	119.8	Good
1539	MH	150+000	252+000	236+120	LHS	Inner		40	0.228	0.1606	0.1043	0.0658	0.0424	0.0265	0.0187	31.5	33.1	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	282.2	150.0	1621.5	213.6	119.8	Good
1540	MH	150+000	252+000	236+350	LHS	Inner		40	0.3097	0.2062	0.1121	0.0581	0.0409	0.0296	0.0225	31.5	33.3	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	185.4	150.0	1525.8	134.4	119.8	Good
1541	MH	150+000	252+000	236+600	LHS	Inner		40	0.2639	0.1721	0.1078	0.0735	0.0638	0.0507	0.0433	31.6	33.1	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	394.4	147.8	1648.6	298.3	118.0	Good
1542	MH	150+000	252+000	236+880	LHS	Inner		40	0.1162	0.0742	0.0496	0.0317	0.022	0.0147	0.0132	31.6	33.1	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	387.0	150.0	1640.4	293.0	119.8	Good
1543	MH	150+000	252+000	237+100	LHS	Inner		40	0.1449	0.0963	0.0634	0.0502	0.0405	0.0285	0.0208	31.6	33.6	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.1	150.0	1638.0	299.6	119.8	Good

																		Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	Pavement Condition
1544	MH	150+000	252+000	237+350	LHS	Inner		40	0.1419	0.0921	0.051	0.0344	0.0222	0.014	0.0085	31.7	33.6	37.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	394.6	150.0	1630.9	298.5	119.8	Good
1545	MH	150+000	252+000	237+620	LHS	Inner	T-31.1/38.7	40	0.1509	0.0913	0.0553	0.0367	0.0306	0.0244	0.0219	31.6	33.3	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	399.8	149.9	1708.7	302.2	119.8	Good
1546	MH	150+000	252+000	237+850	LHS	Inner		40	0.1156	0.0718	0.042	0.0279	0.0206	0.0151	0.0121	31.8	33.3	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	399.5	150.0	1752.0	302.0	119.8	Good
1547	MH	150+000	252+000	238+100	LHS	Inner		40	0.2718	0.1695	0.1088	0.0757	0.0528	0.0312	0.0225	31.7	32.9	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	268.3	150.0	1768.5	202.6	119.8	Good
1548	MH	150+000	252+000	238+350	LHS	Inner		40	0.2726	0.1851	0.1076	0.0708	0.045	0.0321	0.0234	31.5	33.2	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	240.9	149.9	1772.4	180.5	119.8	Good
1549	MH	150+000	252+000	238+640	LHS	Inner		40	0.4056	0.2366	0.1288	0.0764	0.0382	0.0252	0.0158	31.5	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	150.5	149.9	1429.8	104.5	119.8	Good
1550	MH	150+000	252+000	238+850	LHS	Inner		40	0.4274	0.2421	0.1399	0.088	0.0521	0.0417	0.0375	31.4	32.7	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1048.4	151.2	149.9	1241.4	105.1	119.8	Good
1551	MH	150+000	252+000	239+100	LHS	Inner		40	0.1578	0.0967	0.065	0.0423	0.0257	0.0151	0.0112	31.4	32.7	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	379.5	150.0	1772.4	287.5	119.8	Good
1552	MH	150+000	252+000	239+350	LHS	Inner		40	0.1205	0.0834	0.0576	0.0429	0.0328	0.025	0.0195	31.4	32.9	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.1	149.7	1773.6	300.3	119.6	Good
1553	MH	150+000	252+000	239+610	LHS	Inner		40	0.0893	0.0577	0.0396	0.0273	0.0188	0.0129	0.0098	31.3	32.6	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	393.6	149.9	1732.8	297.8	119.8	Good
1554	MH	150+000	252+000	239+850	LHS	Inner		40	0.1708	0.0901	0.0555	0.0382	0.0258	0.0195	0.015	31.4	33.1	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	400.0	150.0	1767.3	302.4	119.8	Good
1555	MH	150+000	252+000	240+100	LHS	Inner		40	0.2076	0.1407	0.0926	0.0579	0.0377	0.0293	0.0234	31.4	32.5	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	387.0	150.0	1769.8	293.0	119.8	Good
1556	MH	150+000	252+000	240+350	LHS	Inner		40	0.1365	0.0769	0.0434	0.033	0.025	0.019	0.015	31.3	32.9	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1401.1	400.0	150.0	1659.0	302.4	119.8	Good
1557	MH	150+000	252+000	240+600	LHS	Inner		40	0.1936	0.1133	0.0744	0.0536	0.0428	0.0339	0.0279	31.3	32.9	38.7	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	393.4	149.9	1750.7	297.6	119.8	Good
1558	MH	150+000	252+000	240+850	LHS	Inner	T-30.2/36	40	0.1874	0.1202	0.0752	0.0416	0.0272	0.0205	0.0157	30.8	32.1	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	383.1	150.0	1526.7	290.1	119.8	Good
1559	MH	150+000	252+000	241+100	LHS	Inner		40	0.2927	0.1654	0.1011	0.0733	0.0512	0.0356	0.0168	31.0	32.5	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	197.9	150.0	1545.9	144.9	119.8	Good
1560	MH	150+000	252+000	241+350	LHS	Inner		40	0.233	0.1522	0.0915	0.0597	0.0366	0.0299	0.0251	30.9	32.5	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	387.8	150.0	1545.9	293.6	119.8	Good
1561	MH	150+000	252+000	241+600	LHS	Inner		40	0.3391	0.2103	0.1305	0.0864	0.0554	0.0383	0.0268	31.0	32.6	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	150.2	150.0	1568.4	104.2	119.8	Good
1562	MH	150+000	252+000	241+870	LHS	Inner		40	0.409	0.2413	0.1488	0.0931	0.0547	0.0369	0.0326	30.8	32.1	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1181.7	150.7	149.7	1235.6	104.6	119.6	Good
1563	MH	150+000	252+000	242+100	LHS	Inner		40	0.1464	0.1094	0.0662	0.039	0.0212	0.0141	0.0092	30.6	32.0	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	313.5	150.0	1565.0	238.0	119.8	Good
1564	MH	150+000	252+000	242+350	LHS	Inner		40	0.1745	0.1159	0.0781	0.0513	0.0437	0.0387	0.0348	30.5	32.6	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	395.6	150.0	1544.7	299.2	119.8	Good
1565	MH	150+000	252+000	242+600	LHS	Inner		40	0.1559	0.092	0.0651	0.0455	0.0368	0.0309	0.0278	30.7	32.8	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	396.8	150.0	1505.4	300.1	119.8	Good
1566	MH	150+000	252+000	242+850	LHS	Inner		40	0.1953	0.1297	0.0959	0.0724	0.0465	0.0383	0.0344	30.7	32.0	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	395.1	150.0	1565.0	298.8	119.8	Good
1567	MH	150+000	252+000	243+100	LHS	Inner		40	0.2501	0.1171	0.066	0.0479	0.0349	0.0296	0.0266	30.8	32.2	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.8	150.0	1548.1	300.1	119.8	Good
1568	MH	150+000	252+000	243+350	LHS	Inner		40	0.124	0.0796	0.0501	0.0373	0.024	0.0189	0.0152	30.7	32.5	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	398.5	150.0	1502.1	301.3	119.8	Good
1569	MH	150+000	252+000	243+600	LHS	Inner		40	0.1172	0.0685	0.0511	0.0389	0.028	0.0221	0.018	30.7	32.3	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	150.0	1565.0	298.1	119.8	Good
1570	MH	150+000	252+000	243+850	LHS	Inner		40	0.2119	0.118	0.0754	0.0501	0.0312	0.0201	0.0144	30.8	32.9	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	374.6	150.0	1520.1	283.9	119.8	Good
1571	MH	150+000	252+000	244+100	LHS	Inner		40	0.1483	0.0898	0.0619	0.0404	0.0258	0.0193	0.015	30.9	32.6	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	398.8	150.0	1517.8	301.5	119.8	Good
1572	MH	150+000	252+000	244+350	LHS	Inner		40	0.3486	0.2307	0.1578	0.1072	0.0711	0.0455	0.029	30.8	33.3	36	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	150.2	149.2	1563.9	104.2	119.2	Good
1573	MH	150+000	252+000	244+620	LHS	Inner	T-30.1/36.5	40	0.2432	0.1396	0.086	0.0631	0.0472	0.04	0.0349	29.9	31.5	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	397.8	150.0	1598.4	300.8	119.8	Good
1574	MH	150+000	252+000	244+870	LHS	Inner		40	0.4333	0.262	0.1477	0.1053	0.0806	0.0584	0.0438	30.2	32.5	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	152.2	122.8	1328.1	105.9	96.6	Good
1575	MH	150+000	252+000	245+100	LHS	Inner		40	0.4721	0.2805	0.1509	0.0847	0.0545	0.0435	0.0363	30.7	33.1	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	753.8	150.2	150.0	806.1	104.2	119.8	Good
1576	MH	150+000	252+000	245+325	LHS	Inner		40	0.3111	0.2107	0.1281	0.0814	0.0494	0.0358	0.0262	31.0	33.2	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	172.5	150.0	1580.0	123.4	119.8	Good
1577	MH	150+000	252+000	245+600	LHS	Inner		40	0.4	0.2408	0.1198	0.0777	0.0588	0.0448	0.0417	31.2	32.8	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1035.5	163.7	149.9	1107.4	115.9	119.8	Good
1578	MH	150+000	252+000	246+100	LHS	Inner		40	0.3051	0.1808	0.1062	0.0749	0.0522	0.0385	0.0346	31.4	31.6	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	275.4	150.0	1567.4	208.2	119.8	Good
1579	MH	150+000	252+000	246+350	LHS	Inner		40	0.1728	0.1299	0.0935	0.0678	0.0449	0.0296	0.022	31.0	32.1	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.3	150.0	1603.0	300.4	119.8	Good
1580	MH	150+000	252+000	246+600	LHS	Inner		40	0.2786	0.1883	0.1321	0.0877	0.058	0.0436	0.0339	30.9	32.1	36.5	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	254.3	150.0	1585.8	191.3	119.8	Good
1581	MH	150+000	252+000	246+850	LHS	Inner		40	0.1393	0.0975	0.0644	0.0464	0.0313	0.0217	0.0165	30.9	32.0	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	398.8	149.8	1585.8	301.5	119.7	Good
1582	MH	150+000	252+000	247+200	LHS	Inner		40	0.3746	0.1965	0.1065	0.0731	0.0484	0.0373	0.0299	31.0	32.6	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	934.4	205.5	150.0	999.3	151.3	119.8	Good
1583	MH	150+000	252+000	247+430	LHS	Inner		40	0.352	0.2091	0.1247	0.0806	0.049	0.0332	0.0221	30.8	32.5	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	155.4	150.0	1562.8	108.7	119.8	Good
1584	MH	150+000	252+000	247+620	LHS	Inner		40	0.3243	0.1744	0.1041	0.0629	0.0468	0.0383	0.0325	31.0	32.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	287.1	150.0	1051.0	217.4	119.8	Good
1585	MH	150+000	252+000	247+850	LHS	Inner		40	0.26	0.144	0.0789	0.0551	0.0373	0.0254	0.0209	30.8	32.8	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	382.6	150.0	1585.8	289.8	119.8	Good
1586	MH	150+000	252+000	248+110	LHS	Inner		40	0.3162	0.1987	0.1143	0.0711	0.0526	0.0348	0.0215	31.0	32.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	172.0	150.0	1593.8	123.0	119.8	Good
1587	MH	150+000	252+000	248+350	LHS	Inner		40	0.4935	0.2969	0.1635	0.1151	0.0811	0.0633	0.0504	31.2	32.6	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	823.7	150.2	112.0	880.9	104.2	87.3	Good
1588	MH	150+000	252+000	248+600	LHS	Inner		40	0.3511	0.2108	0.1228	0.0884	0.0647	0.0471	0.0345	31.2	33.0	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	178.3	149.9	1601.8	128.4	119.8	Good
1589	MH	150+000	252+000	248+870	LHS	Inner		40	0.446	0.2713	0.1702	0.1273	0.0863	0.0639	0.0488	31.2	32.9	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1307.5	150.0	110.6	1398.3	104.0	86.1	Good
1590	MH	150+000	252+000	249+100	LHS	Inner		40	0.4136	0.2504	0.1321	0.0846	0.0517	0.0367	0.033	31.0	32.6	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	960.2	151.2	150.0	1026.9	105.1	119.8	Good
1591	MH	150+000	252+000	249+370	LHS	Inner		40	0.4237	0.2624	0.1367	0.0911	0.0591	0.0386	0.0347	31.1	33.2	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	957.0	150.5	150.0	1023.4	104.5	119.8	Good
1592	MH	150+000	252+000	249+600	LHS	Inner	T-30.1/36.5	40	0.4163	0.2112	0.1035	0.0672	0.0431	0.0362	0.0326	31.5	33.5	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	652.7	190.1	150.0	698.0	138.4	119.8	Good
1593	MH	150+000	252+000	249+870	LHS	Inner		40	0.4263	0.2468	0.1308	0.0893	0.0606	0.0463	0.0356	31.8	33.3	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1060.2	150.7	147.9	1133.8	104.6	118.1	Good
1594	MH	150+000	252+000	250+100	LHS	Inner		40	0.1055	0.0813	0.0605	0.047	0.0334	0.0238	0.0176	32.1	33.1	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	397.8	149.9	1593.8	300.8	119.8	Good
1595	MH	150+000	252+000	250+350	LHS	Inner		40	0.1418	0.0954	0.071	0.0486	0.0356	0.021	0.012	31.6	33.5	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	397.3	150.0	1600.7	300.4	119.8	Good
1596	MH	150+000	252+000	250+600	LHS	Inner		40	0.1655	0.1064	0.067	0.0498	0.037	0.0274	0.0206	31.5	33.7	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	396.1	149.9	1581.2	299.6	119.8	Good
1597	MH	150+000	252+000	250+880	LHS	Inner		40	0.2664	0.1487	0.0878	0.0631	0.0471	0.0403	0.0363	31.6	33.6	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1392.5	395.1	150.0	1489.2	298.8	119.8	Good
1598	MH	150+000	252+000	251+100	LHS	Inner		40	0.3344	0.1981	0.124	0.072	0.0476	0.0304	0.0274	31.8	33.9	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	152.7	150.0	1575.4	106.4	119.8	Good
1599	MH	150+000	252+000	251+350	LHS	Inner		40	0.4143	0.2515	0.1348	0.0897	0.0563	0.0396	0.028	32.3	34.3	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	960.2	150.7	149.9	1026.9	104.6	119.8	Good
1600	MH	150+000	252+000	251+600	LHS	Inner		40	0.2591	0.164	0.1071	0.0702	0.0434	0.033	0.0258	32.3	34.1	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	285.6	150.0	1596.1	216.3	119.8	Good
1601	MH	150+000	252+000	251+820	LHS	Inner		40	0.2423	0.1633	0.0931	0.0629	0.0454	0.0411	0.038	32.5	35.0	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	399.8	150.0	1595.0	302.2	119.8	Fair
1602	MH	150+000	252+000	251+970	LHS	Inner	4 Lane	40	0.336	0.2127	0.1361	0.0845	0.0513	0.0471	0.0424	32.3	33.1	36.5	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	175.4	149.8	1596.1	125.9	119.7	Fair
1603	MH	150+000	252+000	251+605	RHS	Middle	T-28.9/38.4	40	0.226	0.1429	0.0989	0.0661	0.0439	0.0283	0.0254	32.4	33.2	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	379.5	150.0	1721.1	287.5	119.8	Good
1604	MH	150+000	252+000	251+300	RHS	Middle		40	0.346	0.2176	0.1098	0.0649	0.0423	0.0392	0.0353	32.2	33.0	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1238.7	190.3	150.0	1446.1	138.5	119.8	Good
1605	MH	150+000	252+000	250+605	RHS	Middle		40	0.4149	0.2249	0.1092	0.0725	0.0473	0.0343	0.0309	32.1	32.6	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	895.7	161.0	150.0	1045.7	113.5	119.8	Good
1606	MH	150+000	252+000	250+300	RHS	Middle		40	0.2039	0.133	0.0816	0.0618	0.0481	0.0373	0.0336	32.2	32.8	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	395.1	149.9	1687.2	298.8	119.8	Good
1607	MH	150+000	252+000	249+600	RHS	Middle		40	0.3361	0.1902	0.0998	0.0703	0.0504	0.0405	0.0342	32.1	32.5	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1003.2	261.9	150.0	1171.2	197.4	119.8	Good
1608	MH	150+000	252+000	249+260	RHS	Middle		40	0.3803	0.2391	0.1281	0.0858	0.0547	0.0423	0.038	31.9	32.0	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1286.0	151.0	149.9	1501.4	104.9	119.8	Good
1609	MH	150+000	252+000	248+605	RHS	Middle		40	0.2622	0.1654	0.0892	0.0516	0.0336	0.0207	0.0186	31.7	32.1	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	221.8	150.0	1713.5	164.8	119.8	Good
1610	MH	150+000	252+000	248+300	RHS	Middle		40	0.2814	0.167	0.1012	0.069	0.0459	0.0343	0.0262	31.6	32.6	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	279.3	150.0	1743.6	211.3	119.8	Good
1611	MH	150+000	252+000	247+590	RHS	Middle		40	0.1451	0.1079	0.0755	0.0525	0.0394	0.0296	0.0269	32.0	32.6	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	394.9	150.0	1694.7	298.7	119.8	Good
1612	MH	150+000	252+000	247+300	RHS	Middle		40	0.2028	0.1398	0.0956	0.0647	0.0427	0.0374	0.0338	32.0	32.4	38.4	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	399.5	149.9	1692.2	302.0	119.8	Good
1613	MH	150+000	252+000	246+605	RHS	Middle		40	0.4195	0.2551	0.1304	0.0826	0.0488	0.0421	0.0373	31.9	31.6	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1023.7	152.2	149.6	1195.1	105.9	119.5	Good

A-2: Back Calculation

																			Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)			Pavement Condition
Sl No.	Place	Start Point	End Point	Chainage	LHS /RHS	Lane	Remarks	Load (kN)	Geophone1 (mm)	Geophone 2 (mm)	Geophone 3 (mm)	Geophone 4 (mm)	Geophone 5 (mm)	Geophone 6 (mm)	Geophone 7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular(Summer)	Subgrade (Summer)	
1614	MH	150+000	252+000	246+300	RHS	Middle		40	0.2111	0.1433	0.0918	0.0583	0.0394	0.026	0.0234	31.3	31.5	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	394.4	150.0	1742.4	298.3	119.8	Good
1615	MH	150+000	252+000	245+590	RHS	Middle		40	0.4227	0.2509	0.1274	0.0744	0.0396	0.0313	0.0254	31.3	31.7	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1175.3	151.2	150.0	1372.1	105.1	119.8	Good
1616	MH	150+000	252+000	245+300	RHS	Middle		40	0.3716	0.2252	0.1303	0.064	0.0417	0.031	0.0279	31.5	32.4	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1263.4	158.8	150.0	1475.0	111.6	119.8	Good
1617	MH	150+000	252+000	244+610	RHS	Middle		40	0.4691	0.2985	0.1734	0.1183	0.082	0.056	0.0338	31.8	32.3	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	993.5	151.0	130.1	1159.9	104.9	102.8	Good
1618	MH	150+000	252+000	244+300	RHS	Middle		40	0.1812	0.1172	0.0728	0.0558	0.0363	0.026	0.0234	31.5	32.3	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	399.8	150.0	1694.7	302.2	119.8	Good
1619	MH	150+000	252+000	243+605	RHS	Middle		40	0.3442	0.2154	0.1192	0.0769	0.0487	0.0349	0.0314	31.6	32.3	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	167.8	150.0	1744.9	119.4	119.8	Good
1620	MH	150+000	252+000	243+300	RHS	Middle		40	0.1232	0.0853	0.0642	0.048	0.0372	0.0292	0.0238	31.4	31.5	38.4	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.7	149.9	1739.9	297.1	119.8	Good
1621	MH	150+000	252+000	242+600	RHS	Middle	T-28.3/38.2	40	0.4403	0.2753	0.1522	0.1031	0.0681	0.0433	0.033	30.8	32.3	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.2	147.1	1128.0	104.2	117.4	Good
1622	MH	150+000	252+000	242+300	RHS	Middle		40	0.4345	0.2553	0.1348	0.0931	0.0638	0.0462	0.0415	31.0	32.0	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1073.1	150.0	143.0	1241.1	104.0	113.9	Good
1623	MH	150+000	252+000	241+610	RHS	Middle		40	0.4093	0.2483	0.1445	0.0903	0.0502	0.0364	0.0281	30.9	32.2	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1104.3	150.5	149.8	1277.2	104.5	119.7	Good
1624	MH	150+000	252+000	241+300	RHS	Middle		40	0.2549	0.1331	0.0714	0.0497	0.034	0.0282	0.024	30.7	31.0	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	398.3	150.0	1701.3	301.1	119.8	Good
1625	MH	150+000	252+000	240+605	RHS	Middle		40	0.2802	0.1669	0.1007	0.0702	0.0497	0.0387	0.0313	30.8	31.2	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	347.0	150.0	1687.5	263.5	119.8	Good
1626	MH	150+000	252+000	240+300	RHS	Middle		40	0.3356	0.2084	0.1232	0.0773	0.0452	0.0338	0.0254	30.6	31.5	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	160.3	149.9	1734.8	112.9	119.8	Good
1627	MH	150+000	252+000	239+610	RHS	Middle		40	0.3928	0.2417	0.1257	0.0804	0.0489	0.0378	0.0302	30.5	31.5	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1258.1	150.5	150.0	1455.1	104.5	119.8	Good
1628	MH	150+000	252+000	239+300	RHS	Middle		40	0.2116	0.1416	0.0909	0.0653	0.0445	0.0311	0.0218	30.6	31.2	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	391.4	150.0	1717.4	296.2	119.8	Good
1629	MH	150+000	252+000	238+605	RHS	Middle		40	0.3628	0.2533	0.1529	0.1051	0.0702	0.0502	0.04	30.9	31.5	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	150.5	134.7	1708.7	104.5	106.8	Good
1630	MH	150+000	252+000	238+300	RHS	Middle		40	0.3103	0.1905	0.1064	0.0633	0.0365	0.0311	0.028	30.8	31.6	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	200.8	150.0	1687.5	147.4	119.8	Good
1631	MH	150+000	252+000	237+580	RHS	Middle		40	0.2379	0.1619	0.1093	0.0724	0.0585	0.0425	0.0291	30.3	31.4	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	390.5	150.0	1724.9	295.5	119.8	Good
1632	MH	150+000	252+000	237+300	RHS	Middle		40	0.3577	0.218	0.1223	0.07	0.0542	0.0418	0.0359	30.1	31.3	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1255.9	182.5	150.0	1452.5	131.9	119.8	Good
1633	MH	150+000	252+000	236+605	RHS	Middle		40	0.3194	0.2178	0.1328	0.0918	0.0633	0.0441	0.0309	30.2	31.3	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	176.4	149.8	1732.3	126.7	119.7	Good
1634	MH	150+000	252+000	236+300	RHS	Middle		40	0.3335	0.1754	0.0849	0.0562	0.0382	0.0317	0.0285	30.3	31.8	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	974.2	285.9	150.0	1126.7	216.5	119.8	Good
1635	MH	150+000	252+000	235+610	RHS	Middle		40	0.2834	0.1848	0.1087	0.0698	0.0442	0.0336	0.0264	30.7	31.3	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	242.4	150.0	1724.9	181.7	119.8	Good
1636	MH	150+000	252+000	235+300	RHS	Middle		40	0.4293	0.2447	0.1234	0.0678	0.0534	0.0353	0.022	30.6	31.6	38.2	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	784.9	150.2	150.0	907.8	104.2	119.8	Good
1637	MH	150+000	252+000	235+330	LHS	Middle	T-26.8/35.9	40	0.2796	0.1813	0.1201	0.0809	0.0542	0.041	0.0319	28.5	29.7	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	279.0	150.0	1561.3	211.1	119.8	Good
1638	MH	150+000	252+000	235+605	LHS	Middle		40	0.2577	0.1848	0.1125	0.066	0.0512	0.0408	0.0367	28.8	29.9	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	321.1	150.0	1552.4	243.8	119.8	Good
1639	MH	150+000	252+000	236+300	LHS	Middle		40	0.2581	0.1746	0.1026	0.0543	0.0322	0.0225	0.0203	29.1	31.0	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	211.8	150.0	1516.6	156.5	119.8	Good
1640	MH	150+000	252+000	236+610	LHS	Middle		40	0.2234	0.1482	0.0996	0.0646	0.0411	0.0309	0.0235	29.0	30.4	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.0	150.0	1552.4	300.9	119.8	Good
1641	MH	150+000	252+000	237+300	LHS	Middle		40	0.1251	0.0884	0.0642	0.047	0.0336	0.0236	0.0122	29.1	31.0	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	394.4	150.0	1550.1	298.3	119.8	Good
1642	MH	150+000	252+000	237+600	LHS	Middle		40	0.1313	0.0876	0.057	0.0417	0.031	0.0286	0.0268	28.8	30.7	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	391.2	149.8	1517.7	296.0	119.7	Good
1643	MH	150+000	252+000	238+300	LHS	Middle		40	0.3219	0.194	0.1245	0.0799	0.0503	0.0375	0.0337	29.1	30.5	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	198.1	149.9	1514.3	145.1	119.8	Good
1644	MH	150+000	252+000	238+600	LHS	Middle		40	0.3789	0.2381	0.1539	0.0929	0.0604	0.0469	0.0391	29.0	30.7	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	150.0	144.4	1542.3	104.0	115.1	Good
1645	MH	150+000	252+000	239+300	LHS	Middle		40	0.1124	0.0838	0.0478	0.0306	0.0205	0.0202	0.0181	29.4	31.2	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.8	149.8	1556.9	300.8	119.7	Good
1646	MH	150+000	252+000	239+600	LHS	Middle		40	0.1303	0.0795	0.0546	0.0301	0.0217	0.0184	0.0156	29.4	31.3	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	400.0	150.0	1526.7	302.4	119.8	Good
1647	MH	150+000	252+000	240+300	LHS	Middle		40	0.0898	0.0618	0.0396	0.0248	0.0184	0.015	0.013	29.6	31.5	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	396.1	150.0	1542.3	299.6	119.8	Good
1648	MH	150+000	252+000	240+605	LHS	Middle		40	0.1277	0.0875	0.0594	0.0406	0.032	0.0257	0.0231	29.1	30.8	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	395.1	149.8	1547.9	298.8	119.7	Good
1649	MH	150+000	252+000	241+300	LHS	Middle		40	0.2333	0.1425	0.0816	0.0597	0.044	0.0312	0.0281	29.6	31.5	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	398.0	150.0	1517.7	300.9	119.8	Good
1650	MH	150+000	252+000	241+605	LHS	Middle		40	0.2859	0.1862	0.1139	0.0816	0.0574	0.0372	0.022	29.7	31.6	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	222.3	149.9	1560.2	165.2	119.8	Good
1651	MH	150+000	252+000	242+300	LHS	Middle		40	0.1203	0.0786	0.0494	0.0365	0.0278	0.0218	0.0195	30.3	32.0	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	397.3	149.9	1533.3	300.4	119.8	Good
1652	MH	150+000	252+000	242+620	LHS	Middle		40	0.1502	0.0899	0.0579	0.0445	0.0358	0.027	0.0201	30.3	32.0	35.9	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	397.6	149.7	1558.0	300.6	119.6	Good
1653	MH	150+000	252+000	243+300	LHS	Middle	T-27.9/35.1	40	0.1022	0.0756	0.0559	0.0426	0.0303	0.022	0.0162	29.8	30.6	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.3	150.0	1489.4	301.9	119.8	Good
1654	MH	150+000	252+000	243+620	LHS	Middle		40	0.0905	0.0618	0.0439	0.0337	0.0284	0.0231	0.0208	30.1	31.6	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	394.1	149.9	1498.0	298.1	119.8	Good
1655	MH	150+000	252+000	244+320	LHS	Middle		40	0.3013	0.1903	0.1314	0.0958	0.073	0.0525	0.038	30.6	32.3	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	273.2	138.6	1505.5	206.5	110.1	Good
1656	MH	150+000	252+000	244+600	LHS	Middle		40	0.3089	0.185	0.1022	0.0611	0.0489	0.04	0.036	30.4	31.8	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1339.8	286.9	150.0	1345.7	217.3	119.8	Good
1657	MH	150+000	252+000	245+300	LHS	Middle		40	0.4717	0.2905	0.1595	0.1136	0.0827	0.0635	0.0509	30.5	32.0	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	932.3	150.7	112.1	936.4	104.6	87.4	Good
1658	MH	150+000	252+000	245+605	LHS	Middle		40	0.561	0.3351	0.1535	0.0821	0.0576	0.04	0.036	30.4	32.2	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	495.7	150.0	149.7	497.9	104.0	119.6	Good
1659	MH	150+000	252+000	246+320	LHS	Middle		40	0.19	0.1225	0.0689	0.0494	0.0369	0.0276	0.0211	30.7	32.3	35.1	10.00	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	391.0	149.8	1505.5	295.9	119.7	Good
1660	MH	150+000	252+000	246+610	LHS	Middle		40	0.1614	0.125	0.093	0.0699	0.055	0.0463	0.0372	30.4	32.0	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	396.1	150.0	1498.0	299.6	119.8	Good
1661	MH	150+000	252+000	247+300	LHS	Middle		40	0.4804	0.279	0.1344	0.0741	0.0519	0.0366	0.0231	30.9	33.3	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	687.1	150.5	150.0	690.1	104.5	119.8	Good
1662	MH	150+000	252+000	247+600	LHS	Middle		40	0.2109	0.1202	0.0709	0.0545	0.0383	0.0271	0.0244	30.7	33.3	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.9	1504.4	299.1	119.8	Good
1663	MH	150+000	252+000	248+300	LHS	Middle		40	0.1683	0.1062	0.0745	0.0531	0.038	0.0275	0.0202	31.0	33.4	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	396.8	150.0	1443.0	300.1	119.8	Good
1664	MH	150+000	252+000	248+620	LHS	Middle		40	0.2751	0.1677	0.1022	0.071	0.0486	0.0398	0.0337	30.6	33.3	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	331.3	150.0	1394.4	251.6	119.8	Good
1665	MH	150+000	252+000	249+320	LHS	Middle		40	0.3899	0.2367	0.1169	0.079	0.0586	0.0383	0.0287	31.1	33.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1215.1	153.4	149.9	1220.5	107.0	119.8	Good
1666	MH	150+000	252+000	249+610	LHS	Middle		40	0.3794	0.2111	0.1172	0.0698	0.0388	0.0276	0.0248	30.9	33.8	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1249.5	153.4	150.0	1255.0	107.0	119.8	Good
1667	MH	150+000	252+000	250+300	LHS	Middle		40	0.1264	0.0792	0.0484	0.0384	0.0316	0.0265	0.023	31.1	34.3	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.0	149.9	1499.1	301.7	119.8	Good
1668	MH	150+000	252+000	250+620	LHS	Middle		40	0.3841	0.2225	0.1236	0.0852	0.0585	0.0476	0.0399	31.0	33.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1146.2	172.5	149.9	1151.3	123.4	119.8	Good
1669	MH	150+000	252+000	251+320	LHS	Middle		40	0.3992	0.2456	0.1258	0.0711	0.0466	0.0294	0.0216	31.5	34.5	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1249.5	150.5	150.0	1255.0	104.5	119.8	Good
1670	MH	150+000	252+000	251+610	LHS	Middle		40	0.1782	0.1243	0.0847	0.0603	0.0428	0.034	0.0306	31.8	34.7	35.1	10.00	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	397.3	150.0	1461.3	300.4	119.8	Good

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
406	MH	150+000	252+000	150+100	LHS	Outer	T-29.1/37.8	40	0.2253	0.1644	0.1055	0.0726	0.0502	0.0342	0.025	30.9	33.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	390.5	150.0	1702.8	295.5	119.8	0.0609	1	0.0609	-0.04635
1207	MH	150+000	252+000	150+140	LHS	Inner	T-31.5/39.5	40	0.4192	0.249	0.1258	0.0869	0.0596	0.0463	0.0296	32.3	36.4	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	151.2	149.5	1209.1	105.1	119.4	0.1702	2	0.2311	0.016597
407	MH	150+000	252+000	150+250	LHS	Outer		40	0.1941	0.1357	0.0877	0.0542	0.039	0.0272	0.0185	31.1	34.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	381.7	149.9	1699.1	289.1	119.8	0.0584	3	0.2895	-0.03225
1208	MH	150+000	252+000	150+350	LHS	Inner		40	0.2342	0.154	0.099	0.0686	0.0486	0.0356	0.0272	32.6	38.0	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	388.5	150.0	1830.8	294.1	119.8	0.0802	4	0.3697	-0.05931
408	MH	150+000	252+000	150+450	LHS	Outer	Bheema Bridge Approach	40	0.3793	0.2489	0.1448	0.0862	0.0556	0.0397	0.0291	31.2	34.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	150.2	149.9	1597.7	104.2	119.8	0.1304	5	0.5001	-0.03616
1209	MH	150+000	252+000	150+950	LHS	Inner		40	0.2435	0.1752	0.1109	0.0658	0.0426	0.0257	0.0194	33.2	38.7	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	237.7	150.0	1833.4	177.9	119.8	0.0683	6	0.5684	-0.07511
409	MH	150+000	252+000	151+000	LHS	Outer		40	0.2047	0.1421	0.0983	0.0639	0.041	0.0303	0.0227	31.3	34.8	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	395.8	150.0	1694.2	299.3	119.8	0.0626	7	0.631	-0.11976
1210	MH	150+000	252+000	151+100	LHS	Inner		40	0.4133	0.2347	0.1373	0.09	0.0484	0.0336	0.0204	33.1	39.1	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	150.5	149.9	1482.9	104.5	119.8	0.1786	8	0.8096	-0.04841
410	MH	150+000	252+000	151+250	LHS	Outer		40	0.4789	0.2661	0.1704	0.1019	0.0702	0.0474	0.0304	31.2	34.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	903.2	150.0	146.1	1025.3	104.0	116.5	0.2128	9	1.0224	0.057136
1211	MH	150+000	252+000	151+350	LHS	Inner		40	0.2876	0.1841	0.1187	0.0757	0.0514	0.0396	0.031	33.2	37.9	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	251.7	149.9	1830.8	189.2	119.8	0.1035	10	1.1259	0.053384
411	MH	150+000	252+000	151+500	LHS	Outer		40	0.1753	0.1377	0.101	0.0699	0.0479	0.032	0.0231	31.4	34.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	392.9	150.0	1683.2	297.3	119.8	0.0376	11	1.1635	-0.01627
412	MH	150+000	252+000	151+730	LHS	Outer		40	0.1462	0.1061	0.0777	0.0531	0.0364	0.0272	0.0228	31.5	34.5	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	397.3	149.7	1674.7	300.4	119.6	0.0401	12	1.2036	-0.08342
1212	MH	150+000	252+000	151+810	LHS	Inner		40	0.2786	0.2085	0.1478	0.0959	0.0599	0.0492	0.0418	33.2	38.0	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	236.3	141.6	1838.7	176.7	112.7	0.0701	13	1.2737	-0.12057
1213	MH	150+000	252+000	151+950	LHS	Inner		40	0.2331	0.1647	0.112	0.0631	0.0351	0.0285	0.0239	33.2	39.0	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	307.9	150.0	1841.4	233.7	119.8	0.0684	14	1.3421	-0.15942
413	MH	150+000	252+000	152+000	LHS	Outer		40	0.1577	0.1138	0.0841	0.0607	0.0399	0.026	0.0166	31.8	35.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	396.3	149.9	1640.5	299.7	119.8	0.0439	15	1.386	-0.22277
1214	MH	150+000	252+000	152+100	LHS	Inner		40	0.4396	0.2784	0.1624	0.0914	0.0542	0.0319	0.0108	33.1	38.8	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	150.0	150.0	1767.3	104.0	119.8	0.1612	16	1.5472	-0.16883
414	MH	150+000	252+000	152+250	LHS	Outer		40	0.2276	0.1532	0.1048	0.071	0.0477	0.0343	0.0247	32.0	36.4	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	368.5	150.0	1689.4	279.4	119.8	0.0744	17	1.6216	-0.20168
1215	MH	150+000	252+000	152+400	LHS	Inner		40	0.3206	0.2012	0.1191	0.0711	0.0485	0.0326	0.0293	33.4	39.0	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1375.3	187.6	150.0	1691.9	136.2	119.8	0.1194	18	1.741	-0.18953
415	MH	150+000	252+000	152+500	LHS	Outer		40	0.353	0.2285	0.1444	0.0975	0.0663	0.0393	0.0216	32.1	35.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1425.8	152.0	149.8	1618.5	105.8	119.7	0.1245	19	1.8655	-0.17228
1216	MH	150+000	252+000	152+600	LHS	Inner		40	0.2552	0.1395	0.0862	0.0542	0.043	0.0285	0.0247	33.1	38.9	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	385.1	150.0	1799.1	291.6	119.8	0.1157	20	1.9812	-0.16383
416	MH	150+000	252+000	152+700	LHS	Outer		40	0.2659	0.1681	0.0995	0.0632	0.0479	0.0365	0.0284	31.9	35.4	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	326.7	150.0	1696.6	248.1	119.8	0.0978	21	2.079	-0.17328
1217	MH	150+000	252+000	152+850	LHS	Inner		40	0.1993	0.1497	0.1027	0.0664	0.0412	0.0316	0.0238	33.3	41.1	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	389.5	149.7	1840.0	294.8	119.6	0.0496	22	2.1286	-0.23093
417	MH	150+000	252+000	153+000	LHS	Outer		40	0.2596	0.1922	0.1257	0.0808	0.0539	0.0421	0.0335	31.9	35.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	288.1	149.9	1697.9	218.2	119.8	0.0674	23	2.196	-0.27079
1218	MH	150+000	252+000	153+100	LHS	Inner		40	0.191	0.1243	0.0766	0.0571	0.0411	0.0295	0.0228	33.9	40.8	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	396.8	149.9	1805.6	300.1	119.8	0.0667	24	2.2627	-0.31134
418	MH	150+000	252+000	153+250	LHS	Outer		40	0.1187	0.0937	0.075	0.0515	0.0355	0.0248	0.0171	31.9	35.3	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1410.8	399.8	150.0	1601.5	302.2	119.8	0.025	25	2.2877	-0.39359
1219	MH	150+000	252+000	153+350	LHS	Inner		40	0.252	0.1516	0.0834	0.0556	0.0367	0.0228	0.0154	33.5	40.6	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	243.1	150.0	1826.8	182.3	119.8	0.1004	26	2.3881	-0.40044
419	MH	150+000	252+000	153+500	LHS	Outer		40	0.1255	0.0894	0.0627	0.0489	0.0388	0.0287	0.022	31.9	35.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	397.1	149.9	1666.1	300.3	119.8	0.0361	27	2.4242	-0.47159
1220	MH	150+000	252+000	153+600	LHS	Inner		40	0.1705	0.1106	0.0719	0.046	0.0335	0.0299	0.0269	33.5	40.9	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	396.6	149.6	1793.8	299.9	119.5	0.0599	28	2.4841	-0.51894
420	MH	150+000	252+000	153+750	LHS	Outer		40	0.1315	0.0939	0.0651	0.05	0.0383	0.0297	0.0233	31.8	35.8	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.3	149.8	1701.5	301.9	119.7	0.0376	29	2.5217	-0.5886
1221	MH	150+000	252+000	153+850	LHS	Inner		40	0.1486	0.1208	0.0947	0.0772	0.0543	0.0378	0.0307	33.5	41.2	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	394.4	150.0	1810.9	298.3	119.8	0.0278	30	2.5495	-0.66805
421	MH	150+000	252+000	154+000	LHS	Outer		40	0.1519	0.1037	0.0692	0.0463	0.0346	0.0277	0.0244	32.0	35.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	391.9	149.9	1683.2	296.5	119.8	0.0482	31	2.5977	-0.7271
1222	MH	150+000	252+000	154+100	LHS	Inner		40	0.1713	0.1079	0.0693	0.0497	0.0342	0.0232	0.0209	33.7	40.5	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	395.4	150.0	1824.2	299.1	119.8	0.0634	32	2.6611	-0.77095
422	MH	150+000	252+000	154+250	LHS	Outer		40	0.1171	0.0845	0.0615	0.047	0.0325	0.0259	0.0211	32.3	36.8	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.5	149.5	1701.5	302.0	119.4	0.0326	33	2.6937	-0.8456
1223	MH	150+000	252+000	154+350	LHS	Inner		40	0.1417	0.1028	0.0691	0.0505	0.034	0.0226	0.0187	33.5	40.6	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	399.8	149.9	1814.9	302.2	119.8	0.0389	34	2.7326	-0.91395
423	MH	150+000	252+000	154+500	LHS	Outer		40	0.1935	0.1434	0.0992	0.0702	0.0485	0.0333	0.0299	32.5	36.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.0	149.9	1699.1	300.9	119.8	0.0501	35	2.7827	-0.9711
1224	MH	150+000	252+000	154+600	LHS	Inner	T-31.5/42.5	40	0.1802	0.1248	0.0841	0.0562	0.0443	0.0377	0.034	33.9	40.2	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.3	150.0	2094.9	301.1	119.8	0.0554	36	2.8381	-1.02296
424	MH	150+000	252+000	154+750	LHS	Outer	T-30.8/39.1	40	0.3016	0.1906	0.1131	0.0677	0.0456	0.0307	0.0267	32.6	36.4	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	193.0	150.0	1803.7	140.8	119.8	0.111	37	2.9491	-1.01921
1225	MH	150+000	252+000	154+850	LHS	Inner		40	0.3321	0.1948	0.1392	0.1004	0.065	0.0415	0.022	33.9	41.7	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	153.4	149.9	2117.9	107.0	119.8	0.1373	38	3.0864	-0.98916
425	MH	150+000	252+000	155+000	LHS	Outer		40	0.2634	0.1641	0.1028	0.0646	0.0492	0.0338	0.0261	32.8	37.1	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	315.2	150.0	1784.3	239.3	119.8	0.0993	39	3.1857	-0.99711
1226	MH	150+000	252+000	155+100	LHS	Inner		40	0.3553	0.2149	0.1287	0.0921	0.0663	0.0474	0.0344	33.8	36.5	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	170.5	150.0	2117.9	121.7	119.8	0.1404	40	3.3261	-0.96396
426	MH	150+000	252+000	155+250	LHS	Outer		40	0.2575	0.1733	0.1155	0.083	0.0523	0.0372	0.025	32.9	36.3	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	268.8	150.0	1758.4	203.0	119.8	0.0842	41	3.4103	-0.98701
1227	MH	150+000	252+000	155+350	LHS	Inner		40	0.546	0.2816	0.1538	0.1136	0.0797	0.0552	0.043	33.3	41.4	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	506.5	150.0	121.7	724.0	104.0	95.6	0.2644	42	3.6747	-0.82987
427	MH	150+000	252+000	155+550	LHS	Outer		40	0.2869	0.1893	0.1191	0.0745	0.0585	0.0476	0.0329	33.0	36.6	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	256.8	150.0	1746.7	193.3	119.8	0.0976	43	3.7723	-0.83952
1228	MH	150+000	252+000	155+600	LHS	Inner		40	0.4193	0.2497	0.1421	0.0916	0.0639	0.0442	0.0309	33.3	41.0	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1159.1	151.2	149.8	1656.8	105.1	119.7	0.1696	44	3.9419	-0.77717
428	MH	150+000	252+000	155+750	LHS	Outer		40	0.1133	0.0862	0.0619	0.0458	0.0374	0.0289	0.023	33.0	37.7	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.5	149.9	1801.2	302.0	119.8	0.0271	45	3.969	-0.85732
1229	MH	150+000	252+000	155+850	LHS	Inner		40	0.2814	0.1691	0.102	0.0726	0.0572	0.0384	0.0272	33.2	41.7	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	292.7	150.0	2136.4	221.8	119.8	0.1123	46	4.0813	-0.85227
429	MH	150+000	252+000	156+000	LHS	Outer		40	0.1516	0.114	0.0886	0.06	0.0416	0.0315	0.024	33.0	38.1	39.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	396.8	149.8	1794.7	300.1	119.7	0.0376	47	4.1189	-0.92192
1230	MH	150+000	252+000	156+100	LHS	Inner		40	0.2521	0.1552	0.1038	0.0713	0.0463	0.0353	0.0276	33.5	41.4	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	377.8	150.0	2087.2	286.3	119.8	0.0969	48	4.2158	-0.93228
430	MH	150+000	252+000	156+250	LHS	Outer	T-31.5/40.5	40	0.1571	0.1104	0.0758	0.0527	0.0362	0.028	0.0219	33.0	37.8	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	395.1	150.0	1930.6	298.8	119.8	0.0467	49	4.2625	-0.99283
1231	MH	150+000	252+000	156+350	LHS	Inner		40	0.1599	0.1121	0.0678	0.0542	0.0448	0.038	0.0284	33.6	42.5	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	400.0	149.5	2128.6	302.4	119.4	0.0478	50	4.3103	-1.05228
431	MH	150+000	252+000	156+500	LHS	Outer		40	0.2358	0.1656	0.1036	0.0771	0.0591	0.0454	0.0357	32.9	38.2	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.3	149.8	1932.0	299.7	119.7	0.0702	51	4.3805	-1.08933
1232	MH	150+000	252+000	156+600	LHS	Inner		40	0.1512	0.1165	0.0844	0.0625	0.0494	0.0315	0.0216	33.6	42.3	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	399.8	149.6	2125.6	302.2	119.5	0.0347	52	4.4152	-1.16188
432	MH	150+000	252+000	156+750	LHS	Outer		40	0.1927	0.1353	0.0933	0.0635	0.0448	0.031	0.0222	33.3	40.1	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	399.0	150.0	1922.3	301.7	119.8	0.0574	53	4.4726	-1.21173
1233	MH	150+000	252+000	156+850	LHS	Inner		40	0.2633	0.1462	0.101	0.0705	0.0462	0.0381	0.0343	33.5	43.2	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	391.9	150.0	2122.5	296.5	119.8	0.1171	54	4.5897	-1.20188
433	MH	150+000	252+000	157+000	LHS	Outer		40	0.2745	0.1933	0.13	0.0783	0.0587	0.0409	0.0311	33.6	40.7	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	236.3	150.0	1926.4	176.7	119.8	0.0812	55	4.6709	-1.22794
1234	MH	150+000	252+000	157+100	LHS	Inner		40	0.3418	0.2125	0.1287	0.0961	0.0636	0.0409	0.0368	33.8	43.0	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	172.5	149.9	2131.8	123.4	119.8	0.1293	56	4.8002	-1.20589
434	MH	150+000	252+000	157+250	LHS	Outer		40	0.192	0.1251	0.0817	0.0554	0.0436	0.0332	0.0258	33.9	40.9	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	397.6	150.0	1913.9	300.6	119.8	0.0669	57	4.8671	-1.24624
1235	MH	150+000	252+000	157+350	LHS	Inner		40	0.152	0.1143	0.0876	0.0693	0.052	0.033	0.0185	33.8	43.1	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	398.8	150.0	2140.9	301.5	119.8	0.0377	58	4.9048	-1.31579
435	MH	150+000	252+000	157+500	LHS	Outer		40	0.3215	0.2379	0.151	0.0881	0.0715	0.0554	0.0449	33.9	40.5	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	201.3	129.4	1923.6	147.8	102.2	0.0836	59	4.9884	-1.33944
1236	MH	150+000	252+000	157+600	LHS	Inner		40	0.1953	0.1438	0.0938	0.0626	0.0414	0.0307	0.024	33.7	43.1	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	388.5	150.0	2134.8	294.1	119.8	0.0515	60	5.0399	-1.39519
436	MH	150+000	252+000	157+750	LHS	Outer		40	0.41	0.2439	0.1373	0.0757	0.061	0.0415	0.0281	34.1	41.0	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.0	150.0	1545.9	104.0	119.8	0.1661	61	5.206	-1.33635
1237	MH	150+000	252+000	157+850	LHS	Inner		40	0.3432	0.1919	0.1272	0.0835	0.0507	0.0302	0.0168	33.7	42.9	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	150.7	150.0	2081.0	104.6	119.8	0.1513	62	5.3573	-1.2923
437	MH	150+000	252+000	158+000	LHS	Outer		40	0.3821	0.2254	0.1228	0.0647	0.0476	0.0364	0.0318	34.1	40.9	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	157.8	150.0	1559.7	110.8	119.8	0.1567	63	5.514	-1.24285
1238	MH	150+000	252+000	158+100	LHS	Inner		40	0.3774	0.2266	0.1371	0.0913	0.0602	0.0402	0.025	33.9	43.3	42.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1416.1	150.2	150.0	2024.1	104.2	119.8	0.1508	64	5.6648	-1.1993
438	MH	150+000	252+000	158+250	LHS	Outer		40	0.3596	0.2234	0.1265	0.0863	0.0593	0.04	0.0269	34.4	42.0	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	151.0	149.9	1927.8	104.9	119.8	0.1362	65	5.801	-1.17035
1239	MH	150+000	252+000	158+350	LHS	Inner	t-30.8/42.3	40	0.3256	0.1902	0.1055	0.0704	0.0511	0.0335	0.0213	33.2	37.1	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	188.9	150.0	2009.3	137.3	119.8	0.1354	66	5.9364	-1.1422
439	MH	150+000	252+000	158+500	LHS	Outer		40	0.4071	0.2519	0.1338	0.086	0.0696	0.0463	0.03	34.8	42.4	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1283.9	150.0	149.4	1658.4	104.0	119.3	0.1552	67	6.0916	-1.09425
1240	MH	150+000	252+000	158+600	LHS	Inner		40	0.3769	0.2087	0.0985	0.0674	0.0462	0.0331	0.0241	33.2	36.3	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	967.7	181.5	150.0	1368.9	131.1	119.8	0.1682	68	6.2598	-1.03331
440	MH	150+000	252+000	158+750	LHS	Outer		40	0.3999	0.231	0.1192	0.0579	0.0474	0.0337	0.0243	35.0	43.0	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	154.6	150.0	1155.5	108.0	119.8	0.1689	69	6.4287	-0.97166
1241	MH	150+000	252+000	158+850	LHS	Inner		40	0.4437	0.2646	0.1446	0.0971	0.0644	0.0443	0.0334	33.1	36.5	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	981.7	150.0	147.3	1388.7	104.0	117.5

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
447	MH	150+000	252+000	160+500	LHS	Outer		40	0.478	0.2763	0.1419	0.0905	0.0543	0.0395	0.0281	34.3	41.2	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	753.8	152.2	149.9	973.7	105.9	119.8	0.2017	83	8.5798	-0.32208
1248	MH	150+000	252+000	160+600	LHS	Inner		40	0.3858	0.2206	0.1117	0.063	0.0451	0.0357	0.0296	33.4	38.4	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	904.3	169.8	150.0	1279.2	121.1	119.8	0.1652	84	8.745	-0.26413
448	MH	150+000	252+000	160+750	LHS	Outer		40	0.3891	0.2419	0.1349	0.0825	0.0569	0.0394	0.0286	34.5	40.9	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	150.7	149.4	1581.9	104.6	119.3	0.1472	85	8.8922	-0.22418
1249	MH	150+000	252+000	160+850	LHS	Inner		40	0.3433	0.2143	0.1163	0.0677	0.0455	0.0355	0.0302	33.6	36.3	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1355.9	171.5	150.0	1918.1	122.6	119.8	0.129	86	9.0212	-0.20243
449	MH	150+000	252+000	161+000	LHS	Outer		40	0.3679	0.2258	0.1185	0.077	0.0468	0.0348	0.0234	34.6	40.9	40.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1394.6	156.8	150.0	1801.4	109.9	119.8	0.1421	87	9.1633	-0.16759
1250	MH	150+000	252+000	161+130	LHS	Inner		40	0.3597	0.228	0.1287	0.0659	0.0419	0.0346	0.0311	33.0	36.1	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1237.6	156.1	150.0	1750.7	109.3	119.8	0.1317	88	9.295	-0.14314
450	MH	150+000	252+000	161+250	LHS	Outer	T-27.4/37.5;6 Lane VUP Start	40	0.474	0.302	0.164	0.0998	0.0631	0.0373	0.032	29.8	32.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	752.7	150.7	149.9	842.6	104.6	119.8	0.172	89	9.467	-0.07839
1251	MH	150+000	252+000	161+350	LHS	Inner		40	0.474	0.298	0.1648	0.0831	0.0631	0.0445	0.0299	32.9	36.5	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	747.3	150.7	149.9	1057.1	104.6	119.8	0.176	90	9.643	-0.00964
451	MH	150+000	252+000	161+500	LHS	Outer		40	0.4177	0.278	0.1461	0.0866	0.064	0.0413	0.0287	29.7	33.0	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1083.9	150.2	149.9	1213.4	104.2	119.8	0.1397	91	9.7827	0.022808
1252	MH	150+000	252+000	161+600	LHS	Inner		40	0.3988	0.2422	0.142	0.0734	0.0491	0.0366	0.0305	33.0	36.7	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1278.5	151.0	150.0	1808.6	104.9	119.8	0.1566	92	9.9393	0.072156
452	MH	150+000	252+000	161+750	LHS	Outer	6 Lane VUP End	40	0.4092	0.2543	0.131	0.0813	0.0623	0.0379	0.0274	29.6	32.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1086.0	150.5	150.0	1215.8	104.5	119.8	0.1549	93	10.0942	0.119805
1253	MH	150+000	252+000	161+850	LHS	Inner		40	0.4288	0.2708	0.1532	0.0882	0.0588	0.0399	0.0316	33.3	36.9	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1050.5	150.0	150.0	1486.1	104.0	119.8	0.158	94	10.2522	0.170553
453	MH	150+000	252+000	162+000	LHS	Outer		40	0.4457	0.2963	0.1579	0.0997	0.0564	0.0369	0.0241	29.5	32.3	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	877.4	152.4	150.0	982.3	106.1	119.8	0.1494	95	10.4016	0.212702
1254	MH	150+000	252+000	162+100	LHS	Inner		40	0.4139	0.2383	0.1259	0.0701	0.054	0.0431	0.0354	33.7	36.0	42.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	150.0	149.9	1356.8	104.0	119.8	0.1756	96	10.5772	0.28105
454	MH	150+000	252+000	162+200	LHS	Outer		40	0.4431	0.2779	0.15	0.0977	0.0674	0.0473	0.0297	29.2	31.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	892.5	150.2	149.4	999.2	104.2	119.3	0.1652	97	10.7424	0.338998
1255	MH	150+000	252+000	163+255	LHS	Inner	T-33.1/41.9	40	0.283	0.1727	0.0946	0.0533	0.0384	0.0309	0.0219	33.5	37.5	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	254.8	150.0	2077.2	191.7	119.8	0.1103	98	10.8527	0.342047
455	MH	150+000	252+000	163+260	LHS	Outer		40	0.2717	0.1697	0.102	0.0612	0.0398	0.0241	0.0159	29.1	31.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	170.0	150.0	1652.7	121.3	119.8	0.102	99	10.9547	0.336795
456	MH	150+000	252+000	163+500	LHS	Outer		40	0.4329	0.284	0.1489	0.0858	0.0549	0.0312	0.0269	29.1	32.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.2	149.8	1006.3	104.2	119.7	0.1489	100	11.1036	0.378444
1256	MH	150+000	252+000	163+650	LHS	Inner		40	0.2736	0.1691	0.1007	0.0603	0.048	0.0341	0.0254	33.8	37.5	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	288.6	150.0	2035.5	218.6	119.8	0.1045	101	11.2081	0.375692
457	MH	150+000	252+000	163+760	LHS	Outer		40	0.3556	0.238	0.1257	0.0875	0.0616	0.0393	0.0242	29.0	32.0	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1406.5	151.5	150.0	1574.6	105.3	119.8	0.1176	102	11.3257	0.386041
1257	MH	150+000	252+000	163+850	LHS	Inner		40	0.318	0.1874	0.1193	0.0735	0.0539	0.0397	0.0244	34.0	37.5	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	195.5	150.0	2054.9	142.9	119.8	0.1306	103	11.4563	0.409389
458	MH	150+000	252+000	164+000	LHS	Outer		40	0.3635	0.2343	0.1339	0.0799	0.0504	0.0404	0.0305	28.8	31.3	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	150.0	149.8	1625.1	104.0	119.7	0.1292	104	11.5855	0.431337
1258	MH	150+000	252+000	164+100	LHS	Inner		40	0.2735	0.1691	0.1047	0.0627	0.0471	0.0314	0.0249	34.0	37.6	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	296.1	150.0	1998.2	224.5	119.8	0.1044	105	11.6899	0.428486
459	MH	150+000	252+000	164+250	LHS	Outer		40	0.3056	0.2058	0.1323	0.0842	0.0508	0.0281	0.0171	28.5	31.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1409.7	154.2	150.0	1578.2	107.7	119.8	0.0998	106	11.7897	0.421034
1259	MH	150+000	252+000	164+350	LHS	Inner		40	0.2782	0.1782	0.1057	0.0694	0.0449	0.0327	0.0293	34.3	37.5	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	280.0	150.0	2069.7	211.8	119.8	0.1	107	11.8897	0.413783
460	MH	150+000	252+000	164+500	LHS	Outer		40	0.3024	0.1998	0.1228	0.0813	0.0531	0.0404	0.0316	28.5	31.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	214.8	150.0	1615.4	159.0	119.8	0.1026	108	11.9923	0.409131
1260	MH	150+000	252+000	164+600	LHS	Inner		40	0.3836	0.2459	0.1502	0.0954	0.0563	0.0419	0.0324	34.3	37.4	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1384.9	152.2	150.0	1919.2	105.9	119.8	0.1377	109	12.13	0.43958
461	MH	150+000	252+000	164+750	LHS	Outer		40	0.4076	0.2456	0.135	0.0886	0.057	0.0389	0.0289	28.6	32.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1115.1	153.4	150.0	1248.4	107.0	119.8	0.162	110	12.292	0.494328
1261	MH	150+000	252+000	164+850	LHS	Inner		40	0.4372	0.2619	0.1554	0.0971	0.0463	0.0309	0.021	34.2	37.4	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.5	150.0	1658.5	104.5	119.8	0.1753	111	12.4673	0.562377
462	MH	150+000	252+000	165+000	LHS	Outer		40	0.3465	0.2111	0.1236	0.0847	0.0604	0.0382	0.0266	28.9	32.3	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	152.7	150.0	1637.2	106.4	119.8	0.1354	112	12.6027	0.590525
1262	MH	150+000	252+000	165+150	LHS	Inner		40	0.3679	0.2179	0.1348	0.0731	0.0453	0.041	0.0342	34.3	36.6	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	163.0	150.0	1691.2	115.3	119.8	0.15	113	12.7527	0.633273
463	MH	150+000	252+000	165+250	LHS	Outer		40	0.3716	0.2367	0.1338	0.0844	0.0519	0.0357	0.0245	29.0	32.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1392.5	151.2	150.0	1558.9	105.1	119.8	0.1349	114	12.8876	0.660922
1263	MH	150+000	252+000	165+350	LHS	Inner		40	0.2613	0.1688	0.0945	0.0538	0.0242	0.0162	0.011	34.1	37.1	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1319.4	150.7	150.0	1828.4	104.6	119.8	0.0925	115	12.9801	0.64617
464	MH	150+000	252+000	165+500	LHS	Outer		40	0.3392	0.2081	0.1216	0.0716	0.0523	0.0342	0.0211	29.3	32.5	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	152.4	150.0	1633.5	106.1	119.8	0.1311	116	13.1112	0.670019
1264	MH	150+000	252+000	165+600	LHS	Inner		40	0.3134	0.1824	0.1004	0.0609	0.0336	0.0269	0.0218	34.3	37.3	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1352.7	186.4	150.0	1874.6	135.2	119.8	0.131	117	13.2422	0.693767
465	MH	150+000	252+000	165+750	LHS	Outer		40	0.4124	0.2646	0.1568	0.0897	0.0495	0.0236	0.0186	29.4	32.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1172.0	150.5	150.0	1312.1	104.5	119.8	0.1478	118	13.39	0.734316
1265	MH	150+000	252+000	165+850	LHS	Inner		40	0.1532	0.1079	0.0768	0.0527	0.0344	0.0226	0.0144	34.3	37.7	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	391.4	149.9	2072.7	296.2	119.8	0.0453	119	13.4353	0.672364
466	MH	150+000	252+000	165+980	LHS	Outer	T-26.6/37.8	40	0.1774	0.1234	0.0777	0.0464	0.0332	0.0246	0.0215	29.6	31.4	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	391.2	150.0	1695.4	296.0	119.8	0.054	120	13.4893	0.619112
1266	MH	150+000	252+000	166+100	LHS	Inner		40	0.303	0.2111	0.1492	0.1072	0.0656	0.0365	0.0239	34.3	37.6	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	159.5	149.7	2066.8	112.2	119.6	0.0919	121	13.5812	0.603761
467	MH	150+000	252+000	166+250	LHS	Outer		40	0.163	0.1243	0.0938	0.067	0.0478	0.034	0.0242	29.3	32.0	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	398.8	150.0	1685.6	301.5	119.8	0.0387	122	13.6199	0.535209
1267	MH	150+000	252+000	166+350	LHS	Inner		40	0.2256	0.1563	0.0963	0.0612	0.0373	0.0186	0.0098	34.3	37.6	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	152.0	149.9	2066.8	105.8	119.8	0.0693	123	13.6892	0.497258
468	MH	150+000	252+000	166+500	LHS	Outer		40	0.2437	0.1618	0.1045	0.0735	0.0495	0.0339	0.0247	29.5	31.8	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	350.9	150.0	1672.2	266.4	119.8	0.0819	124	13.7711	0.471906
1268	MH	150+000	252+000	166+600	LHS	Inner		40	0.2062	0.1213	0.0855	0.0619	0.0452	0.0336	0.0273	34.1	36.9	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	394.6	149.9	2069.7	298.5	119.8	0.0849	125	13.856	0.449555
469	MH	150+000	252+000	166+750	LHS	Outer		40	0.1868	0.1313	0.0946	0.0704	0.0502	0.0362	0.025	29.2	31.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.4	149.8	1691.7	296.9	119.7	0.0555	126	13.9115	0.397803
1269	MH	150+000	252+000	166+860	LHS	Inner		40	0.2841	0.1837	0.1135	0.0694	0.0519	0.046	0.0356	33.6	36.3	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	293.9	150.0	2033.9	222.8	119.8	0.1004	127	14.0119	0.390952
470	MH	150+000	252+000	167+000	LHS	Outer		40	0.2238	0.1547	0.1002	0.0696	0.0464	0.0398	0.0349	29.2	31.6	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	399.3	149.9	1656.3	301.9	119.8	0.0691	128	14.081	0.3528
1270	MH	150+000	252+000	167+120	LHS	Inner		40	0.4153	0.2361	0.1405	0.0905	0.0572	0.041	0.0295	33.3	35.4	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1007.5	152.2	149.7	1396.2	105.9	119.6	0.1792	129	14.2602	0.424748
471	MH	150+000	252+000	167+250	LHS	Outer		40	0.3723	0.2203	0.1257	0.0907	0.0643	0.0459	0.0291	29.1	31.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1415.1	155.1	150.0	1606.4	108.4	119.8	0.152	130	14.4122	0.469497
1271	MH	150+000	252+000	167+350	LHS	Inner		40	0.4724	0.2728	0.1498	0.0839	0.0637	0.0471	0.0408	32.7	36.1	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	722.6	150.2	141.3	1001.4	104.2	112.4	0.1996	131	14.6118	0.561845
472	MH	150+000	252+000	167+470	LHS	Outer		40	0.3329	0.2327	0.1332	0.0726	0.0448	0.0354	0.0287	29.3	31.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	151.7	149.9	1630.8	105.5	119.8	0.1002	132	14.712	0.554794
1272	MH	150+000	252+000	167+700	LHS	Inner		40	0.4689	0.2751	0.1486	0.1005	0.0768	0.0513	0.0352	33.0	35.7	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	150.7	135.6	1227.8	104.6	107.5	0.1938	133	14.9058	0.641342
473	MH	150+000	252+000	167+750	LHS	Outer		40	0.4573	0.2674	0.1382	0.0838	0.0558	0.0334	0.0182	29.3	32.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	667.7	151.0	150.0	758.0	104.9	119.8	0.1899	134	15.0957	0.723991
1273	MH	150+000	252+000	167+860	LHS	Inner		40	0.4397	0.2691	0.1602	0.1005	0.0762	0.0587	0.0426	32.8	36.3	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1119.4	150.5	125.3	1551.3	104.5	98.7	0.1706	135	15.2663	0.787339
474	MH	150+000	252+000	168+000	LHS	Outer		40	0.4749	0.2982	0.1686	0.0947	0.0593	0.0395	0.0261	29.2	32.3	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	594.6	150.2	150.0	675.0	104.2	119.8	0.1767	136	15.443	0.856787
1274	MH	150+000	252+000	168+100	LHS	Inner		40	0.5341	0.3255	0.1845	0.1276	0.0973	0.0764	0.0662	32.9	36.5	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	150.2	93.5	1090.8	104.2	71.5	0.2086	137	15.6516	0.958136
475	MH	150+000	252+000	168+250	LHS	Outer		40	0.1244	0.0815	0.0538	0.0403	0.0314	0.0254	0.0173	29.1	32.4	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	394.9	149.9	1691.7	298.7	119.8	0.0429	138	15.6945	0.893784
1275	MH	150+000	252+000	168+360	LHS	Inner		40	0.1749	0.104	0.0622	0.0348	0.0246	0.0178	0.016	33.0	36.8	41.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	393.4	150.0	2045.9	297.6	119.8	0.0709	139	15.7654	0.857433
476	MH	150+000	252+000	168+500	LHS	Outer		40	0.0975	0.0623	0.0369	0.0258	0.0185	0.0127	0.0114	29.1	32.6	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	398.5	149.9	1661.2	301.3	119.8	0.0352	140	15.8006	0.785381
1276	MH	150+000	252+000	168+600	LHS	Inner	T-28.8/42.2	40	0.1268	0.0836	0.0531	0.04	0.031	0.0252	0.0227	33.4	37.1	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	396.8	149.8	2103.4	300.1	119.7	0.0432	141	15.8438	0.72133
477	MH	150+000	252+000	168+750	LHS	Outer		40	0.1888	0.1328	0.0964	0.0713	0.0423	0.0263	0.0155	29.3	32.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	390.5	149.9	1679.6	295.5	119.8	0.056	142	15.8998	0.670078
1277	MH	150+000	252+000	168+850	LHS	Inner		40	0.2915	0.181	0.1163	0.0677	0.0509	0.0339	0.0188	33.7	37.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	177.4	150.0	2080.7	127.6	119.8	0.1105	143	16.0103	0.673327
478	MH	150+000	252+000	169+000	LHS	Outer		40	0.2038	0.1348	0.0882	0.0624	0.0439	0.0282	0.0241	29.3	32.0	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	396.8	150.0	1634.4	300.1	119.8	0.069	144	16.0793	0.635075
1278	MH	150+000	252+000	169+100	LHS	Inner		40	0.2907	0.2091	0.141	0.096	0.0713	0.0464	0.032	33.6	36.9	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	208.9	149.9	2098.9	154.1	119.8	0.0816	145	16.1609	0.609423
479	MH	150+000	252+000	169+250	LHS	Outer		40	0.1362	0.1004	0.0766	0.0546	0.0389	0.0326	0.0267	29.2	32.0	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.1	149.7	1697.9	299.6	119.6	0.0358	146	16.1967	0.537972
1279	MH	150+000	252+000	169+350	LHS	Inner		40	0.1707	0.1213	0.0928	0.0618	0.0413	0.0308	0.0277	33.6	36.9	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	399.8	149.7	1999.0	302.2	119.6	0.0494	147	16.2461	0.48012
480	MH	150+000	252+000	169+500	LHS	Outer		40	0.1696	0.1219	0.0876	0.0603	0.0478	0.0392	0.0303	29.1	32.0	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.5	1700.3	299.1	119.4	0.0477	148	16.2938	0.420569
1280	MH	150+000	252+000	169+600	LHS	Inner		40	0.2273	0.1395	0.0917	0.0677	0.0396	0.0198	0.0117	33.9	36.4	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	199.6	150.0	2097.3	146.4	119.8	0.0878	149	16.3816	0.401117
481	MH	150+000	252+000	169+750	LHS	Outer		40	0.3365	0.2172	0.1298	0.0858	0.0473	0.0326	0.0258	29.0	31.5	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	152.9	150.0	1647.8	106.5	119.8	0.1193	150	16.5009	0.413166
1281	MH	150+000	252+000	169+850	LHS	Inner		40	0.3687	0.2215	0.1418	0.0991	0.0507	0.0325	0.0259	34.0	36.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1383.9	150.7	149.9	1947.6	104.6	119.8	0.1472	151	16.6481	0.453114
482	MH	150+000	252+000	170+000	LHS	Outer		40	0.2344	0.1773	0.1172	0.0793	0.0616	0.0423	0.0304	29.0	31.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	375.6	149.9	1701.5	284.7	119.8	0.0571	152	16.7052	0.402962

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1288	MH	150+000	252+000	171+600	LHS	Inner		40	0.1782	0.1229	0.0925	0.0656	0.0425	0.0258	0.0183	33.7	36.6	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	387.3	150.0	2098.9	293.2	119.8	0.0553	165	18.219	0.522492
489	MH	150+000	252+000	171+750	LHS	Outer		40	0.3184	0.2048	0.1339	0.0919	0.0631	0.0464	0.0318	28.8	31.8	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	180.3	149.9	1749.9	130.1	119.8	0.1136	166	18.3326	0.528841
1289	MH	150+000	252+000	171+850	LHS	Inner		40	0.2391	0.1641	0.1043	0.0653	0.0378	0.0286	0.022	33.7	36.3	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	314.7	150.0	2030.8	238.9	119.8	0.075	167	18.4076	0.496589
490	MH	150+000	252+000	172+000	LHS	Outer		40	0.1798	0.1195	0.0754	0.0513	0.0363	0.0269	0.0237	28.9	31.4	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	391.7	150.0	1687.2	296.4	119.8	0.0603	168	18.4679	0.449637
1290	MH	150+000	252+000	172+100	LHS	Inner		40	0.2529	0.1627	0.1019	0.0628	0.0416	0.0273	0.0198	34.0	36.4	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	254.3	150.0	2097.3	191.3	119.8	0.0902	169	18.5581	0.432586
491	MH	150+000	252+000	172+250	LHS	Outer		40	0.2206	0.1433	0.0976	0.067	0.0462	0.0324	0.0292	28.7	31.2	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	384.4	150.0	1749.9	291.1	119.8	0.0773	170	18.6354	0.402634
1291	MH	150+000	252+000	172+350	LHS	Inner		40	0.2811	0.1842	0.0942	0.0623	0.0392	0.0277	0.019	33.4	36.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	194.5	150.0	2064.1	142.1	119.8	0.0969	171	18.7323	0.392283
492	MH	150+000	252+000	172+500	LHS	Outer		40	0.1908	0.1318	0.0786	0.0476	0.0338	0.0215	0.0132	28.7	31.5	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	344.5	150.0	1711.0	261.6	119.8	0.059	172	18.7913	0.344031
1292	MH	150+000	252+000	172+600	LHS	Inner		40	0.2218	0.1408	0.0899	0.0639	0.0448	0.0339	0.0262	33.8	35.9	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.1	149.9	2097.3	299.6	119.8	0.081	173	18.8723	0.31778
493	MH	150+000	252+000	172+750	LHS	Outer		40	0.1311	0.0923	0.0626	0.0418	0.0278	0.0212	0.0153	28.7	31.5	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	396.1	150.0	1680.9	299.6	119.8	0.0388	174	18.9111	0.249328
1293	MH	150+000	252+000	172+850	LHS	Inner	T-28.7/41.3	40	0.2099	0.123	0.0857	0.0645	0.0499	0.0402	0.0332	34.8	36.9	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	399.0	149.9	2016.4	301.7	119.8	0.0869	175	18.998	0.228977
494	MH	150+000	252+000	173+000	LHS	Outer		40	0.1389	0.0957	0.0674	0.0507	0.0392	0.0319	0.0231	28.9	31.8	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.8	1748.6	299.1	119.7	0.0432	176	19.0412	0.164925
1294	MH	150+000	252+000	173+100	LHS	Inner		40	0.3253	0.2134	0.1297	0.0961	0.0631	0.0407	0.0219	34.9	36.1	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	161.0	149.9	1970.1	113.5	119.8	0.1119	177	19.1531	0.169573
495	MH	150+000	252+000	173+250	LHS	Outer		40	0.3244	0.203	0.1226	0.0699	0.0492	0.0313	0.0276	28.7	31.3	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	171.3	150.0	1703.4	122.4	119.8	0.1214	178	19.2745	0.183722
1295	MH	150+000	252+000	173+390	LHS	Inner		40	0.3599	0.2192	0.1164	0.0822	0.0632	0.0499	0.0337	34.5	36.1	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1329.0	183.0	150.0	1786.5	132.4	119.8	0.1407	179	19.4152	0.21717
496	MH	150+000	252+000	173+500	LHS	Outer		40	0.3516	0.2317	0.1386	0.0871	0.0652	0.0397	0.0302	29.0	31.5	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	150.0	149.6	1748.6	104.0	119.5	0.1199	180	19.5351	0.229819
1296	MH	150+000	252+000	173+610	LHS	Inner		40	0.3079	0.2005	0.1348	0.1002	0.0765	0.0514	0.0334	34.6	36.6	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	213.0	144.2	1993.2	157.5	114.9	0.1074	181	19.6425	0.229967
497	MH	150+000	252+000	173+750	LHS	Outer		40	0.2835	0.1954	0.1188	0.0751	0.0462	0.0286	0.0157	29.0	31.2	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	156.1	149.8	1731.1	109.3	119.7	0.0881	182	19.7306	0.210816
1297	MH	150+000	252+000	173+850	LHS	Inner		40	0.2236	0.1558	0.1073	0.0824	0.0663	0.044	0.0284	32.2	34.8	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.8	150.0	2010.6	300.8	119.8	0.0678	183	19.7984	0.171364
498	MH	150+000	252+000	174+000	LHS	Outer		40	0.4184	0.2523	0.1432	0.1033	0.078	0.053	0.0387	29.1	31.4	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	150.7	133.5	1419.7	104.6	105.7	0.1661	184	19.9645	0.230212
1298	MH	150+000	252+000	174+240	LHS	Inner		40	0.4376	0.2741	0.1598	0.0854	0.0528	0.0403	0.0314	32.9	35.4	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	880.6	150.5	150.0	1183.7	104.5	119.8	0.1635	185	20.128	0.286461
499	MH	150+000	252+000	174+280	LHS	Outer	T-26/34.5	40	0.2851	0.1813	0.1016	0.0606	0.0326	0.0253	0.0204	27.2	29.1	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	167.6	150.0	1400.0	119.2	119.8	0.1038	186	20.2318	0.283009
1299	MH	150+000	252+000	174+350	LHS	Inner		40	0.4646	0.2541	0.1641	0.1102	0.0742	0.0502	0.0319	32.5	35.0	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	905.4	150.0	139.6	1217.1	104.0	111.0	0.2105	187	20.4423	0.386258
500	MH	150+000	252+000	174+500	LHS	Outer		40	0.1288	0.0945	0.0713	0.0488	0.0338	0.0277	0.0211	27.2	29.0	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	399.5	149.6	1452.6	302.0	119.5	0.0343	188	20.4766	0.313306
1300	MH	150+000	252+000	174+600	LHS	Inner		40	0.1097	0.0767	0.0598	0.047	0.037	0.0309	0.0262	33.0	35.7	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.6	149.9	1997.5	300.6	119.8	0.033	189	20.5096	0.239055
501	MH	150+000	252+000	174+750	LHS	Outer		40	0.2091	0.132	0.0968	0.0703	0.0503	0.0365	0.0306	27.2	29.2	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	397.8	149.8	1455.8	300.8	119.7	0.0771	190	20.5867	0.208903
1301	MH	150+000	252+000	174+850	LHS	Inner		40	0.1656	0.1237	0.0818	0.0599	0.0449	0.0333	0.0253	33.4	36.4	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	397.6	150.0	2003.3	300.6	119.8	0.0419	191	20.6286	0.143552
502	MH	150+000	252+000	175+000	LHS	Outer		40	0.1401	0.1014	0.0765	0.0584	0.0454	0.0356	0.0292	27.3	29.3	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	399.8	150.0	1431.5	302.2	119.8	0.0387	192	20.6673	0.075
1302	MH	150+000	252+000	175+100	LHS	Inner		40	0.2724	0.1685	0.1085	0.0847	0.0593	0.0417	0.0278	33.7	36.0	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	307.1	150.0	1994.7	233.0	119.8	0.1039	193	20.7712	0.071648
503	MH	150+000	252+000	175+250	LHS	Outer		40	0.1739	0.1308	0.0939	0.0678	0.0494	0.0364	0.0271	27.4	29.6	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	400.0	149.7	1466.3	302.4	119.6	0.0431	194	20.8143	0.007497
1303	MH	150+000	252+000	175+350	LHS	Inner		40	0.1427	0.1044	0.0729	0.0511	0.0374	0.0279	0.0251	34.0	36.2	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.1	149.7	2010.6	300.3	119.6	0.0383	195	20.8526	-0.06145
504	MH	150+000	252+000	175+500	LHS	Outer		40	0.1583	0.1178	0.0894	0.0661	0.0508	0.0397	0.0273	27.3	29.3	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	149.9	1439.0	302.4	119.8	0.0405	196	20.8931	-0.12821
1304	MH	150+000	252+000	175+600	LHS	Inner		40	0.2637	0.1545	0.0952	0.0604	0.0448	0.0337	0.0303	34.1	36.2	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	384.4	150.0	1967.2	291.1	119.8	0.1092	197	21.0023	-0.12626
505	MH	150+000	252+000	175+750	LHS	Outer		40	0.152	0.1083	0.0778	0.0572	0.0423	0.028	0.0183	27.2	29.3	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	396.3	149.9	1461.0	299.7	119.8	0.0437	198	21.046	-0.18981
1305	MH	150+000	252+000	175+850	LHS	Inner	T-29.5/38.9	40	0.197	0.1482	0.1081	0.072	0.0464	0.0352	0.0256	34.0	36.6	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.1	149.9	1790.5	298.8	119.8	0.0488	199	21.0948	-0.24826
506	MH	150+000	252+000	176+000	LHS	Outer		40	0.1415	0.1003	0.0731	0.0554	0.0435	0.0261	0.019	27.1	29.2	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	399.5	149.9	1449.4	302.0	119.8	0.0412	200	21.136	-0.31431
1306	MH	150+000	252+000	176+100	LHS	Inner		40	0.4512	0.2611	0.1677	0.1083	0.0756	0.0554	0.0406	34.0	36.1	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1057.0	150.2	126.7	1263.5	104.2	99.9	0.1901	201	21.3261	-0.23146
507	MH	150+000	252+000	176+250	LHS	Outer		40	0.2581	0.192	0.1438	0.0967	0.0623	0.0391	0.0248	27.2	29.8	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	213.0	149.9	1453.6	157.5	119.8	0.0661	202	21.3922	-0.27262
1307	MH	150+000	252+000	176+350	LHS	Inner		40	0.1794	0.1344	0.1048	0.0837	0.0655	0.0534	0.0411	34.2	35.9	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	398.5	149.7	1769.9	301.3	119.6	0.045	203	21.4372	-0.33487
508	MH	150+000	252+000	176+500	LHS	Outer		40	0.2173	0.1522	0.1097	0.0793	0.0582	0.0414	0.0268	27.3	29.7	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	398.3	150.0	1451.6	301.1	119.8	0.0651	204	21.5023	-0.37702
1308	MH	150+000	252+000	176+600	LHS	Inner		40	0.2894	0.1822	0.1153	0.0794	0.0544	0.0372	0.0293	34.5	36.1	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	256.5	150.0	1780.2	193.1	119.8	0.1072	205	21.6095	-0.37707
509	MH	150+000	252+000	176+750	LHS	Outer		40	0.3683	0.2252	0.1444	0.0855	0.0656	0.0422	0.0261	27.3	29.8	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	150.5	150.0	1433.7	104.5	119.8	0.1431	206	21.7526	-0.34122
1309	MH	150+000	252+000	176+850	LHS	Inner		40	0.4495	0.2711	0.1653	0.1153	0.0754	0.0464	0.0397	34.4	36.3	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1005.4	150.0	131.0	1201.8	104.0	103.6	0.1784	207	21.931	-0.27007
510	MH	150+000	252+000	177+000	LHS	Outer		40	0.4205	0.2653	0.1394	0.0838	0.0481	0.0357	0.0272	27.4	30.2	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	877.4	150.5	149.9	858.3	104.5	119.8	0.1552	208	22.0862	-0.22213
1310	MH	150+000	252+000	177+100	LHS	Inner		40	0.433	0.2598	0.153	0.1082	0.0791	0.0503	0.0322	34.9	36.6	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1196.8	150.5	141.0	1430.6	104.5	112.2	0.1732	209	22.2594	-0.15618
511	MH	150+000	252+000	177+300	LHS	Outer		40	0.4467	0.2863	0.1596	0.1135	0.068	0.0423	0.0258	27.7	30.1	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.0	149.8	954.1	104.0	119.7	0.1604	210	22.4198	-0.10303
1311	MH	150+000	252+000	177+350	LHS	Inner		40	0.4184	0.2588	0.1499	0.0969	0.0613	0.0422	0.038	35.0	36.2	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1163.4	150.0	146.0	1390.7	104.0	116.4	0.1596	211	22.5794	-0.05068
512	MH	150+000	252+000	177+500	LHS	Outer		40	0.411	0.2683	0.1553	0.0894	0.0589	0.0369	0.0242	27.7	30.2	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1173.1	150.2	149.9	1147.6	104.2	119.8	0.1427	212	22.7221	-0.01523
1312	MH	150+000	252+000	177+600	LHS	Inner		40	0.4094	0.2627	0.1487	0.0941	0.0696	0.0516	0.0367	35.1	36.3	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	150.7	138.1	1448.6	104.6	109.7	0.1467	213	22.8688	0.024217
513	MH	150+000	252+000	177+750	LHS	Outer		40	0.4045	0.2455	0.1457	0.091	0.0632	0.0476	0.0345	27.7	29.9	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1217.2	150.2	145.5	1190.7	104.2	116.0	0.159	214	23.0278	0.075966
1313	MH	150+000	252+000	177+850	LHS	Inner		40	0.3109	0.2063	0.1187	0.0783	0.0506	0.0368	0.0267	35.0	36.3	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	192.0	149.9	1780.2	140.0	119.8	0.1046	215	23.1324	0.073314
514	MH	150+000	252+000	178+000	LHS	Outer		40	0.2019	0.1407	0.0952	0.0677	0.0426	0.0288	0.019	27.7	29.9	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	398.3	150.0	1415.8	301.1	119.8	0.0612	216	23.1936	0.027262
1314	MH	150+000	252+000	178+100	LHS	Inner		40	0.3053	0.2083	0.1332	0.0967	0.054	0.0395	0.0355	35.0	36.1	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	187.4	150.0	1786.6	136.1	119.8	0.097	217	23.2906	0.017011
515	MH	150+000	252+000	178+250	LHS	Outer		40	0.4234	0.2787	0.1781	0.1205	0.0834	0.0581	0.0347	27.6	30.0	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	151.0	128.2	1214.9	104.9	101.2	0.1447	218	23.4353	0.054459
1315	MH	150+000	252+000	178+350	LHS	Inner		40	0.2089	0.128	0.0883	0.0637	0.0528	0.0427	0.0363	35.2	36.5	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.6	149.8	1760.9	299.2	119.7	0.0809	219	23.5162	0.028108
516	MH	150+000	252+000	178+500	LHS	Outer		40	0.1705	0.1148	0.0775	0.0514	0.0366	0.0266	0.0192	27.5	30.4	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.5	149.9	1462.1	302.0	119.8	0.0557	220	23.5719	-0.02344
1316	MH	150+000	252+000	178+600	LHS	Inner		40	0.3788	0.2098	0.11	0.0734	0.0457	0.0354	0.0284	35.4	36.1	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1197.8	167.1	150.0	1431.8	118.8	119.8	0.169	221	23.7409	0.038305
517	MH	150+000	252+000	178+750	LHS	Outer		40	0.228	0.159	0.0989	0.0599	0.0453	0.032	0.0224	27.8	30.5	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	378.5	150.0	1458.9	286.8	119.8	0.069	222	23.8099	5.31E-05
1317	MH	150+000	252+000	178+850	LHS	Inner		40	0.4629	0.2622	0.1406	0.094	0.064	0.0438	0.0295	35.4	35.9	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	811.8	150.5	149.8	970.4	104.5	119.7	0.2007	223	24.0106	0.093502
518	MH	150+000	252+000	179+000	LHS	Outer		40	0.1686	0.1125	0.0702	0.0477	0.0366	0.0292	0.0239	27.8	30.1	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	400.0	149.9	1452.6	302.4	119.8	0.0561	224	24.0667	0.04235
519	MH	150+000	252+000	179+080	LHS	Outer		40	0.2563	0.1486	0.1032	0.072	0.0469	0.0382	0.0295	27.8	29.7	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	396.1	150.0	1452.6	299.6	119.8	0.1077	225	24.1744	0.042798
1318	MH	150+000	252+000	179+100	LHS	Inner		40	0.278	0.1945	0.1281	0.0826	0.054	0.0461	0.0367	35.0	35.8	38.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	252.2	149.9	1749.3	189.6	119.8	0.0835	226	24.2579	0.019047
520	MH	150+000	252+000	179+630	LHS	Outer		40	0.3001	0.2115	0.1291	0.0863	0.0547	0.0297	0.0255	27.7	29.3	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	158.6	149.9	1450.5	111.5	119.8	0.0886	227	24.3465	0.000395
521	MH	150+000	252+000	179+750	LHS	Outer		40	0.47	0.332	0.1988	0.1308	0.0893	0.063	0.0444	27.6	29.4	34.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	914.0	150.0	109.0	894.1	104.0	84.8	0.138	228	24.4845	0.031144
1320	MH	150+000	252+000	179+850	LHS	Inner	T-29.5/39.5	40	0.5816	0.38	0.2189	0.1053	0.0724	0.0515	0.0372	31.4	33.1	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	457.0	150.2	129.8	562.2	104.2	102.6	0.2016	229	24.6861	0.125492
522	MH	150+000	252+000	180+000	LHS	Outer	T-25.9/33	40	0.3733	0.2453	0.1481	0.0866	0.0598	0.0398	0.0279	27.1	28.9	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1325.8	151.5	150.0	1215.2	105.3	119.8	0.128	230	24.8141	0.146241
1321	MH	150+000	252+000	180+100	LHS	Inner		40	0.378	0.2565	0.1605	0.097	0.0545	0.0368	0.0285	31.7	33.2	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1319.4	150.5	150.0	1623.2	104.5	119.8	0.1215	231	24.9356	0.160489
523	MH	150+000	252+000	180+250	LHS	Outer		40	0.2011	0.151	0.1158	0.0857	0.0637	0.042	0.0298	27.1	28.8	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	399.0	149.3	1368.0	301.7	119.3	0.0501	232	24.9857	0.103337
1322	MH	150+000	252+000	180+350	LHS	Inner		40	0.1991	0.1267	0.0783	0.0501	0.0358	0.0253	0.0179	31.7	33.5	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	391.4	149.9	1842.6	296.2	119.8	0.0724	233	25.0581	0.068486
524	MH	150+000	252+000	180+500	LHS	Outer		40	0.1548	0.1051	0.0709	0.0485	0.0322	0.0234	0.017	27.3	29.2	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1424.7	399.5	150.0	1305.8	302.0	119.8	0.0497	234	25.1078	0.010934
1323	MH

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1329	MH	150+000	252+000	182+100	LHS	Inner		40	0.3833	0.2376	0.1336	0.0846	0.0649	0.043	0.0316	31.7	33.6	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1396.8	150.2	150.0	1718.4	104.2	119.8	0.1457	247	26.508	0.016864
531	MH	150+000	252+000	182+250	LHS	Outer		40	0.3408	0.2237	0.1248	0.0842	0.0581	0.0388	0.0233	27.2	28.9	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	151.0	149.9	1331.5	104.9	119.8	0.1171	248	26.6251	0.026712
1330	MH	150+000	252+000	182+350	LHS	Inner		40	0.3992	0.2371	0.1477	0.0853	0.0585	0.0399	0.0359	31.5	33.2	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1338.7	150.0	150.0	1646.9	104.0	119.8	0.1621	249	26.7872	0.081561
532	MH	150+000	252+000	182+500	LHS	Outer		40	0.2488	0.1511	0.0948	0.069	0.0513	0.0403	0.0326	27.2	29.1	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	396.6	150.0	1367.0	299.9	119.8	0.0977	250	26.8849	0.072009
1331	MH	150+000	252+000	182+600	LHS	Inner		40	0.3733	0.2276	0.1359	0.089	0.0678	0.0544	0.0437	31.7	33.4	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1369.9	181.3	135.2	1685.3	130.9	107.2	0.1457	251	27.0306	0.110458
533	MH	150+000	252+000	182+750	LHS	Outer		40	0.2357	0.1561	0.1015	0.0747	0.0483	0.0364	0.0275	27.2	28.5	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	382.4	150.0	1345.2	289.6	119.8	0.0796	252	27.1102	0.082806
1332	MH	150+000	252+000	182+890	LHS	Inner		40	0.3361	0.1951	0.1248	0.1018	0.0765	0.0482	0.0271	31.6	33.2	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	194.0	149.9	1840.0	141.6	119.8	0.141	253	27.2512	0.116555
534	MH	150+000	252+000	183+000	LHS	Outer		40	0.2736	0.1831	0.1131	0.0689	0.0485	0.0422	0.0352	27.0	28.5	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	308.1	149.9	1330.5	233.8	119.8	0.0905	254	27.3417	0.099803
1333	MH	150+000	252+000	183+100	LHS	Inner		40	0.2127	0.1305	0.0818	0.059	0.0407	0.0347	0.0302	31.4	33.3	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	399.3	149.9	1840.0	301.9	119.8	0.0822	255	27.4239	0.074752
535	MH	150+000	252+000	183+250	LHS	Outer		40	0.2124	0.1419	0.0852	0.0571	0.0404	0.0298	0.0217	26.9	28.7	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.5	150.0	1359.1	302.0	119.8	0.0705	256	27.4944	0.038
536	MH	150+000	252+000	183+500	LHS	Outer		40	0.323	0.2155	0.1429	0.0944	0.0717	0.0556	0.0465	26.8	28.5	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	223.8	128.3	1372.8	166.5	101.3	0.1075	257	27.6019	0.038248
1334	MH	150+000	252+000	183+600	LHS	Inner		40	0.4987	0.3417	0.2085	0.1351	0.0799	0.0533	0.0351	31.5	33.3	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	848.4	150.0	125.6	1043.7	104.0	99.0	0.157	258	27.7589	0.087997
537	MH	150+000	252+000	183+750	LHS	Outer		40	0.3776	0.2243	0.1086	0.0676	0.0529	0.0354	0.0226	26.8	28.9	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	153.4	150.0	1110.7	107.0	119.8	0.1533	259	27.9122	0.134045
1335	MH	150+000	252+000	183+850	LHS	Inner		40	0.5159	0.3284	0.1919	0.1312	0.0917	0.0645	0.0469	31.5	33.8	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.0	106.5	964.4	104.0	82.6	0.1875	260	28.0997	0.214294
538	MH	150+000	252+000	184+000	LHS	Outer		40	0.3258	0.2201	0.138	0.0981	0.0727	0.0452	0.0273	26.7	28.7	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	161.5	149.9	1369.9	114.0	119.8	0.1057	261	28.2054	0.212742
1336	MH	150+000	252+000	184+100	LHS	Inner		40	0.5001	0.2898	0.1588	0.1023	0.0611	0.045	0.0336	31.6	33.3	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	625.8	150.2	145.3	769.9	104.2	115.8	0.2103	262	28.4157	0.315791
539	MH	150+000	252+000	184+250	LHS	Outer		40	0.3743	0.2304	0.1445	0.0932	0.057	0.0328	0.0161	26.7	28.8	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	150.2	149.8	1448.4	104.2	119.7	0.1439	263	28.5596	0.352439
1337	MH	150+000	252+000	184+350	LHS	Inner		40	0.4739	0.3035	0.1776	0.1165	0.0759	0.051	0.0323	31.5	33.3	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	150.0	136.4	894.6	104.0	108.2	0.1704	264	28.73	0.415587
540	MH	150+000	252+000	184+500	LHS	Outer		40	0.664	0.4029	0.2206	0.139	0.0963	0.0829	0.0625	26.9	28.6	33	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	417.2	150.5	88.0	382.4	104.5	66.8	0.2611	265	28.9911	0.569436
1338	MH	150+000	252+000	184+600	LHS	Inner		40	0.459	0.2706	0.1287	0.0895	0.0617	0.0419	0.028	31.2	32.7	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.2	149.9	964.4	104.2	119.8	0.1884	266	29.1795	0.650584
541	MH	150+000	252+000	184+750	LHS	Outer	T-25.8/33.3	40	0.2331	0.1586	0.1016	0.0683	0.0498	0.0363	0.0291	26.7	28.3	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	395.8	150.0	1383.7	299.3	119.8	0.0745	267	29.254	0.617833
1339	MH	150+000	252+000	184+850	LHS	Inner		40	0.3453	0.2306	0.1341	0.0879	0.0551	0.0396	0.0293	31.1	32.5	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	150.7	150.0	1781.8	104.6	119.8	0.1147	268	29.3687	0.625281
542	MH	150+000	252+000	185+000	LHS	Outer		40	0.4713	0.2736	0.1622	0.1125	0.0865	0.0644	0.0505	26.5	28.1	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	954.8	152.2	111.1	886.5	105.9	86.6	0.1977	269	29.5664	0.71573
1340	MH	150+000	252+000	185+100	LHS	Inner		40	0.3063	0.2066	0.1391	0.0938	0.0666	0.0524	0.0472	30.4	31.9	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	248.0	132.5	1840.0	186.2	104.9	0.0997	270	29.6661	0.708178
543	MH	150+000	252+000	185+250	LHS	Outer		40	0.252	0.1667	0.1044	0.0756	0.0572	0.0441	0.03	26.7	28.3	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	367.7	149.9	1372.7	278.9	119.8	0.0853	271	29.7514	0.686227
1341	MH	150+000	252+000	185+350	LHS	Inner	Rutting	40	0.2358	0.1538	0.1064	0.0874	0.0568	0.0373	0.0252	30.6	32.3	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	359.9	150.0	1821.5	273.1	119.8	0.082	272	29.8334	0.660975
544	MH	150+000	252+000	185+500	LHS	Outer		40	0.1741	0.1276	0.0878	0.0584	0.0392	0.0304	0.0246	26.4	28.0	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	398.5	149.7	1387.7	301.3	119.6	0.0465	273	29.8799	0.600223
1342	MH	150+000	252+000	185+600	LHS	Inner		40	0.4524	0.247	0.1373	0.0689	0.047	0.0365	0.0328	30.6	32.5	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	668.8	150.0	150.0	822.8	104.0	119.8	0.2054	274	30.0853	0.698372
545	MH	150+000	252+000	185+750	LHS	Outer		40	0.4719	0.2981	0.1675	0.107	0.0753	0.054	0.0392	26.3	27.9	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	125.4	834.6	104.0	98.8	0.1738	275	30.2591	0.76492
1343	MH	150+000	252+000	185+850	LHS	Inner		40	0.334	0.1917	0.1099	0.0777	0.056	0.0408	0.0296	30.6	32.5	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1334.4	216.0	149.9	1641.6	160.0	119.8	0.1423	276	30.4014	0.799969
546	MH	150+000	252+000	186+000	LHS	Outer		40	0.2598	0.145	0.087	0.0617	0.0372	0.0302	0.0272	26.2	27.8	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	393.6	150.0	1367.7	297.8	119.8	0.1148	277	30.5162	0.807517
1344	MH	150+000	252+000	186+100	LHS	Inner		40	0.2633	0.1715	0.1066	0.0758	0.0561	0.0396	0.0295	30.6	32.7	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	324.7	149.9	1842.6	246.6	119.8	0.0918	278	30.608	0.792066
547	MH	150+000	252+000	186+250	LHS	Outer		40	0.3532	0.2229	0.1361	0.0888	0.0576	0.0417	0.0308	26.3	27.7	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	152.9	150.0	1383.7	106.5	119.8	0.1303	279	30.7383	0.815114
1345	MH	150+000	252+000	186+350	LHS	Inner		40	0.5147	0.3543	0.187	0.1107	0.0602	0.0359	0.027	30.5	32.6	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	607.5	150.2	149.5	747.4	104.2	119.4	0.1604	280	30.8987	0.868262
548	MH	150+000	252+000	186+510	LHS	Outer		40	0.4088	0.2785	0.1819	0.1303	0.0933	0.0681	0.05	26.4	28.0	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	152.2	104.6	1371.7	105.9	81.0	0.1303	281	31.029	0.891311
1346	MH	150+000	252+000	186+600	LHS	Inner		40	0.4281	0.2899	0.1718	0.1048	0.0741	0.0466	0.0386	30.4	32.1	39.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	150.2	132.5	1506.6	104.2	104.9	0.1382	282	31.1672	0.922259
549	MH	150+000	252+000	186+750	LHS	Outer		40	0.3779	0.2158	0.1363	0.0936	0.0748	0.0512	0.0355	26.4	28.5	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	165.9	142.5	1384.7	117.8	113.4	0.1621	283	31.3293	0.977108
1347	MH	150+000	252+000	186+850	LHS	Inner	T-30.2/36.9	40	0.349	0.2065	0.1151	0.0771	0.0666	0.0525	0.043	30.4	32.4	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1071.0	242.4	144.2	1166.4	181.7	114.9	0.1425	284	31.4718	1.012356
550	MH	150+000	252+000	187+000	LHS	Outer		40	0.3816	0.2383	0.1632	0.1134	0.0771	0.0526	0.043	26.5	27.8	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	151.0	127.7	1357.8	104.9	100.8	0.1433	285	31.6151	1.048405
1348	MH	150+000	252+000	187+100	LHS	Inner		40	0.2233	0.1409	0.0945	0.0756	0.0531	0.0397	0.0314	30.6	32.3	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	398.3	149.8	1603.1	301.1	119.7	0.0824	286	31.6975	1.023553
551	MH	150+000	252+000	187+250	LHS	Outer		40	0.3104	0.2023	0.1301	0.0936	0.0661	0.0493	0.0369	26.4	28.0	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	215.7	145.9	1389.7	159.8	116.3	0.1081	287	31.8056	1.024402
1349	MH	150+000	252+000	187+350	LHS	Inner		40	0.3218	0.2057	0.119	0.0848	0.0639	0.0505	0.038	30.5	32.1	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	214.5	147.0	1633.6	158.8	117.3	0.1161	288	31.9217	1.03325
552	MH	150+000	252+000	187+500	LHS	Outer		40	0.1475	0.1048	0.0758	0.0605	0.0427	0.0303	0.0206	26.5	27.9	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	399.0	150.0	1367.7	301.7	119.8	0.0427	289	31.9644	0.968698
1350	MH	150+000	252+000	187+600	LHS	Inner		40	0.4149	0.2942	0.1592	0.0923	0.0711	0.0496	0.0344	30.5	32.4	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	150.5	138.8	1319.7	104.5	110.3	0.1207	290	32.0851	0.982147
553	MH	150+000	252+000	187+740	LHS	Outer		40	0.5317	0.3382	0.1916	0.1254	0.0806	0.0522	0.0315	26.3	28.1	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	605.4	150.0	135.7	562.1	104.0	107.6	0.1935	291	32.2786	1.068395
1351	MH	150+000	252+000	187+850	LHS	Inner		40	0.4845	0.286	0.1507	0.0897	0.0629	0.0468	0.0355	30.5	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	673.1	150.0	144.0	733.1	104.0	114.7	0.1985	292	32.4771	1.159644
554	MH	150+000	252+000	188+000	LHS	Outer		40	0.3744	0.2139	0.1153	0.0749	0.0466	0.0342	0.0261	26.5	28.6	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	151.5	150.0	1119.2	105.3	119.8	0.1605	293	32.6376	1.212892
1352	MH	150+000	252+000	188+100	LHS	Inner		40	0.5161	0.2785	0.1351	0.0784	0.0594	0.046	0.0414	30.4	32.4	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	569.9	150.2	146.5	620.7	104.2	116.9	0.2376	294	32.8752	1.343241
555	MH	150+000	252+000	188+250	LHS	Outer		40	0.3491	0.2255	0.1303	0.0741	0.0515	0.0355	0.0276	26.5	28.4	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	157.6	150.0	1386.7	110.6	119.8	0.1236	295	32.9988	1.359589
1353	MH	150+000	252+000	188+350	LHS	Inner		40	0.3563	0.242	0.1372	0.0732	0.0581	0.05	0.0379	30.5	32.3	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	151.0	150.0	1591.5	104.9	119.8	0.1143	296	33.1131	1.366637
556	MH	150+000	252+000	188+500	LHS	Outer		40	0.3881	0.2416	0.132	0.0847	0.0551	0.0392	0.0275	26.6	28.8	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1274.2	150.0	149.9	1183.1	104.0	119.8	0.1465	297	33.2596	1.405886
1354	MH	150+000	252+000	188+600	LHS	Inner		40	0.3338	0.2042	0.1226	0.0967	0.0655	0.0444	0.0298	30.6	32.6	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	188.4	150.0	1617.2	136.9	119.8	0.1296	298	33.3892	1.428234
557	MH	150+000	252+000	188+820	LHS	Outer		40	0.4358	0.2645	0.1329	0.0651	0.0452	0.0331	0.0251	26.9	28.8	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	858.1	153.2	149.9	796.7	106.8	119.8	0.1713	299	33.5605	1.492283
1355	MH	150+000	252+000	188+850	LHS	Inner		40	0.4452	0.268	0.1417	0.0871	0.0626	0.0473	0.0368	30.6	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	150.0	144.2	912.2	104.0	114.9	0.1772	300	33.7377	1.562231
558	MH	150+000	252+000	189+000	LHS	Outer		40	0.4309	0.2532	0.1402	0.0952	0.0719	0.0453	0.0277	26.9	28.5	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1003.2	151.0	150.0	931.4	104.9	119.8	0.1777	301	33.9154	1.63268
1356	MH	150+000	252+000	189+100	LHS	Inner		40	0.4375	0.2708	0.1541	0.1005	0.0738	0.0429	0.0333	30.6	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	997.8	150.0	143.9	1086.7	104.0	114.6	0.1667	302	34.0821	1.692128
559	MH	150+000	252+000	189+250	LHS	Outer		40	0.3097	0.1933	0.1385	0.0986	0.0629	0.0391	0.0219	26.7	28.4	33.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	171.0	149.8	1381.8	122.1	119.7	0.1164	303	34.1985	1.701277
1357	MH	150+000	252+000	189+350	LHS	Inner		40	0.4376	0.2883	0.1729	0.1103	0.0833	0.0655	0.059	30.5	32.3	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1215.1	151.0	108.2	1323.3	104.9	84.1	0.1493	304	34.3478	1.743325
560	MH	150+000	252+000	189+500	LHS	Outer	T-25.2/32.8	40	0.1852	0.1305	0.087	0.0599	0.0413	0.0263	0.0158	26.6	28.0	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	381.7	150.0	1354.3	289.1	119.8	0.0547	305	34.4025	1.690773
1358	MH	150+000	252+000	189+600	LHS	Inner		40	0.1951	0.1451	0.1028	0.0702	0.048	0.0392	0.0353	30.6	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	391.0	150.0	1620.8	295.9	119.8	0.05	306	34.4525	1.633522
561	MH	150+000	252+000	189+750	LHS	Outer		40	0.1393	0.1105	0.0784	0.0521	0.0329	0.0248	0.019	26.6	27.6	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	391.2	149.9	1354.3	296.0	119.8	0.0288	307	34.4813	1.55507
1359	MH	150+000	252+000	189+850	LHS	Inner		40	0.1719	0.128	0.0901	0.0553	0.0377	0.0243	0.0173	30.7	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	150.0	1602.0	302.4	119.8	0.0439	308	34.5252	1.491719
562	MH	150+000	252+000	190+010	LHS	Outer		40	0.1449	0.0957	0.0586	0.0436	0.0294	0.0209	0.0151	26.3	27.5	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	392.9	150.0	1318.1	297.3	119.8	0.0492	309	34.5744	1.433667
1360	MH	150+000	252+000	190+100	LHS	Inner		40	0.1512	0.1189	0.0823	0.0532	0.0401	0.0271	0.0226	30.6	32.6	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	399.0	149.6	1620.8	301.7	119.5	0.0323	310	34.6067	1.358716
563	MH	150+000	252+000	190+250	LHS	Outer		40	0.1389	0.0943	0.07	0.0493	0.0314	0.0225	0.0162	26.3	27.6	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	396.6	149.9	1362.1	299.9	119.8	0.0446	311	34.6513	1.296064
1361	MH	150+000	252+000	190+350	LHS	Inner		40	0.1617	0.1234	0.0849	0.0591	0.0453	0.0343	0.0264	30.5	32.1	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	399.0	149.8	1611.4	301.7	119.7	0.0383	312	34.6896	1.227112
564	MH	150+000	252+000	190+500	LHS	Outer		40	0.2438	0.1504	0.0996	0.0628	0.0534	0.0427	0.0396	26.3	27.4	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.1	150.0	1341.6	298.8	119.8	0.0934	313	34.783	1.213261
1362	MH	150+000	252+000	190+600	LHS	Inner		40	0.1821	0.1321	0.096	0.0656	0.0486	0.0372	0.0289	30.5	32.2	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	393.4	149.7	1625.4	297.6	119.6	0.05	314	34.833	1.156009
565	MH	150+000	252+000	190+750	LHS	Outer		40	0.3826	0.2288	0.117	0.068	0.0495	0.0364	0.0234	26.3	27.6	32.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	153.2	150.0	1127.6	106.8	119.8	0.1538	315	34.9868	1.202558
1363	MH	150+000	252+000	190+900	LHS	Inner		40	0.3913	0.2255	0.1222	0.0835	0.0554	0.0397	0.0288	30.3	31.9	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.2	150.0	1310.4	104.2	119.8	0.1658	316	35.1526	1.261106
566	MH	150+000	252+000	190+950	LHS	Outer		40	0.4181	0.2817

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
572	MH	150+000	252+000	192+530	LHS	Outer	T-25.8/31.3	40	0.1066	0.0665	0.0389	0.0265	0.0197	0.0161	0.012	26.0	27.6	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	397.8	150.0	1253.3	300.8	119.8	0.0401	329	37.0646	1.778836
1370	MH	150+000	252+000	192+600	LHS	Inner		40	0.088	0.0628	0.0438	0.0336	0.0261	0.0188	0.0136	31.0	33.1	36.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	393.9	150.0	1574.6	298.0	119.8	0.0252	330	37.0898	1.696784
573	MH	150+000	252+000	192+750	LHS	Outer		40	0.0945	0.061	0.0368	0.0251	0.016	0.0142	0.0117	26.5	28.0	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	395.4	149.8	1260.6	299.1	119.7	0.0335	331	37.1233	1.623033
1371	MH	150+000	252+000	192+850	LHS	Inner		40	0.0776	0.0574	0.0421	0.0301	0.0217	0.0166	0.0132	30.9	32.5	36.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.3	150.0	1562.1	299.7	119.8	0.0202	332	37.1435	1.535981
574	MH	150+000	252+000	193+000	LHS	Outer		40	0.0969	0.0627	0.0361	0.0216	0.0172	0.016	0.0141	26.6	27.9	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	399.8	150.0	1278.9	302.2	119.8	0.0342	333	37.1777	1.46293
1372	MH	150+000	252+000	193+100	LHS	Inner		40	0.097	0.0698	0.05	0.037	0.0277	0.0206	0.0155	30.8	32.6	36.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	400.0	149.7	1578.0	302.4	119.6	0.0272	334	37.2049	1.382878
575	MH	150+000	252+000	193+250	LHS	Outer		40	0.1342	0.0695	0.0357	0.0287	0.0217	0.0201	0.0181	26.7	29.0	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1439.8	392.7	150.0	1227.6	297.1	119.8	0.0647	335	37.2696	1.340327
1373	MH	150+000	252+000	193+350	LHS	Inner		40	0.213	0.1043	0.0616	0.0411	0.0297	0.022	0.0198	30.8	32.8	36.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	386.6	150.0	1576.8	292.7	119.8	0.1087	336	37.3783	1.341775
576	MH	150+000	252+000	193+500	LHS	Outer		40	0.132	0.0877	0.0546	0.0375	0.0267	0.0196	0.0176	26.9	29.0	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	400.0	150.0	1242.3	302.4	119.8	0.0443	337	37.4226	1.278823
1374	MH	150+000	252+000	193+600	LHS	Inner		40	0.3752	0.2212	0.1261	0.0743	0.0541	0.0393	0.0354	30.8	32.5	36.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1247.3	167.4	150.0	1315.9	119.0	119.8	0.154	338	37.5766	1.325572
577	MH	150+000	252+000	193+750	LHS	Outer		40	0.1453	0.0948	0.052	0.0368	0.0265	0.0199	0.0153	26.9	28.9	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	397.3	150.0	1204.7	300.4	119.8	0.0505	339	37.6271	1.26882
1375	MH	150+000	252+000	193+850	LHS	Inner	t-26.8/34.7	40	0.4196	0.2356	0.1269	0.0781	0.0489	0.0289	0.026	27.5	29.1	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1082.8	151.0	150.0	1068.6	104.9	119.8	0.184	340	37.8111	1.345569
578	MH	150+000	252+000	194+000	LHS	Outer		40	0.4775	0.2907	0.1421	0.0967	0.0638	0.045	0.0312	27.0	29.0	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	710.8	150.0	149.2	606.0	104.0	119.2	0.1868	341	37.9979	1.425117
1376	MH	150+000	252+000	194+100	LHS	Inner		40	0.6216	0.348	0.1715	0.0986	0.07	0.0554	0.0439	27.7	29.2	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	421.5	150.5	124.4	416.0	104.5	98.0	0.2736	342	38.2715	1.591466
579	MH	150+000	252+000	194+250	LHS	Outer		40	0.4879	0.2852	0.1712	0.1267	0.0934	0.0692	0.0532	27.1	29.2	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	946.2	151.5	104.2	806.7	105.3	80.7	0.2027	343	38.4742	1.686914
1377	MH	150+000	252+000	194+350	LHS	Inner		40	0.5602	0.3297	0.173	0.1019	0.0751	0.0557	0.0429	27.8	29.3	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	481.7	151.5	122.4	475.4	105.3	96.2	0.2305	344	38.7047	1.810162
580	MH	150+000	252+000	194+500	LHS	Outer		40	0.4673	0.2421	0.1489	0.1032	0.0724	0.0514	0.0313	27.2	29.8	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	910.8	151.0	144.1	776.6	104.9	114.8	0.2252	345	38.9299	1.928111
1378	MH	150+000	252+000	194+600	LHS	Inner		40	0.5121	0.3277	0.1782	0.1155	0.0734	0.0516	0.0372	27.9	29.1	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	694.6	150.0	126.9	685.5	104.0	100.1	0.1844	346	39.1143	2.005259
581	MH	150+000	252+000	194+750	LHS	Outer		40	0.4433	0.2692	0.1638	0.0934	0.0651	0.0456	0.0259	27.2	29.4	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	955.9	151.0	150.0	815.0	104.9	119.8	0.1741	347	39.2884	2.072108
1379	MH	150+000	252+000	194+850	LHS	Inner		40	0.4933	0.2963	0.1842	0.1079	0.0735	0.0478	0.0338	28.0	29.4	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	759.1	150.5	136.1	749.1	104.5	108.0	0.197	348	39.4854	2.161856
582	MH	150+000	252+000	195+000	LHS	Outer		40	0.1138	0.0816	0.0592	0.0412	0.0286	0.02	0.0146	27.3	28.9	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	389.7	150.0	1255.0	294.9	119.8	0.0322	349	39.5176	2.086805
1380	MH	150+000	252+000	195+100	LHS	Inner		40	0.4272	0.2618	0.1461	0.1018	0.0718	0.0494	0.0324	28.1	29.4	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1124.7	150.0	143.5	1109.9	104.0	114.3	0.1654	350	39.683	2.144953
583	MH	150+000	252+000	195+250	LHS	Outer		40	0.5169	0.3138	0.1745	0.1237	0.0994	0.0752	0.0486	27.4	29.8	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	782.8	150.2	103.2	667.4	104.2	79.8	0.2031	351	39.8861	2.240802
1381	MH	150+000	252+000	195+350	LHS	Inner		40	0.6059	0.3755	0.21	0.1471	0.1118	0.0671	0.0361	28.3	29.7	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	500.0	150.2	110.6	493.4	104.2	86.1	0.2304	352	40.1165	2.36395
584	MH	150+000	252+000	195+500	LHS	Outer		40	0.22	0.1317	0.0771	0.0564	0.0391	0.0299	0.0236	27.7	29.9	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.6	149.9	1268.9	298.5	119.8	0.0883	353	40.2048	2.344998
1382	MH	150+000	252+000	195+600	LHS	Inner		40	0.1976	0.1291	0.0745	0.0491	0.0314	0.0244	0.0176	28.3	29.7	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	396.8	150.0	1473.9	300.1	119.8	0.0685	354	40.2733	2.306247
585	MH	150+000	252+000	195+750	LHS	Outer		40	0.5319	0.3325	0.1648	0.1083	0.0679	0.0579	0.051	27.8	30.0	31.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	590.3	150.7	119.4	503.3	104.6	93.7	0.1994	355	40.4727	2.398395
1383	MH	150+000	252+000	195+850	LHS	Inner		40	0.2369	0.12	0.0684	0.0447	0.0294	0.0242	0.0217	28.2	29.6	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1423.7	398.0	150.0	1405.0	300.9	119.8	0.1169	356	40.5896	2.408044
586	MH	150+000	252+000	196+000	LHS	Outer	T-26.4/33.6	40	0.3152	0.1572	0.0937	0.0488	0.0324	0.0265	0.0162	27.9	29.3	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1341.9	195.2	150.0	1262.2	142.7	119.8	0.158	357	40.7476	2.458792
1384	MH	150+000	252+000	196+100	LHS	Inner		40	0.2678	0.1447	0.0804	0.056	0.0385	0.0354	0.0257	28.2	29.9	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	389.7	150.0	1472.9	294.9	119.8	0.1231	358	40.8707	2.474641
587	MH	150+000	252+000	196+250	LHS	Outer		40	0.1261	0.0736	0.0389	0.0304	0.0239	0.0169	0.0122	27.7	29.2	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	395.8	150.0	1371.5	299.3	119.8	0.0525	359	40.9232	2.419889
1385	MH	150+000	252+000	196+350	LHS	Inner		40	0.1104	0.071	0.0517	0.0398	0.0318	0.0243	0.019	28.2	30.3	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	397.8	150.0	1453.7	300.8	119.8	0.0394	360	40.9626	2.352037
588	MH	150+000	252+000	196+500	LHS	Outer	Wide Cracking	40	0.3675	0.2229	0.1229	0.0554	0.0421	0.0286	0.0258	27.7	29.4	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1108.6	152.0	150.0	1042.7	105.8	119.8	0.1446	361	41.1072	2.389386
1386	MH	150+000	252+000	196+600	LHS	Inner		40	0.3279	0.2072	0.1355	0.0854	0.0622	0.0456	0.0411	28.4	29.9	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	193.5	146.5	1476.0	141.2	116.9	0.1207	362	41.2279	2.402834
589	MH	150+000	252+000	196+750	LHS	Outer		40	0.2763	0.1165	0.0591	0.041	0.0289	0.0239	0.0148	27.7	29.8	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	378.5	150.0	1377.5	286.8	119.8	0.1598	363	41.3877	2.455383
1387	MH	150+000	252+000	196+850	LHS	Inner		40	0.2654	0.1444	0.0913	0.0541	0.0391	0.0285	0.0257	28.4	30.4	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	387.3	150.0	1466.5	293.2	119.8	0.121	364	41.5087	2.469131
590	MH	150+000	252+000	197+000	LHS	Outer		40	0.3283	0.1601	0.0771	0.058	0.0384	0.0358	0.0324	27.6	29.4	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	400.0	150.0	788.9	302.4	119.8	0.1682	365	41.6769	2.53008
1388	MH	150+000	252+000	197+100	LHS	Inner		40	0.338	0.1885	0.1202	0.0712	0.0473	0.0304	0.0198	28.4	29.9	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	152.0	150.0	1447.4	105.8	119.8	0.1495	366	41.8264	2.572328
591	MH	150+000	252+000	197+250	LHS	Outer		40	0.4839	0.2884	0.1527	0.0687	0.0407	0.0332	0.0298	27.8	29.9	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	676.3	152.2	150.0	636.1	105.9	119.8	0.1955	367	42.0219	2.660577
1389	MH	150+000	252+000	197+350	LHS	Inner		40	0.5269	0.2711	0.1492	0.0776	0.0544	0.0367	0.0333	28.7	30.9	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	543.0	150.2	149.9	535.9	104.2	119.8	0.2558	368	42.2777	2.809125
592	MH	150+000	252+000	197+500	LHS	Outer		40	0.4828	0.2549	0.1468	0.0816	0.0497	0.0273	0.0255	27.9	29.9	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	612.9	150.0	150.0	576.5	104.0	119.8	0.2279	369	42.5056	2.929773
1390	MH	150+000	252+000	197+630	LHS	Inner		40	0.4816	0.2981	0.159	0.1	0.0622	0.0423	0.0381	28.9	30.6	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	798.9	150.0	144.5	788.4	104.0	115.1	0.1835	370	42.6891	3.006022
593	MH	150+000	252+000	197+750	LHS	Outer		40	0.2622	0.1204	0.0726	0.0535	0.0403	0.03	0.0228	28.1	30.0	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1386.0	396.3	150.0	1303.7	299.7	119.8	0.1418	371	42.8309	3.04057
1391	MH	150+000	252+000	197+850	LHS	Inner		40	0.0902	0.067	0.0506	0.0323	0.0193	0.0118	0.0098	28.9	30.9	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	400.0	149.7	1469.6	302.4	119.6	0.0232	372	42.8541	2.956519
594	MH	150+000	252+000	198+000	LHS	Outer		40	0.0783	0.0579	0.0441	0.0328	0.0253	0.0186	0.0142	28.1	30.1	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	394.6	150.0	1405.8	298.5	119.8	0.0204	373	42.8745	2.869667
1392	MH	150+000	252+000	198+100	LHS	Inner		40	0.0817	0.0598	0.0425	0.0317	0.0247	0.0178	0.0131	29.1	31.3	34.7	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1448.4	399.3	149.8	1429.4	301.9	119.7	0.0219	374	42.8964	2.784316
595	MH	150+000	252+000	198+250	LHS	Outer		40	0.0879	0.0653	0.0495	0.0364	0.0279	0.0212	0.015	28.4	31.1	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.8	150.0	1408.8	299.3	119.8	0.0226	375	42.919	2.699664
1393	MH	150+000	252+000	198+350	LHS	Inner	T-27.5/35.4	40	0.0897	0.0693	0.0504	0.0389	0.0309	0.0238	0.0186	29.1	30.7	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.8	149.9	1512.6	300.8	119.8	0.0204	376	42.9394	2.612812
596	MH	150+000	252+000	198+500	LHS	Outer		40	0.0885	0.0651	0.0494	0.0366	0.028	0.021	0.0123	28.5	30.5	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	397.8	149.8	1383.6	300.8	119.7	0.0234	377	42.9628	2.528961
1394	MH	150+000	252+000	198+600	LHS	Inner		40	0.0927	0.0693	0.0523	0.0367	0.0253	0.0162	0.01	29.5	31.7	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	399.0	149.9	1462.3	301.7	119.8	0.0234	378	42.9862	2.445109
597	MH	150+000	252+000	198+750	LHS	Outer		40	0.0884	0.0659	0.05	0.0367	0.0281	0.0214	0.0137	28.5	30.9	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	392.2	150.0	1410.9	296.7	119.8	0.0225	379	43.0087	2.360358
1395	MH	150+000	252+000	198+850	LHS	Inner		40	0.2587	0.1494	0.0812	0.0564	0.0393	0.0289	0.0216	29.7	31.8	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	388.5	150.0	1523.6	294.1	119.8	0.1093	380	43.118	2.362406
598	MH	150+000	252+000	199+000	LHS	Outer		40	0.0937	0.0689	0.0525	0.0389	0.0295	0.0223	0.0137	28.9	31.5	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	399.3	149.8	1383.6	301.9	119.7	0.0248	381	43.1428	2.279955
1396	MH	150+000	252+000	199+100	LHS	Inner		40	0.4187	0.2412	0.117	0.0812	0.0551	0.0394	0.0281	29.7	32.0	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1034.4	151.0	149.9	1052.9	104.9	119.8	0.1775	382	43.3203	2.350203
599	MH	150+000	252+000	199+250	LHS	Outer		40	0.1496	0.0984	0.0645	0.0475	0.0356	0.0274	0.0219	29.1	32.0	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	391.9	150.0	1392.6	296.5	119.8	0.0512	383	43.3715	2.294152
1397	MH	150+000	252+000	199+350	LHS	Inner		40	0.1038	0.0739	0.0576	0.0415	0.0309	0.0261	0.023	29.7	31.5	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	395.8	150.0	1523.6	299.3	119.8	0.0299	384	43.4014	2.2168
600	MH	150+000	252+000	199+500	LHS	Outer		40	0.195	0.1422	0.1019	0.0746	0.047	0.0282	0.016	29.1	32.0	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	333.8	150.0	1392.6	253.5	119.8	0.0528	385	43.4542	2.162348
1398	MH	150+000	252+000	199+600	LHS	Inner		40	0.4901	0.2963	0.19	0.1147	0.0717	0.0421	0.0379	30.0	32.4	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.0	137.5	834.1	104.0	109.2	0.1938	386	43.648	2.248897
601	MH	150+000	252+000	199+750	LHS	Outer		40	0.2274	0.1428	0.1066	0.0826	0.0539	0.0409	0.0317	29.2	31.3	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	393.6	150.0	1369.4	297.8	119.8	0.0846	387	43.7326	2.226245
1399	MH	150+000	252+000	199+870	LHS	Inner		40	0.4627	0.3099	0.1782	0.0946	0.0607	0.0451	0.0406	30.1	32.7	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	923.7	150.0	139.2	940.2	104.0	110.6	0.1528	388	43.8854	2.271794
602	MH	150+000	252+000	200+000	LHS	Outer		40	0.4346	0.2303	0.1252	0.0934	0.0697	0.0492	0.0367	29.1	31.7	33.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	163.9	144.0	833.4	116.0	114.7	0.2043	389	44.0897	2.368842
1400	MH	150+000	252+000	200+230	LHS	Inner		40	0.4184	0.2895	0.1681	0.1118	0.0722	0.0396	0.0352	30.2	31.8	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	150.0	143.9	1258.7	104.0	114.6	0.1289	390	44.2186	2.390491
603	MH	150+000	252+000	200+250	LHS	Outer	T-29.3/35.3	40	0.3561	0.1861	0.0927	0.0652	0.0444	0.0297	0.0198	29.5	32.7	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1230.1	197.9	150.0	1246.6	144.9	119.8	0.17	391	44.3886	2.453239
1401	MH	150+000	252+000	200+350	LHS	Inner		40	0.3985	0.2503	0.1503	0.0828	0.053	0.031	0.0279	30.0	32.6	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1297.8	151.2	150.0	1321.0	105.1	119.8	0.1482	392	44.5368	2.494188
604	MH	150+000	252+000	200+500	LHS	Outer		40	0.2683	0.1669	0.0943	0.0701	0.0519	0.0426	0.0318	29.8	33.3	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	382.9	150.0	1468.9	290.0	119.8	0.1014	393	44.6382	2.488336
1402	MH	150+000	252+000	200+600	LHS	Inner		40	0.306	0.1911	0.1186	0.0672	0.0365	0.0189	0.017	29.9	31.5	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1261.3	151.5	150.0	1283.9	105.3	119.8	0.1149	394	44.7531	2.495984
605	MH	150+000	252+000	200+750	LHS	Outer		40	0.3641	0.1828	0.0921	0.0642	0.0479	0.0376	0.0303	30.0	33.6	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	764.5	273.9	150.0	774.7	207.0	119.8	0.1813	395	44.9344	2.570033
1403	MH	150+000	252+000	200+850	LHS	Inner		40	0.3888	0.184	0.0979	0.0704	0.0514	0.0381	0.0343	29.8	32.0	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	592.5	273.4	150.0	603.1	206.6	119.8	0.2048	396	45.1392	2.667581
606	MH	150+000	252+000	201+000	LHS	Outer		40	0.4004	0.2122	0.1476	0.1021	0.0704	0.0484	0.0377	30.1	33.5	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	150.7	140.0	1517.8	104.6	111.3	0.1882	397	45.3274	2.74853
1404	MH	150+000	252+000	201+110	LHS	Inner		40	0.5887	0.314	0.153	0.0652	0.0459	0.0309	0.0201	29.9	32.5	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	479.6	151.5	150.0	488.2	105.3	119.8	0.2747	398	45.6021	2.915978
607	MH	150+000	252+000	201+

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
613	MH	150+000	252+000	202+750	LHS	Outer		40	0.1467	0.0936	0.0698	0.0491	0.0378	0.0295	0.0249	30.9	35.0	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.8	149.9	1519.0	300.8	119.8	0.0531	411	47.3553	3.274908
1411	MH	150+000	252+000	202+850	LHS	Inner		40	0.1994	0.1139	0.0756	0.0546	0.0381	0.027	0.0194	30.3	33.8	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	393.2	150.0	1525.7	297.5	119.8	0.0855	412	47.4408	3.253156
614	MH	150+000	252+000	203+000	LHS	Outer		40	0.1239	0.0912	0.0685	0.0505	0.0372	0.0279	0.0195	31.0	34.4	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	399.8	150.0	1517.8	302.2	119.8	0.0327	413	47.4735	3.178605
1412	MH	150+000	252+000	203+110	LHS	Inner		40	0.4232	0.2524	0.1454	0.0839	0.0563	0.0371	0.0299	30.5	33.7	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1018.3	151.2	149.9	1036.5	105.1	119.8	0.1708	414	47.6443	3.242153
615	MH	150+000	252+000	203+250	LHS	Outer		40	0.1333	0.0801	0.0537	0.0366	0.0287	0.0233	0.0155	31.2	35.7	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	395.6	150.0	1505.9	299.2	119.8	0.0532	415	47.6975	3.188102
1413	MH	150+000	252+000	203+350	LHS	Inner		40	0.1971	0.1089	0.059	0.0465	0.0372	0.0318	0.0286	30.7	34.1	35.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.5	149.8	1491.8	301.3	119.7	0.0882	416	47.7857	3.16905
616	MH	150+000	252+000	203+500	LHS	Outer		40	0.1337	0.0805	0.0571	0.0403	0.0259	0.0159	0.0094	31.1	34.9	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.3	150.0	1516.8	301.1	119.8	0.0532	417	47.8389	3.114998
1414	MH	150+000	252+000	203+600	LHS	Inner	T-29.5/38.3	40	0.1604	0.1051	0.0596	0.0385	0.0244	0.015	0.0135	30.6	33.1	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	381.9	150.0	1700.5	289.3	119.8	0.0553	418	47.8942	3.063047
617	MH	150+000	252+000	203+750	LHS	Outer		40	0.1383	0.0866	0.0516	0.0369	0.0277	0.0234	0.0204	31.2	35.5	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	400.0	150.0	1448.1	302.4	119.8	0.0517	419	47.9459	3.007495
1415	MH	150+000	252+000	203+850	LHS	Inner		40	0.3092	0.1721	0.114	0.0709	0.0463	0.0288	0.026	31.0	34.5	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	207.9	150.0	1733.0	153.3	119.8	0.1371	420	48.083	3.037344
618	MH	150+000	252+000	204+000	LHS	Outer		40	0.1678	0.1159	0.0831	0.0627	0.0457	0.0332	0.0202	31.3	35.9	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	393.4	149.9	1519.0	297.6	119.8	0.0519	421	48.1349	2.981992
1416	MH	150+000	252+000	204+100	LHS	Inner		40	0.2349	0.1247	0.0824	0.0554	0.0346	0.0279	0.02	31.0	34.7	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	400.0	150.0	1725.4	302.4	119.8	0.1102	422	48.2451	2.984941
619	MH	150+000	252+000	204+250	LHS	Outer		40	0.153	0.1132	0.0706	0.0426	0.0292	0.0166	0.0134	31.7	36.4	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	384.8	150.0	1471.0	291.4	119.8	0.0398	423	48.2849	2.917489
1417	MH	150+000	252+000	204+350	LHS	Inner		40	0.1648	0.1	0.0681	0.0533	0.045	0.0327	0.0244	30.9	34.9	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	397.3	149.8	1730.4	300.4	119.7	0.0648	424	48.3497	2.875037
620	MH	150+000	252+000	204+530	LHS	Outer		40	0.1572	0.1022	0.0676	0.0415	0.0302	0.0224	0.0156	31.8	36.3	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.8	1517.8	299.1	119.7	0.055	425	48.4047	2.822786
1418	MH	150+000	252+000	204+620	LHS	Inner		40	0.1242	0.08	0.0561	0.0403	0.0304	0.0208	0.0139	31.0	34.9	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	397.1	150.0	1696.7	300.3	119.8	0.0442	426	48.4489	2.759734
621	MH	150+000	252+000	204+750	LHS	Outer		40	0.1225	0.0776	0.0452	0.0309	0.0203	0.0173	0.012	31.9	36.8	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	397.1	149.7	1513.5	300.3	119.6	0.0449	427	48.4938	2.697383
1419	MH	150+000	252+000	204+850	LHS	Inner		40	0.3336	0.1885	0.1077	0.0671	0.0383	0.0283	0.0255	31.1	34.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	180.1	150.0	1686.7	129.9	119.8	0.1451	428	48.6389	2.735231
622	MH	150+000	252+000	205+000	LHS	Outer		40	0.1725	0.128	0.0881	0.0649	0.0446	0.0311	0.0223	32.0	36.8	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	398.0	150.0	1515.7	300.9	119.8	0.0445	429	48.6834	2.67248
1420	MH	150+000	252+000	205+100	LHS	Inner		40	0.429	0.2221	0.1102	0.0716	0.0447	0.037	0.0333	31.5	35.4	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	706.5	166.9	150.0	820.9	118.6	119.8	0.2069	430	48.8903	2.772128
623	MH	150+000	252+000	205+250	LHS	Outer		40	0.324	0.2133	0.1319	0.0795	0.049	0.0268	0.0198	32.1	36.4	35.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	154.2	150.0	1431.8	107.7	119.8	0.1107	431	49.001	2.775577
1421	MH	150+000	252+000	205+350	LHS	Inner		40	0.4485	0.2772	0.1894	0.1231	0.0874	0.0545	0.0432	31.4	35.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1231.2	150.0	117.4	1430.6	104.0	92.0	0.1713	432	49.1723	2.839625
624	MH	150+000	252+000	205+500	LHS	Outer	T-29.9/36.8	40	0.2837	0.1619	0.1054	0.0682	0.0433	0.033	0.0201	32.2	35.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	238.7	150.0	1607.5	178.7	119.8	0.1218	433	49.2941	2.854173
1422	MH	150+000	252+000	205+600	LHS	Inner		40	0.305	0.173	0.0847	0.0506	0.0348	0.0241	0.0217	31.4	35.0	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1191.4	243.4	150.0	1384.4	182.5	119.8	0.132	434	49.4261	2.878922
625	MH	150+000	252+000	205+750	LHS	Outer		40	0.1618	0.0921	0.0564	0.0428	0.0339	0.0226	0.0149	32.2	35.9	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	400.0	149.8	1625.0	302.4	119.7	0.0697	435	49.4958	2.84137
1423	MH	150+000	252+000	205+850	LHS	Inner		40	0.2375	0.1253	0.0811	0.0599	0.0463	0.0406	0.0364	31.1	35.0	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	398.8	149.9	1659.3	301.5	119.8	0.1122	436	49.608	2.846319
626	MH	150+000	252+000	206+000	LHS	Outer		40	0.1558	0.1023	0.0688	0.0456	0.0316	0.022	0.0152	32.2	35.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	395.1	149.9	1626.2	298.8	119.8	0.0535	437	49.6615	2.792567
1424	MH	150+000	252+000	206+100	LHS	Inner		40	0.3525	0.2099	0.1134	0.0732	0.0521	0.0509	0.0458	31.1	35.3	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1004.3	233.1	149.9	1167.0	174.1	119.8	0.1426	438	49.8041	2.827916
627	MH	150+000	252+000	206+250	LHS	Outer		40	0.2056	0.1113	0.0703	0.0534	0.0301	0.0201	0.018	32.1	35.2	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	399.0	150.0	1590.1	301.7	119.8	0.0943	439	49.8984	2.814964
1425	MH	150+000	252+000	206+380	LHS	Inner		40	0.184	0.1233	0.0898	0.0677	0.0541	0.0444	0.0374	31.6	35.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.0	149.9	1723.0	301.7	119.8	0.0607	440	49.9591	2.768412
628	MH	150+000	252+000	206+500	LHS	Outer		40	0.1955	0.1266	0.0897	0.0691	0.0399	0.0273	0.0224	32.2	35.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	398.8	149.7	1587.7	301.5	119.6	0.0689	441	50.028	2.730061
1426	MH	150+000	252+000	206+600	LHS	Inner		40	0.1655	0.1131	0.0723	0.051	0.0372	0.0272	0.0245	31.7	36.0	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	396.6	149.7	1740.4	299.9	119.6	0.0524	442	50.0804	2.675209
629	MH	150+000	252+000	206+750	LHS	Outer		40	0.3541	0.1941	0.0965	0.0608	0.0341	0.0216	0.0145	32.3	35.9	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1248.4	152.0	150.0	1353.4	105.8	119.8	0.16	443	50.2404	2.727958
1427	MH	150+000	252+000	206+860	LHS	Inner		40	0.236	0.1217	0.0729	0.0415	0.0255	0.0191	0.0146	31.7	36.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	326.9	150.0	1713.0	248.3	119.8	0.1143	444	50.3547	2.735006
630	MH	150+000	252+000	207+000	LHS	Outer		40	0.4639	0.2383	0.1173	0.0691	0.0544	0.0392	0.0253	32.5	37.1	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	700.0	150.2	150.0	758.9	104.2	119.8	0.2256	445	50.5803	2.853355
1428	MH	150+000	252+000	207+100	LHS	Inner		40	0.4552	0.2211	0.1319	0.0898	0.0601	0.048	0.0363	32.1	36.9	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	844.1	154.6	148.9	980.8	108.0	118.9	0.2341	446	50.8144	2.980203
631	MH	150+000	252+000	207+250	LHS	Outer		40	0.5526	0.3024	0.1562	0.0782	0.047	0.031	0.0201	32.8	38.2	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	492.5	150.7	150.0	492.5	104.6	119.8	0.2502	447	51.0646	3.123152
1429	MH	150+000	252+000	207+350	LHS	Inner		40	0.4282	0.2715	0.1394	0.0842	0.0549	0.0353	0.0204	32.3	37.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	933.3	152.2	149.9	933.3	105.9	119.8	0.1567	448	51.2213	3.1726
632	MH	150+000	252+000	207+500	LHS	Outer		40	0.1958	0.1202	0.0676	0.0477	0.0315	0.0205	0.0184	33.4	38.7	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	394.6	150.0	1604.1	298.5	119.8	0.0756	449	51.2969	3.140948
1430	MH	150+000	252+000	207+600	LHS	Inner		40	0.2101	0.1173	0.0712	0.0411	0.0306	0.0229	0.0206	32.3	36.8	38.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1446.2	397.8	149.9	1680.5	300.8	119.8	0.0928	450	51.3897	3.126497
633	MH	150+000	252+000	207+750	LHS	Outer		40	0.376	0.1843	0.0878	0.0561	0.0344	0.0234	0.0154	33.5	38.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	957.0	150.5	150.0	1037.5	104.5	119.8	0.1917	451	51.5814	3.210945
1431	MH	150+000	252+000	207+850	LHS	Inner	T-30.9/41.3	40	0.3895	0.241	0.1378	0.0987	0.0688	0.0478	0.033	32.1	36.3	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1404.3	150.2	146.5	1887.7	104.2	116.9	0.1485	452	51.7299	3.252194
634	MH	150+000	252+000	208+000	LHS	Outer		40	0.2558	0.175	0.112	0.0687	0.047	0.0283	0.0177	33.7	39.4	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	213.3	149.9	1573.7	157.8	119.8	0.0808	453	51.8107	3.225742
1432	MH	150+000	252+000	208+150	LHS	Inner		40	0.4005	0.2264	0.127	0.0834	0.0545	0.0415	0.03	32.2	37.2	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1252.7	150.7	149.9	1683.9	104.6	119.8	0.1741	454	51.9848	3.292591
635	MH	150+000	252+000	208+250	LHS	Outer		40	0.3321	0.2081	0.1303	0.0867	0.0544	0.0287	0.0155	33.7	39.3	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1421.5	151.5	150.0	1541.1	105.3	119.8	0.124	455	52.1088	3.309339
1433	MH	150+000	252+000	208+350	LHS	Inner		40	0.161	0.0938	0.061	0.043	0.0301	0.0227	0.0177	32.3	37.3	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1411.8	397.3	150.0	1897.8	300.4	119.8	0.0672	456	52.176	3.269287
636	MH	150+000	252+000	208+500	LHS	Outer		40	0.3761	0.2622	0.162	0.0958	0.0489	0.0309	0.0198	33.9	39.7	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	151.2	149.9	1574.9	105.1	119.8	0.1139	457	52.2899	3.275936
1434	MH	150+000	252+000	208+620	LHS	Inner		40	0.2917	0.1439	0.0712	0.0467	0.0295	0.0216	0.0161	32.3	37.3	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	269.7	150.0	1668.1	203.7	119.8	0.1478	458	52.4377	3.316484
637	MH	150+000	252+000	208+750	LHS	Outer		40	0.1881	0.0909	0.0487	0.0383	0.0262	0.0185	0.0134	34.0	40.1	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	396.6	150.0	1611.0	299.9	119.8	0.0972	459	52.5349	3.306433
1435	MH	150+000	252+000	208+850	LHS	Inner		40	0.2134	0.1031	0.056	0.0415	0.0284	0.0185	0.0116	32.2	38.3	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	393.9	149.9	1983.1	298.0	119.8	0.1103	460	52.6452	3.309481
638	MH	150+000	252+000	209+000	LHS	Outer		40	0.1511	0.1075	0.0607	0.0369	0.0256	0.0178	0.0132	34.1	39.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	398.3	149.8	1615.7	301.1	119.7	0.0436	461	52.6888	3.24583
1436	MH	150+000	252+000	209+100	LHS	Inner		40	0.1845	0.0912	0.0472	0.0324	0.0215	0.0149	0.0102	32.4	38.2	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	397.6	150.0	1961.4	300.6	119.8	0.0933	462	52.7821	3.231878
639	MH	150+000	252+000	209+250	LHS	Outer	T-32.2/41.2	40	0.1205	0.0812	0.0548	0.0359	0.0238	0.0182	0.0164	34.4	39.7	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	396.3	150.0	1973.2	299.7	119.8	0.0393	463	52.8214	3.163927
1437	MH	150+000	252+000	209+350	LHS	Inner		40	0.1718	0.0919	0.0576	0.0334	0.0195	0.0139	0.0102	32.4	39.0	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	376.5	150.0	1996.1	285.3	119.8	0.0799	464	52.9013	3.136575
640	MH	150+000	252+000	209+500	LHS	Outer		40	0.2694	0.1265	0.0634	0.0407	0.036	0.0327	0.0283	34.6	40.3	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1378.5	399.8	149.9	1843.7	302.2	119.8	0.1429	465	53.0442	3.172223
1438	MH	150+000	252+000	209+600	LHS	Inner		40	0.2614	0.1333	0.0874	0.0544	0.0462	0.0403	0.0374	32.5	36.7	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.8	150.0	2004.8	300.8	119.8	0.1281	466	53.1723	3.193072
641	MH	150+000	252+000	209+750	LHS	Outer		40	0.0937	0.0673	0.0482	0.0367	0.0286	0.0189	0.0116	34.6	41.3	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	393.2	150.0	1993.3	297.5	119.8	0.0264	467	53.1987	3.11222
1439	MH	150+000	252+000	209+850	LHS	Inner		40	0.0859	0.0608	0.0436	0.031	0.0184	0.0138	0.0108	32.6	39.5	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.4	150.0	1980.2	299.1	119.8	0.0251	468	53.2238	3.030069
642	MH	150+000	252+000	209+950	LHS	Outer		40	0.0992	0.0722	0.0513	0.0397	0.0321	0.0239	0.0183	34.7	35.8	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.1	149.8	1980.3	299.6	119.7	0.027	469	53.2508	2.949817
1440	MH	150+000	252+000	210+100	LHS	Inner		40	0.0819	0.0587	0.0429	0.0343	0.0283	0.0234	0.0203	33.0	39.2	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	399.5	150.0	1994.7	302.0	119.8	0.0232	470	53.274	2.865766
643	MH	150+000	252+000	210+250	LHS	Outer		40	0.0941	0.0659	0.0469	0.0362	0.0287	0.019	0.0124	34.8	41.9	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	392.7	150.0	1991.8	297.1	119.8	0.0282	471	53.3022	2.786714
1441	MH	150+000	252+000	210+350	LHS	Inner		40	0.351	0.1845	0.124	0.0789	0.0585	0.0448	0.0344	32.9	38.7	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1210.8	220.1	150.0	1627.6	163.4	119.8	0.1665	472	53.4687	2.845962
644	MH	150+000	252+000	210+500	LHS	Outer		40	0.6247	0.3528	0.167	0.1025	0.0741	0.051	0.0338	34.9	42.7	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	424.7	150.0	134.8	568.0	104.0	106.8	0.2719	473	53.7406	3.010611
1442	MH	150+000	252+000	210+620	LHS	Inner		40	0.7122	0.3894	0.2223	0.1374	0.0791	0.0546	0.0358	32.9	39.9	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	412.9	150.7	122.7	555.0	104.6	96.5	0.3228	474	54.0634	3.226159
645	MH	150+000	252+000	210+750	LHS	Outer		40	0.4016	0.226	0.1285	0.0887	0.0623	0.0428	0.0292	35.2	43.0	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	150.2	149.8	1731.5	104.2	119.7	0.1756	475	54.239	3.294508
1443	MH	150+000	252+000	210+850	LHS	Inner		40	0.2084	0.1211	0.0683	0.0479	0.0372	0.0293	0.0218	33.1	39.5	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	378.0	150.0	2014.9	286.4	119.8	0.0873	476	54.3263	3.274556
646	MH	150+000	252+000	211+020	LHS	Outer		40	0.4096	0.2101	0.0858	0.0461	0.0302	0.0217	0.0195	35.3	39.0	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	610.8	153.9	150.0	816.9	107.4	119.8	0.1995	477	54.5258	3.366805
1444	MH	150+000	252+000	211+130	LHS	Inner		40	0.2908	0.14	0.0857	0.056	0.035	0.0217	0.012	33.0	38.8	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	176.4	150.0	1996.1	126.7	119.8	0.1508	478	54.6766	3.410353
647	MH	150+000	252+000	211+250	LHS	Outer		40	0.2176	0.1098	0.0748	0.0516	0.0346	0.0226	0.0147	35.3	42.4	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	393.9	150.0	1987.5	298.0	119.8	0.1078	479	54.7844	3.410902
1445	MH	150+000	252+000	211+380	LHS	Inner		40	0.2269	0.1339	0.0906	0.0583	0.0381	0.0233	0.0138	33.0	37.9	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	281.0	150.0	2014.9	212.6	119.8	0.093	480	54.8774	3.39665
648	MH	150+000	252+000

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
654	MH	150+000	252+000	213+000	LHS	Outer		40	0.4858	0.249	0.1076	0.0611	0.0504	0.0387	0.0249	34.9	40.8	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	608.6	150.0	150.0	814.0	104.0	119.8	0.2368	493	56.5229	3.64788
1452	MH	150+000	252+000	213+100	LHS	Inner		40	0.3391	0.168	0.0843	0.0483	0.0409	0.0355	0.0268	33.8	40.3	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	871.0	342.1	150.0	1170.8	259.8	119.8	0.1711	494	56.694	3.711728
655	MH	150+000	252+000	213+250	LHS	Outer		40	0.2675	0.1254	0.0662	0.0468	0.0334	0.0276	0.0203	34.8	41.4	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	396.6	150.0	1917.0	299.9	119.8	0.1421	495	56.8361	3.746577
1453	MH	150+000	252+000	213+370	LHS	Inner		40	0.4613	0.2675	0.1267	0.0643	0.0478	0.0373	0.0334	34.1	40.6	41.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	617.2	150.0	150.0	829.7	104.0	119.8	0.1938	496	57.0299	3.833125
656	MH	150+000	252+000	213+500	LHS	Outer		40	0.1609	0.0942	0.0626	0.0384	0.0284	0.0214	0.0146	35.0	41.0	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	400.0	150.0	1983.2	302.4	119.8	0.0667	497	57.0966	3.792573
1454	MH	150+000	252+000	213+680	LHS	Inner	t-34.9/43.8	40	0.3308	0.1897	0.1078	0.0794	0.0596	0.0509	0.0467	36.7	40.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	996.8	295.7	146.2	1526.5	224.2	116.6	0.1411	498	57.2377	3.826422
657	MH	150+000	252+000	213+750	LHS	Outer	T-28.5/38.6	40	0.3019	0.1791	0.1108	0.0734	0.0459	0.0355	0.0291	30.8	34.3	38.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	244.6	150.0	1764.0	183.5	119.8	0.1228	499	57.3605	3.84197
1455	MH	150+000	252+000	213+850	LHS	Inner		40	0.3039	0.1869	0.1061	0.0776	0.0584	0.0493	0.0444	36.9	39.8	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1224.7	303.7	150.0	1875.5	230.4	119.8	0.117	500	57.4775	3.851719
658	MH	150+000	252+000	214+000	LHS	Outer		40	0.1688	0.1143	0.0746	0.0521	0.037	0.0306	0.0246	30.7	33.7	38.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.5	149.6	1755.0	302.0	119.5	0.0545	501	57.532	3.798967
1456	MH	150+000	252+000	214+120	LHS	Inner		40	0.5324	0.3022	0.1529	0.0982	0.0712	0.0546	0.0432	36.9	39.4	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	624.7	150.5	126.2	956.7	104.5	99.5	0.2302	502	57.7622	3.921916
659	MH	150+000	252+000	214+250	LHS	Outer		40	0.3028	0.1934	0.1126	0.0745	0.0464	0.0262	0.0189	30.7	34.2	38.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	152.9	150.0	1717.1	106.5	119.8	0.1094	503	57.8716	3.924064
1457	MH	150+000	252+000	214+350	LHS	Inner		40	0.4749	0.2248	0.1192	0.0883	0.0674	0.0536	0.0431	36.8	40.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	478.5	217.7	137.6	732.8	161.4	109.2	0.2501	504	58.1217	4.066912
660	MH	150+000	252+000	214+500	LHS	Outer		40	0.3214	0.2019	0.1175	0.0818	0.0498	0.0325	0.0256	30.7	33.9	38.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	175.4	149.9	1734.8	125.9	119.8	0.1195	505	58.2412	4.079161
1458	MH	150+000	252+000	214+600	LHS	Inner		40	0.3631	0.2426	0.1537	0.1136	0.0808	0.0541	0.0369	36.7	40.5	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	155.4	132.2	2280.6	108.7	104.6	0.1205	506	58.3617	4.092409
661	MH	150+000	252+000	214+750	LHS	Outer		40	0.1879	0.1308	0.0915	0.0682	0.0524	0.0384	0.0355	30.7	33.8	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	396.1	150.0	1720.9	299.6	119.8	0.0571	507	58.4188	4.042258
1459	MH	150+000	252+000	214+850	LHS	Inner		40	0.2279	0.1497	0.0904	0.0588	0.0392	0.0295	0.0221	37.0	40.8	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	361.4	150.0	2293.8	274.2	119.8	0.0782	508	58.497	4.013206
662	MH	150+000	252+000	215+000	LHS	Outer		40	0.264	0.1634	0.1156	0.0816	0.0584	0.0439	0.0333	30.7	34.2	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	366.5	149.9	1766.5	278.0	119.8	0.1006	509	58.5976	4.006555
1460	MH	150+000	252+000	215+100	LHS	Inner		40	0.1002	0.0623	0.0448	0.037	0.0297	0.0248	0.0171	37.1	40.3	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	393.9	149.6	2292.2	298.0	119.5	0.0379	510	58.6355	3.937203
663	MH	150+000	252+000	215+250	LHS	Outer		40	0.494	0.2887	0.1748	0.1057	0.0748	0.0585	0.0337	30.8	34.0	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	830.1	150.0	132.9	978.3	104.0	105.2	0.2053	511	58.8408	4.035252
1461	MH	150+000	252+000	215+350	LHS	Inner		40	0.4819	0.3019	0.1874	0.1224	0.089	0.0665	0.0482	36.8	40.0	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	966.7	150.0	107.6	1480.4	104.0	83.6	0.18	512	59.0208	4.108
664	MH	150+000	252+000	215+500	LHS	Outer		40	0.3318	0.1668	0.0945	0.059	0.0353	0.0228	0.0147	30.8	34.5	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1440.9	157.8	150.0	1698.1	110.8	119.8	0.165	513	59.1858	4.165748
1462	MH	150+000	252+000	215+620	LHS	Inner		40	0.4749	0.2953	0.1701	0.1034	0.085	0.0719	0.0455	36.5	39.8	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	969.9	150.2	113.6	1485.3	104.2	88.7	0.1796	514	59.3654	4.238097
665	MH	150+000	252+000	215+850	LHS	Outer		40	0.5607	0.3149	0.1727	0.1102	0.0661	0.0467	0.0285	30.7	33.8	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	493.5	150.2	147.9	581.6	104.2	118.1	0.2458	515	59.6112	4.376645
1463	MH	150+000	252+000	215+855	LHS	Inner		40	0.6715	0.3922	0.2097	0.1399	0.0914	0.0735	0.0539	36.6	40.2	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	420.4	150.5	95.6	643.8	104.5	73.3	0.2793	516	59.8905	4.548694
666	MH	150+000	252+000	216+000	LHS	Outer		40	0.4664	0.2835	0.1598	0.1056	0.0599	0.026	0.0172	30.7	33.8	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1272.0	150.0	149.9	1499.1	104.0	119.8	0.1829	517	60.0734	4.624342
1464	MH	150+000	252+000	216+130	LHS	Inner		40	0.675	0.3354	0.1756	0.107	0.0771	0.0603	0.0543	36.6	40.6	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	152.0	111.2	614.3	105.8	86.7	0.3396	518	60.413	4.856691
667	MH	150+000	252+000	216+350	LHS	Outer		40	0.568	0.3137	0.1615	0.0759	0.0481	0.0327	0.0283	30.8	33.9	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	469.9	152.0	149.9	553.8	105.8	119.8	0.2543	519	60.6673	5.003739
1465	MH	150+000	252+000	216+370	LHS	Inner		40	0.5161	0.3046	0.1528	0.0822	0.0465	0.037	0.0333	36.9	40.6	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	528.0	151.5	149.8	808.6	105.3	119.7	0.2115	520	60.8788	5.107987
668	MH	150+000	252+000	216+500	LHS	Outer		40	0.451	0.2252	0.1289	0.079	0.0463	0.0311	0.0209	30.7	34.4	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	794.6	151.2	150.0	936.5	105.1	119.8	0.2258	521	61.1046	5.226536
1466	MH	150+000	252+000	216+600	LHS	Inner		40	0.4256	0.2634	0.1575	0.0838	0.0539	0.0325	0.0244	37.0	41.4	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1096.8	150.7	150.0	1679.7	104.6	119.8	0.1622	522	61.2668	5.281484
669	MH	150+000	252+000	216+900	LHS	Outer		40	0.4902	0.2838	0.1331	0.0701	0.0478	0.0383	0.0317	30.8	34.3	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	622.6	150.0	149.5	733.7	104.0	119.4	0.2064	523	61.4732	5.380633
1467	MH	150+000	252+000	216+905	LHS	Inner		40	0.4516	0.2601	0.1323	0.0813	0.0458	0.0322	0.029	37.1	40.6	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	823.7	154.4	150.0	1261.4	107.8	119.8	0.1915	524	61.6647	5.464881
670	MH	150+000	252+000	217+000	LHS	Outer		40	0.4779	0.2183	0.1017	0.0513	0.0423	0.0307	0.0276	30.9	34.3	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	544.1	150.7	150.0	641.2	104.6	119.8	0.2596	525	61.9243	5.61723
1468	MH	150+000	252+000	217+120	LHS	Inner		40	0.4037	0.2561	0.1432	0.1039	0.0786	0.0556	0.0407	37.2	41.3	43.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	152.0	129.1	2226.4	105.8	102.0	0.1476	526	62.0719	5.657578
671	MH	150+000	252+000	217+250	LHS	Outer		40	0.1251	0.0775	0.0518	0.034	0.0283	0.024	0.0179	31.0	34.5	38.6	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	399.3	150.0	1720.9	301.9	119.8	0.0476	527	62.1195	5.597927
672	MH	150+000	252+000	218+000	LHS	Outer	T-28.5/38	40	0.2845	0.1782	0.1062	0.0626	0.0512	0.046	0.0368	31.1	33.5	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	329.6	150.0	1663.2	250.3	119.8	0.1063	528	62.2258	5.596975
1469	MH	150+000	252+000	218+100	LHS	Inner	T-34.2/43	40	0.1947	0.1273	0.0813	0.0405	0.0244	0.0183	0.0164	36.2	38.9	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	384.8	150.0	2183.7	291.4	119.8	0.0674	529	62.2932	5.557123
673	MH	150+000	252+000	218+250	LHS	Outer		40	0.1006	0.0717	0.0515	0.0354	0.0247	0.0184	0.0141	31.0	33.6	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	394.9	150.0	1675.6	298.7	119.8	0.0289	530	62.3221	5.478772
1470	MH	150+000	252+000	218+380	LHS	Inner		40	0.0916	0.0585	0.0378	0.0292	0.0207	0.0148	0.0133	35.9	38.0	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	395.6	150.0	2161.5	299.2	119.8	0.0331	531	62.3552	5.40462
674	MH	150+000	252+000	218+500	LHS	Outer		40	0.4303	0.2523	0.1531	0.08	0.0589	0.0396	0.0261	30.7	33.6	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1229.0	151.2	149.9	1408.2	105.1	119.8	0.178	532	62.5332	5.475369
1471	MH	150+000	252+000	218+600	LHS	Inner		40	0.2707	0.1798	0.1222	0.0792	0.0583	0.0438	0.0316	35.4	37.8	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	306.6	150.0	2196.3	232.7	119.8	0.0909	533	62.6241	5.459017
675	MH	150+000	252+000	218+750	LHS	Outer		40	0.259	0.1277	0.0723	0.0479	0.0313	0.0236	0.0183	30.9	33.3	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	380.4	150.0	1711.2	288.2	119.8	0.1313	534	62.7554	5.483066
1472	MH	150+000	252+000	218+850	LHS	Inner		40	0.4072	0.2206	0.1181	0.08	0.0551	0.0405	0.0302	35.2	36.9	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	165.4	150.0	1407.3	117.3	119.8	0.1866	535	62.942	5.562414
676	MH	150+000	252+000	219+000	LHS	Outer		40	0.2541	0.1557	0.1069	0.0767	0.059	0.042	0.0319	30.8	33.3	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	398.3	150.0	1703.9	301.1	119.8	0.0984	536	63.0404	5.553562
1473	MH	150+000	252+000	219+100	LHS	Inner		40	0.2237	0.1172	0.0661	0.0539	0.0458	0.044	0.0402	34.3	37.5	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	393.6	149.9	2133.2	297.8	119.8	0.1065	537	63.1469	5.552811
677	MH	150+000	252+000	219+250	LHS	Outer		40	0.4177	0.2242	0.12	0.0731	0.0564	0.0446	0.0334	30.6	32.3	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	867.7	169.3	150.0	994.2	120.7	119.8	0.1935	538	63.3404	5.639059
1474	MH	150+000	252+000	219+350	LHS	Inner		40	0.3287	0.1892	0.1082	0.0679	0.0393	0.0316	0.0262	34.1	37.8	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1328.0	198.4	150.0	1948.6	145.3	119.8	0.1395	539	63.4799	5.671308
678	MH	150+000	252+000	219+500	LHS	Outer		40	0.3386	0.1656	0.0904	0.05	0.0308	0.0215	0.0194	30.4	33.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1202.2	192.3	150.0	1377.5	140.2	119.8	0.173	540	63.6529	5.737056
1475	MH	150+000	252+000	219+600	LHS	Inner		40	0.2018	0.1041	0.0588	0.0335	0.0248	0.0186	0.0113	34.5	38.8	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	391.7	150.0	2169.5	296.4	119.8	0.0977	541	63.7506	5.727505
679	MH	150+000	252+000	219+750	LHS	Outer		40	0.2151	0.1323	0.0733	0.0475	0.0295	0.0233	0.0192	30.3	32.4	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	394.4	150.0	1703.9	298.3	119.8	0.0828	542	63.8334	5.703053
1476	MH	150+000	252+000	219+850	LHS	Inner		40	0.4667	0.2483	0.125	0.0529	0.0294	0.0283	0.0254	35.3	38.9	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	614.0	150.0	149.9	900.9	104.0	119.8	0.2184	543	64.0518	5.814202
680	MH	150+000	252+000	220+000	LHS	Outer		40	0.0971	0.0722	0.0537	0.0386	0.0275	0.0215	0.0174	30.3	32.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	398.3	149.9	1652.1	301.1	119.8	0.0249	544	64.0767	5.73185
1477	MH	150+000	252+000	220+100	LHS	Inner		40	0.1313	0.0705	0.0411	0.0311	0.0246	0.0191	0.015	35.3	38.4	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	399.0	149.9	2095.4	301.7	119.8	0.0608	545	64.1375	5.685398
681	MH	150+000	252+000	220+250	LHS	Outer		40	0.2293	0.152	0.1168	0.082	0.0573	0.0326	0.0197	30.1	32.3	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	332.6	149.9	1713.8	252.6	119.8	0.0773	546	64.2148	5.655447
1478	MH	150+000	252+000	220+350	LHS	Inner		40	0.1771	0.0887	0.053	0.0372	0.0266	0.0223	0.0191	34.8	37.9	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	398.8	150.0	2128.4	301.5	119.8	0.0884	547	64.3032	5.636595
682	MH	150+000	252+000	220+500	LHS	Outer		40	0.1137	0.0776	0.0591	0.0426	0.0298	0.0188	0.013	29.9	32.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.3	149.6	1708.8	301.1	119.5	0.0361	548	64.3393	5.565444
1479	MH	150+000	252+000	220+620	LHS	Inner		40	0.1234	0.0632	0.0377	0.028	0.0207	0.0166	0.014	34.9	38.6	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	394.4	150.0	2163.1	298.3	119.8	0.0602	549	64.3995	5.518392
683	MH	150+000	252+000	220+750	LHS	Outer		40	0.1201	0.0804	0.0617	0.044	0.0306	0.0182	0.0117	30.0	32.5	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	396.8	150.0	1710.1	300.1	119.8	0.0397	550	64.4392	5.450841
1480	MH	150+000	252+000	220+850	LHS	Inner		40	0.3651	0.2095	0.1202	0.0859	0.0613	0.0479	0.0384	35.2	38.7	43	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	193.7	149.4	1899.6	141.4	119.3	0.1556	551	64.5948	5.499189
684	MH	150+000	252+000	221+000	LHS	Outer	T-27.7/38	40	0.4269	0.2209	0.1345	0.0858	0.0509	0.0383	0.03	29.9	32.2	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1068.8	150.0	149.9	1224.6	104.0	119.8	0.206	552	64.8008	5.597937
1481	MH	150+000	252+000	221+100	LHS	Inner	T-33/42.2	40	0.5083	0.318	0.1808	0.0971	0.0642	0.0351	0.0199	35.2	37.7	42.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	610.8	150.5	149.8	859.6	104.5	119.7	0.1903	553	64.9911	5.680986
685	MH	150+000	252+000	221+250	LHS	Outer		40	0.5083	0.3071	0.1699	0.1161	0.0776	0.0566	0.0413	29.9	32.5	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	748.4	150.0	119.9	857.5	104.0	94.1	0.2012	554	65.1923	5.774934
1482	MH	150+000	252+000	221+400	LHS	Inner		40	0.1638	0.127	0.0849	0.0561	0.037	0.027	0.0201	35.0	37.8	42.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	398.8	149.9	2067.1	301.5	119.8	0.0368	555	65.2291	5.704483
686	MH	150+000	252+000	221+500	LHS	Outer		40	0.4267	0.2494	0.1503	0.081	0.0591	0.0444	0.0343	30.0	32.4	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1166.7	150.2	149.5	1336.8	104.2	119.4	0.1773	556	65.4064	5.774531
1483	MH	150+000	252+000	221+600	LHS	Inner		40	0.1686	0.1046	0.0602	0.0425	0.0298	0.0225	0.0175	34.9	37.8	42.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	391.9	150.0	2053.4	296.5	119.8	0.064	557	65.4704	5.73128
687	MH	150+000	252+000	221+750	LHS	Outer		40	0.0965	0.0759	0.0568	0.042	0.0341	0.0263	0.0202	29.8	32.6	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	400.0	149.6	1712.5	302.4	119.5	0.0206	558	65.491	5.644628
1484	MH	150+000	252+000	221+850	LHS	Inner		40	0.0748	0.0581	0.0467	0.0365	0.0297	0.0243	0.0205	34.8	38.5	42.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	398.5	149.8	2076.2	301.3	119.7	0.0167	559	65.5077	5.554077
688	MH	150+000	252+000	222+000	LHS	Outer		40	0.1153	0.0718	0.046	0.0275	0.0209	0.0159	0.0122	29.9	33.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	399.3	150.0	1637.3	301.9	119.8	0.0435	560	65.5512	5.490325
1485	MH	150+000	252+000	222+100	LHS	Inner		40	0.0849	0.0609	0.0447	0.0322	0.025	0.0198	0.0178	34.7	38.1	42.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	399.8	150.0	2101.9	302.2	119.8	0.024	561	65.5752	5.407073
689	MH	150+000	252+000	222+250	LHS	Outer		40	0.1267	0.0779	0.0484	0.0359	0.028	0.0208	0.016	30.0	33.2	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.1	150.0	1705.2	298.1	119.8	0.0488	562	65.624	5.348622
1486	MH	150+000	252+000	222+350	LHS	Inner		40	0.0843	0.0609	0.0444	0.0337	0.0265	0.0216	0.0182

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1492	MH	150+000	252+000	223+850	LHS	Inner		40	0.168	0.1122	0.0726	0.0552	0.0429	0.0358	0.0258	33.0	35.4	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	399.3	149.8	1901.2	301.9	119.7	0.0558	575	66.5151	4.845452
696	MH	150+000	252+000	224+000	LHS	Outer		40	0.2305	0.1537	0.1044	0.076	0.0516	0.034	0.0212	29.6	32.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	369.7	150.0	1678.0	280.3	119.8	0.0768	576	66.5919	4.815
1493	MH	150+000	252+000	224+100	LHS	Inner	T-30.8/39.7	40	0.1598	0.1072	0.0719	0.0543	0.042	0.0352	0.0317	33.1	34.9	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.5	149.9	1859.3	301.3	119.8	0.0526	577	66.6445	4.760348
697	MH	150+000	252+000	224+250	LHS	Outer		40	0.1033	0.0712	0.0469	0.0346	0.0241	0.0166	0.0104	29.8	32.4	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1432.3	400.0	150.0	1641.1	302.4	119.8	0.0321	578	66.6766	4.685197
1494	MH	150+000	252+000	224+350	LHS	Inner		40	0.2752	0.1766	0.0929	0.0649	0.0523	0.0476	0.0431	32.9	35.1	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1397.8	397.1	150.0	1736.3	300.3	119.8	0.0986	579	66.7752	4.676545
698	MH	150+000	252+000	224+500	LHS	Outer		40	0.0931	0.0609	0.041	0.0311	0.0237	0.0185	0.0106	29.7	32.7	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	394.1	150.0	1702.6	298.1	119.8	0.0322	580	66.8074	4.601494
1495	MH	150+000	252+000	224+530	LHS	Inner		40	0.0801	0.0531	0.0412	0.0319	0.0238	0.0181	0.0151	32.8	35.3	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	396.1	149.6	1843.2	299.6	119.5	0.027	581	66.8344	4.521242
699	MH	150+000	252+000	224+750	LHS	Outer		40	0.3013	0.1795	0.1044	0.0755	0.0549	0.0388	0.0249	29.8	32.6	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	248.5	150.0	1686.6	186.6	119.8	0.1218	582	66.9562	4.535791
1496	MH	150+000	252+000	224+890	LHS	Inner		40	0.3427	0.1753	0.0925	0.0525	0.0344	0.0295	0.0265	32.4	34.8	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	979.6	234.6	150.0	1216.8	175.3	119.8	0.1674	583	67.1236	4.595939
700	MH	150+000	252+000	225+000	LHS	Outer		40	0.4354	0.2421	0.1582	0.1011	0.0627	0.0418	0.0245	29.9	32.0	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1235.5	150.2	149.7	1415.6	104.2	119.6	0.1933	584	67.3169	4.681987
1497	MH	150+000	252+000	225+100	LHS	Inner		40	0.3823	0.2169	0.1213	0.0824	0.0553	0.0409	0.0305	32.3	35.7	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1412.9	154.9	150.0	1755.0	108.3	119.8	0.1654	585	67.4823	4.740136
701	MH	150+000	252+000	225+250	LHS	Outer		40	0.5357	0.3248	0.175	0.1137	0.0694	0.0432	0.0265	29.9	32.6	38	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	619.4	150.2	149.6	709.7	104.2	119.5	0.2109	586	67.6932	4.843784
1498	MH	150+000	252+000	225+350	LHS	Inner		40	0.5634	0.3447	0.1698	0.0882	0.0541	0.0438	0.0353	32.6	35.7	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	473.1	150.0	149.6	587.7	104.0	119.5	0.2187	587	67.9119	4.955233
702	MH	150+000	252+000	225+500	LHS	Outer	T-28.2/37.5	40	0.1061	0.0753	0.0532	0.0397	0.0307	0.0258	0.0223	29.9	32.2	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	398.3	149.7	1663.6	301.1	119.6	0.0308	588	67.9427	4.878781
1499	MH	150+000	252+000	225+600	LHS	Inner		40	0.5467	0.3187	0.1727	0.0813	0.047	0.0399	0.0361	32.3	34.8	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	502.2	151.2	149.8	623.8	105.1	119.7	0.228	589	68.1707	4.99953
703	MH	150+000	252+000	225+750	LHS	Outer		40	0.2163	0.1372	0.0808	0.0541	0.0375	0.0249	0.0166	29.6	32.2	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	381.9	150.0	1664.8	289.3	119.8	0.0791	590	68.2498	4.971378
1500	MH	150+000	252+000	225+850	LHS	Inner		40	0.2792	0.1578	0.0938	0.0624	0.0506	0.0375	0.034	32.5	35.4	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1403.2	393.6	150.0	1743.0	297.8	119.8	0.1214	591	68.3712	4.985527
704	MH	150+000	252+000	226+000	LHS	Outer		40	0.2753	0.1769	0.1061	0.0662	0.0472	0.0378	0.0308	29.9	32.6	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	287.8	150.0	1678.0	218.0	119.8	0.0984	592	68.4696	4.976675
1501	MH	150+000	252+000	226+100	LHS	Inner		40	0.3797	0.229	0.122	0.081	0.0522	0.0413	0.0339	32.5	35.5	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1318.3	150.7	150.0	1637.5	104.6	119.8	0.1507	593	68.6203	5.020123
705	MH	150+000	252+000	226+250	LHS	Outer		40	0.4265	0.2489	0.1434	0.0895	0.0593	0.0399	0.0359	30.0	32.7	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1021.5	150.5	149.4	1143.6	104.5	119.3	0.1776	594	68.7979	5.090472
1502	MH	150+000	252+000	226+390	LHS	Inner		40	0.4811	0.3064	0.1718	0.0901	0.0627	0.0433	0.0315	32.7	36.6	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	148.7	1116.6	104.0	118.7	0.1747	595	68.9726	5.15792
706	MH	150+000	252+000	226+530	LHS	Outer		40	0.4577	0.2967	0.1631	0.1025	0.0612	0.0433	0.039	30.2	32.7	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	935.5	150.5	141.4	1047.3	104.5	112.5	0.161	596	69.1336	5.211669
1503	MH	150+000	252+000	226+600	LHS	Inner		40	0.343	0.206	0.1095	0.065	0.0435	0.0289	0.0205	33.1	35.9	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	152.2	150.0	1815.2	105.9	119.8	0.137	597	69.2706	5.241417
707	MH	150+000	252+000	226+750	LHS	Outer		40	0.1933	0.1378	0.0895	0.058	0.0434	0.0328	0.0295	30.3	32.7	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	383.9	150.0	1650.4	290.7	119.8	0.0555	598	69.3261	5.189666
1504	MH	150+000	252+000	226+850	LHS	Inner		40	0.1713	0.0933	0.0552	0.0379	0.0265	0.0184	0.0119	33.1	36.0	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	383.9	150.0	1836.5	290.7	119.8	0.078	599	69.4041	5.160414
708	MH	150+000	252+000	227+000	LHS	Outer	T-27.3/34.2	40	0.0805	0.0465	0.0334	0.0254	0.0195	0.0173	0.0156	29.6	32.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	400.0	149.6	1358.9	302.4	119.5	0.034	600	69.4381	5.087162
1505	MH	150+000	252+000	227+100	LHS	Inner		40	0.147	0.0748	0.044	0.0309	0.0222	0.0158	0.0143	33.1	35.9	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	399.8	150.0	1775.0	302.2	119.8	0.0722	601	69.5103	5.052111
709	MH	150+000	252+000	227+250	LHS	Outer		40	0.0756	0.0493	0.0342	0.0238	0.0184	0.0155	0.0125	29.6	31.7	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	395.6	149.9	1409.8	299.2	119.8	0.0263	602	69.5366	4.971159
1506	MH	150+000	252+000	227+350	LHS	Inner		40	0.138	0.0889	0.0513	0.0353	0.0247	0.0185	0.0142	33.2	36.4	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	396.6	150.0	1820.5	299.9	119.8	0.0491	603	69.5857	4.913008
710	MH	150+000	252+000	227+500	LHS	Outer		40	0.0901	0.0501	0.0315	0.0236	0.0189	0.0168	0.0127	29.8	31.9	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	397.6	149.8	1441.0	300.6	119.7	0.04	604	69.6257	4.845756
1507	MH	150+000	252+000	227+600	LHS	Inner		40	0.1333	0.0735	0.0488	0.0311	0.0233	0.018	0.0101	33.6	36.1	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1387.1	400.0	150.0	1723.0	302.4	119.8	0.0598	605	69.6855	4.798305
711	MH	150+000	252+000	227+750	LHS	Outer		40	0.0899	0.0682	0.0494	0.0379	0.0273	0.0179	0.0126	29.9	31.8	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.0	149.7	1443.0	301.7	119.6	0.0217	606	69.7072	4.712753
1508	MH	150+000	252+000	227+850	LHS	Inner		40	0.1313	0.0799	0.056	0.0401	0.0309	0.0244	0.0204	34.3	37.2	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	398.5	150.0	1856.5	301.3	119.8	0.0514	607	69.7586	4.656902
712	MH	150+000	252+000	228+000	LHS	Outer		40	0.0812	0.0447	0.0302	0.0244	0.0201	0.0163	0.0114	29.8	31.9	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	399.5	150.0	1395.3	302.0	119.8	0.0365	608	69.7951	4.58615
1509	MH	150+000	252+000	228+120	LHS	Inner		40	0.1638	0.1132	0.0681	0.0392	0.0188	0.0119	0.0071	34.7	37.1	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	151.7	149.9	1829.8	105.5	119.8	0.0506	609	69.8457	4.529498
713	MH	150+000	252+000	228+250	LHS	Outer		40	0.0795	0.0467	0.0319	0.0236	0.0185	0.016	0.0132	30.1	32.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.6	150.0	1446.1	300.6	119.8	0.0328	610	69.8785	4.455047
1510	MH	150+000	252+000	228+350	LHS	Inner		40	0.0912	0.0598	0.0372	0.0246	0.0197	0.014	0.01	34.3	37.1	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	398.8	149.9	1837.9	301.5	119.8	0.0314	611	69.9099	4.379195
714	MH	150+000	252+000	228+500	LHS	Outer		40	0.0764	0.0543	0.0373	0.0276	0.0209	0.0162	0.0122	30.1	31.5	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	394.4	150.0	1432.6	298.3	119.8	0.0221	612	69.932	4.294044
1511	MH	150+000	252+000	228+600	LHS	Inner		40	0.0994	0.0612	0.0387	0.0269	0.023	0.0209	0.0178	34.1	36.7	39.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	400.0	150.0	1783.1	302.4	119.8	0.0382	613	69.9702	4.224992
715	MH	150+000	252+000	228+750	LHS	Outer		40	0.0766	0.0521	0.0353	0.027	0.021	0.0163	0.0117	30.2	31.6	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	400.0	150.0	1421.2	302.4	119.8	0.0245	614	69.9947	4.142241
1512	MH	150+000	252+000	228+850	LHS	Inner	T-31.2/38.7	40	0.0954	0.0619	0.0389	0.0224	0.0164	0.0123	0.0084	31.8	33.6	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.3	150.0	1766.0	301.1	119.8	0.0335	615	70.0282	4.068489
716	MH	150+000	252+000	229+000	LHS	Outer		40	0.074	0.0512	0.0357	0.0273	0.021	0.0145	0.013	30.3	31.7	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	398.5	149.9	1408.7	301.3	119.8	0.0228	616	70.051	3.984037
1513	MH	150+000	252+000	229+100	LHS	Inner		40	0.093	0.059	0.0368	0.025	0.0205	0.0171	0.0135	31.7	33.6	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	398.0	150.0	1731.6	300.9	119.8	0.034	617	70.085	3.910786
717	MH	150+000	252+000	229+250	LHS	Outer		40	0.0762	0.0465	0.0321	0.024	0.019	0.0154	0.0093	30.0	31.7	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	398.0	149.9	1430.5	300.9	119.8	0.0297	618	70.1147	3.833234
1514	MH	150+000	252+000	229+350	LHS	Inner		40	0.0925	0.0586	0.0372	0.0236	0.0189	0.0158	0.0124	31.8	33.3	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	394.4	149.7	1763.4	298.3	119.6	0.0339	619	70.1486	3.759883
718	MH	150+000	252+000	229+500	LHS	Outer		40	0.0693	0.0515	0.036	0.027	0.018	0.0116	0.0104	30.1	31.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	400.0	149.9	1379.6	302.4	119.8	0.0178	620	70.1664	3.670431
1515	MH	150+000	252+000	229+600	LHS	Inner		40	0.1617	0.0926	0.0561	0.037	0.0232	0.0136	0.0069	31.7	33.2	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	213.5	150.0	1723.9	158.0	119.8	0.0691	621	70.2355	3.63228
719	MH	150+000	252+000	229+750	LHS	Outer		40	0.2957	0.1651	0.0856	0.06	0.0382	0.0299	0.0192	30.2	31.6	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	256.8	150.0	1420.2	193.3	119.8	0.1306	622	70.3661	3.655628
1516	MH	150+000	252+000	229+850	LHS	Inner		40	0.4353	0.2783	0.1703	0.0953	0.0686	0.0504	0.0399	31.6	32.8	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1109.7	150.0	133.5	1314.0	104.0	105.7	0.157	623	70.5231	3.705377
720	MH	150+000	252+000	229+920	LHS	Outer		40	0.1667	0.1083	0.0765	0.0533	0.0418	0.0365	0.034	30.0	31.4	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	398.3	149.9	1441.0	301.1	119.8	0.0584	624	70.5815	3.656525
1517	MH	150+000	252+000	230+380	LHS	Inner		40	0.3707	0.2408	0.1464	0.089	0.0636	0.0403	0.0235	31.8	33.9	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	156.1	149.9	1727.7	109.3	119.8	0.1299	625	70.7114	3.679173
722	MH	150+000	252+000	230+500	LHS	Outer		40	0.3682	0.1991	0.1146	0.0709	0.0429	0.0286	0.0163	31.1	32.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1345.2	150.2	150.0	1298.7	104.2	119.8	0.1691	626	70.8805	3.741022
1518	MH	150+000	252+000	230+600	LHS	Inner		40	0.4188	0.2515	0.1319	0.0779	0.0627	0.0525	0.0458	31.9	33.7	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1019.4	156.6	140.8	1207.1	109.7	112.0	0.1673	627	71.0478	3.80107
723	MH	150+000	252+000	230+750	LHS	Outer		40	0.4031	0.2216	0.1096	0.055	0.0301	0.0156	0.0108	31.2	32.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	984.9	150.7	149.9	950.9	104.6	119.8	0.1815	628	71.2293	3.875319
1519	MH	150+000	252+000	230+800	LHS	Inner		40	0.3213	0.1868	0.1322	0.0935	0.0714	0.056	0.0548	31.8	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1155.9	349.9	125.1	1368.7	265.6	98.5	0.1345	629	71.3638	3.902567
724	MH	150+000	252+000	231+000	LHS	Outer		40	0.2138	0.1319	0.0741	0.0475	0.0285	0.0192	0.0126	31.2	31.9	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1401.1	258.5	150.0	1352.7	194.7	119.8	0.0819	630	71.4457	3.877216
1520	MH	150+000	252+000	231+100	LHS	Inner		40	0.2434	0.1588	0.1104	0.0806	0.0644	0.0482	0.0339	31.4	32.7	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	399.8	149.7	1774.9	302.2	119.6	0.0846	631	71.5303	3.854564
725	MH	150+000	252+000	231+250	LHS	Outer		40	0.2987	0.1906	0.0972	0.0548	0.0294	0.0207	0.015	31.2	31.8	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1429.0	157.6	150.0	1379.6	110.6	119.8	0.1081	632	71.6384	3.855412
1521	MH	150+000	252+000	231+350	LHS	Inner		40	0.2876	0.1819	0.108	0.0679	0.0504	0.038	0.0323	31.4	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	261.9	150.0	1764.7	197.4	119.8	0.1057	633	71.7441	3.853861
726	MH	150+000	252+000	231+500	LHS	Outer		40	0.1408	0.086	0.0538	0.0371	0.0303	0.0221	0.0164	31.0	31.4	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	399.3	149.7	1416.0	301.9	119.6	0.0548	634	71.7989	3.801409
727	MH	150+000	252+000	231+750	LHS	Outer		40	0.2602	0.1525	0.078	0.0376	0.0262	0.0212	0.0191	30.8	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	305.7	150.0	1437.8	232.0	119.8	0.1077	635	71.9066	3.801858
1522	MH	150+000	252+000	231+850	LHS	Inner		40	0.2861	0.1726	0.1118	0.0759	0.0501	0.0393	0.0318	31.6	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	285.4	150.0	1764.7	216.1	119.8	0.1135	636	72.0201	3.808106
728	MH	150+000	252+000	232+000	LHS	Outer	T-27.7/34.2	40	0.3618	0.2002	0.1197	0.0665	0.0397	0.0146	0.0086	30.4	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	150.0	149.9	1395.3	104.0	119.8	0.1616	637	72.1817	3.862455
1523	MH	150+000	252+000	232+100	LHS	Inner		40	0.308	0.1856	0.0991	0.063	0.0432	0.0349	0.0241	31.6	32.8	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1417.2	239.4	150.0	1678.1	179.3	119.8	0.1224	638	72.3041	3.877603
729	MH	150+000	252+000	232+250	LHS	Outer		40	0.2694	0.1796	0.1182	0.0715	0.0406	0.0222	0.0098	30.3	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	151.2	150.0	1409.8	105.1	119.8	0.0898	639	72.3939	3.860152
1524	MH	150+000	252+000	232+350	LHS	Inner		40	0.1925	0.138	0.0792	0.0569	0.0418	0.0304	0.0233	31.5	33.3	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.6	149.9	1771.1	299.9	119.8	0.0545	640	72.4484	3.8074
730	MH	150+000	252+000	232+500	LHS	Outer		40	0.2233	0.139	0.0858	0.0571	0.0351	0.0203	0.0101	30.5	30.8	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	188.4	150.0	1420.2	136.9	119.8	0.0843	641	72.5327	3.784448
1525	MH	150+000	252+000	232+600	LHS	Inner		40	0.3141	0.2028	0.1147	0.0721	0.0624	0.0496	0.0409	31.6	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	249.7	150.0	1736.7	187.6	119.8	0.1113	642	72.644	3.788497
731	MH	150+000	252+000	232+750	LHS	Outer		40	0.442	0.2366	0.131	0.0677	0.0405	0.0223	0.0119	30.4	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	150.2	150.0	1433.6	104.2	119.8	0.2054	643	72.8494	3.886645
1526	MH	150+000	252+000	232+890	LHS	Inner		40	0.1784	0.1065	0.0702	0.0507	0.0374	0.0288	0.0234	31.6	32.6	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	389.0	150.0	1753.2	294.4	119.8	0.0719	644	72.9213	3.851294
732	MH	150+000	252+000

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
738	MH	150+000	252+000	234+500	LHS	Outer		40	0.1227	0.0707	0.0484	0.0369	0.0247	0.0182	0.0136	30.3	31.3	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	399.3	150.0	1444.0	301.9	119.8	0.052	657	74.0434	3.579123
1533	MH	150+000	252+000	234+600	LHS	Inner		40	0.2861	0.1771	0.0973	0.0563	0.034	0.0192	0.0173	31.2	33.1	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	156.6	150.0	1609.6	109.7	119.8	0.109	658	74.1524	3.580872
739	MH	150+000	252+000	234+750	LHS	Outer		40	0.1366	0.1147	0.0988	0.0807	0.0668	0.0572	0.0519	30.4	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	400.0	149.6	1441.0	302.4	119.5	0.0219	659	74.1743	3.49552
1534	MH	150+000	252+000	234+850	LHS	Inner		40	0.3277	0.1998	0.1238	0.0916	0.0632	0.0431	0.0211	31.3	33.3	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	175.9	150.0	1634.5	126.3	119.8	0.1279	660	74.3022	3.516169
740	MH	150+000	252+000	235+000	LHS	Outer		40	0.3844	0.2086	0.1198	0.069	0.0314	0.0186	0.0094	30.3	31.1	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	150.0	150.0	1174.1	104.0	119.8	0.1758	661	74.478	3.584717
1535	MH	150+000	252+000	235+100	LHS	Inner		40	0.3725	0.2276	0.1398	0.0968	0.0731	0.0552	0.0363	31.4	33.4	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	166.9	138.1	1629.7	118.6	109.7	0.1449	662	74.6229	3.622366
741	MH	150+000	252+000	235+250	LHS	Outer	6 Lane Start	40	0.1759	0.1121	0.0714	0.0475	0.0306	0.0156	0.0115	30.2	31.0	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	354.8	150.0	1422.2	269.3	119.8	0.0638	663	74.6867	3.578914
1637	MH	150+000	252+000	235+330	LHS	Middle	T-26.8/35.9	40	0.2796	0.1813	0.1201	0.0809	0.0542	0.041	0.0319	28.5	29.7	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	279.0	150.0	1561.3	211.1	119.8	0.0983	664	74.785	3.569962
1536	MH	150+000	252+000	235+350	LHS	Inner		40	0.3673	0.2568	0.1454	0.0873	0.0597	0.0439	0.0411	31.5	33.7	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	150.0	145.9	1640.4	104.0	116.3	0.1105	665	74.8955	3.573211
742	MH	150+000	252+000	235+500	LHS	Outer		40	0.2034	0.1444	0.0955	0.064	0.0402	0.0288	0.0193	30.1	30.6	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	387.5	150.0	1435.7	293.3	119.8	0.059	666	74.9545	3.524959
1537	MH	150+000	252+000	235+600	LHS	Inner		40	0.3163	0.2283	0.1508	0.1001	0.0621	0.0347	0.0256	31.5	33.4	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	153.7	149.9	1638.0	107.2	119.8	0.088	667	75.0425	3.505708
1638	MH	150+000	252+000	235+605	LHS	Middle		40	0.2577	0.1848	0.1125	0.066	0.0512	0.0408	0.0367	28.8	29.9	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	321.1	150.0	1552.4	243.8	119.8	0.0729	668	75.1154	3.471356
743	MH	150+000	252+000	235+700	LHS	Outer		40	0.2476	0.1517	0.1004	0.0619	0.0389	0.0241	0.0186	30.1	30.6	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	258.0	150.0	1444.0	194.3	119.8	0.0959	669	75.2113	3.460005
1538	MH	150+000	252+000	235+850	LHS	Inner		40	0.4167	0.2493	0.154	0.0944	0.0594	0.0355	0.0261	31.5	33.4	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.7	149.9	1322.4	104.6	119.8	0.1674	670	75.3787	3.520153
744	MH	150+000	252+000	236+000	LHS	Outer		40	0.2181	0.149	0.0967	0.0649	0.0449	0.0313	0.0178	30.0	30.8	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	391.0	150.0	1432.6	295.9	119.8	0.0691	671	75.4478	3.482002
1539	MH	150+000	252+000	236+120	LHS	Inner		40	0.228	0.1606	0.1043	0.0658	0.0424	0.0265	0.0187	31.5	33.1	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	282.2	150.0	1621.5	213.6	119.8	0.0674	672	75.5152	3.44215
745	MH	150+000	252+000	236+250	LHS	Outer		40	0.1944	0.1299	0.085	0.0515	0.0288	0.0209	0.0161	30.2	30.7	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	366.3	150.0	1441.9	277.8	119.8	0.0645	673	75.5797	3.399398
1639	MH	150+000	252+000	236+300	LHS	Middle		40	0.2581	0.1746	0.1026	0.0543	0.0322	0.0225	0.0203	29.1	31.0	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	211.8	150.0	1516.6	156.5	119.8	0.0835	674	75.6632	3.375647
1540	MH	150+000	252+000	236+350	LHS	Inner		40	0.3097	0.2062	0.1121	0.0581	0.0409	0.0296	0.0225	31.5	33.3	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	185.4	150.0	1525.8	134.4	119.8	0.1035	675	75.7667	3.371895
746	MH	150+000	252+000	236+500	LHS	Outer		40	0.1821	0.1255	0.0862	0.0567	0.0337	0.024	0.0173	30.0	30.4	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	393.6	150.0	1423.3	297.8	119.8	0.0566	676	75.8233	3.321244
1541	MH	150+000	252+000	236+600	LHS	Inner		40	0.2639	0.1721	0.1078	0.0735	0.0638	0.0507	0.0433	31.6	33.1	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	394.4	147.8	1648.6	298.3	118.0	0.0918	677	75.9151	3.305792
1640	MH	150+000	252+000	236+610	LHS	Middle		40	0.2234	0.1482	0.0996	0.0646	0.0411	0.0309	0.0235	29.0	30.4	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.0	150.0	1552.4	300.9	119.8	0.0752	678	75.9903	3.273741
747	MH	150+000	252+000	236+750	LHS	Outer		40	0.0716	0.0584	0.0479	0.037	0.026	0.0192	0.0145	30.0	30.2	34.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	396.8	150.0	1447.1	300.1	119.8	0.0132	679	76.0035	3.179689
1542	MH	150+000	252+000	236+880	LHS	Inner		40	0.1162	0.0742	0.0496	0.0317	0.022	0.0147	0.0132	31.6	33.1	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	387.0	150.0	1640.4	293.0	119.8	0.042	680	76.0455	3.114437
748	MH	150+000	252+000	237+000	LHS	Outer	T-27.2/33.3	40	0.125	0.0885	0.0628	0.0426	0.0289	0.0183	0.0094	29.9	30.9	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	387.0	150.0	1381.8	293.0	119.8	0.0365	681	76.082	3.043686
1543	MH	150+000	252+000	237+100	LHS	Inner		40	0.1449	0.0963	0.0634	0.0502	0.0405	0.0285	0.0208	31.6	33.6	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.1	150.0	1638.0	299.6	119.8	0.0486	682	76.1306	2.985034
749	MH	150+000	252+000	237+250	LHS	Outer		40	0.1287	0.0816	0.0547	0.0429	0.0347	0.0293	0.0229	30.1	30.3	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.3	150.0	1387.7	301.9	119.8	0.0471	683	76.1777	2.924883
1641	MH	150+000	252+000	237+300	LHS	Middle		40	0.1251	0.0884	0.0642	0.047	0.0336	0.0236	0.0122	29.1	31.0	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	394.4	150.0	1550.1	298.3	119.8	0.0367	684	76.2144	2.854331
1544	MH	150+000	252+000	237+350	LHS	Inner		40	0.1419	0.0921	0.051	0.0344	0.0222	0.014	0.0085	31.7	33.6	37.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	394.6	150.0	1630.9	298.5	119.8	0.0498	685	76.2642	2.79688
750	MH	150+000	252+000	237+500	LHS	Outer		40	0.1162	0.0616	0.0375	0.0213	0.014	0.0137	0.0123	29.9	30.6	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	397.6	149.9	1380.7	300.6	119.8	0.0546	686	76.3188	2.744228
1642	MH	150+000	252+000	237+600	LHS	Middle		40	0.1313	0.0876	0.057	0.0417	0.031	0.0286	0.0268	28.8	30.7	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	391.2	149.8	1517.7	296.0	119.7	0.0437	687	76.3625	2.680677
1545	MH	150+000	252+000	237+620	LHS	Inner	T-31.1/38.7	40	0.1509	0.0913	0.0553	0.0367	0.0306	0.0244	0.0219	31.6	33.3	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	399.8	149.9	1708.7	302.2	119.8	0.0596	688	76.4221	2.633025
751	MH	150+000	252+000	237+750	LHS	Outer		40	0.1561	0.1096	0.0687	0.0536	0.0374	0.0268	0.0165	29.9	30.4	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	396.1	150.0	1347.8	299.6	119.8	0.0465	689	76.4686	2.572273
1546	MH	150+000	252+000	237+850	LHS	Inner		40	0.1156	0.0718	0.042	0.0279	0.0206	0.0151	0.0121	31.8	33.3	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	399.5	150.0	1752.0	302.0	119.8	0.0438	690	76.5124	2.508822
752	MH	150+000	252+000	238+000	LHS	Outer		40	0.1069	0.0602	0.0422	0.0284	0.0205	0.0177	0.0154	29.8	30.3	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	399.3	150.0	1368.8	301.9	119.8	0.0467	691	76.5591	2.44827
1547	MH	150+000	252+000	238+100	LHS	Inner		40	0.2718	0.1695	0.1088	0.0757	0.0528	0.0312	0.0225	31.7	32.9	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	268.3	150.0	1768.5	202.6	119.8	0.1023	692	76.6614	2.443319
753	MH	150+000	252+000	238+250	LHS	Outer		40	0.1975	0.1344	0.089	0.0628	0.0343	0.0212	0.0116	29.8	30.1	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	261.4	150.0	1389.7	197.0	119.8	0.0631	693	76.7245	2.399167
1643	MH	150+000	252+000	238+300	LHS	Middle		40	0.3219	0.194	0.1245	0.0799	0.0503	0.0375	0.0337	29.1	30.5	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	198.1	149.9	1514.3	145.1	119.8	0.1279	694	76.8524	2.419816
1548	MH	150+000	252+000	238+350	LHS	Inner		40	0.2726	0.1851	0.1076	0.0708	0.045	0.0321	0.0234	31.5	33.2	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	240.9	149.9	1772.4	180.5	119.8	0.0875	695	76.9399	2.400064
754	MH	150+000	252+000	238+510	LHS	Outer		40	0.3409	0.1931	0.1206	0.0723	0.0452	0.0251	0.0215	29.6	29.4	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1362.4	157.8	150.0	1265.0	110.8	119.8	0.1478	696	77.0877	2.440612
1644	MH	150+000	252+000	238+600	LHS	Middle		40	0.3789	0.2381	0.1539	0.0929	0.0604	0.0469	0.0391	29.0	30.7	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	150.0	144.4	1542.3	104.0	115.1	0.1408	697	77.2285	2.474161
1549	MH	150+000	252+000	238+640	LHS	Inner		40	0.4056	0.2366	0.1288	0.0764	0.0382	0.0252	0.0158	31.5	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	150.5	149.9	1429.8	104.5	119.8	0.169	698	77.3975	2.535909
755	MH	150+000	252+000	238+740	LHS	Outer	Approach	40	0.2403	0.1771	0.1097	0.0599	0.037	0.0211	0.0159	29.6	28.1	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	180.3	150.0	1362.7	130.1	119.8	0.0632	699	77.4607	2.491858
1550	MH	150+000	252+000	238+850	LHS	Inner		40	0.4274	0.2421	0.1399	0.088	0.0521	0.0417	0.0375	31.4	32.7	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1048.4	151.2	149.9	1241.4	105.1	119.8	0.1853	700	77.646	2.569906
756	MH	150+000	252+000	239+000	LHS	Outer		40	0.3006	0.1977	0.1204	0.0743	0.0468	0.0279	0.0124	29.6	27.6	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	151.5	149.7	1371.7	105.3	119.6	0.1029	701	77.7489	2.565555
1551	MH	150+000	252+000	239+100	LHS	Inner		40	0.1578	0.0967	0.065	0.0423	0.0257	0.0151	0.0112	31.4	32.7	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	379.5	150.0	1772.4	287.5	119.8	0.0611	702	77.81	2.519403
757	MH	150+000	252+000	239+250	LHS	Outer		40	0.0904	0.0705	0.0514	0.0378	0.0314	0.025	0.0225	29.3	27.9	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	398.0	149.7	1388.7	300.9	119.6	0.0199	703	77.8299	2.432052
1645	MH	150+000	252+000	239+300	LHS	Middle		40	0.1124	0.0838	0.0478	0.0306	0.0205	0.0202	0.0181	29.4	31.2	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	397.8	149.8	1556.9	300.8	119.7	0.0286	704	77.8585	2.3534
1552	MH	150+000	252+000	239+350	LHS	Inner		40	0.1205	0.0834	0.0576	0.0429	0.0328	0.025	0.0195	31.4	32.9	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.1	149.7	1773.6	300.3	119.6	0.0371	705	77.8956	2.283248
758	MH	150+000	252+000	239+500	LHS	Outer		40	0.0744	0.0509	0.0351	0.025	0.0194	0.0152	0.0137	29.2	27.6	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	392.4	149.8	1386.7	296.9	119.7	0.0235	706	77.9191	2.199497
1646	MH	150+000	252+000	239+600	LHS	Middle		40	0.1303	0.0795	0.0546	0.0301	0.0217	0.0184	0.0156	29.4	31.3	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	400.0	150.0	1526.7	302.4	119.8	0.0508	707	77.9699	2.143045
1553	MH	150+000	252+000	239+610	LHS	Inner		40	0.0893	0.0577	0.0396	0.0273	0.0188	0.0129	0.0098	31.3	32.6	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	393.6	149.9	1732.8	297.8	119.8	0.0316	708	78.0015	2.067394
759	MH	150+000	252+000	239+750	LHS	Outer		40	0.0911	0.0659	0.0462	0.0327	0.0234	0.0191	0.0171	29.0	27.8	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.3	150.0	1390.7	300.4	119.8	0.0252	709	78.0267	1.985342
1554	MH	150+000	252+000	239+850	LHS	Inner		40	0.1708	0.0901	0.0555	0.0382	0.0258	0.0195	0.015	31.4	33.1	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	400.0	150.0	1767.3	302.4	119.8	0.0807	710	78.1074	1.958791
760	MH	150+000	252+000	240+000	LHS	Outer		40	0.0903	0.0571	0.0341	0.02	0.0149	0.0114	0.0102	29.0	27.8	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	399.3	149.6	1383.7	301.9	119.5	0.0332	711	78.1406	1.884739
1555	MH	150+000	252+000	240+100	LHS	Inner		40	0.2076	0.1407	0.0926	0.0579	0.0377	0.0293	0.0234	31.4	32.5	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	387.0	150.0	1769.8	293.0	119.8	0.0669	712	78.2075	1.844387
761	MH	150+000	252+000	240+250	LHS	Outer		40	0.0972	0.0676	0.043	0.0309	0.0226	0.0195	0.0175	29.0	27.4	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	395.8	149.8	1359.8	299.3	119.7	0.0296	713	78.2371	1.766736
1647	MH	150+000	252+000	240+300	LHS	Middle		40	0.0898	0.0618	0.0396	0.0248	0.0184	0.015	0.013	29.6	31.5	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	396.1	150.0	1542.3	299.6	119.8	0.028	714	78.2651	1.687484
1556	MH	150+000	252+000	240+350	LHS	Inner		40	0.1365	0.0769	0.0434	0.033	0.025	0.019	0.015	31.3	32.9	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1401.1	400.0	150.0	1659.0	302.4	119.8	0.0596	715	78.3247	1.639833
762	MH	150+000	252+000	240+500	LHS	Outer		40	0.1301	0.0882	0.0617	0.049	0.0399	0.0334	0.0311	28.8	27.5	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	396.3	149.8	1362.7	299.7	119.7	0.0419	716	78.3666	1.574481
1557	MH	150+000	252+000	240+600	LHS	Inner		40	0.1936	0.1133	0.0744	0.0536	0.0428	0.0339	0.0279	31.3	32.9	38.7	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	393.4	149.9	1750.7	297.6	119.8	0.0803	717	78.4469	1.54753
1648	MH	150+000	252+000	240+605	LHS	Middle		40	0.1277	0.0875	0.0594	0.0406	0.032	0.0257	0.0231	29.1	30.8	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	395.1	149.8	1547.9	298.8	119.7	0.0402	718	78.4871	1.480478
763	MH	150+000	252+000	240+750	LHS	Outer		40	0.1699	0.103	0.0701	0.0444	0.0289	0.0184	0.0104	28.7	27.5	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	382.9	150.0	1381.8	290.0	119.8	0.0669	719	78.554	1.440127
1558	MH	150+000	252+000	240+850	LHS	Inner	T-30.2/36	40	0.1874	0.1202	0.0752	0.0416	0.0272	0.0205	0.0157	30.8	32.1	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	383.1	150.0	1526.7	290.1	119.8	0.0672	720	78.6212	1.400075
764	MH	150+000	252+000	241+000	LHS	Outer		40	0.1194	0.079	0.0558	0.0396	0.0274	0.0193	0.0174	28.7	27.6	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	398.0	149.9	1383.7	300.9	119.8	0.0404	721	78.6616	1.333223
1559	MH	150+000	252+000	241+100	LHS	Inner		40	0.2927	0.1654	0.1011	0.0733	0.0512	0.0356	0.0168	31.0	32.5	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	197.9	150.0	1545.9	144.9	119.8	0.1273	722	78.7889	1.353272
765	MH	150+000	252+000	241+250	LHS	Outer		40	0.1458	0.0888	0.0567	0.0409	0.0302	0.0232	0.0209	28.7	27.6	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	398.3	150.0	1370.7	301.1	119.8	0.057	723	78.8459	1.30302
1649	MH	150+000	252+000	241+300	LHS	Middle		40	0.2333	0.1425	0.0816	0.0597	0.044	0.0312	0.0281	29.6	31.5	35.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	398.0	150.0	1517.7	300.9	119.8	0.0908	724	78.9367	1.286569
1560	MH	150+000	252+000	241+350	LHS	Inner		40	0.233	0.1522	0.0915	0.0597	0.0366	0.0299	0.0251	30.9	32.5	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	387.8	150.0	1545.9	293.6	119.8	0.0808	725	79.0175	1.260117
766	MH	150+000	252+000	241+500	LHS	Outer		40	0.1561	0.1072	0.0742	0.0505	0.0341	0.0207	0.0118	28.6	27.7	33.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.1	149.9	1370.7	298.8	119.8	0.0489	726

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
771	MH	150+000	252+000	242+770	LHS	Outer		40	0.1498	0.0931	0.0649	0.0476	0.0314	0.0203	0.0165	28.5	28.4	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	397.3	149.9	1255.6	300.4	119.8	0.0567	739	79.9327	0.673795
1566	MH	150+000	252+000	242+850	LHS	Inner		40	0.1953	0.1297	0.0959	0.0724	0.0465	0.0383	0.0344	30.7	32.0	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	395.1	150.0	1565.0	298.8	119.8	0.0656	740	79.9983	0.632144
772	MH	150+000	252+000	243+000	LHS	Outer		40	0.0842	0.061	0.0451	0.0314	0.0217	0.0162	0.0125	28.6	28.0	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	399.5	149.8	1298.7	302.0	119.7	0.0232	741	80.0215	0.548092
1567	MH	150+000	252+000	243+100	LHS	Inner		40	0.2501	0.1171	0.066	0.0479	0.0349	0.0296	0.0266	30.8	32.2	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	396.8	150.0	1548.1	300.1	119.8	0.133	742	80.1545	0.573841
773	MH	150+000	252+000	243+250	LHS	Outer		40	0.0766	0.0621	0.0535	0.0449	0.037	0.0335	0.0302	28.4	27.5	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	399.3	149.9	1303.4	301.9	119.8	0.0145	743	80.169	0.481089
1653	MH	150+000	252+000	243+300	LHS	Middle	T-27.9/35.1	40	0.1022	0.0756	0.0559	0.0426	0.0303	0.022	0.0162	29.8	30.6	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	399.3	150.0	1489.4	301.9	119.8	0.0266	744	80.1956	0.400437
1568	MH	150+000	252+000	243+350	LHS	Inner		40	0.124	0.0796	0.0501	0.0373	0.024	0.0189	0.0152	30.7	32.5	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	398.5	150.0	1502.1	301.3	119.8	0.0444	745	80.24	0.337586
774	MH	150+000	252+000	243+500	LHS	Outer		40	0.1174	0.0814	0.0433	0.0325	0.0293	0.0212	0.019	28.4	28.1	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	396.6	150.0	1297.8	299.9	119.8	0.036	746	80.276	0.266334
1569	MH	150+000	252+000	243+600	LHS	Inner		40	0.1172	0.0685	0.0511	0.0389	0.028	0.0221	0.018	30.7	32.3	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	150.0	1565.0	298.1	119.8	0.0487	747	80.3247	0.207783
1654	MH	150+000	252+000	243+620	LHS	Middle		40	0.0905	0.0618	0.0439	0.0337	0.0284	0.0231	0.0208	30.1	31.6	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	394.1	149.9	1498.0	298.1	119.8	0.0287	748	80.3534	0.129231
775	MH	150+000	252+000	243+750	LHS	Outer		40	0.1056	0.0725	0.0495	0.0343	0.0258	0.0211	0.0177	28.5	27.7	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	397.3	149.9	1283.8	300.4	119.8	0.0331	749	80.3865	0.05508
1570	MH	150+000	252+000	243+850	LHS	Inner		40	0.2119	0.118	0.0754	0.0501	0.0312	0.0201	0.0144	30.8	32.9	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	374.6	150.0	1520.1	283.9	119.8	0.0939	750	80.4804	0.041728
776	MH	150+000	252+000	244+000	LHS	Outer		40	0.1698	0.1077	0.0664	0.0437	0.0286	0.0231	0.0207	28.4	28.4	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	393.9	150.0	1293.1	298.0	119.8	0.0621	751	80.5425	-0.00342
1571	MH	150+000	252+000	244+100	LHS	Inner		40	0.1483	0.0898	0.0619	0.0404	0.0258	0.0193	0.015	30.9	32.6	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	398.8	150.0	1517.8	301.5	119.8	0.0585	752	80.601	-0.05218
777	MH	150+000	252+000	244+250	LHS	Outer		40	0.1497	0.0982	0.076	0.0564	0.0372	0.0249	0.0177	28.3	28.5	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	398.5	149.9	1270.6	301.3	119.8	0.0515	753	80.6525	-0.10793
1655	MH	150+000	252+000	244+320	LHS	Middle		40	0.3013	0.1903	0.1314	0.0958	0.073	0.0525	0.038	30.6	32.3	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	273.2	138.6	1505.5	206.5	110.1	0.111	754	80.7635	-0.10418
1572	MH	150+000	252+000	244+350	LHS	Inner		40	0.3486	0.2307	0.1578	0.1072	0.0711	0.0455	0.029	30.8	33.3	36	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	150.2	149.2	1563.9	104.2	119.2	0.1179	755	80.8814	-0.09353
778	MH	150+000	252+000	244+500	LHS	Outer		40	0.2856	0.199	0.1154	0.0698	0.048	0.0299	0.0172	28.3	27.9	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	161.0	149.9	1265.0	113.5	119.8	0.0866	756	80.968	-0.11418
1656	MH	150+000	252+000	244+600	LHS	Middle		40	0.3089	0.185	0.1022	0.0611	0.0489	0.04	0.036	30.4	31.8	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1339.8	286.9	150.0	1345.7	217.3	119.8	0.1239	757	81.0919	-0.09753
1573	MH	150+000	252+000	244+620	LHS	Inner	T-30.1/36.5	40	0.2432	0.1396	0.086	0.0631	0.0472	0.04	0.0349	29.9	31.5	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	397.8	150.0	1598.4	300.8	119.8	0.1036	758	81.1955	-0.10118
779	MH	150+000	252+000	244+750	LHS	Outer		40	0.1305	0.0847	0.0477	0.0343	0.0272	0.0188	0.0142	28.2	27.2	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	150.0	1303.4	298.1	119.8	0.0458	759	81.2413	-0.16264
1574	MH	150+000	252+000	244+870	LHS	Inner		40	0.4333	0.262	0.1477	0.1053	0.0806	0.0584	0.0438	30.2	32.5	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	152.2	122.8	1328.1	105.9	96.6	0.1713	760	81.4126	-0.09859
780	MH	150+000	252+000	245+000	LHS	Outer		40	0.3583	0.2419	0.162	0.0997	0.0587	0.037	0.0218	28.2	27.5	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	150.0	150.0	1223.8	104.0	119.8	0.1164	761	81.529	-0.08944
1575	MH	150+000	252+000	245+100	LHS	Inner		40	0.4721	0.2805	0.1509	0.0847	0.0545	0.0435	0.0363	30.7	33.1	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	753.8	150.2	150.0	806.1	104.2	119.8	0.1916	762	81.7206	-0.00509
781	MH	150+000	252+000	245+250	LHS	Outer		40	0.2934	0.1969	0.1248	0.0661	0.0389	0.0256	0.0153	28.5	27.9	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	150.5	150.0	1275.3	104.5	119.8	0.0965	763	81.8171	-0.01584
1657	MH	150+000	252+000	245+300	LHS	Middle		40	0.4717	0.2905	0.1595	0.1136	0.0827	0.0635	0.0509	30.5	32.0	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	932.3	150.7	112.1	936.4	104.6	87.4	0.1812	764	81.9983	0.058106
1576	MH	150+000	252+000	245+325	LHS	Inner		40	0.3111	0.2107	0.1281	0.0814	0.0494	0.0358	0.0262	31.0	33.2	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	172.5	150.0	1580.0	123.4	119.8	0.1004	765	82.0987	0.051255
782	MH	150+000	252+000	245+500	LHS	Outer		40	0.2599	0.1803	0.1105	0.0688	0.0391	0.0284	0.0212	28.5	27.9	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	260.9	150.0	1278.1	196.6	119.8	0.0796	766	82.1783	0.023603
1577	MH	150+000	252+000	245+600	LHS	Inner		40	0.4	0.2408	0.1198	0.0777	0.0588	0.0448	0.0417	31.2	32.8	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1035.5	163.7	149.9	1107.4	115.9	119.8	0.1592	767	82.3375	0.075552
1658	MH	150+000	252+000	245+605	LHS	Middle		40	0.561	0.3351	0.1535	0.0821	0.0576	0.04	0.036	30.4	32.2	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	495.7	150.0	149.7	497.9	104.0	119.6	0.2259	768	82.5634	0.1942
783	MH	150+000	252+000	245+750	LHS	Outer		40	0.2698	0.1673	0.092	0.0577	0.0341	0.0245	0.0228	28.7	27.8	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	247.8	150.0	1292.2	186.1	119.8	0.1025	769	82.6659	0.189448
784	MH	150+000	252+000	246+000	LHS	Outer		40	0.5018	0.299	0.1382	0.066	0.0409	0.0232	0.0179	28.8	27.5	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	521.5	150.0	150.0	454.1	104.0	119.8	0.2028	770	82.8687	0.284997
1578	MH	150+000	252+000	246+100	LHS	Inner		40	0.3051	0.1808	0.1062	0.0749	0.0522	0.0385	0.0346	31.4	31.6	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	275.4	150.0	1567.4	208.2	119.8	0.1243	771	82.993	0.302045
785	MH	150+000	252+000	246+250	LHS	Outer		40	0.215	0.1519	0.107	0.0776	0.0587	0.0421	0.0342	28.7	27.7	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	397.3	150.0	1273.5	300.4	119.8	0.0631	772	83.0561	0.257894
1659	MH	150+000	252+000	246+320	LHS	Middle		40	0.19	0.1225	0.0689	0.0494	0.0369	0.0276	0.0211	30.7	32.3	35.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	391.0	149.8	1505.5	295.9	119.7	0.0675	773	83.1236	0.218142
1579	MH	150+000	252+000	246+350	LHS	Inner		40	0.1728	0.1299	0.0935	0.0678	0.0449	0.0296	0.022	31.0	32.1	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.3	150.0	1603.0	300.4	119.8	0.0429	774	83.1665	0.153791
786	MH	150+000	252+000	246+500	LHS	Outer		40	0.1797	0.1297	0.0775	0.0418	0.0278	0.0179	0.0161	28.7	28.4	31.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	394.9	150.0	1291.2	298.7	119.8	0.05	775	83.2165	0.096539
1580	MH	150+000	252+000	246+600	LHS	Inner		40	0.2786	0.1883	0.1321	0.0877	0.058	0.0436	0.0339	30.9	32.1	36.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	254.3	150.0	1585.8	191.3	119.8	0.0903	776	83.3068	0.079587
1660	MH	150+000	252+000	246+610	LHS	Middle		40	0.1614	0.125	0.093	0.0699	0.055	0.0463	0.0372	30.4	32.0	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	396.1	150.0	1498.0	299.6	119.8	0.0364	777	83.3432	0.008736
787	MH	150+000	252+000	246+750	LHS	Outer		40	0.1379	0.0966	0.0708	0.0517	0.0388	0.0285	0.0164	28.7	28.5	31.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.6	150.0	1295.9	298.5	119.8	0.0413	778	83.3845	-0.05722
1581	MH	150+000	252+000	246+850	LHS	Inner		40	0.1393	0.0975	0.0644	0.0464	0.0313	0.0217	0.0165	30.9	32.0	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	398.8	149.8	1585.8	301.5	119.7	0.0418	779	83.4263	-0.12267
788	MH	150+000	252+000	247+000	LHS	Outer		40	0.1659	0.1125	0.0679	0.0415	0.0317	0.0247	0.0192	28.5	27.9	31.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	398.0	149.8	1282.8	300.9	119.7	0.0534	780	83.4797	-0.17652
1582	MH	150+000	252+000	247+200	LHS	Inner		40	0.3746	0.1965	0.1065	0.0731	0.0484	0.0373	0.0299	31.0	32.6	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	934.4	205.5	150.0	999.3	151.3	119.8	0.1781	781	83.6578	-0.10567
789	MH	150+000	252+000	247+250	LHS	Outer	T-26.5/30.3	40	0.3505	0.2187	0.1036	0.0535	0.0328	0.0195	0.0144	28.7	28.7	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1193.5	152.7	150.0	975.8	106.4	119.8	0.1318	782	83.7896	-0.08112
1661	MH	150+000	252+000	247+300	LHS	Middle		40	0.4804	0.279	0.1344	0.0741	0.0519	0.0366	0.0231	30.9	33.3	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	687.1	150.5	150.0	690.1	104.5	119.8	0.2014	783	83.991	0.013027
1583	MH	150+000	252+000	247+430	LHS	Inner		40	0.352	0.2091	0.1247	0.0806	0.049	0.0332	0.0221	30.8	32.5	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	155.4	150.0	1562.8	108.7	119.8	0.1429	784	84.1339	0.048675
790	MH	150+000	252+000	247+500	LHS	Outer		40	0.1524	0.1075	0.0719	0.0436	0.0308	0.0216	0.0147	28.7	28.9	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	391.4	150.0	1211.4	296.2	119.8	0.0449	785	84.1788	-0.01368
1662	MH	150+000	252+000	247+600	LHS	Middle		40	0.2109	0.1202	0.0709	0.0545	0.0383	0.0271	0.0244	30.7	33.3	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	149.9	1504.4	299.1	119.8	0.0907	786	84.2695	-0.03023
1584	MH	150+000	252+000	247+620	LHS	Inner		40	0.3243	0.1744	0.1041	0.0629	0.0468	0.0383	0.0325	31.0	32.7	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	287.1	150.0	1051.0	217.4	119.8	0.1499	787	84.4194	0.01242
791	MH	150+000	252+000	247+750	LHS	Outer		40	0.1835	0.1337	0.1003	0.077	0.057	0.0349	0.0209	28.8	28.5	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	400.0	150.0	1202.7	302.4	119.8	0.0498	788	84.4692	-0.04503
1585	MH	150+000	252+000	247+850	LHS	Inner		40	0.26	0.144	0.0789	0.0551	0.0373	0.0254	0.0209	30.8	32.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	382.6	150.0	1585.8	289.8	119.8	0.116	789	84.5852	-0.03628
792	MH	150+000	252+000	247+980	LHS	Outer		40	0.202	0.1265	0.0895	0.0634	0.0439	0.0291	0.0246	28.5	28.0	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	396.1	150.0	1222.9	299.6	119.8	0.0755	790	84.6607	-0.06803
1586	MH	150+000	252+000	248+110	LHS	Inner		40	0.3162	0.1987	0.1143	0.0711	0.0526	0.0348	0.0215	31.0	32.7	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	172.0	150.0	1593.8	123.0	119.8	0.1175	791	84.7782	-0.05779
793	MH	150+000	252+000	248+250	LHS	Outer		40	0.1338	0.0994	0.0646	0.0436	0.0334	0.0265	0.0191	28.4	28.6	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	398.3	149.8	1198.3	301.1	119.7	0.0344	792	84.8126	-0.13064
1663	MH	150+000	252+000	248+300	LHS	Middle		40	0.1683	0.1062	0.0745	0.0531	0.038	0.0275	0.0202	31.0	33.4	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1436.6	396.8	150.0	1443.0	300.1	119.8	0.0621	793	84.8747	-0.17579
1587	MH	150+000	252+000	248+350	LHS	Inner		40	0.4935	0.2969	0.1635	0.1151	0.0811	0.0633	0.0504	31.2	32.6	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	823.7	150.2	112.0	880.9	104.2	87.3	0.1966	794	85.0713	-0.08644
794	MH	150+000	252+000	248+500	LHS	Outer		40	0.2057	0.1427	0.0889	0.0481	0.031	0.019	0.0137	28.4	29.0	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	249.2	150.0	1211.4	187.2	119.8	0.063	795	85.1343	-0.13069
1588	MH	150+000	252+000	248+600	LHS	Inner		40	0.3511	0.2108	0.1228	0.0884	0.0647	0.0471	0.0345	31.2	33.0	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	178.3	149.9	1601.8	128.4	119.8	0.1403	796	85.2746	-0.09764
1664	MH	150+000	252+000	248+620	LHS	Middle		40	0.2751	0.1677	0.1022	0.071	0.0486	0.0398	0.0337	30.6	33.3	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	331.3	150.0	1394.4	251.6	119.8	0.1074	797	85.382	-0.0975
795	MH	150+000	252+000	248+750	LHS	Outer		40	0.2203	0.1496	0.0911	0.0665	0.0447	0.0286	0.0201	28.5	28.9	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	378.0	150.0	1217.6	286.4	119.8	0.0707	798	85.4527	-0.13405
1589	MH	150+000	252+000	248+870	LHS	Inner		40	0.446	0.2713	0.1702	0.1273	0.0863	0.0639	0.0488	31.2	32.9	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1307.5	150.0	110.6	1398.3	104.0	86.1	0.1747	799	85.6274	-0.0666
796	MH	150+000	252+000	249+000	LHS	Outer		40	0.2566	0.1653	0.0959	0.0696	0.0509	0.0376	0.0286	28.6	28.1	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	371.4	150.0	1218.5	281.6	119.8	0.0913	800	85.7187	-0.08255
1590	MH	150+000	252+000	249+100	LHS	Inner		40	0.4136	0.2504	0.1321	0.0846	0.0517	0.0367	0.033	31.0	32.6	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	960.2	151.2	150.0	1026.9	105.1	119.8	0.1632	801	85.8819	-0.0266
797	MH	150+000	252+000	249+250	LHS	Outer		40	0.2171	0.1475	0.0992	0.0701	0.044	0.026	0.0164	28.7	27.8	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	287.6	150.0	1216.7	217.8	119.8	0.0696	802	85.9515	-0.06425
1665	MH	150+000	252+000	249+320	LHS	Middle		40	0.3899	0.2367	0.1169	0.079	0.0586	0.0383	0.0287	31.1	33.7	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1215.1	153.4	149.9	1220.5	107.0	119.8	0.1532	803	86.1047	-0.0183
1591	MH	150+000	252+000	249+370	LHS	Inner		40	0.4237	0.2624	0.1367	0.0911	0.0591	0.0386	0.0347	31.1	33.2	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	957.0	150.5	150.0	1023.4	104.5	119.8	0.1613	804	86.266	0.035744
798	MH	150+000	252+000	249+500	LHS	Outer		40	0.2223	0.1615	0.093	0.0556	0.0343	0.0195	0.0147	28.8	28.3	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	223.6	150.0	1190.3	166.3	119.8	0.0608	805	86.3268	-0.01071
1592	MH	150+000	252+000	249+600	LHS	Inner	T-30.1/36.5	40	0.4163	0.2112	0.1035	0.0672	0.0431	0.0362	0.0326	31.5	33.5	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	652.7	190.1	150.0	698.0	138.4	119.8	0.2051	806	86.5319	0.087141
1666	MH	150+000	252+000	249+610	LHS	Middle		40	0.3794	0.2111	0.1172	0.0698	0.0388	0.0276	0.0248	30.9	33.8	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1249.5	153.4	150.0	1255.0	107.0	119.8	0.1683	807	86.7002	0.148189
799	MH	150+000	252+000	249+730	LHS	Outer		40	0.1884	0.1324	0.0805	0.0557	0.0383	0.0182	0.0108	28.6	28.3	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	234.6	150.0	1209.7	175.3	119.8	0.056	808	86.7562	0.096937
1593	MH	150+000	252+000	249+870	LHS	Inner		40

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1598	MH	150+000	252+000	251+100	LHS	Inner		40	0.3344	0.1981	0.124	0.072	0.0476	0.0304	0.0274	31.8	33.9	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	152.7	150.0	1575.4	106.4	119.8	0.1363	821	88.0378	-0.01573
805	MH	150+000	252+000	251+250	LHS	Outer		40	0.2963	0.2036	0.121	0.0706	0.0364	0.0198	0.0158	28.9	29.4	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	157.8	149.9	1220.3	110.8	119.8	0.0927	822	88.1305	-0.03028
1669	MH	150+000	252+000	251+320	LHS	Middle		40	0.3992	0.2456	0.1258	0.0711	0.0466	0.0294	0.0216	31.5	34.5	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1249.5	150.5	150.0	1255.0	104.5	119.8	0.1536	823	88.2841	0.016064
1599	MH	150+000	252+000	251+350	LHS	Inner		40	0.4143	0.2515	0.1348	0.0897	0.0563	0.0396	0.028	32.3	34.3	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	960.2	150.7	149.9	1026.9	104.6	119.8	0.1628	824	88.4469	0.071613
806	MH	150+000	252+000	251+500	LHS	Outer		40	0.2208	0.1526	0.0955	0.0545	0.04	0.0295	0.0186	28.9	28.8	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	352.6	150.0	1224.6	267.6	119.8	0.0682	825	88.5151	0.032561
1600	MH	150+000	252+000	251+600	LHS	Inner		40	0.2591	0.164	0.1071	0.0702	0.0434	0.033	0.0258	32.3	34.1	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	285.6	150.0	1596.1	216.3	119.8	0.0951	826	88.6102	0.020409
1670	MH	150+000	252+000	251+610	LHS	Middle		40	0.1782	0.1243	0.0847	0.0603	0.0428	0.034	0.0306	31.8	34.7	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	397.3	150.0	1461.3	300.4	119.8	0.0539	827	88.6641	-0.03294
807	MH	150+000	252+000	251+750	LHS	Outer		40	0.221	0.138	0.0878	0.0514	0.0306	0.0224	0.0131	28.9	28.1	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	246.5	150.0	1218.5	185.0	119.8	0.083	828	88.7471	-0.05719
1601	MH	150+000	252+000	251+820	LHS	Inner		40	0.2423	0.1633	0.0931	0.0629	0.0454	0.0411	0.038	32.5	35.0	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	399.8	150.0	1595.0	302.2	119.8	0.079	829	88.8261	-0.08545
808	MH	150+000	252+000	251+950	LHS	Outer		40	0.5327	0.3307	0.1631	0.0943	0.0461	0.0307	0.0195	28.7	27.2	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	531.2	150.7	149.8	434.3	104.6	119.7	0.202	830	89.0281	0.009303
1602	MH	150+000	252+000	251+970	LHS	Inner	4 Lane	40	0.336	0.2127	0.1361	0.0845	0.0513	0.0471	0.0424	32.3	33.1	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	175.4	149.8	1596.1	125.9	119.7	0.1233	831	89.1514	0.025352
809	MH	150+000	252+000	252+000	LHS	Outer		40	0.2135	0.1316	0.0768	0.0509	0.0327	0.0207	0.0132	28.5	27.2	30.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	302.7	150.0	1201.8	229.6	119.8	0.0819	832	89.2333	0
405	MH	150+000	252+000	150+000	RHS	Outer		40	0.2466	0.1671	0.0981	0.0487	0.036	0.0266	0.0239	30.0	33.1	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	339.1	150.0	1492.6	257.5	119.8	0.0795	1	0.0795	-0.07372
1206	MH	150+000	252+000	150+080	RHS	Inner		40	0.3463	0.2059	0.1393	0.0942	0.0707	0.0533	0.0339	29.4	33.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	175.4	144.7	1393.7	125.9	115.3	0.1404	2	0.2199	-0.08653
404	MH	150+000	252+000	150+250	RHS	Outer		40	0.4355	0.254	0.1316	0.0802	0.0456	0.0316	0.0284	30.1	33.6	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	810.8	150.0	149.9	814.4	104.0	119.8	0.1815	3	0.4014	-0.05825
1205	MH	150+000	252+000	150+270	RHS	Inner		40	0.3608	0.1994	0.1002	0.0651	0.0425	0.0329	0.026	29.3	32.7	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	966.7	202.1	150.0	901.4	148.5	119.8	0.1614	4	0.5628	-0.05007
1204	MH	150+000	252+000	150+400	RHS	Inner		40	0.3534	0.2017	0.1315	0.0852	0.055	0.0403	0.0295	29.1	33.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	171.0	149.9	1385.7	122.1	119.8	0.1517	5	0.7145	-0.05159
403	MH	150+000	252+000	150+750	RHS	Outer		40	0.3624	0.2228	0.1161	0.0704	0.0384	0.0287	0.02	30.1	33.6	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1239.8	151.5	150.0	1245.3	105.3	119.8	0.1396	6	0.8541	-0.0652
402	MH	150+000	252+000	151+000	RHS	Outer	Bheema Bridge Approach	40	0.3694	0.2341	0.125	0.0636	0.0414	0.0355	0.032	29.7	33.1	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1189.2	154.2	150.0	1194.5	107.7	119.8	0.1353	7	0.9894	-0.08312
1203	MH	150+000	252+000	151+100	RHS	Inner		40	0.5216	0.3271	0.1791	0.1078	0.0584	0.0351	0.0183	28.7	30.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	152.4	149.9	469.2	106.1	119.8	0.1945	8	1.1839	-0.04184
401	MH	150+000	252+000	151+250	RHS	Outer		40	0.435	0.2406	0.1369	0.0725	0.0574	0.0425	0.0389	29.6	32.7	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	949.5	155.1	149.8	953.7	108.4	119.7	0.1944	9	1.3783	-0.00066
1202	MH	150+000	252+000	151+350	RHS	Inner		40	0.5493	0.3221	0.1888	0.1282	0.0894	0.0638	0.0375	28.8	31.7	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	597.8	151.0	116.3	557.4	104.9	91.0	0.2272	10	1.6055	0.073328
400	MH	150+000	252+000	151+500	RHS	Outer		40	0.233	0.1522	0.0964	0.0664	0.0474	0.0346	0.0311	29.6	33.0	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1444.1	392.4	150.0	1450.5	296.9	119.8	0.0808	11	1.6863	0.00091
1201	MH	150+000	252+000	151+600	RHS	Inner		40	0.18	0.1406	0.1008	0.0747	0.0489	0.0315	0.0158	28.7	31.9	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	394.1	150.0	1347.6	298.1	119.8	0.0394	12	1.7257	-0.11291
399	MH	150+000	252+000	151+750	RHS	Outer		40	0.2305	0.1481	0.0984	0.066	0.0419	0.0265	0.02	29.5	32.6	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	332.3	150.0	1504.4	252.4	119.8	0.0824	13	1.8081	-0.18372
1200	MH	150+000	252+000	151+850	RHS	Inner		40	0.3999	0.2701	0.1649	0.1044	0.0544	0.0395	0.0289	28.9	31.4	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1191.4	151.5	150.0	1111.0	105.3	119.8	0.1298	14	1.9379	-0.20714
398	MH	150+000	252+000	152+000	RHS	Outer		40	0.1172	0.0804	0.054	0.0389	0.0286	0.0195	0.0135	29.6	32.7	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.8	149.8	1495.8	302.2	119.7	0.0368	15	1.9747	-0.32356
1199	MH	150+000	252+000	152+100	RHS	Inner		40	0.2738	0.1866	0.1261	0.0906	0.0528	0.0325	0.0292	28.9	31.3	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	249.2	150.0	1397.7	187.2	119.8	0.0872	16	2.0619	-0.38958
1198	MH	150+000	252+000	152+220	RHS	Inner		40	0.2348	0.1533	0.1045	0.0784	0.0656	0.0423	0.0187	29.1	31.5	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	334.8	150.0	1397.7	254.3	119.8	0.0815	17	2.1434	-0.46129
397	MH	150+000	252+000	152+250	RHS	Outer		40	0.2519	0.1731	0.1194	0.0777	0.0484	0.0287	0.0229	29.6	33.0	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	255.3	150.0	1486.0	192.1	119.8	0.0788	18	2.2222	-0.53571
396	MH	150+000	252+000	152+475	RHS	Outer		40	0.1744	0.1259	0.0919	0.0673	0.0403	0.0197	0.0128	29.4	33.3	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	354.1	150.0	1490.3	268.8	119.8	0.0485	19	2.2707	-0.64043
1197	MH	150+000	252+000	152+600	RHS	Inner		40	0.1365	0.1039	0.0818	0.0661	0.0493	0.0378	0.0218	28.8	31.7	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	398.3	150.0	1382.7	301.1	119.8	0.0326	20	2.3033	-0.76104
395	MH	150+000	252+000	152+750	RHS	Outer		40	0.1428	0.1036	0.0732	0.0474	0.0299	0.0207	0.0143	29.2	32.4	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	399.8	149.9	1482.8	302.2	119.8	0.0392	21	2.3425	-0.87506
1196	MH	150+000	252+000	152+830	RHS	Inner		40	0.3603	0.2419	0.1265	0.0768	0.0432	0.0336	0.0266	28.7	31.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	151.7	150.0	1187.2	105.5	119.8	0.1184	22	2.4609	-0.90988
394	MH	150+000	252+000	153+000	RHS	Outer		40	0.1884	0.1263	0.0829	0.0544	0.0338	0.023	0.0201	29.1	31.8	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	396.1	150.0	1488.3	299.6	119.8	0.0621	23	2.523	-1.001
1195	MH	150+000	252+000	153+100	RHS	Inner		40	0.3734	0.2401	0.1348	0.0842	0.0515	0.0361	0.0325	28.6	30.9	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1251.6	152.0	149.8	1167.1	105.8	119.7	0.1333	24	2.6563	-1.02091
393	MH	150+000	252+000	153+250	RHS	Outer		40	0.2194	0.1512	0.1078	0.0668	0.0493	0.0372	0.0236	29.0	31.6	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	376.1	150.0	1489.4	285.0	119.8	0.0682	25	2.7245	-1.10593
1194	MH	150+000	252+000	153+350	RHS	Inner		40	0.3027	0.1895	0.1179	0.0831	0.0636	0.037	0.0319	28.7	30.8	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	220.1	149.9	1395.8	163.4	119.8	0.1132	26	2.8377	-1.14595
392	MH	150+000	252+000	153+500	RHS	Outer		40	0.2943	0.2002	0.1248	0.086	0.0602	0.0424	0.0333	29.0	31.7	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	215.0	150.0	1468.9	159.2	119.8	0.0941	27	2.9318	-1.20507
1193	MH	150+000	252+000	153+600	RHS	Inner		40	0.3732	0.2162	0.1265	0.0846	0.0657	0.0494	0.0383	28.8	31.3	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1234.4	186.9	145.8	1151.1	135.7	116.3	0.157	28	3.0888	-1.20128
391	MH	150+000	252+000	153+750	RHS	Outer		40	0.367	0.2241	0.1295	0.0748	0.0522	0.0339	0.025	28.7	31.8	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	150.2	150.0	1493.7	104.2	119.8	0.1429	29	3.2317	-1.2116
1192	MH	150+000	252+000	153+850	RHS	Inner		40	0.304	0.1878	0.1168	0.0757	0.0561	0.0423	0.0388	28.6	31.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1425.8	262.9	149.9	1329.5	198.2	119.8	0.1162	30	3.3479	-1.24862
390	MH	150+000	252+000	154+000	RHS	Outer	T-27.5/35.1	40	0.3966	0.2595	0.1579	0.1093	0.0743	0.0484	0.0303	28.5	31.1	35.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1337.6	150.2	146.1	1343.5	104.2	116.5	0.1371	31	3.485	-1.26473
1191	MH	150+000	252+000	154+100	RHS	Inner		40	0.4828	0.2907	0.1638	0.1114	0.0738	0.054	0.0404	28.3	30.5	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	858.1	150.5	124.3	800.2	104.5	97.9	0.1921	32	3.6771	-1.22585
389	MH	150+000	252+000	154+250	RHS	Outer		40	0.2751	0.1794	0.1145	0.0739	0.0485	0.0297	0.0209	28.7	31.7	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	181.3	150.0	1392.7	130.9	119.8	0.0957	33	3.7728	-1.28337
1190	MH	150+000	252+000	154+350	RHS	Inner		40	0.4111	0.2466	0.1287	0.0828	0.048	0.0244	0.0189	28.3	30.4	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	153.4	149.9	1130.0	107.0	119.8	0.1645	34	3.9373	-1.27209
388	MH	150+000	252+000	154+500	RHS	Outer		40	0.1767	0.1251	0.0914	0.0674	0.0451	0.0297	0.021	28.4	31.7	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	399.8	149.7	1310.5	302.2	119.6	0.0516	35	3.9889	-1.3737
1189	MH	150+000	252+000	154+600	RHS	Inner		40	0.5281	0.35	0.1902	0.0972	0.069	0.0422	0.0258	28.0	30.2	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	558.1	151.0	150.0	520.4	104.9	119.8	0.1781	36	4.167	-1.34882
387	MH	150+000	252+000	154+720	RHS	Outer		40	0.1722	0.1248	0.0863	0.0607	0.0429	0.0304	0.0247	28.2	31.1	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.6	150.0	1395.8	298.5	119.8	0.0474	37	4.2144	-1.45464
1188	MH	150+000	252+000	154+850	RHS	Inner		40	0.1634	0.1174	0.0691	0.0423	0.0252	0.0165	0.0098	28.0	30.2	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	296.9	150.0	1397.7	225.1	119.8	0.046	38	4.2604	-1.56186
386	MH	150+000	252+000	155+000	RHS	Outer		40	0.1891	0.1281	0.0878	0.0666	0.0521	0.0412	0.0336	28.4	31.5	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.8	149.7	1397.7	300.8	119.6	0.061	39	4.3214	-1.65407
1187	MH	150+000	252+000	155+100	RHS	Inner		40	0.2401	0.1649	0.107	0.0723	0.047	0.0268	0.0119	28.0	29.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	167.1	149.9	1385.7	118.8	119.8	0.0752	40	4.3966	-1.73209
385	MH	150+000	252+000	155+250	RHS	Outer		40	0.1877	0.128	0.084	0.0607	0.0438	0.033	0.0253	28.3	31.5	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	394.1	149.9	1395.8	298.1	119.8	0.0597	41	4.4563	-1.82561
1186	MH	150+000	252+000	155+350	RHS	Inner		40	0.2298	0.1612	0.1273	0.0896	0.0639	0.0369	0.0185	27.8	29.9	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	265.3	150.0	1394.7	200.2	119.8	0.0686	42	4.5249	-1.91022
384	MH	150+000	252+000	155+500	RHS	Outer		40	0.173	0.1249	0.0852	0.0534	0.0313	0.0271	0.0244	28.3	31.3	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.8	149.8	1390.7	301.5	119.7	0.0481	43	4.573	-2.01534
1185	MH	150+000	252+000	155+600	RHS	Inner	T-26.6/33.4	40	0.2967	0.2018	0.1402	0.0856	0.0519	0.0384	0.0236	27.6	29.9	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	167.8	150.0	1375.7	119.4	119.8	0.0949	44	4.6679	-2.07366
383	MH	150+000	252+000	155+750	RHS	Outer		40	0.1867	0.1358	0.0878	0.0607	0.041	0.03	0.0226	28.1	31.3	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	398.0	149.9	1358.6	300.9	119.8	0.0509	45	4.7188	-2.17598
1184	MH	150+000	252+000	155+850	RHS	Inner		40	0.2464	0.1534	0.1074	0.0821	0.0646	0.0428	0.0274	27.7	29.7	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	354.8	150.0	1328.5	269.3	119.8	0.093	46	4.8118	-2.23619
382	MH	150+000	252+000	156+000	RHS	Outer		40	0.2022	0.1415	0.0935	0.0645	0.044	0.0323	0.0196	28.0	31.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	398.0	149.9	1385.7	300.9	119.8	0.0607	47	4.8725	-2.32871
1183	MH	150+000	252+000	156+100	RHS	Inner		40	0.1449	0.1042	0.0786	0.0598	0.0387	0.0226	0.0112	27.6	29.9	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	388.5	150.0	1327.6	294.1	119.8	0.0407	48	4.9132	-2.44123
381	MH	150+000	252+000	156+250	RHS	Outer		40	0.1658	0.1162	0.0831	0.0577	0.0397	0.0297	0.0229	27.9	30.6	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	398.8	150.0	1363.7	301.5	119.8	0.0496	49	4.9628	-2.54485
1182	MH	150+000	252+000	156+350	RHS	Inner		40	0.1939	0.1553	0.1129	0.0852	0.0552	0.0342	0.025	27.4	29.3	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	392.9	149.8	1332.3	297.3	119.7	0.0386	50	5.0014	-2.65946
380	MH	150+000	252+000	156+480	RHS	Outer		40	0.3079	0.2069	0.1197	0.0763	0.0503	0.0393	0.0296	27.8	31.0	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	191.3	150.0	1352.6	139.4	119.8	0.101	51	5.1024	-2.71168
1181	MH	150+000	252+000	156+600	RHS	Inner		40	0.1421	0.1066	0.0712	0.0482	0.0351	0.0259	0.0233	27.2	29.0	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	399.5	149.7	1287.4	302.0	119.6	0.0355	52	5.1379	-2.8294
379	MH	150+000	252+000	156+750	RHS	Outer		40	0.2755	0.1787	0.1116	0.063	0.0471	0.0352	0.0273	27.8	30.9	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	262.7	150.0	1380.6	198.1	119.8	0.0968	53	5.2347	-2.88581
1180	MH	150+000	252+000	156+850	RHS	Inner		40	0.2222	0.1579	0.1115	0.0645	0.0323	0.0197	0.0117	27.2	28.8	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	167.6	150.0	1323.8	119.2	119.8	0.0643	54	5.299	-2.97473
378	MH	150+000	252+000	157+000	RHS	Outer		40	0.2487	0.1695	0.1088	0.0761	0.0565	0.0396	0.0279	27.7	30.4	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	339.9	150.0	1388.7	258.1	119.8	0.0792	55	5.3782	-3.04875
1179	MH	150+000	252+000	157+100	RHS	Inner		40	0.1254	0.0892	0.0584	0.036	0.0238	0.017	0.0152	26.8	28.7	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	397.3	149.9	1333.3	300.4	119.8	0.0362	56	5.4144	-3.16577
377	MH	150+000	252+000	157+250	RHS	Outer		40	0.1434	0.1044	0.0746	0.0513	0.0361	0.0257	0.0174	27.6	30.4	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	391.2	150.0	1396.7	296.0	119.8	0.039	57	5.4534	-3.27998
1178	MH	150+000	252+000	157+400	RHS	Inner		40	0.176	0.1235	0.0891	0.0649	0.0491	0.0354	0.0255	26.6	27.7	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	398.5	149.8	1309.4	301.3	119.7	0.0525	58	5.5059	-3.3807
376	MH	150+000	252+000	157

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
370	MH	150+000	252+000	159+000	RHS	Outer	T-25.8/33.4	40	0.5083	0.3123	0.1781	0.1036	0.0704	0.0475	0.0311	27.2	28.6	33.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	702.2	150.0	141.6	654.8	104.0	112.7	0.196	71	7.9602	-2.91822
1171	MH	150+000	252+000	159+020	RHS	Inner	T-24.2/32.3	40	0.4053	0.2251	0.1401	0.079	0.0486	0.0277	0.0191	25.9	27.3	32.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1205.4	151.2	149.9	1072.2	105.1	119.8	0.1802	72	8.1404	-2.89124
369	MH	150+000	252+000	159+250	RHS	Outer		40	0.3189	0.2136	0.1167	0.0679	0.0458	0.0374	0.0312	28.2	30.3	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1371.0	194.0	150.0	1359.0	141.6	119.8	0.1053	73	8.2457	-2.93916
1170	MH	150+000	252+000	159+350	RHS	Inner		40	0.3063	0.207	0.1178	0.0724	0.0384	0.0248	0.0148	30.1	30.0	33.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	152.7	150.0	1389.5	106.4	119.8	0.0993	74	8.345	-2.99308
368	MH	150+000	252+000	159+500	RHS	Outer		40	0.3257	0.2126	0.1211	0.0773	0.0467	0.0355	0.024	28.3	30.2	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	157.1	149.9	1475.1	110.2	119.8	0.1131	75	8.4581	-3.03319
1169	MH	150+000	252+000	159+600	RHS	Inner		40	0.2247	0.1546	0.09	0.0538	0.0299	0.0202	0.0181	30.0	30.2	33.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	255.8	150.0	1379.2	192.5	119.8	0.0701	76	8.5282	-3.11631
367	MH	150+000	252+000	159+750	RHS	Outer		40	0.3332	0.2162	0.1202	0.0738	0.0501	0.0352	0.024	28.4	30.1	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	160.8	150.0	1446.3	113.4	119.8	0.117	77	8.6452	-3.15253
1168	MH	150+000	252+000	159+850	RHS	Inner		40	0.3916	0.2463	0.1454	0.086	0.0457	0.0353	0.0281	30.4	30.5	33.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1180.6	150.2	150.0	1125.0	104.2	119.8	0.1453	78	8.7905	-3.16045
366	MH	150+000	252+000	160+000	RHS	Outer		40	0.3779	0.2367	0.1202	0.0622	0.0459	0.0348	0.0213	28.7	30.8	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1239.8	153.4	149.9	1228.9	107.0	119.8	0.1412	79	8.9317	-3.17246
1167	MH	150+000	252+000	160+100	RHS	Inner	T-26.8/33.9	40	0.364	0.2141	0.1281	0.085	0.054	0.0411	0.0322	30.4	31.1	33.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1422.6	158.6	150.0	1355.6	111.5	119.8	0.1499	80	9.0816	-3.17578
365	MH	150+000	252+000	160+250	RHS	Outer		40	0.3677	0.2416	0.1467	0.0855	0.0585	0.0447	0.0359	28.9	30.8	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	150.2	150.0	1449.5	104.2	119.8	0.1261	81	9.2077	-3.2029
1166	MH	150+000	252+000	160+350	RHS	Inner		40	0.4243	0.2533	0.1294	0.0738	0.0561	0.0446	0.0402	30.9	31.3	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	886.0	152.2	149.8	918.1	105.9	119.7	0.171	82	9.3787	-3.18511
364	MH	150+000	252+000	160+500	RHS	Outer		40	0.343	0.2215	0.1102	0.0772	0.06	0.0362	0.0268	28.8	31.0	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1434.4	156.4	150.0	1421.8	109.6	119.8	0.1215	83	9.5002	-3.21683
1165	MH	150+000	252+000	160+550	RHS	Inner		40	0.4012	0.2344	0.137	0.09	0.0581	0.0422	0.0281	30.8	32.5	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	150.2	150.0	1281.4	104.2	119.8	0.1668	84	9.667	-3.20325
363	MH	150+000	252+000	160+750	RHS	Outer		40	0.3664	0.2178	0.1199	0.0756	0.0511	0.0351	0.0303	29.0	31.3	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1302.2	161.5	150.0	1290.8	114.0	119.8	0.1486	85	9.8156	-3.20787
1164	MH	150+000	252+000	160+850	RHS	Inner		40	0.3547	0.2377	0.13	0.0793	0.047	0.0316	0.0284	30.6	31.2	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1422.6	151.7	150.0	1474.1	105.5	119.8	0.117	86	9.9326	-3.24408
362	MH	150+000	252+000	161+000	RHS	Outer		40	0.297	0.1927	0.1077	0.0705	0.0471	0.0313	0.0282	29.2	31.1	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	212.1	150.0	1459.1	156.8	119.8	0.1043	87	10.0369	-3.293
1163	MH	150+000	252+000	161+100	RHS	Inner		40	0.2576	0.1694	0.1031	0.0535	0.034	0.0211	0.0131	30.7	31.1	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	161.5	150.0	1551.0	114.0	119.8	0.0882	88	10.1251	-3.35802
361	MH	150+000	252+000	161+250	RHS	Outer	6 Lane VUP Ends	40	0.4022	0.2613	0.1391	0.086	0.0564	0.0352	0.0215	29.1	31.3	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	155.1	150.0	1225.7	108.4	119.8	0.1409	89	10.266	-3.37033
1162	MH	150+000	252+000	161+350	RHS	Inner		40	0.4263	0.2512	0.1636	0.0969	0.0651	0.0429	0.0297	30.7	31.5	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	150.2	148.9	1246.8	104.2	118.9	0.1751	90	10.4411	-3.34845
360	MH	150+000	252+000	161+500	RHS	Outer		40	0.3699	0.2108	0.13	0.0777	0.0423	0.0308	0.0226	28.6	31.1	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1339.8	154.6	150.0	1328.0	108.0	119.8	0.1591	91	10.6002	-3.34257
1161	MH	150+000	252+000	161+600	RHS	Inner		40	0.3325	0.2195	0.1226	0.0822	0.0577	0.0369	0.0215	30.6	31.4	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	152.2	150.0	1548.8	105.9	119.8	0.113	92	10.7132	-3.38279
359	MH	150+000	252+000	161+750	RHS	Outer		40	0.4638	0.2907	0.1492	0.0846	0.0563	0.0402	0.0209	28.4	31.0	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	781.7	150.5	149.4	774.8	104.5	119.3	0.1731	93	10.8863	-3.3629
1160	MH	150+000	252+000	161+850	RHS	Inner		40	0.3701	0.2352	0.1279	0.0882	0.0607	0.0451	0.0305	30.7	31.5	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	151.5	149.9	1504.2	105.3	119.8	0.1349	94	11.0212	-3.38122
358	MH	150+000	252+000	162+000	RHS	Outer		40	0.4096	0.2434	0.1362	0.0826	0.0605	0.0448	0.0291	28.2	30.7	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1208.6	151.7	150.0	1198.0	105.5	119.8	0.1662	95	11.1874	-3.36824
1159	MH	150+000	252+000	162+100	RHS	Inner		40	0.2949	0.1903	0.119	0.0823	0.0594	0.0427	0.0328	30.8	31.3	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	239.2	149.9	1502.0	179.1	119.8	0.1046	96	11.292	-3.41686
357	MH	150+000	252+000	162+145	RHS	Outer	T-25.8/34.8	40	0.3459	0.2232	0.1325	0.0741	0.0534	0.0395	0.0294	28.4	30.7	34.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	158.3	150.0	1450.5	111.2	119.8	0.1227	97	11.4147	-3.44737
356	MH	150+000	252+000	163+020	RHS	Outer		40	0.4531	0.2805	0.1403	0.094	0.0607	0.0432	0.0311	28.3	30.4	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	861.3	151.2	150.0	861.3	105.1	119.8	0.1726	98	11.5873	-3.42799
1158	MH	150+000	252+000	163+120	RHS	Inner		40	0.4636	0.3002	0.1627	0.1047	0.0662	0.0343	0.0131	30.6	31.3	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	973.1	151.7	150.0	1008.4	105.5	119.8	0.1634	99	11.7507	-3.41781
355	MH	150+000	252+000	163+250	RHS	Outer		40	0.4772	0.3031	0.1754	0.1114	0.0764	0.0508	0.0331	29.3	30.4	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	943.0	150.2	135.3	1027.0	104.2	107.3	0.1741	100	11.9248	-3.39692
1157	MH	150+000	252+000	163+350	RHS	Inner		40	0.5614	0.3498	0.162	0.0928	0.0722	0.0469	0.0412	30.7	30.8	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.0	132.5	521.4	104.0	104.9	0.2116	101	12.1364	-3.33854
354	MH	150+000	252+000	163+500	RHS	Outer		40	0.209	0.1526	0.1144	0.08	0.0564	0.0376	0.0242	29.3	29.8	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	381.9	150.0	1609.0	289.3	119.8	0.0564	102	12.1928	-3.43536
1156	MH	150+000	252+000	163+630	RHS	Inner		40	0.4874	0.2669	0.1539	0.0732	0.0475	0.0299	0.0269	30.7	31.4	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	595.7	152.7	150.0	617.3	106.4	119.8	0.2205	103	12.4133	-3.36808
353	MH	150+000	252+000	163+750	RHS	Outer	6 Lane VUP	40	0.492	0.3098	0.1718	0.0958	0.0516	0.0393	0.0353	29.3	28.9	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	588.2	150.0	149.7	640.6	104.0	119.6	0.1822	104	12.5955	-3.33909
1155	MH	150+000	252+000	163+850	RHS	Inner		40	0.4008	0.2495	0.1494	0.0918	0.0565	0.0319	0.0227	30.7	31.4	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	151.0	150.0	1285.9	104.9	119.8	0.1513	105	12.7468	-3.34101
352	MH	150+000	252+000	164+000	RHS	Outer		40	0.6161	0.3562	0.187	0.1073	0.0662	0.0476	0.0309	29.5	31.0	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.0	144.1	436.8	104.0	114.8	0.2599	106	13.0067	-3.23433
1154	MH	150+000	252+000	164+100	RHS	Inner		40	0.5306	0.3216	0.1815	0.1241	0.0853	0.0547	0.0344	30.6	31.0	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.0	127.7	646.3	104.0	100.8	0.209	107	13.2157	-3.17855
351	MH	150+000	252+000	164+250	RHS	Outer		40	0.4336	0.2852	0.1617	0.1042	0.0755	0.0587	0.0377	29.6	31.0	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1204.3	150.5	127.6	1311.6	104.5	100.7	0.1484	108	13.3641	-3.18336
1153	MH	150+000	252+000	164+350	RHS	Inner	T-27.8/35.8	40	0.4633	0.2952	0.1661	0.0838	0.0518	0.0433	0.039	30.8	31.5	35.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	791.4	150.0	149.7	820.1	104.0	119.6	0.1681	109	13.5322	-3.16848
350	MH	150+000	252+000	164+500	RHS	Outer		40	0.443	0.2787	0.1492	0.1005	0.0653	0.0387	0.02	29.8	31.2	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	955.9	150.5	149.9	1041.0	104.5	119.8	0.1643	110	13.6965	-3.1574
1152	MH	150+000	252+000	164+600	RHS	Inner		40	0.4147	0.2665	0.1396	0.1007	0.0711	0.0581	0.0377	31.1	30.8	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1257.0	150.0	133.0	1308.4	104.0	105.3	0.1482	111	13.8447	-3.16241
349	MH	150+000	252+000	164+720	RHS	Outer		40	0.4549	0.2944	0.161	0.0874	0.0547	0.034	0.026	30.1	32.0	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	944.1	150.7	149.9	1028.2	104.6	119.8	0.1605	112	14.0052	-3.15513
1151	MH	150+000	252+000	164+800	RHS	Inner		40	0.484	0.2926	0.1667	0.1046	0.0791	0.051	0.0307	31.3	31.1	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	832.3	150.0	140.4	866.3	104.0	111.6	0.1914	113	14.1966	-3.11695
348	MH	150+000	252+000	165+000	RHS	Outer		40	0.3998	0.2544	0.1415	0.0815	0.0554	0.0345	0.0295	29.9	32.0	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1228.0	150.7	149.9	1337.4	104.6	119.8	0.1454	114	14.342	-3.12477
1150	MH	150+000	252+000	165+100	RHS	Inner		40	0.4268	0.2642	0.1518	0.1047	0.0715	0.0499	0.0389	31.2	32.1	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1219.4	150.2	134.3	1269.3	104.2	106.4	0.1626	115	14.5046	-3.11538
347	MH	150+000	252+000	165+250	RHS	Outer		40	0.4793	0.3032	0.1786	0.119	0.0798	0.0512	0.0297	29.8	32.2	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	800.0	150.0	141.8	871.3	104.0	112.8	0.1761	116	14.6807	-3.0925
1149	MH	150+000	252+000	165+350	RHS	Inner		40	0.512	0.3125	0.1788	0.1128	0.0822	0.0494	0.0301	31.2	32.6	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	725.8	150.0	138.0	755.5	104.0	109.6	0.1995	117	14.8802	-3.04622
346	MH	150+000	252+000	165+500	RHS	Outer		40	0.4789	0.3159	0.174	0.1164	0.081	0.056	0.0504	30.1	32.2	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	150.7	113.3	913.4	104.6	88.5	0.163	118	15.0432	-3.03643
1148	MH	150+000	252+000	165+600	RHS	Inner		40	0.4685	0.2904	0.1588	0.1106	0.0813	0.0604	0.0488	31.2	32.7	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	930.1	152.2	114.4	968.1	105.9	89.4	0.1781	119	15.2213	-3.01155
345	MH	150+000	252+000	165+750	RHS	Outer		40	0.4386	0.2339	0.1274	0.07	0.0513	0.0381	0.0284	29.6	32.3	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	834.4	152.2	150.0	908.7	105.9	119.8	0.2047	120	15.426	-2.96007
1147	MH	150+000	252+000	165+850	RHS	Inner		40	0.2415	0.1788	0.1131	0.0822	0.0598	0.0449	0.0404	31.1	32.6	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	374.1	150.0	1561.3	283.6	119.8	0.0627	121	15.4887	-3.05059
344	MH	150+000	252+000	166+000	RHS	Outer	T-26.8/36.9	40	0.173	0.1251	0.0893	0.0564	0.0389	0.0275	0.0197	29.6	32.5	36.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	399.3	149.9	1621.9	301.9	119.8	0.0479	122	15.5366	-3.1559
1146	MH	150+000	252+000	166+100	RHS	Inner		40	0.3959	0.2532	0.1454	0.0916	0.057	0.0377	0.0308	31.1	32.8	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1306.5	150.2	149.9	1359.9	104.2	119.8	0.1427	123	15.6793	-3.16642
343	MH	150+000	252+000	166+250	RHS	Outer		40	0.2746	0.1906	0.1218	0.088	0.0555	0.0401	0.0291	30.0	32.7	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	250.2	149.9	1596.9	188.0	119.8	0.084	124	15.7633	-3.23564
1145	MH	150+000	252+000	166+350	RHS	Inner		40	0.4639	0.2896	0.1505	0.0983	0.0637	0.0399	0.035	30.8	32.4	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	150.0	149.7	847.3	104.0	119.6	0.1743	125	15.9376	-3.21456
342	MH	150+000	252+000	166+500	RHS	Outer		40	0.2217	0.1613	0.1045	0.0584	0.0409	0.0283	0.0195	29.9	33.0	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	359.7	150.0	1551.1	272.9	119.8	0.0604	126	15.998	-3.30737
1144	MH	150+000	252+000	166+600	RHS	Inner		40	0.3514	0.2373	0.1261	0.0668	0.0429	0.0264	0.0159	30.3	32.0	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1428.0	150.7	150.0	1486.4	104.6	119.8	0.1141	127	16.1121	-3.34649
341	MH	150+000	252+000	166+750	RHS	Outer		40	0.3921	0.2491	0.1451	0.0963	0.06	0.0428	0.0305	29.7	32.7	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1358.1	150.2	149.6	1445.8	104.2	119.5	0.143	128	16.2551	-3.35671
1143	MH	150+000	252+000	166+800	RHS	Inner		40	0.326	0.2181	0.1392	0.1028	0.0763	0.061	0.0512	30.5	31.7	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	256.3	118.7	1502.0	192.9	93.1	0.1079	129	16.363	-3.40202
340	MH	150+000	252+000	167+000	RHS	Outer		40	0.2658	0.166	0.09	0.0636	0.0463	0.0346	0.0234	29.5	32.5	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	339.4	150.0	1547.7	257.7	119.8	0.0998	130	16.4628	-3.45544
1142	MH	150+000	252+000	167+070	RHS	Inner		40	0.4369	0.3043	0.1909	0.1211	0.0731	0.0529	0.0394	30.0	31.9	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1104.3	150.7	124.7	1149.5	104.6	98.2	0.1326	131	16.5954	-3.47606
339	MH	150+000	252+000	167+250	RHS	Outer		40	0.4403	0.2771	0.1597	0.1037	0.0547	0.0227	0.0165	29.3	32.3	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1304.3	150.5	149.9	1388.6	104.5	119.8	0.1632	132	16.7586	-3.46608
1141	MH	150+000	252+000	167+380	RHS	Inner	T-28.3/35.9	40	0.4555	0.2709	0.1636	0.1128	0.0798	0.0584	0.0442	29.5	31.3	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.2	119.5	1015.2	104.2	93.8	0.1846	133	16.9432	-3.43469
338	MH	150+000	252+000	167+480	RHS	Outer		40	0.4568	0.2787	0.1598	0.0886	0.055	0.038	0.029	29.3	31.9	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	790.3	151.0	150.0	841.4	104.9	119.8	0.1781	134	17.1213	-3.40981
1140	MH	150+000	252+000	167+505	RHS	Inner		40	0.3558	0.2277	0.1327	0.0913	0.0666	0.0504	0.0338	30.1	31.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	155.1	149.0	1697.9	108.4	119.0	0.1281	135	17.2494	-3.43493
337	MH	150+000	252+000	167+740	RHS	Outer	6 Lane VUP End	40	0.4063	0.2432	0.124	0.0687	0.0519	0.0399	0.0297	29.1	32.3	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1058.1	155.6	149.9	1126.5	108.9	119.8	0.1631	136	17.4125	-3.42505
1139	MH	150+000	252+000	167+850	RHS	Inner		40	0.4507	0.2762	0.1464	0.0875	0.0592	0.0467	0.042	30.0	31.6	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	923.7	150.5	143.0	1048.6	104.5	113.9	0.1745	137	17.587	-3.40376
336	MH	150+000	252+000	168+000	RHS	Outer	Approach	40	0.5207	0.3295	0.1859	0.0931	0.0596	0.0367	0.0276	29.0	32.0	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	646.2	150.7	149.9	687.9	104.6	119.8	0.1912	138	17.7782	-3.36578
1138	MH	150+000	252+000	168+100	RHS	Inner		40	0.4711	0.2932	0.1549	0.0888	0.0582	0.0427	0.0384	30.1	31.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	150.0	146.7	924.0	104.0	117.0	0.1779	139	17.9561	-3.3411
335	MH	150+000	252+000	168+250	RHS	Outer	6 Lane VUP Start	40	0.4176	0.2638	0.1525	0.0938	0.0616	0.0473	0.037	29.2	32.0	36.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	150.7	142.7	1150.4	104.6	113.6	0.1538

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1131	MH	150+000	252+000	169+850	RHS	Inner		40	0.5285	0.3186	0.188	0.0986	0.0641	0.0448	0.031	30.6	32.1	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	578.5	150.0	147.8	656.7	104.0	118.0	0.2099	153	20.0942	-3.34804
328	MH	150+000	252+000	170+000	RHS	Outer		40	0.4897	0.311	0.1744	0.1023	0.0521	0.0412	0.0309	29.8	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	150.0	149.9	893.6	104.0	119.8	0.1787	154	20.2729	-3.32256
1130	MH	150+000	252+000	170+100	RHS	Inner		40	0.5546	0.3251	0.1721	0.0934	0.066	0.047	0.0275	30.5	32.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	498.9	150.5	149.5	566.3	104.5	119.4	0.2295	155	20.5024	-3.24627
327	MH	150+000	252+000	170+250	RHS	Outer		40	0.3532	0.2186	0.1149	0.06	0.0478	0.0356	0.035	30.0	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1100.0	183.0	150.0	1266.3	132.4	119.8	0.1346	156	20.637	-3.26489
1129	MH	150+000	252+000	170+350	RHS	Inner		40	0.4578	0.2964	0.1707	0.1169	0.0806	0.0594	0.0446	30.5	32.5	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	991.4	150.0	117.2	1125.4	104.0	91.8	0.1614	157	20.7984	-3.25671
326	MH	150+000	252+000	170+500	RHS	Outer		40	0.1869	0.1314	0.0856	0.0579	0.038	0.0291	0.0236	30.0	33.0	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	399.3	150.0	1676.0	301.9	119.8	0.0555	158	20.8539	-3.35442
1128	MH	150+000	252+000	170+600	RHS	Inner		40	0.4909	0.3131	0.1714	0.0935	0.0533	0.0425	0.0383	30.5	32.2	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	672.0	150.2	147.2	762.8	104.2	117.5	0.1778	159	21.0317	-3.32984
325	MH	150+000	252+000	170+750	RHS	Outer		40	0.4539	0.2276	0.1376	0.1062	0.094	0.0599	0.0356	29.7	32.4	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	811.8	176.1	131.3	934.5	126.5	103.9	0.2263	160	21.258	-3.25676
1127	MH	150+000	252+000	170+800	RHS	Inner		40	0.3694	0.1878	0.1123	0.0728	0.0604	0.0479	0.0431	30.8	31.9	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	768.8	268.5	149.7	872.7	202.7	119.6	0.1816	161	21.4396	-3.22838
324	MH	150+000	252+000	171+000	RHS	Outer		40	0.3773	0.2086	0.1117	0.064	0.0504	0.0378	0.0264	29.6	32.4	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	904.3	185.2	150.0	1041.0	134.2	119.8	0.1687	162	21.6083	-3.21289
1126	MH	150+000	252+000	171+100	RHS	Inner		40	0.3693	0.2406	0.1479	0.0972	0.0762	0.0534	0.0408	30.9	31.6	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	151.2	132.0	1694.2	105.1	104.5	0.1287	163	21.737	-3.23741
323	MH	150+000	252+000	171+250	RHS	Outer		40	0.3883	0.257	0.13	0.0703	0.0467	0.0292	0.0246	29.6	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1214.0	154.2	150.0	1397.5	107.7	119.8	0.1313	164	21.8683	-3.25933
1125	MH	150+000	252+000	171+350	RHS	Inner		40	0.3882	0.2329	0.1465	0.0933	0.0576	0.0417	0.0375	30.9	32.4	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1395.7	150.5	149.5	1584.4	104.5	119.4	0.1553	165	22.0236	-3.25725
322	MH	150+000	252+000	171+500	RHS	Outer		40	0.402	0.2611	0.1602	0.1152	0.0705	0.0385	0.0246	29.6	32.5	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1212.9	150.0	149.6	1396.2	104.0	119.5	0.1409	166	22.1645	-3.26956
1124	MH	150+000	252+000	171+600	RHS	Inner	T-28/37.8	40	0.4371	0.2782	0.1661	0.0892	0.0608	0.0422	0.0379	31.2	32.7	37.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	921.5	150.0	145.8	1046.1	104.0	116.3	0.1589	167	22.3234	-3.26388
321	MH	150+000	252+000	171+750	RHS	Outer		40	0.1448	0.1058	0.0797	0.0557	0.0379	0.0258	0.019	29.7	32.5	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	399.5	150.0	1694.5	302.0	119.8	0.039	168	22.3624	-3.3781
1123	MH	150+000	252+000	171+840	RHS	Inner		40	0.2883	0.1834	0.1138	0.0606	0.0451	0.0339	0.0305	30.9	32.6	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1378.5	248.5	150.0	1543.2	186.6	119.8	0.1049	169	22.4673	-3.42641
320	MH	150+000	252+000	172+000	RHS	Outer		40	0.2439	0.1452	0.0974	0.071	0.0512	0.0336	0.0206	29.7	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	371.2	150.0	1719.2	281.4	119.8	0.0987	170	22.566	-3.48093
1122	MH	150+000	252+000	172+100	RHS	Inner		40	0.4579	0.2899	0.1521	0.0979	0.059	0.0433	0.0317	31.4	33.1	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.5	149.6	1091.8	104.5	119.5	0.168	171	22.734	-3.46615
319	MH	150+000	252+000	172+250	RHS	Outer		40	0.2171	0.1432	0.0978	0.0591	0.0463	0.0372	0.0239	29.7	32.5	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1431.2	395.1	150.0	1647.5	298.8	119.8	0.0739	172	22.8079	-3.54547
1121	MH	150+000	252+000	172+350	RHS	Inner		40	0.4737	0.2814	0.164	0.1058	0.0675	0.0475	0.0335	31.7	33.2	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	943.0	150.0	141.6	1055.7	104.0	112.7	0.1923	173	23.0002	-3.50638
318	MH	150+000	252+000	172+500	RHS	Outer		40	0.606	0.4046	0.2106	0.1351	0.0828	0.0466	0.0333	29.8	32.5	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	486.0	150.2	130.9	559.5	104.2	103.5	0.2014	174	23.2016	-3.4582
1120	MH	150+000	252+000	172+600	RHS	Inner		40	0.3034	0.1853	0.0984	0.0706	0.0501	0.0422	0.0337	31.7	33.3	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1197.8	291.5	150.0	1340.9	220.9	119.8	0.1181	175	23.3197	-3.49332
317	MH	150+000	252+000	172+750	RHS	Outer		40	0.2394	0.1648	0.102	0.0743	0.0541	0.0406	0.0267	29.7	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1480.6	370.4	150.0	1704.4	280.8	119.8	0.0746	176	23.3943	-3.57194
1119	MH	150+000	252+000	172+850	RHS	Inner		40	0.3709	0.2438	0.1451	0.0949	0.0607	0.0413	0.0371	31.7	33.6	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	150.5	149.4	1622.7	104.5	119.3	0.1271	177	23.5214	-3.59805
316	MH	150+000	252+000	173+000	RHS	Outer		40	0.1854	0.1269	0.0828	0.0568	0.0422	0.032	0.0211	29.8	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	397.3	149.8	1708.2	300.4	119.7	0.0585	178	23.5799	-3.69277
1118	MH	150+000	252+000	173+100	RHS	Inner		40	0.5262	0.3285	0.1747	0.1027	0.068	0.038	0.0236	31.7	33.7	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	603.2	151.7	150.0	675.3	105.5	119.8	0.1977	179	23.7776	-3.64829
315	MH	150+000	252+000	173+230	RHS	Outer		40	0.4986	0.3163	0.1737	0.1073	0.0701	0.0525	0.0483	29.6	33.0	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	749.5	150.2	121.4	862.8	104.2	95.4	0.1823	180	23.9599	-3.6192
1117	MH	150+000	252+000	173+240	RHS	Inner		40	0.3053	0.1962	0.1239	0.0795	0.0501	0.0394	0.0354	31.7	33.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	209.4	150.0	1667.2	154.5	119.8	0.1091	181	24.069	-3.66332
314	MH	150+000	252+000	173+500	RHS	Outer		40	0.4263	0.2449	0.1104	0.0715	0.0431	0.0322	0.0242	29.6	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	867.7	151.2	149.9	998.9	105.1	119.8	0.1814	182	24.2504	-3.63514
1116	MH	150+000	252+000	173+600	RHS	Inner		40	0.1821	0.1272	0.09	0.0629	0.0447	0.0332	0.0299	31.3	32.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	398.0	150.0	1654.0	300.9	119.8	0.0549	183	24.3053	-3.73346
313	MH	150+000	252+000	173+750	RHS	Outer		40	0.1878	0.127	0.0873	0.063	0.0455	0.0319	0.0229	29.6	32.7	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	399.0	150.0	1709.3	301.7	119.8	0.0608	184	24.3661	-3.82587
1115	MH	150+000	252+000	173+850	RHS	Inner		40	0.228	0.1401	0.0944	0.0692	0.0521	0.0377	0.0282	31.2	32.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1424.7	398.8	150.0	1595.0	301.5	119.8	0.0879	185	24.454	-3.89119
312	MH	150+000	252+000	174+000	RHS	Outer		40	0.436	0.2841	0.1583	0.0761	0.0558	0.0366	0.0221	29.5	33.3	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	936.6	151.0	150.0	1078.2	104.9	119.8	0.1519	186	24.6059	-3.89251
1114	MH	150+000	252+000	174+100	RHS	Inner		40	0.267	0.1601	0.0983	0.0627	0.0436	0.03	0.027	31.3	33.1	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	315.2	150.0	1675.7	239.3	119.8	0.1069	187	24.7128	-3.93882
311	MH	150+000	252+000	174+250	RHS	Outer		40	0.4617	0.3026	0.1675	0.1093	0.0671	0.0451	0.0305	29.4	33.1	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	917.2	150.2	143.5	1055.8	104.2	114.3	0.1591	188	24.8719	-3.93294
1113	MH	150+000	252+000	174+350	RHS	Inner		40	0.4803	0.3061	0.1569	0.0977	0.057	0.0374	0.024	31.3	32.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.7	150.0	698.2	104.6	119.8	0.1742	189	25.0461	-3.91196
310	MH	150+000	252+000	174+500	RHS	Outer		40	0.249	0.1678	0.0961	0.0671	0.0487	0.0361	0.0271	29.3	32.6	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	360.2	150.0	1726.7	273.3	119.8	0.0812	190	25.1273	-3.98398
1112	MH	150+000	252+000	174+600	RHS	Inner		40	0.4853	0.305	0.1749	0.097	0.0642	0.0416	0.0236	31.2	32.9	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	152.0	149.7	881.2	105.8	119.6	0.1803	191	25.3076	-3.95689
309	MH	150+000	252+000	174+750	RHS	Outer	T-27.3/38.1	40	0.4877	0.3056	0.1523	0.0911	0.0761	0.0504	0.0313	29.1	32.3	38.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	734.4	150.0	143.7	845.4	104.0	114.5	0.1821	192	25.4897	-3.92801
1111	MH	150+000	252+000	174+830	RHS	Inner		40	0.3845	0.2414	0.1463	0.0971	0.0662	0.0489	0.0375	31.2	33.0	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	150.2	140.3	1629.9	104.2	111.6	0.1431	193	25.6328	-3.93813
308	MH	150+000	252+000	175+000	RHS	Outer		40	0.4659	0.3071	0.1646	0.1063	0.068	0.0449	0.0289	29.1	32.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	791.4	150.2	148.8	858.0	104.2	118.8	0.1588	194	25.7916	-3.93255
1110	MH	150+000	252+000	175+100	RHS	Inner		40	0.5459	0.34	0.1963	0.1063	0.0727	0.0525	0.0405	31.2	33.3	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	500.0	150.7	124.0	559.8	104.6	97.6	0.2059	195	25.9975	-3.87986
307	MH	150+000	252+000	175+250	RHS	Outer		40	0.3945	0.2605	0.1396	0.0917	0.0547	0.0395	0.0254	29.1	32.5	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1408.6	150.2	150.0	1527.1	104.2	119.8	0.134	196	26.1315	-3.89908
1109	MH	150+000	252+000	175+350	RHS	Inner		40	0.4858	0.2932	0.1921	0.1067	0.0691	0.0417	0.0283	31.2	32.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	874.2	150.0	149.4	978.7	104.0	119.3	0.1926	197	26.3241	-3.8597
306	MH	150+000	252+000	175+500	RHS	Outer		40	0.3775	0.2459	0.1337	0.0771	0.0625	0.0466	0.0359	29.1	32.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1246.2	150.7	150.0	1246.2	104.6	119.8	0.1316	198	26.4557	-3.88131
1108	MH	150+000	252+000	175+600	RHS	Inner		40	0.4122	0.2653	0.1471	0.0805	0.056	0.0482	0.0323	31.2	32.5	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1038.7	150.5	149.6	1038.7	104.5	119.5	0.1469	199	26.6026	-3.88763
305	MH	150+000	252+000	175+750	RHS	Outer		40	0.4474	0.2975	0.1586	0.0961	0.0723	0.0509	0.0356	29.1	32.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	911.8	150.5	136.4	911.8	104.5	108.2	0.1499	200	26.7525	-3.89095
1107	MH	150+000	252+000	175+850	RHS	Inner		40	0.4575	0.2959	0.1651	0.0914	0.0561	0.0354	0.0209	31.2	32.8	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	864.5	150.7	149.6	864.5	104.6	119.5	0.1616	201	26.9141	-3.88257
304	MH	150+000	252+000	176+000	RHS	Outer		40	0.4757	0.2884	0.1539	0.0871	0.065	0.049	0.0286	29.1	33.0	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	692.5	150.0	150.0	692.5	104.0	119.8	0.1873	202	27.1014	-3.84848
1106	MH	150+000	252+000	176+100	RHS	Inner		40	0.3186	0.2033	0.1219	0.0684	0.0421	0.0356	0.032	31.3	33.0	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	181.3	150.0	1482.8	130.9	119.8	0.1153	203	27.2167	-3.8864
303	MH	150+000	252+000	176+230	RHS	Outer		40	0.1732	0.1185	0.082	0.0596	0.0448	0.03	0.0196	29.1	32.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1454.8	397.8	150.0	1454.8	300.8	119.8	0.0547	204	27.2714	-3.98492
1105	MH	150+000	252+000	176+350	RHS	Inner		40	0.4925	0.3265	0.1681	0.0917	0.0621	0.0398	0.029	31.4	33.1	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	676.3	150.5	149.3	676.3	104.5	119.3	0.166	205	27.4374	-3.97214
302	MH	150+000	252+000	176+500	RHS	Outer		40	0.5029	0.3112	0.141	0.0733	0.0416	0.0312	0.0234	29.1	32.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	475.3	152.4	150.0	475.3	106.1	119.8	0.1917	206	27.6291	-3.93365
1104	MH	150+000	252+000	176+600	RHS	Inner	T-28.5/37.5	40	0.447	0.2709	0.157	0.0822	0.0546	0.0342	0.0253	31.4	33.6	37.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	817.2	150.0	149.8	817.2	104.0	119.7	0.1761	207	27.8052	-3.91077
301	MH	150+000	252+000	176+750	RHS	Outer		40	0.4152	0.2619	0.1586	0.0907	0.0544	0.0382	0.0276	29.0	32.5	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1186.0	151.7	150.0	1285.8	105.5	119.8	0.1533	208	27.9585	-3.91069
1103	MH	150+000	252+000	176+850	RHS	Inner		40	0.4704	0.2903	0.1765	0.1168	0.0889	0.0614	0.0455	32.4	33.6	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	948.4	150.5	113.0	1155.6	104.5	88.2	0.1801	209	28.1386	-3.8838
300	MH	150+000	252+000	177+000	RHS	Outer		40	0.3591	0.2275	0.1491	0.103	0.0698	0.0518	0.0389	28.9	32.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	164.2	137.0	1621.5	116.3	108.7	0.1316	210	28.2702	-3.90542
1102	MH	150+000	252+000	177+100	RHS	Inner		40	0.4726	0.2843	0.1709	0.1096	0.0682	0.0517	0.0346	32.5	34.1	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	876.3	150.0	135.0	1067.7	104.0	107.0	0.1883	211	28.4585	-3.87034
299	MH	150+000	252+000	177+230	RHS	Outer		40	0.3918	0.2406	0.1374	0.079	0.0399	0.0279	0.0197	28.9	32.2	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1280.6	150.5	150.0	1388.3	104.5	119.8	0.1512	212	28.6097	-3.87236
1101	MH	150+000	252+000	177+350	RHS	Inner		40	0.4317	0.2702	0.1472	0.0973	0.0601	0.0402	0.0255	32.5	34.1	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1037.6	152.2	150.0	1264.3	105.9	119.8	0.1615	213	28.7712	-3.86407
298	MH	150+000	252+000	177+500	RHS	Outer		40	0.4186	0.2725	0.1582	0.0867	0.0543	0.0412	0.025	28.9	31.7	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1171.0	150.5	149.9	1269.5	104.5	119.8	0.1461	214	28.9173	-3.87119
1100	MH	150+000	252+000	177+600	RHS	Inner		40	0.4481	0.2933	0.1715	0.1018	0.0758	0.0577	0.0378	32.4	34.1	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	976.3	150.0	126.2	1189.6	104.0	99.5	0.1548	215	29.0721	-3.86961
297	MH	150+000	252+000	177+750	RHS	Outer		40	0.4519	0.2865	0.1444	0.096	0.0636	0.0473	0.0271	28.8	31.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	783.9	150.5	149.3	849.8	104.5	119.3	0.1654	216	29.2375	-3.85743
1099	MH	150+000	252+000	177+830	RHS	Inner		40	0.344	0.22	0.1317	0.0783	0.0462	0.0361	0.0327	32.2	33.6	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	151.0	149.9	1800.1	104.9	119.8	0.124	217	29.3615	-3.88664
296	MH	150+000	252+000	178+000	RHS	Outer		40	0.3706	0.2529	0.1546	0.1106	0.0727	0.0461	0.0375	28.9	31.8	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	150.5	138.2	1607.5	104.5	109.8	0.1177	218	29.4792	-3.92216
1098	MH	150+000	252+000	178+100	RHS	Inner		40	0.4315	0.2734	0.1593	0.1021	0.0685	0.0534	0.0383	32.4	33.8	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1144.1	150.0	133.0	1394.0	104.0	105.3	0.1581	219	29.6373	-3.91728
295	MH	150+000	252+000	178+250	RHS	Outer		40	0.2952	0.2112	0.1312	0.0724	0.0547	0.0407	0.0306	28.8	31.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	195.9	149.9	1600.5	143.2	119.8	0.084	220	29.7213	-3.98649
1097	MH	150+000	252+000	178+350	RHS	Inner		40	0.2315	0.1844	0.1219	0.0748	0.0428	0.0325	0.0248	32.5	33.6	39.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	283.7	149.9	1825.0	214.8	119.8	0.0471	221	29.7684	-4.09261
294	MH	150+000	252+000	178+500	RHS	Outer		40	0.3233	0.2248	0.1363	0.0847	0.0617	0.045	0.0328	28.7	31.6	36.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	163.9	150.0	1626.2	116.0	119.8	0.0985	222	29.8669	-4.14733
1096	MH	150+000	252+000	178+600	RHS	Inner		40	0.3294	0.1972	0.1095	0.0589	0

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
287	MH	150+000	252+000	180+250	RHS	Outer		40	0.2536	0.1624	0.1066	0.0629	0.0467	0.0357	0.0224	28.8	31.8	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	313.5	150.0	1433.6	238.0	119.8	0.0912	235	31.2262	-4.77985
1089	MH	150+000	252+000	180+350	RHS	Inner		40	0.4039	0.2295	0.1318	0.084	0.0547	0.034	0.0198	34.6	36.3	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	152.2	149.9	1821.9	105.9	119.8	0.1744	236	31.4006	-4.75867
286	MH	150+000	252+000	180+500	RHS	Outer		40	0.4985	0.2884	0.177	0.1032	0.0517	0.0386	0.0297	28.7	32.0	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	731.2	150.2	149.7	702.9	104.2	119.6	0.2101	237	31.6107	-4.70179
285	MH	150+000	252+000	180+750	RHS	Outer		40	0.1895	0.1332	0.0876	0.0568	0.0416	0.0314	0.0283	28.6	31.4	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.1	149.8	1433.6	300.3	119.7	0.0563	238	31.667	-4.7987
1088	MH	150+000	252+000	180+850	RHS	Inner		40	0.5573	0.3299	0.159	0.0795	0.0536	0.0441	0.0287	34.4	36.6	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.0	149.8	690.0	104.0	119.7	0.2274	239	31.8944	-4.72452
284	MH	150+000	252+000	181+000	RHS	Outer		40	0.3108	0.195	0.1151	0.0621	0.0426	0.0301	0.0252	28.6	31.3	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	182.3	150.0	1433.6	131.8	119.8	0.1158	240	32.0102	-4.76194
1087	MH	150+000	252+000	181+100	RHS	Inner		40	0.3604	0.2052	0.096	0.0562	0.0316	0.02	0.0172	34.5	36.4	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	982.8	150.0	150.0	1383.1	104.0	119.8	0.1552	241	32.1654	-4.75996
283	MH	150+000	252+000	181+250	RHS	Outer		40	0.2264	0.1403	0.1005	0.0667	0.0405	0.0233	0.0161	28.6	31.3	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	266.6	150.0	1425.4	201.2	119.8	0.0861	242	32.2515	-4.82707
1086	MH	150+000	252+000	181+330	RHS	Inner		40	0.2386	0.1471	0.0885	0.0591	0.0392	0.029	0.0244	34.5	36.6	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	380.4	150.0	2070.2	288.2	119.8	0.0915	243	32.343	-4.88879
282	MH	150+000	252+000	181+500	RHS	Outer		40	0.4638	0.2827	0.1538	0.0987	0.0602	0.0415	0.0281	28.4	30.9	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	969.9	150.0	149.8	932.3	104.0	119.7	0.1811	244	32.5241	-4.86091
1085	MH	150+000	252+000	181+600	RHS	Inner		40	0.4526	0.2834	0.1749	0.0959	0.0727	0.0562	0.0343	34.5	36.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	932.3	150.2	135.3	1312.1	104.2	107.3	0.1692	245	32.6933	-4.84493
281	MH	150+000	252+000	181+750	RHS	Outer		40	0.3737	0.2605	0.1505	0.1006	0.0607	0.0439	0.0314	28.5	31.4	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1405.4	150.2	150.0	1350.9	104.2	119.8	0.1132	246	32.8065	-4.88494
1084	MH	150+000	252+000	181+850	RHS	Inner		40	0.4742	0.2974	0.1685	0.1078	0.0684	0.0507	0.0467	34.6	36.3	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	889.2	150.2	125.0	1251.4	104.2	98.5	0.1768	247	32.9833	-4.86136
280	MH	150+000	252+000	182+000	RHS	Outer		40	0.5103	0.2787	0.1634	0.1057	0.0644	0.037	0.0241	28.4	31.4	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	735.5	150.5	149.9	707.0	104.5	119.8	0.2316	248	33.2149	-4.78298
1083	MH	150+000	252+000	182+100	RHS	Inner		40	0.2226	0.1519	0.0975	0.0604	0.0421	0.0293	0.0223	34.7	36.0	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	383.1	149.9	2092.8	290.1	119.8	0.0707	249	33.2856	-4.86549
279	MH	150+000	252+000	182+250	RHS	Outer		40	0.2705	0.1373	0.089	0.0579	0.0411	0.0292	0.0262	28.3	30.9	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	395.4	150.0	1419.1	299.1	119.8	0.1332	250	33.4188	-4.88551
1082	MH	150+000	252+000	182+350	RHS	Inner		40	0.3333	0.1958	0.117	0.0615	0.0509	0.0419	0.0303	34.7	36.4	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1223.7	218.2	150.0	1722.2	161.9	119.8	0.1375	251	33.5563	-4.90123
278	MH	150+000	252+000	182+500	RHS	Outer	T-26/34.1	40	0.4221	0.2332	0.1457	0.0738	0.0496	0.0382	0.0302	28.2	31.0	34.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	857.0	152.4	150.0	823.8	106.1	119.8	0.1889	252	33.7452	-4.86555
1081	MH	150+000	252+000	182+600	RHS	Inner		40	0.3835	0.231	0.1252	0.0719	0.0529	0.04	0.034	34.7	36.3	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1216.1	154.2	150.0	1711.5	107.7	119.8	0.1525	253	33.8977	-4.86626
277	MH	150+000	252+000	182+750	RHS	Outer		40	0.3055	0.1928	0.1159	0.0668	0.0467	0.032	0.0277	28.6	31.0	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1419.4	205.7	150.0	1477.4	151.5	119.8	0.1127	254	34.0104	-4.90678
1080	MH	150+000	252+000	182+850	RHS	Inner		40	0.3087	0.1774	0.1126	0.0828	0.0625	0.042	0.0273	34.8	36.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	244.8	150.0	2074.7	183.6	119.8	0.1313	255	34.1417	-4.9287
276	MH	150+000	252+000	183+000	RHS	Outer		40	0.3238	0.2089	0.127	0.0724	0.0521	0.0393	0.0305	28.8	31.2	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	174.4	150.0	1550.1	125.0	119.8	0.1149	256	34.2566	-4.96701
1079	MH	150+000	252+000	183+100	RHS	Inner		40	0.1894	0.1216	0.0853	0.0519	0.036	0.0264	0.0238	35.0	36.2	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	397.3	150.0	2085.2	300.4	119.8	0.0678	257	34.3244	-5.05243
275	MH	150+000	252+000	183+250	RHS	Outer		40	0.2228	0.1442	0.0933	0.0609	0.0386	0.0271	0.0192	28.8	31.6	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	373.4	149.9	1555.7	283.0	119.8	0.0786	258	34.403	-5.12705
1078	MH	150+000	252+000	183+350	RHS	Inner		40	0.1813	0.1058	0.07	0.0431	0.0337	0.0242	0.0188	35.0	36.9	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	390.5	149.9	2109.5	295.5	119.8	0.0755	259	34.4785	-5.20477
274	MH	150+000	252+000	183+500	RHS	Outer		40	0.4088	0.261	0.146	0.0916	0.0633	0.0447	0.0275	28.8	31.0	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1281.7	151.2	150.0	1334.1	105.1	119.8	0.1478	260	34.6263	-5.21018
1077	MH	150+000	252+000	183+600	RHS	Inner		40	0.5093	0.3153	0.2076	0.1245	0.0926	0.0654	0.0465	35.0	36.8	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	847.3	150.5	107.0	1192.4	104.5	83.1	0.194	261	34.8203	-5.1694
273	MH	150+000	252+000	183+750	RHS	Outer		40	0.4397	0.2571	0.1414	0.1006	0.0728	0.0478	0.0318	28.7	30.2	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	944.1	150.2	146.3	982.7	104.2	116.7	0.1826	262	35.0029	-5.14002
1076	MH	150+000	252+000	183+850	RHS	Inner		40	0.3735	0.2307	0.1339	0.0797	0.0597	0.0517	0.0457	35.0	36.7	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1267.7	171.7	143.4	1784.1	122.7	114.2	0.1428	263	35.1457	-5.15044
272	MH	150+000	252+000	184+000	RHS	Outer		40	0.5427	0.3295	0.1725	0.1058	0.0766	0.0571	0.0514	28.6	31.6	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	575.3	150.0	114.1	598.8	104.0	89.1	0.2132	264	35.3589	-5.09045
1075	MH	150+000	252+000	184+100	RHS	Inner	T-32/42.2	40	0.4189	0.2604	0.1504	0.0804	0.053	0.0426	0.0352	34.7	37.4	42.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1098.9	150.2	149.8	1546.5	104.2	119.7	0.1585	265	35.5174	-5.08517
271	MH	150+000	252+000	184+250	RHS	Outer		40	0.4309	0.2885	0.1741	0.0956	0.0717	0.0505	0.0352	28.6	30.3	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	980.6	150.2	137.2	1020.7	104.2	108.9	0.1424	266	35.6598	-5.09599
1074	MH	150+000	252+000	184+350	RHS	Inner		40	0.4711	0.2964	0.1651	0.0868	0.061	0.0484	0.0395	34.7	36.7	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	761.3	150.0	139.1	1065.9	104.0	110.5	0.1747	267	35.8345	-5.0745
270	MH	150+000	252+000	184+530	RHS	Outer		40	0.4418	0.2491	0.1433	0.0952	0.0599	0.0465	0.0367	28.5	29.9	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	958.1	150.2	145.5	997.3	104.2	116.0	0.1927	268	36.0272	-5.03502
1073	MH	150+000	252+000	184+600	RHS	Inner		40	0.2377	0.1393	0.0862	0.0664	0.0463	0.0323	0.0239	34.9	36.2	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	390.2	150.0	2006.8	295.3	119.8	0.0984	269	36.1256	-5.08984
269	MH	150+000	252+000	184+750	RHS	Outer		40	0.3475	0.21	0.1361	0.0882	0.0688	0.0539	0.0379	28.5	28.9	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	191.5	140.8	1547.9	139.5	112.0	0.1375	270	36.2631	-5.10556
1072	MH	150+000	252+000	184+850	RHS	Inner		40	0.3455	0.182	0.1041	0.0716	0.0482	0.0366	0.0314	34.8	37.2	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	983.9	237.0	150.0	1377.6	177.3	119.8	0.1635	271	36.4266	-5.09527
268	MH	150+000	252+000	185+000	RHS	Outer		40	0.4042	0.2354	0.1489	0.1121	0.0834	0.0587	0.0421	28.6	29.3	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	158.8	123.6	1550.1	111.6	97.3	0.1688	272	36.5954	-5.07969
1071	MH	150+000	252+000	185+100	RHS	Inner		40	0.5892	0.373	0.2033	0.1123	0.0821	0.0624	0.0492	34.9	37.3	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	472.0	150.0	107.4	660.8	104.0	83.4	0.2162	273	36.8116	-5.01671
267	MH	150+000	252+000	185+230	RHS	Outer		40	0.5035	0.3304	0.1817	0.1099	0.0618	0.0455	0.0334	28.8	29.8	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	651.6	150.0	143.7	678.2	104.0	114.5	0.1731	274	36.9847	-4.99683
1070	MH	150+000	252+000	185+350	RHS	Inner		40	0.5054	0.3232	0.1894	0.122	0.0764	0.0595	0.0523	34.7	37.2	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	767.7	150.2	110.1	1074.9	104.2	85.7	0.1822	275	37.1669	-4.96784
266	MH	150+000	252+000	185+500	RHS	Outer		40	0.4742	0.2634	0.1391	0.0867	0.0615	0.0411	0.0269	28.8	29.9	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	816.1	150.5	149.4	849.5	104.5	119.3	0.2108	276	37.3777	-4.91026
1069	MH	150+000	252+000	185+600	RHS	Inner		40	0.3686	0.2187	0.1116	0.0732	0.0551	0.0424	0.0329	34.2	36.6	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1198.9	184.5	150.0	1678.6	133.6	119.8	0.1499	277	37.5276	-4.91358
265	MH	150+000	252+000	185+750	RHS	Outer		40	0.4503	0.2725	0.1419	0.0679	0.044	0.0355	0.0299	28.9	30.4	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	880.6	150.7	150.0	916.6	104.6	119.8	0.1778	278	37.7054	-4.88899
1068	MH	150+000	252+000	185+850	RHS	Inner		40	0.2781	0.1927	0.1152	0.0726	0.0432	0.0336	0.0279	34.8	37.6	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	219.9	150.0	2083.6	163.3	119.8	0.0854	279	37.7908	-4.95681
264	MH	150+000	252+000	186+000	RHS	Outer		40	0.4725	0.3106	0.169	0.0883	0.0531	0.0398	0.0307	29.1	29.9	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	673.1	150.7	150.0	700.6	104.6	119.8	0.1619	280	37.9527	-4.94813
1067	MH	150+000	252+000	186+100	RHS	Inner		40	0.4872	0.3248	0.179	0.1054	0.0743	0.0515	0.0425	34.9	37.9	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	775.3	150.0	125.5	1085.5	104.0	98.9	0.1624	281	38.1151	-4.93895
263	MH	150+000	252+000	186+250	RHS	Outer		40	0.6142	0.3549	0.174	0.1078	0.0763	0.0522	0.0348	28.9	30.1	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	414.0	150.0	130.8	430.9	104.0	103.4	0.2593	282	38.3744	-4.83286
1066	MH	150+000	252+000	186+350	RHS	Inner		40	0.5538	0.3435	0.1706	0.1139	0.0738	0.0434	0.021	35.3	37.6	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	505.4	150.0	149.2	707.6	104.0	119.2	0.2103	283	38.5847	-4.77578
262	MH	150+000	252+000	186+500	RHS	Outer		40	0.3039	0.1872	0.1091	0.0696	0.0426	0.0311	0.0231	29.1	29.5	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1417.2	191.3	150.0	1475.1	139.4	119.8	0.1167	284	38.7014	-4.8123
1065	MH	150+000	252+000	186+600	RHS	Inner		40	0.3579	0.2275	0.1286	0.07	0.051	0.0438	0.0335	35.4	37.3	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1335.5	153.2	150.0	1869.8	106.8	119.8	0.1304	285	38.8318	-4.83511
261	MH	150+000	252+000	186+750	RHS	Outer		40	0.4871	0.2973	0.1487	0.0782	0.0546	0.0382	0.0328	29.0	29.7	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	663.4	151.5	149.9	690.5	105.3	119.8	0.1898	286	39.0216	-4.79853
1064	MH	150+000	252+000	186+850	RHS	Inner		40	0.268	0.1681	0.0997	0.0564	0.036	0.0283	0.0254	35.6	38.1	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	291.3	150.0	2098.6	220.7	119.8	0.0999	287	39.1215	-4.85185
260	MH	150+000	252+000	187+000	RHS	Outer	T-27.8/35.9	40	0.4446	0.277	0.1386	0.0807	0.0517	0.0384	0.0296	29.2	29.2	35.9	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	814.0	151.5	149.9	847.3	105.3	119.8	0.1676	288	39.2891	-4.83747
1063	MH	150+000	252+000	187+100	RHS	Inner		40	0.3794	0.2246	0.1246	0.0692	0.0551	0.0449	0.0378	36.0	38.2	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1141.9	174.4	150.0	1598.8	125.0	119.8	0.1548	289	39.4439	-4.83588
259	MH	150+000	252+000	187+250	RHS	Outer		40	0.2084	0.1407	0.0964	0.0683	0.0478	0.0366	0.0283	29.4	29.6	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	397.8	149.8	1955.3	300.8	119.7	0.0677	290	39.5116	-4.9214
1062	MH	150+000	252+000	187+350	RHS	Inner		40	0.1907	0.1281	0.0841	0.0506	0.0372	0.0278	0.0195	36.0	38.0	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	394.9	150.0	2062.5	298.7	119.8	0.0626	291	39.5742	-5.01202
258	MH	150+000	252+000	187+500	RHS	Outer		40	0.4055	0.2052	0.1269	0.0791	0.0566	0.0411	0.0348	29.5	29.6	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	949.5	174.4	150.0	1244.8	125.0	119.8	0.2003	292	39.7745	-4.96494
1061	MH	150+000	252+000	187+600	RHS	Inner		40	0.2904	0.194	0.1129	0.055	0.0306	0.0268	0.0241	36.4	38.3	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	173.9	150.0	2092.6	124.6	119.8	0.0964	293	39.8709	-5.02175
257	MH	150+000	252+000	187+730	RHS	Outer		40	0.3493	0.2285	0.1357	0.086	0.0655	0.0505	0.0373	29.5	29.6	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	164.4	145.2	1936.9	116.5	115.7	0.1208	294	39.9917	-5.05417
1060	MH	150+000	252+000	187+850	RHS	Inner		40	0.487	0.2836	0.1427	0.0676	0.0392	0.0355	0.032	36.2	38.6	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	623.7	150.5	149.5	873.2	104.5	119.4	0.2034	295	40.1951	-5.00399
256	MH	150+000	252+000	188+000	RHS	Outer		40	0.4743	0.2812	0.1434	0.0851	0.0558	0.0413	0.0315	29.7	30.4	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	736.6	151.0	150.0	965.7	104.9	119.8	0.1931	296	40.3882	-4.9641
1059	MH	150+000	252+000	188+100	RHS	Inner		40	0.3491	0.2176	0.1329	0.0714	0.0522	0.0425	0.0324	35.8	38.0	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	162.2	150.0	2098.6	114.6	119.8	0.1315	297	40.5197	-4.98582
255	MH	150+000	252+000	188+250	RHS	Outer	6 Lane VUP End	40	0.4324	0.2525	0.1197	0.0851	0.0599	0.0386	0.023	29.8	29.9	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	868.8	154.2	150.0	1139.0	107.7	119.8	0.1799	298	40.6996	-4.95914
1058	MH	150+000	252+000	188+350	RHS	Inner		40	0.393	0.2263	0.1442	0.0847	0.0533	0.0309	0.0255	36.0	38.6	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1308.6	154.2	150.0	1832.2	107.7	119.8	0.1667	299	40.8663	-4.94566
254	MH	150+000	252+000	188+500	RHS	Outer		40	0.4712	0.3052	0.1631	0.112	0.0733	0.0524	0.0378	29.8	30.3	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	888.2	150.2	128.4	1164.5	104.2	101.4	0.166	300	41.0323	-4.93287
1057	MH	150+000	252+000	188+600	RHS	Inner		40	0.4864	0.2936	0.1627	0.0942	0.0748	0.0493	0.0297	36.2	38.9	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.0	146.2	1043.4	104.0	116.6	0.1928	301	41.2251	-4.89329
253	MH	150+000	252+000	188+680	RHS	Outer	6 Lane VUP Start	40	0.4395	0.2682	0.1468	0.0969	0.0611	0.0411	0.0274	29.9	30.1	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	953.8	151.0	149.6	1250.5	104.9	119.5	0.1713	302	41.3964	-4.87521
1056	MH	150+000	252+000	188+850	RHS	Inner	T-33.2/42.1	40	0.4461	0.2609	0.1456	0.0965	0.0608	0.0425	0.0219	36.1	39.1	42.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	150.7	150.0	1312.7	104.6	119.8	0.1852	303	41.5816	-4.84323
252	MH	150+000	252+000	189+000	RHS	Outer		40	0.4074	0.2594	0.1627	0.1004	0.0665	0.0404	0.0262	30.2	30.2	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.0	149.9	1629.6	104.0	119.8	0.148	304	41.7296	-4.84844
1055	MH	150+000	252+000	189+

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
246	MH	150+000	252+000	190+740	RHS	Outer		40	0.5117	0.3111	0.167	0.1112	0.073	0.0484	0.0307	30.9	33.9	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	675.3	150.0	142.1	885.3	104.0	113.1	0.2006	317	43.8015	-4.76837
1048	MH	150+000	252+000	190+825	RHS	Inner		40	0.5014	0.3125	0.158	0.0707	0.0413	0.0345	0.031	36.5	40.0	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	489.2	150.0	150.0	737.2	104.0	119.8	0.1889	318	43.9904	-4.73268
245	MH	150+000	252+000	191+020	RHS	Outer	Approach	40	0.5281	0.3201	0.1555	0.0799	0.0585	0.0413	0.0227	31.0	34.0	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	484.9	150.2	149.7	635.7	104.2	119.6	0.208	319	44.1984	-4.6779
1047	MH	150+000	252+000	191+100	RHS	Inner		40	0.4968	0.2925	0.1453	0.0726	0.0508	0.0362	0.0324	36.1	39.4	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	488.2	151.0	150.0	735.7	104.9	119.8	0.2043	320	44.4027	-4.62682
244	MH	150+000	252+000	191+250	RHS	Outer		40	0.4523	0.2752	0.1386	0.0811	0.0474	0.0304	0.0258	31.2	35.4	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	726.9	153.4	150.0	953.0	107.0	119.8	0.1771	321	44.5798	-4.60294
1046	MH	150+000	252+000	191+350	RHS	Inner		40	0.4393	0.2705	0.1526	0.0745	0.049	0.0371	0.0288	36.4	39.3	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	959.1	150.7	149.9	1445.3	104.6	119.8	0.1688	322	44.7486	-4.58735
243	MH	150+000	252+000	191+500	RHS	Outer		40	0.5649	0.333	0.1737	0.1063	0.0652	0.0558	0.0503	31.3	34.9	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	496.8	150.5	121.9	651.3	104.5	95.8	0.2319	323	44.9805	-4.50867
1045	MH	150+000	252+000	191+600	RHS	Inner		40	0.5578	0.3192	0.1595	0.0771	0.0585	0.0443	0.0393	36.7	39.4	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	472.0	150.0	144.8	711.2	104.0	115.4	0.2386	324	45.2191	-4.42329
242	MH	150+000	252+000	191+730	RHS	Outer	T-29.3/40.8	40	0.5106	0.315	0.1662	0.0733	0.0457	0.0254	0.0178	31.2	34.8	40.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	654.8	150.7	150.0	858.5	104.6	119.8	0.1956	325	45.4147	-4.3809
1044	MH	150+000	252+000	191+850	RHS	Inner		40	0.5937	0.3435	0.1611	0.0886	0.0637	0.0423	0.0271	36.9	39.7	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	150.2	149.5	740.5	104.2	119.4	0.2502	326	45.6649	-4.28392
241	MH	150+000	252+000	192+000	RHS	Outer		40	0.57	0.3325	0.1917	0.1016	0.0722	0.0522	0.0453	31.5	35.5	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	498.9	150.0	122.6	628.8	104.0	96.4	0.2375	327	45.9024	-4.19964
1043	MH	150+000	252+000	192+100	RHS	Inner		40	0.5236	0.3106	0.1578	0.1035	0.0656	0.0396	0.038	36.8	39.3	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	612.9	150.0	143.2	923.6	104.0	114.0	0.213	328	46.1154	-4.13986
240	MH	150+000	252+000	192+250	RHS	Outer		40	0.6074	0.3522	0.1685	0.0907	0.0572	0.0345	0.0286	31.3	35.3	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.5	150.0	513.6	104.5	119.8	0.2552	329	46.3706	-4.03787
1042	MH	150+000	252+000	192+350	RHS	Inner		40	0.5477	0.3219	0.1684	0.0859	0.0593	0.0494	0.0445	36.5	39.1	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	468.8	150.0	135.4	706.4	104.0	107.4	0.2258	330	46.5964	-3.96529
239	MH	150+000	252+000	192+500	RHS	Outer		40	0.3928	0.2223	0.1209	0.0668	0.049	0.0385	0.0347	31.4	35.3	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1028.0	171.7	150.0	1295.7	122.7	119.8	0.1705	331	46.7669	-3.94801
1041	MH	150+000	252+000	192+600	RHS	Inner		40	0.4726	0.2557	0.1419	0.0879	0.0507	0.0374	0.0329	36.4	39.2	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	807.5	151.0	149.7	1216.8	104.9	119.6	0.2169	332	46.9838	-3.88433
238	MH	150+000	252+000	192+750	RHS	Outer		40	0.4279	0.2639	0.1377	0.0848	0.0475	0.0336	0.0242	31.5	35.7	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	838.7	150.2	149.9	1057.1	104.2	119.8	0.164	333	47.1478	-3.87354
1040	MH	150+000	252+000	192+850	RHS	Inner		40	0.2708	0.1687	0.0974	0.0544	0.0404	0.0289	0.0172	36.5	39.3	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	203.5	150.0	2239.2	149.6	119.8	0.1021	334	47.2499	-3.92466
237	MH	150+000	252+000	193+000	RHS	Outer		40	0.4327	0.2227	0.1213	0.0682	0.0447	0.0308	0.0277	31.6	35.4	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	802.2	155.4	150.0	1011.1	108.7	119.8	0.21	335	47.4599	-3.86788
1039	MH	150+000	252+000	193+100	RHS	Inner		40	0.5048	0.2962	0.1536	0.0795	0.0525	0.0392	0.0326	36.8	39.5	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	549.5	150.0	149.8	828.0	104.0	119.7	0.2086	336	47.6685	-3.81249
236	MH	150+000	252+000	193+250	RHS	Outer		40	0.484	0.287	0.1487	0.0918	0.0524	0.0345	0.0217	31.6	35.7	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.7	150.0	819.4	104.6	119.8	0.197	337	47.8655	-3.76871
1038	MH	150+000	252+000	193+350	RHS	Inner	T-34.2/43.5	40	0.4471	0.2448	0.1333	0.0754	0.055	0.0419	0.0298	36.7	39.8	43.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	768.8	152.7	150.0	768.8	106.4	119.8	0.2023	338	48.0678	-3.71963
235	MH	150+000	252+000	193+500	RHS	Outer		40	0.5053	0.2783	0.139	0.0697	0.0492	0.0351	0.0221	31.8	36.1	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	487.1	152.7	149.9	613.9	106.4	119.8	0.227	339	48.2948	-3.64585
1037	MH	150+000	252+000	193+600	RHS	Inner		40	0.3647	0.2129	0.1174	0.0613	0.0381	0.024	0.0136	36.5	40.2	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1209.7	156.1	150.0	1852.6	109.3	119.8	0.1518	340	48.4466	-3.64726
234	MH	150+000	252+000	193+750	RHS	Outer		40	0.3142	0.1577	0.0979	0.0592	0.0415	0.0325	0.0293	31.9	36.8	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1241.9	312.8	150.0	1565.3	237.4	119.8	0.1565	341	48.6031	-3.64398
1036	MH	150+000	252+000	193+850	RHS	Inner		40	0.5219	0.3058	0.1625	0.0804	0.0537	0.0439	0.0395	36.5	39.8	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	564.5	150.0	148.8	864.5	104.0	118.8	0.2161	342	48.8192	-3.5811
233	MH	150+000	252+000	194+000	RHS	Outer		40	0.3521	0.1899	0.0989	0.0559	0.0389	0.0232	0.0123	32.0	36.5	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1350.5	151.5	150.0	1350.5	105.3	119.8	0.1622	343	48.9814	-3.57212
1035	MH	150+000	252+000	194+100	RHS	Inner		40	0.559	0.3365	0.182	0.1122	0.0646	0.0388	0.0274	36.5	40.4	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.0	148.1	490.3	104.0	118.2	0.2225	344	49.2039	-3.50283
232	MH	150+000	252+000	194+250	RHS	Outer		40	0.593	0.2989	0.1462	0.0636	0.0424	0.027	0.012	31.8	36.6	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	549.5	150.5	149.9	692.6	104.5	119.8	0.2941	345	49.498	-3.36195
1034	MH	150+000	252+000	194+350	RHS	Inner		40	0.5664	0.2939	0.1743	0.1092	0.0756	0.0472	0.0299	36.5	39.8	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	494.6	150.0	144.5	757.4	104.0	115.1	0.2725	346	49.7705	-3.24267
231	MH	150+000	252+000	194+500	RHS	Outer		40	0.5499	0.2664	0.1687	0.1018	0.0702	0.0486	0.0333	31.8	36.0	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	514.0	150.0	140.8	647.8	104.0	112.0	0.2835	347	50.054	-3.11238
1033	MH	150+000	252+000	194+600	RHS	Inner		40	0.5897	0.3166	0.1641	0.113	0.0826	0.066	0.0504	36.2	39.6	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	484.9	150.2	109.7	742.6	104.2	85.4	0.2731	348	50.3271	-2.9925
230	MH	150+000	252+000	194+750	RHS	Outer		40	0.5108	0.2483	0.1394	0.0869	0.0481	0.0222	0.013	31.8	35.7	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	718.3	151.0	150.0	905.3	104.9	119.8	0.2625	349	50.5896	-2.88322
1032	MH	150+000	252+000	194+850	RHS	Inner		40	0.5978	0.313	0.1566	0.0948	0.0538	0.0407	0.0314	36.2	39.6	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	478.5	151.2	150.0	732.8	105.1	119.8	0.2848	350	50.8744	-2.75164
229	MH	150+000	252+000	195+000	RHS	Outer		40	0.5547	0.2966	0.1499	0.0848	0.0516	0.0289	0.0188	31.7	35.5	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	447.3	152.2	150.0	563.8	105.9	119.8	0.2581	351	51.1325	-2.64675
1031	MH	150+000	252+000	195+100	RHS	Inner		40	0.4861	0.2855	0.177	0.0959	0.0676	0.047	0.0362	36.3	39.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	788.2	150.0	138.7	1207.1	104.0	110.2	0.2006	352	51.3331	-2.59937
228	MH	150+000	252+000	195+230	RHS	Outer		40	0.4527	0.2551	0.1325	0.0827	0.059	0.0425	0.0276	31.7	35.3	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	734.4	150.7	149.8	925.6	104.6	119.7	0.1976	353	51.5307	-2.55499
1030	MH	150+000	252+000	195+350	RHS	Inner		40	0.4281	0.2348	0.1313	0.0841	0.054	0.0468	0.0419	36.1	39.8	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	983.9	150.5	149.4	1506.8	104.5	119.3	0.1933	354	51.724	-2.5149
227	MH	150+000	252+000	195+500	RHS	Outer		40	0.4749	0.2517	0.1413	0.0743	0.0589	0.0489	0.0342	31.6	35.8	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.7	148.8	939.2	104.6	118.8	0.2232	355	51.9472	-2.44492
1029	MH	150+000	252+000	195+600	RHS	Inner		40	0.3224	0.1599	0.0972	0.0679	0.0478	0.0327	0.0228	36.3	39.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1207.5	256.1	150.0	1849.2	192.8	119.8	0.1625	356	52.1097	-2.43564
226	MH	150+000	252+000	195+750	RHS	Outer		40	0.4239	0.2426	0.1297	0.0865	0.0567	0.036	0.0217	31.8	36.3	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1315.1	150.5	150.0	1657.5	104.5	119.8	0.1813	357	52.291	-2.40756
1028	MH	150+000	252+000	195+850	RHS	Inner		40	0.722	0.3823	0.1919	0.0983	0.0735	0.0556	0.0372	36.1	39.9	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	150.7	124.5	622.5	104.6	98.0	0.3397	358	52.6307	-2.22107
225	MH	150+000	252+000	196+000	RHS	Outer		40	0.5794	0.3245	0.1744	0.0954	0.0659	0.0459	0.0345	31.7	35.5	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	420.4	150.2	140.3	529.9	104.2	111.6	0.2549	359	52.8856	-2.11939
1027	MH	150+000	252+000	196+100	RHS	Inner		40	0.5056	0.2848	0.167	0.1062	0.0633	0.045	0.0318	36.3	39.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	614.0	150.0	147.4	940.3	104.0	117.6	0.2208	360	53.1064	-2.05181
224	MH	150+000	252+000	196+250	RHS	Outer		40	0.5121	0.2292	0.123	0.0753	0.0526	0.0377	0.0318	31.5	35.7	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	153.7	149.9	619.4	107.2	119.8	0.2829	361	53.3893	-1.92213
1026	MH	150+000	252+000	196+350	RHS	Inner		40	0.6202	0.3192	0.1606	0.0894	0.0672	0.044	0.0334	36.3	39.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	402.2	150.7	143.6	615.9	104.6	114.4	0.301	362	53.6903	-1.77434
223	MH	150+000	252+000	196+500	RHS	Outer	T-30.5/40	40	0.5061	0.253	0.1222	0.0702	0.0427	0.0245	0.0135	31.1	34.8	40	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	698.9	150.7	150.0	880.9	104.6	119.8	0.2531	363	53.9434	-1.67446
1025	MH	150+000	252+000	196+600	RHS	Inner		40	0.3695	0.2007	0.1029	0.0623	0.0412	0.0279	0.0251	36.3	39.6	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1240.9	161.2	150.0	1900.3	113.7	119.8	0.1688	364	54.1122	-1.65888
222	MH	150+000	252+000	196+750	RHS	Outer		40	0.4175	0.2043	0.1251	0.0673	0.0423	0.0253	0.0153	31.8	35.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1222.6	150.7	150.0	1222.6	104.6	119.8	0.2132	365	54.3254	-1.59889
1024	MH	150+000	252+000	196+850	RHS	Inner		40	0.3827	0.1928	0.0976	0.0593	0.0404	0.0252	0.0157	36.4	40.0	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	911.8	158.1	150.0	911.8	111.0	119.8	0.1899	366	54.5153	-1.56221
221	MH	150+000	252+000	197+000	RHS	Outer		40	0.5612	0.3182	0.1524	0.0854	0.0649	0.0428	0.0269	31.8	35.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	431.2	150.5	149.8	431.2	104.5	119.7	0.243	367	54.7583	-1.47243
1023	MH	150+000	252+000	197+100	RHS	Inner	Wide Cracking	40	0.6221	0.3581	0.1869	0.0958	0.062	0.0383	0.0345	36.7	39.9	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	418.3	151.0	149.4	418.3	104.9	119.3	0.264	368	55.0223	-1.36165
220	MH	150+000	252+000	197+250	RHS	Outer		40	0.4218	0.2688	0.1479	0.097	0.0617	0.0452	0.0349	32.0	35.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1077.4	150.0	147.0	1077.4	104.0	117.3	0.153	369	55.1753	-1.36186
1022	MH	150+000	252+000	197+350	RHS	Inner		40	0.5584	0.3126	0.1702	0.1138	0.0749	0.0563	0.0358	36.6	39.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	537.6	150.0	126.4	537.6	104.0	99.7	0.2458	370	55.4211	-1.26928
219	MH	150+000	252+000	197+500	RHS	Outer		40	0.4416	0.1946	0.1174	0.0616	0.041	0.0273	0.0197	32.1	35.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	593.5	150.0	150.0	593.5	104.0	119.8	0.247	371	55.6681	-1.1755
1021	MH	150+000	252+000	197+600	RHS	Inner		40	0.4455	0.24	0.1328	0.079	0.0531	0.0358	0.0317	36.6	39.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	824.7	151.7	149.7	824.7	105.5	119.6	0.2055	372	55.8736	-1.12322
218	MH	150+000	252+000	197+750	RHS	Outer	Wide cracking	40	0.6856	0.4116	0.2086	0.1108	0.0696	0.0469	0.0306	32.0	35.9	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	151.0	141.5	404.3	104.9	112.6	0.274	373	56.1476	-1.00243
1020	MH	150+000	252+000	197+830	RHS	Inner	T-33.6/43.8	40	0.4983	0.2674	0.133	0.0728	0.0526	0.0382	0.0283	36.4	40.2	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	589.2	151.0	149.7	589.2	104.9	119.6	0.2309	374	56.3785	-0.92475
217	MH	150+000	252+000	198+000	RHS	Outer		40	0.6639	0.3807	0.1851	0.0912	0.0689	0.0438	0.0291	32.1	36.7	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	409.7	150.7	149.7	409.7	104.6	119.6	0.2832	375	56.6617	-0.79477
1019	MH	150+000	252+000	198+100	RHS	Inner		40	0.2649	0.1432	0.0851	0.057	0.0386	0.0282	0.0211	35.8	44.2	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	363.1	150.0	1496.8	275.5	119.8	0.1217	376	56.7834	-0.82628
216	MH	150+000	252+000	198+250	RHS	Outer		40	0.3457	0.2265	0.1422	0.0729	0.0482	0.0369	0.0331	32.1	36.8	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	150.2	149.8	1469.9	104.2	119.7	0.1192	377	56.9026	-0.8603
1018	MH	150+000	252+000	198+350	RHS	Inner		40	0.677	0.3623	0.1763	0.0999	0.0718	0.0528	0.0348	35.8	45.0	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.2	128.3	410.8	104.2	101.3	0.3147	378	57.2173	-0.69882
215	MH	150+000	252+000	198+500	RHS	Outer		40	0.5134	0.2529	0.132	0.0841	0.0553	0.0374	0.0246	32.2	37.3	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	592.5	152.9	149.9	592.5	106.5	119.8	0.2605	379	57.4778	-0.59154
1017	MH	150+000	252+000	198+600	RHS	Inner		40	0.6159	0.3302	0.1768	0.0972	0.0489	0.0307	0.0179	35.3	43.7	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	150.0	149.8	406.5	104.0	119.7	0.2857	380	57.7635	-0.45905
214	MH	150+000	252+000	198+750	RHS	Outer		40	0.516	0.2893	0.1546	0.0755	0.0505	0.0341	0.0307	32.1	37.6	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	483.9	151.5	149.9	483.9	105.3	119.8	0.2267	381	57.9902	-0.38557
1016	MH	150+000	252+000	198+850	RHS	Inner		40	0.6399	0.3356	0.1828	0.0982	0.0603	0.0462	0.0368	35.3	44.0	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	416.1	150.0	138.2	416.1	104.0	109.8	0.3043	382	58.2945	-0.23449
213	MH	150+000	252+000	199+000	RHS	Outer	Wide cracking	40	0.7191	0.3861	0.1991	0.0892	0.044	0.0309	0.0219	32.1	36.5	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.7	149.3	407.5	104.6	119.3	0.333	383	58.6275	-0.05471
1015	MH	150+000	252+000	199+100	RHS	Inner		40	0.6409	0.3654	0.1899	0.1108	0.0581	0.0484	0.0332	34.9	43.9	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	140.0	404.3	104.0	111.3	0.2755	384	58.903	0.067578
212	MH	150+000	252+000	199+250	RHS	Outer		40	0.6755	0.3842	0.1783	0.1076	0.0552	0.0383	0.0254	32.0	37.2	43.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	431.2	150.5	149.3	431.2	104.5	119.3	0.2913	385	59.1943	0.20566
1014	MH	150+000	252+000	199+350	RHS	Inner		40	0.5096	0.2848	0.16	0.0917	0.0557	0.0413	0.0316	34.3	42.8	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	590.3	150.2	149.5	590.3	104.2	119.4	0.2248	386	59.4191	0.277243
211	MH	150+000	252+000	199+500	RHS	Outer		40	0.524	0.2709	0.14	0.0895	0.0514	0.0406	0.0365	32.2	36.6	43.8	10.0	180	450	400.0	1500.

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)						
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1008	MH	150+000	252+000	201+100	RHS	Inner		40	0.5621	0.3001	0.1521	0.0903	0.0593	0.0377	0.0268	33.4	39.8	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	467.7	151.0	149.6	583.8	104.9	119.5	0.262	399	62.642	1.508319
204	MH	150+000	252+000	201+250	RHS	Outer		40	0.3619	0.1633	0.0842	0.0597	0.0432	0.0361	0.0247	36.5	43.7	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	607.5	302.5	150.0	607.5	229.5	119.8	0.1986	400	62.8406	1.553702
1007	MH	150+000	252+000	201+300	RHS	Inner		40	0.5105	0.2797	0.154	0.1032	0.0701	0.0482	0.0332	33.4	39.6	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	615.1	150.5	139.4	615.1	104.5	110.8	0.2308	401	63.0714	1.631285
203	MH	150+000	252+000	201+500	RHS	Outer		40	0.5663	0.3046	0.1531	0.0797	0.0624	0.0491	0.0457	36.3	43.7	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	448.4	150.0	137.5	448.4	104.0	109.2	0.2617	402	63.3331	1.739767
1006	MH	150+000	252+000	201+600	RHS	Inner		40	0.398	0.2185	0.1211	0.0664	0.0519	0.0378	0.028	33.4	40.0	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	161.0	150.0	937.6	113.5	119.8	0.1795	403	63.5126	1.76605
202	MH	150+000	252+000	201+750	RHS	Outer		40	0.6117	0.3382	0.1617	0.0823	0.0426	0.0143	0.0129	36.2	43.1	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	567.7	150.2	149.9	567.7	104.2	119.8	0.2735	404	63.7861	1.886333
1005	MH	150+000	252+000	201+850	RHS	Inner		40	0.5346	0.3194	0.1748	0.1124	0.0818	0.0587	0.0431	33.4	39.3	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	601.1	150.0	115.5	601.1	104.0	90.3	0.2152	405	64.0013	1.948316
201	MH	150+000	252+000	202+000	RHS	Outer		40	0.5238	0.2988	0.1608	0.0791	0.0577	0.0504	0.0454	36.2	43.6	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	497.8	151.2	139.4	497.8	105.1	110.8	0.225	406	64.2263	2.020098
1004	MH	150+000	252+000	202+100	RHS	Inner		40	0.3679	0.2006	0.1158	0.0611	0.043	0.0381	0.029	33.6	39.0	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	986.0	194.7	150.0	986.0	142.2	119.8	0.1673	407	64.3936	2.034181
200	MH	150+000	252+000	202+220	RHS	Outer		40	0.5605	0.3075	0.1672	0.0855	0.0589	0.0543	0.0489	36.2	42.6	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	466.7	150.0	132.1	466.7	104.0	104.5	0.253	408	64.6466	2.133964
1003	MH	150+000	252+000	202+350	RHS	Inner		40	0.6376	0.3393	0.1883	0.1033	0.0669	0.0478	0.0341	33.9	39.6	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	136.6	404.3	104.0	108.4	0.2983	409	64.9449	2.279047
199	MH	150+000	252+000	202+500	RHS	Outer		40	0.562	0.323	0.1753	0.1199	0.0796	0.0617	0.0491	36.1	42.2	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	557.0	150.0	111.3	557.0	104.0	86.7	0.239	410	65.1839	2.364829
1002	MH	150+000	252+000	202+600	RHS	Inner		40	0.5801	0.3406	0.1909	0.107	0.0749	0.0543	0.0409	33.7	38.9	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	448.4	150.0	121.0	448.4	104.0	95.0	0.2395	411	65.4234	2.451112
198	MH	150+000	252+000	202+750	RHS	Outer		40	0.5873	0.3262	0.1822	0.1019	0.0718	0.0564	0.0454	36.1	43.0	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	487.1	150.0	121.6	487.1	104.0	95.6	0.2611	412	65.6845	2.558995
1001	MH	150+000	252+000	202+850	RHS	Inner	t-33.5/39.8	40	0.7769	0.4069	0.1982	0.0995	0.0677	0.0433	0.0251	33.6	39.1	39.8	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	406.5	151.2	148.9	406.5	105.1	118.9	0.37	413	66.0545	2.775778
197	MH	150+000	252+000	203+000	RHS	Outer		40	0.3967	0.2213	0.129	0.0839	0.0527	0.0433	0.0366	35.7	43.1	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1107.5	159.5	149.9	1107.5	112.2	119.8	0.1754	414	66.2299	2.79796
1000	MH	150+000	252+000	203+100	RHS	Inner		40	0.4123	0.2365	0.1372	0.0763	0.0552	0.0417	0.0326	32.8	37.5	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	996.8	154.6	150.0	996.8	108.0	119.8	0.1758	415	66.4057	2.820543
196	MH	150+000	252+000	203+250	RHS	Outer		40	0.6329	0.3204	0.1696	0.1066	0.0635	0.0475	0.0357	35.7	41.7	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.5	137.0	400.0	104.5	108.7	0.3125	416	66.7182	2.979826
999	MH	150+000	252+000	203+320	RHS	Inner		40	0.7351	0.3788	0.2062	0.1287	0.0773	0.0572	0.0432	32.7	37.9	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.0	113.7	401.1	104.0	88.8	0.3563	417	67.0745	3.182909
195	MH	150+000	252+000	203+500	RHS	Outer		40	0.723	0.3784	0.1846	0.0928	0.0585	0.0441	0.0339	35.8	42.6	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.7	145.4	404.3	104.6	115.9	0.3446	418	67.4191	3.374291
998	MH	150+000	252+000	203+600	RHS	Inner		40	0.5602	0.3049	0.1612	0.0863	0.0639	0.0418	0.0266	33.2	37.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	491.4	152.0	149.2	491.4	105.8	119.2	0.2553	419	67.6744	3.476374
194	MH	150+000	252+000	203+750	RHS	Outer		40	0.5642	0.2981	0.1524	0.1046	0.0707	0.0529	0.0398	35.9	41.7	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	451.6	150.0	129.6	451.6	104.0	102.4	0.2661	420	67.9405	3.589257
997	MH	150+000	252+000	203+850	RHS	Inner		40	0.667	0.3628	0.175	0.1111	0.0808	0.0608	0.0466	33.0	38.2	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.7	112.8	410.8	104.6	88.0	0.3042	421	68.2447	3.74024
193	MH	150+000	252+000	204+000	RHS	Outer	T-35.5/42	40	0.4738	0.2539	0.1417	0.0785	0.0541	0.0361	0.0182	35.8	40.5	42	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	602.2	150.7	149.9	602.2	104.6	119.8	0.2199	422	68.4646	3.806922
996	MH	150+000	252+000	204+100	RHS	Inner		40	0.6342	0.3755	0.1851	0.1054	0.0705	0.0543	0.0434	33.3	37.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	419.4	150.0	120.5	419.4	104.0	94.6	0.2587	423	68.7233	3.912405
192	MH	150+000	252+000	204+250	RHS	Outer		40	0.3523	0.1957	0.1187	0.0718	0.0556	0.0444	0.0399	35.4	41.4	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1065.6	229.2	150.0	1065.6	170.9	119.8	0.1566	424	68.8799	3.915788
995	MH	150+000	252+000	204+350	RHS	Inner	Bleeding and rutting	40	0.6962	0.3954	0.1976	0.1034	0.0656	0.0499	0.0391	33.5	37.4	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	412.9	150.0	130.0	412.9	104.0	102.7	0.3008	425	69.1807	4.063371
191	MH	150+000	252+000	204+500	RHS	Outer		40	0.5924	0.3164	0.1547	0.0966	0.0573	0.0418	0.0309	35.3	40.8	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.7	149.4	411.8	104.6	119.3	0.276	426	69.4567	4.186153
994	MH	150+000	252+000	204+600	RHS	Inner		40	0.556	0.3103	0.1734	0.0963	0.0568	0.0408	0.0302	33.5	37.1	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	439.8	152.4	149.8	439.8	106.1	119.7	0.2457	427	69.7024	4.278636
190	MH	150+000	252+000	204+750	RHS	Outer		40	0.2235	0.139	0.081	0.0573	0.0378	0.0246	0.0139	35.4	41.3	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	283.7	150.0	1481.7	214.8	119.8	0.0845	428	69.7869	4.209919
993	MH	150+000	252+000	204+850	RHS	Inner		40	0.6634	0.4059	0.1901	0.0895	0.055	0.0418	0.0362	33.1	37.4	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.5	147.6	400.0	104.5	117.8	0.2575	429	70.0444	4.314202
189	MH	150+000	252+000	205+000	RHS	Outer		40	0.3501	0.1882	0.1009	0.0648	0.0397	0.0308	0.025	35.5	41.7	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1194.6	194.7	150.0	1194.6	142.2	119.8	0.1619	430	70.2063	4.322884
992	MH	150+000	252+000	205+100	RHS	Inner		40	0.1879	0.1201	0.0764	0.0481	0.0334	0.0222	0.0196	32.9	37.7	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	395.6	150.0	1500.0	299.2	119.8	0.0678	431	70.2741	4.237467
188	MH	150+000	252+000	205+250	RHS	Outer		40	0.2146	0.136	0.091	0.0572	0.0365	0.0275	0.0216	35.2	40.9	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	398.5	150.0	1489.2	301.3	119.8	0.0786	432	70.3527	4.16285
991	MH	150+000	252+000	205+285	RHS	Inner		40	0.3604	0.2028	0.1243	0.0739	0.0374	0.0252	0.0162	32.6	36.5	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1383.9	150.2	150.0	1383.9	104.2	119.8	0.1576	433	70.5103	4.167233
187	MH	150+000	252+000	205+500	RHS	Outer		40	0.6097	0.3427	0.1738	0.0893	0.0654	0.0519	0.0351	34.8	40.4	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.0	139.4	404.3	104.0	110.8	0.267	434	70.7773	4.281015
990	MH	150+000	252+000	205+600	RHS	Inner		40	0.5977	0.346	0.1772	0.0878	0.0629	0.0477	0.0296	32.8	36.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	429.0	150.0	150.0	429.0	104.0	119.8	0.2517	435	71.029	4.379498
186	MH	150+000	252+000	205+750	RHS	Outer		40	0.4295	0.2224	0.1281	0.0767	0.0495	0.0376	0.0335	34.7	40.5	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	916.1	157.1	150.0	916.1	110.2	119.8	0.2071	436	71.2361	4.433381
989	MH	150+000	252+000	205+850	RHS	Inner		40	0.6261	0.3599	0.1788	0.094	0.0605	0.0415	0.0318	32.2	36.7	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	464.5	150.0	148.6	464.5	104.0	118.7	0.2662	437	71.5023	4.546364
185	MH	150+000	252+000	206+000	RHS	Outer		40	0.6443	0.2901	0.1583	0.0999	0.0597	0.0517	0.0463	34.7	41.0	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	416.1	150.0	129.6	416.1	104.0	102.4	0.3542	438	71.8565	4.747346
988	MH	150+000	252+000	206+100	RHS	Inner		40	0.7395	0.405	0.1908	0.106	0.0751	0.0587	0.0317	32.4	35.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.5	132.2	411.8	104.5	104.6	0.3345	439	72.191	4.928629
184	MH	150+000	252+000	206+250	RHS	Outer		40	0.3226	0.1987	0.1128	0.0659	0.0493	0.0379	0.0289	34.4	40.0	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1402.2	212.8	150.0	1402.2	157.4	119.8	0.1239	440	72.3149	4.899312
987	MH	150+000	252+000	206+350	RHS	Inner		40	0.7228	0.4203	0.2191	0.1108	0.0753	0.0505	0.0336	32.8	36.2	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	407.5	150.0	130.4	407.5	104.0	103.1	0.3025	441	72.6174	5.048595
183	MH	150+000	252+000	206+500	RHS	Outer		40	0.6029	0.3838	0.2307	0.1239	0.0889	0.065	0.0569	34.3	39.1	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	501.1	150.2	97.5	501.1	104.2	74.9	0.2191	442	72.8365	5.114477
986	MH	150+000	252+000	206+600	RHS	Inner		40	0.6873	0.43	0.2323	0.146	0.0854	0.0541	0.0329	32.8	35.7	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	418.3	150.2	126.4	418.3	104.2	99.7	0.2573	443	73.0938	5.21856
182	MH	150+000	252+000	206+750	RHS	Outer	Local Settlement	40	0.6105	0.3598	0.1859	0.0936	0.0689	0.0507	0.0409	34.3	39.0	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	439.8	150.0	129.0	439.8	104.0	101.9	0.2507	444	73.3445	5.316043
985	MH	150+000	252+000	206+850	RHS	Inner	Wide Cracking and Bleeding	40	0.6663	0.3978	0.2049	0.1058	0.0669	0.0458	0.0394	32.7	35.8	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.0	128.1	411.8	104.0	101.1	0.2685	445	73.613	5.431326
181	MH	150+000	252+000	207+000	RHS	Outer		40	0.3671	0.2242	0.1265	0.067	0.0392	0.034	0.0317	34.5	38.6	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1047.3	152.4	150.0	1333.0	106.1	119.8	0.1429	446	73.7559	5.421009
984	MH	150+000	252+000	207+100	RHS	Inner	t-28.9/36.5	40	0.3506	0.2009	0.1138	0.0594	0.0407	0.0253	0.022	32.7	35.6	36.5	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1371.0	153.2	150.0	1466.2	106.8	119.8	0.1497	447	73.9056	5.417491
180	MH	150+000	252+000	207+250	RHS	Outer		40	0.3023	0.1783	0.09	0.0546	0.0299	0.0201	0.0133	34.4	39.2	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	150.5	150.0	1894.1	104.5	119.8	0.124	448	74.0296	5.388274
983	MH	150+000	252+000	207+330	RHS	Inner		40	0.2642	0.1483	0.0936	0.0595	0.0366	0.0278	0.0216	32.3	35.1	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	319.1	150.0	1419.2	242.3	119.8	0.1159	449	74.1455	5.350957
179	MH	150+000	252+000	207+520	RHS	Outer		40	0.8689	0.569	0.3715	0.214	0.1026	0.0687	0.044	34.3	38.6	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.5	97.5	522.9	104.5	74.9	0.2999	450	74.4454	5.49764
982	MH	150+000	252+000	207+600	RHS	Inner		40	0.7379	0.3851	0.1963	0.0988	0.0727	0.0538	0.0329	32.4	35.7	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	403.2	150.0	130.8	385.9	104.0	103.4	0.3528	451	74.7982	5.697222
178	MH	150+000	252+000	207+750	RHS	Outer		40	0.6169	0.3257	0.1706	0.0945	0.0667	0.0476	0.0343	34.2	39.1	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	405.4	150.2	141.8	516.0	104.2	112.8	0.2912	452	75.0894	5.835205
981	MH	150+000	252+000	207+850	RHS	Inner		40	0.5452	0.2887	0.1665	0.0913	0.069	0.0522	0.0347	32.1	36.2	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	504.3	150.2	139.1	482.7	104.2	110.5	0.2565	453	75.3459	5.938488
177	MH	150+000	252+000	208+000	RHS	Outer		40	0.4082	0.2347	0.1349	0.089	0.0565	0.0303	0.0128	34.2	38.7	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1281.7	151.5	150.0	1631.3	105.3	119.8	0.1735	454	75.5194	5.958771
980	MH	150+000	252+000	208+100	RHS	Inner		40	0.2444	0.1395	0.0811	0.0504	0.0376	0.0282	0.0218	32.0	35.5	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	395.6	150.0	1395.5	299.2	119.8	0.1049	455	75.6243	5.910453
176	MH	150+000	252+000	208+250	RHS	Outer		40	0.1996	0.1243	0.0789	0.0496	0.0284	0.0182	0.0107	34.0	38.8	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	219.9	150.0	1892.7	163.3	119.8	0.0753	456	75.6996	5.832536
979	MH	150+000	252+000	208+300	RHS	Inner		40	0.3179	0.2	0.1181	0.0803	0.0514	0.038	0.0281	31.8	35.1	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1440.9	197.4	150.0	1379.1	144.5	119.8	0.1179	457	75.8175	5.797219
175	MH	150+000	252+000	208+500	RHS	Outer	T-30.8/40.2	40	0.6976	0.3845	0.1879	0.0951	0.0617	0.0381	0.0312	33.9	37.8	40.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	401.1	150.7	149.5	510.5	104.6	119.4	0.3131	458	76.1306	5.957102
978	MH	150+000	252+000	208+600	RHS	Inner		40	0.5477	0.3072	0.1589	0.0791	0.0489	0.0441	0.0337	31.8	35.3	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	502.2	150.7	149.6	480.6	104.6	119.5	0.2405	459	76.3711	6.044384
174	MH	150+000	252+000	208+750	RHS	Outer		40	0.638	0.3583	0.1816	0.0904	0.0509	0.0409	0.0359	33.6	37.9	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	150.7	147.3	462.0	104.6	117.5	0.2797	460	76.6508	6.170867
977	MH	150+000	252+000	208+840	RHS	Inner		40	0.588	0.3106	0.1633	0.1065	0.0692	0.0484	0.0337	31.7	35.3	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	496.8	150.0	138.4	475.5	104.0	109.9	0.2774	461	76.9282	6.29505
173	MH	150+000	252+000	209+000	RHS	Outer		40	0.63	0.3465	0.1865	0.1115	0.0574	0.0425	0.032	33.6	37.5	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	411.8	150.2	146.3	463.1	104.2	116.7	0.2835	462	77.2117	6.425333
976	MH	150+000	252+000	209+100	RHS	Inner		40	0.5048	0.275	0.1494	0.0948	0.0583	0.0362	0.0206	31.3	34.7	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	151.5	149.9	743.0	105.3	119.8	0.2298	463	77.4415	6.501915
172	MH	150+000	252+000	209+250	RHS	Outer		40	0.3477	0.1886	0.1066	0.074	0.0535	0.0407	0.0315	33.6	37.8	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	989.2	247.5	150.0	1112.5	185.8	119.8	0.1591	464	77.6006	6.507798
975	MH	150+000	252+000	209+350	RHS	Inner		40	0.3903	0.21	0.1103	0.0791	0.0572	0.0437	0.0288	31.0	34.4	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	941.9	196.9	150.0	901.5	144.1	119.8	0.1803	465	77.7809	6.534881
171	MH	150+000	252+000	209+500	RHS	Outer		40	0.3443	0.2145	0.1241	0.0693	0.0532	0.0419	0.0377	33.7	37.9	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1295.7	181.5	150.0	1457.3	131.1	119.8	0.1298	466	77.9107	6.511464
974	MH	150+000	252+000	209+600	RHS	Inner		40	0.4641	0.2693	0.1486	0.0933	0.0561	0.0395	0.0279	31.1	34.3	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	778.5	151.2	149.9	745.1	105.1	119.8	0.1948	467	78.1055	6.553046
170	MH	150+000	252+000	209+750	RHS	Outer		40	0.4768	0.3039	0.1423	0.0926	0.0596	0.0385	0.0241	33.6	37.5	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	733.3	150.7	149.9	824.7	104.6	119.8	0.1729	468	78.2784	6.572729
973	MH	150+000	252+000	209+850	RHS	Inner		40	0.4881	0.2813	0.1458	0.0766	0.0411	0.0326	0.0293	31.1	34.3	34	10.0	180	450	400.0	1500.0	150.0	400.

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
967	MH	150+000	252+000	211+350	RHS	Inner		40	0.2339	0.1251	0.0773	0.0547	0.0382	0.0309	0.0257	30.6	33.6	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	392.7	150.0	1397.5	297.1	119.8	0.1088	481	80.4452	6.747705
163	MH	150+000	252+000	211+500	RHS	Outer		40	0.2786	0.1516	0.0894	0.0536	0.0287	0.0182	0.0107	33.1	36.7	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	150.7	150.0	1597.5	104.6	119.8	0.127	482	80.5722	6.721488
966	MH	150+000	252+000	211+600	RHS	Inner		40	0.3095	0.1578	0.0882	0.0514	0.0397	0.0314	0.0251	30.1	33.3	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1229.0	341.8	150.0	1176.2	259.5	119.8	0.1517	483	80.7239	6.71997
162	MH	150+000	252+000	211+750	RHS	Outer		40	0.2914	0.1654	0.0924	0.0549	0.037	0.0274	0.0247	32.9	36.0	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	256.5	150.0	1625.4	193.1	119.8	0.126	484	80.8499	6.692753
965	MH	150+000	252+000	211+850	RHS	Inner		40	0.4344	0.2507	0.1433	0.0906	0.052	0.0351	0.0239	30.0	32.0	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	862.4	150.7	149.9	825.4	104.6	119.8	0.1837	485	81.0336	6.723236
161	MH	150+000	252+000	211+980	RHS	Outer		40	0.5844	0.3117	0.1554	0.097	0.0672	0.0443	0.0377	33.0	35.9	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	458.1	150.5	138.4	515.2	104.5	109.9	0.2727	486	81.3063	6.842719
964	MH	150+000	252+000	212+100	RHS	Inner	T-27.1/34	40	0.6309	0.3497	0.1875	0.1203	0.0716	0.0521	0.0395	30.0	32.4	34	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	402.2	150.2	122.2	384.9	104.2	96.1	0.2812	487	81.5875	6.970701
160	MH	150+000	252+000	212+250	RHS	Outer		40	0.5798	0.357	0.2115	0.1503	0.1055	0.0693	0.0445	32.8	36.2	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	495.7	150.0	101.5	557.5	104.0	78.4	0.2228	488	81.8103	7.040284
963	MH	150+000	252+000	212+350	RHS	Inner		40	0.6437	0.3456	0.1651	0.0984	0.051	0.0393	0.031	29.8	32.3	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	403.2	151.0	150.0	427.3	104.9	119.8	0.2981	489	82.1084	7.185167
159	MH	150+000	252+000	212+500	RHS	Outer		40	0.7395	0.4268	0.2389	0.1615	0.1045	0.0664	0.0417	32.7	35.8	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	410.8	151.5	103.3	462.0	105.3	79.9	0.3127	490	82.4211	7.34465
962	MH	150+000	252+000	212+600	RHS	Inner		40	0.3627	0.1957	0.1042	0.0724	0.0503	0.0345	0.0235	29.5	31.5	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1291.4	176.1	150.0	1368.6	126.5	119.8	0.167	491	82.5881	7.358432
158	MH	150+000	252+000	212+750	RHS	Outer		40	0.633	0.3378	0.1567	0.0983	0.0597	0.0412	0.0295	32.4	35.7	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	417.2	151.5	149.4	469.2	105.3	119.3	0.2952	492	82.8833	7.500415
961	MH	150+000	252+000	212+850	RHS	Inner		40	0.4965	0.2779	0.1437	0.0774	0.0515	0.0403	0.0363	29.4	31.8	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	625.8	150.7	149.6	663.2	104.6	119.5	0.2186	493	83.1019	7.565798
157	MH	150+000	252+000	213+000	RHS	Outer		40	0.4592	0.2679	0.1432	0.092	0.0589	0.0399	0.0274	32.1	35.7	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	851.6	150.7	150.0	957.8	104.6	119.8	0.1913	494	83.2932	7.603881
960	MH	150+000	252+000	213+080	RHS	Inner		40	0.3166	0.1909	0.1153	0.0706	0.0533	0.0361	0.0243	29.2	31.7	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	183.7	150.0	1565.7	132.9	119.8	0.1257	495	83.4189	7.576363
156	MH	150+000	252+000	213+230	RHS	Outer	T-30.2/37.6	40	0.4354	0.2365	0.1338	0.0882	0.0563	0.0376	0.0312	31.8	34.3	37.6	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1063.4	152.2	150.0	1196.0	105.9	119.8	0.1989	496	83.6178	7.622046
959	MH	150+000	252+000	213+350	RHS	Inner		40	0.4036	0.2314	0.1191	0.0785	0.0578	0.0414	0.0373	29.1	31.1	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	992.5	159.3	150.0	1051.9	112.1	119.8	0.1722	497	83.79	7.641029
155	MH	150+000	252+000	213+500	RHS	Outer		40	0.4714	0.2492	0.1325	0.0826	0.061	0.0425	0.0383	30.8	33.6	35.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	688.2	150.5	149.6	694.3	104.5	119.5	0.2222	498	84.0122	7.710012
958	MH	150+000	252+000	213+600	RHS	Inner		40	0.293	0.1746	0.1014	0.0662	0.0444	0.0283	0.0193	29.0	31.4	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	189.8	150.0	1577.2	138.1	119.8	0.1184	499	84.1306	7.675194
154	MH	150+000	252+000	213+750	RHS	Outer		40	0.3396	0.1665	0.102	0.0689	0.0446	0.0398	0.036	30.8	33.2	35.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	950.5	304.2	150.0	959.0	230.8	119.8	0.1731	500	84.3037	7.695077
957	MH	150+000	252+000	213+840	RHS	Inner		40	0.4065	0.2341	0.1346	0.0741	0.0426	0.0326	0.0259	28.8	31.6	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	936.6	151.7	149.9	992.6	105.5	119.8	0.1724	501	84.4761	7.71426
153	MH	150+000	252+000	214+000	RHS	Outer		40	0.3602	0.1809	0.1066	0.0719	0.0452	0.0438	0.0394	30.5	32.8	35.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	892.5	267.8	150.0	900.4	202.2	119.8	0.1793	502	84.6554	7.740343
956	MH	150+000	252+000	214+100	RHS	Inner		40	0.3758	0.1996	0.1227	0.0687	0.046	0.0352	0.0242	28.7	31.0	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1306.5	152.7	150.0	1384.6	106.4	119.8	0.1762	503	84.8316	7.763326
152	MH	150+000	252+000	214+250	RHS	Outer		40	0.5349	0.3111	0.159	0.1086	0.0743	0.0571	0.0448	30.5	33.2	35.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	609.7	150.0	120.5	615.1	104.0	94.6	0.2238	504	85.0554	7.833908
955	MH	150+000	252+000	214+350	RHS	Inner		40	0.4708	0.2705	0.1579	0.0864	0.0601	0.0407	0.0367	28.3	30.9	36.3	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	819.4	150.5	148.8	868.4	104.5	118.8	0.2003	505	85.2557	7.880991
151	MH	150+000	252+000	214+480	RHS	Outer		40	0.4936	0.2735	0.1408	0.0953	0.062	0.0462	0.0356	30.4	32.8	35.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	664.5	150.5	146.6	670.4	104.5	116.9	0.2201	506	85.4758	7.947874
954	MH	150+000	252+000	214+600	RHS	Inner		40	0.4607	0.2629	0.1531	0.1022	0.0667	0.0493	0.0386	28.2	30.5	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	938.7	151.5	136.6	994.8	105.3	108.4	0.1978	507	85.6736	7.992457
150	MH	150+000	252+000	214+750	RHS	Outer		40	0.477	0.2609	0.1258	0.08	0.0551	0.0388	0.0349	30.4	32.7	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	745.2	150.5	149.6	751.8	104.5	119.5	0.2161	508	85.8897	8.055339
953	MH	150+000	252+000	214+850	RHS	Inner		40	0.4418	0.2384	0.1274	0.0834	0.0526	0.0415	0.0374	27.9	30.9	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	883.9	150.5	149.9	936.8	104.5	119.8	0.2034	509	86.0931	8.105522
149	MH	150+000	252+000	215+000	RHS	Outer		40	0.2953	0.1911	0.1172	0.0647	0.0452	0.0313	0.0272	30.5	32.8	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	210.4	150.0	1512.2	155.4	119.8	0.1042	510	86.1973	8.056505
952	MH	150+000	252+000	215+100	RHS	Inner		40	0.2689	0.1413	0.0907	0.0612	0.0416	0.0266	0.0199	27.7	29.8	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	329.6	150.0	1574.9	250.3	119.8	0.1276	511	86.3249	8.030888
148	MH	150+000	252+000	215+250	RHS	Outer		40	0.3356	0.1805	0.1053	0.0581	0.041	0.0288	0.0264	30.1	32.2	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1338.7	206.0	150.0	1350.6	151.7	119.8	0.1551	512	86.48	8.03277
951	MH	150+000	252+000	215+350	RHS	Inner		40	0.4891	0.2679	0.1322	0.0877	0.058	0.0433	0.0332	27.4	29.8	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	675.3	150.0	149.9	715.7	104.0	119.8	0.2212	513	86.7012	8.100753
147	MH	150+000	252+000	215+500	RHS	Outer		40	0.5236	0.2949	0.1478	0.0768	0.0586	0.0411	0.0289	29.9	32.0	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	596.8	150.0	149.8	602.1	104.0	119.7	0.2287	514	86.9299	8.176236
950	MH	150+000	252+000	215+600	RHS	Inner		40	0.385	0.2318	0.1213	0.0713	0.0385	0.0279	0.0201	27.3	28.4	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1238.7	152.4	150.0	1312.8	106.1	119.8	0.1532	515	87.0831	8.176219
146	MH	150+000	252+000	215+750	RHS	Outer		40	0.4757	0.2758	0.1605	0.1008	0.0564	0.0406	0.0301	30.0	31.3	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	755.9	150.0	149.5	762.6	104.0	119.4	0.1999	516	87.283	8.222901
949	MH	150+000	252+000	215+850	RHS	Inner		40	0.2977	0.1876	0.1286	0.0883	0.0562	0.032	0.0214	27.2	28.3	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	173.0	150.0	1568.1	123.8	119.8	0.1101	517	87.3931	8.179784
145	MH	150+000	252+000	216+000	RHS	Outer		40	0.3348	0.1894	0.1177	0.0765	0.0474	0.0364	0.0291	30.4	31.3	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	197.4	150.0	1473.2	144.5	119.8	0.1454	518	87.5385	8.171967
948	MH	150+000	252+000	216+100	RHS	Inner		40	0.2093	0.1546	0.1082	0.0722	0.046	0.0326	0.0236	27.4	28.4	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	380.2	150.0	1580.6	288.0	119.8	0.0547	519	87.5932	8.07345
144	MH	150+000	252+000	216+210	RHS	Outer	Bleeding	40	0.6543	0.3698	0.1876	0.115	0.0665	0.0516	0.0299	30.6	32.2	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	404.3	150.5	141.9	407.9	104.5	112.9	0.2845	520	87.8777	8.204732
947	MH	150+000	252+000	216+360	RHS	Inner		40	0.2957	0.1739	0.107	0.0646	0.0412	0.0254	0.0171	28.1	29.2	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1430.1	175.7	150.0	1515.6	126.1	119.8	0.1218	521	87.9995	8.173315
143	MH	150+000	252+000	216+500	RHS	Outer	T-28.5/35.2	40	0.411	0.2269	0.1166	0.066	0.049	0.0375	0.0319	30.5	32.6	35.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	852.7	158.6	150.0	860.3	111.5	119.8	0.1841	522	88.1836	8.204198
142	MH	150+000	252+000	216+590	RHS	Outer		40	0.6168	0.3707	0.19	0.1235	0.0777	0.0401	0.0125	30.2	32.3	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	787.1	150.5	150.0	797.6	104.5	119.8	0.2461	523	88.4297	8.297081
946	MH	150+000	252+000	216+600	RHS	Inner		40	0.6245	0.344	0.1646	0.1013	0.0602	0.038	0.0221	28.2	29.6	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	400.0	150.2	149.7	423.9	104.2	119.6	0.2805	524	88.7102	8.424363
141	MH	150+000	252+000	217+000	RHS	Outer		40	0.3702	0.2176	0.1195	0.0745	0.0531	0.039	0.0304	30.1	33.3	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1360.2	165.2	150.0	1378.4	117.2	119.8	0.1526	525	88.8628	8.423746
945	MH	150+000	252+000	217+100	RHS	Inner	T-27.3/36.3	40	0.3104	0.1897	0.1133	0.0791	0.0541	0.0398	0.0298	28.1	30.4	36.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	228.2	150.0	1544.1	170.1	119.8	0.1207	526	88.9835	8.391229
140	MH	150+000	252+000	217+200	RHS	Outer		40	0.4942	0.2807	0.1355	0.0967	0.0686	0.0502	0.0374	30.1	33.0	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	681.7	150.0	136.9	690.8	104.0	108.6	0.2135	527	89.197	8.451512
944	MH	150+000	252+000	217+850	RHS	Inner		40	0.4105	0.248	0.1368	0.0823	0.0455	0.0332	0.0246	29.9	31.8	33.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1194.6	150.5	149.9	1133.4	104.5	119.8	0.1625	528	89.3595	8.460794
139	MH	150+000	252+000	218+000	RHS	Outer		40	0.5832	0.3292	0.1642	0.1033	0.0623	0.0413	0.0266	29.0	31.4	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	497.8	150.7	149.7	504.5	104.6	119.6	0.254	529	89.6135	8.561577
943	MH	150+000	252+000	218+100	RHS	Inner		40	0.4191	0.2376	0.1396	0.0815	0.0525	0.0321	0.023	29.6	31.1	33.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1362.4	151.5	150.0	1292.6	105.3	119.8	0.1815	530	89.795	8.58986
138	MH	150+000	252+000	218+250	RHS	Outer		40	0.4478	0.2534	0.1424	0.085	0.0624	0.0487	0.039	28.8	30.7	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	937.6	150.0	141.6	950.1	104.0	112.7	0.1944	531	89.9894	8.631043
942	MH	150+000	252+000	218+350	RHS	Inner		40	0.4662	0.2559	0.1384	0.0817	0.0597	0.048	0.0401	29.5	30.6	33.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	801.1	150.0	146.1	760.1	104.0	116.5	0.2103	532	90.1997	8.688125
137	MH	150+000	252+000	218+500	RHS	Outer		40	0.4123	0.2313	0.1314	0.0967	0.0744	0.0487	0.031	28.8	30.1	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1322.6	150.2	149.7	1340.3	104.2	119.6	0.181	533	90.3807	8.715908
941	MH	150+000	252+000	218+600	RHS	Inner		40	0.5401	0.3086	0.1977	0.1175	0.0763	0.0471	0.022	29.4	30.3	33.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.7	149.6	477.4	104.6	119.5	0.2315	534	90.6122	8.794191
136	MH	150+000	252+000	218+750	RHS	Outer	Patch	40	0.4963	0.2577	0.1358	0.0881	0.0536	0.0463	0.037	28.9	30.2	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	669.9	150.0	148.5	678.9	104.0	118.6	0.2386	535	90.8508	8.879574
940	MH	150+000	252+000	218+850	RHS	Inner	T-26.3/33.8	40	0.5407	0.2874	0.1574	0.0922	0.0662	0.0485	0.0312	29.5	30.5	33.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	503.2	150.0	145.4	477.4	104.0	115.9	0.2533	536	91.1041	8.979656
135	MH	150+000	252+000	219+000	RHS	Outer		40	0.5259	0.3069	0.166	0.0955	0.0664	0.0444	0.0308	28.8	30.2	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	618.3	150.5	149.0	626.6	104.5	119.0	0.219	537	91.3231	9.045439
939	MH	150+000	252+000	219+100	RHS	Inner		40	0.5554	0.3219	0.19	0.113	0.083	0.0631	0.0422	29.5	30.0	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	588.2	150.0	114.9	658.5	104.0	89.8	0.2335	538	91.5566	9.125722
134	MH	150+000	252+000	219+250	RHS	Outer		40	0.3204	0.1932	0.1133	0.0705	0.0429	0.0293	0.0199	28.6	30.3	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	163.9	150.0	1496.1	116.0	119.8	0.1272	539	91.6838	9.099705
938	MH	150+000	252+000	219+350	RHS	Inner		40	0.3429	0.1753	0.0831	0.0454	0.0307	0.0196	0.0175	29.8	30.2	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1200.0	162.0	150.0	1343.4	114.4	119.8	0.1676	540	91.8514	9.114087
133	MH	150+000	252+000	219+500	RHS	Outer		40	0.4385	0.2638	0.1409	0.0937	0.0624	0.0369	0.019	28.3	30.4	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1115.1	150.2	149.9	1130.0	104.2	119.8	0.1747	541	92.0261	9.13557
937	MH	150+000	252+000	219+600	RHS	Inner		40	0.2452	0.1684	0.1069	0.0705	0.0468	0.032	0.0225	29.7	30.9	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	291.7	150.0	1635.9	221.0	119.8	0.0768	542	92.1029	9.059153
132	MH	150+000	252+000	219+730	RHS	Outer		40	0.4492	0.2073	0.1044	0.0645	0.0485	0.0373	0.0334	28.0	30.4	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	587.1	203.3	150.0	595.0	149.5	119.8	0.2419	543	92.3448	9.147836
936	MH	150+000	252+000	219+850	RHS	Inner		40	0.5813	0.3453	0.1955	0.1358	0.0932	0.0649	0.0449	29.6	31.0	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	490.3	150.2	105.6	548.9	104.2	81.9	0.236	544	92.5808	9.230618
131	MH	150+000	252+000	220+000	RHS	Outer		40	0.4885	0.2635	0.1383	0.0776	0.0488	0.0441	0.0397	28.1	29.6	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	693.5	150.5	149.3	702.8	104.5	119.3	0.225	545	92.8058	9.302401
935	MH	150+000	252+000	220+100	RHS	Inner		40	0.404	0.24	0.1337	0.0761	0.0527	0.0358	0.0265	29.5	30.4	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1102.2	152.0	150.0	1233.9	105.8	119.8	0.164	546	92.9698	9.313184
130	MH	150+000	252+000	220+240	RHS	Outer		40	0.6526	0.3207	0.1753	0.1236	0.0856	0.06	0.0476	28.1	29.8	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	433.3	150.0	110.4	439.1	104.0	86.0	0.3319	547	93.3017	9.491867
934	MH	150+000	252+000	220+350	RHS	Inner		40	0.6439	0.3663	0.1868	0.1219	0.0748	0.0568	0.0443	29.8	31.0	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	440.9	150.2	116.7	493.6	104.2	91.4	0.2776	548	93.5793	9.616249
129	MH	150+000	252+000	220+500	RHS	Outer		40	0.5768	0.3432	0.1871	0.1279	0.0848	0.0622	0.0467	28.1	29.5	35.3	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	534.4	150.5	108.1	541.6	104.5	84.0	0.2336	549	93.8129	9.696632
933	MH	150+000	252+000	220+600	RHS	Inner		40	0.6687	0.4093	0.2062	0.125	0.0905	0.0653	0.0352	29.9	30.9	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	425.8	150.0	119.4	476.7	104.0	93.7	0.2594	550	94.0723	9.802815
128	MH	150+000	252+000	220+750	RHS	Outer		40	0.4664	0.2871	0.1595	0.0967	0.0635	0.0441	0.0301	28.1	29.8	35.3	10.0

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
122	MH	150+000	252+000	222+250	RHS	Outer		40	0.2897	0.1816	0.1087	0.0715	0.0454	0.0289	0.0175	31.3	33.3	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1458.1	177.6	150.0	1580.8	127.8	119.8	0.1081	563	95.68	9.418691
926	MH	150+000	252+000	222+350	RHS	Inner		40	0.3221	0.2115	0.1324	0.0824	0.0485	0.0391	0.0325	30.2	31.3	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	172.7	149.9	1634.7	123.6	119.8	0.1106	564	95.7906	9.376074
121	MH	150+000	252+000	222+500	RHS	Outer		40	0.4691	0.2957	0.1656	0.0953	0.0665	0.0505	0.0383	31.5	33.5	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	894.6	150.0	135.0	969.9	104.0	107.0	0.1734	565	95.964	9.396256
925	MH	150+000	252+000	222+600	RHS	Inner		40	0.289	0.1931	0.1118	0.0745	0.0484	0.0315	0.0203	30.3	31.3	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1420.4	180.8	150.0	1590.1	130.5	119.8	0.0959	566	96.0599	9.338939
120	MH	150+000	252+000	222+750	RHS	Outer		40	0.3267	0.1951	0.1151	0.0615	0.0433	0.031	0.0206	31.4	33.9	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	157.8	150.0	1621.5	110.8	119.8	0.1316	567	96.1915	9.317322
924	MH	150+000	252+000	222+850	RHS	Inner	T-26.8/37.5	40	0.277	0.1819	0.1077	0.0707	0.0556	0.0437	0.0317	30.3	32.2	37.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	303.7	150.0	1667.2	230.4	119.8	0.0951	568	96.2866	9.259205
119	MH	150+000	252+000	223+000	RHS	Outer		40	0.3517	0.2209	0.1289	0.084	0.0541	0.0299	0.0142	31.2	33.9	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	152.0	149.9	1578.4	105.8	119.8	0.1308	569	96.4174	9.236787
923	MH	150+000	252+000	223+100	RHS	Inner		40	0.242	0.1598	0.0973	0.0656	0.0429	0.027	0.0191	30.0	31.4	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1475.3	305.4	150.0	1570.6	231.7	119.8	0.0822	570	96.4996	9.16577
118	MH	150+000	252+000	223+250	RHS	Outer		40	0.264	0.1689	0.11	0.0815	0.0616	0.0504	0.0431	31.0	33.1	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	385.6	146.6	1625.0	292.0	116.9	0.0951	571	96.5947	9.107653
922	MH	150+000	252+000	223+350	RHS	Inner		40	0.1999	0.1187	0.0812	0.0548	0.0317	0.0229	0.0172	29.8	31.1	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	397.1	150.0	1593.5	300.3	119.8	0.0812	572	96.6759	9.035636
117	MH	150+000	252+000	223+500	RHS	Outer		40	0.3018	0.2083	0.1304	0.0745	0.0463	0.0341	0.0309	30.8	32.8	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	188.1	150.0	1620.3	136.7	119.8	0.0935	573	96.7694	8.975918
921	MH	150+000	252+000	223+600	RHS	Inner		40	0.3488	0.2113	0.1081	0.0591	0.038	0.0307	0.0232	29.9	31.1	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1315.1	162.7	150.0	1400.1	115.0	119.8	0.1375	574	96.9069	8.960201
116	MH	150+000	252+000	223+750	RHS	Outer		40	0.2183	0.1364	0.089	0.055	0.0367	0.0238	0.0214	30.8	32.9	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	386.8	150.0	1608.7	292.8	119.8	0.0819	575	96.9888	8.888884
920	MH	150+000	252+000	223+850	RHS	Inner		40	0.2391	0.1431	0.099	0.0647	0.0474	0.0373	0.0278	30.0	31.1	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	385.3	150.0	1569.4	291.7	119.8	0.096	576	97.0848	8.831667
115	MH	150+000	252+000	224+000	RHS	Outer		40	0.2696	0.1595	0.1089	0.0702	0.0433	0.0331	0.026	31.1	32.6	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	321.3	150.0	1578.4	244.0	119.8	0.1101	577	97.1949	8.788549
919	MH	150+000	252+000	224+100	RHS	Inner		40	0.3155	0.1769	0.1055	0.0625	0.0474	0.0321	0.0245	29.9	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1376.3	223.3	150.0	1465.2	166.1	119.8	0.1386	578	97.3335	8.773932
114	MH	150+000	252+000	224+250	RHS	Outer		40	0.3708	0.2063	0.1336	0.0954	0.0622	0.0402	0.0262	31.1	32.9	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	152.4	150.0	1606.3	106.1	119.8	0.1645	579	97.498	8.785215
918	MH	150+000	252+000	224+350	RHS	Outer		40	0.2641	0.1512	0.083	0.0534	0.0332	0.0229	0.016	29.7	31.1	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1433.3	257.8	150.0	1525.9	194.1	119.8	0.1129	580	97.6109	8.744898
113	MH	150+000	252+000	224+500	RHS	Outer		40	0.2703	0.1567	0.0929	0.061	0.038	0.0236	0.0139	31.0	32.4	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	185.7	150.0	1586.5	134.6	119.8	0.1136	581	97.7245	8.70528
917	MH	150+000	252+000	224+550	RHS	Inner		40	0.3251	0.1921	0.1088	0.0481	0.0293	0.0271	0.0244	30.0	30.7	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	159.5	150.0	1323.3	112.2	119.8	0.133	582	97.8575	8.685063
112	MH	150+000	252+000	224+820	RHS	Outer	Approach	40	0.1319	0.084	0.0506	0.0348	0.0235	0.0172	0.0129	30.9	32.7	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	397.3	150.0	1611.0	300.4	119.8	0.0479	583	97.9054	8.579746
916	MH	150+000	252+000	224+850	RHS	Inner		40	0.4834	0.3227	0.173	0.0889	0.0553	0.0416	0.0317	30.1	31.6	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	800.0	150.2	149.8	851.7	104.2	119.7	0.1607	584	98.0661	8.587229
111	MH	150+000	252+000	225+000	RHS	Outer		40	0.4612	0.2832	0.1717	0.1094	0.0635	0.0388	0.0241	31.2	33.1	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	864.5	150.5	149.7	937.2	104.5	119.6	0.178	585	98.2441	8.612011
915	MH	150+000	252+000	225+100	RHS	Inner		40	0.2986	0.1977	0.1203	0.0661	0.0431	0.0283	0.0192	30.1	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	154.6	150.0	1560.3	108.0	119.8	0.1009	586	98.345	8.559694
110	MH	150+000	252+000	225+250	RHS	Outer		40	0.3936	0.2637	0.1484	0.0815	0.0537	0.0386	0.0348	30.9	33.1	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	150.0	149.8	1380.2	104.0	119.7	0.1299	587	98.4749	8.536377
914	MH	150+000	252+000	225+350	RHS	Inner		40	0.3206	0.2155	0.14	0.0942	0.0582	0.0336	0.0239	30.0	31.1	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	150.5	150.0	1582.0	104.5	119.8	0.1051	588	98.58	8.48826
109	MH	150+000	252+000	225+500	RHS	Outer	T-27.6/36.8	40	0.2956	0.2032	0.1175	0.0655	0.0458	0.0321	0.0294	30.5	32.2	36.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	211.3	149.9	1612.2	156.1	119.8	0.0924	589	98.6724	8.427442
913	MH	150+000	252+000	225+600	RHS	Inner		40	0.4249	0.2614	0.1467	0.0918	0.0553	0.0426	0.0335	30.2	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1150.5	151.0	149.4	1224.8	104.9	119.3	0.1635	590	98.8359	8.437725
108	MH	150+000	252+000	225+750	RHS	Outer		40	0.4271	0.2406	0.1178	0.054	0.0318	0.0294	0.0264	31.6	33.1	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	760.2	150.2	150.0	921.8	104.2	119.8	0.1865	591	99.0224	8.471008
912	MH	150+000	252+000	225+850	RHS	Inner		40	0.3701	0.2539	0.1439	0.0832	0.0573	0.0391	0.0302	30.2	31.5	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1478.5	151.0	149.8	1574.0	104.9	119.7	0.1162	592	99.1386	8.433991
107	MH	150+000	252+000	226+000	RHS	Outer		40	0.1974	0.1393	0.082	0.0503	0.0391	0.0344	0.0295	31.8	33.2	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	390.5	150.0	1785.0	295.5	119.8	0.0581	593	99.1967	8.338873
911	MH	150+000	252+000	226+100	RHS	Inner		40	0.2267	0.1429	0.0953	0.0706	0.0538	0.037	0.0249	30.3	31.7	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	391.4	150.0	1596.9	296.2	119.8	0.0838	594	99.2805	8.269456
106	MH	150+000	252+000	226+250	RHS	Outer		40	0.2202	0.1563	0.1053	0.0697	0.0442	0.0341	0.027	31.8	33.1	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	387.3	150.0	1779.8	293.2	119.8	0.0639	595	99.3444	8.180139
910	MH	150+000	252+000	226+310	RHS	Inner		40	0.2867	0.1907	0.1098	0.0788	0.0571	0.0422	0.0321	30.1	31.5	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	276.1	149.9	1584.3	208.8	119.8	0.096	596	99.4404	8.122922
105	MH	150+000	252+000	226+550	RHS	Outer		40	0.1878	0.1291	0.0794	0.0441	0.0308	0.0232	0.0176	31.6	33.3	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1467.7	397.3	150.0	1779.8	300.4	119.8	0.0587	597	99.4991	8.028404
909	MH	150+000	252+000	226+600	RHS	Inner		40	0.1497	0.1	0.0645	0.0474	0.0334	0.0256	0.0191	30.0	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	400.0	150.0	1560.3	302.4	119.8	0.0497	598	99.5488	7.924887
104	MH	150+000	252+000	226+750	RHS	Outer		40	0.1935	0.1326	0.0799	0.0471	0.0319	0.0215	0.0193	31.9	33.2	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	394.6	150.0	1802.0	298.5	119.8	0.0609	599	99.6097	7.83257
908	MH	150+000	252+000	226+850	RHS	Inner		40	0.2808	0.1709	0.1035	0.0735	0.0519	0.0391	0.0343	30.0	31.2	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1462.4	324.0	150.0	1556.9	246.0	119.8	0.1099	600	99.7196	7.789253
103	MH	150+000	252+000	227+000	RHS	Outer		40	0.2785	0.1729	0.0888	0.0576	0.0404	0.0291	0.0212	31.8	33.2	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1468.8	296.4	150.0	1781.1	224.7	119.8	0.1056	601	99.8252	7.741635
907	MH	150+000	252+000	227+100	RHS	Inner		40	0.3498	0.2254	0.1639	0.1193	0.0847	0.0605	0.0442	30.0	31.6	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	207.4	117.9	1584.3	152.9	92.4	0.1244	602	99.9496	7.712818
102	MH	150+000	252+000	227+250	RHS	Outer		40	0.3349	0.2001	0.1087	0.0718	0.0461	0.0311	0.0224	31.9	33.4	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	171.5	150.0	1748.5	122.6	119.8	0.1348	603	100.0844	7.694401
906	MH	150+000	252+000	227+350	RHS	Inner		40	0.2276	0.1355	0.0889	0.0678	0.0434	0.0333	0.0264	30.2	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.9	150.0	1586.6	297.3	119.8	0.0921	604	100.1765	7.633284
101	MH	150+000	252+000	227+500	RHS	Outer		40	0.2476	0.1662	0.1039	0.0705	0.0497	0.0358	0.0231	31.9	33.4	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	334.0	150.0	1748.5	253.6	119.8	0.0814	605	100.2579	7.561466
905	MH	150+000	252+000	227+600	RHS	Inner		40	0.2367	0.1521	0.1019	0.0685	0.0443	0.0276	0.0198	30.3	31.3	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	311.0	150.0	1578.6	236.1	119.8	0.0846	606	100.3425	7.492849
100	MH	150+000	252+000	227+750	RHS	Outer		40	0.4148	0.2668	0.1367	0.084	0.0466	0.0264	0.0238	32.1	33.6	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1050.5	150.5	150.0	1273.9	104.5	119.8	0.148	607	100.4905	7.487632
904	MH	150+000	252+000	227+850	RHS	Inner	T-27.8/36.4	40	0.3467	0.2213	0.1216	0.075	0.0418	0.0297	0.0214	30.3	31.8	36.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1389.2	153.4	150.0	1478.9	107.0	119.8	0.1254	608	100.6159	7.459815
99	MH	150+000	252+000	228+000	RHS	Outer		40	0.4159	0.2631	0.1477	0.0975	0.0636	0.0592	0.0551	32.2	33.3	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1164.5	159.0	124.5	1412.1	111.8	98.0	0.1528	609	100.7687	7.459397
903	MH	150+000	252+000	228+100	RHS	Inner		40	0.4686	0.2913	0.1756	0.097	0.0721	0.0545	0.0374	34.7	42.7	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	900.0	150.5	129.2	1185.8	104.5	102.1	0.1773	610	100.946	7.48348
98	MH	150+000	252+000	228+250	RHS	Outer		40	0.4676	0.2911	0.1531	0.074	0.0615	0.0409	0.0367	32.3	33.4	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	771.0	150.5	149.4	934.9	104.5	119.3	0.1765	611	101.1225	7.506763
902	MH	150+000	252+000	228+350	RHS	Inner		40	0.3715	0.2339	0.1337	0.0881	0.0571	0.0452	0.0363	34.7	42.3	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	151.5	149.6	1922.5	105.3	119.5	0.1376	612	101.2601	7.491146
97	MH	150+000	252+000	228+500	RHS	Outer		40	0.4034	0.2402	0.1155	0.051	0.0404	0.0282	0.0253	32.4	33.8	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	863.4	153.9	150.0	1047.0	107.4	119.8	0.1632	613	101.4233	7.501129
901	MH	150+000	252+000	228+600	RHS	Inner		40	0.4327	0.2471	0.1349	0.0785	0.0554	0.0378	0.025	35.0	43.1	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	854.8	150.5	150.0	1126.3	104.5	119.8	0.1856	614	101.6089	7.533511
96	MH	150+000	252+000	228+750	RHS	Outer		40	0.5145	0.2726	0.1197	0.0521	0.0402	0.0249	0.0225	32.4	33.9	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	562.4	150.5	149.8	682.0	104.5	119.7	0.2419	615	101.8508	7.622194
900	MH	150+000	252+000	228+850	RHS	Inner		40	0.2916	0.1774	0.1073	0.0742	0.0511	0.0392	0.0305	35.3	43.6	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	285.9	149.9	1976.3	216.5	119.8	0.1142	616	101.965	7.583177
95	MH	150+000	252+000	229+000	RHS	Outer		40	0.4374	0.262	0.1283	0.086	0.0576	0.044	0.0306	32.4	34.1	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	905.4	152.4	149.7	1097.9	106.1	119.6	0.1754	617	102.1404	7.60536
899	MH	150+000	252+000	229+100	RHS	Inner		40	0.43	0.2171	0.1187	0.0626	0.0388	0.0231	0.0163	35.1	44.2	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	151.5	150.0	1423.8	105.3	119.8	0.2129	618	102.3533	7.665042
94	MH	150+000	252+000	229+250	RHS	Outer		40	0.4289	0.2761	0.1614	0.1037	0.063	0.0437	0.0393	32.5	33.7	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1107.5	150.5	139.1	1343.0	104.5	110.5	0.1528	619	102.5061	7.664625
898	MH	150+000	252+000	229+350	RHS	Inner		40	0.4654	0.268	0.1563	0.0989	0.0601	0.0413	0.0329	34.4	43.1	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	896.8	150.0	149.2	1181.6	104.0	119.2	0.1974	620	102.7035	7.708808
93	MH	150+000	252+000	229+500	RHS	Outer		40	0.3665	0.2241	0.1147	0.0649	0.0492	0.0385	0.0308	32.7	33.2	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1262.4	171.0	150.0	1530.8	122.1	119.8	0.1424	621	102.8459	7.697991
897	MH	150+000	252+000	229+600	RHS	Inner		40	0.3571	0.2141	0.1119	0.0601	0.0421	0.0301	0.0224	34.5	42.7	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1203.2	155.1	150.0	1585.3	108.4	119.8	0.143	622	102.9889	7.687773
92	MH	150+000	252+000	229+750	RHS	Outer		40	0.4286	0.2776	0.1524	0.0752	0.0505	0.0338	0.0303	32.9	33.9	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1198.9	151.2	150.0	1453.8	105.1	119.8	0.151	623	103.1399	7.685556
896	MH	150+000	252+000	229+850	RHS	Inner		40	0.4524	0.2776	0.1522	0.1002	0.0649	0.0422	0.0273	34.4	42.4	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	951.6	150.7	150.0	1253.8	104.6	119.8	0.1748	624	103.3147	7.707139
91	MH	150+000	252+000	229+890	RHS	Outer	T-30.1/39.2	40	0.1347	0.0849	0.059	0.0436	0.0311	0.0219	0.0157	33.1	34.4	39.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	399.0	150.0	1802.0	301.7	119.8	0.0498	625	103.3645	7.603722
90	MH	150+000	252+000	230+360	RHS	Outer		40	0.2853	0.1934	0.1158	0.0731	0.0535	0.0402	0.0329	32.9	34.5	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	247.0	150.0	1826.8	185.4	119.8	0.0919	626	103.4564	7.542404
895	MH	150+000	252+000	230+380	RHS	Inner		40	0.2061	0.0962	0.0589	0.0411	0.0301	0.0225	0.0129	33.6	42.2	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1460.2	393.2	150.0	1923.9	297.5	119.8	0.1099	627	103.5663	7.499087
89	MH	150+000	252+000	230+500	RHS	Outer		40	0.4245	0.2677	0.1276	0.0636	0.0439	0.0286	0.0258	32.9	34.7	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	871.0	151.0	150.0	1071.5	104.9	119.8	0.1568	628	103.7231	7.50267
894	MH	150+000	252+000	230+600	RHS	Inner		40	0.4369	0.2859	0.1383	0.0684	0.0389	0.0244	0.0172	33.6	41.4	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	915.1	151.0	150.0	1205.7	104.9	119.8	0.151	629	103.8741	7.500453
88	MH	150+000	252+000	230+750	RHS	Outer		40	0.4004	0.2452	0.1183	0.0766	0.0458	0.0307	0.0276	32.9	34.5	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1168.8	152.9	150.0	1437.9	106.5	119.8	0.1552	630	104.0293	7.502435
893	MH	150+000	252+000	230+850	RHS	Inner		40	0.4012	0.2355	0.1256	0.0891	0.0633	0.0504	0.0358	33.6	41.5	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1288.2	151.2	148.0	1697.3	105.1	118.1	0.1657	631	104.195	7.514918
87	MH	150+000	252+000	231+000	RHS	Outer		40	0.4627	0.261	0.1274	0.0863	0.0592	0.041	0.0313	32.9	34.3	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	859.1	151.5	149.8	1056.9	105.3	119.7	0.2017	632	104.3967	7.563401
892	MH	150+000	252+000	231+100	RHS	Inner		40	0.4723

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
886	MH	150+000	252+000	232+600	RHS	Inner		40	0.2969	0.1718	0.1044	0.0665	0.0406	0.032	0.023	33.3	40.5	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	249.5	150.0	1955.1	187.5	119.8	0.1251	645	106.0486	7.223477
80	MH	150+000	252+000	232+750	RHS	Outer		40	0.2182	0.1296	0.0805	0.0493	0.0336	0.0244	0.0182	33.4	34.3	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	391.0	150.0	1836.1	295.9	119.8	0.0886	646	106.1372	7.158859
885	MH	150+000	252+000	232+800	RHS	Inner		40	0.464	0.2861	0.1547	0.1019	0.0616	0.0417	0.0356	33.2	39.5	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	906.5	150.0	147.1	1194.4	104.0	117.4	0.1779	647	106.3151	7.183542
79	MH	150+000	252+000	233+000	RHS	Outer		40	0.4204	0.2625	0.158	0.0869	0.0617	0.0452	0.0244	33.4	34.8	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1222.6	150.2	149.9	1504.1	104.2	119.8	0.1579	648	106.473	7.188225
884	MH	150+000	252+000	233+100	RHS	Inner		40	0.4085	0.2103	0.1399	0.0847	0.0473	0.0318	0.0202	33.0	39.7	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1234.4	150.0	149.8	1626.4	104.0	119.7	0.1982	649	106.6712	7.233208
78	MH	150+000	252+000	233+250	RHS	Outer		40	0.1841	0.1257	0.0807	0.0452	0.0316	0.0217	0.0195	33.5	34.8	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	397.6	150.0	1842.6	300.6	119.8	0.0584	650	106.7296	7.13839
883	MH	150+000	252+000	233+350	RHS	Inner	T-31.5/40.9	40	0.4097	0.2657	0.1602	0.0878	0.0586	0.0387	0.0289	33.1	39.5	40.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1273.1	150.2	149.4	1677.4	104.2	119.3	0.144	651	106.8736	7.129173
77	MH	150+000	252+000	233+500	RHS	Outer		40	0.1793	0.1253	0.0751	0.0532	0.0378	0.0244	0.022	33.4	34.6	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	395.1	150.0	1810.9	298.8	119.8	0.054	652	106.9276	7.029956
882	MH	150+000	252+000	233+600	RHS	Inner		40	0.1771	0.1159	0.0805	0.0549	0.0338	0.0195	0.0122	32.8	38.7	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	372.1	150.0	1698.4	282.1	119.8	0.0612	653	106.9888	6.937939
76	MH	150+000	252+000	233+750	RHS	Outer		40	0.3302	0.2077	0.1132	0.0658	0.051	0.0403	0.0305	33.6	34.5	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1446.2	193.0	150.0	1779.1	140.8	119.8	0.1225	654	107.1113	6.907221
881	MH	150+000	252+000	233+850	RHS	Inner		40	0.3179	0.1871	0.106	0.0744	0.0519	0.0425	0.0361	32.9	38.9	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	271.7	150.0	1391.8	205.3	119.8	0.1308	655	107.2421	6.884804
75	MH	150+000	252+000	234+030	RHS	Outer		40	0.4305	0.2642	0.1501	0.0839	0.0599	0.046	0.0365	33.7	34.6	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1074.2	150.0	147.8	1321.5	104.0	118.0	0.1663	656	107.4084	6.897887
880	MH	150+000	252+000	234+100	RHS	Inner		40	0.3807	0.2119	0.1117	0.0731	0.0473	0.0391	0.0335	32.6	39.0	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1019.4	188.1	150.0	1162.6	136.7	119.8	0.1688	657	107.5772	6.91347
74	MH	150+000	252+000	234+250	RHS	Outer		40	0.2337	0.1532	0.0893	0.0498	0.0315	0.0232	0.0202	33.8	34.5	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	299.3	150.0	1844.0	227.0	119.8	0.0805	658	107.6577	6.840752
879	MH	150+000	252+000	234+350	RHS	Inner		40	0.1105	0.0763	0.0531	0.0361	0.029	0.0239	0.0205	32.7	38.7	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	397.8	149.8	1683.7	300.8	119.7	0.0342	659	107.6919	6.721735
73	MH	150+000	252+000	234+500	RHS	Outer		40	0.1217	0.0728	0.0431	0.0292	0.0196	0.0143	0.0129	34.0	34.7	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	397.8	150.0	1784.4	300.8	119.8	0.0489	660	107.7408	6.617418
878	MH	150+000	252+000	234+600	RHS	Inner		40	0.1115	0.0782	0.0545	0.0391	0.0284	0.0258	0.0226	32.5	39.1	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	395.1	149.9	1661.7	298.8	119.8	0.0333	661	107.7741	6.497501
72	MH	150+000	252+000	234+750	RHS	Outer		40	0.1405	0.0899	0.0577	0.0422	0.0344	0.0294	0.0197	34.4	35.0	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	399.8	150.0	1784.4	302.2	119.8	0.0506	662	107.8247	6.394883
877	MH	150+000	252+000	234+850	RHS	Inner		40	0.5038	0.2791	0.142	0.0977	0.0678	0.0517	0.0406	32.3	38.4	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	733.3	150.0	134.1	836.3	104.0	106.2	0.2247	663	108.0494	6.466366
71	MH	150+000	252+000	235+000	RHS	Outer	T-31.5/39.5	40	0.2954	0.1745	0.0898	0.0542	0.0381	0.0334	0.0271	34.7	35.8	39.5	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1407.5	309.3	150.0	1731.5	234.7	119.8	0.1209	664	108.1703	6.434049
876	MH	150+000	252+000	235+100	RHS	Inner		40	0.3022	0.165	0.1026	0.0701	0.0471	0.0354	0.0261	32.3	38.7	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1464.5	271.5	150.0	1670.2	205.1	119.8	0.1372	665	108.3075	6.418032
70	MH	150+000	252+000	235+250	RHS	Outer		40	0.2342	0.1402	0.0872	0.057	0.0348	0.0239	0.0215	35.2	36.0	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	391.9	150.0	1952.4	296.5	119.8	0.094	666	108.4015	6.358814
1636	MH	150+000	252+000	235+300	RHS	Middle		40	0.4293	0.2447	0.1234	0.0678	0.0534	0.0353	0.022	30.6	31.6	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	784.9	150.2	150.0	907.8	104.2	119.8	0.1846	667	108.5861	6.390197
875	MH	150+000	252+000	235+350	RHS	Inner		40	0.3174	0.2169	0.1237	0.0909	0.0672	0.0528	0.0421	32.2	38.8	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	229.7	138.6	1708.2	171.3	110.1	0.1005	668	108.6866	6.33748
69	MH	150+000	252+000	235+500	RHS	Outer		40	0.3252	0.2054	0.1205	0.0727	0.0459	0.0336	0.0302	35.2	35.4	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	187.4	150.0	1956.7	136.1	119.8	0.1198	669	108.8064	6.304063
874	MH	150+000	252+000	235+600	RHS	Inner		40	0.2656	0.1955	0.113	0.0688	0.0372	0.0253	0.0227	32.1	37.8	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	189.1	150.0	1709.4	137.5	119.8	0.0701	670	108.8765	6.220946
1635	MH	150+000	252+000	235+610	RHS	Middle		40	0.2834	0.1848	0.1087	0.0698	0.0442	0.0336	0.0264	30.7	31.3	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	242.4	150.0	1724.9	181.7	119.8	0.0986	671	108.9751	6.166328
68	MH	150+000	252+000	235+680	RHS	Outer		40	0.2934	0.185	0.1226	0.0814	0.051	0.0363	0.0332	35.1	35.9	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	246.5	150.0	1882.0	185.0	119.8	0.1084	672	109.0835	6.121511
873	MH	150+000	252+000	235+850	RHS	Inner		40	0.4899	0.3102	0.1677	0.1086	0.0671	0.0501	0.0436	32.1	37.9	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	763.4	150.2	126.9	870.6	104.2	100.1	0.1797	673	109.2632	6.147994
67	MH	150+000	252+000	236+000	RHS	Outer		40	0.3638	0.2283	0.1289	0.0704	0.0455	0.0322	0.029	35.1	35.9	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1435.5	152.4	149.9	1882.0	106.1	119.8	0.1355	674	109.3987	6.130277
872	MH	150+000	252+000	236+100	RHS	Inner		40	0.421	0.2351	0.1197	0.0756	0.0463	0.0318	0.0232	31.8	38.2	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	837.6	150.2	150.0	955.2	104.2	119.8	0.1859	675	109.5846	6.162959
66	MH	150+000	252+000	236+235	RHS	Outer		40	0.373	0.2163	0.1334	0.0762	0.0514	0.0351	0.0315	35.0	36.3	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1335.5	150.2	150.0	1750.9	104.2	119.8	0.1567	676	109.7413	6.166442
1634	MH	150+000	252+000	236+300	RHS	Middle		40	0.3335	0.1754	0.0849	0.0562	0.0382	0.0317	0.0285	30.3	31.8	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	974.2	285.9	150.0	1126.7	216.5	119.8	0.1581	677	109.8994	6.171325
871	MH	150+000	252+000	236+350	RHS	Inner		40	0.3214	0.1769	0.0985	0.0654	0.0413	0.0261	0.0234	31.5	37.0	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1395.7	197.4	150.0	1591.7	144.5	119.8	0.1445	678	110.0439	6.162608
65	MH	150+000	252+000	236+500	RHS	Outer		40	0.1364	0.0874	0.0656	0.0472	0.0359	0.0286	0.0229	35.1	36.0	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1452.7	398.3	149.6	1904.5	301.1	119.5	0.049	679	110.0929	6.05839
870	MH	150+000	252+000	236+600	RHS	Inner		40	0.5152	0.3196	0.1822	0.115	0.071	0.0587	0.0392	31.5	37.5	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	776.3	150.0	122.1	885.3	104.0	96.0	0.1956	680	110.2885	6.100773
1633	MH	150+000	252+000	236+605	RHS	Middle		40	0.3194	0.2178	0.1328	0.0918	0.0633	0.0441	0.0309	30.2	31.3	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	176.4	149.8	1732.3	126.7	119.7	0.1016	681	110.3901	6.049156
64	MH	150+000	252+000	236+750	RHS	Outer		40	0.3071	0.1811	0.0975	0.0529	0.0378	0.0274	0.0247	34.9	36.0	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1426.9	217.7	150.0	1870.7	161.4	119.8	0.126	682	110.5161	6.021939
869	MH	150+000	252+000	236+820	RHS	Inner		40	0.3775	0.2365	0.1525	0.0999	0.0712	0.0477	0.0307	31.4	36.5	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1443.0	150.2	149.9	1645.7	104.2	119.8	0.141	683	110.6571	6.009721
63	MH	150+000	252+000	237+000	RHS	Outer		40	0.2132	0.1386	0.092	0.0567	0.037	0.0257	0.0209	34.8	36.0	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	395.6	150.0	1903.1	299.2	119.8	0.0746	684	110.7317	5.931104
868	MH	150+000	252+000	237+100	RHS	Inner		40	0.2654	0.1663	0.1102	0.0801	0.0578	0.0433	0.0327	31.2	35.9	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	354.3	150.0	1680.0	268.9	119.8	0.0991	685	110.8308	5.876987
62	MH	150+000	252+000	237+250	RHS	Outer		40	0.2051	0.1287	0.0833	0.0479	0.0382	0.0315	0.0278	34.9	36.5	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	398.5	150.0	1908.7	301.3	119.8	0.0764	686	110.9072	5.80017
1632	MH	150+000	252+000	237+300	RHS	Middle		40	0.3577	0.218	0.1223	0.07	0.0542	0.0418	0.0359	30.1	31.3	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1255.9	182.5	150.0	1452.5	131.9	119.8	0.1397	687	111.0469	5.786652
867	MH	150+000	252+000	237+350	RHS	Inner	T-30.5/37.9	40	0.3823	0.2455	0.1399	0.0969	0.0555	0.0344	0.0184	31.0	35.9	37.9	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1310.8	153.2	149.6	1494.9	106.8	119.5	0.1368	688	111.1837	5.770235
61	MH	150+000	252+000	237+500	RHS	Outer		40	0.2117	0.1382	0.0868	0.0578	0.0461	0.0376	0.0338	34.8	36.4	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	395.4	150.0	1963.7	299.1	119.8	0.0735	689	111.2572	5.690518
1631	MH	150+000	252+000	237+580	RHS	Middle		40	0.2379	0.1619	0.1093	0.0724	0.0585	0.0425	0.0291	30.3	31.4	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	390.5	150.0	1724.9	295.5	119.8	0.076	690	111.3332	5.613301
866	MH	150+000	252+000	237+600	RHS	Inner		40	0.5116	0.3042	0.1858	0.1288	0.0864	0.052	0.029	30.8	36.1	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	735.5	150.0	139.0	804.7	104.0	110.4	0.2074	691	111.5406	5.667483
60	MH	150+000	252+000	237+750	RHS	Outer		40	0.1633	0.1059	0.0777	0.0544	0.0376	0.0255	0.0171	34.9	36.2	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	398.5	150.0	1956.7	301.3	119.8	0.0574	692	111.598	5.571666
865	MH	150+000	252+000	237+850	RHS	Inner		40	0.2355	0.1593	0.1014	0.0655	0.0394	0.0256	0.0158	30.8	35.6	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	225.5	150.0	1623.5	167.9	119.8	0.0762	693	111.6742	5.494649
59	MH	150+000	252+000	238+000	RHS	Outer		40	0.1518	0.096	0.0625	0.0387	0.0281	0.0205	0.0184	35.2	35.9	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1463.4	399.3	150.0	1918.6	301.9	119.8	0.0558	694	111.73	5.397232
864	MH	150+000	252+000	238+100	RHS	Inner		40	0.2517	0.1692	0.1098	0.0803	0.0523	0.0317	0.0194	30.7	35.3	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1482.8	259.2	150.0	1622.3	195.3	119.8	0.0825	695	111.8125	5.326514
58	MH	150+000	252+000	238+250	RHS	Outer		40	0.2047	0.1257	0.0748	0.0468	0.0335	0.024	0.0216	35.2	36.3	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.5	150.0	1962.3	301.3	119.8	0.079	696	111.8915	5.252297
1630	MH	150+000	252+000	238+300	RHS	Middle		40	0.3103	0.1905	0.1064	0.0633	0.0365	0.0311	0.028	30.8	31.6	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	200.8	150.0	1687.5	147.4	119.8	0.1198	697	112.0113	5.21888
863	MH	150+000	252+000	238+350	RHS	Inner		40	0.3154	0.2096	0.1396	0.0944	0.0644	0.0421	0.0333	30.7	35.5	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	194.0	150.0	1638.7	141.6	119.8	0.1058	698	112.1171	5.171463
57	MH	150+000	252+000	238+500	RHS	Outer		40	0.2949	0.1797	0.1085	0.0593	0.0398	0.026	0.0234	35.3	36.2	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	196.9	150.0	1922.9	144.1	119.8	0.1152	699	112.2323	5.133445
862	MH	150+000	252+000	238+600	RHS	Inner		40	0.3829	0.2623	0.1506	0.0957	0.056	0.0395	0.0283	30.5	34.5	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1388.2	150.7	149.9	1518.8	104.6	119.8	0.1206	700	112.3529	5.100828
1629	MH	150+000	252+000	238+605	RHS	Middle		40	0.3628	0.2533	0.1529	0.1051	0.0702	0.0502	0.04	30.9	31.5	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	150.5	134.7	1708.7	104.5	106.8	0.1095	701	112.4624	5.057111
56	MH	150+000	252+000	238+730	RHS	Outer		40	0.2165	0.1384	0.0928	0.0615	0.0453	0.0337	0.0301	35.3	35.7	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1489.2	393.9	150.0	1952.4	298.0	119.8	0.0781	702	112.5405	4.981994
861	MH	150+000	252+000	238+850	RHS	Inner		40	0.3295	0.1969	0.1231	0.0823	0.0535	0.0422	0.0343	30.3	34.5	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1483.9	207.2	150.0	1623.5	152.7	119.8	0.1326	703	112.6731	4.961376
55	MH	150+000	252+000	239+000	RHS	Outer		40	0.2276	0.1438	0.0965	0.0622	0.0414	0.0272	0.0244	35.4	36.5	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	378.7	150.0	1927.1	286.9	119.8	0.0838	704	112.7569	4.891959
860	MH	150+000	252+000	239+075	RHS	Inner		40	0.16	0.112	0.0718	0.0427	0.0294	0.0193	0.0125	30.0	33.9	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	396.1	150.0	1616.4	299.6	119.8	0.048	705	112.8049	4.786742
54	MH	150+000	252+000	239+250	RHS	Outer		40	0.2997	0.1901	0.1269	0.0859	0.0575	0.0443	0.0356	35.3	36.7	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1500.0	241.9	149.7	1966.5	181.3	119.6	0.1096	706	112.9145	4.743125
1628	MH	150+000	252+000	239+300	RHS	Middle		40	0.2116	0.1416	0.0909	0.0653	0.0445	0.0311	0.0218	30.6	31.2	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	391.4	150.0	1717.4	296.2	119.8	0.07	707	112.9845	4.659907
859	MH	150+000	252+000	239+350	RHS	Inner		40	0.3627	0.2386	0.1296	0.0788	0.0538	0.037	0.0333	30.0	33.7	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	152.9	150.0	1634.0	106.5	119.8	0.1241	708	113.1086	4.63079
53	MH	150+000	252+000	239+500	RHS	Outer		40	0.1609	0.1034	0.0725	0.0468	0.0365	0.029	0.0231	35.5	36.7	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1481.7	391.4	150.0	1942.5	296.2	119.8	0.0575	709	113.1661	4.535073
858	MH	150+000	252+000	239+600	RHS	Inner		40	0.4312	0.2422	0.1528	0.099	0.0608	0.0368	0.0183	29.9	34.4	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1296.8	150.0	150.0	1418.8	104.0	119.8	0.189	710	113.3551	4.570856
1627	MH	150+000	252+000	239+610	RHS	Middle		40	0.3928	0.2417	0.1257	0.0804	0.0489	0.0378	0.0302	30.5	31.5	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1258.1	150.5	150.0	1455.1	104.5	119.8	0.1511	711	113.5062	4.568738
52	MH	150+000	252+000	239+750	RHS	Outer	T-31.5/40.8	40	0.266	0.1393	0.0795	0.0494	0.033	0.0215	0.0193	35.3	36.8	40.8	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	304.9	150.0	1929.8	231.3	119.8	0.1267	712	113.6329	4.542221
857	MH	150+000	252+000	239+850	RHS	Inner		40	0.3454	0.2203	0.122	0.0739	0.0576	0.0353	0.0178	29.7	34.1	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	153.7	150.0	1638.7	107.2	119.8	0.1251	713	113.758	4.514104
51	MH	150+000	252+000	240+000	RHS	Outer		40	0.1575	0.1023	0.0628	0.0449	0.0325	0.026	0.0212	35.5	37.2	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	398.8	149.9	1803.5	301.5	119.8	0.0552	714	113.8132	4.416087
856	MH	150+000	252+000	240+100	RHS	Inner		40	0.1868	0.1227

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
1624	MH	150+000	252+000	241+300	RHS	Middle		40	0.2549	0.1331	0.0714	0.0497	0.034	0.0282	0.024	30.7	31.0	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1471.0	398.3	150.0	1701.3	301.1	119.8	0.1218	727	115.4625	4.073563
851	MH	150+000	252+000	241+350	RHS	Inner		40	0.422	0.258	0.1632	0.105	0.071	0.0469	0.0422	29.5	33.7	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.0	131.8	1359.9	104.0	104.3	0.164	728	115.6265	4.084345
45	MH	150+000	252+000	241+500	RHS	Outer		40	0.3312	0.2087	0.1173	0.0686	0.0495	0.0357	0.0321	35.7	36.7	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1453.8	200.3	150.0	1779.9	146.9	119.8	0.1225	729	115.749	4.053628
850	MH	150+000	252+000	241+600	RHS	Inner		40	0.3213	0.2153	0.1292	0.0882	0.0669	0.0531	0.0478	29.3	33.2	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	242.6	134.6	1638.7	181.9	106.7	0.106	730	115.855	4.006411
1623	MH	150+000	252+000	241+610	RHS	Middle		40	0.4093	0.2483	0.1445	0.0903	0.0502	0.0364	0.0281	30.9	32.2	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1104.3	150.5	149.8	1277.2	104.5	119.7	0.161	731	116.016	4.014194
44	MH	150+000	252+000	241+750	RHS	Outer		40	0.3612	0.2108	0.1196	0.0826	0.0589	0.0526	0.0433	35.9	36.9	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1128.0	221.1	145.5	1381.0	164.2	116.0	0.1504	732	116.1664	4.011376
849	MH	150+000	252+000	241+850	RHS	Inner		40	0.3603	0.2493	0.1388	0.0989	0.0709	0.0495	0.0445	29.2	33.5	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	164.2	134.3	1639.9	116.3	106.4	0.111	733	116.2774	3.969159
43	MH	150+000	252+000	242+000	RHS	Outer		40	0.3185	0.1903	0.1104	0.0634	0.0394	0.0274	0.0247	35.8	37.3	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	169.1	150.0	1804.9	120.5	119.8	0.1282	734	116.4056	3.944142
848	MH	150+000	252+000	242+100	RHS	Inner		40	0.4063	0.2287	0.141	0.0867	0.0505	0.0358	0.0262	29.1	33.5	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1208.6	150.5	149.9	1322.3	104.5	119.8	0.1776	735	116.5832	3.968525
42	MH	150+000	252+000	242+250	RHS	Outer		40	0.3512	0.2	0.1121	0.0746	0.0481	0.0383	0.0315	35.8	37.2	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1206.5	203.3	150.0	1477.1	149.5	119.8	0.1512	736	116.7344	3.966507
1622	MH	150+000	252+000	242+300	RHS	Middle		40	0.4345	0.2553	0.1348	0.0931	0.0638	0.0462	0.0415	31.0	32.0	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1073.1	150.0	143.0	1241.1	104.0	113.9	0.1792	737	116.9136	3.99249
847	MH	150+000	252+000	242+350	RHS	Inner	T-28.8/37	40	0.4314	0.3053	0.1817	0.0974	0.058	0.0311	0.0252	28.7	32.2	37	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	972.0	150.0	149.6	1063.4	104.0	119.5	0.1261	738	117.0397	3.965373
41	MH	150+000	252+000	242+500	RHS	Outer		40	0.4287	0.2634	0.1412	0.0977	0.0666	0.0506	0.0389	35.7	37.4	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1080.6	150.2	136.3	1323.0	104.2	108.1	0.1653	739	117.205	3.977456
1621	MH	150+000	252+000	242+600	RHS	Middle	T-28.3/38.2	40	0.4403	0.2753	0.1522	0.1031	0.0681	0.0433	0.033	30.8	32.3	38.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	975.3	150.2	147.1	1128.0	104.2	117.4	0.165	740	117.37	3.989238
40	MH	150+000	252+000	242+750	RHS	Outer		40	0.1857	0.1315	0.093	0.0654	0.047	0.0313	0.02	35.4	36.2	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1450.5	399.3	150.0	1775.9	301.9	119.8	0.0542	741	117.4242	3.890221
846	MH	150+000	252+000	242+850	RHS	Inner	T-27.5/35	40	0.3306	0.1963	0.0967	0.0511	0.0317	0.0225	0.016	28.1	30.5	35	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1340.9	153.2	150.0	1340.9	106.8	119.8	0.1343	742	117.5585	3.871304
39	MH	150+000	252+000	243+000	RHS	Outer		40	0.1755	0.1093	0.0729	0.0475	0.0361	0.0285	0.0203	35.7	37.4	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1484.9	398.8	150.0	1818.0	301.5	119.8	0.0662	743	117.6247	3.784287
845	MH	150+000	252+000	243+100	RHS	Inner		40	0.1258	0.0877	0.0618	0.0416	0.027	0.0182	0.0123	28.0	29.9	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	389.2	149.9	1316.3	294.6	119.8	0.0381	744	117.6628	3.669169
38	MH	150+000	252+000	243+250	RHS	Outer		40	0.2222	0.1414	0.0892	0.0522	0.0359	0.0271	0.0207	35.6	37.5	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	400.0	149.9	1819.3	302.4	119.8	0.0808	745	117.7436	3.596752
1620	MH	150+000	252+000	243+300	RHS	Middle		40	0.1232	0.0853	0.0642	0.048	0.0372	0.0292	0.0238	31.4	31.5	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	392.7	149.9	1739.9	297.1	119.8	0.0379	746	117.7815	3.481435
844	MH	150+000	252+000	243+350	RHS	Inner		40	0.3457	0.216	0.1075	0.0654	0.0355	0.0224	0.0132	28.1	30.0	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1294.6	151.2	150.0	1141.8	105.1	119.8	0.1297	747	117.9112	3.457918
37	MH	150+000	252+000	243+500	RHS	Outer		40	0.2114	0.1221	0.0752	0.0493	0.0312	0.0243	0.0193	35.7	37.5	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1473.1	387.0	150.0	1803.5	293.0	119.8	0.0893	748	118.0005	3.394
843	MH	150+000	252+000	243+600	RHS	Inner		40	0.246	0.1393	0.0874	0.0551	0.0409	0.0346	0.0256	27.9	29.8	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1455.9	392.2	150.0	1284.1	296.7	119.8	0.1067	749	118.1072	3.347483
1619	MH	150+000	252+000	243+605	RHS	Middle		40	0.3442	0.2154	0.1192	0.0769	0.0487	0.0349	0.0314	31.6	32.3	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	167.8	150.0	1744.9	119.4	119.8	0.1288	750	118.236	3.323066
36	MH	150+000	252+000	243+750	RHS	Outer		40	0.1886	0.1177	0.0738	0.049	0.037	0.0307	0.0276	35.6	37.2	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	399.0	149.9	1829.9	301.7	119.8	0.0709	751	118.3069	3.240749
842	MH	150+000	252+000	243+850	RHS	Inner		40	0.4909	0.3258	0.1764	0.1047	0.0538	0.0323	0.0169	27.9	29.7	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	898.9	150.0	149.9	792.8	104.0	119.8	0.1651	752	118.472	3.252631
35	MH	150+000	252+000	244+000	RHS	Outer		40	0.1622	0.0981	0.0625	0.0432	0.0282	0.0227	0.0188	35.8	37.8	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1365.6	398.5	150.0	1671.9	301.3	119.8	0.0641	753	118.5361	3.163514
841	MH	150+000	252+000	244+080	RHS	Inner		40	0.16	0.1045	0.0775	0.0502	0.0315	0.021	0.0136	27.8	29.7	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	384.8	150.0	1319.2	291.4	119.8	0.0555	754	118.5916	3.065797
34	MH	150+000	252+000	244+250	RHS	Outer		40	0.178	0.1159	0.0778	0.0624	0.0516	0.0401	0.0315	35.7	37.3	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	399.3	149.7	1783.8	301.9	119.6	0.0621	755	118.6537	2.97468
1618	MH	150+000	252+000	244+300	RHS	Middle		40	0.1812	0.1172	0.0728	0.0558	0.0363	0.026	0.0234	31.5	32.3	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	399.8	150.0	1694.7	302.2	119.8	0.064	756	118.7177	2.885462
840	MH	150+000	252+000	244+350	RHS	Inner		40	0.4179	0.2479	0.1256	0.075	0.0373	0.0248	0.0158	27.8	29.4	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	951.6	150.5	150.0	839.3	104.5	119.8	0.17	757	118.8877	2.902245
33	MH	150+000	252+000	244+500	RHS	Outer		40	0.3176	0.2006	0.1266	0.085	0.0549	0.0429	0.0347	35.6	36.4	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1497.8	212.8	149.9	1833.8	157.4	119.8	0.117	758	119.0047	2.866028
839	MH	150+000	252+000	244+600	RHS	Inner		40	0.4215	0.2499	0.1377	0.0819	0.041	0.0277	0.0188	27.8	29.2	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1211.8	151.0	150.0	1068.8	104.9	119.8	0.1716	759	119.1763	2.884411
1617	MH	150+000	252+000	244+610	RHS	Middle		40	0.4691	0.2985	0.1734	0.1183	0.082	0.056	0.0338	31.8	32.3	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	993.5	151.0	130.1	1159.9	104.9	102.8	0.1706	760	119.3469	2.901793
32	MH	150+000	252+000	244+750	RHS	Outer		40	0.2982	0.1846	0.1074	0.065	0.0446	0.0305	0.0274	35.8	36.7	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	213.3	150.0	1794.4	157.8	119.8	0.1136	761	119.4605	2.862176
838	MH	150+000	252+000	244+850	RHS	Inner		40	0.4198	0.2376	0.1163	0.0793	0.0538	0.0345	0.021	27.9	29.4	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	918.3	150.7	149.8	809.9	104.6	119.7	0.1822	762	119.6427	2.891159
31	MH	150+000	252+000	245+000	RHS	Outer	T-32.5/39.4	40	0.2182	0.1437	0.1036	0.0808	0.0652	0.0573	0.052	35.9	37.8	39.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1479.6	400.0	144.8	1811.5	302.4	115.4	0.0745	763	119.7172	2.812442
837	MH	150+000	252+000	245+100	RHS	Inner		40	0.4004	0.2403	0.1381	0.0794	0.0391	0.0297	0.0187	27.9	29.4	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1302.2	150.7	149.9	1148.5	104.6	119.8	0.1601	764	119.8773	2.819324
30	MH	150+000	252+000	245+250	RHS	Outer		40	0.3422	0.2018	0.1144	0.0715	0.0533	0.0402	0.032	36.2	37.7	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1353.8	208.9	150.0	1810.7	154.1	119.8	0.1404	765	120.0177	2.806507
1616	MH	150+000	252+000	245+300	RHS	Middle		40	0.3716	0.2252	0.1303	0.064	0.0417	0.031	0.0279	31.5	32.4	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1263.4	158.8	150.0	1475.0	111.6	119.8	0.1464	766	120.1641	2.79969
836	MH	150+000	252+000	245+330	RHS	Inner		40	0.3535	0.2113	0.1078	0.0624	0.0325	0.0224	0.0151	27.8	29.7	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1394.6	152.2	150.0	1230.0	105.9	119.8	0.1422	767	120.3063	2.788673
29	MH	150+000	252+000	245+500	RHS	Outer		40	0.3896	0.23	0.1316	0.0703	0.0491	0.0428	0.0359	35.9	37.3	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1220.4	150.5	149.9	1632.3	104.5	119.8	0.1596	768	120.4659	2.795055
1615	MH	150+000	252+000	245+590	RHS	Middle		40	0.4227	0.2509	0.1274	0.0744	0.0396	0.0313	0.0254	31.3	31.7	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1175.3	151.2	150.0	1372.1	105.1	119.8	0.1718	769	120.6377	2.813638
835	MH	150+000	252+000	245+600	RHS	Inner		40	0.4158	0.2312	0.1182	0.078	0.0401	0.024	0.0133	27.6	28.9	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1167.7	150.7	150.0	1029.9	104.6	119.8	0.1846	770	120.8223	2.845021
834	MH	150+000	252+000	245+730	RHS	Inner		40	0.3439	0.2121	0.1176	0.0667	0.0315	0.0211	0.014	27.7	28.8	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1423.7	153.4	150.0	1255.7	107.0	119.8	0.1318	771	120.9541	2.823604
28	MH	150+000	252+000	245+750	RHS	Outer		40	0.2633	0.1408	0.0769	0.0532	0.0419	0.0342	0.023	36.2	36.7	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1459.1	399.8	150.0	1951.5	302.2	119.8	0.1225	772	121.0766	2.792886
27	MH	150+000	252+000	246+000	RHS	Outer		40	0.3793	0.2276	0.1194	0.0779	0.0626	0.0453	0.0332	36.5	37.1	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1348.4	160.8	150.0	1803.5	113.4	119.8	0.1517	773	121.2283	2.791369
833	MH	150+000	252+000	246+100	RHS	Inner		40	0.1894	0.1253	0.0817	0.0501	0.037	0.0215	0.011	27.7	28.4	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1461.3	258.3	150.0	1288.8	194.6	119.8	0.0641	774	121.2924	2.702252
26	MH	150+000	252+000	246+250	RHS	Outer		40	0.2153	0.1237	0.0714	0.0452	0.0337	0.0254	0.0228	36.5	37.3	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	395.8	149.8	1993.3	299.3	119.7	0.0916	775	121.384	2.640635
1614	MH	150+000	252+000	246+300	RHS	Middle		40	0.2111	0.1433	0.0918	0.0583	0.0394	0.026	0.0234	31.3	31.5	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1492.5	394.4	150.0	1742.4	298.3	119.8	0.0678	776	121.4518	2.555217
832	MH	150+000	252+000	246+325	RHS	Inner		40	0.1887	0.1345	0.0904	0.0569	0.0356	0.0214	0.0144	27.8	28.4	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	356.7	150.0	1315.4	270.7	119.8	0.0542	777	121.506	2.4562
25	MH	150+000	252+000	246+490	RHS	Outer		40	0.1896	0.1111	0.0719	0.0458	0.0268	0.0211	0.019	36.7	37.5	41.2	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	394.4	150.0	1938.7	298.3	119.8	0.0785	778	121.5845	2.381483
831	MH	150+000	252+000	246+600	RHS	Inner		40	0.3564	0.2228	0.1153	0.0705	0.0396	0.0248	0.0148	27.8	28.7	32.1	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1408.6	150.2	149.7	1242.3	104.2	119.6	0.1336	779	121.7181	2.361866
1613	MH	150+000	252+000	246+605	RHS	Middle		40	0.4195	0.2551	0.1304	0.0826	0.0488	0.0421	0.0373	31.9	31.6	38.4	10.0	175	450	400.0	1500.0	150.0	400.0	50.0	150.0	1023.7	152.2	149.6	1195.1	105.9	119.5	0.1644	780	121.8825	2.373049
24	MH	150+000	252+000	246+750	RHS	Outer		40	0.1984	0.1307	0.0809	0.061	0.0464	0.0415	0.0374	37.1	38.1	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1469.9	395.4	149.8	1966.0	299.1	119.7	0.0677	781	121.9502	2.287531
830	MH	150+000	252+000	246+850	RHS	Inner		40	0.3685	0.2361	0.1226	0.0757	0.0428	0.0277	0.017	27.6	26.6	32.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1243.0	150.2	150.0	1096.3	104.2	119.8	0.1324	782	122.0826	2.266714
23	MH	150+000	252+000	247+000	RHS	Outer		40	0.2779	0.1832	0.1172	0.0721	0.0507	0.0352	0.0193	37.2	38.7	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	208.7	150.0	1993.3	154.0	119.8	0.0947	783	122.1773	2.208197
829	MH	150+000	252+000	247+060	RHS	Inner	T-26.9/32.1	40	0.1761	0.1096	0.0642	0.0451	0.0311	0.0214	0.0141	27.9	28.0	32.1	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1466.7	397.3	150.0	1293.6	300.4	119.8	0.0665	784	122.2438	2.12148
22	MH	150+000	252+000	247+250	RHS	Outer		40	0.2199	0.1358	0.0797	0.0499	0.0364	0.0276	0.0195	37.4	39.3	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1476.3	393.6	150.0	1974.5	297.8	119.8	0.0841	785	122.3279	2.052362
1612	MH	150+000	252+000	247+300	RHS	Middle		40	0.2028	0.1398	0.0956	0.0647	0.0427	0.0374	0.0338	32.0	32.4	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1449.5	399.5	149.9	1692.2	302.0	119.8	0.063	786	122.3909	1.962145
828	MH	150+000	252+000	247+350	RHS	Inner		40	0.1692	0.1157	0.0758	0.0449	0.0309	0.0211	0.019	28.1	29.1	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	397.8	150.0	1233.9	300.8	119.8	0.0535	787	122.4444	1.862428
21	MH	150+000	252+000	247+500	RHS	Outer		40	0.1323	0.1098	0.0861	0.0695	0.0511	0.0392	0.0251	37.4	39.2	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1491.4	398.8	149.5	1994.7	301.5	119.4	0.0225	788	122.4669	1.731711
1611	MH	150+000	252+000	247+590	RHS	Middle		40	0.1451	0.1079	0.0755	0.0525	0.0394	0.0296	0.0269	32.0	32.6	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1451.6	394.9	150.0	1694.7	298.7	119.8	0.0372	789	122.5041	1.615693
827	MH	150+000	252+000	247+600	RHS	Inner		40	0.3016	0.1623	0.0925	0.0729	0.0516	0.0376	0.018	28.1	28.8	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1486.0	216.2	150.0	1251.1	160.2	119.8	0.1393	790	122.6434	1.601776
20	MH	150+000	252+000	247+750	RHS	Outer		40	0.2253	0.148	0.0885	0.051	0.0298	0.0222	0.02	37.6	39.7	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1494.6	351.6	150.0	1999.0	266.9	119.8	0.0773	791	122.7207	1.525859
826	MH	150+000	252+000	247+830	RHS	Inner		40	0.432	0.2655	0.1313	0.0748	0.0366	0.0242	0.0156	27.9	29.1	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	958.1	150.5	150.0	806.6	104.5	119.8	0.1665	792	122.8872	1.539142
19	MH	150+000	252+000	248+000	RHS	Outer		40	0.2298	0.1309	0.0844	0.0554	0.0396	0.029	0.0261	37.4	39.1	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1498.9	398.5	150.0	2004.8	301.3	119.8	0.0989	793	122.9861	1.484824
825	MH	150+000	252+000	248+075	RHS	Inner		40	0.3086	0.1757	0.1092	0.0627	0.0317	0.0237	0.0183	27.7	28.9	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	165.9	150.0	1260.2	117.8	119.8	0.1329	794	123.119	1.464507
18	MH	150+000	252+000	248+250	RHS	Outer		40	0.202	0.1199	0.0746	0.0444	0.0324	0.0244	0.0219	37.2	39.0	41.2	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1457.0	395.1	150.0	1948.7	298.8	119.8	0.0821	795	123.2011	1.39339
1610	MH	150+000	252+000	248+300	RHS	Middle		40	0.2814	0.167	0.1012	0.069	0.0459	0.0343	0.0262	31.6	32.6	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1493.5	279.3	150.0	1743.6	211.3	119.8	0.1144	796	123.3155	1.354573
824	MH	150+000	252+000	248+350	RHS	Inner		40	0.3559	0.2183	0.1

																	Existing Thickness, mm		BT, Mpa		Granular, Mpa		Subgrade, Mpa		Back Calculated Moduli (MPa)			Corrected Moduli (MPa)					
Sl No.	Place	Start Point	End Point	Chainage	LHS/RHS	Lane	Remarks	Load(kN)	Geophone1 (mm)	Geophone2 (mm)	Geophone3 (mm)	Geophone4 (mm)	Geophone5 (mm)	Geophone6 (mm)	Geophone7 (mm)	Air Temp. (°C)	Surface Temp. (°C)	Manual Temp. (°C)	CBR %	BT	Granular	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	Moduli Lower Limit	Moduli Upper Limit	BT	Granular	Subgrade	BT (Temperature)	Granular (Summer)	Subgrade (Summer)	SCI,xi	Test locations	Cumm. SCI	Zk
13	MH	150+000	252+000	249+500	RHS	Outer		40	0.2113	0.1284	0.0792	0.0531	0.0384	0.0283	0.0226	38.0	39.9	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1490.3	394.6	150.0	2013.4	298.5	119.8	0.0829	809	124.9639	1.011148
1607	MH	150+000	252+000	249+600	RHS	Middle		40	0.3361	0.1902	0.0998	0.0703	0.0504	0.0405	0.0342	32.1	32.5	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1003.2	261.9	150.0	1171.2	197.4	119.8	0.1459	810	125.1098	1.003831
12	MH	150+000	252+000	249+740	RHS	Outer		40	0.2657	0.1734	0.1062	0.0704	0.0458	0.0328	0.0243	37.9	39.9	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1441.9	267.3	150.0	1948.1	201.8	119.8	0.0923	811	125.2021	0.942914
818	MH	150+000	252+000	249+850	RHS	Inner		40	0.265	0.1403	0.0731	0.0436	0.0231	0.0131	0.0106	27.4	28.7	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1236.6	152.9	150.0	1041.1	106.5	119.8	0.1247	812	125.3268	0.914397
11	MH	150+000	252+000	250+000	RHS	Outer		40	0.2164	0.1346	0.0848	0.0542	0.0311	0.0232	0.0209	37.7	39.8	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1447.3	394.1	150.0	1955.3	298.1	119.8	0.0818	813	125.4086	0.842979
817	MH	150+000	252+000	250+100	RHS	Inner		40	0.3395	0.2036	0.0973	0.0592	0.0314	0.021	0.0136	27.4	28.5	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1280.6	155.9	150.0	1078.2	109.1	119.8	0.1359	814	125.5445	0.825662
10	MH	150+000	252+000	250+250	RHS	Outer		40	0.1756	0.1191	0.0827	0.0558	0.0421	0.0329	0.0296	37.5	40.0	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	394.1	150.0	2010.6	298.1	119.8	0.0565	815	125.601	0.728945
1606	MH	150+000	252+000	250+300	RHS	Middle		40	0.2039	0.133	0.0816	0.0618	0.0481	0.0373	0.0336	32.2	32.8	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	395.1	149.9	1687.2	298.8	119.8	0.0709	816	125.6719	0.646628
816	MH	150+000	252+000	250+350	RHS	Inner		40	0.2571	0.1693	0.1056	0.0672	0.0402	0.0232	0.0121	27.2	28.4	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1434.4	159.3	150.0	1207.6	112.1	119.8	0.0878	817	125.7597	0.58121
9	MH	150+000	252+000	250+500	RHS	Outer		40	0.1255	0.0813	0.0469	0.0308	0.0229	0.0174	0.0156	37.4	39.5	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1487.1	392.9	149.9	2009.1	297.3	119.8	0.0442	818	125.8039	0.472193
815	MH	150+000	252+000	250+600	RHS	Inner		40	0.3221	0.1618	0.0885	0.0542	0.0282	0.0206	0.0154	27.2	27.8	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1244.1	160.8	150.0	1047.4	113.4	119.8	0.1603	819	125.9642	0.479276
1605	MH	150+000	252+000	250+605	RHS	Middle		40	0.4149	0.2249	0.1092	0.0725	0.0473	0.0343	0.0309	32.1	32.6	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	895.7	161.0	150.0	1045.7	113.5	119.8	0.19	820	126.1542	0.516059
8	MH	150+000	252+000	250+750	RHS	Outer		40	0.2555	0.1442	0.0824	0.055	0.042	0.0325	0.0281	37.5	39.4	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1488.2	382.2	150.0	2010.6	289.5	119.8	0.1113	821	126.2655	0.474141
814	MH	150+000	252+000	250+850	RHS	Inner		40	0.2533	0.1533	0.0981	0.0637	0.0384	0.0225	0.0187	27.2	28.1	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1472.0	228.0	150.0	1239.3	169.9	119.8	0.1	822	126.3655	0.420924
7	MH	150+000	252+000	251+000	RHS	Outer		40	0.2988	0.1912	0.101	0.0549	0.0426	0.0345	0.031	37.7	39.7	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1309.7	274.1	150.0	1769.4	207.2	119.8	0.1076	823	126.4731	0.375307
813	MH	150+000	252+000	251+100	RHS	Inner		40	0.4462	0.2365	0.1211	0.0772	0.0439	0.0294	0.0193	27.2	27.5	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	648.4	150.0	150.0	545.9	104.0	119.8	0.2097	824	126.6828	0.43179
6	MH	150+000	252+000	251+250	RHS	Outer		40	0.3039	0.1785	0.0925	0.0626	0.0426	0.0295	0.0209	37.9	40.0	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1373.1	216.0	150.0	1855.1	160.0	119.8	0.1254	825	126.8082	0.403972
1604	MH	150+000	252+000	251+300	RHS	Middle		40	0.346	0.2176	0.1098	0.0649	0.0423	0.0392	0.0353	32.2	33.0	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1238.7	190.3	150.0	1446.1	138.5	119.8	0.1284	826	126.9366	0.379155
812	MH	150+000	252+000	251+350	RHS	Inner		40	0.3241	0.2115	0.1103	0.0644	0.03	0.0191	0.0124	27.3	27.6	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1233.3	150.7	149.9	1038.3	104.6	119.8	0.1126	827	127.0492	0.338538
5	MH	150+000	252+000	251+500	RHS	Outer		40	0.2387	0.1599	0.1034	0.0769	0.0609	0.049	0.0441	37.9	39.9	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1496.8	398.8	149.4	2022.2	301.5	119.3	0.0788	828	127.128	0.264121
811	MH	150+000	252+000	251+600	RHS	Inner		40	0.243	0.157	0.1003	0.0668	0.0369	0.022	0.0156	27.9	28.0	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1477.4	211.8	150.0	1243.8	156.5	119.8	0.086	829	127.214	0.196903
1603	MH	150+000	252+000	251+605	RHS	Middle	T-28.9/38.4	40	0.226	0.1429	0.0989	0.0661	0.0439	0.0283	0.0254	32.4	33.2	38.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1474.2	379.5	150.0	1721.1	287.5	119.8	0.0831	830	127.2971	0.126786
4	MH	150+000	252+000	251+770	RHS	Outer		40	0.3772	0.2379	0.1517	0.098	0.059	0.0388	0.0256	38.4	41.5	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1445.2	152.0	149.9	1445.2	105.8	119.8	0.1393	831	127.4364	0.112869
3	MH	150+000	252+000	251+850	RHS	Outer		40	0.3088	0.1957	0.1215	0.0856	0.0615	0.0541	0.05	38.4	40.3	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1495.7	274.1	137.8	1495.7	207.2	109.4	0.1131	832	127.5495	0.072752
2	MH	150+000	252+000	251+930	RHS	Outer		40	0.4228	0.2487	0.147	0.0768	0.053	0.0451	0.0406	38.3	40.4	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	888.2	150.2	149.3	888.2	104.2	119.3	0.1741	833	127.7236	0.093634
810	MH	150+000	252+000	251+935	RHS	Inner	T-25.7/31	40	0.1348	0.0877	0.0546	0.0388	0.0273	0.0188	0.0129	27.9	27.6	31	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1465.6	397.8	149.8	1465.6	300.8	119.7	0.0471	834	127.7707	-0.01248
1	MH	150+000	252+000	252+000	RHS	Outer	T-34.5/41.4	40	0.4282	0.2625	0.1723	0.1109	0.0634	0.0305	0.0274	38.3	40.2	41.4	10.0	180	450	400.0	1500.0	150.0	400.0	50.0	150.0	1237.6	150.0	149.6	1237.6	104.0	119.5	0.1657	835	127.9364	0

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CALIBRATION CERTIFICATE

CUSTOMER NAME & ADDRESS	:	**M/S PARAMESHWARI PROJECTS** H.No.:8-355/22, Plot no.22 Pragathi Enclave,Shilpa Nagar Nagaram, Hyderabad Telangana 500083	**CERTIFICATE NO.** **ENVIRONMENTAL CONDITIONS** **CALIBRATION PROCEDURE**	:	**GT/CAL/22/0012** TEMPERATURE 25.7°C HUMIDITY 60% RH KNOWN DEFLECTION
ITEM DESCRIPTION	:	**FWD GEOPHONE** (FWD SERIAL NO.: **G200201**)	**CALIBRATION PERFORMED AT**	:	LAB
Sr. No. / ID No.	:	**O200201 To O200210**	**RECEIPT DATE**	:	20/02/2023
MAKE / MODEL	:	GEOTRAN / NF	**CALIBRATION DATE**	:	21/02/2023
RANGE	:	0-2 mm	**NEXTCALIBRATION DUE DATE**	:	20/02/2024
LEAST COUNT	:	1 micron	**ISSUE DATE**	:	21/02/2023
LOCATION	:	--	**CONDITION ON RECEIPT**	:	SATISFACTORY

TRACEABILITY:
Standard used for calibration are done as per AASHTO R32 calibration protocol and compliance with IRC 115 and 117. All master instruments are calibrated from NABL ACCREDITED LABORATORY, TRACEABLE TO NATIONAL OR INTERNATIONAL STANDARDS.

STANDARD EQUIPMENT USED FOR CALIBRATION:

Sr. No.	INSTRUMENT SERIAL No.	DESCRIPTION	CAL. DUE DATE	CERTIFICATE No.	CALIBRATED FROM / REF. INSTRUMENT
1	MITUTOYO/2109A-10	DIAL GAUGE	30/11/2023	MACL/12/22/009A-02	MICRO ADVANCE CALIBRATION LAB (URL NO. CC319422000008861F)
2	G20022725	GEOPHONE CALIBRATOR	30/06/2023	GT/22/001	MITUTOYO/2109A-10

CALIBRATION RESULTS

SENSOR Sr. No.	STANDARD DISPLACEMENT IN mm	OBESRVED VALUE IN mm	% ERROR
O200201	0.720	0.715	0.70
O200202		0.718	0.28
O200203		0.721	-0.14
O200204		0.708	1.69
O200205		0.723	-0.41
O200206		0.725	-0.69
O200207		0.713	0.98
O200209		0.72	0.00
O200210		0.719	0.14

ZERO ERROR: OK
REPEATABILITY: OK

M/s GEOTRAN CALIBRATED ROORKEE

REMARKS:

*** END OF CERTIFICATE ***

Calibrated By: (Himanshu Sharma)

Approved By: (Sumit Sharma)

GEOTRAN, D-17, Industrial Estate, Roorkee, India •Tel / Fax: 01332-268590
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CALIBRATION CERTIFICATE

CUSTOMER NAME & ADDRESS	:	**M/S PARAMESHWARI PROJECTS** H.No.:8-355/22, Plot no.22 Pragathi Enclave,Shilpa Nagar Nagaram, Hyderabad Telangana 500083	**CERTIFICATE NO.** **ENVIRONMENTAL CONDITIONS**	:	**GT/CAL/22/0011** TEMPERATURE 25.7°C HUMIDITY 60% RH
			CALIBRATION PROCEDURE	:	COMPRESSION
ITEM DESCRIPTION	:	**FWD LOADCELL** (FWD SERIAL NO.: **O200201**)	**CALIBRATION PERFORMED AT**	:	LAB
Sr. No. / ID No.	:	**O200208**	**RECEIPT DATE**	:	20/02/2023
MAKE / MODEL	:	FWDLC	**CALIBRATION DATE**	:	21/02/2023
RANGE	:	100 kN	**NEXTCALIBRATION DUE DATE**	:	20/02/2024
LEAST COUNT	:	0.1 kN	**ISSUE DATE**	:	21/02/2023
LOCATION	:	--	**CONDITION ON RECEIPT**	:	SATISFACTORY

TRACEABILITY:
Standard used for calibration are done as per AASHTO R32 calibration protocol and compliance with IRC 115 and 117. All master instruments are calibrated from NABL ACCREDITED LABORATORY, TRACEABLE TO NATIONAL OR INTERNATIONAL STANDARDS.

STANDARD EQUIPMENT USED FOR CALIBRATION:

Sr. No.	INSTRUMENT SERIAL No.	DESCRIPTION	CAL. DUE DATE	CERTIFICATE No.	CALIBRATED FROM / REF. INSTRUMENT
1	200KN.0139	PROVING RING Capacity 200 kN	29/10/2023	DRS/10/22/1420	DRS ENG. & CALIBRATION SERVICES (URL NO. CC319322000001420F)

CALIBRATION RESULTS

SR. NO.	APPLIED FORCE IN kN	OBESRVED VALUE IN kN	% ERROR
1	0.0	0.0	0.00
2	10.0	10.1	-0.99
3	20.0	20.2	-0.99
4	40.0	40.0	0.00
5	60.0	59.8	0.33
6	70.0	70.2	-0.28
7	80.0	79.9	0.13

ZERO ERROR: OK
REPEATABILITY: OK

M/s GEOTRAN CALIBRATED ROORKEE

REMARKS:

*** END OF CERTIFICATE ***

Calibrated By: (Himanshu Sharma)

Approved By: (Sumit Sharma)

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CC-2424

CALIBRATION CERTIFICATE

Customer Details :	ULR No : CC242423400000457F	Page 1 of 1
M/s. PARAMESHWARI PROJECTS, H.No:8-355/22,Plot No.22, Pragathi Enclave,Shilpa Nagar,Nagaram, Hyderabad,Telangana,India-500083	Certificate No : ECPL/23/TH/L1343-01 Calibration Date : 02/03/2023 Due Date : 01/03/2024 Issue Date : 02/03/2023 SRF No. : L1343 Date : 02/03/2023	

Details of DUC :		Environmental Conditions :	
Description	: Multi - Thermometer	Temperature	: 25 ±4 °C
Make	: Aceteq	Humidity	: 50 ±10%
Model	: ST-9283B	Calibrated At	: at LAB
ID. No	: ---	Visual Inspection	: OK
Range	: -50 to 300°C	Formate No	: ECPL/F/41
Resolution	: 0.1°C	Cal Procedure	: ECPL/QSP/19/WI/TH/01
		Parameter	: Thermal

Standards Used for Calibration

S.No	Nomenclature	Make & Model	Sl. No / ID. No	Certificate No	Validity
1	4 Wire RTD Sensor with Digital Thermometer	Tempsens	727/16E232289	C2231815/N/TH/01	16/03/2023

Calibration Results

S.No	Set Point °C	Standard Reading in °C	DUC Reading in °C	Deviation Observed in °C	Measurement Uncertainty (±)in °C
1	-50.0	-50.23	-50.2	0.03	0.30
2	0.0	0.15	0.1	-0.05	0.30
3	25.0	25.13	25.2	0.07	0.30
4	40.0	40.18	40.3	0.12	0.30
5	60.0	60.25	60.5	0.25	0.30
6	120.0	120.46	120.6	0.14	0.30
7	250.0	250.55	249.7	-0.85	0.30

Note:

1. The Certificate refers only to the particular item(s) submitted for calibration.
2. All Results Reported are valid at the time of and under the stated conditions of measurements.
3. Masters/ Equipment Used for Calibration are Traceable to National / International Standards.
4. The Report shall not be reproduced except in full without prior permit ion of laboratory.
5. Uncertaintyof measurement at a confidence level 95.45% and coverage factor k =2.
6. DUC: Device Under Calibration, C.L: Confidence Level.

Calibrated by

B.Veeraswamy
(Calibration Engineer)

CALIBRATION PVT. LTD. Hyderabad

Authorised Signatory

N.Asha Latha
(Quality Manager)

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CALIBRATION CERTIFICATE

Customer Details :	ULR No : CC242422400000458F	Page 1 of 1
M/s. PARAMESHWARI PROJECTS, H.No:8-355/22,Plot No.22, Pragathi Enclave,Shilpa Nagar,Nagaram, Hyderabad,Telangana,India-500083	Certificate No : ECPL/23/TH/L1343-02 Calibration Date : 02/03/2023 Due Date : 01/03/2024 Issue Date : 02/03/2023 SRF No. : L1343 Date : 02/03/2023	

Details of DUC :		Environmental Conditions :	
Description	: Multi - Thermometer	Temperature	: 25 ±4 °C
Make	: Aceteq	Humidity	: 50 ±10%
Model	: ST-9283B	Calibrated At	: at LAB
ID. No	: ---	Visual Inspection	: OK
Range	: -50 to 300°C	Formate No	: ECPL/F/41
Resolution	: 0.1°C	Cal Procedure	: ECPL/QSP/19/WI/TH/01
		Parameter	: Thermal

Standards Used for Calibration

S.No	Nomenclature	Make & Model	Sl. No / ID. No	Certificate No	Validity
1	4 Wire RTD Sensor with Digital Thermometer	Tempsens	727/16E232289	C2231815/N/TH/01	16/03/2023

Calibration Results

S.No	Set Point °C	Standard Reading in °C	DUC Reading in °C	Deviation Observed in °C	Measurement Uncertainty (±)in °C
1	-50.0	-50.15	-50.8	-0.65	0.30
2	0.0	0.09	0.5	0.41	0.30
3	25.0	25.18	25.6	0.42	0.30
4	40.0	40.29	40.7	0.41	0.30
5	60.0	60.41	60.8	0.39	0.30
6	120.0	120.48	121.1	0.62	0.30
7	250.0	250.57	249.6	-0.97	0.30

Note:

1. The Certificate refers only to the particular item(s) submitted for calibration.
2. All Results Reported are valid at the time of and under the stated conditions of measurements.
3. Masters/ Equipment Used for Calibration are Traceable to National / International Standards.
4. The Report shall not be reproduced except in full without prior permit ion of laboratory.
5. Uncertaintyof measurement at a confidence level 95.45% and coverage factor k =2.
6. DUC: Device Under Calibration, C.L: Confidence Level.

Calibrated by

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(Calibration Engineer)

Authorised Signatory

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CALIBRATION CERTIFICATE

Customer Details :	ULR No: CC242422400000459F	Page 1 of 1
M/s. PARAMESHWARI PROJECTS, H.No:8-355/22,Plot No.22, Pragathi Enclave,Shilpa Nagar,Nagaram, Hyderabad,Telangana,India-500083	Certificate No : ECPL/23/TH/L1343-03 Calibration Date : 02/03/2023 Due Date : 01/03/2024 Issue Date : 02/03/2023 SRF No. : L1343 Date : 02/03/2023	

Details of DUC :			Environmental Conditions :		
Description	:	IR Thermometer	Temperature	:	25 ±4 °C
Make	:	Stanley	Humidity	:	50 ±10%
Model	:	---	Calibrated At	:	at LAB
Sl. No	:	STHT77365	Visual Inspectior	:	OK
ID.No	:	---	Formate No	:	ECPL/F/041
Range	:	520 ° C	Cal Procedure	:	ECPL/QSP/19/WI/TH/03
Resolution	:	0.1° C	Parameter	:	Thermal

Standards Used for Calibration

S.No	Nomenclature	Make & Model	Sl. No / ID. No	Certificate No	Validity
1	IR Thermometer	Fluke/62Max+	5665230WS	C2271766/T/2	07-07-2023

Calibration Results

S.No	Set Point	Standard Reading in °C	DUC Reading in °C	Deviation Observed in °C	Measurement Uncertainty (±)in °C
1	50	50.2	50.3	0.1	2.9
2	100	100.1	100.2	0.1	2.9
3	200	200.2	199.4	-0.8	2.9
4	300	300.2	300.3	0.1	2.9
5	400	400.1	400.3	0.2	2.9
6	500	500.5	501.1	0.6	2.9

Note:

1. The Certificate refers only to the particular item(s) submitted for calibration.
2. All Results Reported are valid at the time of and under the stated conditions of measurements.
3. Masters/ Equipment Used for Calibration are Traceable to National / International Standards.
4. The Report shall not be reproduced except in full without prior permit ion of laboratory.
5. Uncertaintyof measurement at a confidence level 95.45% and coverage factor k =2.
6. DUC: Device Under Calibration, C.L: Confidence Level.

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Customer Details :	ULR No : CC242422400000460F	Page 1 of 1
M/s. PARAMESHWARI PROJECTS, H.No:8-355/22,Plot No.22, Pragathi Enclave,Shilpa Nagar,Nagaram, Hyderabad,Telangana,India-500083	Certificate No : ECPL/23/TH/L1343-04 Calibration Date : 02/03/2023 Due Date : 01/03/2024 Issue Date : 02/03/2023 SRF No. : L1343 Date : 02/03/2023	

Details of DUC :		Environmental Conditions :	
Description	: Pen Type Thermometer	Temperature	: 25 ±4 °C
Make	: Okayji	Humidity	: 50 ±10%
Model	: TP101	Calibrated At	: at LAB
ID. No	: ---	Visual Inspection	: OK
Range	: -50 to 300°C	Formate No	: ECPL/F/41
Resolution	: 0.1°C	Cal Procedure	: ECPL/QSP/19/WI/TH/01
		Parameter	: Thermal

Standards Used for Calibration

S.No	Nomenclature	Make & Model	Sl. No / ID. No	Certificate No	Validity
1	4 Wire RTD Sensor with Digital Thermometer	Tempsens	727/16E232289	C2231815/N/TH/01	16/03/2023

Calibration Results

S.No	Set Point °C	Standard Reading in °C	DUC Reading in °C	Deviation Observed in °C	Measurement Uncertainty (±)in °C
1	-50.0	-50.27	-50.4	-0.13	0.30
2	0.0	0.17	0.2	0.03	0.30
3	25.0	25.19	25.3	0.11	0.30
4	40.0	40.26	40.5	0.24	0.30
5	60.0	60.42	60.7	0.28	0.30
6	120.0	120.51	120.4	-0.11	0.30
7	250.0	250.56	250.2	-0.36	0.30

Note:

1. The Certificate refers only to the particular item(s) submitted for calibration.
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(Calibration Engineer)

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(Quality Manager)

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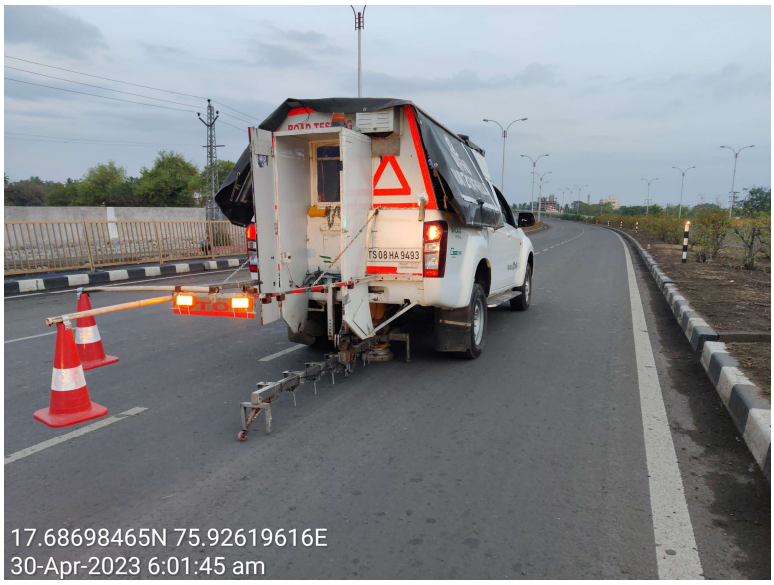
Annexure-5: Photos

Annexure-5: Photos



IL&FS Transportation	IL&FS Transportation Networks Limited		
Client:	**National Highways Authority of India, Delhi**		
Project:	4 Laning of Pune-Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Prop. Chainage 150/400 to Km 251/400)	**Project No.:** 406/2009	
Title:	Pavement Design Report	**Report No.:** RP002	**Rev.:** 1

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Notes:

1. This report contains the design details of flexible pavement for new carriageway, overlay for existing carriageway, new carriageway for service road and rigid pavement for toll plaza section.
2. The pavement design has been done in accordance with IRC clauses.
3. The data used in this report are collected by carrying out field surveys and investigations.
4. This report has been revised (Rev.1) with regards to the traffic survey conducted once again in Feb'2011 as suggested by Independent Engineer (IE). The observations of IE on Pavement Design Report, discussed during the meeting on 26/12/2011 have also been incorporated in the report.

Revision Details:

Rev.	Date	Details	Prepared	Checked	Approved
1	03/01/12	Revised as per Fresh Traffic Survey Data and suggestions of IE during Meeting held on 26/12/11	M.Kanagaraj	Hari Bhavsar	S C Mittal
0	14/12/10	First Submission	M.Kanagaraj	Hari Bhavsar	S C Mittal

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LIST OF REFERENCES

1. Traffic Report
2. Geotechnical Investigation Report

1 Introduction

The responsibility of development, maintenance and management of all National Highways has been entrusted to National Highways Authority of India (NHAI). NHAI has launched major initiatives to upgrade and strengthen National Highways through various phases of National Highways Development Programme (NHDP). Under NHDP Phase-III Programme, NHAI has envisaged 4/6 laning of approximately 12,000 kms of National Highways on BOT basis which includes the High Density Corridors/Sections of National Highways in the country. Under the said Programme, the highway section of NH-9 between Pune and Solapur from existing PWD chainage Km.144/400 to Km 249/000 (proposed chainage Km 150/400 to Km 251/400) has been envisaged for four-laning and upgrading of the existing carriageway pavement to carry the anticipated traffic over the design period.

To accomplish the said objective, NHAI has awarded the above mentioned project to IL&FS Transportation Networks Limited (ITNL) on DBFOT basis and thereby ITNL has formed a company named “Pune Solapur Road Development Company Limited” (PSRDCL) to govern the project under DBFOT format. The Concession Period for the project road is fixed as 20 years including construction period.

2 Description of the Project Corridor

The project section falls between the existing PWD chainage Km 144+400 and Km 249+000 (proposed chainage Km 150/400 to Km 251/400) of National Highway NH-9 between Pune and Solapur in the State of Maharastra. The total length of the project road is about 101 kms as per the detailed topographic Survey. The existing carriageway is of two lanes with earthen shoulder on both sides. A few sections are provided with the paved shoulder of 1m to 1.5m on both sides of the carriageway.

There are many industrial units existing along the project stretch. The project section passes through Solapur MIDC industrial zone. Substantial numbers of sugar factories are functioning abutting the project road, as the project section is one of the highest sugar producing belts. The project section passes through three major towns namely Tembhurni, Mohol and Solapur.

The project road primarily passes through the rural sections with the blend of barren land and agricultural land on both sides for most of the project length.

The existing topography reveals that the terrain of the project section is classified as plain for about 40% and as rolling for 60% of the total project length.

3 Pavement Works

The project primarily envisages strengthening of the existing two-lane carriageway and widening it to four/six lanes for augmenting capacity and significantly extending the service life of the project road under DBFOT scheme.

This chapter deals with the detailed design of pavement works pertaining to the strengthening and widening of the project road from the proposed chainage Km 150/400 to Km 251/400 including service road along the project road as mentioned in the “Manual for Specifications and Standards for Four laning of National Highways through Public Private

Partnership" published by MoRT&H. Both flexible and rigid pavements have been considered in the design.

The pavement works for implementing the above proposals will mainly consist of:

- Strengthening of the existing 2-lane main carriageway with flexible pavement.
- Construction of additional carriageways with flexible pavement to widen the existing 2-lane main carriageway to the proposed 4/6 lane configuration.
- Construction of new four lane / six-lane carriageways with flexible pavement at the bridge approaches, ROBs, stretches of proposed reconstruction etc., if required.
- Construction of service road carriageway with flexible pavement.
- Construction of rest area, truck lay-by and bus bay with flexible pavement
- Construction of toll plaza portion with rigid pavement

The pavements for the above works will be built as per appropriate designs as described in this report.

4 Structure of the Report

This report presents the design of new flexible pavement, overlay for the project road and rigid pavement for toll plaza section. The report is structured as below.

- Pavement Design Methodology
- Traffic Volume
- Axle Load Survey
- Pavement Investigation
- Geotechnical Investigations
- Design Life
- Design Traffic Load
- Flexible Pavement Design for new main carriageway – IRC Method
- Overlay Design for strengthening of existing main carriageway – IRC Method
- Flexible Pavement Design for service road – IRC Method
- Rigid Pavement Design for Toll Plaza – IRC Method

The chainages referred in this report are proposed chainages unless specified.

5 Pavement Design Methodology

Pavement design is the process of developing the most economical combination of pavement layers, with respect to thickness and type of material, to protect the soil foundation from the cumulative loading of traffic for the design life.

The IRC method has been adopted for design of different components of pavements and the pavement design has been validated by strain analysis as suggested in IRC. The pavement thickness derived from IRC method has also been validated by AASHTO method of pavement design.

5.1 New Flexible Pavement Design by IRC Method

The CBR Method of Pavement Design for multi layer pavements of granular material is recommended by IRC 37-2001 “Guidelines for the Design of Flexible Pavements” and the same has been used. Procedure for the same is given below:

- Step 1: Find out initial traffic of commercial vehicles per day by conducting continuous 7 days traffic volume count and data analysis.
- Step 2: Determine traffic growth factor by studying the past trends of traffic growth
- Step 3: Decide Design life of Pavement
- Step 4: Arrive at Vehicle Damage Factor and based on this factor, the number of commercial vehicles of different axle loads and axle configuration are converted to equivalent number of standard axle load repetition. It may be obtained by conducting axle load survey
- Step 5 : Find out distribution factor of traffic for the proposed carriageway width
- Step 6: Determine design traffic in cumulative number of Million Standard Axles (MSA)
- Step 7 : Determine total pavement thickness and crust composition by strain analysis with respect to CBR and cumulative number of Standard Axles.

The design method is based on elastic response of the pavement to traffic stresses (i.e. each of the materials in the pavement structure behaves in an elastic manner). The materials in the pavement are characterised by parameters whose values are determined from field and laboratory testing. The method assumes that failure will not occur as a result of permanent deformation of granular or bound materials (and this assumption will be valid as long as good construction procedures are followed, and the pavement is not subjected to very high wheel loads). The method also assumes that loss of pavement serviceability can occur due to:

- Fatigue of bitumen bound or cemented layers due to repetitions of tensile strains at the bottom of such layers; and/or
- Permanent deformation of the subgrade due to repeated vertical compressive strains induced in the subgrade.

The critical locations for pavement failure are therefore the bottom of bitumen bound or cemented layers (where tensile strains occur) and the top of the subgrade (where compressive strains occur).

There is no standard thickness for a pavement. Total thickness is determined by engineering design procedure. Therefore the pavement design needs to be verified against above mentioned criteria in order to arrive at the optimal pavement thickness and thereby ensure all technical requirements.

5.2 Overlay Design by IRC Method

IRC 81-1997 “Guidelines for Strengthening of Flexible Road Pavement using Benkelman Beam Deflection Technique” is used for design of overlay on existing pavement. Procedure for the same is given below

- Step 1 to step 6 are same as described in **Section 5.1** of this report.
- Step 7: Record dial gauge readings, temperatures etc by conducting Benkelman Beam Deflection Survey (BBD).

- Step 8: Determine moisture content of soil samples collected during BBD survey.
- Step 9: Determine temperature variation factor.
- Step 10: Determine moisture content factor from graphs given in IRC 81-1997.
- Step 11: Determine characteristic deflection
- Step 12: Determine overlay thickness using Fig 9 of IRC 81-1997 in terms of bituminous macadam construction.
- Step 13: Convert thickness in terms of DBM/BC as per IRC 81-1997.

5.3 Rigid Pavement Design by IRC Method

IRC 58-2002 “Guidelines for the Design of Plain Jointed Rigid Pavements for Highways” is used for design of rigid pavement of new carriageway/widening. The design procedure is as stated below.

- Step 1: Stipulate design value for the various parameters.
- Step 2: Decide types and spacing between joints.
- Step 3: Select trial design thickness of pavement slab.
- Step 4: Compute the repetitions of axle loads of different magnitudes during the design period.
- Step 5: Calculate the stresses due to single and tandem axle loads and determine the Cumulative Fatigue Damage (CFD).
- Step 6: If the CFD is more than 1.0, select a higher thickness and repeat the steps 1 to 5.
- Step 7: Compute the temperature stress at the edge and if the sum of the temperature stress and flexural stress due to highest wheel load is greater than the modulus of rupture, select higher thickness and repeat the steps 1 to 6.
- Step 8: Design the pavement thickness on the basis of corner stress if no dowel bars are provided and there is no load transfer due to lack of aggregate inter-lock.

6 Traffic Volume

6.1 Classified Volume Count

The classified traffic volume count surveys were conducted for seven days 24 hours in both directions of travel at three selected locations. The schedule & locations of classified traffic volume count surveys are given in **Table 6-1**.

Table 6-1 Classified Traffic Volume Count Survey Locations

S.No.	Existing Chainage (Km)	Proposed Chainage (Km)	Duration of Survey
1	171/000	176/640	7 Days
2	220/000	225/370	7 Days
3	242/000	247/420	7 Days

Upon the review of Traffic Report and Pavement Design Report, IE adviced the Concessionaire to conduct the traffic survey once again at the same locations to substantiate the volume of traffic and axle loads. Accordingly, the 7 days traffic volume count surveys were conducted at the above said locations between 21st Feb 2011 and 2nd March 2011 under the supervision of representatives of Independent Engineer (IE). The Average Daily

Traffic arrived at from traffic survey is presented in the form of summary in **Annexure I**. The details of traffic data are given Traffic Report (RP003 Rev-1 dated 29/12/2011).

6.2 Annual Average Daily Traffic

Annual Average Daily Traffic (AADT) has been worked out using seasonal variation factor, which is given in Traffic Report. The AADT values obtained at various traffic count stations are shown in **Table 6-2**.

Table 6-2 Location wise Annual Average Daily Traffic (AADT)

Vehicle Type	Proposed Chainage Km 176.640 (in Nos)	Proposed Chainage Km 225.370 (in Nos)	Proposed Chainage Km 247/420 (Solapur Bypass) (in Nos)
Car/Jeep	2904	4513	4782
Mini Bus	41	125	103
Bus	526	939	1323
LCV	1146	1511	2511
2AT	1829	1752	3180
3AT	4076	1833	3183
MAV	1167	891	869

It is revealed from the above table that, the volume of truck traffic is reduced while passenger traffic and LCVs are increased at km 225.370 compared to those counted at Km 176.640 and Km 247.420. The reasons for such variation are stated in **Section 6.4**.

6.3 Traffic projection

The traffic growth rates established for this study are based on elasticity approach, wherein a relationship is established between traffic data and socio-economic indicators. Traffic growth rates by vehicle type for the project road have been determined up to the period 2032.

For the project road, traffic growth rates have been arrived based on the recommended elasticity and the economic growth scenarios for different vehicle types and different growth scenarios are presented in
Table 6-3. The details of traffic projection are given in **Annexure I**.

Table 6-3 Estimated Future Traffic Growth Rates

Vehicle Type	2010-2014	2015-2020	Beyond 2020
Car	7.15	6	5.5
Bus	4.5	3.6	3.3
LCV	5.20	4.2	3.85
2 Axle Trucks	3.25	3.0	2.75
3 Axle Trucks	7.15	4.80	4.40
MAV	7.15	4.80	4.40

However, the minimum traffic growth rates recommended in the Manual of Specifications and Standards for Four Laning of National Highways through Public Private Partnership is moderately higher than the growth rate derived above. For design of the pavement, higher of the two growth rates has been adopted. The traffic growth rates considered for pavement design is given in **Table 6-4**

Table 6-4 Traffic Growth Rates Considered for Design

Concession Period	Design Life	Year	Bus	LCV	Trucks		
					2-Axle	3-Axle	Multi-Axle
0	Construction Period	2009	5	5	5	7	7
1	Construction Period	2010	5	5	5	7	7
2	Construction Period	2011	5	5	5	7	7
3	0.5	2012	5	5	5	7	7
4	1.5	2013	5	5	5	7	7
5	2.5	2014	5	5	5	7	7
6	3.5	2015	5	5	5	5	5
7	4.5	2016	5	5	5	5	5
8	5.5	2017	5	5	5	5	5
9	6.5	2018	5	5	5	5	5
10	7.5	2019	5	5	5	5	5
11	8.5	2020	5	5	5	5	5
12	9.5	2021	5	5	5	5	5
13	10.5	2022	5	5	5	5	5
14	11.5	2023	5	5	5	5	5
15	12.5	2024	5	5	5	5	5
16	13.5	2025	5	5	5	5	5
17	14.5	2026	5	5	5	5	5
18	15.5	2027	5	5	5	5	5
19	16.5	2028	5	5	5	5	5
20	17.5	2029	5	5	5	5	5
-	18.5	2030	5	5	5	5	5
-	19.5	2031	5	5	5	5	5
-	20.0	2032	5	5	5	5	5

6.4 Homogeneous Sections based on Traffic Characteristics

The origin-destination survey was carried out with the primary objective of studying the travel pattern of goods and passenger traffic on the project corridor. The results have been used for identifying the influence area of the project road, estimation of divertible traffic, estimating the growth rates of traffic and thereby to delineate the homogeneous sections based on its traffic characteristics. The details of O-D survey are presented in Traffic report.

As per observations made during O-D survey, local inquiry and analysis of survey data; it is concluded that

- Truck traffic (2 axles, 3 axles and multi axles) takes diversion on NH-13 from junction at proposed chainage km 215.000 in Mohol town for onward destinations of Bijapur, Bangalore and Chennai.
- Passenger traffic (car, mini bus and bus) and LCVs going to / coming from Pilgrimage town of Pandharpur divert/ merge at proposed chainage km 215.000 in Mohol town.

- Most of the Passenger Traffic using the Project Road generates from Pune, Solapur, Temburni and Mohol.
- Most of the Goods Traffic coming on the project road is of through traffic generated from various places of Maharashtra and various states like Andhra Pradesh, Karnataka, Tamil Nadu and Gujarat.

The homogeneous sections have been delineated based on above inferences in order to assign traffic loading for pavement of the project main carriageway. The homogeneous sections are given in **Table 6-5**.

Table 6-5 Homogeneous Sections of Traffic Load

Homogeneous Sections	Existing Chainage		Proposed Chainage	
	From	To	From	To
HS-A	144.400	209.000	150.400	214.600
HS-B	209.000	241.000	214.600	246.610
HS-C	241.000	249.000	246.610	251.400

7 Axle Load Survey

The main objective of Axle Load Survey is to determine Vehicle Damage Factor (VDF) from the axle load spectrum data. Several factors such as gross weight, tire pressure, number of wheels and wheel configuration, number of repetitions etc. affect the design and performance of pavement. The structural damage to a pavement system is caused by the commercial vehicles, which are expected to use it during its design life. In India, overloading of trucks has assumed menacing proportions, endangering the pavement stability and road safety. The road pavement deteriorates under the action of vehicle wheel loads. The damaging effect of vehicle loads is cumulative in nature i.e. if the traffic is more and wheel loads are higher, the pavement deteriorates at higher rate. The Axle load survey was carried out at the existing chainage of Km 171.000 (proposed chainage Km 176.640) and Km 242.000 (proposed chainage Km 247.420).

The axle load survey was conducted using portable weighing pads for one day (24 hrs) at two locations. Utmost care has been taken in selecting the site for placing the pads, so that the effect of camber and longitudinal slope is nullified. The survey was conducted for one day (24 hours) in both directions with simultaneous volume count of commercial vehicles (Trucks and LCV) and random selection of vehicles for axle load measurement, ensuring a representative sample for each category of commercial vehicle including empty vehicles. A few samples of buses were also taken to weigh the axle loads.

7.1 Vehicle Damage Factor and Equivalent Single Axle Load

The concept of load equivalency is most frequently used in the empirical method of pavement design. The Equivalent Axle Load Factor (EALF) is based on a procedure of converting the number of repetitions of observed load into an equivalent number of repetitions of 8.16 tonne standard axle load. The values of EALF depend on the failure criteria employed. There are many criteria by which the effects of different loads on the pavement can be compared. Some of them are:

- Equal vertical stress criterion
- Equal vertical deflection criterion

- Equal tensile stress criterion
- Equal contact pressure criterion

The EALF based on fatigue cracking is different from that based on permanent deformation. Due to the complex interaction of a large number of variables, it might not be possible to select an EALF that can be applied to all situations. The most widely used method for determining the EALF is the one which uses the empirical equations developed from the AASHTO Road Test, according to which the damage caused increases in proportion to the fourth power of the load. For example, a 10.2 tonne axle load would result in EALF of (10.2/8.16)4 = 2.5. Thus, an increase of 25 % in the axle load would result in 2.5 times more damage. This fact becomes even more significant in India where overloading is a norm. The fourth power relationship is internationally accepted and is used for design.

From the axle-load survey, the Vehicle Damage Factor (VDF) for each type of vehicle can be determined. The vehicle damage factor is the average of the sum of equivalent single axle loads (ESALs) for the vehicle type. The cumulative ESAL is calculated using the following equation

$$ESAL = \sum_{i=1}^{i=j} \text{Initial Traffic} \times 365 \times \frac{(1+r)^n - 1}{r} \times LDF \times VDF$$

Where,

r = Annual growth rate of traffic

n = Design life in years

LDF = Lane Distribution Factor

VDF = Vehicle Damage Factor

As per IRC: 37-2001 (Clause 3.3.5.1 (iv)), pavement design of dual carriageway should be based on 75 percent of volume of commercial vehicles in one direction is assumed for pavement design. The VDF used in the design is the maximum of values obtained from the axle-load survey carried out at the existing chainages Km 171.000 (proposed chainage Km 176.640) and Km 242.000 (proposed chainage Km 247.420) of the Project road and is summarized in **Table 7-1**.

Table 7-1 VDF Values Based on Axle Load Survey

Vehicle Type	Obtained VDF for HS-A	Obtained VDF for HS-B & C	Adopted VDF for HS-A, B & C
LCV	0.73	0.73	0.73
2-Axle Truck	1.73	1.59	1.73
3-Axle Truck	3.08	2.49	3.08
Multi Axle Truck	4.24	4.47	4.47
Bus	1.13	1.13	1.13

The Equivalent Single Axle Loading for each year is calculated considering VDF stated above for each type of vehicle for Concession period of 20 years. The Million Standard Axles (MSA) computed based on ESAL for Concession period of 20 years for each homogeneous section is presented in **Annexure II**.

8 Pavement Investigation

The pavement investigation is carried out for evaluating strengthening / rehabilitation requirement of existing flexible pavement. The following activities were conducted under pavement investigation.

- Pavement Condition Survey
- Benkelman Beam Deflection Test

Each activity conducted for the project is described below.

8.1 Pavement Condition Survey

This activity was carried out prior to Benkelman Beam Deflection Test. This activity consists primarily of visual observations, supplemented by simple measurements for rut depth using a 3 meter straight edge. The following details were collected during pavement condition survey of existing pavement.

- Pavement Composition including layer type and thickness
- Shoulder composition and condition
- Cracking in %
- Revelling in %
- Potholing in %
- Rut depth
- Patching in %
- Pavement edge drop in mm
- Embankment condition
- Road Side drain type, size and condition available, if any

The data was collected during survey and recorded as per the format given in Table 2 of IRC:81-1997 and presented vide **Annexure III**. The road length is classified in to sections of equal performance in accordance with the criteria provided in **Table 8-1**

Table 8-1 Pavement Condition Criteria

Classification	Pavement Condition
Good	No cracking, rutting less than 10 mm
Fair	No cracking or cracking confirmed to single crack in the wheel track with rutting between 10 mm and 20 mm
Poor	Extensive cracking and/or rutting greater than 20 mm. Sections with cracking exceeding 20 percent shall be treated as failed

The condition of the pavement is generally observed to be varying from average to very good. The presence of some amount of alligator cracks have been observed at some sections. A few reach has been affected by ravelling which is of trivial in nature. At the time of survey, patching was observed to be minimal. As the shoulders have not been given proper compaction, the shoulder surface on a few section are observed to be irregular.

The sections as given in **Table 8-2** have been overlaid recently and thereby the condition of the same has been observed to be very good.

Table 8-2 Section of Project Road Overlaid Recently

Existing Chainage		Proposed Chainage		Length of Overlaid Sections (Km)
From	To	From	To	
157.000	164.000	162.640	169.640	7
175.000	185.000	180.640	190.640	10
219.000	240.000	224.380	245.390	21

The pavement condition strip map is attached in **Annexure-III**.

8.2 Benkelman Beam Deflection Test

Benkelman Beam Deflection test was undertaken to determine the residual strength of the existing pavement and to determine the thickness of overlay required for catering the projected traffic load.

The test was carried out in accordance with the IRC: 81-1997 “Guidelines for Strengthening of Flexible Road Pavements using Benkelman Beam Deflection Technique (First Revision)” prepared by IRC on the basis of guidelines finally approved by council in its meeting held at Darjeeling on 24.05.1996.

The Benkelman Beam deflection test was conducted once again on the sections, which were overlaid recently by PWD. The overlaid section details are given in **Table 8-2** above.

The reading taken during the tests are used for arriving at characteristic deflection. The characteristic deflection is computed for each homogeneous section. The moisture correction factor for the deflection measurements is applied to allow for seasonal variations. The subsoil moisture survey, together with experience of the Consultants in the region, is used to develop appropriate correction factors. The data collected through Benkelman Beam Deflection test along with analysis of Rebound Deflection as per Table 3 of IRC:81-1997 is presented in **Annexure IV**.

8.3 Existing Pavement Composition

The pavement composition details of the existing pavement were obtained from the examination of test pits excavated at regular intervals along the project road in both directions. The pit results are presented in **Annexure-III**. As evident from the data, it is seen that existing road has granular base and sub base thickness varying from 175 mm to 430 mm. Asphalt layer thickness varies from 90 mm to 260 mm.

9 Geotechnical Investigations

Several methods for evaluating or estimating the strength and supporting power of a sub grade are in use today, including the following:

- Loading test in the field on the sub grade itself. For example, the plate bearing test uses large circular plate, loaded to produce critical amount of deformation on the sub grade in place.
- Loading test in a laboratory using representative samples of the sub grade soil. A test commonly used is the California Bearing Ratio (CBR) test

- Evaluation based on classification of soil by identifying and testing the constituent particles of the soil.

As the pavement design method is based on layered elastic theory, it is beneficial to use elastic modulus for each pavement material and the sub grade. However, pavement materials and natural soils do not behave in a perfectly elastic manner and the determination of elastic moduli is difficult. For these reasons the sub grade strength is not specified in terms of elastic modulus but in terms of the more readily determined CBR value. As CBR is dependent on the nature of the soil, its density, and its moisture content, it is important that the CBR is determined at conditions under which the material is likely to perform in service. In the present case CBR values are obtained by laboratory tests as well as field tests (DCPT).

9.1 Soil Borrow Area

Soil sub grade is a layer of soil prepared to withstand load of road material, traffic load and environmental conditions. The load on pavement is ultimately received by the sub grade soil for dispersion to the earth mass. Therefore it is essential that at no time, the sub grade soil is overstressed meaning that the pressure transmitted on the top of the sub grade is within the allowable limit and should not cause excessive stress condition or deformation beyond elastic limit. Soils that can be used in sub grade and embankment are identified from various borrow -areas located in vicinity of project road.

9.1.1 Objectives

The investigations on borrow areas are carried out with the following basic objectives:

- Source location indicating places, kilometre stone and lead distances and the status whether in operation or new sources.
- To assess source, indicating the direction and nature of the access road i.e. left/right of project road and approximate lead distance.
- Ownership of land, (Government or Private)
- Testing of Borrow area soils to indicate the quality of materials along with their classification details and suitability.
- Probable use indicating the likely use of soils at various stages of construction work, i.e. fill material, sub grade etc.

9.2 Sub-grade Type and Characteristics

Investigations were carried out to assess the type and strength of existing sub-grade soil along the alignment of both the existing as well as proposed carriageways. Further tests from pits (1m x 1 m) were conducted along the corridor of proposed route of new four-lane carriageway to determine the strength of the foundation strata (sub- grade) in terms of CBR.

Soaked CBR on sub-grade samples vary from 4% to 28%. The test results and other characteristics of soil sub-grade are presented in **Annexure-V**.

The test results show that there is good subgrade soil available along most of the corridor having more than 10% CBR value. In order to ensure uniform and reliable pavement strength, it is proposed to build new / widened pavement on a proposed sub-grade layer of 500mm thick using selected barrow material with soaked CBR more than l5%. Accordingly, the CBR value of 12% has been adopted for design.

9.3 Borrow Areas

Investigation of Borrow area for road construction has been carried out to identify the potential sources for embankment fill material and sub grade material for new carriageway / widened portion and to assess the general availability, nature and quantum of materials available for the project.

The detailed survey of probable borrow areas was carried out by Material Engineer. Locations mentioned below are identified as borrow areas for the soil that can be used for road embankment as well as for sub grade. The visual assessment for suitable quantities available from soil borrow areas is made. The details of available source, location, average lead distance to the project roads are given in **Table 9-1**.

Table 9-1 Details of Borrow Soil

S.No	Borrow Area Location (Existing Chainage)	CBR Value (%)
1	Km. 250+100 R/S-10 Km.	22.9
2	Km. 248+960 L/S-7.2 Km.	18.1
3	Km. 248+960 L/S-5.0 Km.	15.1
4	Km 248+980 L/S-4.5 Km	29.6
6	Km 218+580 L/S-2.4 Km	17.8
7	Km 210+340 R/S-0.8 Km	30.5
8	Km 210+340 R/S-1.0 Km	28.0
9	Km 225+550 R/S-0.8 Km	15.0
10	Km 237+950 L/S-4.0 Km	30.0

Soil samples collected from borrow areas are tested for Gradation, Atterberg limit, Modified Maximum Dry Density / Optimum moisture content and CBR at three energy level. All these parameters are tested in accordance with following Bureau of Indian Standards.

Grain Size Analysis	-	As per IS: 2720(Part 4)-1985
Atterberg Limit	-	As per IS: 2720(Part 5)-1985
Modified Maximum Dry Density and Optimum Moisture Content	-	As per IS: 2720(Part 8)-1983
CBR at Three Energy Level	-	As per IS: 2720(Part 16)-1987
Determinations of Organic Matter	-	As per IS: 2720(Part 22)-1978

The summary of geotechnical test results is presented in **Annexure-V.**

Although, the CBR values of barrow materials ranges from 15.1% to 30.5%, the CBR considered for pavement design is restricted to 12%.

9.4 Quarry Materials for Construction

A comprehensive survey of available quarry materials has been done for construction in various components of road: Bituminous Concrete. Dense Bituminous Macadam (DBM), Bituminous Macadam (BM), Wet Mix Macadam (WMM), Granular Sub-base, sand for cement concrete works, gravel etc.

9.4.1 Objectives

The investigations on materials are carried out with the following basic objectives:

- Source location indicating places, kilometre stone, lead distances and status whether in operation or new sources.
- To assess source indicating the direction and nature of the access road i.e. left / right of the project road. Approximate lead distance.
- Ownership of quarries whether Government or Private
- Testing and analysis of materials to indicate the quality and suitability for construction works
- Probable indications of likely use at various stages of construction work i.e. sub-base, bituminous course and Cross Drainage Structures.

9.4.2 Stone Aggregates

Aggregate quarries located in the vicinity of project area have been inspected and the details on number of crushers working over there along with production capacity were collected which is depicted in **Table 9-2**.

Table 9-2 Details of Aggregate Source and its Parameters

S.No	*Source*	*Location (Existing Chainage)*	*Available Material Size*
1	Gangawadi Quarry (Maytas Crusher)	Km 248+960 LHS 18 Km From NH 9	20 mm
			10 mm
2	Sachin Chowhan Crusher	Km 232+600 LHS 2.0 Km From NH 9	40 mm
			20 mm
			10 mm
			Crushed Sand
3	Agam RMC	Km 239+200 LHS 8 Km From NH 9	20 mm
			10 mm
			Crushed Sand
4	Gaykwad Crusher	Km 140+000 RHS 1 Km From NH 9	20 mm
			10 mm
5	Tarangwadi Crusher	Km 140+000 RHS 6 Km From NH 9	40 mm
			20 mm
			10 mm
			Crushed Sand

The samples of aggregate from quarries / crushers are collected and tested to determine their suitability in the construction of various components of pavement structure. Test parameters like Crushing Strength; Impact Value, Water Absorption, Specific Gravity, Soundness test, Coating and Stripping of bitumen are applied on the aggregate samples collected from various quarries in order to determine their suitability vis-à-vis specifications. All the tests are carried out in accordance with the codes mentioned below:

Crushing Strength of Aggregate - As per IS: 2386 (Part 3)

Aggregate Impact Test	-	As per IS: 2386 (Part 3)
Water Absorption of Aggregate	-	As per IS: 2386 (Part 3)
Specific Gravity of Aggregate	-	As per IS: 2386 (Part 3)
Coating and Stripping of Bitumen Test	-	As per IS: 6241-1971
Elongation and Flakiness Index	-	As per IS: 2386 (Part 1)
Soundness Test	-	As per IS: 2386 Part - 5

9.4.2.1 Location and Description of Aggregate Quarries

Aggregate samples collected from identified sources are tested for Impact test, Water Absorption, Specific Gravity, Bitumen Coating and Stripping value and for Elongation and Flakiness tests. The summary of test results obtained is given in **Table 9-3**.

Table 9-3 Test Results of Aggregate Collected from Quarry

S. No	Source	Location (Existing Chainage)	Material	Specific Gravity	Water Absorption	AIV	Flakiness Index
1	Gangawadi Quarry (Maytas Crusher)	Km 248+960 LHS 18 Km From NH 9	20 mm	2.913	0.72	9.87	-
			10 mm	2.91	0.76		-
2	Sachin Chowhan Crusher	Km 232+600 LHS 2.0 Km From NH 9	40 mm	2.92	0.96	13.02	21.9
			20 mm	2.93	0.96		22.1
			10 mm	2.91	1.06		27.9
			Crushed Sand	2.86	1.75	-	-
3	Agam RMC	Km 239+200 LHS 8 Km From NH 9	20 mm	2.93	1.00	10.30	13.1
			10 mm	2.90	1.06		26.7
			Crushed Sand	2.79	1.90	-	-
4	Gaykwad Crusher	Km 140+000 RHS 1 Km From NH 9	20 mm	2.865	0.99	16.09	16.24
			10 mm	2.856	1.12		18.1
5	Tarangwadi Crusher	Km 140+000 RHS 6 Km From NH 9	40 mm	2.880	0.61	13.31	11.44
			20 mm	2.875	0.81		10.62
			10 mm	2.853	1.07		17.97
			Crushed Sand	2.815	1.85	-	-

The aggregate sample collected from the crusher working in the vicinity of project area were tested for the various parameters like Impact Test Water Absorption Specific Gravity Bitumen Coating & Stripping and found to be suitable for road construction as the said materials fulfil the stipulated specifications.

10 Design Life

As per Concession Agreement, the concession period for the project road is stated to be 20 years including concession period. According to section 4.4.2. of Manual of Specifications and Standards for DBFOT Road Projects 2008, the design life for flexible pavement should be 20 years. Therefore, the design life of the pavement has been taken as below.

Base Year - 2010

Construction Period – 2 ½ Years

Design Life – 20 Years

Design Year - 2032

The design life for base & sub base and bituminous surface for new carriageway and strengthening of existing carriage way are as given below.

10.1 Design Life for Base and Sub-Base

The base and sub-base courses of the new pavement have been designed for the full design life ie, the design year of 2032.

10.2 Design Life for Bituminous Surface

As per IRC 37-2007, the initial bituminous surfacing is to be designed for a minimum design period of 10 years and the pavement shall be strengthened by bituminous overlay as and when required to extend the pavement life to full operation period. Therefore, the design life with stage construction for bituminous layers have been assessed for various homogeneous sections, which are delineated based on traffic characteristics, pavement width and soil type. The pavement homogeneous sections are given in **Table 6-5.**

Therefore, stage construction has been adopted for bituminous layers with a design life of 15 years from the date of completion of construction for all three homogeneous sections.

The second stage strengthening is proposed to be done at the end of 17th year from the date of completion of construction ie, 2027.

The design life for various homogeneous sections is tabulated below in **Table 10-1**.

Table 10-1 Design Life for Homogeneous Project Sections

Stages	Proposed Chainage Km 150.400 to Km 214.600 (HS-A)	Proposed Chainage Km 214.600 to Km 246.610 (HS-B)	Proposed Chainage Km 246.610 to Km 251.400 (HS-C)
Design Year for First Stage	2027	2027	2027
Design Year for Second Stage	2032	2032	2032

The remaining life concept of stage construction is based on the assumption that the second stage will be placed before the first stage shows serious signs of distress. However, because of the functional overlays, which will be laid according to functional requirements, the functional overlays of BT layers will add strength to the pavement crust and therefore, the pavement may actually be in a better condition at the end of the first stage time period. Accordingly, the second stage overlay can be decided depending on the condition survey at that time and can be redesigned using BBD methodology or any other suitable technique.

11 Design Traffic Load

11.1 Equivalent Single Axle Load

Vehicles have many combinations of axles for distribution of the load to the pavement through the wheels. As the axle loads of different vehicles vary, these axle loads are converted into Equivalent Single Axle Loads (ESAL) for the purpose of pavement design. A standard truck has two axles, front axle with two wheels and rear axle with four wheels.

Since the design of flexible pavements is by layered theory, only the wheels on one side is considered. On the other hand, the design of rigid pavement is by plate theory and hence the wheel loads on both sides of axle is considered.

11.1.1 Legal Axle Load

The maximum allowed axle load on the roads is called Legal Axle Load. For highways the Maximum Legal Axle Load in India, specified by IRC, is 10 tonnes.

11.1.2 Standard Axle Load

It is a single axle load with dual rear wheel carrying 8.16 tonnes and the design of pavement is based on the standard axle load.

11.1.3 Repetition of Axle Loads

The deformation of pavement due to a single application of axle load may be small but due to repeated application of load there would be accumulation of unrecovered or permanent deformation, which results in failure of pavement.

The traffic loading in terms of the cumulative number of standard axles for the given period has been computed using the following relationship:

$$N_s = \sum_{i}^{DL} \sum_{i}^{n} \frac{365*ADT_i\,[(1+GR_i)^{DL}-1]\ *\ VDF_i\ *LDF}{(GR_i)}$$

Where,

Ns is cumulative number of standard axles for the period under consideration.

ADTi is average daily traffic for vehicle category "i" in the initial year.

GRi is growth rate for vehicle category.

VDFi is vehicle damage factor in terms of equivalent number standard axles for vehicle category, "i" (The VDF values for MSA calculations have been considered as mentioned in Detailed Project Report.)

DL is design life in years.

N is number of Years

LDF is lane distribution factor as per IRC: 37-2001

The cumulative million standard axles (MSA) for various homogeneous sections have been calculated and the same are summarised in the tables below. The detailed calculations for MSA are presented in **Annexure II**.

Details of CVC count are presented in Traffic report. The summary of traffic volume is attached as **Annexure - I**. The traffic study was carried out at site during December 2009 and MSA has been calculated based on the traffic volume, seasonal variation factor and VDF value. The summary of design MSA for 3 homogeneous sections is given in Tables below.

Table 11-1 Million Standard Axles for HS-A (From Km 1150.400 to Km 214.600)

Concession Period	Design Life	Year	Design MSA		Remarks
			Standard Axles in Millions	Cumulative MSA	
0	Base Year	2009	0		
1	Construction Period	2010	0		
2	Construction Period	2011	6.225656711		
3	0.5	2012	3.318156822	1.6591	
4	1.5	2013	3.537229805	5.1963	
5	2.5	2014	3.770977997	8.9673	
6	3.5	2015	3.959526896	12.9268	
7	4.5	2016	4.157503241	17.0843	
8	5.5	2017	4.365378403	21.4497	
9	6.5	2018	4.583647324	26.0333	
10	7.5	2019	4.81282969	30.8462	
11	8.5	2020	5.053471174	35.8996	
12	9.5	2021	5.306144733	41.2058	
13	10.5	2022	5.57145197	46.7772	
14	11.5	2023	5.850024568	52.6273	
15	12.5	2024	6.142525796	58.7698	
16	13.5	2025	6.449652086	65.2194	
17	14.5	2026	6.772134691	71.9916	
18	15.5	2027	7.110741425	79.1023	**1st Stage**
19	16.5	2028	7.466278496	86.5686	
20	17.5	2029	7.839592421	94.4082	
-	18.5	2030	8.231572042	102.6398	
-	19.5	2031	8.643150644	111.2829	
-	20.0	2032	4.537654088	115.8206	**2nd Stage**

Table 11-2 Million Standard Axles for HS-B (From Km 214.600 to Km 246.610)

Concession Period	Design Life	Year	Design MSA		Remarks
			Standard Axles in Millions	Cumulative MSA	
0	Base Year	2009	0		
1	Construction Period	2010	0		
2	Construction Period	2011	4.121309473		
3	0.5	2012	2.190693787	1.0953	
4	1.5	2013	2.329125231	3.4245	
5	2.5	2014	2.476501021	5.9010	
6	3.5	2015	2.600326072	8.5013	
7	4.5	2016	2.730342376	11.2316	
8	5.5	2017	2.866859495	14.0985	
9	6.5	2018	3.01020247	17.1087	
10	7.5	2019	3.160712593	20.2694	
11	8.5	2020	3.318748223	23.5882	
12	9.5	2021	3.484685634	27.0729	
13	10.5	2022	3.658919916	30.7318	
14	11.5	2023	3.841865911	34.5736	
15	12.5	2024	4.033959207	38.6076	
16	13.5	2025	4.235657167	42.8433	
17	14.5	2026	4.447440026	47.2907	
18	15.5	2027	4.669812027	**51.9605**	**1st Stage**
19	16.5	2028	4.903302628	56.8638	
20	17.5	2029	5.14846776	62.0123	
-	18.5	2030	5.405891148	67.4182	
-	19.5	2031	5.676185705	73.0944	
-	20.0	2032	2.979997495	**76.0743**	**2nd Stage**

Table 11-3 Million Standard Axles for HS-C (From Km 246.610 to Km 251.400)

Concession Period	Design Life	Year	Design MSA		Remarks
			Standard Axles in Millions	Cumulative MSA	
0	Base Year	2009	0		
1	Construction Period	2010	0		
2	Construction Period	2011	6.170277821		
3	0.5	2012	3.276952604	1.6385	
4	1.5	2013	3.480985955	5.1195	

Concession Period	Design Life	Year	Design MSA		Remarks
			Standard Axles in Millions	Cumulative MSA	
5	2.5	2014	3.698033973	8.8175	
6	3.5	2015	3.882935672	12.7004	
7	4.5	2016	4.077082455	16.7775	
8	5.5	2017	4.280936578	21.0585	
9	6.5	2018	4.494983407	25.5534	
10	7.5	2019	4.719732577	30.2732	
11	8.5	2020	4.955719206	35.2289	
12	9.5	2021	5.203505166	40.4324	
13	10.5	2022	5.463680425	45.8961	
14	11.5	2023	5.736864446	51.6329	
15	12.5	2024	6.023707668	57.6566	
16	13.5	2025	6.324893052	63.9815	
17	14.5	2026	6.641137704	70.6227	
18	15.5	2027	6.97319459	**77.5959**	**1st Stage**
19	16.5	2028	7.321854319	84.9177	
20	17.5	2029	7.687947035	92.6057	
-	18.5	2030	8.072344387	100.6780	
-	19.5	2031	8.475961606	109.1540	
-	20.0	2032	4.449879843	**113.6039**	**2nd Stage**

12 New Flexible Pavement Design by IRC Method

12.1 New Flexible Pavement Design for Main Carriageway widening Portion

Widening portion of existing road and realignment portion of road have been designed as new flexible pavement. IRC: 37-2001 has been followed for designing of new flexible pavement.

The proposed total thickness of pavement as per IRC: 37-2001 is presented in **Table 12-1**.

The detailed summary of pavement design is presented in **Annexure-VII**.

Table 12-1 Proposed Pavement Crust Thickness for Main Carriageway

Section	Design MSA	Design CBR (%)	BC	DBM	Base (WMM)	Sub-base (GSB)	Sub grade
HS-A	80	10	45	120	250	200	500
HS-B	52	10	40	115	250	200	500
HS-C	78	10	45	120	250	200	500

12.2 New Flexible Pavement Design for Paved Shoulder/Truck layby/Bus Bay/Rest Area

As per AASHTO, “as shoulder is the portion of the roadway continuous with the travelled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface course.

The factors affecting shoulder / highway facility design are similar to those of mainline pavement design. The major difference is the amount of traffic. Traffic volume on shoulders is lower than on a mainline and much difficult to predict.

Three types of traffic may be considered in shoulder design:

- Encroaching traffic
- Parking traffic, and
- Regular traffic

Regular traffic is considered only if the use of shoulder as an additional lane for peak hour or detoured traffic is anticipated. If there is no regular traffic, the sum of encroaching and parking traffic is used to design the inner edge of shoulder adjacent to the mainline; while parking traffic is used to design the outer edge of shoulder. This may turn to be uncertain predicting the traffic on the paved shoulder / facilities.

Considering this aspect, the thickness of pavement layers designed for main carriageway is adopted for paved shoulders, truck layby, rest area and bus bays.

12.3 Drainage of Sub grade

Pavement and sub grade moisture conditions exert a major influence on the performance of roads. In pavement design it is important to be able to recognise ways by which moisture may enter the pavement or sub grade and to determine measures needed to control moisture movement.

Moisture changes usually result from one or more of the following effects:

- seepage from higher ground near the road pavement;
- fluctuations in water table level;
- Infiltration of water through the surface of the road pavement and shoulders; and
- Transfer of moisture in liquid or vapor states.

In the present case, drainage layer of GSB has been proposed for effective drainage.

The widening of both left and right carriageways are proposed on right side of the existing carriageway. Therefore, the GSB layer below the median portion is proposed to be sloped towards right carriageway in order to drain off the water seeped from median top away from the existing crust on left side.

13 Overlay Design for Existing Flexible Pavement

13.1 Homogeneous Sections for Overlay Design

Performance of the flexible pavements is closely related to the elastic deflection of the pavement under the wheel loads. Hence, based on the characteristic deflection which is

obtained from the Benkelman Beam Deflection (BBD) test homogeneous sections are identified. Based on the detailed BBD data analysis which is presented in the **Annexure IV**, the characteristic deflections obtained over a project stretch are shown in the deflection chart attached in **Annexure IV**. It can be observed from the chart that the variation in deflections is significant throughout the length of the project road. The cumulative difference approach suggested by AASHTO Guide for Design of Pavement Structure is used to classify the sections which are similar in nature from the characteristic deflection. This method compares the sequence of actual cumulative sums in a measurement series with the sums that would have resulted from the adding averages.

If r_i is the pavement response value (Characteristic deflection) for the ith chainage measurement, A series Z_1, Z_2 ,…..Z_n is constructed by calculating

$$Z_X = \sum_{i=1}^{n} a_i - \frac{\sum_{i=1}^{n_t} a_i}{L_p} \sum_{i=1}^{n} x_i, \qquad \text{With } a_i = \frac{(r_{i-1} + r_i) \times x_i}{2} = \bar{r}_i \times x_i \text{ (NOTE: let } r_0 = r_1 \text{ for first interval)}$$

where

n = the nth pavement response measurement

n_t = total number of pavement response measurements taken in project

x_i = interval between two measurements

r_i = pavement response value of the ith measurement

$\bar{r}_i$ = average of the pavement response values between the (i-1) and ith tests and

L_p = total project length

According to AASHTO, a section border is indicated whenever the trend in the series of cumulative differences changes from positive to negative and vice versa. However, relatively volatile measurements series should be ignored to restrict the number of identified sections.

The adopted Characteristic Deflection for each homogeneous section is presented in **Table 13-1**.

Table 13-1 Section wise Characteristic Deflection

Homogeneous Section	Existing Chainage Start From (Km)	Existing Chainage End To (Km)	Characteristic Deflection (mm)
HS 1	146.000	147.000	1.58
HS 2	147.000	152.000	2.24
HS 3	152.000	157.000	2.48
HS 4	157.000	161.000	1.44
HS 5	161.000	165.000	2.59
HS 6	165.000	169.000	2.04
HS 7	169.000	171.000	1.58
HS 8	171.000	172.000	2.18
HS 9	172.000	176.000	1.70
HS 10	176.000	180.000	1.26
HS 11	180.000	183.000	1.59

HS 12	183.000	187.000	1.36
HS 13	187.000	189.000	1.47
HS 14	189.000	193.000	2.04
HS 15	193.000	200.000	1.39
HS 16	200.000	204.000	1.51
HS 17	204.000	207.000	1.36
HS 18	207.000	209.000	1.19
HS 19	209.000	214.000	1.62
HS 20	214.000	219.000	1.25
HS 21	219.000	223.000	0.79
HS 22	223.000	228.000	1.79
HS 23	228.000	230.000	2.33
HS 24	230.000	233.000	0.80
HS 25	233.000	236.000	1.07
HS 26	236.000	239.000	1.75
HS 27	239.000	241.000	0.98
HS 28	241.000	249.000	1.24

13.2 Overlay Design

Overlay thickness design has been derived based on characteristic deflection and projected MSA as per the design chart given in IRC: 81-1997.

Benkelman Beam Deflection studies have been carried out for evaluating the requirements of strengthening of pavements. The correction factor is applied for moisture content and Pavement Temperature as per the guidelines given in IRC: 81-1997. Deflection measurements obtained from the field surveys has been used in the analysis to determine the mean deflection, standard deviation and characteristic deflection.

Overlay with BM/DBM has been proposed over the existing road as the condition of the existing road is good to fair and there is no failure in the pavement.

Depending on the MSA and pavement characteristic deflection, overlay thickness in terms of BM (Bituminous Macadam) layer has been established as per design chart given in IRC: 81 – 1997 for each section and accordingly converted into DBM and BC. However, minimum thickness of DBM and BC is kept as 50mm and 40mm respectively in case the designed overlay thickness is lesser than the mentioned limit.

The proposed bituminous overlay for strengthening the existing pavement is presented in **Table 13-2**.

The details of overlay design are given in **Annexure – VII**.

Table 13-2 Proposed Strengthening / Overlay on Existing Road

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 1	80	151.640	152.640	1.58	45	95	0	0
HS 2	80	152.640	162.640	2.48	45	50	70	250
HS 3	80	162.640	166.640	1.44	45	90	0	0
HS 4	80	166.640	174.640	2.59	45	50	70	250

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 5	80	174.640	176.640	1.58	45	95	0	0
HS 6	80	176.640	177.640	2.18	45	50	70	250
HS 7	80	177.640	181.640	1.70	45	50	50	0
HS 8	80	181.640	185.640	1.26	45	75	0	0
HS 9	80	185.640	188.640	1.59	45	95	0	0
HS 10	80	188.640	192.630	1.36	45	80	0	0
HS 11	80	192.630	194.630	1.47	45	85	0	0
HS 12	80	194.630	198.630	2.04	45	50	70	250
HS 13	80	198.630	205.610	1.39	45	80	0	0
HS 14	80	205.610	209.620	1.51	45	90	0	0
HS 15	80	209.620	212.600	1.36	45	80	0	0
HS 16	80	212.600	214.600	1.19	45	65	0	0
HS 17	80	214.600	219.650	1.62	40	90	0	0
HS 18	52	219.650	224.380	1.25	40	60	0	0
HS 19	52	224.380	228.340	0.79	40	50	0	0
HS 20	52	228.340	230.340	1.69	40	90	0	0
HS 21	52	230.340	231.340	1.79	40	65	50	250
HS 22	52	231.340	233.340	1.64	40	90	0	0
HS 23	52	233.340	235.350	2.33	40	50	65	250
HS 24	52	235.350	238.350	0.80	40	50	0	0
HS 25	52	238.350	241.340	1.07	40	50	0	0
HS 26	52	241.340	242.340	1.75	40	50	65	250
HS 27	52	242.340	244.340	1.44	40	95	0	0
HS 28	52	244.340	246.410	0.98	40	50	0	0
HS 29	78	246.410	251.400	1.24	45	75	0	0

13.3 Rehabilitation of Existing Carriageway

While formulating the proposal for strengthening of existing carriageway, the pavement investigation data ie., BBD data, existing crust composition and existing sub grade CBR have been thoroughly reviewed to derive appropriate solution to strengthen the existing crust. A sequential approach guided to draw the proposal for rehabilitation as described below.

The pavement surface condition is observed to be good in most of the project road. Therefore, the combination of BBD data and existing crust thickness data have been used to identify the section for rehabilitation. Though the pavement condition survey shows that it is functionally good, it may have happened because of periodical maintenance by rectifying potholes and functional overlays. And this aspect is supported by the fact that the characteristic deflection reported for all identified sections exhibit comparatively higher values.

It is apparent from the pit data of existing crust that these stretches are provided with frequent overlays resulting in thick bituminous layer and that might have been necessitated due to inherent problems in the weak or thin base / sub base layers. These overlays have very little contribution in structural strengthening of pavement. However, in most of the

sections, the average soaked CBR at present state of compaction are suggestive of good existing subgrade.

The identified stretches are recommended to be rehabilitated by adding 250mm thickness of WMM layer on top of existing crust after removing the existing BT layer and subsequently by laying DBM and BC layers of thickness as same as new crust for the corresponding sections. The stretches considered for rehabilitation and the proposed pavement crust details are highlighted in **Table 13-3**.

Table 13-3 Proposed Pavement Thickness for Rehabilitation of Existing Road

Homogeneous Section	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Pavement Thickness (mm)			
			BC	DBM-I	DBM-II	WMM
HS 2	152.640	162.640	45	50	70	250
HS 4	166.640	174.640	45	50	70	250
HS 6	176.640	177.640	45	50	70	250
HS 12	194.630	198.630	45	50	70	250
HS 21	230.340	231.340	40	65	50	250
HS 23	233.340	235.350	40	50	65	250
HS 26	241.340	242.340	40	50	65	250

13.4 Profile Corrective Course

Before implementing the overlay, the existing surface shall be corrected and brought to proper profile by filling the cracks, potholes, ruts and undulations. No part of the overlay design thickness shall be used for correcting the surface irregularities termed as profile correcting course. The profile corrective courses are those layers laid on top of the existing carriageway, so that the finished road profile matches with shape and level of the designed road profile. These profile corrective courses consist of bituminous or granular material or both. There are six different treatments depending on the overall thickness of profile corrective course required are described as follows.

Table 13-4 Proposed Composition of Profile Corrective Course (PCC)

Type of PCC	Level Difference between bottom of proposed overlay and existing road along existing road centre line	PCC layer
1	< 40 mm	PCC by DBM
2	> 40mm and < 150mm	PCC by BM
3	> 150mm and < 300mm	Dismantle the existing bituminous course and provide bituminous layers as per new carriageway design and rest with WMM as PCC
4	>300mm and < 500mm	Dismantle the existing bituminous course and provide bituminous layers as per new carriageway design and 250mm WMM. Remaining with GSB (min. 100mm) as PCC

Type of PCC	Level Difference between bottom of proposed overlay and existing road along existing road centre line	PCC layer
5	> 500mm	Reconstruction with new carriageway pavement thickness by dismantling of existing pavement to requisite depth
6	> 1600mm	Reconstruction with new carriageway pavement thickness without dismantling the existing bituminous course

14 New Flexible Pavement Design for Service Roads

Service roads are proposed for the urban/built-up areas for effective segregation of traffic and to enforce access control measures. Carriageway width of 7.0m is proposed with footpath of 1.5m width depending on local traffic movement expected. The pavement has been designed for the anticipated traffic.

The Design of pavement layers for Service road is Carried out considering Design MSA of 5 as specified in IRC SP:84-2009 and Design CBR of 10% for entire length of the project road. The thickness of pavement layers proposed is presented in **Table 14-1**.

Table 14-1 Flexible Pavement Crust Thickness for Service Road

Section	Design MSA	Design CBR (%)	SDBC (mm)	DBM (mm)	WMM Base (mm)	GSB Sub-base (mm)	Sub grade (mm)
All Service Roads	5	10	25	50	250	150	500

15 Rigid Pavement Design for Toll Plaza Section

There are two proposed toll plaza in the section of project road one at Km 178/572 and another at Km 229/230. The rigid pavement has been designed for both toll plazas with respect to the corresponding traffic / axle load spectrum data.

There are number of pavement design methods available to determine the thickness of rigid pavements. Because, the mechanism of load carrying is different in flexible and rigid pavements, different methodologies are used for pavement thickness design. In flexible pavements loads are carried by successive layers of materials over the sub-grade. The layers behave as elastic (or Visco-Elastic) material; therefore, flexible pavements are designed using the layer theory. Rigid pavements are able to carry the load largely by their beam action, and are therefore, analysed by the plate theory, instead of the layer theory. Like flexible pavements, rigid pavements are also designed to withstand loading and environmental effects.

The most important load related parameter in the case of rigid pavements, instead of tensile strain, is the stress ratio, i.e., the ratio between the flexural stress and modulus of rupture of concrete under load repetitions. The fatigue of concrete can cause both transverse cracking and longitudinal cracking in the wheel paths.

The environmental effects manifest themselves in the form of warping and curling stresses caused by variations in moisture content with slab depth, and variations of temperature respectively. The situation of differential conditions at the slabs top and bottom is very complex, making it difficult to compute the restraining stresses. Therefore, some design methods ignore them, while others such as, IRC, and Portland Cement Association (PCA) method combine the loading and temperature stresses.

Another important mode of rigid pavement distress, in addition to fatigue failure, is the pumping and erosion of material under and beside the slab. Factors that influence pumping and erosion include the presence of water, the rate at which water is ejected from under the slab, the erodibility of the sub-base material, the magnitude and number of repeated loads, and the amount of deflection. Only the Portland Cement Association model based primarily on the results of AASHTO Road Test takes this and only the corner deflection is accounted into consideration.

Three widely accepted design methods to determine the thickness of rigid pavements currently in use are:

- IRC :58-2002; Guidelines for the Design of Plain Jointed Rigid Pavements for Highways
- Portland Cement Association (PCA); Thickness Design for Concrete Highway and Street Pavements;
- AASHTO Guide for Design of Pavement Structures

The IRC method is considered for design of rigid pavement for this project.

As IRC-58-2002 has been recently revised based on the experience gained in this country, it has been adopted for design in this project. The IRC rigid pavement design method, the pavement is designed for the maximum flexural stress due to wheel load and temperature warping stresses in the pavement due to temperature differential at the top and the bottom of the slab. For loading conditions, a load safety factor, (1.0 for local-street to 1.2 for high volume class facility) and 98 percentile axle-loads is used to calculate flexural stresses and to determine the slab thickness. The slab warping stresses are then calculated for the thickness and the local temperature conditions. If safe under the combined effect of these stresses, the pavement thickness is checked for fatigue damage due to repeated loading from single and tandem axles, to keep the damage within the allowable limits of fatigue life.

The rigid pavements on this project are designed for a life of 30 years and for the projected traffic loadings over the next 30 years. The primary tool used for design on this project, are IRC:58-2002, because this take into account combined edge loading and temperature stresses. As the Tandem axle forms small part in India, erosion analysis has not been carried out. The parameters used for the design of rigid pavement method are as follows:

For Toll Plaza at Km 178/572:

1	Design Life in Years	n	30	Years
2	DesignWheel Load	P	6258	Kg
3	Present Traffic Intensity	T_b	8829	CVD
4	Traffic Growth Rate	r	As Per Attachment	
5	28 days Compressive Strength of Concrete	f_{CK}	400	kg/cm^2
6	Flexural Strength of Concrete	F_{CR}	45.00	kg/cm^2
7	Modulus of Elasticity of Concrete	E	300000	kg/cm^2

8	Possion's Ratio of Concrete	μ	0.15	
9	Coefficient of Thermal Expansion of Concrete	a	10.0E-6	Per ^{o}C
10	Subgrade CBR (%)		7.000	
11	K Value of Sub grade	K_{sg}	4.800	kg /cm^3
12	Subbase Type (Enter Code)		3	
13	Thickness of Dry Lean Concrete		15	cm
14	K Value of Subbase	K_{sb}	27.700	kg /cm^3
15	Zone of Project Corridor for Temparature		3	No.
16	Assume Trail Slab Thickness	h	35	cm
17	Temp. Difference b/w top and bottom layers	D_t	21.00	^{o}C
18	Spacing of Contraction Joints	L	4.5	m
19	Length of Slab (Lane Width)	W	3.5	m
20	Tyre Pressure	p	8	kg/cm^2
21	C/C Distance between two tyres	S	31	cm
22	Load safety factor for Fatigue analysis	LSF	1.2	

For Toll Plaza at Km 229/230:

1	Design Life in Years	n	30	Years
2	DesignWheel Load	P	6470	Kg
3	Present Traffic Intensity	T_b	6979	CVD
4	Traffic Growth Rate	r	As Per Attachment	
5	28 days Compressive Strength of Concrete	f_{CK}	400	kg/cm^2
6	Flexural Strength of Concrete	F_{CR}	45.00	kg/cm^2
7	Modulus of Elasticity of Concrete	E	300000	kg/cm^2
8	Possion's Ratio of Concrete	μ	0.15	
9	Coefficient of Thermal Expansion of Concrete	a	10.0E-6	Per ^{o}C
10	Subgrade CBR (%)		7.000	
11	K Value of Sub grade	K_{sg}	4.800	kg /cm^3
12	Subbase Type (Enter Code)		3	
13	Thickness of Dry Lean Concrete		15	cm
14	K Value of Subbase	K_{sb}	27.700	kg /cm^3
15	Zone of Project Corridor for Temparature		3	No.
16	Assume Trail Slab Thickness	h	34	cm
17	Temp. Difference b/w top and bottom layers	D_t	21.00	^{o}C
18	Spacing of Contraction Joints	L	4.5	m
19	Length of Slab (Lane Width)	W	3.5	m
20	Tyre Pressure	p	8	kg/cm^2
21	C/C Distance between two tyres	S	31	cm
22	Load safety factor for Fatigue analysis	LSF	1.2	

Since the soaked CBR value of the sub-grade borrow material is taken as 7%, it has a 'k' value of 4.8 kg/cm^2/cm, which is less than the suggested minimum of 6.0 kg/cm^2/cm,

required for placing the slab directly over sub-grade. As per the Table-4 of IRC 58-2002 the modified K-value of DLC sub-bases 150 mm corresponding to CBR 10% is 27.70 kg/cm^3.

The IRC Guidelines suggest 25% of traffic in one direction as sufficient for design for four lane/ multi lane highways against fatigue failure, but the Portland Cement Association suggests up to that 100% of trucks in truck lane be considered in their design procedure.

The calculation of stresses i.e. edge stress due to load & temperature and corner stress for concrete is checked as per clause 5.2 of IRC: 58 - 2002. The flexural stress at edge due to the application of single or tandem axle loads for Design thickness of slab for PQC is checked as per Clause 5.4 of IRC: 58 -2002.

Although the design is done for both toll plazas separately, the thickness of PQC and DLC are proposed to be same as given in **Table 15-1**. The maximum thickness of PQC and DLC and reinforcement are proposed as per design for the location of Km 178/572.

The thickness for DLC and PQC based on procedure laid down in "Design of Rigid Pavement as per IRC: 58-2002 and the data indicated as above arrived at is as shown in **Table 15-1**.

Table 15-1 Proposed Rigid Pavement Crust Thickness for both Toll Plazas

Rigid Pavement	Pavement Quality Concrete (PQC) in "mm"	Dry Lean Concrete (DLC) in "mm"	Granular Sub Base (GSB) in "mm"
Toll Plaza	340	150	200

In addition, design of Tie bars for longitudinal joints and dowel bars for transverse joints is carried out as per clause 7.2 of IRC:58-2002. The length, spacing and diameter for tie bars and dowel bars are worked out as per the procedure. The Design for bars showing length, spacing with reference to diameter of bar is presented in Annexure IX. The proposed details of dowel and tie bars are given in **Table 15-2** and **Table 15-3** respectively.

Table 15-2 Proposed Details of Dowel Bars

Diameter of Dowel Bar	30 mm
Length of Dowel Bar	500 mm
Spacing between Dowel Bars	270 mm
Type of Dowel Bar	MS
Width of Transverse Joint	8 mm

Table 15-3 Proposed Details of Tie Bars

Diameter of Tie Bar	12 mm
Length of Tie Bar	640 mm
Spacing between Tie Bars	470 mm
Type of Tie Bar	Deformed

16 Summary of Proposals

The proposals of pavement crusts for various sections of the project highway are summarised below.

1. The flexible pavement is proposed for new main carriageway and widening portion of main carriageway as given in table below and the detailed summary is given in **Annexure VII**.

Section	Proposed Chainage	Design MSA	Design CBR (%)	Design Year for BT	BC	DBM	Design Year for Bases	Base (WMM)	Sub-base (GSB)	Sub grade
HS-A	Km150.400 to Km214.600	80	10	2027	45	120	2032	250	200	500
HS-B	Km214.600 to Km246.610	52	10	2027	40	115	2032	250	200	500
HS-C	Km246.610 to Km251.400	78	10	2027	45	120	2032	250	200	500

2. The bituminous overlay is proposed for strengthening the existing flexible pavement as given in table below and the detailed summary is given in **Annexure VII**.

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 1	80	151.640	152.640	1.58	45	95	0	0
HS 2	80	152.640	162.640	2.48	45	50	70	250
HS 3	80	162.640	166.640	1.44	45	90	0	0
HS 4	80	166.640	174.640	2.59	45	50	70	250
HS 5	80	174.640	176.640	1.58	45	95	0	0
HS 6	80	176.640	177.640	2.18	45	50	70	250
HS 7	80	177.640	181.640	1.70	45	50	50	0
HS 8	80	181.640	185.640	1.26	45	75	0	0
HS 9	80	185.640	188.640	1.59	45	95	0	0
HS 10	80	188.640	192.630	1.36	45	80	0	0
HS 11	80	192.630	194.630	1.47	45	85	0	0
HS 12	80	194.630	198.630	2.04	45	50	70	250
HS 13	80	198.630	205.610	1.39	45	80	0	0
HS 14	80	205.610	209.620	1.51	45	90	0	0
HS 15	80	209.620	212.600	1.36	45	80	0	0
HS 16	80	212.600	214.600	1.19	45	65	0	0
HS 17	80	214.600	219.650	1.62	40	90	0	0
HS 18	52	219.650	224.380	1.25	40	60	0	0
HS 19	52	224.380	228.340	0.79	40	50	0	0
HS 20	52	228.340	230.340	1.69	40	90	0	0

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 21	52	230.340	231.340	1.79	40	65	50	250
HS 22	52	231.340	233.340	1.64	40	90	0	0
HS 23	52	233.340	235.350	2.33	40	50	65	250
HS 24	52	235.350	238.350	0.80	40	50	0	0
HS 25	52	238.350	241.340	1.07	40	50	0	0
HS 26	52	241.340	242.340	1.75	40	50	65	250
HS 27	52	242.340	244.340	1.44	40	95	0	0
HS 28	52	244.340	246.410	0.98	40	50	0	0
HS 29	78	246.410	251.400	1.24	45	75	0	0

3. The flexible pavement of the same crust as main carriageway is proposed for paved shoulders on both sides.
4. The flexible pavement of the same crust as main carriageway is proposed for bus bays.
5. The flexible pavement of the same crust as main carriageway is proposed for truck lay-bys.
6. The flexible pavement is proposed for new service road carriageway as given in table below.

Section	Design MSA	Design CBR (%)	SDBC	DBM	Base (WMM)	Sub-base (GSB)	Sub grade
All Service Roads	5	10	25	50	250	150	500

7. The rigid pavement is proposed for the approaches of toll plaza as given in table below.

Rigid Pavement	Pavement Quality Concrete (PQC) in “mm”	Dry Lean Concrete (DLC) in “mm”	Granular Sub Base (GSB) in “mm”
Toll Plaza	340	150	200

Diameter of Dowel Bar	30 mm
Length of Dowel Bar	500 mm
Spacing between Dowel Bars	270 mm
Type of Dowel Bar	MS
Width of Transverse Joints	8 mm
Diameter of Tie Bar	12 mm
Length of Tie Bar	640 mm
Spacing between Tie Bars	470 mm
Type of Tie Bar	Deformed

Annexure I

Annexure I :- CLASSIFIED TRAFFIC VOLUME COUNT SURVEY Near Varavade Village (Km 171.000)

Description	Passenger Vehicles								Goods Vehicles							Others (HCM /EME)	Agricultural Vehicles			Passanger		Goods	Vehicles		
	Cars	Utility Jeep/ Van	3 Wheeler/ Tempo	Two Wheeler	Mini Bus	Standard Bus			L.C.V		Ordinary Trucks		MAV				Tractor	Tractor with 1 Traillor	Tractor with 2 Traillor	Cycle	Cycle Rickshaw	Animal Drawn Cart/Hand Drawn	Motorised	Non-Motorized	Total
						Govt. Bus	School Bus	Other Pvt. Bus	4 - Tyre	6 - Tyre	2 - Axle	3 - Axle	4 to 6 Axle	>6 Axle											
Pune-Solapur																									
Day 1	483	610	144	826	8	97	2	89	122	134	655	1644	307	9	18	9	2	9	5	22	0	0	5173	22	5195
Day 2	547	688	191	1068	13	120	0	114	227	336	843	1826	454	51	16	66	17	17	23	27	5	0	6619	32	6651
Day 3	639	738	189	790	6	121	4	96	224	395	919	1794	500	0	42	34	20	9	18	40	4	0	6538	44	6582
Day 4	683	781	179	851	11	93	8	86	222	360	999	2023	534	0	12	35	7	18	34	52	9	0	6941	61	7002
Day 5	584	824	177	879	11	100	0	104	136	304	665	1959	369	3	12	39	5	4	32	42	2	1	6207	45	6252
Day 6	540	724	186	890	5	97	2	107	252	399	983	2062	432	0	70	57	12	5	26	46	0	0	6853	46	6899
Day 7	667	869	184	789	5	90	46	45	209	444	1186	2219	424	0	12	20	14	6	33	43	0	2	7262	45	7307
ADT	**593**	**748**	**203**	**884**	**15**	**122**	**19**	**104**	**217**	**344**	**893**	**1932**	**446**	**33**	**45**	**55**	**21**	**17**	**41**	**59**	**5**	**1**	**6733**	**65**	**6798**
Solapur-Pune																									
Day 1	462	590	134	772	7	111	1	88	67	187	643	1986	404	13	21	0	1	11	28	45	0	6	5526	51	5577
Day 2	766	910	267	1263	9	113	4	118	139	309	900	1978	436	15	15	5	6	13	16	10	3	0	7282	13	7295
Day 3	586	700	234	737	39	107	16	93	195	314	821	1836	475	0	48	22	5	16	26	27	4	0	6270	31	6301
Day 4	923	956	198	895	20	151	1	126	157	351	906	2145	488	9	42	9	7	18	41	34	0	0	7443	34	7477
Day 5	533	670	175	757	5	128	1	93	155	336	748	1983	527	0	9	13	5	5	26	11	0	0	6169	11	6180
Day 6	576	856	171	935	4	126	0	88	198	384	966	1922	540	0	11	16	6	18	35	60	2	0	6852	62	6914
Day 7	671	856	179	960	0	120	4	86	190	339	984	1890	489	10	14	2	5	12	32	56	0	0	6845	56	6901
ADT	**645**	**791**	**213**	**912**	**24**	**138**	**8**	**111**	**197**	**338**	**856**	**1965**	**508**	**27**	**58**	**25**	**12**	**32**	**57**	**73**	**4**	**3**	**6919**	**80**	**6999**
Both Directions																									
Total ADT	**1238**	**1539**	**417**	**1796**	**39**	**260**	**28**	**215**	**414**	**682**	**1749**	**3898**	**954**	**60**	**102**	**81**	**33**	**50**	**98**	**132**	**9**	**4**	**13651**	**145**	**13797**
SCF	1.0457	1.046	1.0457	1.0457	1.046	1.0457	1.0457	1.0457	1.0457	1.046	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1	1.0457
AADT	**1295**	**1609**	**436**	**1878**	**41**	**272**	**29**	**225**	**433**	**713**	**1829**	**4076**	**998**	**63**	**107**	**84**	**35**	**52**	**103**	**138**	**9**	**4**	**14275**	**145**	**14427**
PCU Factor	1	1	1	0.5	1.5	3	3	3	1.5	1.5	3	3	4.5	4.5	4.5	4.5	1.5	4.5	4.5	0.5	2	6			
PCU	**1295**	**1609**	**436**	**939**	**61**	**816**	**87**	**674**	**649**	**1069**	**5487**	**12228**	**4490**	**282**	**482**	**379**	**52**	**233**	**461**	**69**	**19**	**25**	**31729**	**112**	**31841**

Annexure I :- CLASSIFIED TRAFFIC VOLUME COUNT SURVEY Near Lamboti Village (Km 220.000)

Description	Passenger Vehicles								Goods Vehicles							Others (HCM /EME)	Agricultural Vehicles			Passanger Vehicles		Goods Vehicles	Vehicles		
	Cars	Utility Jeep/ Van	3 Wheeler/ Tempo	Two Wheeler	Mini Bus	Standard Bus			L.C.V		Ordinary Trucks		MAV				Tractor	Tractor with 1 Traillor	Tractor with 2 Traillor	Cycle	Cycle Rickshaw	Animal Drawn Cart/Hand Drawn	Motorised	Non-Motorized	Total
						Govt. Bus	School Bus	Other Pvt. Bus	4 - Tyre	6 - Tyre	2 - Axle	3 - Axle	4 to 6 Axle	>6 Axle											
Pune-Solapur																									
Day 1	1019	807	210	1689	68	260	18	55	344	239	578	537	58	41	94	3	25	24	19	10	1	8	6088	19	6107
Day 2	1135	1215	277	1964	25	323	12	17	403	336	793	681	119	28	141	7	22	20	32	48	5	26	7572	79	7651
Day 3	1259	1045	362	1410	23	294	14	52	305	328	843	832	53	103	138	10	46	22	25	38	4	36	7164	78	7242
Day 4	1070	1096	311	1314	6	330	2	55	317	329	726	825	100	66	142	9	22	15	23	31	4	25	6758	60	6818
Day 5	1231	1076	315	1450	31	377	13	51	376	376	705	750	146	0	96	27	24	21	20	24	6	14	7085	44	7129
Day 6	1246	1078	326	1293	12	303	6	81	395	368	911	926	159	63	89	16	33	24	32	30	0	10	7361	40	7401
Day 7	1127	1033	259	1512	18	289	7	59	380	312	832	972	178	46	114	35	37	26	41	45	6	2	7277	53	7330
ADT	**1155**	**1052**	**312**	**1528**	**63**	**318**	**26**	**85**	**365**	**349**	**771**	**797**	**160**	**111**	**161**	**35**	**57**	**47**	**53**	**60**	**10**	**38**	**7445**	**108**	**7552**
Solapur-Pune																									
Day 1	938	1102	241	1586	39	297	21	59	498	310	852	949	148	72	44	4	8	15	15	27	2	0	7198	29	7227
Day 2	1102	1094	241	1907	11	237	6	68	338	269	991	975	126	29	26	3	25	19	18	25	0	6	7493	31	7524
Day 3	1123	1021	277	1391	17	244	7	158	283	238	809	870	168	68	62	10	13	12	24	30	4	4	6797	38	6835
Day 4	1143	876	412	1290	17	319	6	121	312	213	986	1049	126	48	48	5	23	16	23	21	1	2	7033	24	7057
Day 5	1053	949	406	1199	33	366	8	79	350	262	894	998	173	0	24	11	34	25	33	24	2	0	6897	26	6923
Day 6	1201	1001	384	1171	21	277	19	128	492	410	958	951	137	88	89	3	36	35	32	14	0	0	7434	14	7448
Day 7	1175	982	320	1515	34	275	20	90	375	355	838	874	80	78	125	5	33	10	16	41	1	0	7212	42	7254
ADT	**1105**	**1004**	**350**	**1452**	**56**	**305**	**25**	**139**	**386**	**346**	**905**	**956**	**183**	**131**	**106**	**16**	**50**	**42**	**51**	**52**	**4**	**4**	**7607**	**60**	**7666**
Both Directions																									
Total ADT	**2260**	**2055**	**662**	**2980**	**119**	**623**	**51**	**224**	**751**	**695**	**1676**	**1753**	**343**	**242**	**267**	**51**	**107**	**88**	**104**	**111**	**14**	**42**	**15051**	**167**	**15219**
SCF	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457
AADT	**2364**	**2149**	**692**	**3117**	**125**	**651**	**54**	**234**	**785**	**726**	**1752**	**1833**	**359**	**253**	**279**	**53**	**112**	**92**	**109**	**116**	**14**	**44**	**15739**	**175**	**15914**
PCU Factor	1	1	1	0.5	1.5	3	3	3	1.5	1.5	3	3	4.5	4.5	4.5	4.5	1.5	4.5	4.5	0.5	2	6			
PCU	**2364**	**2149**	**692**	**1558**	**187**	**1954**	**161**	**703**	**1178**	**1089**	**5257**	**5499**	**1615**	**1141**	**1254**	**240**	**168**	**416**	**490**	**58**	**29**	**263**	**28113**	**351**	**28464**

Annexure I :- CLASSIFIED TRAFFIC VOLUME COUNT SURVEY Near Soalpur Bypass (Km 242.000)

Description	Passenger Vehicles								Goods Vehicles							Others (HCM /EME)	Agricultural Vehicles			Passanger Vehicles		Goods Vehicles	Vehicles		
	Cars	Utility Jeep/ Van	3 Wheeler/ Tempo	Two Wheeler	Mini Bus	Standard Bus			L.C.V		Ordinary Trucks		MAV				Tractor	Tractor with Traillor	Tractor with 2 Traillor	Cycle	Cycle Rickshaw	Animal Drawn Cart/Hand Drawn	Motorised	Non-Motorized	Total
						Govt. Bus	School Bus	Other Pvt. Bus	4 - Tyre	6 - Tyre	2 - Axle	3 - Axle	4 to 6 Axle	>6 Axle											
Pune-Solapur																									
Day 1	1214	1142	651	2752	7	287	3	241	487	539	1288	1075	123	10	100	1	9	19	16	320	1	5	9964	326	10290
Day 2	1181	872	583	2927	13	283	10	183	582	502	1371	1322	143	24	42	9	9	8	18	411	0	5	10179	416	10595
Day 3	1302	1248	672	2585	28	380	25	310	467	489	1381	1394	173	0	73	17	9	10	24	231	24	13	10649	268	10917
Day 4	1109	886	487	1940	12	273	2	189	368	1153	1170	940	105	67	61	3	13	15	22	294	2	7	8815	303	9118
Day 5	1218	1214	730	2166	66	335	26	261	505	592	1649	1742	134	0	91	19	7	21	26	148	17	7	10802	172	10974
Day 6	1308	1212	693	2025	49	255	11	220	503	521	1838	1793	169	67	61	14	11	45	26	308	51	7	10853	366	11219
Day 7	1323	1196	747	2040	19	294	8	266	525	586	1740	1850	145	97	69	33	13	25	19	146	18	7	11027	171	11198
ADT	**1239**	**1113**	**673**	**2362**	**50**	**320**	**24**	**269**	**497**	**631**	**1494**	**1456**	**168**	**99**	**112**	**23**	**18**	**37**	**37**	**295**	**31**	**13**	**10622**	**339**	**10961**
Solapur-Pune																									
Day 1	979	923	758	3154	25	283	17	263	635	517	1230	1233	84	40	101	4	10	12	21	213	91	12	10289	316	10605
Day 2	1122	1170	825	3071	7	370	12	225	590	482	1550	1468	114	55	49	19	8	12	23	280	1	13	11253	294	11547
Day 3	1086	734	596	2480	54	256	9	160	629	483	1372	1401	179	0	96	4	2	7	24	343	6	6	9573	355	9928
Day 4	1379	1115	611	2193	25	394	9	300	627	631	1566	1711	122	43	97	13	6	8	39	239	0	12	10889	251	11140
Day 5	1022	885	577	2090	34	355	11	196	641	795	1462	1467	191	0	110	36	7	21	83	297	13	13	9983	323	10306
Day 6	1431	1289	672	2273	25	345	19	339	630	734	1887	2101	113	63	88	42	20	13	45	184	25	11	12156	220	12376
Day 7	1266	1137	604	2056	25	306	14	241	678	723	1738	1708	163	208	92	33	15	36	52	227	8	11	11152	246	11398
ADT	**1184**	**1037**	**678**	**2477**	**48**	**344**	**23**	**285**	**644**	**629**	**1547**	**1588**	**169**	**149**	**133**	**34**	**16**	**26**	**65**	**309**	**45**	**19**	**11076**	**373**	**11450**
Both Directions																									
Total ADT	**2423**	**2150**	**1352**	**4839**	**98**	**664**	**47**	**554**	**1141**	**1260**	**3041**	**3044**	**337**	**248**	**245**	**57**	**34**	**63**	**102**	**604**	**75**	**32**	**21699**	**712**	**22411**
SCF	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457	1.0457
AADT	**2533**	**2248**	**1413**	**5060**	**103**	**695**	**49**	**579**	**1193**	**1317**	**3180**	**3183**	**353**	**259**	**257**	**59**	**36**	**66**	**106**	**632**	**79**	**34**	**22690**	**744**	**23435**
PCU Factor	1	1	1	0.5	1.5	3	3	3	1.5	1.5	3	3	4.5	4.5	4.5	4.5	1.5	4.5	4.5	0.5	2	6			
PCU	**2533**	**2248**	**1413**	**2530**	**154**	**2084**	**148**	**1737**	**1790**	**1976**	**9539**	**9550**	**1586**	**1167**	**1155**	**267**	**54**	**297**	**479**	**316**	**158**	**203**	**40708**	**677**	**41386**

Annexure I : Projections of Annual Average Daily Traffic (AADT) Near Varavade Village (Km 171.000)

PCU Equi.	1.0	1.5	3.0	1.5	3.0	3.0	4.5	Total Fast Moving Vehicles	Total Fast Moving VehiclesPCU
Year	Car/Taxi /Jeep/Van	Mini Bus /Metador	Standard Bus	LCV	2-Axle	3-Axle	Multi Axle		
2011	2904	41	526	1146	1829	4076	1167	11689	**29229**
2012	3112	43	552	1203	1921	4361	1249	12440	**31102**
2013	3334	45	579	1263	2017	4667	1336	13241	**33099**
2014	3572	47	608	1327	2117	4993	1430	14095	**35225**
2015	3787	50	639	1393	2223	5243	1502	14836	**37022**
2016	4014	52	671	1462	2334	5505	1577	15615	**38911**
2017	4255	55	704	1536	2451	5780	1655	16436	**40897**
2018	4510	57	740	1612	2574	6069	1738	17301	**42985**
2019	4781	60	777	1693	2702	6373	1825	18211	**45179**
2020	5067	63	815	1778	2838	6691	1916	19169	**47486**
2021	5346	66	856	1867	2979	7026	2012	20153	**49885**
2022	5640	70	899	1960	3128	7377	2113	21187	**52406**
2023	5950	73	944	2058	3285	7746	2218	22275	**55055**
2024	6278	77	991	2161	3449	8133	2329	23418	**57837**
2025	6623	81	1041	2269	3621	8540	2446	24621	**60760**
2026	6987	85	1093	2382	3803	8967	2568	25885	**63832**
2027	7372	89	1147	2501	3993	9416	2697	27214	**67058**
2028	7777	94	1205	2626	4192	9886	2831	28612	**70448**
2029	8205	98	1265	2758	4402	10381	2973	30081	**74009**
2030	8656	103	1328	2896	4622	10900	3122	31626	**77751**
2031	9132	108	1395	3040	4853	11445	3278	33251	**81682**
2032	9634	114	1464	3192	5096	12017	3442	34959	**85811**
2033	10164	119	1537	3352	5351	12618	3614	36755	**90150**
2034	10723	125	1614	3520	5618	13249	3794	38644	**94708**
2035	11313	132	1695	3696	5899	13911	3984	40629	**99497**
2036	11935	138	1780	3880	6194	14607	4183	42717	**104529**

Annexure I : Projections of Annual Average Daily Traffic (AADT) Near Lamboti Village (Km 220.000)

PCU Equi.	1.0	1.5	3.0	1.5	3.0	3.0	4.5	Total Fast Moving Vehicles	Total Fast Moving VehiclesPCU
Year	Car/Taxi /Jeep/Van	Mini Bus /Metador	Standard Bus	LCV	2-Axle	3-Axle	Multi Axle		
2011	4513	125	939	1511	1752	1833	891	11564	**24549**
2012	4835	131	986	1587	1840	1961	953	12294	**26064**
2013	5181	137	1035	1666	1932	2099	1020	13071	**27675**
2014	5551	144	1087	1750	2028	2245	1092	13898	**29388**
2015	5885	151	1141	1837	2130	2358	1146	14648	**30912**
2016	6238	159	1198	1929	2236	2476	1204	15440	**32517**
2017	6612	167	1258	2026	2348	2599	1264	16274	**34205**
2018	7009	175	1321	2127	2466	2729	1327	17154	**35981**
2019	7429	184	1387	2233	2589	2866	1393	18082	**37851**
2020	7875	193	1457	2345	2718	3009	1463	19060	**39817**
2021	8308	203	1530	2462	2854	3160	1536	20052	**41848**
2022	8765	213	1606	2585	2997	3318	1613	21096	**43982**
2023	9247	224	1686	2714	3147	3483	1693	22195	**46225**
2024	9756	235	1771	2850	3304	3658	1778	23351	**48582**
2025	10292	247	1859	2993	3469	3841	1867	24567	**51060**
2026	10858	259	1952	3142	3643	4033	1960	25847	**53664**
2027	11455	272	2050	3299	3825	4234	2058	27194	**56402**
2028	12085	286	2152	3464	4016	4446	2161	28611	**59279**
2029	12750	300	2260	3638	4217	4668	2269	30102	**62304**
2030	13451	315	2373	3819	4428	4902	2383	31671	**65483**
2031	14191	331	2492	4010	4649	5147	2502	33322	**68824**
2032	14972	347	2616	4211	4882	5404	2627	35059	**72336**
2033	15795	364	2747	4421	5126	5674	2758	36886	**76028**
2034	16664	383	2884	4642	5382	5958	2896	38810	**79908**
2035	17580	402	3028	4875	5651	6256	3041	40833	**83987**
2036	18547	422	3180	5118	5934	6569	3193	42963	**88274**

Annexure I : Projections of Annual Average Daily Traffic (AADT) on Soalpur Bypass (Km 242.000)

PCU Equi.	1.0	1.5	3.0	1.5	3.0	3.0	4.5	Total Fast Moving Vehicles	Total Fast Moving VehiclesPCU
Year	Car/Taxi /Jeep/Van	Mini Bus /Metador	Standard Bus	LCV	2-Axle	3-Axle	Multi Axle		
2011	4782	103	1323	2511	3180	3183	869	15950	**35668**
2012	5123	108	1389	2636	3339	3406	929	16931	**37824**
2013	5490	113	1458	2768	3506	3645	994	17974	**40113**
2014	5882	119	1531	2906	3681	3900	1064	19084	**42545**
2015	6235	125	1608	3052	3865	4095	1117	20097	**44731**
2016	6609	131	1688	3204	4058	4300	1173	21164	**47030**
2017	7006	138	1773	3364	4261	4515	1232	22288	**49448**
2018	7426	144	1861	3533	4474	4740	1293	23473	**51990**
2019	7872	152	1954	3709	4698	4977	1358	24721	**54664**
2020	8344	159	2052	3895	4933	5226	1426	26035	**57476**
2021	8803	167	2155	4089	5180	5487	1497	27379	**60391**
2022	9287	176	2263	4294	5439	5762	1572	28792	**63455**
2023	9798	184	2376	4509	5710	6050	1651	30278	**66674**
2024	10337	194	2494	4734	5996	6352	1733	31841	**70057**
2025	10906	203	2619	4971	6296	6670	1820	33485	**73611**
2026	11505	213	2750	5219	6611	7004	1911	35213	**77346**
2027	12138	224	2888	5480	6941	7354	2006	37031	**81271**
2028	12806	235	3032	5754	7288	7721	2107	38944	**85395**
2029	13510	247	3184	6042	7653	8107	2212	40955	**89729**
2030	14253	259	3343	6344	8035	8513	2323	43070	**94283**
2031	15037	272	3510	6661	8437	8939	2439	45295	**99068**
2032	15864	286	3685	6994	8859	9385	2561	47635	**104097**
2033	16737	300	3870	7344	9302	9855	2689	50096	**109381**
2034	17657	315	4063	7711	9767	10347	2823	52685	**114934**
2035	18628	331	4266	8097	10255	10865	2964	55407	**120769**
2036	19653	348	4480	8502	10768	11408	3113	58271	**126901**

Annexure II

ANNEXURE - II

IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 251.325)	**Date:**	28/12/2011
Project No:	406 / 2009	**Des. Note No:**	DN001
Title:	Design MSA for the section from Existing Chainage Km 144.400 to Km 210.000	**Rev.No:**	F
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Traffic Volume Count (--/--/--), 2. Axle Load Survey (--/--/--), VDF & MSA calculation is done in accordance with IRC:37-2001	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, Manual of Specifications and Standards for Four Laning of NH through PPP	**Approved**	S C Mittal

Concession Period	Design Life	VDF	1.13	0.73	1.73	3.08	4.47	Lane Distribution Factor	No of Days for Projection	Design MSA	
		Year	Bus	LCV	TRUCK					Standard Axles in Millions	Cumulative MSA
					2-Axle	3-Axle	Multi-Axle				
0	Base Year	2009						0.750	365	0	
1	Construction Period	**2010**						0.750	365	0	
2	Construction Period	**2011**	526	1146	1829	4076	1252	0.750	365	6.225656711	
3	0.5	**2012**	552	1203	1920	4361	1340	0.375	365	3.318156822	1.6591
4	1.5	**2013**	580	1263	2016	4667	1433	0.375	365	3.537229805	5.1963
5	2.5	2014	609	1327	2117	4993	1534	0.375	365	3.770977997	8.9673
6	3.5	2015	639	1393	2223	5243	1610	0.375	365	3.959526896	12.9268
7	4.5	2016	671	1463	2334	5505	1691	0.375	365	4.157503241	17.0843
8	5.5	2017	705	1536	2451	5780	1776	0.375	365	4.365378403	21.4497
9	6.5	2018	740	1613	2574	6069	1864	0.375	365	4.583647324	26.0333
10	7.5	2019	777	1693	2702	6373	1958	0.375	365	4.81282969	30.8462
11	8.5	2020	816	1778	2837	6691	2055	0.375	365	5.053471174	35.8996
12	9.5	2021	857	1867	2979	7026	2158	0.375	365	5.306144733	41.2058
13	10.5	2022	900	1960	3128	7377	2266	0.375	365	5.57145197	46.7772
14	11.5	2023	945	2058	3285	7746	2379	0.375	365	5.850024568	52.6273
15	12.5	2024	992	2161	3449	8134	2498	0.375	365	6.142525796	58.7698
16	13.5	2025	1041	2269	3621	8540	2623	0.375	365	6.449652086	65.2194
17	14.5	2026	1094	2382	3802	8967	2754	0.375	365	6.772134691	71.9916
18	15.5	2027	1148	2502	3992	9416	2892	0.375	365	7.110741425	79.1023
19	16.5	2028	1206	2627	4192	9886	3037	0.375	365	7.466278496	86.5686
20	17.5	2029	1266	2758	4402	10381	3189	0.375	365	7.839592421	94.4082
-	18.5	2030	1329	2896	4622	10900	3348	0.375	365	8.231572042	102.6398
-	19.5	2031	1396	3041	4853	11445	3515	0.375	365	8.643150644	111.2829
-	20.0	2032	1465	3193	5096	12017	3691	0.375	183	4.537654088	**115.8206**

IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	**4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 251.325)**	**Date:**	**28/12/2011**
Project No:	**406 / 2009**	**Des. Note No:**	**DN001**
Title:	**Design MSA for the section from Existing Chainage Km 210.000 to Km 241.200**	**Rev.No:**	**F**
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Traffic Volume Count (--/--/--), 2. Axle Load Survey (--/--/--), VDF & MSA calculation is done in accordance with IRC:37-2001	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, Manual of Specifications and Standards for Four Laning of NH through PPP	**Approved**	S C Mittal

Concession Period	Design Life	VDF	1.13	0.73	1.73	3.08	4.47	Lane Distribution Factor	No of Days for Projection	Design MSA	
		Year	Bus	LCV	TRUCK					Standard Axles in Millions	Cumulative MSA
					2-Axle	3-Axle	Multi-Axle				
0	Base Year	2009						0.750	365	0	
1	Construction Period	**2010**						0.750	365	0	
2	Construction Period	**2011**	939	1511	1752	1833	944	0.750	365	4.121309473	
3	0.5	**2012**	986	1587	1840	1961	1010	0.375	365	2.190693787	1.0953
4	1.5	2013	1035	1666	1932	2099	1081	0.375	365	2.329125231	3.4245
5	2.5	2014	1087	1749	2028	2246	1156	0.375	365	2.476501021	5.9010
6	3.5	2015	1141	1837	2130	2358	1214	0.375	365	2.600326072	8.5013
7	4.5	2016	1198	1928	2236	2476	1275	0.375	365	2.730342376	11.2316
8	5.5	2017	1258	2025	2348	2599	1339	0.375	365	2.866859495	14.0985
9	6.5	2018	1321	2126	2465	2729	1406	0.375	365	3.01020247	17.1087
10	7.5	2019	1387	2232	2589	2866	1476	0.375	365	3.160712593	20.2694
11	8.5	2020	1457	2344	2718	3009	1550	0.375	365	3.318748223	23.5882
12	9.5	2021	1530	2461	2854	3160	1627	0.375	365	3.484685634	27.0729
13	10.5	2022	1606	2584	2997	3318	1709	0.375	365	3.658919916	30.7318
14	11.5	2023	1686	2714	3146	3484	1794	0.375	365	3.841865911	34.5736
15	12.5	2024	1771	2849	3304	3658	1884	0.375	365	4.033959207	38.6076
16	13.5	2025	1859	2992	3469	3841	1978	0.375	365	4.235657167	42.8433
17	14.5	2026	1952	3141	3642	4033	2077	0.375	365	4.447440026	47.2907
18	15.5	2027	2050	3298	3824	4234	2181	0.375	365	4.669812027	51.9605
19	16.5	2028	2152	3463	4016	4446	2290	0.375	365	4.903302628	56.8638
20	17.5	2029	2260	3636	4216	4668	2404	0.375	365	5.14846776	62.0123
-	18.5	2030	2373	3818	4427	4902	2524	0.375	365	5.405891148	67.4182
-	19.5	2031	2491	4009	4649	5147	2651	0.375	365	5.676185705	73.0944
-	20.0	2032	2616	4210	4881	5404	2783	0.375	183	2.979997495	**76.0743**

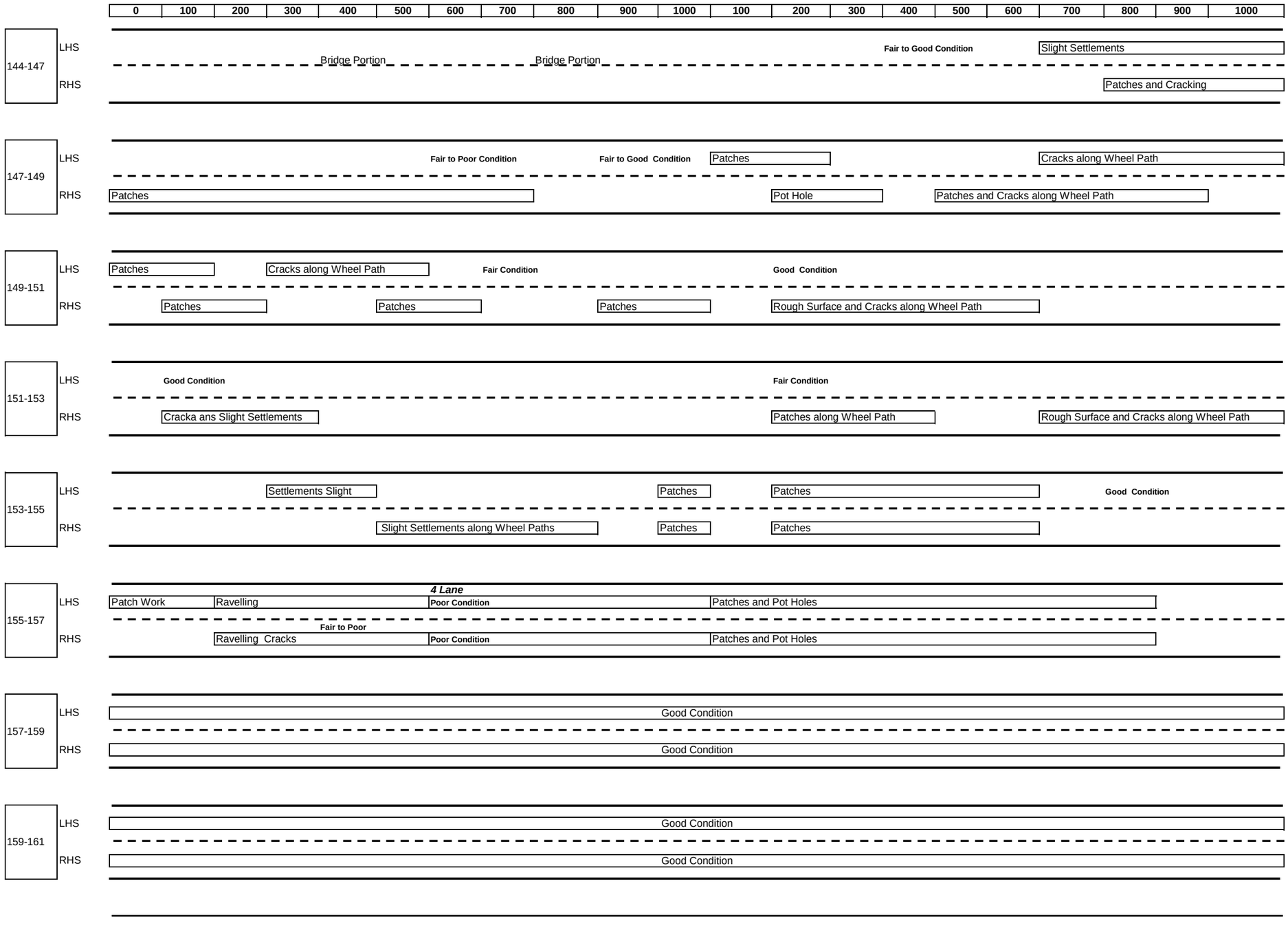
IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 251.325)	Date:	28/12/2011
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Design MSA for the section from Existing Chainage Km 241.200 to Km 249.000	Rev.No:	F
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Traffic Volume Count (--/--/--), 2. Axle Load Survey (--/--/--), VDF & MSA calculation is done in accordance with IRC:37-2001	Designed	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, Manual of Specifications and Standards for Four Laning of NH through PPP	Approved	S C Mittal

Concession Period	Design Life	VDF	1.13	0.73	1.73	3.08	4.47	Lane Distribution Factor	No of Days for Projection	Design MSA	
		Year	Bus	LCV	TRUCK					Standard Axles in Millions	Cumulative MSA
					2-Axle	3-Axle	Multi-Axle				
0	Base Year	**2009**						0.750	365	0	
1	Construction Period	**2010**						0.750	365	0	
2	Construction Period	**2011**	1323	2510	3180	3183	876	0.750	365	6.170277821	
3	0.5	2012	1389	2636	3339	3406	937	0.375	365	3.276952604	1.6385
4	1.5	2013	1459	2767	3506	3644	1003	0.375	365	3.480985955	5.1195
5	2.5	2014	1532	2906	3681	3899	1073	0.375	365	3.698033973	8.8175
6	3.5	2015	1608	3051	3865	4094	1127	0.375	365	3.882935672	12.7004
7	4.5	2016	1689	3203	4059	4299	1183	0.375	365	4.077082455	16.7775
8	5.5	2017	1773	3364	4262	4514	1242	0.375	365	4.280936578	21.0585
9	6.5	2018	1862	3532	4475	4740	1304	0.375	365	4.494983407	25.5534
10	7.5	2019	1955	3708	4698	4977	1370	0.375	365	4.719732577	30.2732
11	8.5	2020	2052	3894	4933	5225	1438	0.375	365	4.955719206	35.2289
12	9.5	2021	2155	4089	5180	5487	1510	0.375	365	5.203505166	40.4324
13	10.5	2022	2263	4293	5439	5761	1586	0.375	365	5.463680425	45.8961
14	11.5	2023	2376	4508	5711	6049	1665	0.375	365	5.736864446	51.6329
15	12.5	2024	2495	4733	5996	6352	1748	0.375	365	6.023707668	57.6566
16	13.5	2025	2619	4970	6296	6669	1835	0.375	365	6.324893052	63.9815
17	14.5	2026	2750	5218	6611	7003	1927	0.375	365	6.641137704	70.6227
18	15.5	2027	2888	5479	6942	7353	2024	0.375	365	6.97319459	77.5959
19	16.5	2028	3032	5753	7289	7720	2125	0.375	365	7.321854319	84.9177
20	17.5	2029	3184	6041	7653	8106	2231	0.375	365	7.687947035	92.6057
-	18.5	2030	3343	6343	8036	8512	2343	0.375	365	8.072344387	100.6780
-	19.5	2031	3510	6660	8437	8937	2460	0.375	365	8.475961606	109.1540
-	20.0	2032	3686	6993	8859	9384	2583	0.375	183	4.449879843	**113.6039**

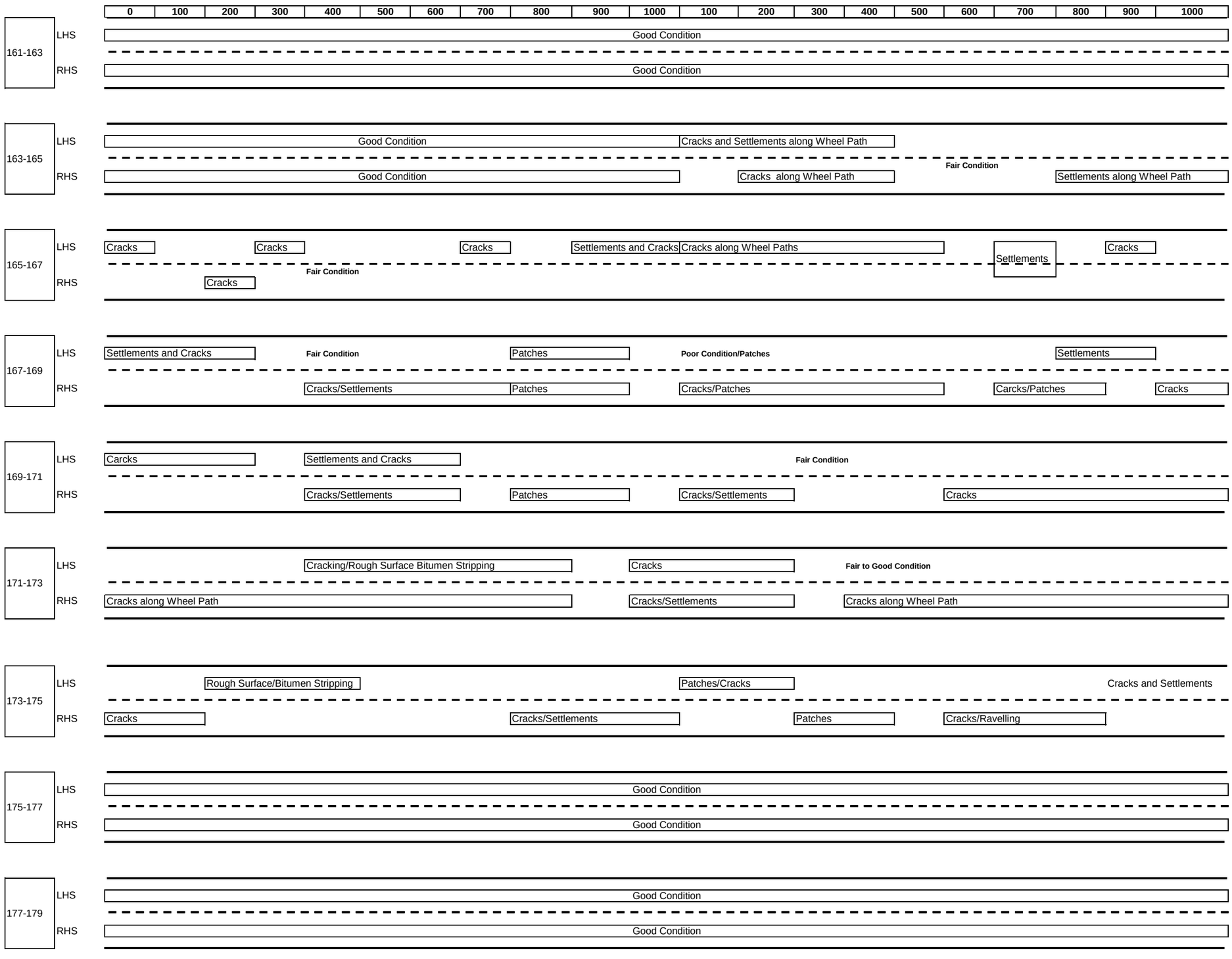
Annexure III

ANNEXURE - III

Pavement Condition Strip Map



Pavement Condition Strip Map

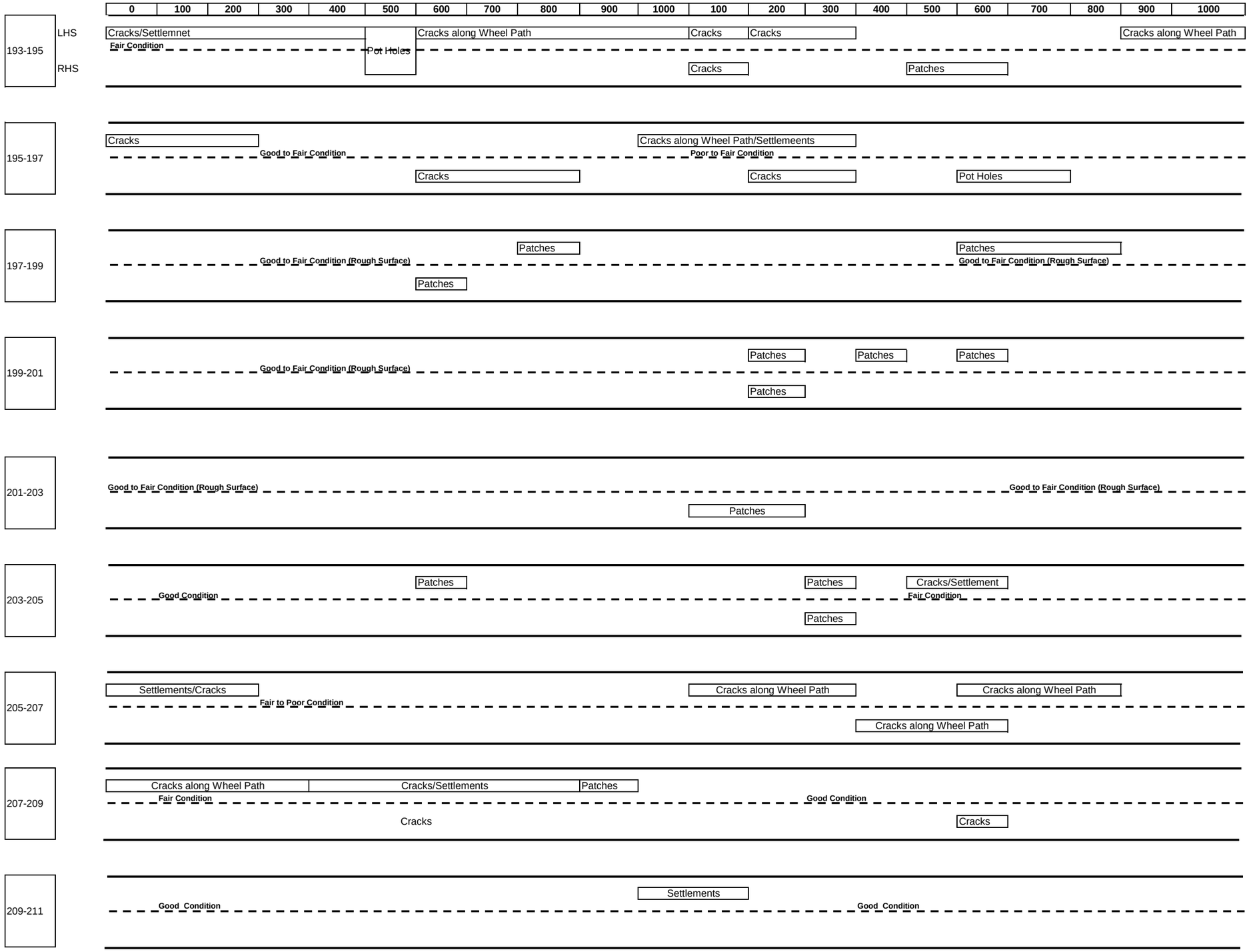


Pavement Condition Strip Map

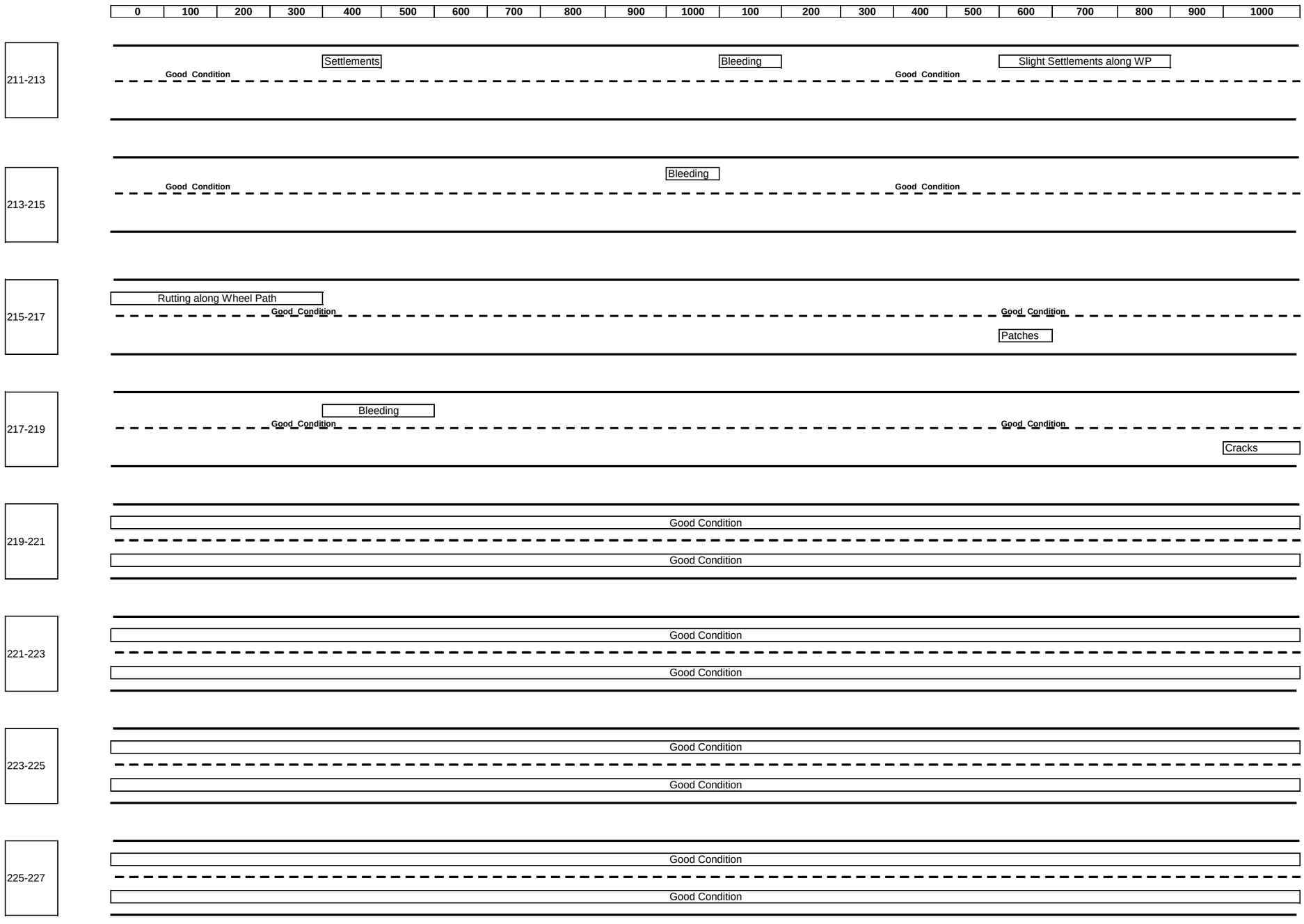
0	100	200	300	400	500	600	700	800	900	1000	100	200	300	400	500	600	700	800	900	1000

179-181	LHS	Good Condition
	RHS	Good Condition
181-183	LHS	Good Condition
	RHS	Good Condition
183-185	LHS	Good Condition
	RHS	Good Condition
185-187	LHS	Good to Fair Condition; Rough Surface/Bitumen Stripping/Ravelling; Bleeding/Slight Settlement; Good Condition
	RHS	Cracks
187-189	LHS	Fair to Good Condition; Ravelling/Cracking; Good to Fair Condition; Poor to Fair; Good to Fair Condition
	RHS	Bleeding/Settlement; Cracks along Wheel Paths
189-191	LHS	Good Condition; Patches; Cracks; Good to Fair Condition
	RHS	Cracks; Cracks; Patches
191-193	LHS	Settlements/Ravelling; Good to Fair Condition; Poor Condition LHS; Rough Surface; Patches; Cracks/Settlements along Wheel Path; Fair Condition
	RHS	

Pavement Condition Strip Map

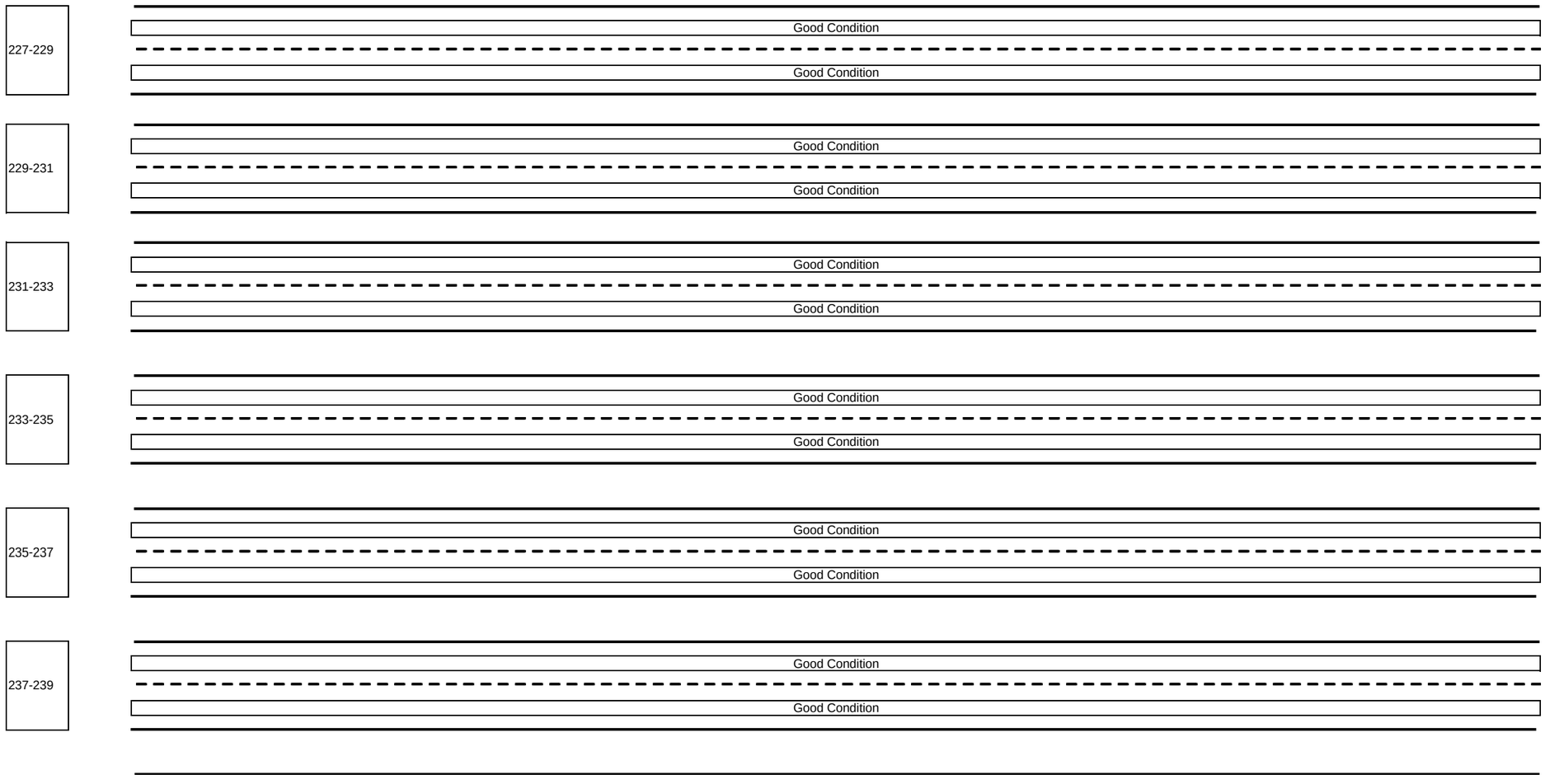


Pavement Condition Strip Map

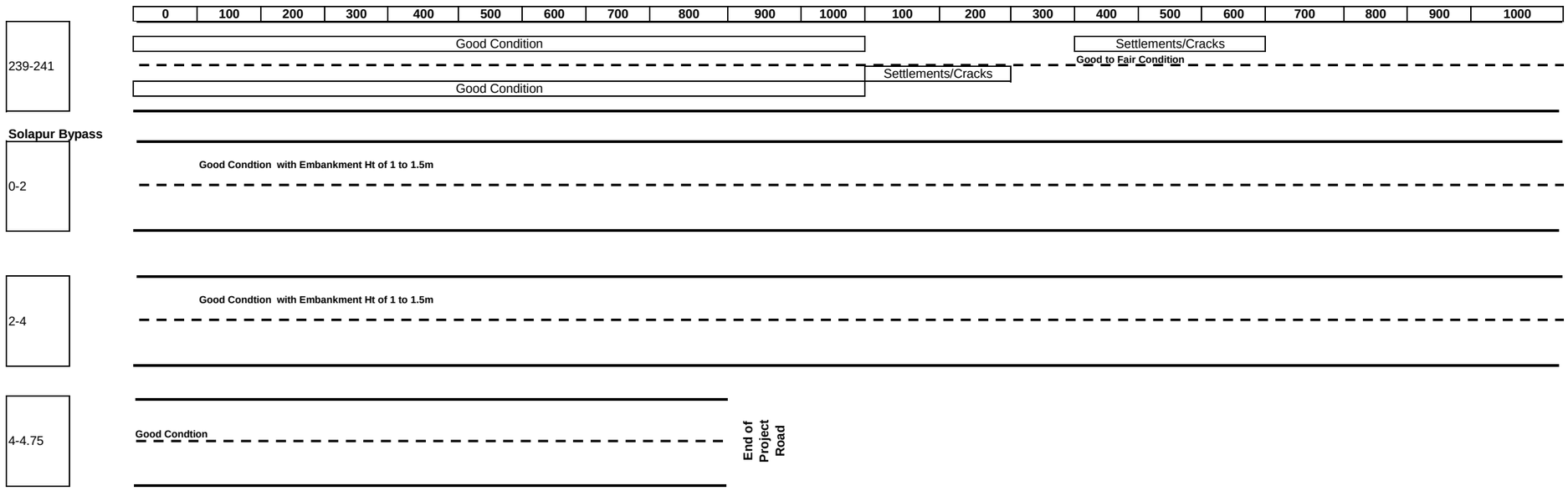


Pavement Condition Strip Map

0	100	200	300	400	500	600	700	800	900	1000	100	200	300	400	500	600	700	800	900	1000



Pavement Condition Strip Map



Annexure IV

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	146-147	33	146.3	43	Clay	12.04%	0	36	40		0.36	0.4	1.03	1.00494286	0.2203392	1.446	-0.08	1.16	**1.5841206**
2				to		RHS		0	30	37		0.3	0.37	1.15						
3				147				0	38	41		0.38	0.41	0.99						
4								0	23	30		0.23	0.3	1.01						
5								0	25	28		0.25	0.28	0.73						
6								0	28	35		0.28	0.35	1.11						
7								0	36	44		0.36	0.44	1.35						
8								0	28	33		0.28	0.33	0.95						
9								0	25	27		0.25	0.27	0.54						
10								0	28	32		0.28	0.32	0.87						
11								0	23	29		0.23	0.29	0.93						
12						LHS		0	36	43		0.36	0.43	1.27						
13								0	32	37		0.32	0.37	1.03						
14								0	26	29		0.26	0.29	0.75						
15								0	27	30		0.27	0.3	0.77						
16								0	28	32		0.28	0.32	0.87						
17								0	40	46		0.4	0.46	1.27						
18								0	33	37		0.33	0.37	0.97						
19								0	22	28		0.22	0.28	0.91						
20								0	25	33		0.25	0.33	1.13						
21								0	38	47		0.38	0.47	1.46						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	147-148	33	147.7	43	Clay	13.14%	0	46	48		0.46	0.48	0.96	1.15269231	0.2800968	1.713	-0.08	1.14	**1.86148983**
2				to		RHS		0	40	44		0.4	0.44	1.11						
3				147.4				0	28	33		0.28	0.33	0.95						
4								0	28	30		0.28	0.3	0.60						
5								0	44	51		0.44	0.51	1.43						
6								0	32	35		0.32	0.35	0.87						
7								0	42	51		0.42	0.51	1.54						
8								0	48	55		0.48	0.55	1.51						
9								0	52	60		0.52	0.6	1.67						
10								0	42	49		0.42	0.49	1.39						
11								0	30	35		0.3	0.35	0.99						
12								0	46	53		0.46	0.53	1.47						
13								0	22	28		0.22	0.28	0.91						
14								0	23	27		0.23	0.27	0.77						
15								0	21	26		0.21	0.26	0.81						
16								0	24	31		0.24	0.31	1.03						
17						LHS		0	37	44		0.37	0.44	1.29						
18								0	27	35		0.27	0.35	1.17						
19								0	31	36		0.31	0.36	1.01						
20								0	37	43		0.37	0.43	1.21						
21								0	38	45		0.38	0.45	1.31						
22								0	40	46		0.4	0.46	1.27						
23								0	23	29		0.23	0.29	0.93						
24								0	38	43		0.38	0.43	1.15						
25								0	35	39		0.35	0.39	1.01						
26								0	34	46		0.34	0.46	1.62						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	148-149	34	148.7	43	Clay & Sand	10.95%	0	25	28		0.25	0.28	0.73	1.13978182	0.2935556	1.727	-0.08	1.2	**1.97627161**
2				to		RHS		0	35	40		0.35	0.4	1.09						
3				148.4				0	27	39		0.27	0.39	1.48						
4								0	26	28		0.26	0.28	0.56						
5								0	30	33		0.3	0.33	0.83						
6								0	38	42		0.38	0.42	1.07						
7								0	38	45		0.38	0.45	1.31						
8								0	40	46		0.4	0.46	1.27						
9								0	36	41		0.36	0.41	1.11						
10								0	40	46		0.4	0.46	1.27						
11								0	33	40		0.33	0.4	1.21						
12								0	24	32		0.24	0.32	1.11						
13						LHS		0	27	32		0.27	0.32	0.93						
14								0	32	47		0.32	0.47	1.81						
15								0	36	40		0.36	0.4	1.03						
16								0	28	33		0.28	0.33	0.95						
17								0	32	39		0.32	0.39	1.19						
18								0	34	37		0.34	0.37	0.91						
19								0	29	32		0.29	0.32	0.81						
20								0	38	48		0.38	0.48	1.54						
21								0	37	46		0.37	0.46	1.44						
22								0	35	44		0.35	0.44	1.40						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	149-150	31	149.8	40	Clay	14.23%	0	39	41		0.39	0.41	0.82	1.28600952	0.3186883	1.923	-0.05	1.1	**2.06072477**
2				to		RHS		0	28	32		0.28	0.32	0.87						
3				149.5				0	30	36		0.3	0.36	1.07						
4								0	35	37		0.35	0.37	0.74						
5								0	42	50		0.42	0.5	1.47						
6								0	43	48		0.43	0.48	1.25						
7								0	46	49		0.46	0.49	1.15						
8								0	40	48		0.4	0.48	1.43						
9								0	36	43		0.36	0.43	1.27						
10								0	35	40		0.35	0.4	1.09						
11								0	28	32		0.28	0.32	0.87						
12						LHS		0	40	44		0.4	0.44	1.11						
13								0	45	58		0.45	0.58	1.92						
14								0	44	52		0.44	0.52	1.51						
15								0	30	39		0.3	0.39	1.30						
16								0	46	53		0.46	0.53	1.47						
17								0	37	49		0.37	0.49	1.68						
18								0	41	50		0.41	0.5	1.52						
19								0	36	48		0.36	0.48	1.66						
20								0	30	37		0.3	0.37	1.15						
21								0	44	54		0.44	0.54	1.66						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	150-151	31	150.8	40	Clay	12.04%	0	38	42		0.38	0.42	1.07	1.29573636	0.3419711	1.980	-0.05	1.16	**2.2384272**
2				to				0	30	35		0.3	0.35	0.99						
3				150.5				0	39	45		0.39	0.45	1.25						
4								0	40	50		0.4	0.5	1.58						
5								0	29	32		0.29	0.32	0.81						
6								0	48	54		0.48	0.54	1.43						
7								0	43	45		0.43	0.45	0.90						
8								0	47	58		0.47	0.58	1.80						
9								0	39	44		0.39	0.44	1.17						
10								0	35	37		0.35	0.37	0.74						
11								0	32	38		0.32	0.38	1.11						
12								0	41	47		0.41	0.47	1.29						
13						LHS		0	32	40		0.32	0.4	1.27						
14								0	33	38		0.33	0.38	1.05						
15								0	42	50		0.42	0.5	1.47						
16								0	35	55		0.35	0.55	2.26						
17								0	48	55		0.48	0.55	1.51						
18								0	43	47		0.43	0.47	1.17						
19								0	48	52		0.48	0.52	1.27						
20								0	50	58		0.5	0.58	1.63						
21								0	39	46		0.39	0.46	1.33						
22								0	39	47		0.39	0.47	1.41						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	151-152	30	151.9	36	Clay	14.23%	0	18	24		0.18	0.24	0.83	0.80779048	0.2706006	1.349	-0.01	1.1	**1.47289086**
2				to				0	17	22		0.17	0.22	0.73						
3				151.6				0	15	19		0.15	0.19	0.61						
4								0	15	17		0.15	0.17	0.34						
5								0	17	25		0.17	0.25	0.97						
6								0	16	19		0.16	0.19	0.55						
7								0	14	17		0.14	0.17	0.51						
8								0	15	19		0.15	0.19	0.61						
9								0	17	21		0.17	0.21	0.65						
10								0	19	21		0.19	0.21	0.42						
11								0	21	26		0.21	0.26	0.81						
12						LHS		0	30	41		0.3	0.41	1.46						
13								0	29	34		0.29	0.34	0.97						
14								0	39	45		0.39	0.45	1.25						
15								0	22	26		0.22	0.26	0.75						
16								0	36	42		0.36	0.42	1.19						
17								0	23	28		0.23	0.28	0.85						
18								0	25	29		0.25	0.29	0.81						
19								0	28	32		0.28	0.32	0.87						
20								0	22	28		0.22	0.28	0.91						
21								0	23	28		0.23	0.28	0.85						

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	152-153	30	152.8	36	Clay	12.04%	0	35	38		0.35	0.38	0.93	1.31953636	0.3128841	1.945	-0.01	1.16	**2.24495339**
2				to				0	48	55		0.48	0.55	1.51						
3				151.5				0	52	55		0.52	0.55	1.27						
4								0	58	60		0.58	0.6	1.20						
5								0	50	57		0.5	0.57	1.55						
6								0	52	56		0.52	0.56	1.35						
7								0	32	36		0.32	0.36	0.95						
8								0	38	41		0.38	0.41	0.99						
9								0	31	33		0.31	0.33	0.66						
10								0	30	39		0.3	0.39	1.30						
11								0	50	58		0.5	0.58	1.63						
12								0	54	60		0.54	0.6	1.55						
13						LHS		0	42	52		0.42	0.52	1.62						
14								0	25	30		0.25	0.3	0.89						
15								0	28	39		0.28	0.39	1.42						
16								0	38	43		0.38	0.43	1.15						
17								0	44	55		0.44	0.55	1.74						
18								0	39	47		0.39	0.47	1.41						
19								0	42	51		0.42	0.51	1.54						
20								0	38	46		0.38	0.46	1.39						
21								0	45	58		0.45	0.58	1.92						
22								0	33	38		0.33	0.38	1.05						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	153-154	28	153.8	33	Clay	14.23%	0	46	48		0.46	0.48	0.96	1.32928182	0.3274768	1.984	0.02	1.1	**2.20465906**
2				to				0	54	63		0.54	0.63	1.78						
3				153.5				0	48	50		0.48	0.5	1.00						
4								0	48	50		0.48	0.5	1.00						
5								0	44	46		0.44	0.46	0.92						
6								0	45	48		0.45	0.48	1.13						
7								0	56	59		0.56	0.59	1.35						
8								0	35	42		0.35	0.42	1.25						
9								0	32	34		0.32	0.34	0.68						
10								0	31	35		0.31	0.35	0.93						
11								0	52	62		0.52	0.62	1.82						
12						LHS		0	50	57		0.5	0.57	1.55						
13								0	34	44		0.34	0.44	1.46						
14								0	47	58		0.47	0.58	1.80						
15								0	36	44		0.36	0.44	1.35						
16								0	30	41		0.3	0.41	1.46						
17								0	30	39		0.3	0.39	1.30						
18								0	36	42		0.36	0.42	1.19						
19								0	37	45		0.37	0.45	1.37						
20								0	49	56		0.49	0.56	1.53						
21								0	50	58		0.5	0.58	1.63						
22								0	50	60		0.5	0.6	1.78						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	24/11/09	154-155	28	154.8	33	Clay	13.14%	0	31	38		0.31	0.38	1.17	1.47913	0.3367226	2.153	0.02	1.14	**2.47673576**
2				to				0	42	48		0.42	0.48	1.31						
3				154.5				0	42	45		0.42	0.45	1.07						
4								0	48	51		0.48	0.51	1.19						
5								0	44	46		0.44	0.46	0.92						
6								0	49	52		0.49	0.52	1.21						
7								0	53	58		0.53	0.58	1.45						
8								0	41	44		0.41	0.44	1.05						
9								0	58	63		0.58	0.63	1.55						
10								0	49	59		0.49	0.59	1.76						
11						LHS		0	45	58		0.45	0.58	1.92						
12								0	48	56		0.48	0.56	1.59						
13								0	50	63		0.5	0.63	2.02						
14								0	45	54		0.45	0.54	1.60						
15								0	47	54		0.47	0.54	1.49						
16								0	49	61		0.49	0.61	1.92						
17								0	40	49		0.4	0.49	1.50						
18								0	59	71		0.59	0.71	2.12						
19								0	41	48		0.41	0.48	1.37						
20								0	37	45		0.37	0.45	1.37						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	157-158	32	157.65	45.5	Clay	9.85%	0	17	19		0.17	0.19	0.38	0.51166	0.1611197	0.834	-0.105	1.24	**0.90383523**
2				to		RHS		0	22	23		0.22	0.23	0.46						
3				157.35				0	21	22		0.21	0.22	0.44						
4								0	26	30		0.26	0.3	0.83						
5								0	27	30		0.27	0.3	0.77						
6								0	16	18		0.16	0.18	0.36						
7								0	19	21		0.19	0.21	0.42						
8								0	22	26		0.22	0.26	0.75						
9								0	22	25		0.22	0.25	0.67						
10								0	20	23		0.2	0.23	0.63						
11								0	18	21		0.18	0.21	0.59						
12						LHS		0	25	27		0.25	0.27	0.54						
13								0	17	19		0.17	0.19	0.38						
14								0	12	14		0.12	0.14	0.28						
15								0	16	18		0.16	0.18	0.36						
16								0	14	17		0.14	0.17	0.51						
17								0	17	19		0.17	0.19	0.38						
18								0	15	17		0.15	0.17	0.34						
19								0	20	23		0.2	0.23	0.63						
20								0	22	24		0.22	0.24	0.48						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	158-159	32	158.7	45.5	Clay	10.95%	0	25	28		0.25	0.28	0.73	0.68641	0.1270675	0.941	-0.105	1.2	**1.002654**
2				to		RHS		0	28	31		0.28	0.31	0.79						
3				158.5				0	26	29		0.26	0.29	0.75						
4								0	24	27		0.24	0.27	0.71						
5								0	23	25		0.23	0.25	0.50						
6								0	25	28		0.25	0.28	0.73						
7								0	19	22		0.19	0.22	0.61						
8								0	18	21		0.18	0.21	0.59						
9								0	24	27		0.24	0.27	0.71						
10								0	16	19		0.16	0.19	0.55						
11								0	20	23		0.2	0.23	0.63						
12						LHS		0	22	25		0.22	0.25	0.67						
13								0	24	26		0.24	0.26	0.52						
14								0	22	24		0.22	0.24	0.48						
15								0	24	26		0.24	0.26	0.52						
16								0	28	32		0.28	0.32	0.87						
17								0	30	33		0.3	0.33	0.83						
18								0	24	28		0.24	0.28	0.79						
19								0	27	31		0.27	0.31	0.85						
20								0	30	33		0.3	0.33	0.83						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	159-160	32	159.8	45	Clay	12.04%	0	24	27		0.24	0.27	0.71	0.65177	0.263823	1.179	-0.1	1.16	**1.25212248**
2				to		RHS		0	26	29		0.26	0.29	0.75						
3				159.5				0	26	28		0.26	0.28	0.56						
4								0	17	24		0.17	0.24	0.89						
5								0	20	23		0.2	0.23	0.63						
6								0	21	23		0.21	0.23	0.46						
7								0	22	26		0.22	0.26	0.75						
8								0	40	44		0.4	0.44	1.11						
9								0	48	52		0.48	0.52	1.27						
10								0	22	24		0.22	0.24	0.48						
11								0	25	28		0.25	0.28	0.73						
12						LHS		0	23	25		0.23	0.25	0.50						
13								0	15	15		0.15	0.15	0.30						
14								0	16	18		0.16	0.18	0.36						
15								0	27	32		0.27	0.32	0.93						
16								0	20	25		0.2	0.25	0.79						
17								0	15	16		0.15	0.16	0.32						
18								0	18	21		0.18	0.21	0.59						
19								0	14	16		0.14	0.16	0.32						
20								0	16	19		0.16	0.19	0.55						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	160-161	33	160.6	45	Clay	13.14%	0	41	43		0.41	0.43	0.86	0.78849412	0.2887322	1.366	-0.1	1.14	**1.44319261**
2				to		RHS		0	30	34		0.3	0.34	0.91						
3				160.3				0	30	34		0.3	0.34	0.91						
4								0	43	46		0.43	0.46	1.09						
5								0	40	43		0.4	0.43	1.03						
6								0	19	22		0.19	0.22	0.61						
7								0	24	27		0.24	0.27	0.71						
8								0	26	30		0.26	0.3	0.83						
9								0	20	22		0.2	0.22	0.44						
10								0	18	20		0.18	0.2	0.40						
11								0	11	13		0.11	0.13	0.26						
12						LHS		0	19	20		0.19	0.2	0.40						
13								0	23	25		0.23	0.25	0.50						
14								0	31	34		0.31	0.34	0.85						
15								0	32	37		0.32	0.37	1.03						
16								0	30	32		0.3	0.32	0.64						
17								0	28	30		0.28	0.3	0.60						
18								0	27	29		0.27	0.29	0.58						
19								0	36	38		0.36	0.38	0.76						
20								0	30	32		0.3	0.32	0.64						
21						RHS		0	35	38		0.35	0.38	0.93						
22								0	37	42		0.37	0.42	1.13						
23								0	40	41		0.4	0.41	0.82						
24								0	35	38		0.35	0.38	0.93						
25								0	32	47		0.32	0.47	1.81						
26								0	42	45		0.42	0.45	1.07						
27								0	40	44		0.4	0.44	1.11						
28								0	34	36		0.34	0.36	0.72						
29								0	28	31		0.28	0.31	0.79						
30								0	22	24		0.22	0.24	0.48						
31								0	18	22		0.18	0.22	0.67						
32								0	21	27		0.21	0.27	0.89						
33								0	24	27		0.24	0.27	0.71						
34								0	20	23		0.2	0.23	0.63						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	161-162	33	161.8	44	Clay	10.95%	0	37	38		0.37	0.38	0.76	1.12624286	0.339846	1.806	-0.09	1.2	**2.05912186**
2				to		RHS		0	28	32		0.28	0.32	0.87						
3				161.5				0	46	51		0.46	0.51	1.31						
4								0	45	47		0.45	0.47	0.94						
5								0	48	51		0.48	0.51	1.19						
6								0	42	45		0.42	0.45	1.07						
7								0	39	42		0.39	0.42	1.01						
8								0	33	37		0.33	0.37	0.97						
9								0	42	46		0.42	0.46	1.15						
10								0	49	53		0.49	0.53	1.29						
11								0	57	59		0.57	0.59	1.18						
12						LHS		0	55	63		0.55	0.63	1.73						
13								0	55	59		0.55	0.59	1.41						
14								0	43	48		0.43	0.48	1.25						
15								0	60	64		0.6	0.64	1.51						
16								0	63	75		0.63	0.75	2.20						
17								0	26	31		0.26	0.31	0.91						
18								0	27	28		0.27	0.28	0.56						
19								0	28	34		0.28	0.34	1.03						
20								0	15	30		0.15	0.3	1.47						
21								0	38	43		0.38	0.43	1.15						
22								0	42	46		0.42	0.46	1.15						
23								0	30	34		0.3	0.34	0.91						
24								0	39	42		0.39	0.42	1.01						
25								0	37	43		0.37	0.43	1.21						
26								0	28	31		0.28	0.31	0.79						
27								0	30	30		0.3	0.3	0.60						
28								0	41	43		0.41	0.43	0.86						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	162-163	30.5	162.8	40	Clay	12.04%	0	33	37		0.33	0.37	0.97	0.89389	0.2692965	1.432	-0.05	1.16	**1.60368019**
2				to				0	30	35		0.3	0.35	0.99						
3				162.5				0	39	45		0.39	0.45	1.25						
4								0	39	47		0.39	0.47	1.41						
5								0	38	40		0.38	0.4	0.80						
6								0	33	35		0.33	0.35	0.70						
7								0	23	25		0.23	0.25	0.50						
8								0	28	28		0.28	0.28	0.56						
9								0	21	22		0.21	0.22	0.44						
10								0	20	27		0.2	0.27	0.95						
11								0	37	39		0.37	0.39	0.78						
12						LHS		0	24	29		0.24	0.29	0.87						
13								0	30	41		0.3	0.41	1.46						
14								0	29	32		0.29	0.32	0.81						
15								0	29	35		0.29	0.35	1.05						
16								0	26	31		0.26	0.31	0.91						
17								0	27	33		0.27	0.33	1.01						
18								0	26	32		0.26	0.32	0.99						
19								0	24	27		0.24	0.27	0.71						
20								0	20	24		0.2	0.24	0.71						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

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Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	163-164	30	163.65	40	Clay	13.14%	0	27	32		0.27	0.32	0.93	1.26213	0.530211	2.323	-0.05	1.14	**2.59070925**
2				to				0	32	37		0.32	0.37	1.03						
3				163.35				0	31	34		0.31	0.34	0.85						
4								0	18	21		0.18	0.21	0.59						
5								0	27	28		0.27	0.28	0.56						
6								0	31	33		0.31	0.33	0.66						
7								0	42	55		0.42	0.55	1.86						
8								0	32	43		0.32	0.43	1.50						
9								0	34	37		0.34	0.37	0.91						
10								0	40	41		0.4	0.41	0.82						
11								0	30	35		0.3	0.35	0.99						
12								0	35	48		0.35	0.48	1.72						
13						LHS		0	40	41		0.4	0.41	0.82						
14								0	45	50		0.45	0.5	1.29						
15								0	36	42		0.36	0.42	1.19						
16								0	40	54		0.4	0.54	1.89						
17								0	34	55		0.34	0.55	2.32						
18								0	40	52		0.4	0.52	1.74						
19								0	39	56		0.39	0.56	2.11						
20								0	45	52		0.45	0.52	1.45						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	164-165	30	164.9	38	Clay	12.04%	0	35	38		0.35	0.38	0.93	1.05862727	0.4370389	1.933	-0.03	1.16	**2.20713782**
2				to				0	25	30		0.25	0.3	0.89						
3				164.65				0	24	27		0.24	0.27	0.71						
4								0	26	28		0.26	0.28	0.56						
5								0	23	25		0.23	0.25	0.50						
6								0	26	28		0.26	0.28	0.56						
7								0	33	35		0.33	0.35	0.70						
8								0	26	29		0.26	0.29	0.75						
9								0	25	27		0.25	0.27	0.54						
10								0	19	23		0.19	0.23	0.69						
11								0	28	30		0.28	0.3	0.60						
12								0	31	40		0.31	0.4	1.32						
13						LHS		0	34	45		0.34	0.45	1.54						
14								0	29	46		0.29	0.46	1.91						
15								0	23	33		0.23	0.33	1.24						
16								0	27	35		0.27	0.35	1.17						
17								0	28	42		0.28	0.42	1.65						
18								0	25	37		0.25	0.37	1.44						
19								0	28	40		0.28	0.4	1.50						
20								0	28	36		0.28	0.36	1.19						
21								0	38	50		0.38	0.5	1.70						
22								0	28	36		0.28	0.36	1.19						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	165-166	28	165.8	34	Clay	14.23%	0	30	34		0.3	0.34	0.91	1.07830476	0.3211367	1.721	0.01	1.1	**1.90363603**
2				to				0	28	32		0.28	0.32	0.87						
3				165.5				0	35	41		0.35	0.41	1.17						
4								0	26	31		0.26	0.31	0.91						
5								0	25	28		0.25	0.28	0.73						
6								0	34	42		0.34	0.42	1.31						
7								0	22	26		0.22	0.26	0.75						
8								0	23	28		0.23	0.28	0.85						
9								0	20	24		0.2	0.24	0.71						
10								0	28	30		0.28	0.3	0.60						
11								0	36	40		0.36	0.4	1.03						
12						LHS		0	34	47		0.34	0.47	1.70						
13								0	26	34		0.26	0.34	1.15						
14								0	30	38		0.3	0.38	1.23						
15								0	30	42		0.3	0.42	1.54						
16								0	24	30		0.24	0.3	0.95						
17								0	20	24		0.2	0.24	0.71						
18								0	22	32		0.22	0.32	1.22						
19								0	24	33		0.24	0.33	1.18						
20								0	33	45		0.33	0.45	1.60						
21								0	25	38		0.25	0.38	1.52						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	166-167	28	166.8	34	Clay	10.95%	0	29	31		0.29	0.31	0.62	0.9204381	0.4109846	1.742	0.01	1.2	**2.1029**
2				to				0	23	27		0.23	0.27	0.77						
3				166.5				0	19	23		0.19	0.23	0.69						
4								0	18	21		0.18	0.21	0.59						
5								0	20	23		0.2	0.23	0.63						
6								0	19	21		0.19	0.21	0.42						
7								0	19	21		0.19	0.21	0.42						
8								0	22	26		0.22	0.26	0.75						
9								0	25	30		0.25	0.3	0.89						
10								0	23	25		0.23	0.25	0.50						
11								0	15	17		0.15	0.17	0.34						
12						LHS		0	21	31		0.21	0.31	1.20						
13								0	37	49		0.37	0.49	1.68						
14								0	37	48		0.37	0.48	1.60						
15								0	38	41		0.38	0.41	0.99						
16								0	33	37		0.33	0.37	0.97						
17								0	28	36		0.28	0.36	1.19						
18								0	26	40		0.26	0.4	1.61						
19								0	26	30		0.26	0.3	0.83						
20								0	36	44		0.36	0.44	1.35						
21								0	28	37		0.28	0.37	1.26						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	167-168	26	167.7	32	Clay	13.14%	0	26	28		0.26	0.28	0.56	1.00002727	0.2529559	1.506	0.03	1.14	**1.75097061**
2				to				0	27	40		0.27	0.4	1.56						
3				167.4				0	32	36		0.32	0.36	0.95						
4								0	35	37		0.35	0.37	0.74						
5								0	31	34		0.31	0.34	0.85						
6								0	29	32		0.29	0.32	0.81						
7								0	25	28		0.25	0.28	0.73						
8								0	38	40		0.38	0.4	0.80						
9								0	22	28		0.22	0.28	0.91						
10								0	21	25		0.21	0.25	0.73						
11								0	30	36		0.3	0.36	1.07						
12								0	32	39		0.32	0.39	1.19						
13						LHS		0	25	34		0.25	0.34	1.20						
14								0	22	29		0.22	0.29	0.99						
15								0	22	30		0.22	0.3	1.07						
16								0	29	39		0.29	0.39	1.36						
17								0	20	25		0.2	0.25	0.79						
18								0	21	33		0.21	0.33	1.36						
19								0	21	28		0.21	0.28	0.97						
20								0	22	28		0.22	0.28	0.91						
21								0	20	29		0.2	0.29	1.10						
22								0	24	35		0.24	0.35	1.34						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	23/11/09	168-169	26	168.4	32	Clay	14.23%	0	35	37		0.35	0.37	0.74	1.140575	0.3404657	1.822	0.03	1.1	**2.03665698**
2				to				0	42	44		0.42	0.44	0.88						
3				168.1				0	24	30		0.24	0.3	0.95						
4								0	33	37		0.33	0.37	0.97						
5								0	39	41		0.39	0.41	0.82						
6								0	30	33		0.3	0.33	0.83						
7								0	22	28		0.22	0.28	0.91						
8								0	29	31		0.29	0.31	0.62						
9								0	44	50		0.44	0.5	1.35						
10								0	27	31		0.27	0.31	0.85						
11								0	42	47		0.42	0.47	1.23						
12								0	34	39		0.34	0.39	1.07						
13						LHS		0	23	29		0.23	0.29	0.93						
14								0	31	40		0.31	0.4	1.32						
15								0	26	34		0.26	0.34	1.15						
16								0	30	38		0.3	0.38	1.23						
17								0	20	25		0.2	0.25	0.79						
18								0	27	34		0.27	0.34	1.09						
19								0	23	36		0.23	0.36	1.48						
20								0	31	45		0.31	0.45	1.71						
21								0	24	34		0.24	0.34	1.26						
22								0	28	43		0.28	0.43	1.73						
23								0	37	49		0.37	0.49	1.68						
24								0	38	51		0.38	0.51	1.78						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	169-170	31	169.8	40	Clay	13.14%	0	50	56		0.5	0.56	1.47	0.90827619	0.2652671	1.439	-0.05	1.14	**1.58324391**
2				to				0	50	55		0.5	0.55	1.39						
3				169.5				0	47	49		0.47	0.49	0.98						
4								0	38	40		0.38	0.4	0.80						
5								0	31	35		0.31	0.35	0.93						
6								0	31	36		0.31	0.36	1.01						
7								0	34	40		0.34	0.4	1.15						
8								0	30	32		0.3	0.32	0.64						
9								0	35	41		0.35	0.41	1.17						
10								0	37	39		0.37	0.39	0.78						
11								0	30	33		0.3	0.33	0.83						
12						LHS		0	30	35		0.3	0.35	0.99						
13								0	26	28		0.26	0.28	0.56						
14								0	29	31		0.29	0.31	0.62						
15								0	24	26		0.24	0.26	0.52						
16								0	32	35		0.32	0.35	0.87						
17								0	26	29		0.26	0.29	0.75						
18								0	36	41		0.36	0.41	1.11						
19								0	26	28		0.26	0.28	0.56						
20								0	28	31		0.28	0.31	0.79						
21								0	37	42		0.37	0.42	1.13						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	170-171	33	170.8	46	Clay	10.95%	0	22	24		0.22	0.24	0.48	0.7314	0.2845272	1.300	-0.11	1.2	**1.42854528**
2				to				0	18	20		0.18	0.2	0.40						
3				170.5				0	17	18		0.17	0.18	0.36						
4								0	19	21		0.19	0.21	0.42						
5								0	14	16		0.14	0.16	0.32						
6								0	20	23		0.2	0.23	0.63						
7								0	25	27		0.25	0.27	0.54						
8								0	25	27		0.25	0.27	0.54						
9								0	22	28		0.22	0.28	0.91						
10								0	25	29		0.25	0.29	0.81						
11								0	28	32		0.28	0.32	0.87						
12								0	24	28		0.24	0.28	0.79						
13								0	18	23		0.18	0.23	0.75						
14								0	36	42		0.36	0.42	1.19						
15						LHS		0	45	53		0.45	0.53	1.53						
16								0	26	28		0.26	0.28	0.56						
17								0	36	39		0.36	0.39	0.95						
18								0	20	25		0.2	0.25	0.79						
19								0	22	28		0.22	0.28	0.91						
20								0	20	23		0.2	0.23	0.63						
21								0	19	21		0.19	0.21	0.42						
22								0	23	26		0.23	0.26	0.69						
23								0	20	25		0.2	0.25	0.79						
24								0	35	40		0.35	0.4	1.09						
25								0	25	30		0.25	0.3	0.89						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	171-172	33	171.8	46	Clay & Sandy	9.85%	0	24	28		0.24	0.28	0.79	1.12182727	0.3208053	1.763	-0.11	1.32	**2.18253799**
2				to				0	30	37		0.3	0.37	1.15						
3				171.5				0	35	48		0.35	0.48	1.72						
4								0	27	33		0.27	0.33	1.01						
5								0	33	35		0.33	0.35	0.70						
6								0	30	34		0.3	0.34	0.91						
7								0	34	39		0.34	0.39	1.07						
8								0	26	29		0.26	0.29	0.75						
9								0	30	33		0.3	0.33	0.83						
10								0	32	37		0.32	0.37	1.03						
11								0	30	36		0.3	0.36	1.07						
12								0	34	40		0.34	0.4	1.15						
13						LHS		0	50	63		0.5	0.63	2.02						
14								0	30	35		0.3	0.35	0.99						
15								0	37	43		0.37	0.43	1.21						
16								0	46	48		0.46	0.48	0.96						
17								0	48	56		0.48	0.56	1.59						
18								0	38	42		0.38	0.42	1.07						
19								0	42	45		0.42	0.45	1.07						
20								0	51	57		0.51	0.57	1.49						
21								0	46	48		0.46	0.48	0.96						
22								0	41	45		0.41	0.45	1.13						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	172-173	33	172.8	47	Clay & Sandy	10.95%	0	26	31		0.26	0.31	0.91	1.02087619	0.2589846	1.539	-0.12	1.2	**1.70261452**
2				to				0	24	28		0.24	0.28	0.79						
3				172.5				0	27	32		0.27	0.32	0.93						
4								0	22	29		0.22	0.29	0.99						
5								0	30	34		0.3	0.34	0.91						
6								0	34	40		0.34	0.4	1.15						
7								0	32	38		0.32	0.38	1.11						
8								0	24	27		0.24	0.27	0.71						
9								0	33	37		0.33	0.37	0.97						
10								0	30	39		0.3	0.39	1.30						
11								0	36	39		0.36	0.39	0.95						
12						LHS		0	31	38		0.31	0.38	1.17						
13								0	25	28		0.25	0.28	0.73						
14								0	35	42		0.35	0.42	1.25						
15								0	38	50		0.38	0.5	1.70						
16								0	22	24		0.22	0.24	0.48						
17								0	40	47		0.4	0.47	1.35						
18								0	31	35		0.31	0.35	0.93						
19								0	35	41		0.35	0.41	1.17						
20								0	27	32		0.27	0.32	0.93						
21								0	30	35		0.3	0.35	0.99						

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Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	173-174	33	173.7	47	Clay	12.04%	0	30	34		0.3	0.34	0.91	0.6784	0.223707	1.126	-0.12	1.16	**1.16674413**
2				to				0	20	22		0.2	0.22	0.44						
3				173.4				0	17	20		0.17	0.2	0.57						
4								0	26	28		0.26	0.28	0.56						
5								0	17	19		0.17	0.19	0.38						
6								0	17	20		0.17	0.2	0.57						
7								0	30	33		0.3	0.33	0.83						
8								0	25	27		0.25	0.27	0.54						
9								0	28	30		0.28	0.3	0.60						
10								0	24	28		0.24	0.28	0.79						
11								0	18	20		0.18	0.2	0.40						
12						LHS		0	30	34		0.3	0.34	0.91						
13								0	19	22		0.19	0.22	0.61						
14								0	25	31		0.25	0.31	0.97						
15								0	34	40		0.34	0.4	1.15						
16								0	20	22		0.2	0.22	0.44						
17								0	22	25		0.22	0.25	0.67						
18								0	18	20		0.18	0.2	0.40						
19								0	20	23		0.2	0.23	0.63						
20								0	24	29		0.24	0.29	0.87						
21								0	29	34		0.29	0.34	0.97						

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	174-175	31	174.4	45	Clay	12.04%	0	15	22		0.15	0.22	0.85	0.875672	0.3447685	1.565	-0.1	1.16	**1.69964244**
2				to				0	12	14		0.12	0.14	0.28						
3				174.1				0	14	18		0.14	0.18	0.59						
4								0	13	17		0.13	0.17	0.57						
5								0	12	15		0.12	0.15	0.47						
6								0	12	16		0.12	0.16	0.55						
7								0	25	29		0.25	0.29	0.81						
8								0	25	31		0.25	0.31	0.97						
9								0	16	21		0.16	0.21	0.71						
10								0	17	24		0.17	0.24	0.89						
11								0	13	15		0.13	0.15	0.30						
12								0	14	17		0.14	0.17	0.51						
13								0	27	31		0.27	0.31	0.85						
14								0	24	26		0.24	0.26	0.52						
15								0	26	31		0.26	0.31	0.91						
16						LHS		0	27	34		0.27	0.34	1.09						
17								0	23	34		0.23	0.34	1.32						
18								0	30	41		0.3	0.41	1.46						
19								0	25	32		0.25	0.32	1.05						
20								0	30	42		0.3	0.42	1.54						
21								0	18	26		0.18	0.26	0.99						
22								0	25	33		0.25	0.33	1.13						
23								0	22	33		0.22	0.33	1.30						
24								0	21	29		0.21	0.29	1.05						
25								0	20	30		0.2	0.3	1.18						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	175-176	31	175.3	45.5555556	Clay	5.14%	0	20	21		0.2	0.21	0.42	0.66816522	0.1857481	1.040	-0.105555556	1.566	**1.46280974**
2				to				0	30	32		0.3	0.32	0.64						
3				175				0	30	33		0.3	0.33	0.83						
4								0	34	37		0.34	0.37	0.91						
5								0	28	30		0.28	0.3	0.60						
6								0	32	37		0.32	0.37	1.03						
7								0	38	40		0.38	0.4	0.80						
8								0	37	38		0.37	0.38	0.76						
9								0	28	30		0.28	0.3	0.60						
10								0	30	34		0.3	0.34	0.91						
11								0	23	24		0.23	0.24	0.48						
12						LHS		0	24	26		0.24	0.26	0.52						
13								0	22	26		0.22	0.26	0.75						
14								0	20	23		0.2	0.23	0.63						
15								0	26	28		0.26	0.28	0.56						
16								0	21	22		0.21	0.22	0.44						
17								0	24	25		0.24	0.25	0.50						
18								0	21	22		0.21	0.22	0.44						
19								0	30	31		0.3	0.31	0.62						
20								0	29	31		0.29	0.31	0.62						
21								0	21	23		0.21	0.23	0.46						
22								0	28	32		0.28	0.32	0.87						
23								0	36	39		0.36	0.39	0.95						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	176-177	30	176.8	54.4444444	Clay	5.14%	0	9	11		0.09	0.11	0.22	0.42010909	0.1972703	0.815	-0.194444444	1.566	**0.97124142**
2				to				0	8	10		0.08	0.1	0.20						
3				176.5				0	6	12		0.06	0.12	0.59						
4								0	9	9		0.09	0.09	0.18						
5								0	9	10		0.09	0.1	0.20						
6								0	12	12		0.12	0.12	0.24						
7								0	8	8		0.08	0.08	0.16						
8								0	7	10		0.07	0.1	0.37						
9								0	10	14		0.1	0.14	0.51						
10								0	12	13		0.12	0.13	0.26						
11								0	18	22		0.18	0.22	0.67						
12								0	24	27		0.24	0.27	0.71						
13								0	25	27		0.25	0.27	0.54						
14						LHS		0	23	26		0.23	0.26	0.69						
15								0	24	27		0.24	0.27	0.71						
16								0	29	30		0.29	0.3	0.60						
17								0	14	16		0.14	0.16	0.32						
18								0	10	12		0.1	0.12	0.24						
19								0	16	19		0.16	0.19	0.55						
20								0	20	21		0.2	0.21	0.42						
21								0	12	14		0.12	0.14	0.28						
22								0	16	19		0.16	0.19	0.55						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	177-178	30	177.8	54.4444444	Clay	5.14%	0	15	18		0.15	0.18	0.53	0.531888	0.23151	0.995	-0.194444444	1.566	**1.25352597**
2				to				0	20	25		0.2	0.25	0.79						
3				177.5				0	16	19		0.16	0.19	0.55						
4								0	12	18		0.12	0.18	0.71						
5								0	14	16		0.14	0.16	0.32						
6								0	18	20		0.18	0.2	0.40						
7								0	10	19		0.1	0.19	0.90						
8								0	10	12		0.1	0.12	0.24						
9								0	9	12		0.09	0.12	0.41						
10								0	2	2		0.02	0.02	0.04						
11								0	25	26		0.25	0.26	0.52						
12								0	26	27		0.26	0.27	0.54						
13						LHS		0	22	23		0.22	0.23	0.46						
14								0	30	32		0.3	0.32	0.64						
15								0	29	29		0.29	0.29	0.58						
16								0	38	39		0.38	0.39	0.78						
17								0	26	28		0.26	0.28	0.56						
18								0	27	30		0.27	0.3	0.77						
19								0	33	33		0.33	0.33	0.66						
20								0	22	25		0.22	0.25	0.67						
21								0	18	26		0.18	0.26	0.99						
22								0	10	13		0.1	0.13	0.43						
23								0	9	11		0.09	0.11	0.22						
24								0	18	20		0.18	0.2	0.40						
25								0	6	8		0.06	0.08	0.16						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	178-179	28	178.7	52.2222222	Clay	5.03%	0	8	12		0.08	0.12	0.47	0.54242	0.1893875	0.921	-0.172222222	1.577	**1.18112993**
2				to				0	10	16		0.1	0.16	0.67						
3				178.4				0	14	18		0.14	0.18	0.59						
4								0	12	16		0.12	0.16	0.55						
5								0	10	14		0.1	0.14	0.51						
6								0	10	12		0.1	0.12	0.24						
7								0	8	12		0.08	0.12	0.47						
8								0	6	10		0.06	0.1	0.43						
9								0	11	12		0.11	0.12	0.24						
10								0	9	10		0.09	0.1	0.20						
11						LHS		0	19	21		0.19	0.21	0.42						
12								0	14	19		0.14	0.19	0.67						
13								0	22	22		0.22	0.22	0.44						
14								0	21	26		0.21	0.26	0.81						
15								0	24	27		0.24	0.27	0.71						
16								0	24	29		0.24	0.29	0.87						
17								0	18	23		0.18	0.23	0.75						
18								0	17	21		0.17	0.21	0.65						
19								0	20	22		0.2	0.22	0.44						
20								0	15	20		0.15	0.2	0.69						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	179-180	25	179.2	50	Clay	5.03%	0	12	15		0.12	0.15	0.47	0.511096	0.220008	0.951	-0.15	1.577	**1.26335353**
2				to				0	17	21		0.17	0.21	0.65						
3				178.9				0	13	17		0.13	0.17	0.57						
4								0	15	18		0.15	0.18	0.53						
5								0	14	17		0.14	0.17	0.51						
6								0	18	20		0.18	0.2	0.40						
7								0	12	14		0.12	0.14	0.28						
8								0	16	18		0.16	0.18	0.36						
9								0	16	18		0.16	0.18	0.36						
10								0	18	20		0.18	0.2	0.40						
11								0	12	20		0.12	0.2	0.87						
12						LHS		0	23	26		0.23	0.26	0.69						
13								0	18	21		0.18	0.21	0.59						
14								0	18	22		0.18	0.22	0.67						
15								0	18	22		0.18	0.22	0.67						
16								0	22	24		0.22	0.24	0.48						
17								0	30	35		0.3	0.35	0.99						
18								0	19	24		0.19	0.24	0.77						
19								0	19	23		0.19	0.23	0.69						
20								0	2	2		0.02	0.02	0.04						
21								0	6	6		0.06	0.06	0.12						
22								0	10	12		0.1	0.12	0.24						
23								0	19	20		0.19	0.2	0.40						
24								0	22	24		0.22	0.24	0.48						
25								0	10	14		0.1	0.14	0.51						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	22/11/09	180-181	24.5	180.8	43.3333333	Clay	4.92%	0	28	32		0.28	0.32	0.87	0.682016	0.2001697	1.082	-0.083333333	1.59	**1.58844517**
2				to				0	6	9		0.06	0.09	0.35						
3				180.5				0	30	33		0.3	0.33	0.83						
4								0	28	30		0.28	0.3	0.60						
5								0	30	32		0.3	0.32	0.64						
6								0	30	35		0.3	0.35	0.99						
7								0	26	30		0.26	0.3	0.83						
8								0	12	15		0.12	0.15	0.47						
9								0	31	36		0.31	0.36	1.01						
10								0	26	28		0.26	0.28	0.56						
11								0	23	25		0.23	0.25	0.50						
12						LHS		0	18	22		0.18	0.22	0.67						
13								0	26	29		0.26	0.29	0.75						
14								0	20	25		0.2	0.25	0.79						
15								0	20	24		0.2	0.24	0.71						
16								0	19	21		0.19	0.21	0.42						
17								0	26	30		0.26	0.3	0.83						
18								0	18	20		0.18	0.2	0.40						
19								0	15	17		0.15	0.17	0.34						
20								0	12	18		0.12	0.18	0.71						
21								0	19	23		0.19	0.23	0.69						
22								0	18	26		0.18	0.26	0.99						
23								0	23	25		0.23	0.25	0.50						
24								0	23	26		0.23	0.26	0.69						
25								0	28	32		0.28	0.32	0.87						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	181-182	32.5	181.8	43.3333333	Clay	4.92%	0	24	27		0.24	0.27	0.71	0.40053793	0.208805	0.818	-0.083333333	1.59	**1.16835511**
2				to				0	17	21		0.17	0.21	0.65						
3				185.5				0	20	20		0.2	0.2	0.40						
4								0	17	21		0.17	0.21	0.65						
5								0	18	22		0.18	0.22	0.67						
6								0	15	18		0.15	0.18	0.53						
7								0	15	17		0.15	0.17	0.34						
8								0	16	18		0.16	0.18	0.36						
9								0	14	16		0.14	0.16	0.32						
10								0	12	15		0.12	0.15	0.47						
11								0	10	14		0.1	0.14	0.51						
12						LHS		0	9	16		0.09	0.16	0.73						
13								0	13	16		0.13	0.16	0.49						
14								0	5	8		0.05	0.08	0.33						
15								0	2	4		0.02	0.04	0.08						
16								0	8	10		0.08	0.1	0.20						
17								0	9	9		0.09	0.09	0.18						
18								0	5	7		0.05	0.07	0.14						
19								0	7	9		0.07	0.09	0.18						
20								0	8	12		0.08	0.12	0.47						
21								0	23	24		0.23	0.24	0.48						
22								0	8	10		0.08	0.1	0.20						
23								0	6	8		0.06	0.08	0.16						
24								0	10	12		0.1	0.12	0.24						
25								0	20	24		0.2	0.24	0.71						
26								0	4	6		0.04	0.06	0.12						
27								0	8	12		0.08	0.12	0.47						
28								0	5	7		0.05	0.07	0.14						
29								0	1	9		0.01	0.09	0.65						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	182-183	35	182.9	36.1111111	Clay	5.03%	0	18	22		0.18	0.22	0.67	0.64066667	0.1697518	0.980	-0.011111111	1.577	**1.52820618**
2				to				0	21	25		0.21	0.25	0.73						
3				182.6				0	22	27		0.22	0.27	0.83						
4								0	24	27		0.24	0.27	0.71						
5								0	15	18		0.15	0.18	0.53						
6								0	20	21		0.2	0.21	0.42						
7								0	16	19		0.16	0.19	0.55						
8								0	25	27		0.25	0.27	0.54						
9								0	12	16		0.12	0.16	0.55						
10								0	12	16		0.12	0.16	0.55						
11								0	26	30		0.26	0.3	0.83						
12						LHS		0	24	27		0.24	0.27	0.71						
13								0	32	36		0.32	0.36	0.95						
14								0	15	19		0.15	0.19	0.61						
15								0	25	30		0.25	0.3	0.89						
16								0	9	13		0.09	0.13	0.49						
17								0	15	18		0.15	0.18	0.53						
18								0	22	26		0.22	0.26	0.75						
19								0	21	25		0.21	0.25	0.73						
20								0	21	24		0.21	0.24	0.65						
21								0	18	22		0.18	0.22	0.67						
22								0	22	26		0.22	0.26	0.75						
23								0	7	8		0.07	0.08	0.16						
24								0	10	14		0.1	0.14	0.51						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	183-184	35	183.8	36.1111111	Clay	5.03%	0	10	11		0.1	0.11	0.22	0.40692174	0.2038051	0.815	-0.011111111	1.577	**1.26699473**
2				to				0	7	8		0.07	0.08	0.16						
3				183.5				0	10	12		0.1	0.12	0.24						
4								0	7	9		0.07	0.09	0.18						
5								0	5	8		0.05	0.08	0.33						
6								0	5	8		0.05	0.08	0.33						
7								0	11	16		0.11	0.16	0.61						
8								0	6	8		0.06	0.08	0.16						
9								0	16	18		0.16	0.18	0.36						
10								0	12	16		0.12	0.16	0.55						
11								0	11	15		0.11	0.15	0.53						
12						LHS		0	15	18		0.15	0.18	0.53						
13								0	17	21		0.17	0.21	0.65						
14								0	7	12		0.07	0.12	0.53						
15								0	8	10		0.08	0.1	0.20						
16								0	13	19		0.13	0.19	0.73						
17								0	7	10		0.07	0.1	0.37						
18								0	23	27		0.23	0.27	0.77						
19								0	15	18		0.15	0.18	0.53						
20								0	10	12		0.1	0.12	0.24						
21								0	10	16		0.1	0.16	0.67						
22								0	3	5		0.03	0.05	0.10						
23								0	5	8		0.05	0.08	0.33						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	184-185	35	184.4	32.2222222	Clay	5.25%	0	5	5		0.05	0.05	0.10	0.30842857	0.1938838	0.696	0.027777778	1.555	**1.12577946**
2				to				0	15	18		0.15	0.18	0.53						
3				184.1				0	12	16		0.12	0.16	0.55						
4								0	8	10		0.08	0.1	0.20						
5								0	9	11		0.09	0.11	0.22						
6								0	9	11		0.09	0.11	0.22						
7								0	2	2		0.02	0.02	0.04						
8								0	6	8		0.06	0.08	0.16						
9								0	7	8		0.07	0.08	0.16						
10								0	10	16		0.1	0.16	0.67						
11								0	10	12		0.1	0.12	0.24						
12						LHS		0	8	13		0.08	0.13	0.55						
13								0	7	10		0.07	0.1	0.37						
14								0	9	13		0.09	0.13	0.49						
15								0	10	14		0.1	0.14	0.51						
16								0	2	3		0.02	0.03	0.06						
17								0	7	8		0.07	0.08	0.16						
18								0	2	6		0.02	0.06	0.35						
19								0	6	8		0.06	0.08	0.16						
20								0	2	4		0.02	0.04	0.08						
21								0	6	8		0.06	0.08	0.16						
22								0	4	6		0.04	0.06	0.12						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
23								0	10	13		0.1	0.13	0.43						
24								0	6	9		0.06	0.09	0.35						
25								0	9	12		0.09	0.12	0.41						
26								0	15	18		0.15	0.18	0.53						
27								0	13	15		0.13	0.15	0.30						
28								0	10	15		0.1	0.15	0.59						
29								0	2	6		0.02	0.06	0.35						
30								0	4	4		0.04	0.04	0.08						
31								0	18	24		0.18	0.24	0.83						
32								0	12	15		0.12	0.15	0.47						
33								0	6	10		0.06	0.1	0.43						
34								0	8	10		0.08	0.1	0.20						
35								0	10	12		0.1	0.12	0.24						
36								0	10	12		0.1	0.12	0.24						
37								0	15	18		0.15	0.18	0.53						
38								0	13	15		0.13	0.15	0.30						
39								0	2	4		0.02	0.04	0.08						
40								0	2	2		0.02	0.02	0.04						
41								0	6	8		0.06	0.08	0.16						
42								0	10	12		0.1	0.12	0.24						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	185-186	35	185.7	32.2222222	Clay	5.25%	0	10	15		0.1	0.15	0.59	0.4096087	0.2193518	0.848	0.027777778	1.555	**1.36231994**
2				to				0	9	13		0.09	0.13	0.49						
3				185.4				0	6	11		0.06	0.11	0.51						
4								0	8	12		0.08	0.12	0.47						
5								0	6	6		0.06	0.06	0.12						
6								0	6	8		0.06	0.08	0.16						
7								0	10	12		0.1	0.12	0.24						
8								0	12	14		0.12	0.14	0.28						
9								0	5	9		0.05	0.09	0.41						
10								0	10	12		0.1	0.12	0.24						
11								0	6	10		0.06	0.1	0.43						
12								0	8	12		0.08	0.12	0.47						
13								0	9	15		0.09	0.15	0.65						
14						LHS		0	22	24		0.22	0.24	0.48						
15								0	7	9		0.07	0.09	0.18						
16								0	8	11		0.08	0.11	0.39						
17								0	4	6		0.04	0.06	0.12						
18								0	15	18		0.15	0.18	0.53						
19								0	16	19		0.16	0.19	0.55						
20								0	25	31		0.25	0.31	0.97						
21								0	22	26		0.22	0.26	0.75						
22								0	10	12		0.1	0.12	0.24						
23								0	8	6		0.08	0.06	0.12						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	186-187	33	186.9	48	Sand and Cla	9.85%	0	10	12		0.1	0.12	0.24	0.56105455	0.332757	1.227	-0.13	1.065	**1.16784557**
2				to				0	9	11		0.09	0.11	0.22						
3				186.5				0	11	14		0.11	0.14	0.45						
4								0	8	10		0.08	0.1	0.20						
5								0	7	9		0.07	0.09	0.18						
6								0	8	12		0.08	0.12	0.47						
7								0	13	15		0.13	0.15	0.30						
8								0	7	9		0.07	0.09	0.18						
9								0	7	9		0.07	0.09	0.18						
10								0	13	16		0.13	0.16	0.49						
11								0	11	15		0.11	0.15	0.53						
12								0	19	25		0.19	0.25	0.85						
13								0	14	16		0.14	0.16	0.32						
14						LHS		0	15	22		0.15	0.22	0.85						
15								0	23	28		0.23	0.28	0.85						
16								0	17	22		0.17	0.22	0.73						
17								0	14	17		0.14	0.17	0.51						
18								0	15	18		0.15	0.18	0.53						
19								0	16	25		0.16	0.25	1.02						
20								0	22	33		0.22	0.33	1.30						
21								0	22	27		0.22	0.27	0.83						
22								0	23	31		0.23	0.31	1.09						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	187-188	30	187.7	43	Sand and Cla	8.21%	0	10	15		0.1	0.15	0.59	0.74337143	0.3418814	1.427	-0.08	1.065	**1.4346979**
2				to				0	12	14		0.12	0.14	0.28						
3				187.4				0	18	21		0.18	0.21	0.59						
4								0	17	19		0.17	0.19	0.38						
5								0	13	15		0.13	0.15	0.30						
6								0	12	16		0.12	0.16	0.55						
7								0	20	22		0.2	0.22	0.44						
8								0	16	19		0.16	0.19	0.55						
9								0	13	15		0.13	0.15	0.30						
10								0	14	16		0.14	0.16	0.32						
11								0	20	24		0.2	0.24	0.71						
12								0	23	32		0.23	0.32	1.16						
13								0	22	32		0.22	0.32	1.22						
14						LHS		0	24	34		0.24	0.34	1.26						
15								0	20	25		0.2	0.25	0.79						
16								0	17	26		0.17	0.26	1.04						
17								0	27	33		0.27	0.33	1.01						
18								0	26	35		0.26	0.35	1.22						
19								0	30	35		0.3	0.35	0.99						
20								0	17	25		0.17	0.25	0.97						
21								0	30	34		0.3	0.34	0.91						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	188-189	30	188.8	43	Sand and Cla	9.30%	0	30	34		0.3	0.34	0.91	0.8337619	0.3150646	1.464	-0.08	1.065	**1.47384412**
2				to				0	20	24		0.2	0.24	0.71						
3				188.5				0	19	21		0.19	0.21	0.42						
4								0	26	28		0.26	0.28	0.56						
5								0	20	22		0.2	0.22	0.44						
6								0	25	28		0.25	0.28	0.73						
7								0	23	25		0.23	0.25	0.50						
8								0	31	34		0.31	0.34	0.85						
9								0	20	22		0.2	0.22	0.44						
10								0	19	21		0.19	0.21	0.42						
11								0	20	23		0.2	0.23	0.63						
12								0	18	24		0.18	0.24	0.83						
13								0	23	31		0.23	0.31	1.09						
14						LHS		0	22	28		0.22	0.28	0.91						
15								0	24	32		0.24	0.32	1.11						
16								0	18	26		0.18	0.26	0.99						
17								0	29	37		0.29	0.37	1.21						
18								0	30	41		0.3	0.41	1.46						
19								0	33	42		0.33	0.42	1.36						
20								0	22	31		0.22	0.31	1.14						
21								0	20	25		0.2	0.25	0.79						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

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Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	189-190	27	189.8	37	Sand and Cla	10.95%	0	25	28		0.25	0.28	0.73	1.06533333	0.4330442	1.931	-0.02	1.065	**2.03566417**
2				to				0	18	22		0.18	0.22	0.67						
3				189.5				0	22	25		0.22	0.25	0.67						
4								0	24	26		0.24	0.26	0.52						
5								0	21	25		0.21	0.25	0.73						
6								0	26	32		0.26	0.32	0.99						
7								0	20	24		0.2	0.24	0.71						
8								0	24	27		0.24	0.27	0.71						
9								0	21	23		0.21	0.23	0.46						
10								0	18	22		0.18	0.22	0.67						
11								0	17	21		0.17	0.21	0.65						
12						LHS		0	21	31		0.21	0.31	1.20						
13								0	23	35		0.23	0.35	1.40						
14								0	24	36		0.24	0.36	1.42						
15								0	22	37		0.22	0.37	1.61						
16								0	25	35		0.25	0.35	1.28						
17								0	30	42		0.3	0.42	1.54						
18								0	28	42		0.28	0.42	1.65						
19								0	28	42		0.28	0.42	1.65						
20								0	23	38		0.23	0.38	1.63						
21								0	29	40		0.29	0.4	1.44						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	190-191	27	190.6	37	Sand and Cla	10.95%	0	27	29		0.27	0.29	0.58	1.07013043	0.3044797	1.679	-0.02	1.065	**1.76693065**
2				to				0	35	38		0.35	0.38	0.93						
3				190.3				0	21	24		0.21	0.24	0.65						
4								0	26	28		0.26	0.28	0.56						
5								0	37	38		0.37	0.38	0.76						
6								0	35	40		0.35	0.4	1.09						
7								0	30	33		0.3	0.33	0.83						
8								0	41	47		0.41	0.47	1.29						
9								0	20	24		0.2	0.24	0.71						
10								0	38	43		0.38	0.43	1.15						
11								0	21	27		0.21	0.27	0.89						
12						LHS		0	40	45		0.4	0.45	1.19						
13								0	21	26		0.21	0.26	0.81						
14								0	41	46		0.41	0.46	1.21						
15								0	28	35		0.28	0.35	1.11						
16								0	34	42		0.34	0.42	1.31						
17								0	43	51		0.43	0.51	1.49						
18								0	46	55		0.46	0.55	1.62						
19								0	40	45		0.4	0.45	1.19						
20								0	37	44		0.37	0.44	1.29						
21								0	40	46		0.4	0.46	1.27						
22								0	40	44		0.4	0.44	1.11						
23								0	35	46		0.35	0.46	1.56						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	191-192	25	191.8	30	Clay	17.52%	0	20	24		0.2	0.24	0.71	0.73368571	0.2945254	1.323	0.05	1.045	**1.43450964**
2				to				0	13	16		0.13	0.16	0.49						
3				191.5				0	15	18		0.15	0.18	0.53						
4								0	13	16		0.13	0.16	0.49						
5								0	15	18		0.15	0.18	0.53						
6								0	14	19		0.14	0.19	0.67						
7								0	20	23		0.2	0.23	0.63						
8								0	17	21		0.17	0.21	0.65						
9								0	12	14		0.12	0.14	0.28						
10								0	12	15		0.12	0.15	0.47						
11								0	12	14		0.12	0.14	0.28						
12						LHS		0	12	18		0.12	0.18	0.71						
13								0	14	22		0.14	0.22	0.91						
14								0	14	18		0.14	0.18	0.59						
15								0	23	32		0.23	0.32	1.16						
16								0	20	25		0.2	0.25	0.79						
17								0	16	22		0.16	0.22	0.79						
18								0	22	30		0.22	0.3	1.07						
19								0	24	33		0.24	0.33	1.18						
20								0	18	28		0.18	0.28	1.14						
21								0	22	33		0.22	0.33	1.30						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	21/11/09	192-193	25	192.8	30	Clay	13.69%	0	36	38		0.36	0.38	0.76	1.01031429	0.2930313	1.596	0.05	1.13	**1.86040599**
2				to				0	33	38		0.33	0.38	1.05						
3				192.5				0	29	32		0.29	0.32	0.81						
4								0	25	32		0.25	0.32	1.05						
5								0	30	33		0.3	0.33	0.83						
6								0	21	23		0.21	0.23	0.46						
7								0	22	26		0.22	0.26	0.75						
8								0	29	32		0.29	0.32	0.81						
9								0	24	27		0.24	0.27	0.71						
10								0	20	24		0.2	0.24	0.71						
11								0	28	32		0.28	0.32	0.87						
12						LHS		0	32	38		0.32	0.38	1.11						
13								0	22	27		0.22	0.27	0.83						
14								0	33	40		0.33	0.4	1.21						
15								0	34	43		0.34	0.43	1.38						
16								0	21	28		0.21	0.28	0.97						
17								0	38	47		0.38	0.47	1.46						
18								0	29	36		0.29	0.36	1.13						
19								0	40	48		0.4	0.48	1.43						
20								0	32	43		0.32	0.43	1.50						
21								0	37	45		0.37	0.45	1.37						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	193-194	32	193.7	43	Sandy	9.85%	0	29	31		0.29	0.31	0.62	0.75051429	0.1705123	1.092	-0.08	1.065	**1.07728885**
2				to				0	34	37		0.34	0.37	0.91						
3				193.4				0	20	23		0.2	0.23	0.63						
4								0	26	29		0.26	0.29	0.75						
5								0	30	33		0.3	0.33	0.83						
6								0	32	36		0.32	0.36	0.95						
7								0	32	34		0.32	0.34	0.68						
8								0	23	26		0.23	0.26	0.69						
9								0	28	30		0.28	0.3	0.60						
10								0	26	32		0.26	0.32	0.99						
11								0	23	25		0.23	0.25	0.50						
12						LHS		0	33	37		0.33	0.37	0.97						
13								0	40	42		0.4	0.42	0.84						
14								0	23	26		0.23	0.26	0.69						
15								0	27	29		0.27	0.29	0.58						
16								0	25	28		0.25	0.28	0.73						
17								0	31	33		0.31	0.33	0.66						
18								0	26	29		0.26	0.29	0.75						
19								0	20	22		0.2	0.22	0.44						
20								0	38	40		0.38	0.4	0.80						
21								0	32	38		0.32	0.38	1.11						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	194-195	32	194.7	43	Clay & Sandy	10.95%	0	30	32		0.3	0.32	0.64	0.8704381	0.1827798	1.236	-0.08	1.2	**1.38719726**
2				to				0	30	33		0.3	0.33	0.83						
3				194.4				0	33	36		0.33	0.36	0.89						
4								0	37	39		0.37	0.39	0.78						
5								0	36	42		0.36	0.42	1.19						
6								0	27	31		0.27	0.31	0.85						
7								0	43	46		0.43	0.46	1.09						
8								0	28	35		0.28	0.35	1.11						
9								0	32	34		0.32	0.34	0.68						
10								0	33	36		0.33	0.36	0.89						
11								0	25	27		0.25	0.27	0.54						
12						LHS		0	26	29		0.26	0.29	0.75						
13								0	28	32		0.28	0.32	0.87						
14								0	35	39		0.35	0.39	1.01						
15								0	25	27		0.25	0.27	0.54						
16								0	29	33		0.29	0.33	0.89						
17								0	33	35		0.33	0.35	0.70						
18								0	38	41		0.38	0.41	0.99						
19								0	40	43		0.4	0.43	1.03						
20								0	34	37		0.34	0.37	0.91						
21								0	41	44		0.41	0.44	1.05						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	195-196	32	195.8	43	Sandy	13.14%	0	34	40		0.34	0.4	1.15	0.76580833	0.1847368	1.135	-0.08	1.065	**1.12387522**
2				to				0	28	30		0.28	0.3	0.60						
3				195.5				0	33	35		0.33	0.35	0.70						
4								0	29	32		0.29	0.32	0.81						
5								0	17	20		0.17	0.2	0.57						
6								0	25	28		0.25	0.28	0.73						
7								0	24	26		0.24	0.26	0.52						
8								0	18	21		0.18	0.21	0.59						
9								0	29	31		0.29	0.31	0.62						
10								0	35	38		0.35	0.38	0.93						
11								0	31	35		0.31	0.35	0.93						
12						LHS		0	20	23		0.2	0.23	0.63						
13								0	26	31		0.26	0.31	0.91						
14								0	34	36		0.34	0.36	0.72						
15								0	23	26		0.23	0.26	0.69						
16								0	27	29		0.27	0.29	0.58						
17								0	22	25		0.22	0.25	0.67						
18								0	30	33		0.3	0.33	0.83						
19								0	25	28		0.25	0.28	0.73						
20								0	22	27		0.22	0.27	0.83						
21								0	23	25		0.23	0.25	0.50						
22								0	26	34		0.26	0.34	1.15						
23								0	32	36		0.32	0.36	0.95						
24								0	30	35		0.3	0.35	0.99						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	196-197	35	196.8	45	Clay & Sandy	12.59%	0	25	27		0.25	0.27	0.54	0.65682727	0.1730246	1.003	-0.1	1.16	**1.04733672**
2				to				0	25	31		0.25	0.31	0.97						
3				196.5				0	23	26		0.23	0.26	0.69						
4								0	18	20		0.18	0.2	0.40						
5								0	19	22		0.19	0.22	0.61						
6								0	19	21		0.19	0.21	0.42						
7								0	17	20		0.17	0.2	0.57						
8								0	23	25		0.23	0.25	0.50						
9								0	15	18		0.15	0.18	0.53						
10								0	16	19		0.16	0.19	0.55						
11								0	21	25		0.21	0.25	0.73						
12						LHS		0	23	26		0.23	0.26	0.69						
13								0	20	23		0.2	0.23	0.63						
14								0	17	20		0.17	0.2	0.57						
15								0	19	25		0.19	0.25	0.85						
16								0	26	29		0.26	0.29	0.75						
17								0	24	28		0.24	0.28	0.79						
18								0	21	23		0.21	0.23	0.46						
19								0	21	25		0.21	0.25	0.73						
20								0	27	32		0.27	0.32	0.93						
21								0	30	35		0.3	0.35	0.99						
22								0	23	25		0.23	0.25	0.50						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	197-198	35	197.7	45	Clay	17.52%	0	14	20		0.14	0.2	0.75	0.62770833	0.192992	1.014	-0.1	1.045	**0.95480857**
2				to				0	12	14		0.12	0.14	0.28						
3				197				0	11	13		0.11	0.13	0.26						
4								0	22	25		0.22	0.25	0.67						
5								0	21	24		0.21	0.24	0.65						
6								0	11	17		0.11	0.17	0.69						
7								0	17	19		0.17	0.19	0.38						
8								0	15	20		0.15	0.2	0.69						
9								0	14	16		0.14	0.16	0.32						
10								0	16	21		0.16	0.21	0.71						
11								0	23	26		0.23	0.26	0.69						
12						LHS		0	21	27		0.21	0.27	0.89						
13								0	19	24		0.19	0.24	0.77						
14								0	19	22		0.19	0.22	0.61						
15								0	13	16		0.13	0.16	0.49						
16								0	19	21		0.19	0.21	0.42						
17								0	23	27		0.23	0.27	0.77						
18								0	27	33		0.27	0.33	1.01						
19								0	23	27		0.23	0.27	0.77						
20								0	13	16		0.13	0.16	0.49						
21								0	15	18		0.15	0.18	0.53						
22								0	22	26		0.22	0.26	0.75						
23								0	28	31		0.28	0.31	0.79						
24								0	30	32		0.3	0.32	0.64						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

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Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	198-199	35	198.5	46	Clay	11.49%	0	14	16		0.14	0.16	0.32	0.57910476	0.2444431	1.068	-0.11	1.18	**1.13042924**
2				to				0	10	12		0.1	0.12	0.24						
3				198.2				0	9	11		0.09	0.11	0.22						
4								0	12	16		0.12	0.16	0.55						
5								0	14	16		0.14	0.16	0.32						
6								0	10	12		0.1	0.12	0.24						
7								0	11	15		0.11	0.15	0.53						
8								0	12	19		0.12	0.19	0.79						
9								0	13	17		0.13	0.17	0.57						
10								0	11	14		0.11	0.14	0.45						
11								0	13	15		0.13	0.15	0.30						
12						LHS		0	20	23		0.2	0.23	0.63						
13								0	18	25		0.18	0.25	0.91						
14								0	22	29		0.22	0.29	0.99						
15								0	22	26		0.22	0.26	0.75						
16								0	24	27		0.24	0.27	0.71						
17								0	17	22		0.17	0.22	0.73						
18								0	19	26		0.19	0.26	0.93						
19								0	23	25		0.23	0.25	0.50						
20								0	18	21		0.18	0.21	0.59						
21								0	24	29		0.24	0.29	0.87						

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	199-200	34	199.8	45	Clay	13.14%	0	14	19		0.14	0.19	0.67	0.71824545	0.2288545	1.176	-0.1	1.14	**1.22658815**
2				to				0	15	18		0.15	0.18	0.53						
3				199.5				0	20	24		0.2	0.24	0.71						
4								0	21	25		0.21	0.25	0.73						
5								0	18	21		0.18	0.21	0.59						
6								0	18	20		0.18	0.2	0.40						
7								0	25	29		0.25	0.29	0.81						
8								0	17	19		0.17	0.19	0.38						
9								0	15	17		0.15	0.17	0.34						
10								0	19	22		0.19	0.22	0.61						
11								0	24	27		0.24	0.27	0.71						
12								0	20	23		0.2	0.23	0.63						
13						LHS		0	17	20		0.17	0.2	0.57						
14								0	27	33		0.27	0.33	1.01						
15								0	29	32		0.29	0.32	0.81						
16								0	30	35		0.3	0.35	0.99						
17								0	25	28		0.25	0.28	0.73						
18								0	33	37		0.33	0.37	0.97						
19								0	30	38		0.3	0.38	1.23						
20								0	24	31		0.24	0.31	1.03						
21								0	17	23		0.17	0.23	0.81						
22								0	23	25		0.23	0.25	0.50						

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	200-201	34	200.4	45	Clay	16.98%	0	22	27		0.22	0.27	0.83	0.91047619	0.2761521	1.463	-0.1	1.06	**1.44454714**
2				to				0	27	29		0.27	0.29	0.58						
3				200.1				0	21	23		0.21	0.23	0.46						
4								0	16	19		0.16	0.19	0.55						
5								0	17	20		0.17	0.2	0.57						
6								0	26	29		0.26	0.29	0.75						
7								0	23	26		0.23	0.26	0.69						
8								0	29	33		0.29	0.33	0.89						
9								0	21	25		0.21	0.25	0.73						
10								0	18	21		0.18	0.21	0.59						
11								0	27	32		0.27	0.32	0.93						
12						LHS		0	36	42		0.36	0.42	1.19						
13								0	28	32		0.28	0.32	0.87						
14								0	30	38		0.3	0.38	1.23						
15								0	32	39		0.32	0.39	1.19						
16								0	35	41		0.35	0.41	1.17						
17								0	28	35		0.28	0.35	1.11						
18								0	37	43		0.37	0.43	1.21						
19								0	32	41		0.32	0.41	1.34						
20								0	28	37		0.28	0.37	1.26						
21								0	28	33		0.28	0.33	0.95						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	201-202	32	201.6	40	Clay	17.52%	0	10	13		0.1	0.13	0.43	0.74964348	0.2199067	1.189	-0.05	1.045	**1.19073249**
2				to				0	18	20		0.18	0.2	0.40						
3				201.3				0	15	18		0.15	0.18	0.53						
4								0	10	12		0.1	0.12	0.24						
5								0	13	18		0.13	0.18	0.65						
6								0	20	24		0.2	0.24	0.71						
7								0	20	23		0.2	0.23	0.63						
8								0	15	22		0.15	0.22	0.85						
9								0	11	18		0.11	0.18	0.77						
10								0	20	25		0.2	0.25	0.79						
11								0	14	17		0.14	0.17	0.51						
12						LHS		0	19	23		0.19	0.23	0.69						
13								0	17	23		0.17	0.23	0.81						
14								0	19	25		0.19	0.25	0.85						
15								0	20	25		0.2	0.25	0.79						
16								0	22	25		0.22	0.25	0.67						
17								0	29	35		0.29	0.35	1.05						
18								0	31	36		0.31	0.36	1.01						
19								0	26	33		0.26	0.33	1.07						
20								0	32	36		0.32	0.36	0.95						
21								0	30	34		0.3	0.34	0.91						
22								0	32	37		0.32	0.37	1.03						
23								0	28	32		0.28	0.32	0.87						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	202-203	28	202.85	38	Clay	11.49%	0	15	17		0.15	0.17	0.34	0.73722609	0.2866139	1.310	-0.03	1.18	**1.51093557**
2				to				0	22	24		0.22	0.24	0.48						
3				202.25				0	19	21		0.19	0.21	0.42						
4								0	14	18		0.14	0.18	0.59						
5								0	12	14		0.12	0.14	0.28						
6								0	13	15		0.13	0.15	0.30						
7								0	17	19		0.17	0.19	0.38						
8								0	20	24		0.2	0.24	0.71						
9								0	18	22		0.18	0.22	0.67						
10								0	14	17		0.14	0.17	0.51						
11								0	13	16		0.13	0.16	0.49						
12						LHS		0	22	30		0.22	0.3	1.07						
13								0	20	26		0.2	0.26	0.87						
14								0	27	34		0.27	0.34	1.09						
15								0	31	35		0.31	0.35	0.93						
16								0	19	26		0.19	0.26	0.93						
17								0	27	34		0.27	0.34	1.09						
18								0	29	34		0.29	0.34	0.97						
19								0	32	37		0.32	0.37	1.03						
20								0	19	25		0.19	0.25	0.85						
21								0	22	28		0.22	0.28	0.91						
22								0	34	40		0.34	0.4	1.15						
23								0	21	27		0.21	0.27	0.89						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	20/11/09	203-204	26	203.9	32	Clay & Sandy	12.04%	0	17	23		0.17	0.23	0.81	0.634096	0.2651824	1.164	0.03	1.18	**1.40946383**
2				to				0	12	15		0.12	0.15	0.47						
3				203.6				0	10	12		0.1	0.12	0.24						
4								0	14	19		0.14	0.19	0.67						
5								0	11	14		0.11	0.14	0.45						
6								0	12	14		0.12	0.14	0.28						
7								0	11	13		0.11	0.13	0.26						
8								0	10	12		0.1	0.12	0.24						
9								0	13	16		0.13	0.16	0.49						
10								0	14	17		0.14	0.17	0.51						
11								0	21	25		0.21	0.25	0.73						
12						LHS		0	18	21		0.18	0.21	0.59						
13								0	22	24		0.22	0.24	0.48						
14								0	26	32		0.26	0.32	0.99						
15								0	28	36		0.28	0.36	1.19						
16								0	24	28		0.24	0.28	0.79						
17								0	19	27		0.19	0.27	1.01						
18								0	18	20		0.18	0.2	0.40						
19								0	17	23		0.17	0.23	0.81						
20								0	15	17		0.15	0.17	0.34						
21								0	20	24		0.2	0.24	0.71						
22								0	28	31		0.28	0.31	0.79						
23								0	30	34		0.3	0.34	0.91						
24								0	26	30		0.26	0.3	0.83						
25								0	22	27		0.22	0.27	0.83						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	204-205	31	204.6	42	Clay & Sandy	8.21%	0	18	21		0.18	0.21	0.59	0.51911818	0.1747168	0.869	-0.07	1.3	**1.03811726**
2				to				0	18	20		0.18	0.2	0.40						
3				204.3				0	13	15		0.13	0.15	0.30						
4								0	12	15		0.12	0.15	0.47						
5								0	16	19		0.16	0.19	0.55						
6								0	20	22		0.2	0.22	0.44						
7								0	11	13		0.11	0.13	0.26						
8								0	10	13		0.1	0.13	0.43						
9								0	20	23		0.2	0.23	0.63						
10								0	10	12		0.1	0.12	0.24						
11								0	15	17		0.15	0.17	0.34						
12						LHS		0	21	26		0.21	0.26	0.81						
13								0	22	24		0.22	0.24	0.48						
14								0	20	22		0.2	0.22	0.44						
15								0	23	25		0.23	0.25	0.50						
16								0	19	22		0.19	0.22	0.61						
17								0	20	22		0.2	0.22	0.44						
18								0	30	34		0.3	0.34	0.91						
19								0	24	26		0.24	0.26	0.52						
20								0	25	27		0.25	0.27	0.54						
21								0	25	28		0.25	0.28	0.73						
22								0	26	29		0.26	0.29	0.75						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	205-206	33	205.6	45	Clay & Sandy	15.33%	0	24	26		0.24	0.26	0.52	0.86604167	0.2332584	1.333	-0.1	1.1	**1.3558144**
2				to				0	41	44		0.41	0.44	1.05						
3				205.3				0	33	36		0.33	0.36	0.89						
4								0	24	30		0.24	0.3	0.95						
5								0	27	31		0.27	0.31	0.85						
6								0	22	24		0.22	0.24	0.48						
7								0	30	33		0.3	0.33	0.83						
8								0	41	48		0.41	0.48	1.37						
9								0	41	44		0.41	0.44	1.05						
10								0	38	42		0.38	0.42	1.07						
11								0	33	39		0.33	0.39	1.13						
12						LHS		0	33	36		0.33	0.36	0.89						
13								0	30	34		0.3	0.34	0.91						
14								0	20	23		0.2	0.23	0.63						
15								0	21	23		0.21	0.23	0.46						
16								0	20	22		0.2	0.22	0.44						
17								0	25	28		0.25	0.28	0.73						
18								0	22	27		0.22	0.27	0.83						
19								0	36	40		0.36	0.4	1.03						
20								0	37	41		0.37	0.41	1.05						
21								0	39	41		0.39	0.41	0.82						
22								0	37	40		0.37	0.4	0.97						
23								0	40	43		0.4	0.43	1.03						
24								0	22	26		0.22	0.26	0.75						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	206-207	33	206.7	45	Clay	10.40%	0	40	45		0.4	0.45	1.19	0.79248333	0.2014455	1.195	-0.1	1.22	**1.3363567**
2				to				0	30	33		0.3	0.33	0.83						
3				206.4				0	37	40		0.37	0.4	0.97						
4								0	32	35		0.32	0.35	0.87						
5								0	39	44		0.39	0.44	1.17						
6								0	27	32		0.27	0.32	0.93						
7								0	25	28		0.25	0.28	0.73						
8								0	24	28		0.24	0.28	0.79						
9								0	29	32		0.29	0.32	0.81						
10								0	24	26		0.24	0.26	0.52						
11								0	34	38		0.34	0.38	0.99						
12								0	41	43		0.41	0.43	0.86						
13						LHS		0	15	19		0.15	0.19	0.61						
14								0	14	19		0.14	0.19	0.67						
15								0	21	26		0.21	0.26	0.81						
16								0	27	29		0.27	0.29	0.58						
17								0	25	28		0.25	0.28	0.73						
18								0	26	33		0.26	0.33	1.07						
19								0	18	20		0.18	0.2	0.40						
20								0	30	33		0.3	0.33	0.83						
21								0	15	18		0.15	0.18	0.53						
22								0	17	20		0.17	0.2	0.57						
23								0	20	24		0.2	0.24	0.71						
24								0	28	31		0.28	0.31	0.79						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	207-208	34	207.6	47	Clay	13.14%	0	25	27		0.25	0.27	0.54	0.82574545	0.170066	1.166	-0.12	1.14	**1.19230031**
2				to				0	36	38		0.36	0.38	0.76						
3				207.3				0	23	26		0.23	0.26	0.69						
4								0	30	32		0.3	0.32	0.64						
5								0	25	27		0.25	0.27	0.54						
6								0	29	34		0.29	0.34	0.97						
7								0	27	33		0.27	0.33	1.01						
8								0	20	25		0.2	0.25	0.79						
9								0	20	23		0.2	0.23	0.63						
10								0	24	29		0.24	0.29	0.87						
11								0	34	37		0.34	0.37	0.91						
12								0	30	33		0.3	0.33	0.83						
13						LHS		0	27	29		0.27	0.29	0.58						
14								0	31	35		0.31	0.35	0.93						
15								0	40	42		0.4	0.42	0.84						
16								0	40	42		0.4	0.42	0.84						
17								0	36	38		0.36	0.38	0.76						
18								0	37	41		0.37	0.41	1.05						
19								0	35	40		0.35	0.4	1.09						
20								0	43	45		0.43	0.45	0.90						
21								0	32	38		0.32	0.38	1.11						
22								0	41	43		0.41	0.43	0.86						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	208-209	34	208.7	47	Clay	16.43%	0	27	30		0.27	0.3	0.77	0.83086667	0.1710694	1.173	-0.12	1.06	**1.11618571**
2				to				0	24	27		0.24	0.27	0.71						
3				208.4				0	30	34		0.3	0.34	0.91						
4								0	34	40		0.34	0.4	1.15						
5								0	34	38		0.34	0.38	0.99						
6								0	31	33		0.31	0.33	0.66						
7								0	37	42		0.37	0.42	1.13						
8								0	32	35		0.32	0.35	0.87						
9								0	28	32		0.28	0.32	0.87						
10								0	30	34		0.3	0.34	0.91						
11								0	24	26		0.24	0.26	0.52						
12								0	37	39		0.37	0.39	0.78						
13						LHS		0	39	41		0.39	0.41	0.82						
14								0	27	30		0.27	0.3	0.77						
15								0	37	40		0.37	0.4	0.97						
16								0	38	40		0.38	0.4	0.80						
17								0	34	37		0.34	0.37	0.91						
18								0	26	28		0.26	0.28	0.56						
19								0	36	39		0.36	0.39	0.95						
20								0	25	27		0.25	0.27	0.54						
21								0	29	32		0.29	0.32	0.81						

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No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	209-210	31	209.6	40	Sandy	8.75%	0	25	27		0.25	0.27	0.54	1.03991667	0.2589202	1.558	-0.05	1.065	**1.60576119**
2				to				0	24	26		0.24	0.26	0.52						
3				209.3				0	35	41		0.35	0.41	1.17						
4								0	32	35		0.32	0.35	0.87						
5								0	36	39		0.36	0.39	0.95						
6								0	31	34		0.31	0.34	0.85						
7								0	24	27		0.24	0.27	0.71						
8								0	40	45		0.4	0.45	1.19						
9								0	42	48		0.42	0.48	1.31						
10								0	41	44		0.41	0.44	1.05						
11								0	42	47		0.42	0.47	1.23						
12								0	50	53		0.5	0.53	1.23						
13						LHS		0	45	51		0.45	0.51	1.37						
14								0	32	35		0.32	0.35	0.87						
15								0	36	45		0.36	0.45	1.42						
16								0	46	48		0.46	0.48	0.96						
17								0	51	57		0.51	0.57	1.49						
18								0	42	48		0.42	0.48	1.31						
19								0	41	44		0.41	0.44	1.05						
20								0	46	49		0.46	0.49	1.15						
21								0	34	38		0.34	0.38	0.99						
22								0	28	32		0.28	0.32	0.87						
23								0	29	32		0.29	0.32	0.81						
24								0	38	41		0.38	0.41	0.99						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	211-212	31	211.9	41	Sandy	13.14%	0	25	28		0.25	0.28	0.73	0.97782857	0.2367432	1.451	-0.06	1.065	**1.48175055**
2				to				0	32	34		0.32	0.34	0.68						
3				211.6				0	23	26		0.23	0.26	0.69						
4								0	20	25		0.2	0.25	0.79						
5								0	32	37		0.32	0.37	1.03						
6								0	24	26		0.24	0.26	0.52						
7								0	38	44		0.38	0.44	1.23						
8								0	26	29		0.26	0.29	0.75						
9								0	29	31		0.29	0.31	0.62						
10								0	31	34		0.31	0.34	0.85						
11								0	35	42		0.35	0.42	1.25						
12						LHS		0	30	38		0.3	0.38	1.23						
13								0	32	36		0.32	0.36	0.95						
14								0	42	45		0.42	0.45	1.07						
15								0	33	40		0.33	0.4	1.21						
16								0	36	42		0.36	0.42	1.19						
17								0	44	48		0.44	0.48	1.19						
18								0	32	38		0.32	0.38	1.11						
19								0	36	42		0.36	0.42	1.19						
20								0	33	39		0.33	0.39	1.13						
21								0	28	35		0.28	0.35	1.11						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	212-213	31	212.6	41	ravel & Sand	13.14%	0	24	27		0.24	0.27	0.71	0.99133333	0.1780452	1.347	-0.06	1.01	**1.30029795**
2				to				0	27	32		0.27	0.32	0.93						
3				212.3				0	33	37		0.33	0.37	0.97						
4								0	33	36		0.33	0.36	0.89						
5								0	22	26		0.22	0.26	0.75						
6								0	31	34		0.31	0.34	0.85						
7								0	30	34		0.3	0.34	0.91						
8								0	40	45		0.4	0.45	1.19						
9								0	38	42		0.38	0.42	1.07						
10								0	31	34		0.31	0.34	0.85						
11								0	27	29		0.27	0.29	0.58						
12						LHS		0	26	32		0.26	0.32	0.99						
13								0	38	41		0.38	0.41	0.99						
14								0	36	41		0.36	0.41	1.11						
15								0	38	43		0.38	0.43	1.15						
16								0	40	45		0.4	0.45	1.19						
17								0	27	33		0.27	0.33	1.01						
18								0	31	38		0.31	0.38	1.17						
19								0	43	46		0.43	0.46	1.09						
20								0	34	39		0.34	0.39	1.07						
21								0	38	45		0.38	0.45	1.31						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	213-214	29	213.8	38	Gravel & Clay	10.95%	0	22	25		0.22	0.25	0.67	0.83575238	0.2289498	1.294	-0.03	1.28	**1.61747461**
2				to				0	21	26		0.21	0.26	0.81						
3				213.5				0	20	25		0.2	0.25	0.79						
4								0	16	18		0.16	0.18	0.36						
5								0	25	28		0.25	0.28	0.73						
6								0	23	26		0.23	0.26	0.69						
7								0	18	24		0.18	0.24	0.83						
8								0	30	34		0.3	0.34	0.91						
9								0	29	33		0.29	0.33	0.89						
10								0	23	25		0.23	0.25	0.50						
11								0	30	35		0.3	0.35	0.99						
12						LHS		0	20	25		0.2	0.25	0.79						
13								0	32	36		0.32	0.36	0.95						
14								0	24	29		0.24	0.29	0.87						
15								0	27	33		0.27	0.33	1.01						
16								0	24	31		0.24	0.31	1.03						
17								0	25	30		0.25	0.3	0.89						
18								0	25	32		0.25	0.32	1.05						
19								0	19	21		0.19	0.21	0.42						
20								0	29	34		0.29	0.34	0.97						
21								0	22	34		0.22	0.34	1.38						

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	214-215	27	214.6	36	Gravel & Clay	12.04%	0	10	14		0.1	0.14	0.51	0.48146087	0.2513046	0.984	-0.01	1.18	**1.14940266**
2				to				0	9	11		0.09	0.11	0.22						
3				214.3				0	13	15		0.13	0.15	0.30						
4								0	12	14		0.12	0.14	0.28						
5								0	15	18		0.15	0.18	0.53						
6								0	9	11		0.09	0.11	0.22						
7								0	9	11		0.09	0.11	0.22						
8								0	9	12		0.09	0.12	0.41						
9								0	9	11		0.09	0.11	0.22						
10								0	14	16		0.14	0.16	0.32						
11								0	11	13		0.11	0.13	0.26						
12								0	10	12		0.1	0.12	0.24						
13								0	11	13		0.11	0.13	0.26						
14						LHS		0	16	22		0.16	0.22	0.79						
15								0	14	20		0.14	0.2	0.75						
16								0	24	28		0.24	0.28	0.79						
17								0	26	32		0.26	0.32	0.99						
18								0	17	23		0.17	0.23	0.81						
19								0	17	19		0.17	0.19	0.38						
20								0	21	27		0.21	0.27	0.89						
21								0	19	23		0.19	0.23	0.69						
22								0	24	26		0.24	0.26	0.52						
23								0	21	23		0.21	0.23	0.46						

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	19/11/09	215-216	26	215.5	35	Clay	12.59%	0	28	30		0.28	0.3	0.60	0.6946087	0.1942048	1.083	0	1.15	**1.24547112**
2				to				0	32	34		0.32	0.34	0.68						
3				215.2				0	29	34		0.29	0.34	0.97						
4								0	16	20		0.16	0.2	0.63						
5								0	19	21		0.19	0.21	0.42						
6								0	25	27		0.25	0.27	0.54						
7								0	18	23		0.18	0.23	0.75						
8								0	25	29		0.25	0.29	0.81						
9								0	15	18		0.15	0.18	0.53						
10								0	30	33		0.3	0.33	0.83						
11								0	16	19		0.16	0.19	0.55						
12								0	15	17		0.15	0.17	0.34						
13								0	21	24		0.21	0.24	0.65						
14						LHS		0	19	24		0.19	0.24	0.77						
15								0	16	22		0.16	0.22	0.79						
16								0	15	18		0.15	0.18	0.53						
17								0	14	16		0.14	0.16	0.32						
18								0	22	27		0.22	0.27	0.83						
19								0	16	21		0.16	0.21	0.71						
20								0	18	24		0.18	0.24	0.83						
21								0	20	26		0.2	0.26	0.87						
22								0	22	29		0.22	0.29	0.99						
23								0	23	30		0.23	0.3	1.01						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	216-217	30	216.9	35	Clay	12.04%	0	21	25		0.21	0.25	0.73	0.45371429	0.1655172	0.785	0	1.16	**0.91030844**
2				to		RHS		0	17	22		0.17	0.22	0.73						
3				216.6				0	17	20		0.17	0.2	0.57						
4								0	12	14		0.12	0.14	0.28						
5								0	13	15		0.13	0.15	0.30						
6								0	12	14		0.12	0.14	0.28						
7								0	11	13		0.11	0.13	0.26						
8								0	18	20		0.18	0.2	0.40						
9								0	13	16		0.13	0.16	0.49						
10								0	14	16		0.14	0.16	0.32						
11								0	20	22		0.2	0.22	0.44						
12								0	15	18		0.15	0.18	0.53						
13						LHS		0	18	22		0.18	0.22	0.67						
14								0	14	18		0.14	0.18	0.59						
15								0	12	14		0.12	0.14	0.28						
16								0	11	13		0.11	0.13	0.26						
17								0	15	18		0.15	0.18	0.53						
18								0	10	12		0.1	0.12	0.24						
19								0	13	16		0.13	0.16	0.49						
20								0	11	14		0.11	0.14	0.45						
21								0	13	18		0.13	0.18	0.65						
22								0	15	18		0.15	0.18	0.53						

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	217-218	31	217.6	36	Clay	14.78%	0	36	39		0.36	0.39	0.95	0.73397143	0.1533743	1.041	-0.01	1.1	**1.13379198**
2				to		RHS		0	28	31		0.28	0.31	0.79						
3				217.3				0	24	27		0.24	0.27	0.71						
4								0	29	31		0.29	0.31	0.62						
5								0	26	29		0.26	0.29	0.75						
6								0	27	30		0.27	0.3	0.77						
7								0	29	33		0.29	0.33	0.89						
8								0	35	38		0.35	0.38	0.93						
9								0	20	22		0.2	0.22	0.44						
10								0	25	27		0.25	0.27	0.54						
11								0	26	29		0.26	0.29	0.75						
12								0	30	33		0.3	0.33	0.83						
13						LHS		0	35	37		0.35	0.37	0.74						
14								0	30	32		0.3	0.32	0.64						
15								0	32	35		0.32	0.35	0.87						
16								0	24	23		0.24	0.23	0.46						
17								0	30	33		0.3	0.33	0.83						
18								0	33	36		0.33	0.36	0.89						
19								0	39	41		0.39	0.41	0.82						
20								0	28	30		0.28	0.3	0.60						
21								0	25	27		0.25	0.27	0.54						
22								0	25	29		0.25	0.29	0.81						

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	219-220	32	219.8	41	Clay	13.14%	0	20	22		0.2	0.22	0.44	0.41687059	0.1593336	0.736	-0.06	1.14	**0.77011316**
2				to				0	10	14		0.1	0.14	0.51						
3				219.5				0	7	11		0.07	0.11	0.45						
4								0	9	10		0.09	0.1	0.20						
5								0	13	14		0.13	0.14	0.28						
6								0	18	20		0.18	0.2	0.40						
7								0	17	19		0.17	0.19	0.38						
8								0	21	22		0.21	0.22	0.44						
9								0	15	20		0.15	0.2	0.69						
10								0	33	34		0.33	0.34	0.68						
11								0	2	3		0.02	0.03	0.06						
12								0	2	3		0.02	0.03	0.06						
13								0	20	23		0.2	0.23	0.63						
14								0	12	13		0.12	0.13	0.26						
15								0	29	29		0.29	0.29	0.58						
16								0	13	16		0.13	0.16	0.49						
17								0	13	15		0.13	0.15	0.30						
18								0	13	16		0.13	0.16	0.49						
19								0	12	12		0.12	0.12	0.24						
20								0	14	15		0.14	0.15	0.30						
21						RHS		0	18	22		0.18	0.22	0.67						
22								0	10	13		0.1	0.13	0.43						
23								0	15	18		0.15	0.18	0.53						
24								0	20	22		0.2	0.22	0.44						
25								0	14	17		0.14	0.17	0.51						
26								0	10	13		0.1	0.13	0.43						
27						LHS		0	12	14		0.12	0.14	0.28						
28								0	8	11		0.08	0.11	0.39						
29								0	9	12		0.09	0.12	0.41						
30								0	14	16		0.14	0.16	0.32						
31								0	18	20		0.18	0.2	0.40						
32								0	20	21		0.2	0.21	0.42						
33								0	17	17		0.17	0.17	0.34						
34								0	18	22		0.18	0.22	0.67						

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								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	220-221	32	220.8	45	Clay	12.59%	0	10	11		0.1	0.11	0.22	0.33241818	0.170682	0.674	-0.1	1.15	**0.65984954**
2				to		LHS		0	8	10		0.08	0.1	0.20						
3				220.5				0	11	13		0.11	0.13	0.26						
4								0	8	11		0.08	0.11	0.39						
5								0	8	10		0.08	0.1	0.20						
6								0	7	9		0.07	0.09	0.18						
7								0	8	8		0.08	0.08	0.16						
8								0	7	8		0.07	0.08	0.16						
9								0	6	8		0.06	0.08	0.16						
10								0	16	16		0.16	0.16	0.32						
11						RHS		0	7	9		0.07	0.09	0.18						
12								0	23	27		0.23	0.27	0.77						
13								0	15	18		0.15	0.18	0.53						
14								0	18	19		0.18	0.19	0.38						
15								0	15	14		0.15	0.14	0.28						
16								0	10	12		0.1	0.12	0.24						
17								0	14	17		0.14	0.17	0.51						
18								0	11	15		0.11	0.15	0.53						
19								0	9	14		0.09	0.14	0.57						
20								0	10	14		0.1	0.14	0.51						
21								0	12	14		0.12	0.14	0.28						
22								0	11	13		0.11	0.13	0.26						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	221-222	31	221.6	45	Clay	19.72%	0	13	16		0.13	0.16	0.49	0.42467	0.1943926	0.813	-0.1	1.03	**0.73485885**
2				to		LHS		0	16	18		0.16	0.18	0.36						
3				221.3				0	10	11		0.1	0.11	0.22						
4								0	8	10		0.08	0.1	0.20						
5								0	21	22		0.21	0.22	0.44						
6								0	15	15		0.15	0.15	0.30						
7								0	16	17		0.16	0.17	0.34						
8								0	17	19		0.17	0.19	0.38						
9								0	9	11		0.09	0.11	0.22						
10								0	20	21		0.2	0.21	0.42						
11						RHS		0	14	17		0.14	0.17	0.51						
12								0	10	10		0.1	0.1	0.20						
13								0	15	21		0.15	0.21	0.77						
14								0	10	12		0.1	0.12	0.24						
15								0	16	19		0.16	0.19	0.55						
16								0	10	10		0.1	0.1	0.20						
17								0	14	18		0.14	0.18	0.59						
18								0	10	14		0.1	0.14	0.51						
19								0	11	18		0.11	0.18	0.77						
20								0	11	18		0.11	0.18	0.77						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	222-223	31	222.6	47	Sandy & Clay	14.78%	0	22	22		0.22	0.22	0.44	0.54554815	0.15603	0.858	-0.12	1.065	**0.78555277**
2				to		LHS		0	26	29		0.26	0.29	0.75						
3				222.3				0	34	36		0.34	0.36	0.72						
4								0	30	32		0.3	0.32	0.64						
5								0	31	32		0.31	0.32	0.64						
6								0	28	30		0.28	0.3	0.60						
7								0	30	32		0.3	0.32	0.64						
8								0	34	34		0.34	0.34	0.68						
9								0	20	24		0.2	0.24	0.71						
10								0	23	25		0.23	0.25	0.50						
11						RHS		0	28	30		0.28	0.3	0.60						
12								0	25	27		0.25	0.27	0.54						
13								0	20	22		0.2	0.22	0.44						
14								0	19	22		0.19	0.22	0.61						
15								0	17	20		0.17	0.2	0.57						
16								0	16	18		0.16	0.18	0.36						
17								0	18	22		0.18	0.22	0.67						
18								0	18	20		0.18	0.2	0.40						
19								0	16	18		0.16	0.18	0.36						
20								0	17	19		0.17	0.19	0.38						
21								0	14	20		0.14	0.2	0.75						
22								0	10	14		0.1	0.14	0.51						
23								0	12	12		0.12	0.12	0.24						
24								0	15	17		0.15	0.17	0.34						
25								0	9	17		0.09	0.17	0.81						
26								0	11	15		0.11	0.15	0.53						
27								0	13	14		0.13	0.14	0.28						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	223-224	29	223.7	47	Clay	17.52%	0	34	36		0.34	0.36	0.72	0.60118182	0.3575634	1.316	-0.12	1.045	**1.25014259**
2				to		RHS		0	44	45		0.44	0.45	0.90						
3				223.4				0	39	49		0.39	0.49	1.56						
4								0	32	32		0.32	0.32	0.64						
5								0	38	40		0.38	0.4	0.80						
6								0	39	41		0.39	0.41	0.82						
7								0	40	43		0.4	0.43	1.03						
8								0	30	32		0.3	0.32	0.64						
9								0	24	26		0.24	0.26	0.52						
10								0	18	20		0.18	0.2	0.40						
11								0	10	10		0.1	0.1	0.20						
12						LHS		0	6	8		0.06	0.08	0.16						
13								0	14	14		0.14	0.14	0.28						
14								0	7	7		0.07	0.07	0.14						
15								0	7	11		0.07	0.11	0.45						
16								0	11	12		0.11	0.12	0.24						
17								0	14	15		0.14	0.15	0.30						
18								0	15	15		0.15	0.15	0.30						
19								0	28	30		0.28	0.3	0.60						
20								0	15	18		0.15	0.18	0.53						
21								0	31	37		0.31	0.37	1.09						
22								0	29	33		0.29	0.33	0.89						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	224-225	29	224.3	41	Clay	10.95%	0	32	41		0.32	0.41	1.34	0.94014	0.2630564	1.466	-0.06	1.2	**1.68750344**
2				to		RHS		0	39	44		0.39	0.44	1.17						
3				224.5				0	30	32		0.3	0.32	0.64						
4								0	41	42		0.41	0.42	0.84						
5								0	53	55		0.53	0.55	1.10						
6								0	33	37		0.33	0.37	0.97						
7								0	39	42		0.39	0.42	1.01						
8								0	38	42		0.38	0.42	1.07						
9								0	36	44		0.36	0.44	1.35						
10								0	25	27		0.25	0.27	0.54						
11								0	31	36		0.31	0.36	1.01						
12						LHS		0	21	24		0.21	0.24	0.65						
13								0	28	29		0.28	0.29	0.58						
14								0	35	37		0.35	0.37	0.74						
15								0	32	32		0.32	0.32	0.64						
16								0	29	33		0.29	0.33	0.89						
17								0	36	38		0.36	0.38	0.76						
18								0	44	46		0.44	0.46	0.92						
19								0	44	50		0.44	0.5	1.35						
20								0	49	52		0.49	0.52	1.21						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	225-226	29	225	41	Clay	11.49%	0	34	37		0.34	0.37	0.91	1.01807	0.277952	1.574	-0.06	1.18	**1.78648927**
2				to		RHS		0	25	30		0.25	0.3	0.89						
3				225.4				0	35	41		0.35	0.41	1.17						
4								0	36	42		0.36	0.42	1.19						
5								0	23	26		0.23	0.26	0.69						
6								0	13	20		0.13	0.2	0.81						
7								0	24	31		0.24	0.31	1.03						
8								0	33	38		0.33	0.38	1.05						
9								0	39	44		0.39	0.44	1.17						
10								0	24	26		0.24	0.26	0.52						
11								0	29	31		0.29	0.31	0.62						
12						LHS		0	35	41		0.35	0.41	1.17						
13								0	40	44		0.4	0.44	1.11						
14								0	34	35		0.34	0.35	0.70						
15								0	47	50		0.47	0.5	1.17						
16								0	36	38		0.36	0.38	0.76						
17								0	48	51		0.48	0.51	1.19						
18								0	51	55		0.51	0.55	1.33						
19								0	60	66		0.6	0.66	1.67						
20								0	44	48		0.44	0.48	1.19						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	18/11/09	226-227	28	226.3	44	Clay & Grave	11.49%	0	39	44		0.39	0.44	1.17	0.85072414	0.2697996	1.390	-0.09	1.15	**1.49537174**
2				to		RHS		0	26	34		0.26	0.34	1.15						
3				226.6				0	27	36		0.27	0.36	1.24						
4								0	35	38		0.35	0.38	0.93						
5								0	38	42		0.38	0.42	1.07						
6								0	33	38		0.33	0.38	1.05						
7								0	44	52		0.44	0.52	1.51						
8								0	35	40		0.35	0.4	1.09						
9								0	27	28		0.27	0.28	0.56						
10								0	35	39		0.35	0.39	1.01						
11								0	25	27		0.25	0.27	0.54						
12						LHS		0	23	24		0.23	0.24	0.48						
13								0	18	24		0.18	0.24	0.83						
14								0	18	23		0.18	0.23	0.75						
15								0	25	28		0.25	0.28	0.73						
16								0	24	28		0.24	0.28	0.79						
17								0	18	20		0.18	0.2	0.40						
18								0	30	34		0.3	0.34	0.91						
19								0	44	48		0.44	0.48	1.19						
20								0	50	52		0.5	0.52	1.04						
21								0	20	24		0.2	0.24	0.71						
22								0	21	27		0.21	0.27	0.89						
23								0	28	32		0.28	0.32	0.87						
24								0	18	22		0.18	0.22	0.67						
25								0	17	21		0.17	0.21	0.65						
26								0	30	32		0.3	0.32	0.64						
27								0	20	22		0.2	0.22	0.44						
28								0	24	27		0.24	0.27	0.71						
29								0	19	22		0.19	0.22	0.61						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	227-228	29	227.8	44	Sandy	9.30%	0	30	33		0.3	0.33	0.83	1.0428	0.2917739	1.626	-0.09	1.065	**1.63621045**
2				to		RHS		0	36	39		0.36	0.39	0.95						
3				227.5				0	44	57		0.44	0.57	1.90						
4								0	34	39		0.34	0.39	1.07						
5								0	39	45		0.39	0.45	1.25						
6								0	31	35		0.31	0.35	0.93						
7								0	32	35		0.32	0.35	0.87						
8								0	35	40		0.35	0.4	1.09						
9								0	40	42		0.4	0.42	0.84						
10								0	40	46		0.4	0.46	1.27						
11								0	40	48		0.4	0.48	1.43						
12						LHS		0	52	57		0.52	0.57	1.43						
13								0	58	61		0.58	0.61	1.39						
14								0	48	51		0.48	0.51	1.19						
15								0	33	37		0.33	0.37	0.97						
16								0	29	32		0.29	0.32	0.81						
17								0	28	31		0.28	0.31	0.79						
18								0	25	28		0.25	0.28	0.73						
19								0	30	32		0.3	0.32	0.64						
20								0	28	31		0.28	0.31	0.79						
21								0	48	51		0.48	0.51	1.19						
22								0	30	34		0.3	0.34	0.91						
23								0	34	37		0.34	0.37	0.91						
24								0	28	31		0.28	0.31	0.79						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	228-229	30	228.6	48	Clay/Gravel	15.88%	0	50	63		0.5	0.63	2.02	0.99463871	0.6164454	2.228	-0.13	1.11	**2.32825769**
2				to		RHS		0	52	57		0.52	0.57	1.43						
3				228.3				0	48	58		0.48	0.58	1.74						
4								0	42	49		0.42	0.49	1.39						
5								0	62	70		0.62	0.7	1.87						
6								0	52	64		0.52	0.64	1.98						
7								0	55	62		0.55	0.62	1.65						
8								0	47	62		0.47	0.62	2.11						
9								0	49	58		0.49	0.58	1.68						
10								0	41	56		0.41	0.56	1.99						
11								0	38	46		0.38	0.46	1.39						
12						LHS		0	24	28		0.24	0.28	0.79						
13								0	12	14		0.12	0.14	0.28						
14								0	18	21		0.18	0.21	0.59						
15								0	8	11		0.08	0.11	0.39						
16								0	12	15		0.12	0.15	0.47						
17								0	10	16		0.1	0.16	0.67						
18								0	16	20		0.16	0.2	0.63						
19								0	24	24		0.24	0.24	0.48						
20								0	44	45		0.44	0.45	0.90						
21								0	35	37		0.35	0.37	0.74						
22								0	30	34		0.3	0.34	0.91						
23								0	24	27		0.24	0.27	0.71						
24								0	11	13		0.11	0.13	0.26						
25								0	12	16		0.12	0.16	0.55						
26								0	10	11		0.1	0.11	0.22						
27								0	14	14		0.14	0.14	0.28						
28								0	15	18		0.15	0.18	0.53						
29								0	14	22		0.14	0.22	0.91						
30								0	20	21		0.2	0.21	0.42						
31								0	22	27		0.22	0.27	0.83						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	229-230	30	229.6	48	Sandy	15.88%	0	41	50		0.41	0.5	1.52	0.92296	0.4002523	1.723	-0.13	1.065	**1.69703972**
2				to		RHS		0	38	42		0.38	0.42	1.07						
3				229.3				0	27	32		0.27	0.32	0.93						
4								0	27	27		0.27	0.27	0.54						
5								0	30	30		0.3	0.3	0.60						
6								0	54	56		0.54	0.56	1.12						
7								0	42	47		0.42	0.47	1.23						
8								0	23	28		0.23	0.28	0.85						
9								0	54	55		0.54	0.55	1.10						
10								0	38	53		0.38	0.53	1.93						
11								0	39	51		0.39	0.51	1.72						
12						LHS		0	39	41		0.39	0.41	0.82						
13								0	41	43		0.41	0.43	0.86						
14								0	33	35		0.33	0.35	0.70						
15								0	28	28		0.28	0.28	0.56						
16								0	27	27		0.27	0.27	0.54						
17								0	31	32		0.31	0.32	0.64						
18								0	34	36		0.34	0.36	0.72						
19								0	27	29		0.27	0.29	0.58						
20								0	20	21		0.2	0.21	0.42						
21								0	18	19		0.18	0.19	0.38						
22								0	48	52		0.48	0.52	1.27						
23								0	25	28		0.25	0.28	0.73						
24								0	42	47		0.42	0.47	1.23						
25								0	38	41		0.38	0.41	0.99						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	230-231	31	230.8	54	Clay	5.68%	0	20	20		0.2	0.2	0.40	0.34392	0.1085428	0.561	-0.19	1.512	**0.56096051**
2				to		RHS		0	15	16		0.15	0.16	0.32						
3				230.5				0	18	21		0.18	0.21	0.59						
4								0	8	10		0.08	0.1	0.20						
5								0	10	11		0.1	0.11	0.22						
6								0	10	11		0.1	0.11	0.22						
7								0	10	12		0.1	0.12	0.24						
8								0	15	17		0.15	0.17	0.34						
9								0	14	17		0.14	0.17	0.51						
10								0	19	21		0.19	0.21	0.42						
11								0	14	16		0.14	0.16	0.32						
12						LHS		0	17	19		0.17	0.19	0.38						
13								0	10	12		0.1	0.12	0.24						
14								0	15	17		0.15	0.17	0.34						
15								0	14	14		0.14	0.14	0.28						
16								0	10	13		0.1	0.13	0.43						
17								0	17	19		0.17	0.19	0.38						
18								0	12	14		0.12	0.14	0.28						
19								0	13	16		0.13	0.16	0.49						
20								0	11	13		0.11	0.13	0.26						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	231-232	30	231.6	54	Clay	5.68%	0	8	10		0.08	0.1	0.20	0.29575652	0.1617545	0.619	-0.19	1.512	**0.64904959**
2				to		RHS		0	12	14		0.12	0.14	0.28						
3				231.4				0	9	10		0.09	0.1	0.20						
4								0	7	8		0.07	0.08	0.16						
5								0	6	8		0.06	0.08	0.16						
6								0	8	10		0.08	0.1	0.20						
7								0	0	8		0	0.08	0.63						
8								0	7	10		0.07	0.1	0.37						
9								0	10	14		0.1	0.14	0.51						
10								0	9	13		0.09	0.13	0.49						
11								0	10	11		0.1	0.11	0.22						
12						LHS		0	12	14		0.12	0.14	0.28						
13								0	6	8		0.06	0.08	0.16						
14								0	9	11		0.09	0.11	0.22						
15								0	7	9		0.07	0.09	0.18						
16								0	6	8		0.06	0.08	0.16						
17								0	7	8		0.07	0.08	0.16						
18								0	10	13		0.1	0.13	0.43						
19								0	7	9		0.07	0.09	0.18						
20								0	9	13		0.09	0.13	0.49						
21								0	8	8		0.08	0.08	0.16						
22								0	10	16		0.1	0.16	0.67						
23								0	12	14		0.12	0.14	0.28						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	232-233	30	232.6	39	Clay	5.46%	0	7	8		0.07	0.08	0.16	0.31235652	0.1234669	0.559	-0.04	1.534	**0.79659123**
2				to		RHS		0	6	9		0.06	0.09	0.35						
3				232.3				0	10	13		0.1	0.13	0.43						
4								0	6	10		0.06	0.1	0.43						
5								0	7	10		0.07	0.1	0.37						
6								0	7	11		0.07	0.11	0.45						
7								0	8	9		0.08	0.09	0.18						
8								0	8	11		0.08	0.11	0.39						
9								0	10	13		0.1	0.13	0.43						
10								0	20	22		0.2	0.22	0.44						
11								0	7	9		0.07	0.09	0.18						
12						LHS		0	10	10		0.1	0.1	0.20						
13								0	10	11		0.1	0.11	0.22						
14								0	9	9		0.09	0.09	0.18						
15								0	8	10		0.08	0.1	0.20						
16								0	7	9		0.07	0.09	0.18						
17								0	10	12		0.1	0.12	0.24						
18								0	10	11		0.1	0.11	0.22						
19								0	10	14		0.1	0.14	0.51						
20								0	8	10		0.08	0.1	0.20						
21								0	18	20		0.18	0.2	0.40						
22								0	10	14		0.1	0.14	0.51						
23								0	12	14		0.12	0.14	0.28						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	233-234	31	233.7	39	Clay	5.46%	0	8	12		0.08	0.12	0.47	0.36424138	0.1868036	0.738	-0.04	1.534	**1.07049971**
2				to		RHS		0	10	12		0.1	0.12	0.24						
3				233.4				0	8	10		0.08	0.1	0.20						
4								0	7	10		0.07	0.1	0.37						
5								0	34	38		0.34	0.38	0.99						
6								0	10	13		0.1	0.13	0.43						
7								0	6	8		0.06	0.08	0.16						
8								0	8	9		0.08	0.09	0.18						
9								0	2	9		0.02	0.09	0.59						
10								0	10	12		0.1	0.12	0.24						
11								0	10	13		0.1	0.13	0.43						
12						LHS		0	4	8		0.04	0.08	0.39						
13								0	6	10		0.06	0.1	0.43						
14								0	10	12		0.1	0.12	0.24						
15								0	6	6		0.06	0.06	0.12						
16								0	12	15		0.12	0.15	0.47						
17								0	5	5		0.05	0.05	0.10						
18								0	6	10		0.06	0.1	0.43						
19								0	10	12		0.1	0.12	0.24						
20								0	9	12		0.09	0.12	0.41						
21								0	10	12		0.1	0.12	0.24						
22								0	8	11		0.08	0.11	0.39						
23								0	7	10		0.07	0.1	0.37						
24								0	6	11		0.06	0.11	0.51						
25								0	10	12		0.1	0.12	0.24						
26								0	6	8		0.06	0.08	0.16						
27								0	9	12		0.09	0.12	0.41						
28								0	10	16		0.1	0.16	0.67						
29								0	8	11		0.08	0.11	0.39						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	234-235	29	234.6	40	Sandy Yellow Soil	6.01%	0	13	16		0.13	0.16	0.49	0.48288696	0.1590931	0.801	-0.05	1.08	**0.81115901**
2				to		RHS		0	10	12		0.1	0.12	0.24						
3				234.3				0	16	18		0.16	0.18	0.36						
4								0	22	25		0.22	0.25	0.67						
5								0	16	20		0.16	0.2	0.63						
6								0	12	14		0.12	0.14	0.28						
7								0	18	21		0.18	0.21	0.59						
8								0	17	17		0.17	0.17	0.34						
9								0	15	19		0.15	0.19	0.61						
10								0	19	21		0.19	0.21	0.42						
11								0	10	14		0.1	0.14	0.51						
12						LHS		0	10	18		0.1	0.18	0.83						
13								0	10	13		0.1	0.13	0.43						
14								0	9	11		0.09	0.11	0.22						
15								0	15	16		0.15	0.16	0.32						
16								0	12	16		0.12	0.16	0.55						
17								0	10	14		0.1	0.14	0.51						
18								0	18	19		0.18	0.19	0.38						
19								0	20	20		0.2	0.2	0.40						
20								0	15	18		0.15	0.18	0.53						
21								0	18	20		0.18	0.2	0.40						
22								0	15	20		0.15	0.2	0.69						
23								0	18	22		0.18	0.22	0.67						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	235-236	29	236.1	40	Sand	6.01%	0	8	11		0.08	0.11	0.39	0.55195152	0.2309121	1.014	-0.05	1.08	**1.04087768**
2				to		RHS		0	12	14		0.12	0.14	0.28						
3				235.8				0	12	14		0.12	0.14	0.28						
4								0	12	16		0.12	0.16	0.55						
5								0	10	16		0.1	0.16	0.67						
6								0	10	15		0.1	0.15	0.59						
7								0	12	16		0.12	0.16	0.55						
8								0	5	10		0.05	0.1	0.49						
9								0	20	23		0.2	0.23	0.63						
10								0	7	8		0.07	0.08	0.16						
11								0	16	18		0.16	0.18	0.36						
12						LHS		0	15	16		0.15	0.16	0.32						
13								0	18	21		0.18	0.21	0.59						
14								0	40	45		0.4	0.45	1.19						
15								0	30	35		0.3	0.35	0.99						
16								0	10	11		0.1	0.11	0.22						
17								0	30	32		0.3	0.32	0.64						
18								0	25	28		0.25	0.28	0.73						
19								0	20	20		0.2	0.2	0.40						
20								0	7	11		0.07	0.11	0.45						
21								0	18	20		0.18	0.2	0.40						
22								0	10	12		0.1	0.12	0.24						
23								0	16	20		0.16	0.2	0.63						
24								0	21	24		0.21	0.24	0.65						
25								0	8	14		0.08	0.14	0.63						
26								0	20	22		0.2	0.22	0.44						
27								0	18	23		0.18	0.23	0.75						
28								0	31	36		0.31	0.36	1.01						
29								0	7	12		0.07	0.12	0.53						
30								0	8	14		0.08	0.14	0.63						
31								0	18	20		0.18	0.2	0.40						
32								0	18	22		0.18	0.22	0.67						
33								0	20	24		0.2	0.24	0.71						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	236-237	28	237	44	Clay	5.68%	0	18	20		0.18	0.2	0.40	0.7371037	0.2538232	1.245	-0.09	1.512	**1.74598217**
2				to		RHS		0	20	24		0.2	0.24	0.71						
3				236.7				0	21	26		0.21	0.26	0.81						
4								0	20	26		0.2	0.26	0.87						
5								0	20	23		0.2	0.23	0.63						
6								0	35	40		0.35	0.4	1.09						
7								0	12	15		0.12	0.15	0.47						
8								0	20	25		0.2	0.25	0.79						
9								0	26	30		0.26	0.3	0.83						
10								0	30	40		0.3	0.4	1.38						
11								0	19	22		0.19	0.22	0.61						
12						LHS		0	16	19		0.16	0.19	0.55						
13								0	14	18		0.14	0.18	0.59						
14								0	16	20		0.16	0.2	0.63						
15								0	16	20		0.16	0.2	0.63						
16								0	25	28		0.25	0.28	0.73						
17								0	16	20		0.16	0.2	0.63						
18								0	18	22		0.18	0.22	0.67						
19								0	20	22		0.2	0.22	0.44						
20								0	19	21		0.19	0.21	0.42						
21								0	18	22		0.18	0.22	0.67						
22								0	40	45		0.4	0.45	1.19						
23								0	18	22		0.18	0.22	0.67						
24								0	21	21		0.21	0.21	0.42						
25								0	30	38		0.3	0.38	1.23						
26								0	32	36		0.32	0.36	0.95						
27								0	40	42		0.4	0.42	0.84						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

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Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	17/11/09	237-238	28	238	44	Clay	5.68%	0	28	32		0.28	0.32	0.87	0.73772381	0.1534787	1.045	-0.09	1.512	**1.44347809**
2				to		RHS		0	25	31		0.25	0.31	0.97						
3				237.7				0	22	25		0.22	0.25	0.67						
4								0	30	32		0.3	0.32	0.64						
5								0	27	29		0.27	0.29	0.58						
6								0	30	33		0.3	0.33	0.83						
7								0	28	31		0.28	0.31	0.79						
8								0	35	38		0.35	0.38	0.93						
9								0	30	36		0.3	0.36	1.07						
10								0	28	32		0.28	0.32	0.87						
11								0	22	24		0.22	0.24	0.48						
12						LHS		0	25	29		0.25	0.29	0.81						
13								0	20	24		0.2	0.24	0.71						
14								0	20	23		0.2	0.23	0.63						
15								0	18	21		0.18	0.21	0.59						
16								0	15	19		0.15	0.19	0.61						
17								0	14	20		0.14	0.2	0.75						
18								0	18	21		0.18	0.21	0.59						
19								0	15	20		0.15	0.2	0.69						
20								0	25	29		0.25	0.29	0.81						
21								0	16	19		0.16	0.19	0.55						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	238-239	35	239	56	Clay	4.92%	0	18	20		0.18	0.2	0.40	0.57752258	0.1936035	0.965	-0.21	1.59	**1.20002**
2				to		RHS		0	10	12		0.1	0.12	0.24						
3				238.6				0	9	12		0.09	0.12	0.41						
4								0	20	22		0.2	0.22	0.44						
5								0	18	21		0.18	0.21	0.59						
6								0	20	24		0.2	0.24	0.71						
7								0	10	12		0.1	0.12	0.24						
8								0	15	18		0.15	0.18	0.53						
9								0	18	20		0.18	0.2	0.40						
10								0	40	45		0.4	0.45	1.19						
11								0	22	25		0.22	0.25	0.67						
12								0	26	28		0.26	0.28	0.56						
13								0	20	25		0.2	0.25	0.79						
14						LHS		0	19	22		0.19	0.22	0.61						
15								0	18	22		0.18	0.22	0.67						
16								0	18	21		0.18	0.21	0.59						
17								0	10	12		0.1	0.12	0.24						
18								0	25	28		0.25	0.28	0.73						
19								0	18	21		0.18	0.21	0.59						
20								0	19	22		0.19	0.22	0.61						
21								0	18	22		0.18	0.22	0.67						
22								0	18	21		0.18	0.21	0.59						
23								0	16	22		0.16	0.22	0.79						
24								0	18	20		0.18	0.2	0.40						
25								0	16	20		0.16	0.2	0.63						
26								0	20	22		0.2	0.22	0.44						
27								0	20	24		0.2	0.24	0.71						
28								0	22	26		0.22	0.26	0.75						
29								0	18	21		0.18	0.21	0.59						
30								0	20	23		0.2	0.23	0.63						
31								0	19	21		0.19	0.21	0.42						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	239-240	34	239.8	56	Clay	4.92%	0	9	15		0.09	0.15	0.65	0.54422857	0.1422049	0.829	-0.21	1.59	**0.98363505**
2				to		RHS		0	6	12		0.06	0.12	0.59						
3				240.1				0	15	18		0.15	0.18	0.53						
4								0	14	17		0.14	0.17	0.51						
5								0	13	20		0.13	0.2	0.81						
6								0	16	21		0.16	0.21	0.71						
7								0	18	22		0.18	0.22	0.67						
8								0	10	16		0.1	0.16	0.67						
9								0	12	15		0.12	0.15	0.47						
10								0	15	17		0.15	0.17	0.34						
11								0	10	13		0.1	0.13	0.43						
12						LHS		0	9	13		0.09	0.13	0.49						
13								0	11	15		0.11	0.15	0.53						
14								0	14	16		0.14	0.16	0.32						
15								0	12	17		0.12	0.17	0.63						
16								0	8	12		0.08	0.12	0.47						
17								0	9	15		0.09	0.15	0.65						
18								0	8	11		0.08	0.11	0.39						
19								0	7	12		0.07	0.12	0.53						
20								0	9	16		0.09	0.16	0.73						
21								0	12	14		0.12	0.14	0.28						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1		240-241			55	Clay	5.14%	0	12	18		0.12	0.18	0.71	0.5644087	0.0967421	0.758	-0.2	1.566	**0.8736604**
2								0	10	14		0.1	0.14	0.51						
3								0	12	16		0.12	0.16	0.55						
4								0	10	13		0.1	0.13	0.43						
5								0	11	15		0.11	0.15	0.53						
6								0	9	13		0.09	0.13	0.49						
7								0	10	14		0.1	0.14	0.51						
8								0	30	32		0.3	0.32	0.64						
9								0	12	15		0.12	0.15	0.47						
10								0	12	17		0.12	0.17	0.63						
11								0	22	24		0.22	0.24	0.48						
12						LHS		0	18	21		0.18	0.21	0.59						
13								0	17	20		0.17	0.2	0.57						
14								0	18	18		0.18	0.18	0.36						
15								0	16	21		0.16	0.21	0.71						
16								0	20	22		0.2	0.22	0.44						
17								0	17	20		0.17	0.2	0.57						
18								0	20	23		0.2	0.23	0.63						
19								0	18	22		0.18	0.22	0.67						
20								0	17	21		0.17	0.21	0.65						
21								0	12	18		0.12	0.18	0.71						
22								0	10	15		0.1	0.15	0.59						
23								0	9	13		0.09	0.13	0.49						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	242-243	35	242.3	46	Clay &	9.30%	0	22	26		0.22	0.26	0.75	0.61923636	0.2082924	1.036	-0.11	1.28	**1.18505109**
2				to		RHS		0	13	17		0.13	0.17	0.57						
3				242				0	24	31		0.24	0.31	1.03						
4								0	22	25		0.22	0.25	0.67						
5								0	16	22		0.16	0.22	0.79						
6								0	21	26		0.21	0.26	0.81						
7								0	24	28		0.24	0.28	0.79						
8								0	12	14		0.12	0.14	0.28						
9								0	14	17		0.14	0.17	0.51						
10								0	23	28		0.23	0.28	0.85						
11								0	23	26		0.23	0.26	0.69						
12								0	18	22		0.18	0.22	0.67						
13						LHS		0	12	14		0.12	0.14	0.28						
14								0	10	12		0.1	0.12	0.24						
15								0	15	18		0.15	0.18	0.53						
16								0	13	15		0.13	0.15	0.30						
17								0	13	16		0.13	0.16	0.49						
18								0	15	19		0.15	0.19	0.61						
19								0	18	24		0.18	0.24	0.83						
20								0	14	19		0.14	0.19	0.67						
21								0	16	19		0.16	0.19	0.55						
22								0	18	22		0.18	0.22	0.67						

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Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	243-244	33	243.4	46	Sandy	7.11%	0	12	16		0.12	0.16	0.55	0.5367619	0.1380351	0.813	-0.11	1.065	**0.74851627**
2				to		RHS		0	15	18		0.15	0.18	0.53						
3				243				0	11	13		0.11	0.13	0.26						
4								0	15	18		0.15	0.18	0.53						
5								0	14	17		0.14	0.17	0.51						
6								0	17	21		0.17	0.21	0.65						
7								0	13	17		0.13	0.17	0.57						
8								0	11	14		0.11	0.14	0.45						
9								0	17	20		0.17	0.2	0.57						
10								0	14	16		0.14	0.16	0.32						
11								0	18	22		0.18	0.22	0.67						
12								0	16	18		0.16	0.18	0.36						
13						LHS		0	15	20		0.15	0.2	0.69						
14								0	15	19		0.15	0.19	0.61						
15								0	12	14		0.12	0.14	0.28						
16								0	20	22		0.2	0.22	0.44						
17								0	17	20		0.17	0.2	0.57						
18								0	16	21		0.16	0.21	0.71						
19								0	13	18		0.13	0.18	0.65						
20								0	18	21		0.18	0.21	0.59						
21								0	20	24		0.2	0.24	0.71						

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Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	244-245	32	243.4	46	Clay and	10.95%	0	9	12		0.09	0.12	0.41	0.489784	0.1526599	0.795	-0.11	1.2	**0.82212462**
2				to		RHS		0	11	14		0.11	0.14	0.45						
3				243				0	15	18		0.15	0.18	0.53						
4								0	18	22		0.18	0.22	0.67						
5								0	16	19		0.16	0.19	0.55						
6								0	12	14		0.12	0.14	0.28						
7								0	13	15		0.13	0.15	0.30						
8								0	10	13		0.1	0.13	0.43						
9								0	15	17		0.15	0.17	0.34						
10								0	11	14		0.11	0.14	0.45						
11								0	17	19		0.17	0.19	0.38						
12						LHS		0	22	25		0.22	0.25	0.67						
13								0	21	26		0.21	0.26	0.81						
14								0	20	23		0.2	0.23	0.63						
15								0	12	16		0.12	0.16	0.55						
16								0	18	20		0.18	0.2	0.40						
17								0	21	23		0.21	0.23	0.46						
18								0	15	17		0.15	0.17	0.34						
19								0	18	21		0.18	0.21	0.59						
20								0	24	27		0.24	0.27	0.71						
21								0	18	22		0.18	0.22	0.67						
22								0	12	14		0.12	0.14	0.28						
23								0	12	13		0.12	0.13	0.26						
24								0	11	14		0.11	0.14	0.45						
25								0	17	20		0.17	0.2	0.57						

IL&FS TRANSPORTATION NETWORKS LIMITED (ITNL)

Annexure IV : Proforma for Recording Pavement Deflection Data (As per IRC:81-1997)

Name of Road : Pune Solapur

Km 144.000 to 249.000

No of traffic lanes : 2

Sr. No.	Date of Observation	Time of Observation	Air Temperature ^{0}C	Location of test point (Km) and identification of lane	Pavement Temperature ^{0}C	Type of Soil	Moisture content %	Dial gauge reading (Dial Gauge Divisions)			Rebound Deflection (mm)	Intermediate-Intial	Final-Intial	Rebound Delflection	Average	Standard Deviation	Charecterstic Deflection	Temparature Correction Factor	Moisture Correction Factor	Corrected Deflection
								Initial	Intermediate	Final										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	16/11/09	245-246	35	245.6	42	Clay and	13.69%	0	14	18		0.14	0.18	0.59	0.72257143	0.2196212	1.162	-0.07	1.14	**1.24466773**
2				to		RHS		0	12	15		0.12	0.15	0.47						
3				245.3				0	17	21		0.17	0.21	0.65						
4								0	14	18		0.14	0.18	0.59						
5								0	17	21		0.17	0.21	0.65						
6								0	18	20		0.18	0.2	0.40						
7								0	19	23		0.19	0.23	0.69						
8								0	21	27		0.21	0.27	0.89						
9								0	17	19		0.17	0.19	0.38						
10								0	20	22		0.2	0.22	0.44						
11								0	22	25		0.22	0.25	0.67						
12								0	20	23		0.2	0.23	0.63						
13						LHS		0	20	23		0.2	0.23	0.63						
14								0	22	25		0.22	0.25	0.67						
15								0	36	41		0.36	0.41	1.11						
16								0	27	30		0.27	0.3	0.77						
17								0	29	34		0.29	0.34	0.97						
18								0	30	34		0.3	0.34	0.91						
19								0	40	44		0.4	0.44	1.11						
20								0	32	36		0.32	0.36	0.95						
21								0	32	36		0.32	0.36	0.95						

Annexure V

SUMMARY OF EXISTING ROAD SUB GRADE SAMPLE.

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
1	151+000	RHS	0.40	8.8	
2	151+500	LHS	0.35	7.4	
3	152+000	RHS	0.50	3.9	
4	152+500	LHS	0.35	12.1	
5	153+000	RHS	0.35	4.5	
6	153+500	LHS	0.40	4.8	
7	154+000	RHS	0.40	5.4	
8	154+500	LHS	0.40	4.5	
9	155+000	RHS	0.40	7.4	
10	155+500	LHS	0.40	14.4	
11	156+000	RHS	0.40	8.5	
12	156+500	LHS	0.35	5.7	
13	157+000	RHS	0.35	10.5	
14	157+500	LHS	0.40	8.6	
15	158+000	RHS	0.50	9.0	
16	158+500	LHS	Sampling Not Done Due to Village area		
17	159+000	RHS			
18	159+500	LHS			
19	160+000	RHS			
20	160+500	LHS			
21	161+000	RHS	0.60	17.9	
22	161+500	LHS	0.65	14.8	
23	162+000	RHS	0.50	5.7	
24	162+500	LHS	0.45	10.4	
25	163+000	RHS	0.40	2.6	
26	163+500	LHS	0.40	15.7	
27	164+000	RHS	0.30	10.0	
28	164+500	LHS	0.35	11.7	
29	165+000	RHS	0.50	7.7	
30	165+500	LHS	0.40	7.5	
31	166+000	RHS	0.40	17.6	
32	166+500	LHS	0.50	8.6	
33	167+000	RHS	0.60	5.3	
34	167+500	LHS	0.50	3.1	
35	168+000	RHS	0.40	7.8	
36	168+500	LHS	0.45	7.6	
37	169+000	RHS	0.40	12.6	
38	169+500	LHS	0.35	8.0	
39	170+000	RHS	0.30	7.9	
40	170+500	LHS	0.50	5.1	
41	171+000	RHS	0.40	5.8	
42	171+500	LHS	0.40	12.6	
43	172+000	RHS	0.40	9.5	
44	172+500	LHS	0.40	12.3	
45	173+000	RHS	0.40	10.3	
46	173+500	LHS	0.40	7.8	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
47	174+000	RHS	0.50	4.3	
48	174+500	LHS	0.50	5.1	
49	175+000	RHS	0.30	3.6	
50	175+500	LHS	0.35	6.3	
51	176+000	RHS	0.40	4.8	
52	176+500	LHS	0.40	13.7	
53	177+000	RHS	0.35	7.2	
54	177+500	LHS	0.50	10.3	
55	178+000	RHS	0.50	14.7	
56	178+500	LHS	0.50	11.6	
57	179+000	RHS	0.30	8.0	
58	179+500	LHS	0.50	9.7	
59	180+000	RHS	0.45	19.7	
60	180+500	LHS	0.35	18.0	
61	181+000	RHS	0.40	15.7	
62	181+500	LHS	0.40	7.1	
63	182+000	RHS	0.40	6.5	
64	182+500	LHS	0.30	13.1	
65	183+000	RHS	0.50	9.2	
66	183+500	LHS	0.35	20.4	
67	184+000	RHS	0.60	4.9	
68	184+500	LHS	0.60	13.2	
69	185+000	RHS	0.50	16.9	
70	185+500	LHS	0.50	15.8	
71	186+000	RHS	0.60	5.1	
72	186+500	LHS	0.60	11.3	
73	187+000	RHS	0.50	12.5	
74	187+500	LHS	0.50	9.2	
75	188+000	RHS	0.60	19.4	
76	188+500	LHS	0.60	7.2	
77	189+000	RHS	0.60	9.1	
78	189+500	LHS	0.50	20.3	
79	190+000	RHS	0.70	15.7	
80	190+500	LHS	0.60	4.5	
81	191+000	RHS	0.65	18.5	
82	191+500	LHS	0.65	14.7	
83	192+000	RHS	0.50	12.1	
84	192+500	LHS	0.50	17.4	
85	193+000	RHS	0.60	12.4	
86	193+500	LHS	0.60	10.1	
87	194+000	RHS	0.60	8.1	
88	194+500	LHS	0.60	5.9	
89	195+000	RHS	0.65	21.1	
90	195+500	LHS	0.70	15.6	
91	196+000	RHS	0.60	19.6	
92	196+500	LHS	0.60	17.1	
93	197+000	RHS	0.70	6.1	
94	197+500	LHS	0.70	9.2	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
95	198+000	RHS	0.65	8.1	
96	198+500	LHS	0.65	7.8	
97	199+000	RHS	0.60	12.6	
98	199+500	LHS	0.50	9.2	
99	200+000	RHS	0.70	11.1	
100	200+500	LHS	0.40	5.5	
101	201+000	RHS	0.5	5.3	
102	201+500	LHS	0.6	5.4	
103	202+000	RHS	0.6	6.2	
104	202+500	LHS	0.5	10.1	
105	203+000	RHS	0.5	7.4	
106	203+500	LHS	0.6	9.1	
107	204+000	RHS	0.5	10.4	
108	204+500	LHS	0.4	14.3	
109	205+000	RHS	0.65	4.7	
110	205+500	LHS	0.6	13.1	
111	206+000	RHS	0.6	9.4	
112	206+500	LHS	0.5	12.7	
113	207+000	RHS	0.65	15.4	
114	207+500	LHS	0.6	5.3	
115	208+000	RHS	0.6	11.5	
116	208+500	LHS	0.6	7.1	
117	209+000	RHS	0.7	11.5	
118	209+500	LHS	0.7	10.3	
119	210+000	RHS	0.6	22.3	
120	210+500	LHS	0.3	24.6	
121	211+000	RHS	0.5	9.4	
122	211+500	LHS	0.5	15.1	
123	212+000	RHS	0.4	15.1	
124	212+500	LHS	0.3	26.9	
125	213+000	RHS	0.35	6.5	
126	213+500	LHS	0.4	6.5	
127	214+000	RHS	0.5	3.7	
128	214+500	LHS	0.35	6.1	
129	215+000	RHS	0.4	3.7	
130	215+500	LHS	S.N.Done		
131	216+000	RHS	0.4	3.6	
132	216+500	LHS	0.35	4.9	
133	217+000	RHS	0.35	9.0	
134	217+500	LHS	0.4	20.9	
135	218+000	RHS	0.4	5.4	
136	218+500	LHS	0.45	10.3	
137	219+000	RHS	0.4	5.8	
138	219+500	LHS	0.35	9.7	
139	220+000	RHS	0.45	6.1	
140	220+500	LHS	0.5	10.8	
141	221+000	RHS	0.4	4.4	
142	221+500	LHS	0.4	9.7	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
143	222+000	RHS	0.5	3.7	
144	222+500	LHS	0.45	4.2	
145	223+000	RHS	0.4	5.4	
146	223+500	LHS	0.35	22.1	
147	224+000	RHS	0.4	5.1	
148	224+500	LHS	0.45	9.1	
149	225+000	RHS	0.4	6.5	
150	225+500	LHS	0.5	6.6	
151	226+000	RHS	0.5	2.9	
152	226+500	LHS	0.5	18.6	
153	227+000	RHS	0.45	3.1	
154	227+500	LHS	0.5	8.3	
155	228+000	RHS	0.35	3.1	
156	228+500	LHS	0.45	7.3	
157	229+000	RHS	0.45	17.3	
158	229+500	LHS	0.4	6.1	
159	230+000	RHS	0.35	6.0	
160	230+500	LHS	0.5	6.9	
161	231+000	RHS	0.5	8.2	
162	231+500	LHS	0.45	11.8	
163	232+000	RHS	0.35	12.5	
164	232+500	LHS	0.4	3.2	
165	233+000	RHS	0.5	7.2	
166	233+500	LHS	0.45	5.4	
167	234+000	RHS	0.45	11.5	
168	234+500	LHS	0.5	4.8	
169	235+000	RHS	0.5	7.2	
170	235+500	LHS	0.45	7.2	
171	236+000	RHS	0.50	7.3	
172	236+500	LHS	0.35	8.0	
173	237+000	RHS	0.50	13.2	
174	237+500	LHS	0.50	10.6	
175	238+000	RHS	0.40	9.5	
176	238+500	LHS	0.45	15.7	
177	239+000	RHS	0.40	4.6	
178	239+500	LHS	0.40	12.3	
179	240+000	RHS	0.35	9.8	
180	240+500	LHS	0.40	15.5	
181	241+000	RHS	0.40	5.6	
182	241+500	LHS	0.50	17.6	
183	242+000	RHS	0.35	9.8	
184	242+500	LHS	0.35	10.2	
185	243+000	RHS	0.50	12.1	
186	243+500	LHS	0.60	16.3	
187	244+000	RHS	0.50	6.7	
188	244+500	LHS	0.45	11.5	
189	245+000	RHS	0.45	7.1	
190	245+500	LHS	0.50	16.8	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
191	246+000	RHS	0.45	7.8	
192	246+500	LHS	0.35	9.1	
193	247+000	RHS	0.45	10.4	
194	247+500	LHS	0.45	14.0	
195	248+000	RHS	0.45	7.6	
196	248+500	LHS	0.40	6.7	
197	249+000	RHS	0.50	18.0	
198	249+500	LHS	0.50	4.0	
199	250+000	RHS	0.45	27.1	
200	250+500	LHS	0.35	4.0	
201	251+000	RHS	0.50	14.3	

ANNEXURE - V - DETAILS OF AGGREGATE

S.No	*Source*	*Location*	*Material*	*Specific Gravity*	*Water Absorption*	*AIV*	*Flakiness Index*
1	Gangawadi Quarry (Maytas Crusher)	Km 248+960 LHS 18 Km From NH 9	20 mm	2.913	0.72	9.87	-
			10 mm	2.91	0.76		-
2	Sachin Chowhan Crusher	Km 232+600 LHS 2.0 Km From NH 9	40 mm	2.92	0.96	13.02	21.9
			20 mm	2.93	0.96		22.1
			10 mm	2.91	1.06		27.9
			Crushed Sand	2.86	1.75	-	-
3	Agam RMC	Km 239+200 LHS 8 Km From NH 9	20 mm	2.93	1.00	10.30	13.1
			10 mm	2.90	1.06		26.7
			Crushed Sand	2.79	1.90	-	-
4	Gaykwad Crusher	Km 140+000 RHS 1 Km From NH 9	20 mm	2.865	0.99	16.09	16.24
			10 mm	2.856	1.12		18.1
5	Tarangwadi Crusher	Km 140+000 RHS 6 Km From NH 9	40 mm	2.880	0.61	13.31	11.44
			20 mm	2.875	0.81		10.62
			10 mm	2.853	1.07		17.97
			Crushed Sand	2.815	1.85	-	-

SUMMARY OF EXISTING ROAD SUB GRADE SAMPLE.

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
1	151+000	RHS	0.40	8.8	
2	151+500	LHS	0.35	7.4	
3	152+000	RHS	0.50	3.9	
4	152+500	LHS	0.35	12.1	
5	153+000	RHS	0.35	4.5	
6	153+500	LHS	0.40	4.8	
7	154+000	RHS	0.40	5.4	
8	154+500	LHS	0.40	4.5	
9	155+000	RHS	0.40	7.4	
10	155+500	LHS	0.40	14.4	
11	156+000	RHS	0.40	8.5	
12	156+500	LHS	0.35	5.7	
13	157+000	RHS	0.35	10.5	
14	157+500	LHS	0.40	8.6	
15	158+000	RHS	0.50	9.0	
16	158+500	LHS	Sampling Not Done Due to Village area		
17	159+000	RHS			
18	159+500	LHS			
19	160+000	RHS			
20	160+500	LHS			
21	161+000	RHS	0.60	17.9	
22	161+500	LHS	0.65	14.8	
23	162+000	RHS	0.50	5.7	
24	162+500	LHS	0.45	10.4	
25	163+000	RHS	0.40	2.6	
26	163+500	LHS	0.40	15.7	
27	164+000	RHS	0.30	10.0	
28	164+500	LHS	0.35	11.7	
29	165+000	RHS	0.50	7.7	
30	165+500	LHS	0.40	7.5	
31	166+000	RHS	0.40	17.6	
32	166+500	LHS	0.50	8.6	
33	167+000	RHS	0.60	5.3	
34	167+500	LHS	0.50	3.1	
35	168+000	RHS	0.40	7.8	
36	168+500	LHS	0.45	7.6	
37	169+000	RHS	0.40	12.6	
38	169+500	LHS	0.35	8.0	
39	170+000	RHS	0.30	7.9	
40	170+500	LHS	0.50	5.1	
41	171+000	RHS	0.40	5.8	
42	171+500	LHS	0.40	12.6	
43	172+000	RHS	0.40	9.5	
44	172+500	LHS	0.40	12.3	
45	173+000	RHS	0.40	10.3	
46	173+500	LHS	0.40	7.8	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
47	174+000	RHS	0.50	4.3	
48	174+500	LHS	0.50	5.1	
49	175+000	RHS	0.30	3.6	
50	175+500	LHS	0.35	6.3	
51	176+000	RHS	0.40	4.8	
52	176+500	LHS	0.40	13.7	
53	177+000	RHS	0.35	7.2	
54	177+500	LHS	0.50	10.3	
55	178+000	RHS	0.50	14.7	
56	178+500	LHS	0.50	11.6	
57	179+000	RHS	0.30	8.0	
58	179+500	LHS	0.50	9.7	
59	180+000	RHS	0.45	19.7	
60	180+500	LHS	0.35	18.0	
61	181+000	RHS	0.40	15.7	
62	181+500	LHS	0.40	7.1	
63	182+000	RHS	0.40	6.5	
64	182+500	LHS	0.30	13.1	
65	183+000	RHS	0.50	9.2	
66	183+500	LHS	0.35	20.4	
67	184+000	RHS	0.60	4.9	
68	184+500	LHS	0.60	13.2	
69	185+000	RHS	0.50	16.9	
70	185+500	LHS	0.50	15.8	
71	186+000	RHS	0.60	5.1	
72	186+500	LHS	0.60	11.3	
73	187+000	RHS	0.50	12.5	
74	187+500	LHS	0.50	9.2	
75	188+000	RHS	0.60	19.4	
76	188+500	LHS	0.60	7.2	
77	189+000	RHS	0.60	9.1	
78	189+500	LHS	0.50	20.3	
79	190+000	RHS	0.70	15.7	
80	190+500	LHS	0.60	4.5	
81	191+000	RHS	0.65	18.5	
82	191+500	LHS	0.65	14.7	
83	192+000	RHS	0.50	12.1	
84	192+500	LHS	0.50	17.4	
85	193+000	RHS	0.60	12.4	
86	193+500	LHS	0.60	10.1	
87	194+000	RHS	0.60	8.1	
88	194+500	LHS	0.60	5.9	
89	195+000	RHS	0.65	21.1	
90	195+500	LHS	0.70	15.6	
91	196+000	RHS	0.60	19.6	
92	196+500	LHS	0.60	17.1	
93	197+000	RHS	0.70	6.1	
94	197+500	LHS	0.70	9.2	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
95	198+000	RHS	0.65	8.1	
96	198+500	LHS	0.65	7.8	
97	199+000	RHS	0.60	12.6	
98	199+500	LHS	0.50	9.2	
99	200+000	RHS	0.70	11.1	
100	200+500	LHS	0.40	5.5	
101	201+000	RHS	0.5	5.3	
102	201+500	LHS	0.6	5.4	
103	202+000	RHS	0.6	6.2	
104	202+500	LHS	0.5	10.1	
105	203+000	RHS	0.5	7.4	
106	203+500	LHS	0.6	9.1	
107	204+000	RHS	0.5	10.4	
108	204+500	LHS	0.4	14.3	
109	205+000	RHS	0.65	4.7	
110	205+500	LHS	0.6	13.1	
111	206+000	RHS	0.6	9.4	
112	206+500	LHS	0.5	12.7	
113	207+000	RHS	0.65	15.4	
114	207+500	LHS	0.6	5.3	
115	208+000	RHS	0.6	11.5	
116	208+500	LHS	0.6	7.1	
117	209+000	RHS	0.7	11.5	
118	209+500	LHS	0.7	10.3	
119	210+000	RHS	0.6	22.3	
120	210+500	LHS	0.3	24.6	
121	211+000	RHS	0.5	9.4	
122	211+500	LHS	0.5	15.1	
123	212+000	RHS	0.4	15.1	
124	212+500	LHS	0.3	26.9	
125	213+000	RHS	0.35	6.5	
126	213+500	LHS	0.4	6.5	
127	214+000	RHS	0.5	3.7	
128	214+500	LHS	0.35	6.1	
129	215+000	RHS	0.4	3.7	
130	215+500	LHS	S.N.Done		
131	216+000	RHS	0.4	3.6	
132	216+500	LHS	0.35	4.9	
133	217+000	RHS	0.35	9.0	
134	217+500	LHS	0.4	20.9	
135	218+000	RHS	0.4	5.4	
136	218+500	LHS	0.45	10.3	
137	219+000	RHS	0.4	5.8	
138	219+500	LHS	0.35	9.7	
139	220+000	RHS	0.45	6.1	
140	220+500	LHS	0.5	10.8	
141	221+000	RHS	0.4	4.4	
142	221+500	LHS	0.4	9.7	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
143	222+000	RHS	0.5	3.7	
144	222+500	LHS	0.45	4.2	
145	223+000	RHS	0.4	5.4	
146	223+500	LHS	0.35	22.1	
147	224+000	RHS	0.4	5.1	
148	224+500	LHS	0.45	9.1	
149	225+000	RHS	0.4	6.5	
150	225+500	LHS	0.5	6.6	
151	226+000	RHS	0.5	2.9	
152	226+500	LHS	0.5	18.6	
153	227+000	RHS	0.45	3.1	
154	227+500	LHS	0.5	8.3	
155	228+000	RHS	0.35	3.1	
156	228+500	LHS	0.45	7.3	
157	229+000	RHS	0.45	17.3	
158	229+500	LHS	0.4	6.1	
159	230+000	RHS	0.35	6.0	
160	230+500	LHS	0.5	6.9	
161	231+000	RHS	0.5	8.2	
162	231+500	LHS	0.45	11.8	
163	232+000	RHS	0.35	12.5	
164	232+500	LHS	0.4	3.2	
165	233+000	RHS	0.5	7.2	
166	233+500	LHS	0.45	5.4	
167	234+000	RHS	0.45	11.5	
168	234+500	LHS	0.5	4.8	
169	235+000	RHS	0.5	7.2	
170	235+500	LHS	0.45	7.2	
171	236+000	RHS	0.50	7.3	
172	236+500	LHS	0.35	8.0	
173	237+000	RHS	0.50	13.2	
174	237+500	LHS	0.50	10.6	
175	238+000	RHS	0.40	9.5	
176	238+500	LHS	0.45	15.7	
177	239+000	RHS	0.40	4.6	
178	239+500	LHS	0.40	12.3	
179	240+000	RHS	0.35	9.8	
180	240+500	LHS	0.40	15.5	
181	241+000	RHS	0.40	5.6	
182	241+500	LHS	0.50	17.6	
183	242+000	RHS	0.35	9.8	
184	242+500	LHS	0.35	10.2	
185	243+000	RHS	0.50	12.1	
186	243+500	LHS	0.60	16.3	
187	244+000	RHS	0.50	6.7	
188	244+500	LHS	0.45	11.5	
189	245+000	RHS	0.45	7.1	
190	245+500	LHS	0.50	16.8	

Sl. No.	Location (KM)	Side	Depth (m)	CBR %	Remarks
191	246+000	RHS	0.45	7.8	
192	246+500	LHS	0.35	9.1	
193	247+000	RHS	0.45	10.4	
194	247+500	LHS	0.45	14.0	
195	248+000	RHS	0.45	7.6	
196	248+500	LHS	0.40	6.7	
197	249+000	RHS	0.50	18.0	
198	249+500	LHS	0.50	4.0	
199	250+000	RHS	0.45	27.1	
200	250+500	LHS	0.35	4.0	
201	251+000	RHS	0.50	14.3	

BA.No	Borrow Area Location	CBR Value (%)
1	Km. 250+100 R/S-10 Km.	22.9
2	Km. 248+960 L/S-7.2 Km.	18.1
3	Km. 248+960 L/S-5.0 Km.	15.1
4	Km 248+980 L/S-4.5 Km	29.6
6	Km 218+580 L/S-2.4 Km	17.8
7	Km 210+340 R/S-0.8 Km	30.5
8	Km 210+340 R/S-1.0 Km	28.0
9	Km 225+550 R/S-0.8 Km	15.0
10	Km 237+950 L/S-4.0 Km	30.0

S.No	OGL Location (Cutting)	CBR Value (%)
1	163+200 R/S	1.9
2	163+480 R/S	1.6
3	164+400 R/S	2.87
4	164+600 R/S	6.3
5	164+800 R/S	7.3
4	164+960 R/S	1.6
5	165+200 R/S	6.7
6	165+400 R/S	2.6
7	165+600 R/S	8.2

Annexure VI

ANNEXURE - VI

IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)	Date:	22/11/2010
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Homogenious Section Delineating Analysis by Cumulative Difference Approach	Rev.No:	B
Notes:	Data of following surveys and investigations are used to design the pavement. 1. BBD survey (--/--/--)	Prepared	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	AASHTO Guide for Design of Pavement Structures 1993	Approved	S C Mittal

Interval Number	Existing Chainage (Kms)		Proposed Chainage (Kms)		Pavement Response Value (Cumulative Deflection)	Interval Distance	Cumulative Interval Distance	Average Interval Response	Actual Interval Area	Cumulative Area	Cumulative Difference Variable
	From	To	From	To							
1	146	147	151.640	152.640	1.584	1.0000	1.000	1.584	1.584	1.584	0.178
2	147	148	152.640	153.640	1.861	1.0000	2.0000	1.7228	1.723	3.307	0.494
3	148	149	153.640	154.640	1.976	1.0000	3.0000	1.9189	1.919	5.226	1.006
4	149	150	154.640	155.640	2.061	1.0000	4.0000	2.0185	2.018	7.244	1.618
5	150	151	155.640	156.640	2.238	1.0000	5.0000	2.1496	2.150	9.394	2.361
6	151	152	156.640	157.640	1.473	1.0000	6.0000	1.8557	1.856	11.250	2.810
7	152	153	157.640	158.640	2.245	1.0000	7.0000	1.8589	1.859	13.108	3.262
8	153	154	158.640	159.640	2.205	1.0000	8.0000	2.2248	2.225	15.333	4.081
9	154	155	159.640	160.640	2.477	1.0000	9.0000	2.3407	2.341	17.674	5.015
10	155	157	160.640	162.640	2.451	2.0000	11.0000	2.4640	4.928	22.602	7.130
11	157	158	162.640	163.640	0.904	1.0000	12.0000	1.6776	1.678	24.280	7.401
12	158	159	163.640	164.640	1.003	1.0000	13.0000	1.7271	1.727	24.329	6.044
13	159	160	164.640	165.640	1.252	1.0000	14.0000	1.1275	1.128	25.457	5.765
14	160	161	165.640	166.640	1.443	1.0000	15.0000	1.3475	1.348	26.804	5.706
15	161	162	166.640	167.640	2.059	1.0000	16.0000	1.7510	1.751	28.555	6.050
16	162	163	167.640	168.640	1.604	1.0000	17.0000	1.8315	1.832	30.387	6.475
17	163	164	168.640	169.640	2.591	1.0000	18.0000	2.0975	2.098	32.484	7.166
18	164	165	169.640	170.640	2.207	1.0000	19.0000	2.3991	2.399	34.883	8.158
19	165	166	170.640	171.640	1.904	1.0000	20.0000	2.0554	2.055	36.938	8.807
20	166	167	171.640	172.640	2.037	1.0000	21.0000	1.9703	1.970	38.909	9.371
21	167	168	172.640	173.640	1.751	1.0000	22.0000	1.8940	1.894	40.803	9.858
22	168	169	173.640	174.640	2.037	1.0000	23.0000	1.8938	1.894	42.697	10.346
23	169	170	174.640	175.640	1.583	1.0000	24.0000	1.8100	1.810	44.507	10.749
24	170	171	175.640	176.640	1.429	1.0000	25.0000	1.5059	1.506	46.012	10.848
25	171	172	176.640	177.640	2.183	1.0000	26.0000	1.8055	1.806	47.818	11.247
26	172	173	177.640	178.640	1.703	1.0000	27.0000	1.9426	1.943	49.761	11.783
27	173	174	178.640	179.640	1.167	1.0000	28.0000	1.4347	1.435	51.195	11.811
28	174	175	179.640	180.640	1.700	1.0000	29.0000	1.4332	1.433	52.628	11.838
29	175	176	180.640	181.640	1.463	1.0000	30.0000	1.5813	1.581	54.210	12.013
30	176	177	181.640	182.640	0.971	1.0000	31.0000	1.2170	1.217	55.427	11.823
31	177	178	182.640	183.640	1.254	1.0000	32.0000	1.1125	1.113	56.539	11.529
32	178	179	183.640	184.640	1.181	1.0000	33.0000	1.2175	1.218	57.757	11.340

IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)	Date:	22/11/2010
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Homogenious Section Delineating Analysis by Cumulative Difference Approach	Rev.No:	B
Notes:	Data of following surveys and investigations are used to design the pavement. 1. BBD survey (--/--/--)	Prepared	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	AASHTO Guide for Design of Pavement Structures 1993	Approved	S C Mittal

Interval Number	Existing Chainage (Kms)		Proposed Chainage (Kms)		Pavement Response Value (Cumulative Deflection)	Interval Distance	Cumulative Interval Distance	Average Interval Response	Actual Interval Area	Cumulative Area	Cumulative Difference Variable
	From	To	From	To							
33	179	180	184.640	185.640	1.263	1.0000	34.0000	1.2220	1.222	58.979	11.156
34	180	181	185.640	186.640	1.588	1.0000	35.0000	1.4255	1.426	60.404	11.174
35	181	182	186.640	187.640	1.168	1.0000	36.0000	1.3780	1.378	61.782	11.146
36	182	183	187.640	188.640	1.528	1.0000	37.0000	1.3480	1.348	63.130	11.087
37	183	184	188.640	189.640	1.267	1.0000	38.0000	1.3975	1.398	64.528	11.078
38	184	185	189.640	190.640	1.126	1.0000	39.0000	1.1965	1.197	65.724	10.868
39	185	186	190.640	191.630	1.362	1.0000	40.0000	1.2440	1.244	66.968	10.706
40	186	187	191.630	192.630	1.168	1.0000	41.0000	1.2649	1.265	68.233	10.564
41	187	188	192.630	193.630	1.435	1.0000	42.0000	1.3013	1.301	69.534	10.459
42	188	189	193.630	194.630	1.474	1.0000	43.0000	1.4543	1.454	70.989	10.506
43	189	190	194.630	195.630	2.036	1.0000	44.0000	1.7548	1.755	72.743	10.855
44	190	191	195.630	196.630	1.767	1.0000	45.0000	1.9013	1.901	74.645	11.349
45	191	192	196.630	197.630	1.435	1.0000	46.0000	1.6007	1.601	76.245	11.543
46	192	193	197.630	198.630	1.860	1.0000	47.0000	1.6475	1.647	77.893	11.784
47	193	194	198.630	199.630	1.077	1.0000	48.0000	1.4688	1.469	79.362	11.847
48	194	195	199.630	200.620	1.387	1.0000	49.0000	1.2322	1.232	80.594	11.672
49	195	196	200.620	201.610	1.124	1.0000	50.0000	1.2555	1.256	81.850	11.521
50	196	197	201.610	202.610	1.047	1.0000	51.0000	1.0856	1.086	82.935	11.200
51	197	198	202.610	203.600	0.955	1.0000	52.0000	1.0011	1.001	83.936	10.795
52	198	199	203.600	204.600	1.130	1.0000	53.0000	1.0426	1.043	84.979	10.431

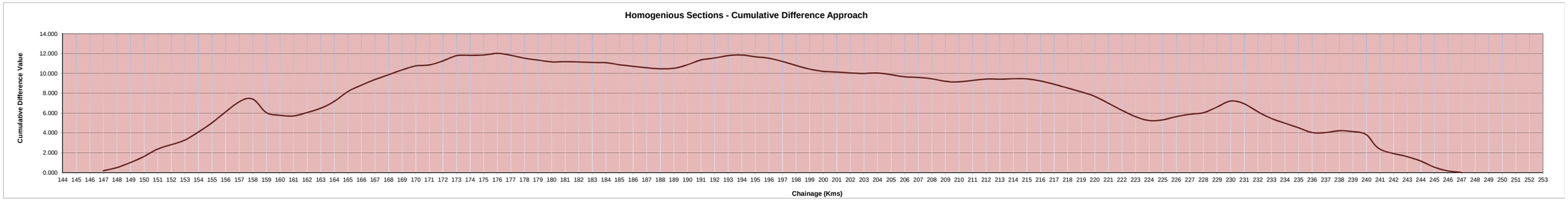
IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)	Date:	22/11/2010
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Homogenious Section Delineating Analysis by Cumulative Difference Approach	Rev.No:	B
Notes:	Data of following surveys and investigations are used to design the pavement. 1. BBD survey (--/--/--)	Prepared	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	AASHTO Guide for Design of Pavement Structures 1993	Approved	S C Mittal

Interval Number	Existing Chainage (Kms)		Proposed Chainage (Kms)		Pavement Response Value (Cumulative Deflection)	Interval Distance	Cumulative Interval Distance	Average Interval Response	Actual Interval Area	Cumulative Area	Cumulative Difference Variable
	From	To	From	To							
53	199	200	204.600	205.610	1.227	1.0000	54.0000	1.1785	1.179	86.157	10.203
54	200	201	205.610	206.610	1.445	1.0000	55.0000	1.3356	1.336	87.493	10.132
55	201	202	206.610	207.610	1.191	1.0000	56.0000	1.3176	1.318	88.811	10.043
56	202	203	207.610	208.620	1.511	1.0000	57.0000	1.3508	1.351	90.161	9.987
57	203	204	208.620	209.620	1.410	1.0000	58.0000	1.4605	1.460	91.622	10.041
58	204	205	209.620	210.620	1.038	1.0000	59.0000	1.2241	1.224	92.846	9.859
59	205	206	210.620	211.610	1.356	1.0000	60.0000	1.1970	1.197	94.043	9.649
60	206	207	211.610	212.600	1.336	1.0000	61.0000	1.3461	1.346	95.389	9.588
61	207	208	212.600	213.590	1.192	1.0000	62.0000	1.2643	1.264	96.653	9.446
62	208	209	213.590	214.600	1.116	1.0000	63.0000	1.1542	1.154	97.808	9.194
63	209	210	214.600	215.600	1.606	1.0000	64.0000	1.3610	1.361	99.169	9.148
64	210	212	215.600	217.600	1.482	2.0000	66.0000	1.5438	3.088	102.256	9.423
65	212	213	217.600	218.600	1.300	1.0000	67.0000	1.3910	1.391	103.647	9.407
66	213	214	218.600	219.650	1.618	1.0000	68.0000	1.4591	1.459	105.106	9.460
67	214	215	219.650	220.610	1.149	1.0000	69.0000	1.3837	1.384	106.490	9.437
68	215	216	220.610	221.600	1.246	1.0000	70.0000	1.1977	1.198	107.688	9.228
69	216	217	221.600	222.600	0.910	1.0000	71.0000	1.0782	1.078	108.766	8.900
70	217	219	222.600	224.380	1.134	2.0000	73.0000	1.0221	2.044	110.810	8.131
71	219	220	224.380	225.370	0.770	1.0000	74.0000	0.9519	0.952	111.762	7.676
72	220	221	225.370	226.340	0.660	1.0000	75.0000	0.7150	0.715	112.477	6.984
73	221	222	226.340	227.340	0.735	1.0000	76.0000	0.6975	0.698	113.174	6.275
74	222	223	227.340	228.340	0.786	1.0000	77.0000	0.7605	0.761	113.935	5.629
75	223	224	228.340	229.340	1.250	1.0000	78.0000	1.0180	1.018	114.953	5.241
76	224	225	229.340	230.340	1.688	1.0000	79.0000	1.4690	1.469	116.422	5.303
77	225	226	230.340	231.340	1.787	1.0000	80.0000	1.7375	1.738	118.159	5.634
78	226	227	231.340	232.340	1.495	1.0000	81.0000	1.6410	1.641	119.800	5.868

IL&FS Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)	Date:	22/11/2010
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Homogenious Section Delineating Analysis by Cumulative Difference Approach	Rev.No:	B
Notes:	Data of following surveys and investigations are used to design the pavement. 1. BBD survey (--/--/--)	Prepared	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	AASHTO Guide for Design of Pavement Structures 1993	Approved	S C Mittal

Interval Number	Existing Chainage (Kms)		Proposed Chainage (Kms)		Pavement Response Value (Cumulative Deflection)	Interval Distance	Cumulative Interval Distance	Average Interval Response	Actual Interval Area	Cumulative Area	Cumulative Difference Variable
	From	To	From	To							
79	227	228	232.340	233.340	1.636	1.0000	82.0000	1.5655	1.566	121.366	6.027
80	228	229	233.340	234.340	2.328	1.0000	83.0000	1.9820	1.982	123.348	6.603
81	229	230	234.340	235.350	1.697	1.0000	84.0000	2.0125	2.013	125.360	7.209
82	230	231	235.350	236.350	0.561	1.0000	85.0000	1.1290	1.129	126.489	6.931
83	231	232	236.350	237.340	0.649	1.0000	86.0000	0.6050	0.605	127.094	6.130
84	232	233	237.340	238.350	0.797	1.0000	87.0000	0.7230	0.723	127.817	5.446
85	233	234	238.350	239.340	1.071	1.0000	88.0000	0.9340	0.934	128.751	4.973
86	234	235	239.340	240.340	0.811	1.0000	89.0000	0.9410	0.941	129.692	4.508
87	235	236	240.340	241.340	1.049	1.0000	90.0000	0.9300	0.930	130.622	4.031
88	236	237	241.340	242.340	1.746	1.0000	91.0000	1.3975	1.398	132.020	4.022
89	237	238	242.340	243.340	1.444	1.0000	92.0000	1.5950	1.595	133.615	4.211
90	238	239	243.340	244.340	1.200	1.0000	93.0000	1.3220	1.322	134.937	4.126
91	239	240	244.340	245.390	0.984	1.0000	94.0000	1.0920	1.092	136.029	3.812
92	240	241	245.390	246.410	0.874	1.0000	95.0000	1.0370	1.037	135.974	2.350
93	241	243	246.410	248.420	1.185	2.0000	97.0000	1.0295	2.059	138.033	1.596
94	243	244	248.420	249.420	0.749	1.0000	98.0000	0.9668	0.967	139.000	1.156
95	244	245	249.420	250.420	0.822	1.0000	99.0000	0.7853	0.785	139.785	0.535
96	245	246.00	250.420	251.420	1.245	1.0000	100.0000	1.0334	1.033	140.818	0.162
97	246	247.00	251.420	N.A.	1.245	1.0000	101.0000	1.2448	1.245	142.063	0.000

Total Project Length			L_p	**101.00**
Final Cumulative Area			A_t	**142.06**
$F = A_t / L_p$			**F**	**1.407**


Homogenious Sections - Cumulative Difference Approach
Cumulative Difference Value
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0.000
144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253
Chainage (Kms)

Annexure VII

IL&FS | Transportation	IL&FS TRANSPORTAION NETWORKS LIMITED		
Client:	NATIONAL HIGHWAY AUTHORITY OF INDIA, NEW DELHI		
Project:	4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)	Date:	28/12/2011
Project No:	406 / 2009	Des. Note No:	DN001
Title:	Flexible Pavement and Overlay Design	Rev.No:	F
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Pavement condition survey (--/--/--), 2. BBD survey (--/--/--), 3. Axle Load Survey (--/--/--), 4. Traffic Survey (--/--/--), 5. CBR Tests (--/--/--). Pavement Design is done in accordance with IRC:37-2001 and overlay design is done in accordance with IRC:81-1997. Homogenious Section has been analysed by cumulative deflection approach as suggested in AASHTO Guide for Design of Pavement Structures 1993.	Designed	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, IRC:81-1997 Guidelines for strengthening of flexible pavements using BBD technique, AASHTO Guide for Design of Pavement Structures 1993.	Approved	S C Mittal

S.No	Existing Chainage		Proposed Chainage		Length (Km)	Existing Crust Composition			Cd	Delineated Homogenious Sections	Charecteristic Deflection of Homogenious Section (Cd)	Traffic Loading Considered for Overlay (MSA)	Strengthening / Overlay Thickness (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for Paved Shoulder abutting Existing Road (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for New Carriageway Widening (mm)					
	From	To	From	To		BT	WBM	Moorum					BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG
1	146.000	147.000	151.640	152.640	1	260	165	0	1.58	1	1.58	80	45	95	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
2	147.000	148.000	152.640	153.640	1	185	75	150	1.86																									
3	148.000	149.000	153.640	154.640	1	215	175	0	1.98																									
4	149.000	150.000	154.640	155.640	1	275	0	150	2.06																									
5	150.000	151.000	155.640	156.640	1	200	175	0	2.24																									
6	151.000	152.000	156.640	157.640	1	215	75	75	1.47	2	2.48	80	45	50	70	250	0	0	80	10	45	50	70	250	200	500	80	10	45	50	70	250	200	500
7	152.000	153.000	157.640	158.640	1	225	150	0	2.24																									
8	153.000	154.000	158.640	159.640	1	125	75	100	2.20																									
9	154.000	155.000	159.640	160.640	1	100	200	0	2.48																									
10	155.000	157.000	160.640	162.640	2	150	175	0	2.45																									
11	157.000	158.000	162.640	163.640	1	150	175	0	0.90	3	1.44	80	45	90	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
12	158.000	159.000	163.640	164.640	1	225	150	0	1.00																									
13	159.000	160.000	164.640	165.640	1	205	165	0	1.25																									
14	160.000	161.000	165.640	166.640	1	190	200	0	1.44																									
15	161.000	162.000	166.640	167.640	1	200	155	0	2.06	4	2.59	80	45	50	70	250	0	0	80	10	45	50	70	250	200	500	80	10	45	50	70	250	200	500
16	162.000	163.000	167.640	168.640	1	185	190	0	1.60																									
17	163.000	164.000	168.640	169.640	1	185	190	0	2.59																									
18	164.000	165.000	169.640	170.640	1	225	165	0	2.21																									
19	165.000	166.000	170.640	171.640	1	225	160	0	1.90																									
20	166.000	167.000	171.640	172.640	1	235	160	75	2.04																									
21	167.000	168.000	172.640	173.640	1	135	175	0	1.75																									
22	168.000	169.000	173.640	174.640	1	185	210	0	2.04																									

Project:	**4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)**	**Date:**	**28/12/2011**
Project No:	**406 / 2009**	**Des. Note No:**	**DN001**
Title:	**Flexible Pavement and Overlay Design**	**Rev.No:**	**F**
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Pavement condition survey (--/--/--), 2. BBD survey (--/--/--), 3. Axle Load Survey (--/--/--), 4. Traffic Survey (--/--/--), 5. CBR Tests (--/--/--). Pavement Design is done in accordance with IRC:37-2001 and overlay design is done in accordance with IRC:81-1997. Homogenious Section has been analysed by cumulative deflection approach as suggested in AASHTO Guide for Design of Pavement Structures 1993.	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, IRC:81-1997 Guidelines for strengthening of flexible pavements using BBD technique, AASHTO Guide for Design of Pavement Structures 1993.	**Approved**	S C Mittal

S.No	Existing Chainage		Proposed Chainage		Length (Km)	Existing Crust Composition			C_d	Delineated Homogenious Sections	Charecteristic Deflection of Homogenious Section (C_d)	Traffic Loading Considered for Overlay (MSA)	Strengthening / Overlay Thickness (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for Paved Shoulder abutting Existing Road (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for New Carriageway Widening (mm)					
	From	To	From	To		BT	WBM	Moorum					BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG
23	169.000	170.000	174.640	175.640	1	190	200	0	1.58	5	1.58	80	45	95	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
24	170.000	171.000	175.640	176.640	1	110	225	0	1.43																									
25	171.000	172.000	176.640	177.640	1	175	195	0	2.18	6	2.18	80	45	50	70	250	0	0	80	10	45	50	70	250	200	500	80	10	45	50	70	250	200	500
26	172.000	173.000	177.640	178.640	1	175	175	0	1.70	7	1.70	80	45	50	50	0	0	0	80	10	45	50	70	250	200	500	80	10	45	50	70	250	200	500
27	173.000	174.000	178.640	179.640	1	165	180	100	1.17																									
28	174.000	175.000	179.640	180.640	1	150	170	100	1.70																									
29	175.000	176.000	180.640	181.640	1	145	195	50	1.46																									
30	176.000	177.000	181.640	182.640	1	180	200	0	0.97	8	1.26	80	45	75	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
31	177.000	178.000	182.640	183.640	1	165	210	0	1.25																									
32	178.000	179.000	183.640	184.640	1	165	185	0	1.18																									
33	179.000	180.000	184.640	185.640	1	143	230	200	1.26																									
34	180.000	181.000	185.640	186.640	1	153	195	100	1.59	9	1.59	80	45	95	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
35	181.000	182.000	186.640	187.640	1	115	222.5	75	1.17																									
36	182.000	183.000	187.640	188.640	1	140	200	0	1.53																									
37	183.000	184.000	188.640	189.640	1	135	195	0	1.27	10	1.36	80	45	80	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
38	184.000	185.000	189.640	190.640	1	130	195	0	1.13																									
39	185.000	186.000	190.640	191.630	1	120	200	0	1.36																									
40	186.000	187.000	191.630	192.630	1	125	225	0	1.17																									
41	187.000	188.000	192.630	193.630	1	155	185	0	1.43	11	1.47	80	45	85	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
42	188.000	189.000	193.630	194.630	1	120	225	0	1.47																									

Project:	**4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)**	**Date:**	**28/12/2011**
Project No:	**406 / 2009**	**Des. Note No:**	**DN001**
Title:	**Flexible Pavement and Overlay Design**	**Rev.No:**	**F**
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Pavement condition survey (--/--/--), 2. BBD survey (--/--/--), 3. Axle Load Survey (--/--/--), 4. Traffic Survey (--/--/--), 5. CBR Tests (--/--/--). Pavement Design is done in accordance with IRC:37-2001 and overlay design is done in accordance with IRC:81-1997. Homogenious Section has been analysed by cumulative deflection approach as suggested in AASHTO Guide for Design of Pavement Structures 1993.	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, IRC:81-1997 Guidelines for strengthening of flexible pavements using BBD technique, AASHTO Guide for Design of Pavement Structures 1993.	**Approved**	S C Mittal

S.No	Existing Chainage		Proposed Chainage		Length (Km)	Existing Crust Composition			C_d	Delineated Homogenious Sections	Charecteristic Deflection of Homogenious Section (C_d)	Traffic Loading Considered for Overlay (MSA)	Strengthening / Overlay Thickness (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for Paved Shoulder abutting Existing Road (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for New Carriageway Widening (mm)					
	From	To	From	To		BT	WBM	Moorum					BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG
43	189.000	190.000	194.630	195.630	1	110	245	0	2.04	12	2.04	80	45	50	70	250	0	0	80	10	45	50	70	250	200	500	80	10	45	50	70	250	200	500
44	190.000	191.000	195.630	196.630	1	90	250	0	1.77																									
45	191.000	192.000	196.630	197.630	1	95	175	0	1.43																									
46	192.000	193.000	197.630	198.630	1	95	165	0	1.86																									
47	193.000	194.000	198.630	199.630	1	100	150	75	1.08	13	1.39	80	45	80	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
48	194.000	195.000	199.630	200.620	1	125	170	0	1.39																									
49	195.000	196.000	200.620	201.610	1	145	180	0	1.12																									
50	196.000	197.000	201.610	202.610	1	130	190	0	1.05																									
51	197.000	198.000	202.610	203.600	1	130	180	0	0.95																									
52	198.000	199.000	203.600	204.600	1	140	165	0	1.13																									
53	199.000	200.000	204.600	205.610	1	205	155	0	1.23																									
54	200.000	201.000	205.610	206.610	1	210	150	0	1.44	14	1.51	80	45	90	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
55	201.000	202.000	206.610	207.610	1	200	175	0	1.19																									
56	202.000	203.000	207.610	208.620	1	190	155	0	1.51																									
57	203.000	204.000	208.620	209.620	1	160	185	0	1.41																									
58	204.000	205.000	209.620	210.620	1	135	200	0	1.04	15	1.36	80	45	80	0	0	0	0	80	10	45	70	50	250	200	500	80	10	45	70	50	250	200	500
59	205.000	206.000	210.620	211.610	1	115	185	0	1.36																									
60	206.000	207.000	211.610	212.600	1	70	205	0	1.34																									
61	207.000	208.000	212.600	213.590	1	97.5	180	0	1.19	16	1.19	80	45	65	0	0	0	0	80	10	45	65	55	250	200	500	80	10	45	65	55	250	200	500
62	208.000	209.000	213.590	214.600	1	115	190	100	1.12																									

Project:	**4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)**	**Date:**	**28/12/2011**
Project No:	**406 / 2009**	**Des. Note No:**	**DN001**
Title:	**Flexible Pavement and Overlay Design**	**Rev.No:**	**F**
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Pavement condition survey (--/--/--), 2. BBD survey (--/--/--), 3. Axle Load Survey (--/--/--), 4. Traffic Survey (--/--/--), 5. CBR Tests (--/--/--). Pavement Design is done in accordance with IRC:37-2001 and overlay design is done in accordance with IRC:81-1997. Homogenious Section has been analysed by cumulative deflection approach as suggested in AASHTO Guide for Design of Pavement Structures 1993.	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, IRC:81-1997 Guidelines for strengthening of flexible pavements using BBD technique, AASHTO Guide for Design of Pavement Structures 1993.	**Approved**	S C Mittal

S.No	Existing Chainage		Proposed Chainage		Length (Km)	Existing Crust Composition			C_d	Delineated Homogenious Sections	Charecteristic Deflection of Homogenious Section (C_d)	Traffic Loading Considered for Overlay (MSA)	Strengthening / Overlay Thickness (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for Paved Shoulder abutting Existing Road (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for New Carriageway Widening (mm)					
	From	To	From	To		BT	WBM	Moorum					BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG
63	209.000	210.000	214.600	215.600	1	190	175	0	1.61	17	1.62	52	40	90	0	0	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
64	210.000	212.000	215.600	217.600	2	163	230	0	1.48																									
65	212.000	213.000	217.600	218.600	1	230	165	0	1.30																									
66	213.000	214.000	218.600	219.650	1	200	200	0	1.62																									
67	214.000	215.000	219.650	220.610	1	160	185	100	1.15	18	1.25	52	40	60	0	0	0	0	52	10	40	60	55	250	200	500	52	10	40	60	55	250	200	500
68	215.000	216.000	220.610	221.600	1	175	205	0	1.25																									
69	216.000	217.000	221.600	222.600	1	175	180	0	0.91																									
70	217.000	219.000	222.600	224.380	2	130	225	0	1.13																									
71	219.000	220.000	224.380	225.370	1	125	205	75	0.77	19	0.79	52	40	50	0	0	0	0	52	10	40	50	65	250	200	500	52	10	40	50	65	250	200	500
72	220.000	221.000	225.370	226.340	1	170	205	0	0.66																									
73	221.000	222.000	226.340	227.340	1	160	200	0	0.74																									
74	222.000	223.000	227.340	228.340	1	190	185	0	0.79																									
75	223.000	224.000	228.340	229.340	1	150	200	0	1.25	20	1.69	52	40	90	0	0	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
76	224.000	225.000	229.340	230.340	1	150	230	0	1.69																									
77	225.000	226.000	230.340	231.340	1	145	210	0	1.79	21	1.79	52	40	65	50	250	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
78	226.000	227.000	231.340	232.340	1	145	205	0	1.50	22	1.64	52	40	90	0	0	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
79	227.000	228.000	232.340	233.340	1	150	200	0	1.64																									
80	228.000	229.000	233.340	234.340	1	145	200	0	2.33	23	2.33	52	40	50	65	0	0	0	52	10	40	50	65	250	200	500	52	10	40	50	65	250	200	500
81	229.000	230.000	234.340	235.350	1	173	180	0	1.70																									
82	230.000	231.000	235.350	236.350	1	173	190	0	0.56	24	0.80	52	40	50	0	0	0	0	52	10	40	50	65	250	200	500	52	10	40	50	65	250	200	500
83	231.000	232.000	236.350	237.340	1	130	240	0	0.65																									
84	232.000	233.000	237.340	238.350	1	125	240	0	0.80																									

Project:	**4 Laning of Pune - Solapur Section of NH-9 from Km 144.400 to Km 249.000 (Proposed Chainage - Km 150.050 to Km 246.900)**	**Date:**	**28/12/2011**
Project No:	**406 / 2009**	**Des. Note No:**	**DN001**
Title:	**Flexible Pavement and Overlay Design**	**Rev.No:**	**F**
Notes:	Data of following surveys and investigations are used to design the pavement. 1. Pavement condition survey (--/--/--), 2. BBD survey (--/--/--), 3. Axle Load Survey (--/--/--), 4. Traffic Survey (--/--/--), 5. CBR Tests (--/--/--). Pavement Design is done in accordance with IRC:37-2001 and overlay design is done in accordance with IRC:81-1997. Homogenious Section has been analysed by cumulative deflection approach as suggested in AASHTO Guide for Design of Pavement Structures 1993.	**Designed**	M.Kanagaraj
		Checked	Hari Bhavsar
Reference:	IRC:37-2001 Guidelines for the design of flexible pavements, IRC:81-1997 Guidelines for strengthening of flexible pavements using BBD technique, AASHTO Guide for Design of Pavement Structures 1993.	**Approved**	S C Mittal

S.No	Existing Chainage		Proposed Chainage		Length (Km)	Existing Crust Composition			C_d	Delineated Homogenious Sections	Charecteristic Deflection of Homogenious Section (C_d)	Traffic Loading Considered for Overlay (MSA)	Strengthening / Overlay Thickness (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for Paved Shoulder abutting Existing Road (mm)						Traffic Loading Considered for New Pavement (MSA)	California Bearing Ratio of Proposed Subgrade (Barrow Material) (CBR in %)	New Pavement Thickness for New Carriageway Widening (mm)					
	From	To	From	To		BT	WBM	Moorum					BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG			BC	DBM-II	DBM-I	WMM	GSB	SG
85	233.000	234.000	238.350	239.340	1	105	225	0	1.07	25	1.07	52	40	50	0	0	0	0	52	10	40	50	65	250	200	500	52	10	40	50	65	250	200	500
86	234.000	235.000	239.340	240.340	1	105	175	0	0.81																									
87	235.000	236.000	240.340	241.340	1	95	215	0	1.05																									
88	236.000	237.000	241.340	242.340	1	90	220	0	1.75	26	1.75	52	40	50	65	250	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
89	237.000	238.000	242.340	243.340	1	95	230	0	1.44	27	1.44	52	40	95	0	0	0	0	52	10	40	65	50	250	200	500	52	10	40	65	50	250	200	500
90	238.000	239.000	243.340	244.340	1	95	210	0	1.20																									
91	239.000	240.000	244.340	245.390	1	95	210	0	0.98	28	0.98	52	40	50	0	0	0	0	52	10	40	50	65	250	200	500	52	10	40	50	65	250	200	500
92	240.000	241.000	245.390	246.410	1	113	197.5	0	0.87																									
93	241.000	243.000	246.410	248.420	2	110	200	125	1.19	29	1.24	78	45	75	0	0	0	0	78	10	45	70	50	250	200	500	78	10	45	70	50	250	200	500
94	243.000	244.000	248.420	249.420	1	100	195	150	0.75																									
95	244.000	245.000	249.420	250.420	1	105	190	155	0.82																									
96	245.000	246.000	250.420	251.420	1	135	230	75	1.24																									
97	246.000	247.000	251.420	N.A.	1	135	230	75	1.24																									

Annexure VIII

DESIGN OF RIGID PAVEMENT FOR TOLL PLAZA AT 178/572
AS PER IRC: 58-2002

Slab Thickness 34 Cms

1	Design Life in Years	n	30	Years
2	DesignWheel Load	P	6258	Kg
3	Present Traffic Intensity	T_b	8829	CVD
4	Traffic Growth Rate	r	As Per Attachment	
5	28 days Compressive Strength of Concrete	f_{CK}	400	kg/cm^2
6	Flexural Strength of Concrete	F_{CR}	45.00	kg/cm^2
7	Modulus of Elasticity of Concrete	E	300000	kg/cm^2
8	Possion's Ratio of Concrete	μ	0.15	
9	Coefficient of Thermal Expansion of Concrete	a	10.0E-6	Per °C
10	Subgrade CBR (%)		7.000	
11	K Value of Sub grade	K_{sg}	4.800	kg/cm^3
12	Subbase Type (Enter Code)		3	
13	Thickness of Dry Lean Concrete >= 10 cm		10	cm
14	K Value of Subbase	K_{sb}	20.800	kg/cm^3
15	Zone of Project Corridor for Temparature		3	No.
16	Assume Trail Slab Thickness	h	34	cm
17	Temp. Difference b/w top and bottom layers	D_t	21.00	°C
18	Spacing of Contraction Joints	L	4.5	m
19	Length of Slab (Lane Width)	W	3.5	m
20	Tyre Pressure	p	8	kg/cm^2
21	C/C Distance between two tyres	S	31	cm
22	Load safety factor for Fatigue analysis	LSF	1.2	

Axle Load Spectrum:

Single Axle Loads		Tandem Axle Loads	
Load in Tonnes	Expected Repetitions	Load in Tonnes	Expected Repetitions
23 - 25	0.00	42 - 46	0.00
21 - 23	0.00	38 - 42	0.00
19 - 21	0.10	34 - 38	0.05
17 - 19	0.05	30 - 34	0.00
15 - 17	0.26	26 - 30	0.15
13 - 15	0.20	22 - 26	2.40
11 - 13	1.28	18 - 22	11.24
09 - 11	4.09	14 - 18	9.91
< 09	63.18	< 14	7.10
Total	69.15	Total	30.85

Cumulative repetitions in ' n ' years		116294269	CVD
Design Traffic		29073567	CVD
Radius of Relative Stiffness	l	83.378	cm

Fatigue Analysis :

Axle load	AL * LSF	Stress from Charts	Stress Ratio	Expected repetition	Fatigue Life, N	Fatigue Life Consumed
1	2	3	4	5	6	5/6
Single Axle						
20	24.0	**19.480**	0.43	29697	INIFINITY	0.0000
18	21.6	**17.761**	0.39	14849	INIFINITY	0.0000
16	19.2	**16.158**	0.36	74243	INIFINITY	0.0000
14	16.8	**14.408**	0.32	59394	INIFINITY	0.0000
12	14.4	**12.626**	0.28	371215	INIFINITY	0.0000
10	12.0	**10.799**	0.24	1187888	INIFINITY	0.0000
8	9.6	**8.908**	0.20	18367724	INIFINITY	0.0000
6	7.2	**6.95**	0.15			
Tandem Axle						
36	43.2	**14.07**	0.31	14849	INIFINITY	0.0000
32	38.4	**13.09**	0.29	0	INIFINITY	0.0000
28	33.6	**11.70**	0.26	44546	INIFINITY	0.0000
24	28.8	**10.30**	0.23	697884	INIFINITY	0.0000
20	24.0	**8.86**	0.20	3266693	INIFINITY	0.0000
16	19.2	**7.26**	0.16	2880629	INIFINITY	0.0000
12	14.4	**5.91**	0.13	2063956	INIFINITY	0.0000

Cumulative Fatigue Damage / Life Consumed **0.0000**

Check for Fatigue Life ***SAFE***

Check for Temperature Stress :

	L/l	5.397	
	B/l	4.198	
Bradbury's Coefficient	**C**	**0.799**	
Edge warping stress	**Ste**	**25.18**	**kg/cm^2**
Maximum Load Stress		**19.48**	**kg/cm^2**
Total Temparature Stresses		**44.66**	**kg/cm^2**
Check for Temperature Stress		***SAFE***	

Check for Corner Stress :

Radius of Load Contact Area	**a**	**24.37**	**cm**
Radius of equilent distribution of pressure	**b**	**22.94**	**cm**
Corner Stress	**Sc**	**10.61**	**kg/cm^2**

Check for Corner Stress ***SAFE***

The assumed slab thickness is safe

DESIGN OF DOWEL BARS

Percentage of load transfer			40	%
Joint width			0.8	cm
Dia of Dowel bar		d	3	cm
Assumed spacing between the dowel bars		S_d	27	cm
Assumed length of dowel bars		L_d	50	cm
Modulus of elasticity of Steel		E_S	2000000	kg /cm^2
Ratio of Modulus of Dowel to Concrete Interation		K	41500	kg /cm^3
Perimissible bearing stress in concrete		F_b	300.68	kg /cm^2
No. of dowel bars required for load transfer			5	No.s
Load transferred by dowel system		P_t *	1.762	
Load carried by outer dowel bar		P_t	1420.79	kg
Moment of Inertia of Dowel bar		MI	3.976	cm^4
Relative stiffness of Dowel bar		β	0.250	
Bearing stress in dowel bar			260.62	kg /cm^2
			SAFE	

DESIGN OF TIE BARS

Coefficient of friction		f	1.5	
Diameter of Tie bar	*Range*	*12 to 16 mm*	12	mm
Density of Concrete			2400	kg /cm^3
Select type of tie bar			Deformed	
Alloable tensile stress in tie bars			2000	kg /cm^2
Alloable bond stress for tie bars			24.6	kg /cm^2
Area of steel bar per unit length			2.142	cm^2
Crosssectional area of Tie bar		a_s	1.131	cm^2
Perimeter of Tie bar		P_t	3.770	cm
Spacing of Tie bars		S_t	52.80	cm
Say spacing of Tie bars			52	cm
Length of Tie bar		L_t	48.780	cm
Say length of Tie bar after allowing for Loss of bond Stress			64	cm

DESIGN OF RIGID PAVEMENT FOR TOLL PLAZA AT KM 229/230 AS PER IRC: 58-2002

Slab Thickness 33 Cms

1	Design Life in Years	n	30	Years
2	DesignWheel Load	P	6470	Kg
3	Present Traffic Intensity	T_b	6979	CVD
4	Traffic Growth Rate	r	As Per Attachment	
5	28 days Compressive Strength of Concrete	f_{CK}	400	kg/cm^2
6	Flexural Strength of Concrete	F_{CR}	45.00	kg/cm^2
7	Modulus of Elasticity of Concrete	E	300000	kg/cm^2
8	Possion's Ratio of Concrete	μ	0.15	
9	Coefficient of Thermal Expansion of Concrete	a	10.0E-6	Per °C
10	Subgrade CBR (%)		7.000	
11	K Value of Sub grade	K_{sg}	4.800	kg/cm^3
12	Subbase Type (Enter Code)		3	
13	Thickness of Dry Lean Concrete >= 10 cm		10	cm
14	K Value of Subbase	K_{sb}	20.800	kg/cm^3
15	Zone of Project Corridor for Temparature		3	No.
16	Assume Trail Slab Thickness	h	33	cm
17	Temp. Difference b/w top and bottom layers	D_t	21.00	°C
18	Spacing of Contraction Joints	L	4.5	m
19	Length of Slab (Lane Width)	W	3.5	m
20	Tyre Pressure	p	8	kg/cm^2
21	C/C Distance between two tyres	S	31	cm
22	Load safety factor for Fatigue analysis	LSF	1.2	

Axle Load Spectrum:

Single Axle Loads		Tandem Axle Loads	
Load in Tonnes	Expected Repetitions	Load in Tonnes	Expected Repetitions
23 - 25	0.00	42 - 46	0.00
21 - 23	0.00	38 - 42	0.00
19 - 21	0.00	34 - 38	0.03
17 - 19	0.03	30 - 34	0.14
15 - 17	0.10	26 - 30	0.27
13 - 15	0.38	22 - 26	1.27
11 - 13	1.92	18 - 22	6.53
09 - 11	4.57	14 - 18	7.29
< 09	69.42	< 14	8.04
Total	76.43	Total	23.57

Cumulative repetitions in ' n ' years		90879152	CVD
Design Traffic		22719788	CVD
Radius of Relative Stiffness	l	81.532	cm

Fatigue Analysis :

Axle load	AL * LSF	Stress from Charts	Stress Ratio	Expected repetition	Fatigue Life, N	Fatigue Life Consumed
1	2	3	4	5	6	5/6
Single Axle						
20	24.0	**20.302**	0.45	0	50911482	0.0000
18	21.6	**18.520**	0.41	7807	INIFINITY	0.0000
16	19.2	**16.849**	0.37	23422	INIFINITY	0.0000
14	16.8	**15.030**	0.33	85882	INIFINITY	0.0000
12	14.4	**13.177**	0.29	437219	INIFINITY	0.0000
10	12.0	**11.277**	0.25	1038396	INIFINITY	0.0000
8	9.6	**9.308**	0.21	15771124	INIFINITY	0.0000
6	7.2	**7.27**	0.16			
Tandem Axle						
36	43.2	**14.63**	0.33	7807	INIFINITY	0.0000
32	38.4	**13.62**	0.30	31230	INIFINITY	0.0000
28	33.6	**12.18**	0.27	62460	INIFINITY	0.0000
24	28.8	**10.73**	0.24	288877	INIFINITY	0.0000
20	24.0	**9.24**	0.21	1483423	INIFINITY	0.0000
16	19.2	**7.58**	0.17	1655187	INIFINITY	0.0000
12	14.4	**6.17**	0.14	1826952	INIFINITY	0.0000

Cumulative Fatigue Damage / Life Consumed **0.0000**

Check for Fatigue Life ***SAFE***

Check for Temperature Stress :

	L/l	5.519	
	B/l	4.293	
Bradbury's Coefficient	**C**	**0.824**	
Edge warping stress	**Ste**	**25.95**	**kg/cm^2**
Maximum Load Stress		**18.52**	**kg/cm^2**
Total Temparature Stresses		**44.47**	**kg/cm^2**
Check for Temperature Stress		***SAFE***	

Check for Corner Stress :

Radius of Load Contact Area	**a**	**24.65**	**cm**
Radius of equilent distribution of pressure	**b**	**23.12**	**cm**
Corner Stress	**Sc**	**11.39**	**kg/cm^2**

Check for Corner Stress ***SAFE***

The assumed slab thickness is safe

DESIGN OF DOWEL BARS

Percentage of load transfer		40	%
Joint width		0.8	cm
Dia of Dowel bar	d	3	cm
Assumed spacing between the dowel bars	S_d	25	cm
Assumed length of dowel bars	L_d	50	cm
Modulus of elasticity of Steel	E_S	2000000	kg /cm^2
Ratio of Modulus of Dowel to Concrete Interation	K	41500	kg /cm^3
Perimissible bearing stress in concrete	F_b	300.68	kg /cm^2
No. of dowel bars required for load transfer		5	No.s
Load transferred by dowel system	P_t *	1.934	
Load carried by outer dowel bar	P_t	1338.37	kg
Moment of Inertia of Dowel bar	MI	3.976	cm^4
Relative stiffness of Dowel bar	β	0.250	
Bearing stress in dowel bar		245.50	kg /cm^2
		SAFE	

DESIGN OF TIE BARS

Coefficient of friction		f	1.5	
Diameter of Tie bar	*Range*	*12 to 16 mm*	12	mm
Density of Concrete			2400	kg /cm^3
Select type of tie bar			Deformed	
Alloable tensile stress in tie bars			2000	kg /cm^2
Alloable bond stress for tie bars			24.6	kg /cm^2
Area of steel bar per unit length			2.079	cm^2
Crosssectional area of Tie bar		a_s	1.131	cm^2
Perimeter of Tie bar		P_t	3.770	cm
Spacing of Tie bars		S_t	54.40	cm
Say spacing of Tie bars			54	cm
Length of Tie bar		L_t	48.780	cm
Say length of Tie bar after allowing for Loss of bond Stress			64	cm

This has reference to our meeting with your good self and Mr.Noor Alam, Pavement Expert on 10th and 11th January 2012.

The Pavement Design submitted by us on the basis of analytical design approach was reviewed and discussed in length. For the simplicity of Design we were advised to draw the pavement crust thickness directly from the plates of IRC-37-2001, Guidelines for the Design of Flexible Pavements. In addition to that, we were also suggested to provide bituminous concrete (BC) thickness of 50mm throughout the project road in order to have uniformity in wearing course. Accordingly, the Pavement Crust thickness is revised as tabulated below:

Flexible Pavement Crust Thickness for Main Carriageway

Section	Proposed Chainage	Design MSA	Design CBR (%)	BC	DBM	Base (WMM)	Sub-base (GSB)	Sub grade
HS-A	Km150.400 to Km214.600	100	10	50	130	250	200	500
HS-B	Km214.600 to Km246.610	80	10	50	125	250	200	500
HS-C	Km246.610 to Km251.400	100	10	50	130	250	200	500

Strengthening / Overlay Thickness for Existing Road

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 1	100	151.640	152.640	1.58	50	95	0	0
HS 2	100	152.640	162.640	2.48	50	50	80	250
HS 3	100	162.640	166.640	1.44	50	90	0	0
HS 4	100	166.640	174.640	2.59	50	50	80	250
HS 5	100	174.640	176.640	1.58	50	95	0	0
HS 6	100	176.640	177.640	2.18	50	50	80	250
HS 7	100	177.640	181.640	1.70	50	50	50	0
HS 8	100	181.640	185.640	1.26	50	80	0	0
HS 9	100	185.640	188.640	1.59	50	95	0	0
HS 10	100	188.640	192.630	1.36	50	85	0	0
HS 11	100	192.630	194.630	1.47	50	90	0	0
HS 12	100	194.630	198.630	2.04	50	50	80	250
HS 13	100	198.630	205.610	1.39	50	85	0	0
HS 14	100	205.610	209.620	1.51	50	95	0	0

Homogeneous Section	Design MSA	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Characteristic Deflection (mm)	Strengthening / Overlay Thickness (mm)			
					BC	DBM-I	DBM-II	WMM
HS 15	100	209.620	212.600	1.36	50	85	0	0
HS 16	100	212.600	214.000	1.19	50	70	0	0
HS 17	100	214.000	215.000	1.61	50	50	75	250
HS 18	100	215.000	219.650	1.62	50	50	50	0
HS 18	80	219.650	224.380	1.25	50	65	0	0
HS 19	80	224.380	228.340	0.79	50	50	0	0
HS 20	80	228.340	230.340	1.69	50	90	0	0
HS 21	80	230.340	231.340	1.79	50	50	80	250
HS 22	80	231.340	233.340	1.64	50	90	0	0
HS 23	80	233.340	235.350	2.33	50	50	75	250
HS 24	80	235.350	238.350	0.80	50	50	0	0
HS 25	80	238.350	241.340	1.07	50	50	0	0
HS 26	80	241.340	242.340	1.75	50	50	75	250
HS 27	80	242.340	244.340	1.44	50	80	0	0
HS 28	80	244.340	246.410	0.98	50	50	0	0
HS 29	100	246.410	251.400	1.24	50	75	0	0

Flexible Pavement Thickness for Rehabilitation of Existing Road

Homogeneous Section	Proposed Chainage From (Km)	Proposed Chainage To (Km)	Pavement Thickness (mm)			
			BC	DBM-I	DBM-II	WMM
HS 2	152.640	162.640	50	50	80	250
HS 4	166.640	175.000	50	50	80	250
HS 6	176.640	177.640	50	50	80	250
HS 12	194.630	198.630	50	50	80	250
HS 17	214.000	215.000	50	50	75	250
HS 21	230.340	231.340	50	50	75	250
HS 23	233.340	235.350	50	50	75	250
HS 26	241.340	242.340	50	50	75	250

Proposed Composition of Profile Corrective Course (PCC)

Type of PCC	Level Difference between bottom of proposed overlay and existing road along existing road centre line	PCC layer
1	< 40 mm	PCC by DBM
2	> 40mm and < 150mm	PCC by BM
3	> 150mm and < 300mm	Dismantle the existing bituminous course and provide bituminous layers as per new carriageway design and rest with WMM as PCC
4	>300mm and < 500mm	Dismantle the existing bituminous course and provide bituminous layers as per new carriageway design and 250mm WMM. Remaining with GSB (min. 100mm) as PCC
5	> 500mm	Reconstruction with new carriageway pavement thickness by dismantling of existing pavement to requisite depth
6	> 1600mm	Reconstruction with new carriageway pavement thickness without dismantling the existing bituminous course

Flexible Pavement Crust Thickness for Service Road

Section	Design MSA	Design CBR (%)	SDBC (mm)	DBM (mm)	WMM Base (mm)	GSB Sub-base (mm)	Sub grade (mm)
All Service Roads	5	10	25	50	250	150	500

Rigid Pavement Crust Thickness for Toll Plaza

Rigid Pavement	Pavement Quality Concrete (PQC) in "mm"	Dry Lean Concrete (DLC) in "mm"	Granular Sub Base (GSB) in "mm"
Toll Plaza	340	150	200

Details of Dowel and Tie Bars of Rigid Pavement for Toll Plaza

Diameter of Dowel Bar	30 mm
Length of Dowel Bar	500 mm
Spacing between Dowel Bars	270 mm
Type of Dowel Bar	MS
Width of Transverse Joints	8 mm
Diameter of Tie Bar	12 mm
Length of Tie Bar	640 mm
Spacing between Tie Bars	470 mm
Type of Tie Bar	Deformed

You are requested to give your concurrence on above.

Intercontinental Consultants
and Technocrats Pvt. Ltd.

Independent Engineer Services for Design, Engineering, Construction, Development, Finance, Operation and Maintenance of 4 laning of Pune-Solapur Section of NH-9 from Km. 144.400 to Km. 249.000 in the State of Maharashtra under NHDP Phase III on Design, Build, Finance, Operate and Transfer (DBFOT) basis

PSRDCL
INWARD
TEC PRJ ADM ACC
17 FEB 2012
No. 1376
OPN OMT MNT TOL

ICT/PUNE/SOLAPUR/PSRDCL/385 Date: - 17.02.12

To,
Mr. K .R. Khan
The Project Director,
PSRDCL,
Solapur

Sub.:- Design, Engineering, Construction, Development, Finance, Operation & Maintenance of 4 laning of Pune-Solapur section of NH-9 from km 144.400 to 249.000 in the state of Maharashtra under NHDP Phase III on DBFOT basis –
Approval of Pavement Design -Reg

Ref: - PSRDCL/ PRJ/ TEC/ IEO/ 848 dated 13.01.2012

Dear Sir,

Reference of your above letter, Pavement Design submitted by you has been checked and reviewed by us. Crust Thickness of Pavement has been finalized keeping in view the VDF obtained and AADT furnished by you.

1. Flexible Pavement Crust Thickness for Main Carriageway

Section	Design Traffic for 20 Years MSA (2012– 2032)	Design MSA	Design Period for Stage -I	First Stage Construction (mm)				Second Stage Construction (mm)	
				BC (mm)	DBM (mm)	WMM (mm)	GSB (mm)	BC (mm)	DBM (mm)
HS-A km 150.400 to km 214.600	140	100	2012 - 2023	50	130	250	200	50	50
HS-B Km 214.600 to km 246.610	94	90	2012 - 2026	50	125	250	200	50	50
HS-C Km 246.610 to km 251.400	140	100	2012- 2023	50	130	250	200	50	50

Note: - The second stage construction (to extend the pavement's life up to the end of operation period of 20 years) will be taken up in the year 2024 for HS-A & HS-C and 2027 for HS-B, when about 70% of the pavement life designed in first stage will be consumed.

ISO 9001 REGISTERED DNV MGMT SYS RvA C 024 DNV Certification B.V. The Netherlands

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The Crust Thickness of slip roads, acceleration and deceleration lanes, and Median openings should be same as main carriageway.

2. Strengthening/Overlay Thickness for Existing Road

Homogeneous Section	Design MSA	Proposed Chainage (km)		Characteristic Deflection (mm)	Strengthening/Overlay Thickness (mm)			
		From	To		BC	DBM-I	DBM-II	WMM
HS 01	100	151.640	152.640	1.58	50	95	0	0
HS 02	100	152.640	162.640	2.48	50	50	80	250
HS 03	100	162.640	166.640	1.44	59	90	0	0
HS 04	100	166.640	174.640	2.59	50	50	80	250
HS 05	100	174.640	176.640	1.58	50	95	0	0
HS 06	100	176.640	177.640	2.18	50	50	80	250
HS 07	100	177.640	181.640	1.70	50	50	50	0
HS 08	100	181.640	185.640	1.26	50	80	0	0
HS 09	100	185.640	188.640	1.59	50	95	0	0
HS 10	100	188.640	192.630	1.36	50	85	0	0
HS 11	100	192.630	194.630	1.47	50	90	0	0
HS 12	100	194.630	198.630	2.04	50	50	80	250
HS 13	100	198.630	205.610	1.39	50	85	0	0
HS 14	100	205.610	209.620	1.51	50	95	0	0
HS 15	100	209.620	212.600	1.36	50	85	0	0
HS 16	100	212.600	214.000	1.19	50	70	0	0
HS 17	100	214.000	215.000	1.61	50	50	75	250
HS 18	100	215.000	219.650	1.62	50	50	50	0
HS 19	90	219.650	224.380	1.25	50	65	0	0
HS 20	90	224.380	228.340	0.79	50	50	0	0
HS 21	90	228.340	230.340	1.69	50	90	0	0
HS 22	90	230.340	231.340	1.79	50	50	75	250
HS 23	90	231.340	233.340	1.64	50	90	0	0
HS 24	90	233.340	235.350	2.33	50	50	75	250
HS 25	90	235.350	238.350	0.80	50	50	0	0
HS 26	90	238.350	241.340	1.07	50	50	0	0
HS 27	90	241.340	242.340	1.75	50	50	75	250
HS 28	90	242.340	244.340	1.44	50	80	0	0
HS 29	90	244.340	246.410	0.98	50	50	0	0
HS 30	100	246.410	251.400	1.24	50	65	0	0

3. Flexible Pavement Thickness for Rehabilitation of Existing Road

Homogeneous Section	Proposed Chainage		Pavement Thickness (mm)			
	From (km)	To (km)	BC	DBM-I	DBM-II	WMM
HS 02	152.640	162.640	50	50	80	250
HS 04	166.640	175.000	50	50	80	250
HS 06	176.640	177.640	50	50	80	250
HS 12	194.630	198.630	50	50	80	250
HS 17	214.000	215.000	50	50	75	250
HS 22	230.340	231.340	50	50	75	250
HS 24	233.340	235.350	50	50	75	250
HS 27	241.340	242.340	50	50	75	250

4. Flexible Pavement Crust Thickness for Service Road

Section	Design MSA	Design CBR (%)	SDBC (mm)	DBM (mm)	WMM Base (mm)	GSB Sub-base (mm)	Sub grade (mm)
All Service Roads	5	10	25	50	250	150	500

5. Rigid Pavement Crust Thickness for Toll Plaza

Rigid Pavement	Pavement Quality Concrete (PQC) in (mm)	Dry Lean Concrete (DLC) in (mm)	Granular Sub Base (GSB) in (mm)
Toll Plaza	340	150	200

6. Details of Dowel and Tie bars of Rigid Pavement for Toll Plaza.

Diameter of Dowel Bar	32 mm
Length of Dowel Bar	600 mm
Spacing between Dowel Bars	270 mm Centre to Centre
Type of Dowel Bar	M S
Width of Transverse Joints	10 mm
Width of Longitudinal Joints	8 mm
Diameter of Tie Bar	12 mm
Length of Tie Bar	640 mm
Spacing between Tie Bars	300 Centre to Centre
Type of Tie Bar	Deformed

Please you proceed your work accordingly.

Thanking you,

Yours truly,

(A.P.Singh)
Team Leader

CC: - 1) CGM NHAI, Nagpur
2) Project Director, NHAI, Solapur.
3) Mr. A K Bajaj, IE, ICT Pvt. Ltd;
4) Md. Nur Alam, Senior Pavement Expert, ICT Pvt. Ltd.
5) Mr. I Prasad Rao, Traffic and Transportation Expert, ICT, Pvt. Ltd.

BARWA-ADDA-PANAGARH SECTION OF NH-2 FROM KM 398.240 TO KM 521.120

TECHNICAL STUDY & INDEPENDENT ASSESSMENT OF MAJOR AND O&M REQUIREMENTS

Roadstar Infra Investment Trust

Report Number:

TRANSYS-2512023-TDD-BAP-001-R2

Date:

December , 2023

Prepared for:

Roadstar Infra Investment Trust

The IL&FS Financial Center, 6th Floor, Plot C-22,
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R3	20-12-2023	-	Sandeep

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1 EXECUTIVE SUMMARY

1.1 Basis of Preparation

1.1.1 General

Barwa Adda Expressway Limited (BAEL) was engaged for the construction of a six- lane highway in the Barwa – Adda section of NH-2 from Km. 398.240 to Km. 521.120 (design length of approximately 122.88 km) in the States of Jharkhand and West Bengal under National Highway Development Program Phase-V on a Design-Build-Finance-Operate-Transfer (DBFOT) basis. A concession agreement dated May 8, 2013 was entered into between the NHAI and BAEL. The project commenced tolling on April 5, 2014. The concession period for this project is 20 years commencing from April1, 2014.

M/s Roadstar Infra Investment Trust (hereinafter "**the Client**") has appointed M/s Transys consulting Pvt. Ltd. (hereinafter referred as "**Technical Consultant**") to carry out technical study and assess the Major and O&M requirements of operational asset "6-lane Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120 on DBFOT toll basis" in the States of Jharkhand and West Bengal (herein after refer as "**the Project**") which is being operated by "M/s Barwa Adda Expressway Limited" (hereinafter refer as "**the Concessionaire** or **BAEL**").

Table 1-1 : Description of Asset

S. No.	Stretch	States	Start (Km)	End (Km)	Length (km)	Lane configuration
1	Barwa-adda – Panagarh section of NH-2 (New NH Number-19) from Km 398.240 to Km 521.120 in the states of Jharkhand and West Bengal.	Jharkhand and West Bengal.	398+240	521+120	122.880	6Lane

1.1.2 Objective and Scope of services

This report is prepared as per scope of work defined in Work Order and directed to include in report by the Client and test report provided to us. Our work, which is summarized in this Report, has been limited to matters which we have identified that would appear to us to be of significance within the context of our scope.

The present condition of the Project Highway is reviewed based on physical site visit observations and documents and test reports provided by the Client.

This report submission covers Cost Estimate of OPEX for collection of tolls and to satisfy Operation and Maintenance requirement as per Concession Agreement and to provide performance level as per requirement of the project.

1.1.3 Sources of information

Primarily the following documents have been studied:

a) Project Document

- Concession Agreement
- Schedule A, B, C and D
- Pavement Design Report
- Plan and Profile
- Earlier Due diligence reports
- Monthly Progress Report prepared by IE
- MM works under execution.

b) Surveys & Investigations

- NSV Survey Data
- FWD Test Report with analysis
- Axle loas surveys and analysis
- Past Traffic data at toll plazas
- Existing crust

1.2 Salient Features of the project road

The major features along the project road are highlighted in following table:

Table 1-2 : Salient features of the project road

Sl. No	Particulars	
1	Start Chainage (Km)	398.240
2	End chainage (Km)	521.120
3	Length of the Project Corridor	122.88 Km
4	Concessionaire	M/s. Barwa-Adda Expressway Limited
5	Concession Period	20 years from appointed date
6	Executing agency	M/s. Barwa-Adda Expressway Limited
7	Project Cost	Rs. 1665.0 Cr (As per CA); Rs. 2434.86 Cr (As per Financial Model)
8	Date of Award	5th April 2013
9	Appointed Date	1st April 2014
10	Date of Completion	As per CA - 26/09/2016 Anticipated completion – 31/12/2023
11	No of Toll Plaza	02 Nos.
12	No of Bypass	01 Panagarh Bypass about 8.12 Km
13	Length of Service Road / Slip Road	139.508 (Including Both Sides)
14	Number of Flyovers	13 Nos.
15	Number of PUP/SVUP/LVUP/VUP	33 Nos.
16	Number of Overpasses	02 Nos.
17	Number of Minor Bridges	21 Nos.
18	Number of Major Bridges	06 Nos.
19	Number of RoB's	06 Nos.
20	Traffic& Highway Amenities	2 Way Side amenities and 2 Truck Parking
21	Number of Culverts (Pipe)	87 Nos.
22	Number of Culverts (Slab/Box)	115 Nos.
23	Number of Major Junctions	14 Nos.
24	Number of Minor junctions	40 Nos. (including both sides)

Key map showing the project road is given in the next page.

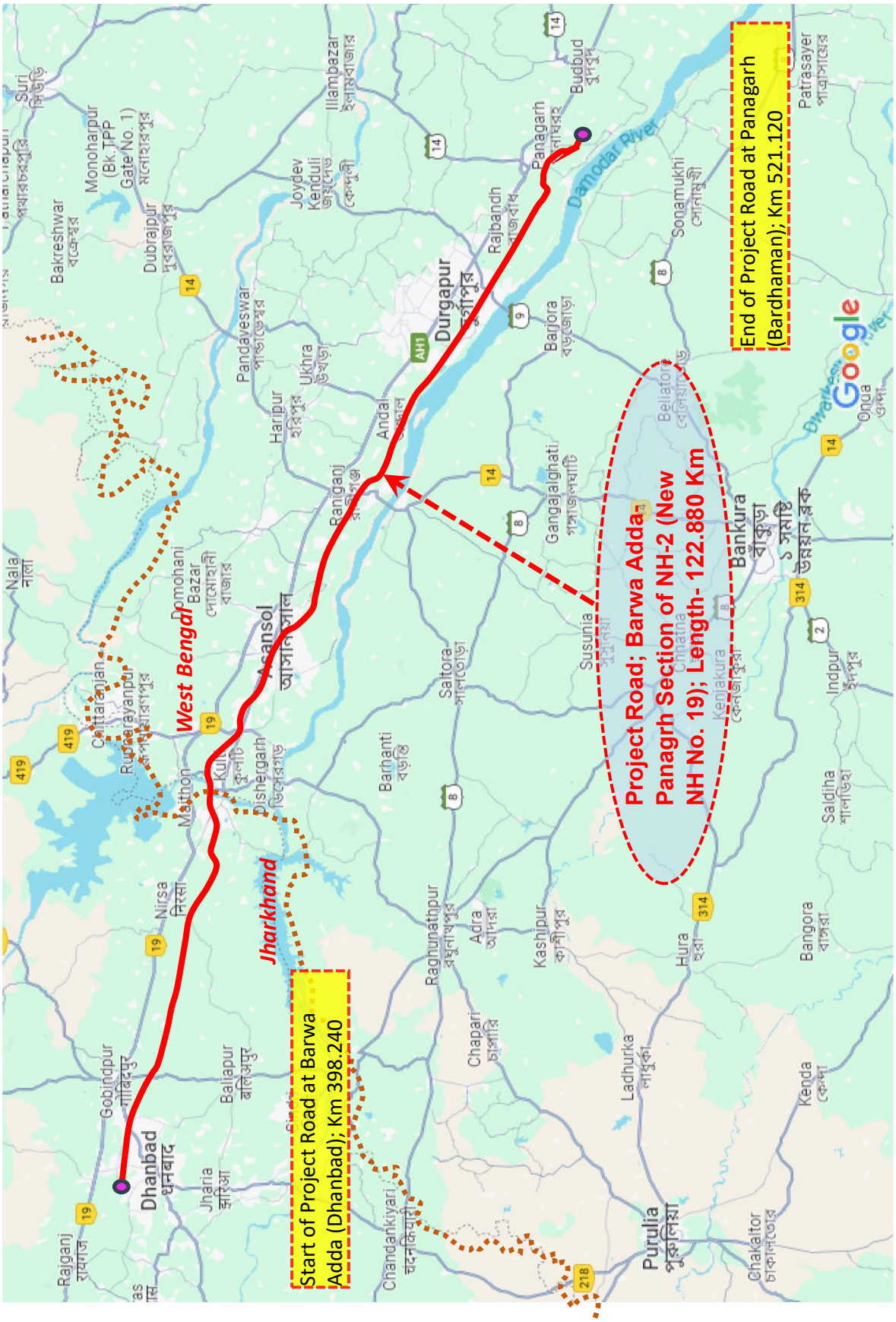


Figure 1-1 : Key Map

1.3 Key Findings

We have rated key findings with Red/Amber/Green for high risk, medium risk and low risk respectively.

🔴	**High Risk:** Critical risks that will have material impact on cost of project during balance concession period
🟡	**Medium Risk:** Moderate likelihood of impact on cost of project during balance concession period
🟢	**Low Risk:** Low level of impact on cost of project during balance concession period

Table 1-3 : Key Findings

Diligence Area	Findings	Risk
Balance Works	As per CA construction is to be completed by 26/09/2016. The majority of construction was completed in the year 2017. There are still some stretches where construction work is balance and currently in progress at site. Approx. in a length of 12.24km still construction is going on main carriageway including structure approach. Service road is under construction in a length of 6.495km and 19.035 km on LHS and RHS respectively. It is learned that due to slow progress of work exhibited by concessionaire balance work has not been completed yet. Anticipated completion date is 31.12.2023. Concessionaire has awarded the balance work to M/s S&P-Skylark and agreement made on 10thJune 2022	🔴
Operation and Maintenance	As per Article 17 of Concession Agreement, Concessionaire shall maintain project highway either by itself, or through the O & M Contractor. The concessionaire shall procure that at all time during the O & M period, the Project Highway conforms to the maintenance requirement set forth in Schedule-K. As per IE O & M Inspection Report, Concessionaire is advised to carryout day to day routine maintenance within given time frame.	🟡
Maintenance Manual and Yearly Program	As per Article 17.4 of Concession Agreement, Concessionaire required to submit proposed Program not later than 45 days before beginning of each accounting year.	🟢
Pavement Design	Pavement design was done as per IRC 37 – 2011 considering 8 % CBR. Key fact of pavement design is as follows: - Pavement design 13 years for BT layers and 20 years for Granular layers - Design Traffic varying from 31 to 70 MSA. - Total Traffic till year 2034 – 62 to 140 MSA Adopted Pavement thickness: BC – 50 mm, DBM - 50mm, AIL - 100mm, CTB - 75 to 105mm, CTSB – 250mm Pavement design for Service Road was designed for 10 MSA and accordingly following pavement thickness was adopted for Service Road. BC – 40 mm, AIL - 100mm, CTB - 100mm, CTSB – 250mm	🟢
Pavement Condition	As per Roughness survey report of May 2023 carried out by M/s SOWiL Limited, 92% length is in good to fair condition (roughness < 2500mm/km) and remaining 8% length is in poor condition As per our site observation, existing pavement condition is in Fair to Poor condition.	🟢

Diligence Area	Findings	Risk
Penalty	Penalty imposed / recommended by NHAI / IE. a) Rs. 5.24 Lakh recovery damage penalty imposed by IE for not repairing potholes on road. b) IE reported undue lane closure on Barakar bridge at Km 441 and recommended a penalty to be recovered by from concessionaire, Rs. 31. 82 Lakh in this regard c) IE reported undue lane closure on Garui ROB at Km 454 and recommended a penalty to be recovered by from concessionaire, Rs. 83. 04 Lakh in this regard d) Concessionaire has contested imposition of all penalties and attributes the reason of lane closure to authorities for their indecision on the issue Concessionaire is arguing all required action were taken by him under contract. Lanes were closed due to delay in instructions by authorities	
Change of Scope	NHAI issued COS notices to the Company Pursuant to Article 16 of the CA for following Items: - (A) Positive COS The COS proposals amounting to Rs. 111.55 cr was submitted to NHAI and are in various stages of approvals. Some of these COS are completed and some are in progress. (B) Negative COS 1. Negative COS towards Govindpur, Nirsa and Bograchotti – 119.46 cr 2. Negative impact towards O&M costs for de- scoped portion of Six-laning works – 11.99 cr 3. Negative impact towards De-scoping proposal of 6.852 km length of LHS service road held-up due to non-shifting of GEECL gas pipelines – 11.98 c Pending with NHAI	
Toll Plaza and TMS	There are two toll plazas along the project corridor at Km 438.500 (TP 1) having 5 + 5 lanes and Km 507.100 (TP 2) having 7 + 7 lanes. Rigid pavement has been provided at toll plazas. The existing Rigid Pavement at to both the Toll Plaza is in fair condition. The existing TMS system is in order and we do not envisaged any issue. The replacement of system is expected in Year 2028, 2033 and 2038.	
Major Issue Identified by IE	Current issue as per IE MPR oct 2023 is as follows: 1. MCW & Service Road construction progress is very slow due to lack of resources. 2. In Sep. 2023 balance work progress is approx. 0.35% (Total=84.65%). Remaining 15.35% to be completed in 03 months. So, Concessionaire has to be expediting the progress fast for completion of project up to 31.12.2023. 3. Safety in construction zone is not satisfactory. Diversion at km 433.550 is not satisfactory. NCR and Notice issued. 4. Condition of Road markings and road studs is poor and to be redone in entire length. 5. Routine Maintenance of Road Furniture (MBCB, Road Signs, kerb painting etc.)	
Road Safety	Road safety appurtenances in the form of sign board, blinker, road	

Diligence Area	Findings	Risk
	marking, lighting of highway, metal beam crash barrier etc. has provided as per Concession Agreement. As per site visit, following additional measures are recommended to enhance safety for road users: • Provide blinkers at all median • Provide missing median plant to reduce glare affect during night • Wrong placement of Sign Board • Provide PGR between MCW and SR at all locations • Antiglare arrangement at narrow median (width less than 2 m)	
Geometric Design	The project road is to be designed as per Specifications and Standards provided in Schedule D. Key parameters of design is as follows: Design Speed – 100 kmph, Minimum Radius 400 m as ruling and 250 m as absolute minimum, K value for Summit Curves 70 and Valley Curves 42 for Stopping Sight Distance. Project road confirms requirement of Schedule D.	●
As-Built Drawing	As per provision of Contract Sub Clause 12.3(a), the Concessionaire shall prepare and submit, with reasonable promptness and in such sequence as is consistent with the project completion schedule, three copies each of all drawing to the independent engineer to review.	●

1.4 Asset Condition

In general, the condition of asset is in Fair condition. As per consultants' study, with existing arrangement for Operation and Maintenance and with every 5 or 6 years cycle of Major Maintenance (Overlay) cycle, project road will continue to fulfill Level of Service as set forth in Schedule K and requirement of Article 17 of Concession Agreement except following improvements are required:

- Safety enhancement
- Roughness Survey and FWD Survey to be conducted as per frequency stated in Schedule L

The summary of asset condition is tabled as follow:

Table 1-4 : Asset Condition

Sl. No	Asset	Condition
1	Main Carriageway	Project road is 6 lane having paved width of 2 x 12.25 m at normal sections and 2 x 12.5 m at approach of grade separated structures. The pavement condition of existing pavement is generally in fair condition with isolated stretches of poor condition
2	Service Road	5.50 m & 7 m width of service road has provided at approach of Grade Separated Structures and at built up area. Total length of service road is 149.310 km including both sides. The pavement condition of service road is in fair condition. Also, routine maintenance of service road was found in poor condition. At some locations heavy commercial traffic is plying on the service road damaged pavement of service road as service roads are designed for 10 MSA only as per contract. These locations are after Raniganj towards Panagarh as majority of roads from Bihar and Northeast States join between this section. Approx. length of these sections is 21.65 km, and these stretches need immediate repair

Sl. No	Asset	Condition
3	Median	4.5/2.0 m raised median has been provided. Median plantation in rural areas (4.5 m width) is in order, trimming is required in entire stretch. NJCB has been provided at 2m wide median locations and is in fair condition.
5	Drainage arrangement	Lined drain has provided between Main Carriageway and Service Road/at outer edge of slip road and is in good condition.
6	Major and Minor Junctions	14 nos of major junctions and 40 nos of minor Junctions are found along project road.
7	Safety Barrier	Metal Beam Crash barrier has provided along outer edge and median side and RCC Crash barrier has provided over approach of GS Structure on top of RE Wall and is in good condition
8	Pedestrian Guard Rail	Pedestrian Guard Rail has provided in between MCW and SR at some built up area to guide pedestrian safely to crossroad at designated location. However, PGR has not provided at complete required length i.e. between MCW and SR. As per Inventory condition survey report 3670 m is found at site.
9	Toll Plaza	There are two toll plazas along the project corridor at Km 438.500 (TP 1) having 5 + 5 lanes and Km 507.100 (TP 2) having 7 + 7 lanes. Rigid pavement has been provided at toll plazas. The existing Rigid Pavement at to both the Toll Plaza is in fair condition. The existing TMS system is in order and we do not envisaged any issue. The replacement of system is expected in Year 2028, 2033 and 2038.
10	Highway Lighting	Highway lighting is provided at the Toll Plaza, approach of major Junction at median. 51 nos of High Mast have provided at Toll Plaza, Major Junctions and Flyovers. Existing condition of highway lighting is in order.
11	Bus Bays and Bus Shelters	40 nos of bus bays with shelter have observed at site and conditions.of bus bays and shelters are generally found to be in good condition. However, at 8 locations bus sheds are damaged and needs to be repaired.
12	Truck Lay byes	14 nos of truck laybys have been provided with facility of toilets and drinking water facilities and no major repairs are required at present.
13	Traffic Sign and Marking	292 nos. of Traffic Sign boards were observed during the inventory of project road. The condition of most sign boards was found to be Good except some of sign boards are required to be replaced with new. Road Marking was in poor condition.
14	Major Bridge	6 no of Major Bridge has provided and structural condition of bridge is fair to good. Drainage Spout cover and elastomeric strip seal is found to be defective which are required to be provided.
15	Minor Bridge	21 numbers of Minor Bridge are in fair to good condition. Maintenance / cleaning of Expansion Joint, drainage spouts and protection work are required.
16	PUP/SVUP/LVUP/ VUP	33 Nos, structurally in good condition.
17	ROB	6 nos of ROB having varying span arrangement and found to be in good condition.
18	Cross Drainage	Total 80 nos of cross drainage structures have found and condition of structure are found to be in order.

1.5 Requirement of O & M and Periodic Maintenance as per Concession Agreement

As per Schedule K, the Concessionaire shall take all such actions and do all such things (including without limitation, organizing itself, adopting measures and standards, executing procedures including inspection procedures, highway patrols and engaging contractors, if any, agents and

employees) in such manner, as well:

i) Ensure the safety of personnel deployed on and users of the project facilities or part thereof.
ii) Keep the Project Facilities from undue deterioration and wear
iii) Permit unimpaired performance of statutory duties and functions of any party in relation to

During the concession period, the Concessionaire is fully responsible for Operation & Maintenance of Project Highway. Schedule K elaborates requirement various service factor desirable level and acceptable level during O & M period along with time period if any parameter level of service beyond acceptable limit.

As per schedule K, no mention of periodic/structural overlay of pavement. However, there is a provision of repair/rectification if the roughness value exceeds 2500mm/km.

It is observed that traffic projections as per current traffic are higher than those taken at design time. Hence early strengthening of pavement may be required. The remaining life pavement in approx. 20 km on LHS and 27 km. on RHS is less than 2 years, these sections require immediate overlay. These sections have been proposed with structural overlay in the year 2024/25. Strengthening of pavement is worked out on the basis of FWD analysis and new projections of traffic loading. The same detailed out in relevant chapter of this report.

The anticipated balance MSA (2023-2038) to be served till end of concession period is 111 and 208 for section1 (Barwa adda-Raiganj) and section2 (Raiganj – Panagarh) respectively. The pavement design adopted during construction is for 62 and 140 MSA..

While estimating the maintenance requirements concession period up to year 2038 has been considered as per concessionaire letter BAEL/PRJ/TEC/ICO-581/2023/3943 dated 13th oct 2023.

1.6 Major Maintenance

Major Maintenance is required in order to comply requirement of Concession Agreement and to maintain performance level as defined in CA. MMR cycle has been done on the basis of point wise FWD analysis and roughness surveys. The basic principle considered in calculating overlay requirement is as under:

A. The traffic projections (MSA) are obtained from the combined results of axle load and historical traffic data as given in previous sections.

B. The project stretch is divided into 2 homogenous sections and all the parameters are listed for each section.

C. For the sections having poor riding quality or the remaining life is less than 2years, immediate overlay has been proposed as per design traffic in the year 2038.

D. Sections which satisfy both the functional parameters as well have a life more than 2 years life are considered for routine maintenance only.

E. As per schedule K, there is provision of repair/rectification if the roughness value exceeds 2500mm/km. Accordingly responsive overlay has been proposed as given in the table below:

Table 1-5 : Major Maintenance requirements for pavement

S.N.	Year	Treatment Proposed	
		LHS	RHS
a) Main Carriageway			
1	FY24/25/26	Overlay for the sections with poor riding quality and remaining life less than year 2025, length 20.40 km Only BC in 2.00 km and BC+DBM in	Overlay for the sections with poor riding quality and remaining life less than year 2025, length 27.28 km Only BC in 6.70 km and BC+DBM in 20.58

S.N.	Year	Treatment Proposed	
		LHS	**RHS**
		18.40 km	km
		Immediate Major Repairs Cost has been considered @ 9% in the Fy 2023-24, @ 15% in the FY 2024-25 and 76% in Fy 2025-26	
2	FY27/28/29	30mm BC Overlay – 0 % 40mm BC Overlay – 85 % Where structural overlay is provided with DBM+BC in the year 2024, no improvement is considered in this cycle	30mm BC Overlay – 0 % 40mm BC Overlay – 83 % Where structural overlay is provided with DBM+BC in the year 2024, no improvement is considered in the year 2027/28
		Functional + Structural overlay MCW+S/R in 1st periodic maintenance cost has been considered @ 25% on Fy 2026-27, @50% on Fy 2027-28 and 25% on Fy 2028-29	
3	FY32/33/34	30mm BC Overlay – 85 % 40mm BC Overlay – 15 %	30mm BC Overlay – 83 % 40mm BC Overlay – 17 %
		Functional + Structural overlay MCW+S/R in 2nd periodic maintenance cost has been considered @ 25% on Fy 2031-32, @50% on Fy 2032-33 and 25% on Fy 2033-34	
4	FY36/37/38	40 mm BC Overlay in entire stretch	40 mm BC Overlay in entire stretch
		Functional + Structural overlay MCW+S/R in 3rd periodic maintenance cost has been considered @ 25% on Fy 2035-36, @25% on Fy 2036-37 and 50% on Fy 2037-38	
b) Service Road			
1	FY24/25/26	30mm BC for the sections with poor riding quality, length 21.65km	30mm BC for the sections with poor riding quality, length 21.65km
2	FY27/28/29	30 mm BC overly on service road stretch excluding the under construction stretch 25.53 km & the stretch of service road undergone for immediate repair	
3	FY32/33/34	30 mm BC on 100 % length	30 mm BC on 100 % length
4	FY36/37/38	40 mm BC on 100 % length	40 mm BC on 100 % length
c) Structure Major Maintenance			
Replacement of Wearing Coat at every MM Cycle			

Table 1-6 : Major Maintenance Cost and periodic maintenance cost

Sl. N0.	Type of maintenance	Year	Base Cost excl. GST (year 2024) (Rs. In Cr.)	Subtotal of base cost (Rs. In Cr.)	Esc Period	Cost on due date @ 5% Escalation (Rs. In Cr.)	Subtotal of escalated cost (Rs. In Cr.)
1	Immediate Major Maintenance	2023/24	5.11	**56.80**	0	5.11	**61.65**
2		2024/25	8.52		1	8.95	
3		2025/26	43.17		2	47.60	
4		2026/27	30.74	**135.31**	3	35.59	**164.56**

Sl. N0.	Type of maintenance	Year	Base Cost excl. GST (year 2024) (Rs. In Cr.)	Subtotal of base cost (Rs. In Cr.)	Esc Period	Cost on due date @ 5% Escalation (Rs. In Cr.)	Subtotal of escalated cost (Rs. In Cr.)
5	1st Periodic Maintenance	2027/28	73.82		4	89.73	
5		2028/29	30.74		5	39.24	
7	2nd Periodic Maintenance	2031/32	32.84	**139.94**	8	48.52	**217.22**
8		2032/33	74.26		9	115.20	
9		2033/34	32.84		10	53.50	
10	3rd Periodic Maintenance	2035/36	42.02	**182.94**	12	75.47	**350.51**
11		2036/37	42.02		13	79.24	
12		2037/38	98.90		14	195.81	

1.7 Routine Maintenance

Routine Maintenance will mainly consist of the following costs.

- Cost of Routine repair and maintenance
- Cost of routine operation
- Cost of Tolling Operation
- Electrical work Cost
- Structure Maintenance Cost
- Transportation Cost
- TMS/HTMS costs and other
- SPV Costs

Cost of Routine Maintenance is shown in table below:

Table 1-7 : Routine Operational Cost (Annual)

Sl. No.	Description	Remarks	Amount (in CR) in FY 2023-24	Amount (in CR) FY 2024-25 onwards
1	R&R of Road works	Routine maintenance related to pavement repairs like pothole repairs, crack sealing, patch works, Replacement of road furniture, repair of kerb, kerb painting, sign boards repair, drain repair, shoulder repair, Road Marking repair, replacement of Safety Barriers etc.	1.63	3.26
2	R&R of Structure works	Maintenance related to bridges and structures at including bearing, replacement, expansion joint replacement, grouting, RE wall repair etc.	0.54	1.07
3	Incident Management (IM) Services & Route Operation	Includes IM staff: RPV- driver, RPO, helper; Ambulance- driver, paramedic, helper; Recovery Vehicle- driver, helper and Incident manager. Also includes: RPV/Ambulance/Recovery Vehicle- running, maintenance, rent etc, Diesels expenses	1.65	3.31
4	Toll Plaza	Includes outsourced manpower related to	4.99	9.98

SI. No.	Description	Remarks	Amount (in CR) in FY 2023-24	Amount (in CR) FY 2024-25 onwards
	Operation	toll collection - toll collectors, supervisors and associated expenses like uniform, printing rolls, food expense, accommodation etc.		
		O & M Cost in Crores	**8.81**	**17.62**

1.8 Conclusions

a) The project Road length is 125.380 Km and it is six lane divided Carriageway with Flexible Pavement.

b) The construction work in most of stretch is complete and the anticipated date of completion for balance works is 31-12-2023.

c) The concession period is 20 years i.e. up to 2034. However, as the present traffic is less than target traffic as per CA, concessionaire proposes for extension of concession period up to 2038.

d) Present tollable traffic is 27060 pcu at Beliyad toll plaza and 54320 pcu at Banskopa toll plaza. The growth rates of traffic is varying widely. For LCV growth is decreasing @ 5 to 6% and for buses increasing @ 0.59% to 3.79%. 2Axle truck traffic is increasing @ 3.3% at Beliyad toll plaza and decreasing @ 0.07% at Banskopa toll plaza. 3Axle trucks are decreasing by 4.5% to 8.9%. Multi axle traffic is in increasing trend with 2.1% at Beliyad plaza and 8.71% at Banskopa plaza. Considering this, 5% growth has been considered for MAV and 2% for other vehicles.

e) The Average granular layer thickness of existing pavement varies from 400 mm to 700 and bituminous layer thickness varies from 100 mm to 200 mm. As per Roughness survey report of May 2023 92% length is in good to fai2 condition (roughness < 2500mm/km) and remaining 8% length is in poor condition. As per visual observation, the existing pavement is in fair condition with isolated patches of Poor condition. Some maintenance work with patching were observed in different locations of the project corridor.

f) In the Project corridor, all the structures are in good condition. No major Maintenance is required.

g) The signboards are in good condition. Road markings and studs are in poor condition and need to be replaced most of the length. Solar blinkers were not provided at most of the median opening locations along the corridor. Few Blinkers are not in working condition.

h) The highway lightings are in working condition, but the LUX level is less than 40.

i) The remaining life pavement in approx. 20.4 km on LHS and 27.28 km on RHS is less than 2 years, these sections require immediate overlay. These sections have been proposed with structural overlay in the year FY 24/25/26. For other sections responsive overlay has been considered.

2 SURVEYS AND INVESTIGATIONS .

2.1 Objective and Scope of services

The main objective of undertaking surveys and investigations is to appreciate the existing engineering features along the project corridor and to understand the present condition of the various elements of the project road and to prepare inputs required for various rehabilitation and maintenance strategies. The present condition of the Project Highway has been assessed based on physical site visit observations and documents and test reports provided by the Client.

2.2 Sources of information & Documents reviewed

Following data/documents have been provided by the client which have been reviewed and considered for assessment of O&M requirement and major maintenance requirement for the project road;

a) Signed Concession Agreement including Technical Schedules;
b) Past O&M Reports (Concessionaire/IE reports)
c) Past roughness test report/results
d) Past FWD test report/results
e) Past NSV survey report/results
f) Past Due Diligence Reports
g) Past MPR & Inspection Reports
h) Traffic survey report
i) Past Report on ongoing or completed major maintenance

2.3 Surveys & Investigations

Following Survey and Investigations have been undertaken as a part of study with an objective to understand the present condition of the road and there by access the quality of construction and as well to prepare requisite rehabilitation/corrective designs where necessary.

- Road Inventory/Asset Inventory Surveys
- Visual Pavement & Structural Condition Surveys
- Collection of pavement crust data by trial pits @ every 15 km interval
- Axle load survey at two locations for the assessment of axle loading pattern and estimation of VDF. (48 Hrs. at each location)
- Under Construction Stretches of Project Road
- Road Marking & Traffic Signages

2.3.1 Road Inventory

The project corridor has Flexible pavement in the entire length, with 10.50m wide carriageway flanked by 1.5m paved shoulder and 2.0 m earthen shoulder on each side.

In general, the median is raised median of width varying between 1.5 to 4.0m all along the project road.

The project corridor generally runs in plain and rolling terrain. The land use along the project road is mostly Agricultural interspersed with urban settlements. Govindpur, Nirsa, Raniganj, Asansol, Durgapur and Panagarh are major built-up area through which the project road traverses.

In general, road embankments are in the range of 1.5m to 2.5m height. Embankments higher than 2.5m are observed mainly in the approaches of CD structures and Underpass locations.

There is total 149.310 km of service road (including both sides) at built up and other sections. Service road between Km. 466.780 to Km. 467.640 is in very poor condition and needs immediate attention for repair/reconstruction. Also, the stretch between Km. 428.040 to Km. 428.400 has temporary service road which also needs to be constructed.

The Project Road has about 48 nos. of major and minor junctions along its length.

There are 21 nos. of minor bridges and 6 nos. of major bridges along the entire project stretch.

There are 6 nos. of RoB's along the entire project stretch.

There is total 10 nos. of grade separated structures (flyovers), 21 nos. of VUP's, 02 nos. of VOP's, and 10 nos. of PUP/CUP along the entire project stretch.

There are two toll plazas in project stretch. One at km.438+500 at Maithon and second at km.507+085 at Banskopa. Both the Toll plazas are fully operational. Toll plaza control centre is located at Ch. 507+085.

2.3.2 Visual Pavement Condition Surveys

The Pavement condition Survey has been conducted by visual observation. The Condition survey has been conducted for each km length in each direction. By visual inspection the pavement condition appears to be fair and riding quality is satisfactory in most of the stretches. Stretches with major pavement distress are presented in the table below;

Table 2-1 : Detail of Distresses in existing pavement

S. No.	Start Chainage	End Chainage	Length(m)	Distress
1	411+700	411+800	100	Cracking on LHS C/W
2	414+000	414+250	250	Cracking on RHS C/W
3	432+900	433+000	100	Cracking with Ravelling and Rutting
4	434+240	434+260	20	Cracking with Potholes
5	442+920	442+980	60	Patching on LHS C/W
6	451+260	451+360	100	Cracking on RHS C/W
7	449+900	449+950	50	Cracking on LHS C/W and Potholes on RHS C/W
8	451+100	451+240	140	Cracking on LHS C/W
9	464+600	464+700	100	Cracking with Ravelling and Rutting
10	466+020	466+140	120	Cracking on LHS C/W
11	508+110	508+160	50	Patching on LHS C/W
12	508+300	508+500	200	Cracking with Ravelling and Rutting
13	518+750	518+800	50	Cracking on LHS C/W

2.3.3 Condition Surveys of Structures

Most of the structures appear to be in fair to good condition as inspected by visual observation. Minor repair works like repairing/replacement of wearing coat, clearing of drainage spouts, repair of expansion joints, cleaning of water way/vent etc. is required for most of the structures.

The detail of structure conditions and requirement of repair works is presented below in tabular form;

Table 2-2 : Condition & Proposed Repair Works of Structures

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
1	398+495	PUP/ CUP	1x7.0	Construction work is still under progress	-	-
2	398+820	Flyover- 3 Lane (RHS)	1x32.5+2x16.675	Construction work is still under progress	-	-
3	399+230	PUP/ CUP	1x7.0	Construction work is still under progress	-	-
4	403+440	VUP	1x12.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust	Expansion joints & drainage spouts to be rectified Repair of outer side RCC crash barrier (approx. 1.0m length)
5	405+345	Minor Bridge	1x25.94	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust	Expansion joints & drainage spouts to be rectified
6	407+400	PUP/ CUP	1x7.0	Descoped	-	-
7	407+545	Flyover- 3 Lane (RHS)	1x46.0+2x16.675	Descoped	-	-
8	408+320	Flyover- 6 Lane	1x46.0+2x16.675	Descoped	-	-
9	409+090	PUP/ CUP	1x10.0	Descoped	-	-
10	409+880	Minor Bridge	1x15.495+1x15.10+1x15.495	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust	Expansion joints & drainage spouts to be rectified Wearing coat to be replaced/repaired

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
11	411+375	VUP	1x12.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust No vertical drainage pipe in approach (RE Wall) Pavement of cross road under VUP is damaged	Expansion joints & drainage spouts to be rectified Vertical drainage pipe to be installed in approach (RE wall) Pavement of cross road under VUP to be repaired
12	413+890	VUP	1x12.0	-	Expansion joints & drainage spouts buried under silt & waste Vegetation growth in RE wall on BHS	Expansion joints & drainage spouts to be rectified Vegetation growth to cleaned from sides of RE wall
13	415+115	Minor Bridge	1x25.94	-	Overall fair condition of structure and Pavement Vegetation growth at abutment locations and on footpath RCC crash barried damaged in around 2.5 m length	Vegetation to be cleaned RCC crash barrier to be repaired
14	417+960	PUP/ CUP	1x10.0	-	Overall fair condition of structure and Pavement RCC crash barrier damaged in around 1.5m length Vegetation growth at abutment locations	RCC crash barried to be repaired Vegetation to be cleared

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
15	420+075	Major Bridge	5x13.75	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust	Expansion joints & drainage spouts to be rectified Vegetation growth on abutment/pier needs to be cleared
16	421+400	VUP	1x12.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth on face of RE wall	Expansion joints & drainage spouts to be rectified Vegetation growth on face of RE wall needs to be cleared
17	424+400	PUP/ CUP	1x10.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth on face of RE wall Pavement of cross road under PUP is damaged RCC crash barrier damaged in around 1.5m length	Expansion joints & drainage spouts to be rectified Vegetation growth on face of RE wall needs to be cleared Pavement of cross road under PUP to be repaired RCC crash barried to be repaired
18	428+205	VUP	1x12.0	Descoped	-	-
19	429+970	Minor Bridge	2x15.495+1x15.1	New Bridge on LHS still under construction Only structure part is complete for new bridge	For Old Bridge: Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth on abutment/pier	Expansion joints & drainage spouts to be rectified Vegetation growth to be cleared

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
20	433+565	VUP	1x12.0	Still under construction Only structure part is complete, Approaches and RE wall construction work yet to be completed	-	-
21	437+050	Minor Bridge	1x25.94	New Bridge on LHS still under construction Only structure part is complete for new bridge	For Old Bridge: Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth on abutment/pier	Expansion joints & drainage spouts to be rectified Vegetation growth to be cleared
22	437+775	VOP	1x42.50	-	Overall fair condition of structure and Pavement	No repair works required
23	441+330	Major Bridge (Barakar)	2x47.35+8x48.15	-	Overall fair condition of structure and Pavement MBCB damaged in a length of approx. 25m	Damaged MBCB to be replaced and appropriate end treatment of MBCB to be done
24	443+710	Road Over Bridge (ROB)	3x25.0+1x61.75	-	Overall Good condition of structure and Pavement Drainage spouts buried under silt/ dust Footpath is covered with garbages	Drainage spouts to be cleaned Footpath to be cleaned

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
25	445+595	Minor Bridge	1x6.82	-	Overall fair condition of structure and Pavement Vegetation growth at abutment locations and on footpath	Vegetation to be cleaned
26	447+780	VUP	2x15.665 (along skew)	-	Overall fair condition of structure and Pavement Pavement of cross road under VUP is damaged Removable RCC crash barrier (damaged) stacked in median	Pavement of cross road under VUP to be repaired Removable RCC crash barrier (damaged) which are stacked in median to be removed
27	448+680	Road Over Bridge (ROB)	1x18.0+1x50.0+1x18.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Wearing coat damaged at few location Footpath slab is damaged at few locations	Expansion joints & drainage spouts to be rectified Repair of damged wearing coat Repair of damaged Footpath slab Cleaning/clearing of footpath
28	450+140	Minor Bridge (Dharam Jora)	2x9.435+1x33.80	-	Overall fair condition of structure and Pavement Drainage spouts buried under silt/ dust Footpath slab is damaged at few locations Vegetation growth at abutment locations	Drainage spouts to be cleaned Repair of damaged Footpath slab Cleaning/clearing of vegetation
29	451+155	VUP	1x17.595 (along skew)	-	Overall fair condition of structure and Pavement	No repair works required

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
30	454+220	Road Over Bridge (ROB)	1x16.0+1x30.0+1 x21.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Footpath slab is damaged at many locations	Expansion joints & drainage spouts to be rectified Repair of damaged Footpath slab
31	456+315	Flyover- 6 Lane	1x32.5+2x16.675	-	Overall Good condition of structure and Pavement Drainage spouts buried under silt/ dust Pavement of cross road under VUP is damaged at few locations	Drainage spouts to be cleaned Pavement of cross road under VUP to be repaired
32	460+040	VUP	1x12.0	-	Overall fair condition of structure and Pavement	No repair works required
33	461+650	Minor Bridge (Branch of Nunia)	1x33.91	-	Overall fair condition of structure and Pavement Footpath is damaged at few locations Vegetation growth at abutment location	Damaged Footpath to be repaired Vegetation to be cleared
34	462+895	Minor Bridge	2x3.425	-	Overall fair condition of structure and Pavement Vegetation growth on footpath & abutment location	Vegetation to be cleared
35	463+090	Minor Bridge	2x3.425	-	Overall fair condition of structure and Pavement Vegetation growth on footpath & abutment location	Vegetation to be cleared

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
36	463+710	Minor Bridge	2x3.425	-	Overall fair condition of structure and Pavement Minor cracks on wearing coat Vegetation growth on footpath & abutment location	Wearing coat to be repaired/replaced Vegetation to be cleared Vent way to be cleaned
37	464+185	Flyover- 3 Lane (RHS)	1x46.0	Under construction	Overall fair condition of structure and Pavement	No repair works required
38	464+665	Major Bridge (Nunia River)	1x32.575+1x33.324+1x35.385	-	Overall fair condition of structure and Pavement Wearing coat damaged at approaches Footpath damaged at few location	Wearing coat to be repaired/replaced Damaged footpath to be repaired
39	464+910	Minor Bridge (Gagri River Bridge)	1x19.19	-	Overall fair condition of structure and Pavement Vegetation growth on abutment location	Vegetation to be cleared
40	467+115	VUP	1x12.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust	Expansion joints & drainage spouts to be rectified
41	468+620	Minor Bridge	1x12.55		Overall fair condition of structure and Pavement	No repair works required
42	469+750	VUP	1x12.0	Descoped	-	-
43	470+025	Minor Bridge	1x7.02	-	Overall fair condition of structure and Pavement	No repair works required
44	471+000	Minor Bridge	1x8.32	-	Overall fair condition of structure and Pavement	No repair works required

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
45	473+340	VUP	1x12.0	-	Overall fair condition of structure and Pavement	No repair works required
46	475+665	Flyover- 6 Lane	1x46.0+2x16.675	-	Overall fair condition of structure and Pavement	No repair works required
47	476+045	Flyover- 3 Lane (LHS)	1x46.0	-	Overall fair condition	No repair works required
48	476+430	PUP/ CUP	1x7.0	-	Overall fair condition	No repair works required
49	479+100	VUP	1x15.900 (along skew)	-	Overall fair condition	No repair works required
50	481+010	Road Over Bridge (ROB)	1x22.0+1x7.0 to 25.70 (varying)+1x32.0 +1x40.0+1x7.0 to 25.70 (varying)+1x22.0	-	Overall Good condition of structure	Expansion joints & drainage spouts to be rectified
51	482+735	Major Bridge (Singaron)	1x25+1x33+1x25	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth at abutment & pier locations	Expansion joints & drainage spouts to be rectified Vegetation to be cleared
52	483+230	Road Over Bridge (ROB)	5x22.0	-	Overall good condition	No repair works required
53	484+990	Minor Bridge	1x6.025+1x5.85+ 1x6.025	-	Overall fair condition of structure and Pavement Vegetation growth at abutment & pier locations	Vegetation to be cleared
54	486+415	VUP	1x12.0	-	Overall fair condition	No repair works required
55	489+695	VUP	2x12.0	-	Overall fair condition	No repair works required
56	491+440	VUP	1x12.0	-	Overall fair condition	No repair works required
57	492+860	Minor Bridge	2x6.775+5x6.50	-	Overall fair condition	No repair works required
58	494+415	VUP	1x12.0	-	Overall fair condition	No repair works required

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
59	495+725	Minor Bridge	1x9.42	-	Overall fair condition of structure	Vegetation to be cleared
60	496+595	Flyover- 6 Lane	1x46.0+2x16.675		Overall fair condition of structure and Pavement	No repair works required
61	497+475	VUP	1x12.0	-	Overall fair condition of structure and Pavement	No repair works required
62	497+840	Minor Bridge	1x13.51	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Railing on RHS damaged	Expansion joints & drainage spouts to be rectified Damaged railing to be repaired
63	499+320	VOP	1x48.50	-	Overall fair condition of structure and Pavement	No repair works required
64	500+110	VUP	4.125+16+4.125	-	Overall fair condition of structure and Pavement Pavement of cross road under VUP is damaged	Pavement of cross road under VUP to be repaired
65	501+985	Flyover- 6 Lane	1x32.5+2x16.675	-	Overall fair condition of structure and Pavement	No repair works required
66	503+985	VUP	1x16.45	-	Overall fair condition of structure and Pavement Median side crash barrier is damaged	Damaged crash barrier to be repaired
67	504+300	Flyover- 3 Lane (RHS)	1x32.5+2x16.675	-	Overall fair condition of structure and Pavement	No repair works required
68	504+600	PUP/ CUP	1x7.0	-	Overall fair condition of structure and Pavement	No repair works required
69	506+205	Flyover- 3 Lane (RHS)	1x32.5	-	Overall fair condition of structure and Pavement	No repair works required

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
70	507+510	Minor Bridge	1x9.40		Overall fair condition of structure and Pavement Vegetation growth at abutment locations	Vegetation to be cleared
71	509+570	VUP	1x12.0	-	Overall fair condition of structure and Pavement	No repair works required
72	509+960	Minor Bridge (DVC Canal)	1x42.35	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Vegetation growth at abutment locations	Expansion joints & drainage spouts to be rectified Vegetation to be cleared
73	510+700	PUP/ CUP	1x7.0	-	Overall fair condition of structure and Pavement	No repair works required
74	512+930	PUP/ CUP	1x7.0	-	Overall fair condition of structure and Pavement	No repair works required
75	514+990	PUP/ CUP	1x7.0	-	Overall fair condition of structure and Pavement	No repair works required
76	515+983	Flyover- 6 Lane	1x30.0	-	Overall fair condition of structure and Pavement	No repair works required
77	516+442	PUP/ CUP	1x7.0	-	Overall fair condition of structure and Pavement	No repair works required
78	517+122	Major Bridge (Pond)	4x30.0	-	Overall fair condition of structure and Pavement Vegetation growth at abutment/pier locations End treatment of MBCB not done	Vegetation to be cleared End treatment of MBCB to be done

Sl. No.	Chainage (Km)	Type of Structure	Span Arrangement	Remarks	Condition of Structure	Repair/Rehabilitation Works Required
79	518+227	VUP	1x12.0	-	Overall fair condition of structure and Pavement	No repair works required
80	518+834	Major Bridge (Canal)	1x30.0+1x35.0+1x30.0	-	Overall fair condition of structure and Pavement Expansion joints & drainage spouts buried under silt/ dust Cracks in wearing coat Footpath way is not cleared Vegetation growth at abutment/pier locations	Expansion joints & drainage spouts to be rectified Wearing coat to be repaired/replaced Cleaning of Footpath Vegetation clearing
81	519+373	VUP	1x12.0	-	Overall fair condition	No repair works required
82	520+383	Road Over Bridge (ROB)	1x16.0+1x43.0+1x25.0	-	Overall fair condition	No repair works required
83	403+340	Box Culvert	1x2.30	-	Overall fair condition of structure and Pavement RHS Parapet not constructed	RHS parapet needs to be constructed
84	413+555	Slab Culvert	1x2.30	-	Overall fair condition of structure and Pavement RLHS railing damaged	LHS railing needs to be repaired
85	507+738	Slab Culvert	1x3.10	-	Very poor condition of structure	Needs to be reconstructed

2.3.4 Pavement Crust

Pavement crust data has been collected by digging trial pits at the road edge and measurement of various pavement layers by steel tape/scale. The trial pits were dug at every 15km interval on either side of carriageway. The result of pavement crust data is presented in the below table;

Table 2-3 : Detail of existing pavement crust

Trial Pit at km 414 (LHS)

Trial Pit at km 458 (RHS)

S. No.	Location (km)	Test Pit No.	Test pit side Left/Right	Surface Layer		Granular Layer		Remarks
				Type	Thickness (mm)	Type	Thickness (mm)	
1	2	3	4	5	6	7	8	9
1	398+200	2	Left	CC	200	WMM/ GSB	300	SR
2	398+200	1	Right	CC	200	WMM/ GSB	300	SR
3	414+800	3	Left	BT	80	WMM/ GSB	350	MCW
4	414+800	4	Right	BT	330	WMM/ GSB	300	MCW
5	427+700	5	Left	BT	50	WMM/ GSB	1000	MCW
6	427+700	6	Right	BT	50	WMM/ GSB	1000	MCW
7	445+000	8	Left	BT	130	WMM/ GSB	530	MCW
8	445+000	7	Right	BT	120	WMM/ GSB	530	MCW
9	460+000	9	Left	BT	150	WMM/ GSB	500	MCW
10	458+000	10	Right	BT	230	WMM/ GSB	500	MCW
11	477+200	11	Left	BT	190	WMM/ GSB	400	MCW
12	477+200	12	Right	BT	160	WMM/ GSB	500	MCW
13	488+000	14	Left	BT	60	WMM/ GSB	480	MCW
14	488+540	13	Right	BT	180	WMM/ GSB	800	MCW
15	505+200	15	Left	BT	60	WMM/ GSB	460	SR

S. No.	Location (km)	Test Pit No.	Test pit side Left/Right	Surface Layer		Granular Layer		Remarks
				Type	Thickness (mm)	Type	Thickness (mm)	
16	505+200	16	Right	BT	180	WMM/ GSB	600	MCW
17	518+700	17	Left	BT	80	WMM/ GSB	400	MCW
18	518+700	18	Right	BT	150	WMM/ GSB	480	MCW

2.3.5 Axle Load Survey

Axle load survey was conducted at both toll plaza locations as per schedule mentioned in the below table

Table 2-4 : Schedule of Axle Load Survey

S. No.	Location of Survey/ Test	Period of Survey/ Test		Remarks
		From	To	
1	Km 438+500 (Toll Plaza located at Maithan, Jharkhand)	Thursday 23.11.2023	Saturday 25.11.2023	48 Hours
2	Km 507+085 (Toll Plaza located at Banskopa, West Bengal)	Tuesday 21.11.2023	Thursday 23.11.2023	48 Hours

2.3.6 Under Construction Stretches of Project Road

Construction work is also under progress at following stretches of project road;

Table 2-5 : Detail of Under Construction Stretches

Axle Load Test

Axle Load Test

S. No.	Start Chainage	End Chainage	Length(m)	Remarks
1	398+240	399+560	1320	Construction of Underpass
2	409+000	409+150	150	LHS Lane Widening
3	433+000	433+920	920	RHS Lane Widening
4	436+640	437+330	690	LHS Lane Widening
5	437+230	438+300	1070	Construction of Underpass
Total			**4150**	

Service road repairing/construction work is also under progress at following stretches of project road;

Table 2-6 : Detail of Service Road repairing/construction work

S. No.	Start Chainage	End Chainage	Length (m)	Remarks
1	400+000	401+500	1500	RHS Under Construction
2	404+240	404+620	380	RHS Under Construction
3	405+350	406+840	1490	RHS Under Construction
4	410+200	410+350	150	RHS Under Construction
5	412+280	412+970	690	RHS Under Construction
6	414+280	414+420	140	RHS Under Construction
7	414+700	415+100	400	RHS Under Construction
8	415+550	415+700	150	RHS Under Construction
9	415+900	416+600	700	RHS Under Construction
10	416+640	417+600	960	RHS Under Construction
11	418+220	418+900	680	RHS Under Construction
12	422+020	422+720	700	RHS Under Construction
13	424+200	424+800	600	RHS Under Construction
14	426+000	426+400	400	RHS Under Construction
15	432+350	432+900	550	RHS Under Construction
16	434+100	434+250	150	RHS Under Construction
17	435+000	435+700	700	RHS Under Construction
18	445+800	446+420	620	LHS Under Construction
19	458+320	458+620	300	RHS Under Construction
20	458+700	458+920	220	RHS Under Construction
21	460+500	460+850	350	RHS Under Construction
22	465+080	465+400	320	LHS Under Construction
23	465+500	466+400	900	LHS Under Construction
24	467+660	467+900	240	RHS Under Construction
25	467+800	468+300	500	LHS Under Construction
26	470+300	471+000	700	LHS Under Construction
27	471+400	471+500	100	LHS Under Construction
28	474+900	475+300	400	LHS Under Construction
29	487+000	487+200	200	RHS Under Construction
30	488+450	489+000	550	RHS Under Construction
31	493+000	493+200	200	LHS Under Construction
32	493+000	494+000	1000	RHS Under Construction
33	508+000	508+500	500	LHS Under Construction
	Total Length (in Meter)		**17440**	

Lined drain repairing/construction work is also under progress at following stretches of project road;

Table 2-7 : Detail of Lined Drain repairing/construction work

S. No.	Start Chainage	End Chainage	Length(m)	Remarks
1	401+400	402+000	600	U/C on LHS
2	406+900	407+300	400	U/C on LHS
3	408+250	409+000	750	U/C on LHS
Total			**1750**	

2.3.7 Road Marking & Signages

Road marking appears to be in fair condition in almost entire stretch except the stretches where construction work is under progress and structure locations along with approaches where the road markings are either not available or in poor condition and needs to be rectified immediately.

Road studs are not adequate/functional in almost entire stretch of project road. Road delineators are also not found along the project road.

Most of the signages are found to be in order, however few signages are not found along the project road as mentioned below and the same needs to be placed considering the safety of the road users;

The details of major road marking and signages which needs to be rectified are presented below;

Table 2-8 : Detail of Road Markings and Signages to be rectified

S. No.	Type of Signages/ Road Markings	Requirement
1	Road Markings i.e., CL, edge marking	Road markings to be rectified at required locations especially at structure locations along with approaches
2	Road Studs	Road studs to be replaced/rectified at required locations along the entire stretch of project road
3	Delineators	Road delineators to be installed at required locations along the entire stretch of project road
4	Gap In Median	Required in entire project stretch at Median Opening Locations
5	U Turn Ahead	Required in entire project stretch at U Turn Location
6	LHS Object Hazard Marker	Required in entire project stretch at Object Hazard Locations

2.4 Photographs along project road

Photographs showing various features along the project road are presented on subsequent pages.

Major Junction at km 456.315

Major Junction at km 464.185 RHS

Major Junction at km 475.665

Major Junction at km 515.983

Service Road near km 404.250

Service Road near km 513.000

Toll Plaza at km 438.500

Toll Plaza at km 507.085

Minor Bridge at km 405.345

Major Bridge at km 420.075

Major Bridge at km 441.330

ROB at km 443.710

Minor Bridge at km 450.140

ROB at km 454.220

Minor Bridge at km 463.090

Major Bridge at km 464.665

Minor Bridge at km 471.000

ROB at km 481.010

Major Bridge at km 482.735

VOP at km 499.320

Minor Bridge at km 509.960

Major Bridge at km 517.122

Major Bridge at km 518.834

ROB at km 520.383

3 PAVEMENT EVALUATION AND OVERLAY DESIGN

3.1 Background

Pavement is an integral part of all highway projects. Pavement performance under prevailing as well as projected traffic and environmental conditions is considered to be crucial as it has a direct bearing on the economic returns from the project developments. An under-designed pavement will fail prematurely, resulting in the additional cost to the project. Hence it is necessary to ensure the pavement layer thicknesses, configurations and materials are adequately designed and require minimal maintenance under the anticipated traffic loading throughout the project life. To achieve this objective and thereby to predict the performance of any pavement structure, it is necessary to analyze material characteristics, traffic condition, present physical condition of the pavement layers, local environment and its impacts, probable modes of failure of existing pavement and technology available for reconstruction. In addition, it is also necessary to presume what level of performance and what pavement condition will be considered satisfactory in order to estimate the future operation and maintenance cost of the road. Due to the large number of variables involved, it is intricate task to determine exact level of pavement performance through the project life. But, based on the assessment of present condition of pavement, analysis of available survey data, traffic projections and estimations regarding the pavement life, future maintenance requirements can be estimated.

The present chapter contains the details about the series of field investigations and analysis carried out to find out the present condition of pavement as well as to determine the future maintenance requirements for sound pavement performance throughout the project life.

Objectives

- To assess the present physical and structural conditions of pavement layers.
- To formulate the rehabilitation/rectification proposal as required for damaged/poor sections.
- To determine the future maintenance requirement for sound performance (both structural and functional) of pavement layers throughout the concession period.

3.2 Pavement Crust adopted during construction of six lane

During construction of six laning, project road was divided into 5 homogeneous sections, and pavement design has been carried out based on design MSA of respective homogeneous sections. Pavement design was carried out considering stage construction with 13yrs design life for bituminous layers and 20 years design life for granular layers. Summary of MSA and crust adopted is given below:

HST-1 Barwa Adda– Dhanbad Junction
HST-2 Dhanbad Junction- Asansol
HST-3 Asansol- Raniganj
HST-4 Raniganj- Durgapur
HST-5 Durgapur – Panagarh

Table 3-1 : Summary of MSA and adopted crust by the concessionaire

Homogenous Section	Chainage		Length (KM)	For Bituminous Layers		For Granular Layers	
	From	To		Design period	MSA	Design period	MSA
HST-1	398.240	408.500	10.260	13 yrs (2027)	31	20 yrs (2034)	62
HST-2	408.500	447.750	39.250	13 yrs (2027)	29	20 yrs (2034)	58
HST-3	447.750	464.400	16.650	13 yrs (2027)	34	20 yrs (2034)	67
HST-4	464.400	496.600	32.200	13 yrs (2027)	56	20 yrs (2034)	112
HST-5	496.600	521.120	24.520	13 yrs (2027)	70	20 yrs (2034)	140

Section	Chainage		Length (KM)	Crust for New Sections	Crust for Widening Sections
	From	To			
HST-1	398.240	408.500	10.260	BC - 50, DBM - 50, AIL - 100, CTB - 75, CTSB-250	BC - 40, DBM - 50, WMM - 250, GSB - 550
HST-2	408.500	447.750	39.250	BC - 50, DBM - 50, AIL - 100, CTB - 80, CTSB-250	BC - 50, DBM - 50, WMM - 250, GSB - 550
HST-3	447.750	464.400	16.650	BC - 50, DBM - 50, AIL - 100, CTB - 85, CTSB-250	BC - 40, DBM - 60, WMM - 250, GSB - 550
HST-4	464.400	496.600	32.200	BC - 50, DBM - 50, AIL - 100, CTB - 100, CTSB-250	BC - 40, DBM - 95, WMM - 250, GSB - 550
HST-5	496.600	521.120	24.520	BC - 50, DBM - 50, AIL - 100, CTB - 105, CTSB-250	BC - 40, DBM - 100, WMM - 250, GSB - 550

It can be observed that from Barwa adda to Raniganj (HST-1 to HST-3) traffic loading is almost similar but it increases substantially in the section after Raniganj (HST-4 to HST-5). This is due to the fact that Kolkata / Durgapur bound traffic from Bihar and Northeast states join project road between Raniganj and Panagarh.

3.3 Survey and Investigations

Following site investigations and surveys were carried out/referred to determine the present condition of pavement as well as to find out the future maintenance requirements.

i. Traffic Surveys – Data provided by client.
ii. Axle Load Surveys
iii. Roughness Survey– Data provided by client.
iv. Pavement Condition Surveys
v. Falling Weight Deflectometer (FWD) Test– Data provided by client.

3.4 Traffic Surveys & Analysis

The summary of past traffic data at both toll plazas for the years from 2014 to 2023 as provided by the client is given below and the details are given in Appendix 1.

Table 3-2 : Past Traffic Data

Year	Beliyad					Banskopa				
	LCV/ Mbus	Bus	2A Truck	3A Truck	MA Truck	LCV/Mini bus	Bus	2A Truck	3A Truck	MA Truck
2014	660	412	570	2540	961					
2015	678	223	436	2319	1717					
2016	478	210	581	1696	1885					
2017	457	260	681	1816	2584	1133	486	2186	2944	2865
2018	404	245	795	1917	3085	1245	908	2139	3154	3528
2019	402	249	775	1744	2961	1161	860	1882	2758	3662
2020	321	219	702	1573	3029	938	649	1966	3253	4095
2021	284	242	858	1441	3660	848	824	2054	2466	4872
2022	292	306	966	1091	3495	841	940	2130	2393	5822
2023	265	286	1033	997	3454	753	871	2107	2124	6221
CAGR	**-5.4%**	**3.79%**	**3.30%**	**-8.9%**	**2.10%**	**-6.33%**	**0.59%**	**-0.07%**	**-4.5%**	**8.71%**

As can be seen from the above data, the growth rates of traffic is varying widely. For LCV growth is decreasing @ 5 to 6% and for buses increasing @ 0.59% to 3.79%. 2Axle truck traffic is increasing

@ 3.3% at Beliyad toll plaza and decreasing @ 0.07% at Banskopa toll plaza. 3Axle trucks are decreasing by 4.5% to 8.9%. Multi axle traffic is in increasing trend with 2.1% at Beliyad plaza and 8.71% at Banskopa plaza.

Present tollable traffic is 27060 pcu at Beliyad toll plaza and 54320 pcu at Banskopa toll plaza.

On analyzing the above data and experience of consultants in similar projects, the following growth rates have been adopted for estimating the future traffic loading on the project road.

Table 3-3 : Adopted Traffic Growth Rates

Period	LCV/Minibus	Bus	2A Truck	3A Truck	MA Truck
2024-2027	2.00%	2.19%	2.00%	2.00%	5.40%
2028-2038	2.00%	2.00%	2.00%	2.00%	5.00%

3.5 Axle load survey data & analysis

The axle load survey was conducted using portable weighing pads for 48 Hrs at both the toll plazas from 21-11-2023 to 24-11-2023. The survey was conducted in both directions with random selection of vehicles for axle load measurement, ensuring a suitable sample for each category of commercial vehicle including empty vehicles.

Due to the mixed traffic condition of the project highway, the traffic load is heterogeneous in nature. In order to know the actual impact of heterogeneous traffic load on highway pavement it is essential to convert the heterogeneous traffic to equivalent homogenous traffic. Equivalent Standard Axle Load (ESAL) is a parameter used to express the heterogeneous traffic load in terms of a standard axle load of 80KN and VDF is the multiplying factor used to convert the traffic loads of different type of vehicle into the equivalent number of standard axle loads.

Equations as given in section 4.4, IRC: 37-2018, have been used for computing equivalency factors for converting different axle load repetitions into equivalent standards axle load repetitions (ESAL). In order to convert the ESAL into VDF, the frequency distribution of ESAL for each category of vehicle and weighted average of ESAL is calculated to arrive at the VDF. Detailed calculations are given in **Appendix 2.1 & 2.2** and summary is presented below:

Table 3-4 : Vehicle Damage Factor

Type of Vehicle	Sample (%)	Panagarh - Dhanbad		Dhanbad - Panagarh		Adopted VDF
		No. of Veh.	VDF	No. of Veh.	VDF	
@ Beliyad toll plaza (Ch. 438+500)						
LCV	57.4%	73	1.34	79	1.49	1.40
2A Truck	19.0%	86	3.21	110	2.51	2.90
3A Truck	30.2%	162	5.61	139	6.49	6.00
MA Truck	23.4%	383	8.48	424	11.52	10.00
Bus	20.6%	45	1.89	14	1.54	1.70
@ Banskopa toll plaza (Ch. 507+100)						
LCV	19.8%	63	0.66	86	1.05	0.90
2A Truck	14.8%	182	2.97	130	1.94	2.50
3A Truck	17.7%	216	4.92	159	5.28	5.10
MA Truck	12.1%	418	10.84	337	11.86	10.50
Bus	4.9%	21	1.80	22	1.23	1.50

3.6 Design Traffic Loading

With the above base year traffic, growth rates and VDF, future traffic loading in terms of MSA has been worked out which comes to following.

Table 3-5 : Design Traffic Loading (MSA)

Design Year	Beliyad toll plaza (Ch. 438+500)	Banskopa toll plaza (Ch. 507+100)
	Ch 398.240 to 464.400	Ch. 464.400 to 521.120
2028	MSA 33	MSA 62
2033	MSA 68	MSA 127
2038	MSA 111	MSA 208

Table 3-6 : Cumulative million standard axles (MSA) at Ch. 438+500

Year	LCV	Bus	Truck			ESA in million	
			2Axle	3Axle	MAV	Year wise	Cumulative
VDF	**1.40**	**1.70**	**2.90**	**6.00**	**10.00**		
2023	265	286	1033	997	3454	4.859	4.859
2024	270	292	1053	1017	3641	5.085	9.943
2025	275	298	1075	1037	3837	5.322	15.265
2026	281	305	1096	1058	4045	5.572	20.837
2027	286	311	1118	1079	4263	5.834	26.671
2028	292	318	1140	1100	4477	6.091	32.762
2029	298	324	1163	1122	4700	6.360	39.122
2030	304	331	1186	1145	4935	6.641	45.763
2031	310	337	1210	1168	5182	6.936	52.700
2032	316	344	1234	1191	5441	7.245	59.945
2033	322	351	1259	1215	5713	7.569	67.514
2034	329	358	1284	1239	5999	7.908	75.422
2035	335	365	1310	1264	6299	8.263	83.685
2036	342	372	1336	1289	6614	8.635	92.320
2037	349	380	1363	1315	6945	9.025	101.346
2038	356	387	1390	1341	7292	9.434	110.780
2039	363	395	1418	1368	7657	9.862	120.642
2040	370	403	1446	1396	8039	10.311	130.953

Table 3-7 : Cumulative million standard axles (MSA) at Ch. 507+100

Year	LCV	Bus	Truck			ESA in million	
			2Axle	3Axle	MAV	Year wise	Cumulative
VDF	**0.90**	**1.50**	**2.50**	**5.10**	**10.50**		
2023	753	871	2107	2124	6221	9.132	9.132
2024	768	890	2149	2167	6557	9.559	18.691
2025	783	910	2192	2210	6911	10.007	28.698
2026	799	930	2236	2254	7285	10.478	39.176
2027	815	950	2281	2299	7678	10.973	50.149
2028	831	969	2326	2345	8062	11.457	61.607
2029	848	989	2373	2392	8465	11.965	73.571
2030	865	1008	2420	2440	8889	12.496	86.067
2031	882	1029	2469	2489	9333	13.052	99.119
2032	900	1049	2518	2539	9800	13.635	112.754
2033	918	1070	2568	2589	10290	14.246	127.000
2034	936	1091	2620	2641	10804	14.886	141.886

Year	LCV	Bus	Truck			ESA in million	
			2Axle	3Axle	MAV	Year wise	Cumulative
2035	955	1113	2672	2694	11344	15.556	157.442
2036	974	1136	2726	2748	11912	16.259	173.701
2037	994	1158	2780	2803	12507	16.995	190.696
2038	1014	1181	2836	2859	13133	17.766	208.462
2039	1034	1205	2893	2916	13789	18.574	227.036
2040	1054	1229	2950	2974	14479	19.421	246.457

3.7 Roughness survey using NSV

Roughness is one of the important parameters for determining the functional characteristics of pavements. Roughness Survey was performed by NSV using the Laser Profilometer by M/s SOWiL Limited in the month of May 2023. Based on the Roughness value, The riding quality of project road is summarized in the table below as per IRC:SP:16-2019

Table 3-8 : Summary of Pavement Riding Quality as per NSV surveys

Riding Condition	Roughness Index (mm/KM)	Length (in km)		% Length	
		LHS	RHS	LHS	RHS
Good	< 1800	90	86	73%	70%
Fair	1800 - 2500	27	27	22%	22%
Poor	>2500	7	10	5%	8%

It is observed that roughness index was similar in both directions. The Roughness Index at some locations for LHS and RHS lane was beyond limit of 2500 mm/km. The major section of the project road has roughness index less than 2500 mm/km and has fair riding quality. Locations having roughness index in excess of 2500mm/ km are proposed for immediate improvement of riding quality.

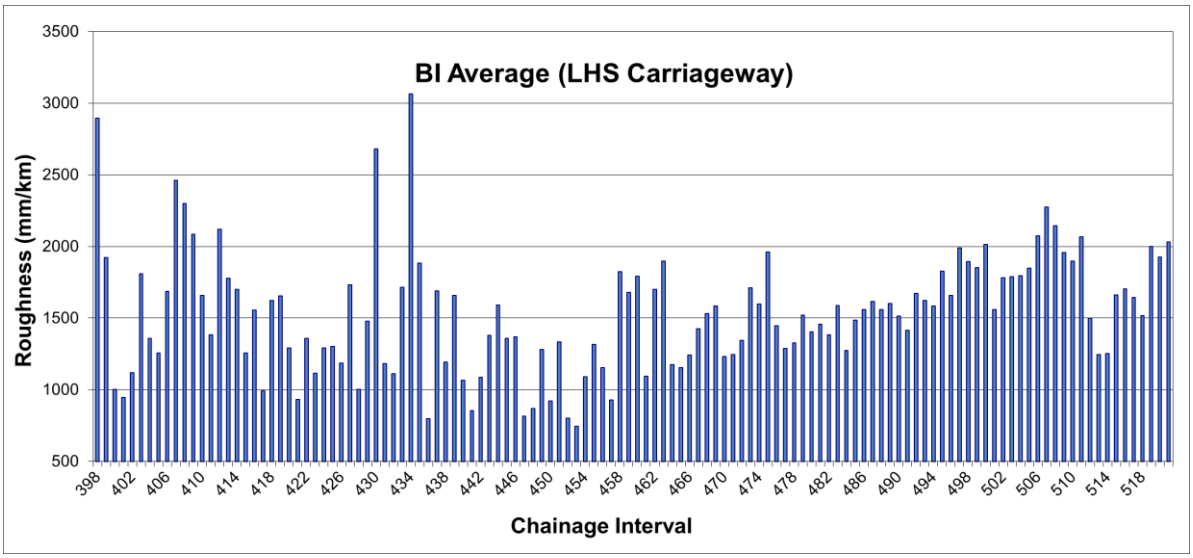


Figure 3-1 : BI Average for LHS Carriageway (Barwa Adda - Panagarh)

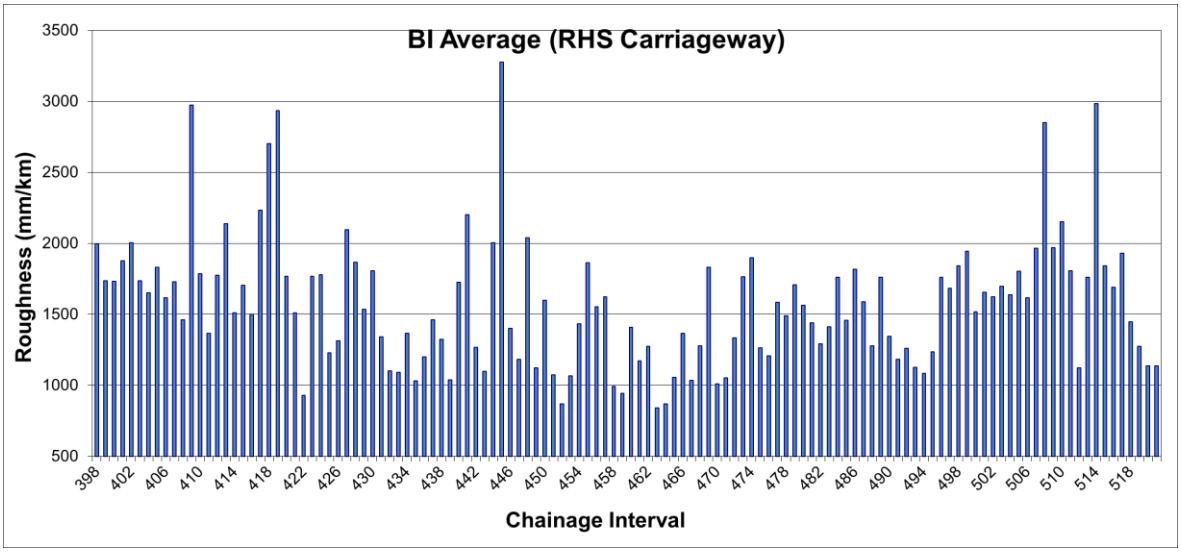


Figure 3-2 : BI Average for RHS Carriageway (Panagarh - Barwa Adda)

3.8 Existing Pavement Composition

Existing pavement composition (pavement course, material type, and thickness) was recorded at an interval of 10.0 km along the Project Stretch. The pavement composition was checked to understand the construction layers laid on the project road and its correlation and analysis of residual life and strengthening requirement. The Average granular layer thickness varies from 400 mm to 700 and bituminous layer thickness varies from 100 mm to 200 mm. The summary of existing pavement crust thickness is presented in the following table:

Table 3-9 : Existing Pavement Composition

S.No	Location (km)	Test pit side	Surface Layer		Granular Layer	
			Type	Thickness (mm)	Type	Thickness (mm)
1	398.50	Left	BT	100	WMM/ GSB	650
2	402.10	Left	BT	150	WMM/ GSB	650
3	414.80	Left	BT	100	WMM/ GSB	500
4	418.10	Left	BT	110	WMM/ GSB	500
5	427.70	Left	BT	100	WMM/ GSB	530
6	433.21	Left	BT	120	WMM/ GSB	590
7	439.43	Left	BT	120	WMM/ GSB	570
8	445.00	Left	BT	130	WMM/ GSB	530
9	453.10	Left	BT	100	WMM/ GSB	590
10	460.00	Left	BT	150	WMM/ GSB	500
11	477.20	Left	BT	180	WMM/ GSB	620
12	488.00	Left	BT	150	WMM/ GSB	600
13	505.53	Left	BT	100	WMM/ GSB	650
14	518.70	Left	BT	100	WMM/ GSB	600
1	398.50	Right	BT	110	WMM/ GSB	670
2	405.97	Right	BT	160	WMM/ GSB	680
3	414.80	Right	BT	210	WMM/ GSB	350
4	421.54	Right	BT	110	WMM/ GSB	560
5	427.70	Right	BT	100	WMM/ GSB	530
6	436.11	Right	BT	110	WMM/ GSB	720

S.No	Location (km)	Test pit side	Surface Layer		Granular Layer	
			Type	Thickness (mm)	Type	Thickness (mm)
7	441.39	Right	BT	120	WMM/ GSB	630
8	445.00	Right	BT	120	WMM/ GSB	530
9	458.00	Right	BT	200	WMM/ GSB	500
10	467.50	Right	BT	130	WMM/ GSB	630
11	477.20	Right	BT	160	WMM/ GSB	500
12	488.54	Right	BT	180	WMM/ GSB	800
13	495.32	Right	BT	170	WMM/ GSB	680
14	505.20	Right	BT	180	WMM/ GSB	600
15	511.50	Right	BT	130	WMM/ GSB	850
16	518.70	Right	BT	150	WMM/ GSB	600

3.9 FWD Analysis and Assessment of Overlay requirement

A Falling Weight Deflectometer (FWD) is used to measure the vertical deflection response of a surface to an impulse load. Precision load measurement and deflection sensors record the pavement surface characteristics, which is used to calculate pavement properties such as bearing capacity, elastic modulus and expected surface life.

Concessionaire has conducted FWD for entire Project Road. Summary of remaining life of existing pavement as per the FWD Test results provided by the client is presented below and the detail data and calculations as provided by the Concessionaire.

Table 3-10 : Summary of Resilient Moduli of different layers in MCW

Sl. No	Chainage		Corrected Back Calculated Moduli (Mpa)					
			LHS			RHS		
	From	To	Bituminous Layer	Granular layer	Subgrade	Bituminous Layer	Granular layer	Subgrade
1	398	399	2305	226	87	2185	252	86
2	399	400	3145	392	86	3168	395	86
3	400	401	2560	394	86	1227	166	86
4	401	402	2627	392	86	1163	229	87
5	402	403	2640	392	87	1263	184	86
6	403	404	1129	391	87	2286	363	86
7	404	405	3797	395	86	2306	353	86
8	405	406	1183	214	87	2785	393	86
9	406	407	1287	393	86	2217	342	86
10	407	408	2575	343	87	2730	395	86
11	408	409	2270	327	86	2799	393	87
12	409	410	3089	393	86	1808	321	87
13	410	411	2926	392	86	2747	389	87
14	411	412	3126	394	87	2481	390	86
15	412	413	3087	395	87	3076	393	86
16	413	414	2812	393	86	2868	395	86
17	414	415	2616	393	86	2847	394	86
18	415	416	2388	313	87	2702	393	86
19	416	417	2873	379	86	2731	394	87
20	417	418	2967	395	86	2870	393	87
21	418	419	2604	392	86	2424	395	86
22	419	420	1125	252	86	2990	391	86
23	420	421	1662	394	86	2974	393	86
24	421	422	2405	391	86	2948	393	86

Sl. No	Chainage		Corrected Back Calculated Moduli (Mpa)					
			LHS			RHS		
	From	To	Bituminous Layer	Granular layer	Subgrade	Bituminous Layer	Granular layer	Subgrade
25	422	423	910	232	86	2955	393	87
26	423	424	2978	385	86	2979	392	86
27	424	425	2241	392	87	2480	352	86
28	425	426	3094	389	86	1298	380	86
29	426	427	3022	394	86	2737	392	86
30	427	428	2982	348	86	2893	393	86
31	428	429	3439	394	86	2863	392	86
32	429	430	2293	339	87	2484	370	87
33	430	431	1410	265	86	2913	394	86
34	431	432	2672	334	86	2429	393	86
35	432	433	1854	394	86	2789	392	86
36	433	434	3373	393	87	2841	396	87
37	434	435	2678	386	86	2845	392	87
38	435	436	3380	394	87	2906	392	86
39	436	437	3625	392	86	2821	390	87
40	437	438	2536	394	86	2815	393	86
41	438	439	2479	395	86	3440	395	87
42	439	440	1134	310	86	2809	388	87
43	440	441	2745	392	86	3445	393	86
44	441	442	790	363	87	992	373	86
45	442	443	2306	395	86	2871	391	86
46	443	444	2832	394	87	3233	393	87
47	444	445	2920	393	86	3217	395	87
48	445	446	2848	394	86	3015	394	86
49	446	447	2972	395	86	3026	393	87
50	447	448	2579	392	86	2677	374	86
51	448	449	793	215	86	3435	391	87
52	449	450	2717	362	86	1459	166	86
53	450	451	2589	376	87	2706	393	86
54	451	452	2979	395	87	2676	392	87
55	452	453	2970	393	86	3198	394	86
56	453	454	2809	394	86	3808	392	87
57	454	455	2852	395	86	1040	143	86
58	455	456	2805	392	87	3701	394	86
59	456	457	3098	395	86	3848	393	86
60	457	458	2493	394	87	3599	394	86
61	458	459	3123	395	86	3608	394	86
62	459	460	3219	394	86	3729	393	86
63	460	461	3151	392	86	3820	392	86
64	461	462	3165	393	86	3744	394	86
65	462	463	3232	393	86	3617	394	86
66	463	464	3231	394	87	3886	394	87
67	464	465	2758	318	86	3435	393	87
68	465	466	3334	395	86	3686	394	86
69	466	467	3017	395	87	4005	392	86
70	467	468	3396	394	86	4030	395	87
71	468	469	2719	328	86	3780	393	86
72	469	470	2205	343	87	1193	358	87
73	470	471	2561	378	86	3438	394	86

Sl. No	Chainage		Corrected Back Calculated Moduli (Mpa)					
			LHS			RHS		
	From	To	Bituminous Layer	Granular layer	Subgrade	Bituminous Layer	Granular layer	Subgrade
74	471	472	2949	345	87	3375	392	86
75	472	473	2186	290	86	3380	394	86
76	473	474	1410	95	87	3075	393	87
77	474	475	2940	227	86	3435	393	87
78	475	476	2753	393	86	3290	392	86
79	476	477	1665	134	86	2104	331	87
80	477	478	2895	394	86	3042	393	86
81	478	479	2932	393	86	3094	393	86
82	479	480	2622	392	87	3601	393	87
83	480	481	2700	394	86	3313	395	86
84	481	482	2634	396	87	1699	393	86
85	482	483	2671	394	86	3209	394	87
86	483	484	2322	280	87	5005	395	86
87	484	485	2715	393	86	3237	393	86
88	485	486	2796	383	87	3350	393	87
89	486	487	3413	395	86	4994	395	86
90	487	488	3112	393	86	3205	394	86
91	488	489	3129	393	86	3017	391	86
92	489	490	2829	395	86	3145	393	86
93	490	491	3233	393	86	2747	395	86
94	491	492	3245	395	86	3173	394	87
95	492	493	3850	395	86	2848	393	86
96	493	494	3414	394	86	3167	394	86
97	494	495	4089	392	86	2774	395	86
98	495	496	3813	392	87	2949	393	87
99	496	497	4326	392	86	3165	392	87
100	497	498	4254	395	87	3031	394	87
101	498	499	4030	394	86	3035	394	87
102	499	500	3980	394	86	3135	393	86
103	500	501	3832	394	86	3195	394	86
104	501	502	3725	394	87	3246	395	86
105	502	503	3702	394	86	3320	392	86
106	503	504	3632	391	87	3273	393	86
107	504	505	3954	393	87	3278	395	86
108	505	506	3951	393	86	3248	393	86
109	506	507	3414	392	86	3131	394	86
110	507	508	1023	260	86	3341	391	86
111	508	509	1025	148	86	3585	393	87
112	509	510	3514	362	86	2850	392	86
113	510	511	4276	394	86	3859	395	86
114	511	512	3874	393	86	3522	394	86
115	512	513	3991	394	87	3557	392	86
116	513	514	1602	277	87	2462	362	86
117	514	515	1054	171	87	998	145	86
118	515	516	2361	316	86	1796	305	86
119	516	517	4124	395	87	2754	349	87
120	517	518	1050	165	86	1289	150	87
121	518	519	1407	189	87	1725	185	87
122	519	520	1684	305	87	1981	203	86

Sl. No	Chainage		Corrected Back Calculated Moduli (Mpa)					
			LHS			RHS		
	From	To	Bituminous Layer	Granular layer	Subgrade	Bituminous Layer	Granular layer	Subgrade
123	520	521	1854	389	87	3724	392	87
124	521	522	1305	270	87	2540	346	86

It can be noticed from the above table that the layer moduli for the three layers vary along the length and direction. The MR value for BT layer varies between 790 Mpa to 4326 Mpa in LHS & 992 Mpa to 5005 Mpa in RHS Carriageway. The MR value for Granular Layers varies between 95 Mpa to 396 Mpa in LHS & 143 Mpa to 396 Mpa in RHS Carriageway. Similarly, the MR value for Subgrade Layer is 86 Mpa to 87 Mpa in both directions.

The MR value for BT layers is moderated and considered as 3000 Mpa where it is more than 3000 Mpa as suggested upper limit in IRC 115 is 3000Mpa.

3.10 Remaining life of existing pavement

The remaining life of existing pavement has been calculated with the 15th percentile back-calculated corrected layer moduli and layer thicknesses given in above sections. The critical strains have been calculated with IITPAVE program considering existing road as three-layer pavement system. With the strains obtained from IITPAVE, remaining life of pavement has been estimated using Fatigue and Rutting criteria mentioned in IRC – 115:2014 and in IRC-37:2018. The following table gives details of the remaining life of existing pavement.

Table 3-11 : Remaining life of Existing Pavement

LHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
398.24	399.64	1.40	7	0
399.64	402.94	3.30	29	4
402.94	403.44	0.50	92	12
403.44	407.04	3.60	52	7
407.04	407.44	0.40	67	9
407.44	408.34	0.90	67	9
408.34	408.54	0.20	54	8
408.54	408.74	0.20	54	8
408.74	409.54	0.80	54	8
409.54	410.44	0.90	103	14
410.44	412.14	1.70	105	14
412.14	413.04	0.90	103	14
413.04	413.54	0.50	98	13
413.54	414.24	0.70	98	13
414.24	416.14	1.90	92	12
416.14	416.44	0.30	27	4
416.44	419.94	3.50	28	4
419.94	420.14	0.20	8	0
420.14	427.04	6.90	123	16
427.04	427.54	0.50	28	4
427.54	429.84	2.30	38	5
429.84	430.74	0.90	18	2
430.74	433.54	2.80	22	3
433.54	434.14	0.60	49	7
434.14	435.24	1.10	44	6

RHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
398.24	399.52	1.28	11	1
399.52	400.22	0.70	39	5
400.22	400.52	0.30	36	5
400.52	401.52	1.00	36	5
401.52	404.42	2.90	4	0
404.42	405.02	0.60	40	6
405.02	405.72	0.70	5	0
405.72	408.12	2.40	23	3
408.12	408.42	0.30	70	10
408.42	409.02	0.60	70	10
409.02	410.22	1.20	133	17
410.22	412.72	2.50	116	15
412.72	413.42	0.70	134	17
413.42	414.12	0.70	126	16
414.12	415.22	1.10	118	15
415.22	415.42	0.20	145	18
415.42	415.72	0.30	145	18
415.72	416.22	0.50	145	18
416.22	416.92	0.70	246	25
416.92	418.22	1.30	246	25
418.22	420.12	1.90	230	24
420.12	420.52	0.40	182	21
420.52	421.02	0.50	182	21
421.02	423.22	2.20	269	27
423.22	423.62	0.40	37	5

LHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
435.24	435.54	0.30	50	7
435.54	437.24	1.70	50	7
437.24	437.94	0.70	44	6
437.94	439.24	1.30	44	6
439.24	439.74	0.50	17	2
439.74	444.14	4.40	36	5
444.14	444.34	0.20	48	7
444.34	444.74	0.40	48	7
444.74	445.04	0.30	48	7
445.04	445.44	0.40	59	8
445.44	445.74	0.30	59	8
445.74	449.14	3.40	58	8
449.14	449.34	0.20	47	7
449.34	457.94	8.60	57	8
457.94	459.34	1.40	28	4
459.34	460.14	0.80	31	4
460.14	461.04	0.90	97	13
461.04	462.74	1.70	97	13
462.74	463.54	0.80	97	13
463.54	467.84	4.30	85	6
467.84	468.54	0.70	98	7
468.54	469.54	1.00	61	4
469.54	469.74	0.20	56	4
469.74	473.44	3.70	76	6
473.44	473.74	0.30	3	0
473.74	475.24	1.50	3	0
475.24	475.44	0.20	91	7
475.44	476.34	0.90	91	7
476.34	479.84	3.50	49	3
479.84	480.04	0.20	172	12
480.04	487.74	7.70	164	12
487.74	488.04	0.30	195	14
488.04	492.84	4.80	103	8
492.84	493.54	0.70	103	8
493.54	494.94	1.40	103	8
494.94	495.44	0.50	101	8
495.44	496.64	1.20	101	8
496.64	498.34	1.70	101	8
498.34	498.54	0.20	103	8
498.54	499.04	0.50	103	8
499.04	499.24	0.20	103	8
499.24	499.84	0.60	103	8
499.84	500.84	1.00	103	8
500.84	501.94	1.10	103	8
501.94	502.44	0.50	103	8
502.44	503.34	0.90	103	8
503.34	503.64	0.30	101	8
503.64	503.94	0.30	101	8

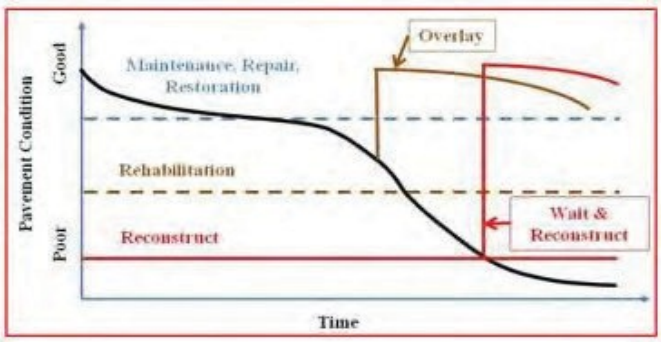
RHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
423.62	424.22	0.60	37	5
424.22	424.72	0.50	33	4
424.72	426.72	2.00	26	3
426.72	427.82	1.10	39	5
427.82	428.02	0.20	23	3
428.02	428.52	0.50	31	4
428.52	428.82	0.30	31	4
428.82	429.12	0.30	31	4
429.12	430.02	0.90	18	2
430.02	430.42	0.40	8	0
430.42	434.22	3.80	29	4
434.22	434.42	0.20	28	4
434.42	437.72	3.30	29	4
437.72	438.02	0.30	36	5
438.02	440.62	2.60	39	5
440.62	441.32	0.70	37	5
441.32	441.62	0.30	23	3
441.62	444.32	2.70	47	7
444.32	444.72	0.40	49	7
444.72	446.02	1.30	49	7
446.02	448.02	2.00	48	7
448.02	448.52	0.50	5	0
448.52	450.32	1.80	5	0
450.32	450.82	0.50	40	6
450.82	454.92	4.10	48	7
454.92	455.32	0.40	47	7
455.32	455.52	0.20	46	7
455.52	455.72	0.20	46	7
455.72	456.82	1.10	46	7
456.82	457.42	0.60	49	7
457.42	459.92	2.50	49	7
459.92	460.12	0.20	271	27
460.12	461.82	1.70	269	27
461.82	462.02	0.20	270	27
462.02	466.52	4.50	271	18
466.52	467.02	0.50	273	18
467.02	468.62	1.60	273	18
468.62	468.82	0.20	39	2
468.82	469.22	0.40	39	2
469.22	469.52	0.30	37	2
469.52	469.92	0.40	37	2
469.92	472.22	2.30	64	5
472.22	472.52	0.30	25	1
472.52	473.42	0.90	25	1
473.42	473.72	0.30	2	0
473.72	474.02	0.30	2	0
474.02	474.72	0.70	20	1
474.72	479.52	4.80	56	4

LHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
503.94	504.24	0.30	101	8
504.24	504.64	0.40	102	8
504.64	507.54	2.90	102	8
507.54	508.34	0.80	7	0
508.34	510.84	2.50	9	0
510.84	511.14	0.30	31	2
511.14	511.64	0.50	31	2
511.64	511.94	0.30	31	2
511.94	512.14	0.20	31	2
512.14	515.54	3.40	11	0
515.54	516.04	0.50	16	0
516.04	516.74	0.70	31	2
516.74	517.24	0.50	31	2
517.24	519.04	1.80	2	0
519.04	519.24	0.20	12	0
519.24	519.54	0.30	12	0
519.54	521.14	1.60	12	0

RHS Carriageway				
Chainage		Length (km)	Remaining Life	
From	To		in MSA	in Years
479.52	479.82	0.30	110	8
479.82	483.82	4.00	115	9
483.82	484.62	0.80	48	3
484.62	485.92	1.30	114	9
485.92	486.62	0.70	110	8
486.62	489.12	2.50	124	9
489.12	489.72	0.60	195	14
489.72	496.52	6.80	201	14
496.52	497.02	0.50	161	12
497.02	498.52	1.50	163	12
498.52	499.92	1.40	163	12
499.92	501.52	1.60	163	12
501.52	502.12	0.60	163	12
502.12	503.42	1.30	163	12
503.42	503.62	0.20	161	12
503.62	505.52	1.90	164	12
505.52	505.82	0.30	193	14
505.82	506.42	0.60	193	14
506.42	507.92	1.50	194	14
507.92	508.72	0.80	35	2
508.72	509.32	0.60	9	0
509.32	509.62	0.30	163	12
509.62	510.12	0.50	163	12
510.12	510.72	0.60	194	14
510.72	511.02	0.30	194	14
511.02	511.32	0.30	193	14
511.32	513.22	1.90	194	14
513.22	513.62	0.40	18	0
513.62	513.92	0.30	18	0
513.92	515.12	1.20	18	0
515.12	515.62	0.50	32	2
515.62	515.92	0.30	32	2
515.92	516.22	0.30	32	2
516.22	516.42	0.20	65	5
516.42	517.22	0.80	65	5
517.22	518.22	1.00	4	0
518.22	520.92	2.70	9	0
520.92	521.12	0.20	70	5

3.11 Determination of Pavement Major Maintenance

The performance of a pavement is affected by the type, time of application, quality of the maintenance it receives. Preventive maintenance slows the rate of pavement deterioration due to traffic and environmentally applied loads. Delays in maintenance and deferred maintenance increase the quantity of defects and their severity so that, when corrected, the cost of repair is greater as shown in figure below:



Major Maintenance is required in order to comply requirement of Concession Agreement and to maintain performance level as defined in CA. MMR cycle has been done on the basis of point wise FWD analysis and roughness surveys. The basic principle considered in calculating overlay requirement is as under:

F. The traffic projections (MSA) are obtained from the combined results of axle load and historical traffic data as given in previous sections.

G. The project stretch is divided into 2 homogenous sections and all the parameters are listed for each section.

H. For the sections having poor riding quality or the remaining life is less than year 2028 (< 4years), immediate overlay has been proposed as per design traffic in the year 2038.

I. Sections which satisfy both the functional parameters as well have a life more than 4 years life are considered for routine maintenance only.

J. As per schedule K, there is provision of repair/rectification if the roughness value exceeds 2500mm/km. Accordingly responsive overlay has been proposes as given in the table below:

Table 3-12 : Major Maintenance requirements for pavement

S.N.	Year	Treatment Proposed	
		LHS	**RHS**
a) Main Carriageway			
1	FY24/25/26	Overlay for the sections with poor riding quality and remaining life less than year 2025, length 20.40 km Only BC in 2.00 km and BC+DBM in 18.40 km	Overlay for the sections with poor riding quality and remaining life less than year 2025, length 27.28 km Only BC in 6.70 km and BC+DBM in 20.58 km
		Immediate Major Repairs Cost has been considered @ 9% in the Fy 2023-24, @ 15% in the FY 2024-25 and 76% in Fy 2025-26	
2	FY27/28/29	30mm BC Overlay – 0 % 40mm BC Overlay – 85 % Where structural overlay is provided with DBM+BC in the year 2024, no improvement is considered in this cycle	30mm BC Overlay – 0 % 40mm BC Overlay – 83 % Where structural overlay is provided with DBM+BC in the year 2024, no improvement is considered in the year 2027/28
		Functional + Structural overlay MCW+S/R in 1st periodic maintenance cost has been considered @ 25% on Fy 2026-27, @50% on Fy 2027-28 and 25% on Fy 2028-29	
3	FY32/33/34	30mm BC Overlay – 85 % 40mm BC Overlay – 15 %	30mm BC Overlay – 83 % 40mm BC Overlay – 17 %

S.N.	Year	Treatment Proposed	
		LHS	RHS
		Functional + Structural overlay MCW+S/R in 2nd periodic maintenance cost has been considered @ 25% on Fy 2031-32, @50% on Fy 2032-33 and 25% on Fy 2033-34	
4	FY36/37/38	40 mm BC Overlay in entire stretch	40 mm BC Overlay in entire stretch
		Functional + Structural overlay MCW+S/R in 3rd periodic maintenance cost has been considered @ 25% on Fy 2035-36, @25% on Fy 2036-37 and 50% on Fy 2037-38	
b) Service Road			
1	FY24/25/26	30mm BC for the sections with poor riding quality, length 21.65km	30mm BC for the sections with poor riding quality, length 21.65km
2	FY27/28/29	30 mm BC overly on service road stretch excluding the under construction stretch 25.53 km & the stretch of service road undergone for immediate repair	
3	FY32/33/34	30 mm BC on 100 % length	30 mm BC on 100 % length
4	FY36/37/38	40 mm BC on 100 % length	40 mm BC on 100 % length
c) Structure Major Maintenance			
Replacement of Wearing Coat at every MM Cycle			

Detailed maintenance schedule for each section is presented in in subsequent sections.

4 OPERATION & MAINTENANCE COST

4.1 General

Cost Component for various items and activities have been worked out by considering the Best Industry practice and most appropriate methods. The gist of the cost components considered are presented below:

A. Immediate Repair's Cost

B. Periodic Maintenance Cost

- Functional +Structural overlay on MCW& SR
- Major Maintenance of Rigid Pavement
- Replacement of wearing coat at every MM cycle
- Replacement of Toll Hardware and software & HTMS at later date

C. Routine Maintenance Cost

- Routine Maintenance of Road
- Routine Maintenance for Structures
- Route Operation
- Toll Plaza Operation
- Highway Patrolling % Incident management
- Operation and management costs of rest areas and lay byes
- Maintenance of utilities and public amenities

D. Toll Plaza Operation cost - Toll collections, toll plaza maintenance, security, tools and equipment, software, hardware, surveillance etc.

4.2 Item Rates

Unit rates considered along with source/assumptions is given in the table below:

Table 4-1 : Item Rates

Item No	Description	Unit	Rate	Remarks
1	**Immediate Major Maintenance**			
A	**Highways**			
1.01	Tack coat over bituminous surface	Sqm	8.00	BoQ of ongoing MMR
1.02	DBM	Cum	8,179.00	BoQ of ongoing MMR
1.03	BC	Cum	10,136.00	BoQ of ongoing MMR
B	**Structure**			
1.04	removal of wearing coat	Sqm	320.00	1 labor per day per sqm
1.05	New wearing cost	Sqm	970.45	Balance work BoQ
1.06	replace expansion joint	m	13,204.60	Balance work BoQ
1.07	cleaning Drainage spout	m	250.00	1 labour can clean 2 drainage spout in a day i/c tool and plant
1.08	replace Crash barrier	m	6,360.15	Balance work BoQ
1.09	replace RCC Railing	m	6,287.91	Balance work BoQ
1.10	Repair of spalling of concrete	sqm	500.00	1 sqm consumes 0.1 cum of concrete and cost of concrete is Rs. 5000 per cum
2	**Periodic maintenance**			

Item No	Description	Unit	Rate	Remarks
i	Functional + Structure overlay MCW+SR			
2.01	Tack coat over bituminous surface	Sqm	8.00	BoQ of ongoing MMR
2.02	BC	Cum	10,136.00	BoQ of ongoing MMR
ii	Major Maintenance of Rigid Pavement			
2.03	Panel Replacement - PQC	Cum	7,293.02	Balance work BoQ
2.04	Repair of cracks in rigid pavement	sqm	250.00	
2.05	Retexturing	Sqm	150.00	
iii	Structure			
2.06	removal of wearing coat	Sqm	320.00	1 labor per day per sqm
2.07	New wearing cost	Sqm	970.45	Balance work BoQ
2.08	replace expansion joint	m	13,204.60	Balance work BoQ
2.09	cleaning Drainage spout	m	250.00	1 labour can clean 2 drainage spout in a day i/c tool and plant
2.10	replace Crash barrier	m	6,360.15	Balance work BoQ
2.11	replace RCC Railing	m	6,287.91	Balance work BoQ
iv	Replacement of ATMS & TMS			
2.12	Replacement of ATMS & TMS	no.	1,20,00,000.00	
3.00	**Routine Maintenance**			
i	Repair and rehabilitation of Highways			
3.01	Pavement Cleaning/sweeping	Sqm	2.50	one labour can clean 128 sqm in one day.
3.02	Cleaning of Toll Plaza	Nos	1,44,000.00	
3.03	Cleaning of ROW	Hectare	7,500.00	
3.04	Pavement Cleaning/sweeping	Sqm	2.50	one labour can clean 128 sqm in one day.
3.05	Repair of cracks in rigid pavement	sqm	250.00	
ii	Service road			
3.06	Pavement Cleaning/sweeping	Sqm	2.50	one labour can clean 128 sqm in one day.
iii	Plantation			
3.07	Maintenace of Median Plantation / Trimming etc	km	10,000.00	assuming 30 nos of laboour in one kilometer
3.08	Watering at median Plantaion and Avenue Plantation	km	45,000.00	
3.09	Replacement of Median Plantation	Km	25,000.00	
3.10	Avenue Plantation	Nos	377.27	Balance work BoQ
iv	Protection works			
3.11	Cleaning of vegetation in shoulder on either side and side at side slopes (ROW Cleaning)	ha	48,000.00	
v	Busbay and Bus shelters			
3.12	Genereal Cleaning and Maintenance of Bus Shelter & Bus bay	Nos	5,000.00	
vi	Miscellaneous Item			

Item No	Description	Unit	Rate	Remarks
3.13	Carrying out routine maintenance to all types of road signs by regular washing , removal of pasted posters etc. complete as directed by the Engineer	Km.	1,500.00	
3.14	Maintenance of Laboratory	Month	50,000.00	
3.15	Cleaning of Drain	km	12,000.00	
3.16	Cleaning of Chute Drain	km	6,600.00	
3.17	Truck Layby Maintenance	m	2,12,680.00	
3.18	Safety Items at Site & Corridor	Per Plaza	5,00,000.00	
3.19	Rectification of damages at Site office (Civil Work)	Per Plaza	3,00,000.00	
vii	Structure			
3.20	General Cleaning of Structures - Removing of dirt, removing of vegetation and clearing the vent by all means for smooth flow	Sqm	400.00	
3.21	New wearing cost	Sqm	970.45	Balance work BoQ
3.22	replace expansion joint	m	13,204.60	Balance work BoQ
3.23	Drainage spout	no.	3,393.53	Balance work BoQ
3.24	RCC crash barrier	m	6,360.15	Balance work BoQ
3.25	bearing	no.	95,000.00	
4.00	**Route Operation**			
4.01	Driver	Nos, year	3,00,000.00	
4.02	Helper	Nos, year	2,40,000.00	
4.03	Route Patrol Officer/ Paramedical officer	Nos, year	3,60,000.00	
4.04	Monthly Hire Charge of Vehicle excluding Disel	Month	40,000.00	
4.05	Monthly Hire Charge of Vehicle excluding Disel	Month	60,000.00	
4.06	Diesel Cost	Ltr	90.00	
4.07	Safety Equipment	Month	5,000.00	
4.08	Tools - Chains etc	Month	2,500.00	
4.20	Manager - Corridor Control	Nos	7,20,000	
4.21	CRO	Nos	3,00,000	
4.22	Safety & Corridor Manager	0	9,00,000	
4.23	Vehicle for NHAI	Month	1,00,000	
4.24	Vehicle for Concessionaire PM	Month	1,00,000	
4.25	Vehicle for Route Operation Head	Month	1,00,000	
4.26	Vehicle for dead animal recovery	Month	1,20,000	
5.00	**Tolling Operations**			
5.01	Plaza Manager	Per Month	1,50,000	
5.02	Plaza Controller/Incharge	Per Month	75,000	
5.03	Asst. Plaza Manager	Per Month	50,000	
5.04	Route Officer	Per Month	30,000	
5.05	Toll Supervisor	Per Month	30,000	

Item No	Description	Unit	Rate	Remarks
5.06	Shift In charge	Per Month	30,000	
5.07	Cashier	Per Month	20,000	
5.08	Lane Supervisor	Per Month	20,000	
5.09	Admin/ Account Officer	Per Month	25,000	
5.10	Auditor	Per Month	20,000	
5.11	Exe.Point of Sale	Per Month	20,000	
5.12	Civil/Site Supervisor	Per Month	25,000	
5.13	Control Room Officer - HTMS	Per Month	25,000	
5.14	Toll Collector	Per Month	20,000	
5.15	Booth Assistant/ Lane Attendant	Per Month	20,000	
5.16	Route Patrolling Officer	Per Month	25,000	
5.17	Route Patrolling Assistant	Per Month	20,000	
5.18	Electrician and Helper	Per Month	20,000	
5.19	Office Support staff	Per Month	20,000	
5.20	Guest House	Per Month	20,000	
5.21	Security Supervisor	Per Month	25,000	
5.22	Security Guard	Per Month	20,000	
5.23	Gun Man	Per Month	20,000	
5.24	System Engineer	Per Month	25,000	
5.25	Labour	Per Month	15,000	
5.26	Miscellaneous	Per Month	2,00,000	
5.27	TMS	Per Month	2,50,000	
5.28	ATMS	Per Month	3,00,000	
5.29	Telecommunication Cost	Per Month	20,000	
5.30	Electricity	Per Month	50,000	

4.3 Costing

Cost of such regular and periodic maintenance is worked out and given in subsequent sections.

APPENDIX 1 - Past traffic data

APPENDIX 2 - Axle load survey data

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Abstract of Cost for Operation & Maintenance

At current rates

S. no.	Routine Maintenance (OpEx) - Subhead	Annual O&M Cost (INR, Cr)	FY24 (H2 from 1st Oct to March 2024)	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38
1	***Immediate Major Maintenance***	**56.80**	5.11	8.52	43.17												
2	***Periodic Maintenance***	**458.19**				**30.74**	**73.82**	**30.74**			**32.84**	**74.26**	**32.84**		**42.02**	**42.02**	**98.90**
2.1	*Functional + Structural overlay MCW+S/R*					30.74	61.49	30.74			32.84	65.69	32.84		42.02	42.02	84.05
2.2	*Maintenance of Rigid Pavement*						1.68					1.04					1.68
2.3	*Structure specified repairs*						8.85					6.33					11.37
2.4	*Replacement of ATMS & TMS*						1.80					1.20					1.80
3	**Major Maintenanace Cost Excluding GST**	**515.00**	**5.11**	**8.52**	**43.17**	**30.74**	**73.82**	**30.74**	**-**	**-**	**32.84**	**74.26**	**32.84**	**-**	**42.02**	**42.02**	**98.90**
4	**Major Maintenanace Cost Including GST**	**607.70**	**6.03**	**10.05**	**50.94**	**36.28**	**87.11**	**36.28**	**-**	**-**	**38.75**	**87.62**	**38.75**	**-**	**49.59**	**49.59**	**116.70**
5	***Routine Maintenance***	**254.44**	**8.77**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**
5.1	*R&R of Highway*		1.59	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19
5.2	*R&R of Structures*		0.54	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
5.3	*Route Operation*		1.65	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31
5.4	*Toll Plaza Operation*		4.99	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98
6	**O&M and Tolling Excluding GST**	**254.44**	**8.77**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**	**17.55**
7	**O&M and Tolling Including GST**	**300.24**	**10.35**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**	**20.71**
8	*Insurance Policy Charges incldiung GST*		2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
9	*IE Fee including GST*		0.77	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
10	*Electric Cost*		1.22	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44
11	***Total Other Cost***	**90.60**	**4.18**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**
12	***Grand Total Including GST (MM+O&M and Tolling and Other Cost)***	**998.54**	**20.57**	**36.93**	**77.82**	**63.16**	**113.99**	**63.16**	**26.88**	**26.88**	**65.63**	**114.50**	**65.63**	**26.88**	**76.47**	**76.47**	**143.58**

Note:

1) Since estimate has been considered from 1st Oct. 2023, cost of routine maintenance, IE Fee, Electric cost etc. has been considered 50% of respective cost per annum for the fiscal year 2023-24 and100% fiscal year 2024-25 onwards.

2) Immediate Major Repair cost considered 10% in FY 2023-24, 60% in FY 2024-25 and 30% in Fy 2025-26.

3) Periodic maintenance cost of Functional + Structural overlay MCW+S/R distributed in three years as 25% in following year, 50% in periodic maintenance year and 25% in preceeding year.

4) BAEL Balance scope of work, which is under construction has been excluded from immediate major maintenance and 1st periodic maintenance at year 2028.

SL No.	Description	Length (m)
1	MCW Widening Status	6,935
2	LHS Service Road Status	6,495
3	RHS Service road Status	19,035
4	STR Approach Status	5,305

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Abstract of Cost for Operation & Maintenance

With 5% escalation

S. no.	Routine Maintenance (OpEx) - Subhead	Annual O&M Cost (INR, Cr)	FY24 (H2 from 1st Oct to March 2024)	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38
1	***Immediate Major Maintenance***	**61.65**	5.11	8.95	47.60												
2	***Periodic Maintenance***	**732.29**				**35.59**	**89.73**	**39.24**			**48.52**	**115.20**	**53.50**		**75.47**	**79.24**	**195.81**
2.1	*Functional + Structural overlay MCW+S/R*					35.59	74.74	39.24			48.52	101.90	53.50		75.47	79.24	166.41
2.2	*Maintenance of Rigid Pavement*						2.04					1.61					3.32
2.3	*Structure specified repairs*						10.76					9.83					22.51
2.4	*Replacement of ATMS & TMS*						2.19					1.86					3.56
3	**Major Maintenanace Cost Excluding GST**	**793.94**	**5.11**	**8.95**	**47.60**	**35.59**	**89.73**	**39.24**	**-**	**-**	**48.52**	**115.20**	**53.50**	**-**	**75.47**	**79.24**	**195.81**
4	**Major Maintenanace Cost Including GST**	**936.85**	**6.03**	**10.56**	**56.16**	**42.00**	**105.88**	**46.30**	**-**	**-**	**57.26**	**135.93**	**63.13**	**-**	**89.05**	**93.50**	**231.05**
5	***Routine Maintenance***	**369.88**	**8.77**	**18.43**	**19.35**	**20.31**	**21.33**	**22.40**	**23.52**	**24.69**	**25.93**	**27.22**	**28.58**	**30.01**	**31.51**	**33.09**	**34.74**
5.1	*R&R of Highway*		1.59	3.35	3.51	3.69	3.87	4.07	4.27	4.48	4.71	4.94	5.19	5.45	5.72	6.01	6.31
5.2	*R&R of Structures*		0.54	1.12	1.18	1.24	1.30	1.37	1.44	1.51	1.58	1.66	1.74	1.83	1.92	2.02	2.12
5.3	*Route Operation*		1.65	3.47	3.65	3.83	4.02	4.22	4.43	4.65	4.88	5.13	5.39	5.65	5.94	6.23	6.55
5.4	*Toll Plaza Operation*		4.99	10.48	11.01	11.56	12.14	12.74	13.38	14.05	14.75	15.49	16.26	17.08	17.93	18.83	19.77
6	**O&M and Tolling Excluding GST**	**369.88**	**8.77**	**18.43**	**19.35**	**20.31**	**21.33**	**22.40**	**23.52**	**24.69**	**25.93**	**27.22**	**28.58**	**30.01**	**31.51**	**33.09**	**34.74**
7	**O&M and Tolling Including GST**	**436.46**	**10.35**	**21.74**	**22.83**	**23.97**	**25.17**	**26.43**	**27.75**	**29.14**	**30.59**	**32.12**	**33.73**	**35.41**	**37.19**	**39.04**	**41.00**
8	*Insurance Policy Charges incldluing GST*		2.20	2.30	2.42	2.54	2.67	2.80	2.94	3.09	3.24	3.41	3.58	3.75	3.94	4.14	4.35
9	*IE Fee including GST*		0.77	1.61	1.69	1.78	1.87	1.96	2.06	2.16	2.27	2.38	2.50	2.63	2.76	2.90	3.04
10	*Electric Cost*		1.22	2.56	2.69	2.83	2.97	3.12	3.27	3.44	3.61	3.79	3.98	4.18	4.38	4.60	4.83
11	***Total Other Cost***	**131.21**	**4.18**	**6.48**	**6.81**	**7.15**	**7.50**	**7.88**	**8.27**	**8.69**	**9.12**	**9.58**	**10.05**	**10.56**	**11.09**	**11.64**	**12.22**
12	***Grand Total Including GST (MM+O&M and Tolling and Other Cost)***	**1,504.52**	**20.57**	**38.78**	**85.80**	**73.11**	**138.55**	**80.61**	**36.02**	**37.82**	**96.97**	**177.63**	**106.91**	**45.97**	**137.32**	**144.19**	**284.27**

Note:

1) Since estimate has been considered from 1st Oct. 2023, cost of routine maintenance, IE Fee, Electric cost etc. has been considered 50% of respective cost per annum for the fiscal year 2023-24 and100% fiscal year 2024-25 onwards.

2) Immediate Major Repair cost considered 10% in FY 2023-24, 60% in FY 2024-25 and 30% in Fy 2025-26.

3) Periodic maintenance cost of Functional + Structural overlay MCW+S/R distributed in three years as 25% in following year, 50% in periodic maintenance year and 25% in preceeding year.

4) BAEL Balance scope of work, which is under construction has been excluded from immediate major maintenance and 1st periodic maintenance at year 2028.

SL No.	Description	Length (m)
1	MCW Widening Status	6,935
2	LHS Service Road Status	6,495
3	RHS Service road Status	19,035
4	STR Approach Status	5,305

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Pavement Major Maintenance Schedule - LHS Main Carriageway

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
1	398.24	399.64	1.40	2679	Poor	7	0	Immediate	33	68	111	100	650	110	70	40	0	40	40
2	399.64	402.94	3.30	1012	Good	29	4		33	68	111	100	650	60	0	0	40	30	40
3	402.94	403.44	0.50	2494	Fair	92	12		33	68	111	150	650	10	0	0	40	30	40
4	403.44	407.04	3.60	1411	Good	52	7		33	68	111	150	650	40	0	0	40	30	40
5	407.04	407.44	0.40	2003	Fair	67	9		33	68	111	150	650	30	0	0	40	30	40
6	407.44	408.34	0.90	2737	Poor	67	9	Immediate	33	68	111	150	650	30	0	40	40	30	40
7	408.34	408.54	0.20	1639	Good	54	8		33	68	111	150	650	40	0	0	40	30	40
8	408.54	408.74	0.20	2051	Fair	54	8		33	68	111	150	650	40	0	0	40	30	40
9	408.74	409.54	0.80	2398	Fair	54	8		33	68	111	150	650	40	0	0	40	30	40
10	409.54	410.44	0.90	1884	Fair	103	14		33	68	111	150	650	10	0	0	40	30	40
11	410.44	412.14	1.70	1435	Good	105	14		33	68	111	150	650	10	0	0	40	30	40
12	412.14	413.04	0.90	2169	Fair	103	14		33	68	111	150	650	10	0	0	40	30	40
13	413.04	413.54	0.50	1568	Good	98	13		33	68	111	150	650	10	0	0	40	30	40
14	413.54	414.24	0.70	2006	Fair	98	13		33	68	111	150	650	10	0	0	40	30	40
15	414.24	416.14	1.90	1413	Good	92	12		33	68	111	150	650	10	0	0	40	30	40
16	416.14	416.44	0.30	1947	Fair	27	4		33	68	111	100	500	60	0	0	40	30	40
17	416.44	419.94	3.50	1398	Good	28	4		33	68	111	100	500	60	0	0	40	30	40
18	419.94	420.14	0.20	2057	Fair	8	0	Immediate	33	68	111	110	500	110	70	40	0	40	40
19	420.14	427.04	6.90	1200	Good	123	16		33	68	111	110	500	65	0	0	40	30	40
20	427.04	427.54	0.50	2055	Fair	28	4		33	68	111	110	500	60	0	0	40	30	40
21	427.54	429.84	2.30	1166	Good	38	5		33	68	111	110	500	50	0	0	40	30	40
22	429.84	430.74	0.90	2961	Poor	18	2	Immediate	33	68	111	100	530	80	50	40	0	40	40
23	430.74	433.54	2.80	1245	Good	22	3		33	68	111	100	530	70	0	0	40	30	40
24	433.54	434.14	0.60	2100	Fair	49	7		33	68	111	120	590	40	0	0	40	30	40
25	434.14	435.24	1.10	3196	Poor	44	6	Immediate	33	68	111	120	590	40	0	40	40	30	40
26	435.24	435.54	0.30	1895	Fair	50	7		33	68	111	120	590	40	0	0	40	30	40
27	435.54	437.24	1.70	963	Good	50	7		33	68	111	120	590	40	0	0	40	30	40
28	437.24	437.94	0.70	1968	Fair	44	6		33	68	111	120	590	40	0	0	40	30	40
29	437.94	439.24	1.30	1206	Good	44	6		33	68	111	120	590	40	0	0	40	30	40
30	439.24	439.74	0.50	1859	Fair	17	2	Immediate	33	68	111	120	590	80	50	40	0	40	40
31	439.74	444.14	4.40	1131	Good	36	5		33	68	111	120	570	50	0	0	40	30	40
32	444.14	444.34	0.20	1914	Fair	48	7		33	68	111	120	570	40	0	0	40	30	40
33	444.34	444.74	0.40	1345	Good	48	7		33	68	111	120	570	40	0	0	40	30	40

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
34	444.74	445.04	0.30	1848	Fair	48	7		33	68	111	120	570	40	0	0	40	30	40
35	445.04	445.44	0.40	1030	Good	59	8		33	68	111	130	530	30	0	0	40	30	40
36	445.44	445.74	0.30	1723	Good	59	8		33	68	111	130	530	30	0	0	40	30	40
37	445.74	449.14	3.40	1058	Good	58	8		33	68	111	130	530	30	0	0	40	30	40
38	449.14	449.34	0.20	2347	Fair	47	7		33	68	111	130	530	40	0	0	40	30	40
39	449.34	457.94	8.60	1023	Good	57	8		33	68	111	130	530	30	0	0	40	30	40
40	457.94	459.34	1.40	1828	Fair	28	4		33	68	111	100	590	60	0	0	40	30	40
41	459.34	460.14	0.80	1608	Good	31	4		33	68	111	100	590	55	0	0	40	30	40
42	460.14	461.04	0.90	1825	Fair	97	13		33	68	111	150	500	20	0	0	40	30	40
43	461.04	462.74	1.70	1207	Good	97	13		33	68	111	150	500	20	0	0	40	30	40
44	462.74	463.54	0.80	2412	Fair	97	13		33	68	111	150	500	20	0	0	40	30	40
45	463.54	467.84	4.30	1244	Good	85	6		33	68	111	150	500	50	0	0	40	30	40
46	467.84	468.54	0.70	1757	Good	98	7		62	127	208	150	500	40	0	0	40	30	40
47	468.54	469.54	1.00	1366	Good	61	4		62	127	208	150	500	60	0	0	40	30	40
48	469.54	469.74	0.20	1879	Fair	56	4		62	127	208	150	500	65	0	0	40	30	40
49	469.74	473.44	3.70	1318	Good	76	6		62	127	208	150	500	50	0	0	40	30	40
50	473.44	473.74	0.30	2161	Fair	3	0	Immediate	62	127	208	150	500	160	90	40	0	40	40
51	473.74	475.24	1.50	1596	Good	3	0	Immediate	62	127	208	150	500	160	90	40	0	40	40
52	475.24	475.44	0.20	2451	Fair	91	7		62	127	208	150	500	40	0	0	40	30	40
53	475.44	476.34	0.90	1947	Fair	91	7		62	127	208	150	500	40	0	0	40	30	40
54	476.34	479.84	3.50	1316	Good	49	3		62	127	208	150	500	70	0	0	40	30	40
55	479.84	480.04	0.20	2031	Fair	172	12		62	127	208	180	620	10	0	0	40	30	40
56	480.04	487.74	7.70	1455	Good	164	12		62	127	208	180	620	20	0	0	40	30	40
57	487.74	488.04	0.30	1851	Fair	195	14		62	127	208	180	620	10	0	0	40	30	40
58	488.04	492.84	4.80	1536	Good	103	8		62	127	208	150	600	40	0	0	40	30	40
59	492.84	493.54	0.70	1871	Fair	103	8		62	127	208	150	600	40	0	0	40	30	40
60	493.54	494.94	1.40	1497	Good	103	8		62	127	208	150	600	40	0	0	40	30	40
61	494.94	495.44	0.50	2019	Fair	101	8		62	127	208	150	600	40	0	0	40	30	40
62	495.44	496.64	1.20	1555	Good	101	8		62	127	208	150	600	40	0	0	40	30	40
63	496.64	498.34	1.70	2017	Fair	101	8		62	127	208	150	600	40	0	0	40	30	40
64	498.34	498.54	0.20	1524	Good	103	8		62	127	208	150	600	40	0	0	40	30	40
65	498.54	499.04	0.50	1901	Fair	103	8		62	127	208	150	600	40	0	0	40	30	40
66	499.04	499.24	0.20	2333	Fair	103	8		62	127	208	150	600	40	0	0	40	30	40
67	499.24	499.84	0.60	1603	Good	103	8		62	127	208	150	600	40	0	0	40	30	40
68	499.84	500.84	1.00	2106	Fair	103	8		62	127	208	150	600	40	0	0	40	30	40
69	500.84	501.94	1.10	1541	Good	103	8		62	127	208	150	600	40	0	0	40	30	40

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
70	501.94	502.44	0.50	2058	Fair	103	8		62	127	208	150	600	40	0	0	40	30	40
71	502.44	503.34	0.90	1613	Good	103	8		62	127	208	150	600	40	0	0	40	30	40
72	503.34	503.64	0.30	1948	Fair	101	8		62	127	208	150	600	40	0	0	40	30	40
73	503.64	503.94	0.30	1662	Good	101	8		62	127	208	150	600	40	0	0	40	30	40
74	503.94	504.24	0.30	2104	Fair	101	8		62	127	208	150	600	40	0	0	40	30	40
75	504.24	504.64	0.40	1640	Good	102	8		62	127	208	150	600	40	0	0	40	30	40
76	504.64	507.54	2.90	1961	Fair	102	8		62	127	208	150	600	40	0	0	40	30	40
77	507.54	508.34	0.80	2486	Fair	7	0	Immediate	62	127	208	100	650	145	90	40	0	40	40
78	508.34	510.84	2.50	1973	Fair	9	0	Immediate	62	127	208	100	650	130	90	40	0	40	40
79	510.84	511.14	0.30	1482	Good	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
80	511.14	511.64	0.50	2020	Fair	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
81	511.64	511.94	0.30	2328	Fair	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
82	511.94	512.14	0.20	2035	Fair	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
83	512.14	515.54	3.40	1339	Good	11	0	Immediate	62	127	208	100	650	130	90	40	0	40	40
84	515.54	516.04	0.50	1826	Fair	16	0	Immediate	62	127	208	100	650	110	70	40	0	40	40
85	516.04	516.74	0.70	1508	Good	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
86	516.74	517.24	0.50	2210	Fair	31	2	Immediate	62	127	208	100	650	90	50	40	0	40	40
87	517.24	519.04	1.80	1502	Good	2	0	Immediate	62	127	208	100	650	180	90	40	0	40	40
88	519.04	519.24	0.20	2012	Fair	12	0	Immediate	62	127	208	100	600	130	90	40	0	40	40
89	519.24	519.54	0.30	1762	Good	12	0	Immediate	62	127	208	100	600	130	90	40	0	40	40
90	519.54	521.14	1.60	2062	Fair	12	0	Immediate	62	127	208	100	600	130	90	40	0	40	40

Length requiring immediate intervention	20.4	kms	
BC	20.40	kms	2.00
DBM	18.4	kms	

40mm	104.5	18.4	122.9
30mm	0	104.5	0
40mm	85%	15%	100%
30mm	0%	85%	0%

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Pavement Major Maintenance Schedule - RHS Main Carriageway

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
1	398.24	399.52	1.28	1991	Fair	11	1	Immediate	33	68	111	110	670	100	60	40	0	40	40
2	399.52	400.22	0.70	1687	Good	39	5		33	68	111	110	670	45	0	0	40	30	40
3	400.22	400.52	0.30	1856	Fair	36	5		33	68	111	110	670	55	0	0	40	30	40
4	400.52	401.52	1.00	1655	Good	36	5		33	68	111	110	670	55	0	0	40	30	40
5	401.52	404.42	2.90	1893	Fair	4	0	Immediate	33	68	111	110	670	130	90	40	0	40	40
6	404.42	405.02	0.60	1479	Good	40	6		33	68	111	110	670	40	0	0	40	30	40
7	405.02	405.72	0.70	1924	Fair	5	0	Immediate	33	68	111	110	670	130	90	40	0	40	40
8	405.72	408.12	2.40	1671	Good	23	3		33	68	111	110	670	75	0	0	40	30	40
9	408.12	408.42	0.30	1766	Good	70	10		33	68	111	160	680	40	0	0	40	30	40
10	408.42	409.02	0.60	1310	Good	70	10		33	68	111	160	680	40	0	0	40	30	40
11	409.02	410.22	1.20	3049	Poor	133	17	Immediate	33	68	111	160	680	0	0	40	40	30	40
12	410.22	412.72	2.50	1335	Good	116	15		33	68	111	160	680	0	0	0	40	30	40
13	412.72	413.42	0.70	2701	Poor	134	17	Immediate	33	68	111	160	680	0	0	40	40	30	40
14	413.42	414.12	0.70	1975	Fair	126	16		33	68	111	160	680	0	0	0	40	30	40
15	414.12	415.22	1.10	1378	Good	118	15		33	68	111	160	680	0	0	0	40	30	40
16	415.22	415.42	0.20	1831	Fair	145	18		33	68	111	210	350	0	0	0	40	30	40
17	415.42	415.72	0.30	2287	Fair	145	18		33	68	111	210	350	0	0	0	40	30	40
18	415.72	416.22	0.50	1549	Good	145	18		33	68	111	210	350	0	0	0	40	30	40
19	416.22	416.92	0.70	1372	Good	246	25		33	68	111	210	350	0	0	0	40	30	40
20	416.92	418.22	1.30	2245	Fair	246	25		33	68	111	210	350	0	0	0	40	30	40
21	418.22	420.12	1.90	2840	Poor	230	24	Immediate	33	68	111	210	350	0	0	40	40	30	40
22	420.12	420.52	0.40	1188	Good	182	21		33	68	111	210	350	0	0	0	40	30	40
23	420.52	421.02	0.50	2360	Fair	182	21		33	68	111	210	350	0	0	0	40	30	40
24	421.02	423.22	2.20	1189	Good	269	27		33	68	111	210	350	0	0	0	40	30	40
25	423.22	423.62	0.40	2098	Fair	37	5		33	68	111	110	560	50	0	0	40	30	40
26	423.62	424.22	0.60	1438	Good	37	5		33	68	111	110	560	50	0	0	40	30	40
27	424.22	424.72	0.50	2210	Fair	33	4		33	68	111	110	560	60	0	0	40	30	40
28	424.72	426.72	2.00	1186	Good	26	3		33	68	111	110	560	85	0	0	40	30	40
29	426.72	427.82	1.10	2016	Fair	39	5		33	68	111	110	560	60	0	0	40	30	40
30	427.82	428.02	0.20	2964	Poor	23	3	Immediate	33	68	111	100	530	65	50	40	0	40	40
31	428.02	428.52	0.50	1290	Good	31	4		33	68	111	100	530	60	0	0	40	30	40
32	428.52	428.82	0.30	2017	Fair	31	4		33	68	111	100	530	60	0	0	40	30	40
33	428.82	429.12	0.30	2477	Fair	31	4		33	68	111	100	530	60	0	0	40	30	40

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
34	429.12	430.02	0.90	1338	Good	18	2	Immediate	33	68	111	100	530	80	50	40	0	40	40
35	430.02	430.42	0.40	2391	Fair	8	0	Immediate	33	68	111	100	530	110	70	40	0	40	40
36	430.42	434.22	3.80	1212	Good	29	4		33	68	111	100	530	65	0	0	40	30	40
37	434.22	434.42	0.20	2038	Fair	28	4		33	68	111	100	530	65	0	0	40	30	40
38	434.42	437.72	3.30	1160	Good	29	4		33	68	111	100	530	55	0	0	40	30	40
39	437.72	438.02	0.30	2318	Fair	36	5		33	68	111	110	720	50	0	0	40	30	40
40	438.02	440.62	2.60	1157	Good	39	5		33	68	111	110	720	40	0	0	40	30	40
41	440.62	441.32	0.70	2842	Poor	37	5	Immediate	33	68	111	110	720	50	0	40	40	30	40
42	441.32	441.62	0.30	2229	Fair	23	3		33	68	111	110	720	80	0	0	40	30	40
43	441.62	444.32	2.70	1198	Good	47	7		33	68	111	120	630	35	0	0	40	30	40
44	444.32	444.72	0.40	2254	Fair	49	7		33	68	111	120	630	35	0	0	40	30	40
45	444.72	446.02	1.30	3249	Poor	49	7	Immediate	33	68	111	120	630	35	0	40	40	30	40
46	446.02	448.02	2.00	1215	Good	48	7		33	68	111	120	530	35	0	0	40	30	40
47	448.02	448.52	0.50	2810	Poor	5	0	Immediate	33	68	111	120	530	120	80	40	0	40	40
48	448.52	450.32	1.80	1163	Good	5	0	Immediate	33	68	111	120	530	120	80	40	0	40	40
49	450.32	450.82	0.50	1869	Fair	40	6		33	68	111	120	530	40	0	0	40	30	40
50	450.82	454.92	4.10	1125	Good	48	7		33	68	111	120	530	35	0	0	40	30	40
51	454.92	455.32	0.40	2114	Fair	47	7		33	68	111	120	530	40	0	0	40	30	40
52	455.32	455.52	0.20	1141	Good	46	7		33	68	111	120	530	40	0	0	40	30	40
53	455.52	455.72	0.20	2700	Poor	46	7	Immediate	33	68	111	120	530	40	0	40	40	30	40
54	455.72	456.82	1.10	1441	Good	46	7		33	68	111	120	530	40	0	0	40	30	40
55	456.82	457.42	0.60	2120	Fair	49	7		33	68	111	120	530	40	0	0	40	30	40
56	457.42	459.92	2.50	1001	Good	49	7		33	68	111	120	530	50	0	0	40	30	40
57	459.92	460.12	0.20	3082	Poor	271	27	Immediate	33	68	111	200	500	0	0	40	40	30	40
58	460.12	461.82	1.70	1044	Good	269	27		33	68	111	200	500	0	0	0	40	30	40
59	461.82	462.02	0.20	2187	Fair	270	27		33	68	111	200	500	0	0	0	40	30	40
60	462.02	466.52	4.50	965	Good	271	18		33	68	111	200	500	0	0	0	40	30	40
61	466.52	467.02	0.50	2049	Fair	273	18		62	127	208	200	500	0	0	0	40	30	40
62	467.02	468.62	1.60	905	Good	273	18		62	127	208	200	500	0	0	0	40	30	40
63	468.62	468.82	0.20	2643	Poor	39	2	Immediate	62	127	208	130	630	75	50	40	0	40	40
64	468.82	469.22	0.40	1541	Good	39	2	Immediate	62	127	208	130	630	75	50	40	0	40	40
65	469.22	469.52	0.30	1467	Good	37	2	Immediate	62	127	208	130	630	80	50	40	0	40	40
66	469.52	469.92	0.40	2250	Fair	37	2	Immediate	62	127	208	130	630	80	50	40	0	40	40
67	469.92	472.22	2.30	1043	Good	64	5		62	127	208	130	630	55	0	0	40	30	40
68	472.22	472.52	0.30	2094	Fair	25	1	Immediate	62	127	208	130	630	95	55	40	0	40	40
69	472.52	473.42	0.90	1267	Good	25	1	Immediate	62	127	208	130	630	95	55	40	0	40	40

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)					
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
70	473.42	473.72	0.30	2139	Fair	2	0	Immediate	62	127	208	130	630	175	90	40	0	40	40
71	473.72	474.02	0.30	1760	Good	2	0	Immediate	62	127	208	130	630	175	90	40	0	40	40
72	474.02	474.72	0.70	2174	Fair	20	1	Immediate	62	127	208	130	630	100	60	40	0	40	40
73	474.72	479.52	4.80	1383	Good	56	4		62	127	208	130	630	60	0	0	40	30	40
74	479.52	479.82	0.30	2228	Fair	110	8		62	127	208	160	500	40	0	0	40	30	40
75	479.82	483.82	4.00	1417	Good	115	9		62	127	208	160	500	40	0	0	40	30	40
76	483.82	484.62	0.80	1900	Fair	48	3		62	127	208	160	500	70	0	0	40	30	40
77	484.62	485.92	1.30	1449	Good	114	9		62	127	208	160	500	35	0	0	40	30	40
78	485.92	486.62	0.70	2103	Fair	110	8		62	127	208	160	500	35	0	0	40	30	40
79	486.62	489.12	2.50	1387	Good	124	9		62	127	208	160	500	30	0	0	40	30	40
80	489.12	489.72	0.60	2004	Fair	195	14		62	127	208	180	800	0	0	0	40	30	40
81	489.72	496.52	6.80	1254	Good	201	14		62	127	208	180	800	0	0	0	40	30	40
82	496.52	497.02	0.50	1887	Fair	161	12		62	127	208	170	680	0	0	0	40	30	40
83	497.02	498.52	1.50	1621	Good	163	12		62	127	208	170	680	0	0	0	40	30	40
84	498.52	499.92	1.40	2038	Fair	163	12		62	127	208	170	680	0	0	0	40	30	40
85	499.92	501.52	1.60	1491	Good	163	12		62	127	208	170	680	0	0	0	40	30	40
86	501.52	502.12	0.60	1960	Fair	163	12		62	127	208	170	680	0	0	0	40	30	40
87	502.12	503.42	1.30	1547	Good	163	12		62	127	208	170	680	0	0	0	40	30	40
88	503.42	503.62	0.20	2351	Fair	161	12		62	127	208	170	680	0	0	0	40	30	40
89	503.62	505.52	1.90	1620	Good	164	12		62	127	208	170	680	0	0	0	40	30	40
90	505.52	505.82	0.30	2233	Fair	193	14		62	127	208	180	600	0	0	0	40	30	40
91	505.82	506.42	0.60	1487	Good	193	14		62	127	208	180	600	0	0	0	40	30	40
92	506.42	507.92	1.50	1887	Fair	194	14		62	127	208	180	600	0	0	0	40	30	40
93	507.92	508.72	0.80	3044	Poor	35	2	Immediate	62	127	208	180	600	95	55	40	0	40	40
94	508.72	509.32	0.60	2085	Fair	9	0	Immediate	62	127	208	180	600	120	80	40	0	40	40
95	509.32	509.62	0.30	2334	Fair	163	12		62	127	208	180	600	0	0	0	40	30	40
96	509.62	510.12	0.50	1455	Good	163	12		62	127	208	180	600	0	0	0	40	30	40
97	510.12	510.72	0.60	2069	Fair	194	14		62	127	208	180	600	0	0	0	40	30	40
98	510.72	511.02	0.30	2862	Poor	194	14	Immediate	62	127	208	180	600	0	0	40	40	30	40
99	511.02	511.32	0.30	1995	Fair	193	14		62	127	208	180	600	0	0	0	40	30	40
100	511.32	513.22	1.90	1292	Good	194	14		62	127	208	180	600	0	0	0	40	30	40
101	513.22	513.62	0.40	2321	Fair	18	0	Immediate	62	127	208	130	850	100	60	40	0	40	40
102	513.62	513.92	0.30	1546	Good	18	0	Immediate	62	127	208	130	850	100	60	40	0	40	40
103	513.92	515.12	1.20	2913	Poor	18	0	Immediate	62	127	208	130	850	100	60	40	0	40	40
104	515.12	515.62	0.50	1421	Good	32	2	Immediate	62	127	208	130	850	80	50	40	0	40	40
105	515.62	515.92	0.30	2051	Fair	32	2	Immediate	62	127	208	130	850	80	50	40	0	40	40

Sl. No	Chainage		Length (km)	Roughness	Condition	Remaining Life		Intervention	Design MSA			Exist. Crust		Overlay required (mm)				
												BT	Granular	Total	2024		2028	2033	2038
	From	To				in MSA	in Years		2028	2033	2038				DBM	BC	BC	BC	BC
106	515.92	516.22	0.30	1604	Good	32	2	Immediate	62	127	208	130	850	80	50	40	0	40	40
107	516.22	516.42	0.20	2216	Fair	65	5		62	127	208	130	850	50	0	0	40	30	40
108	516.42	517.22	0.80	1528	Good	65	5		62	127	208	130	850	50	0	0	40	30	40
109	517.22	518.22	1.00	2131	Fair	4	0	Immediate	62	127	208	130	850	150	90	40	0	40	40
110	518.22	520.92	2.70	1181	Good	9	0	Immediate	62	127	208	130	850	125	85	40	0	40	40
111	520.92	521.12	0.20	3325	Poor	70	5	Immediate	62	127	208	150	600	50	0	40	40	30	40

Length requiring immediate intervention		27.28	kms
	BC	27.28	kms
	DBM	20.58	kms

6.70

40mm	102.3	20.58	122.9
30mm	0	102.3	0
40mm	83%	17%	100%
30mm	0%	83%	0%

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Immediate Major Repairs Cost

S. no.	Description	Unit	Rate	Quantity	Amount (Rs.)
A	**Highway**				
1.01	Tack coat	Sqm	8.00	6,95,020.00	55,60,160
1.02	DBM Overlay	Cum	8,179.00	33,657.65	27,52,85,919
1.03	BC Over lay on MCW and SR	Cum	10,136.00	26,285.30	26,64,27,801
B	**Structures**				
1.04	removal of wearing coat	Sqm	320.00	8,084.50	25,87,040
1.05	New wearing cost	Sqm	970.45	8,084.50	78,45,586
1.06	Replace expansion joint	m	13,204.60	633.12	83,60,099
1.07	Cleaning Drainage spout	m	250.00	200.00	50,000
1.08	Replace Crash barrier	m	6,360.15	146.60	9,32,398
1.09	Replace RCC Railing	m	6,287.91	156.00	9,80,913
1.10	Repair of spalling of concrete	sqm	500.00	12.00	6,000
				Sub total	**56,80,35,916**
					56.80

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Periodic Maintenance Cost

S. no.	Description	Unit	Rate	Year 2028			Year 2033			Year 2038		
				Quantity	Factor	Amount (Rs. Cr.)	Quantity	Factor	Amount (Rs. Cr.)	Quantity	Factor	Amount (Rs. Cr.)
i	**Functional + Structure overlay MCW+SR**											
2.01	Tack coat	Sqm	8.00	31,40,881		2.51	34,24,835		2.74	40,65,713		3.25
2.02	BC Over lay on MCW + SR	Cum	10,136.00	1,18,849		120.47	1,26,905		128.63	1,62,629		164.84
					Subtotal	**122.98**			**131.37**			**168.09**
ii	**Major Maintenance of Rigid Pavement**											
2.03	Panel replacement	Cum	7,293.02	12,779.25	10.00%	0.93	12,779.25	10.00%	0.93	12,779.25	10.00%	0.93
2.04	Retexturing	Sqm	150.00	42,597.50	100.00%	0.64	42,597.50	0.00%	0.00	42,597.50	100.00%	0.64
2.05	Repair cracks in pavement	Sqm	250.00	42,597.50	10.00%	0.11	42,597.50	10.00%	0.11	42,597.50	10.00%	0.11
					Subtotal	**1.68**			**1.04**			**1.68**
iii	**Structure**											
2.06	Removal of wearing coat	Sqm	320.00	78,085.83	75.00%	1.87	78,085.83	50.00%	1.25	78,085.83	100.00%	2.50
2.07	New wearing cost	Sqm	970.45	78,085.83	75.00%	5.68	78,085.83	50.00%	3.79	78,085.83	100.00%	7.58
2.08	Replace expansion joint	m	13,204.60	7,739.92	10.00%	1.02	7,739.92	10.00%	1.02	7,739.92	10.00%	1.02
2.09	Cleaning Drainage spout	m	250.00	1,380.00	10.00%	0.00	1,380.00	10.00%	0.00	1,380.00	10.00%	0.00
2.1	Replace Crash barrier	m	6,360.15	3,486.86	10.00%	0.22	3,486.86	10.00%	0.22	3,486.86	10.00%	0.22
2.11	Replace RCC Railing	m	6,287.91	760.00	10.00%	0.05	760.00	10.00%	0.05	760.00	10.00%	0.05
					Subtotal	**8.85**			**6.33**			**11.37**
iv	**Replacement of ATMS & TMS**											
2.12	Replacement of ATMS & TMS	no.	1,20,00,000	2.00	75.00%	1.80	2.00	50.00%	1.20	2.00	75.00%	1.80
					Subtotal	**1.80**			**1.20**			**1.80**

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120
Routine Maintenace Cost -Annual

Sl No	Description of items	Unit	Unit Rate	Total Qty	Factor	Quantity	Amount (Rs.in Cr.)	Remarks
i	**Repair and rehabilitation of Highways**							
A	Flexible pavement							
3.01	Pavement Cleaning/sweeping	Sqm	2.50	34,06,852.79	100.00%	34,06,852.79	0.85	
3.02	Cleaning of Toll Plaza	Nos	1,44,000.00	2.00	100.00%	2.00	0.03	
3.03	Cleaning of ROW	Hectare	7,500.00	308.17	100.00%	308.17	0.23	
B	Rigid pavement maintenance							
3.04	Pavement Cleaning/sweeping	Sqm	2.50	42,597.50	100.00%	42,597.50	0.01	
3.05	Rigid pavement maintenance crack filling	Sqm	250.00	42,597.50	5.00%	2,129.88	0.00	
ii	Service Roads (Both sides)							
A	Flexible Pavement							
3.06	Pavement Claeaning/sweeping	Sqm	2.50	10,08,858.07	100.00%	10,08,858.07	0.25	
iii	Plantation							
3.07	Maintenace of Median Plantation / Trimming etc	km	10,000.00	91.89	100.00%	91.89	0.09	
3.08	Watering at median Plantaion and Avenue Plantation	km	45,000.00	91.89	100.00%	91.89	0.41	
3.09	Replacement of Median Plantation	Km	25,000.00	91.89	5.00%	4.59	0.00	
3.10	Avenue Plantation	Nos	377.27	19,736.36	100%	19,736.36	0.74	
iv	Protection works							
3.11	Cleaning of vegetation in shoulder on either side and side at side slopes (ROW Cleaning)	ha	48,000.00	33.99	100.00%	33.99	0.16	Once in Two Month
v	Busbay and Bus shelters							
3.12	Genereal Cleaning and Maintenance of Bus Shelter & Bus bay	Nos	5,000.00	40.00	100.00%	40.00	0.02	
vi	Miscellaneous Items							

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120
Routine Maintenace Cost -Annual

Sl No	Description of items	Unit	Unit Rate	Total Qty	Factor	Quantity	Amount (Rs.in Cr.)	Remarks
3.13	Carrying out routine maintenance to all types of road signs by regular washing , removal of pasted posters etc. complete as directed by the Engineer	Km.	1,500.00	122.88	100.00%	122.88	0.02	
3.14	Maintenance of Laboratory	Month	50,000.00	12.00	100.00%	12.00	0.06	Including replacement of equipment and consumables
3.15	Cleaning of Drain	km	12,000.00	52.08	100.00%	52.08	0.06	
3.16	Cleaning of Chute Drain	km	6,600.00	0.00	100.00%	0.00	0.00	
3.17	Truck Layby Maintenance	m	2,12,680.00	14.00	50.00%	7.00	0.07	
3.18	Safety Items at Site & Corridor	Per Plaza	5,00,000.00	2.00	100.00%	2.00	0.10	
3.19	Rectification of damages at Site office (Civil Work)	Per Plaza	3,00,000.00	2.00	100.00%	2.00	0.06	
					Sub total		**3.19**	
vii	Structures Maintenance							
3.20	General Cleaning of Structures - Removing of dirt, removing of vegetation and clearing the vent by all means for smooth flow	sqm	400.00	78,085.83	50.00%	39,042.92	0.78	
3.21	Wearing coat	Sqm	970.45	78,085.83	5.00%	3,904.29	0.02	
3.22	expansion joint	m	13,204.60	7,739.92	15.00%	1,160.99	0.23	
3.23	Drainage spout	no.	3,393.53	1,380.00	5.00%	69.00	0.00	
3.24	RCC crash barrier	m	6,360.15	3,486.86	10.00%	348.69	0.02	
3.25	bearing	no.	95,000.00	760.00	5.00%	38.00	0.02	
					Sub total		**1.07**	

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Route Operation Cost

A) Corridor Management (Route Patrol)

Nos of Highway Patrol **2**

Sl. no.	Category	Unit	Quantity	CTC - Year	Amount (Rs.)
4.01	Driver	Nos	4	3,00,000	12,00,000
4.02	Helper	Nos	4	2,40,000	9,60,000
4.03	Route Patrol Officer	Nos	4	3,60,000	14,40,000
4.04	Monthly Hire Charge of Vehicle excluding Disel	Month	24	40,000	9,60,000
4.05	Diesel Cost	Ltr	7475	90	6,72,768
4.06	Safety Equipment	Month	24	5,000	1,20,000
	Total Amount				**53,52,768**

B) Ambulance

Nos. of Ambulance **2**

Sl. no.	Category	Unit	Quantity	CTC - Year	Amount
4.07	Driver	Nos	4	3,00,000	12,00,000
4.08	Helper (Photographer)	Nos	4	2,40,000	9,60,000
4.09	Para Medical Officer	Nos	4	3,60,000	14,40,000
4.10	Monthly Hire Charge of Vehicle excluding Disel	Month	24	60,000	14,40,000
4.11	Diesel Cost	Ltr	3738	90	3,36,384
4.12	Medical Equipment	Month	24	5,000	1,20,000
	Total Amount				**54,96,384**

C) Crane & JCB

Nos of Crane 50 MT **2**

Nos of Crane 15 MT **2**

Nos of JCB **2**

Sn	Category	Unit	Quantity	CTC - Year	Amount
4.13	Driver	Nos	12	3,00,000	36,00,000
4.14	Helper	Nos	12	2,40,000	28,80,000
4.15	Monthly Hire Charge of 50 MT Vehicle excluding Disel	Month	24	1,50,000	36,00,000
4.16	Monthly Hire Charge of 12 MT Vehicle excluding Disel	Month	24	75,000	18,00,000

Sl. no.	Category	Unit	Quantity	CTC - Year	Amount (Rs.)
4.17	JCB	Month	24	75,000	18,00,000
4.18	Diesel Cost	Ltr	16819	90	15,13,728
4.19	Tools - Chains etc	Month	24	2,500	60,000
	Total Amount				**1,52,53,728**

4.20	Manager - Corridor Control	Nos	1	7,20,000	7,20,000
4.21	CRO	Nos	4	3,00,000	12,00,000
4.22	Safety & Corridor Manager	Nos	0	9,00,000	0
4.23	Vehicle for NHAI	Month	12	1,00,000	12,00,000
4.24	Vehicle for Concessionaire PM	Month	12	1,00,000	12,00,000
4.25	Vehicle for Route Operation Head	Month	12	1,00,000	12,00,000
4.26	Vehicle for dead animal recovery	Month	12	1,20,000	14,40,000
	Total Amount				**69,60,000**
	Total Route Operation Cost				**3,30,62,880**
	Total Route Operation Cost (Rs. In Cr.)				**3.31**

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Toll Plaza Operation Cost

Length of Project	122.88	km
Nos of Toll Plazas	2	
Nos of Toll lanes	24	

Tolling Operations	Unit	Rate (Rs)	Quantity	Amount (Rs)
Plaza Manager	Per Month	1,50,000	2	36,00,000
Plaza Controller/Incharge	Per Month	75,000	2	18,00,000
Asst. Plaza Manager	Per Month	50,000	2	12,00,000
Route Officer	Per Month	30,000	2	7,20,000
Toll Supervisor	Per Month	30,000	2	7,20,000
Shift In charge	Per Month	30,000	8	28,80,000
Cashier	Per Month	20,000	8	19,20,000
Lane Supervisor	Per Month	20,000	2	4,80,000
Admin/ Account Officer	Per Month	25,000	2	6,00,000
Auditor	Per Month	20,000	8	19,20,000
Exe.Point of Sale	Per Month	20,000	2	4,80,000
Civil/Site Supervisor	Per Month	25,000	2	6,00,000
Control Room Officer - ATMS	Per Month	25,000	4	12,00,000
Toll Collector	Per Month	20,000	72	1,72,80,000
Booth Assistant/ Lane Attendant	Per Month	20,000	72	1,72,80,000
Route Patrolling Officer	Per Month	25,000	6	18,00,000
Route Patrolling Assistant	Per Month	20,000	10	24,00,000
Electrician and Helper	Per Month	20,000	6	14,40,000
Office Support staff	Per Month	20,000	10	24,00,000
Guest House	Per Month	20,000	4	9,60,000
Security Supervisor	Per Month	25,000	2	6,00,000
Security Guard	Per Month	20,000	12	28,80,000
Gun Man	Per Month	20,000	10	24,00,000
System Engineer	Per Month	25,000	6	18,00,000
Labour	Per Month	15,000	60	1,08,00,000
Miscellaneous	Per Month	2,00,000	2	48,00,000
TMS	Per Month	2,50,000	2	60,00,000
ATMS	Per Month	3,00,000	2	72,00,000
Telecommunication Cost	Per Month	20,000	2	4,80,000

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120

Toll Plaza Operation Cost

Length of Project	122.88	km
Nos of Toll Plazas	2	
Nos of Toll lanes	24	

Tolling Operations	Unit	Rate (Rs)	Quantity	Amount (Rs)
Electricity	Per Month	50,000	2	12,00,000
			Total Cost	**9,98,40,000**
			Total Cost (Rs. In Cr.)	**9.984**

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120
Operation and Maintenance Cost of Lighting

Energy Calculation

Sl. No.	Description	Quantity	Unit	Number of Fixtures	Energy Consumption in Kilowatt (Kw)	Hours Operated (hr)	Energy Consumption per day (KWh)
1	Total number of High Mast	51	Nos	816	0.10	10	816
2	Single Arm (Sodium Vapour)	-	Nos	0	0.25	10	0
3	Double Arm (Sodium Vapour)		Nos	0	0.25	10	0
4	Single Arm (LED)	300	Nos	300	0.18	10	540
5	Double Arm (LED)	599	Nos	1198	0.18	10	2156
6	Total Light at Underside of Structure	175	Nos	175	0.10	10	175
7	Canopy Lighting at Toll Plaza	55	Nos	55	0.15	10	83
				Total Kwh	**1.06**		**3770**

Sl. No.	Description of items	Unit	Quantity	Unit Rate	Amount	Remarks
1	Replacement of LED light from Sodium Light, high					
	(i) LED	Nos	-		-	
	a) 60W	Nos	-		-	
	b) 40W	Nos	-		-	
	c) 30W	Nos	-		-	
2	Spare Parts for highway lighting (AMC)	KM	122.88	50,000	61,44,000	
3	Highway Lighting Electricity Charge	Kwh	13,76,014	12	1,65,12,162	
4	Opearation and Maintenance of DG Set	Nos	2	2,19,000	4,38,000	
5	Solar Blinker	Nos	40	3,000	1,20,000	
6	Office Building Electicity Charge	LS			12,00,000	
	Total				2,44,14,162	
					2.44	

Barwa – Adda - Panagarh Section of NH-2 from Km 398.240 to Km 521.120
Insurance and IE/O&M consultant expenses (Annual Expense)

Length of the Project (Km) 122.88

S.No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs in Cr.)
1	Insurance (All Risk, Labour Insurance, Group Insurance, Burgarly Insurance, Terroism) as per premium paid slip including GST	per annum	1.00	2,19,52,120	2.195
2	IE/O&M Consultant - Half renumeration to be shared by Concessionaire	Per km	122.88	1,25,000	1.536
				Total :	**3.731**

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
FY - 2014-15																		
Apr-14	19258	11197	47342	27219	15024	17299	0	4	137343	19258	16796	142026	81657	45072	77846	0	18	382672
May-14	34288	15419	26303	33709	55496	15297	98	30	180640	34288	23129	78909	101127	166488	68837	441	135	473353
Jun-14	42567	17522	4770	34833	67322	17662	684	282	185642	42567	26283	14310	104499	201966	79479	3078	1269	473451
Jul-14	42374	21309	4486	20898	79543	23060	1091	246	193007	42374	31964	13458	62694	238629	103770	4910	1107	498905
Aug-14	44890	19828	6659	9443	85906	27443	934	236	195339	44890	29742	19977	28329	257718	123494	4203	1062	509415
Sep-14	65839	21535	7375	11235	85558	29610	1337	223	222712	65839	32303	22125	33705	256674	133245	6017	1004	550911
Oct-14	76803	18880	9085	10214	80159	26842	1760	179	223922	76803	28320	27255	30642	240477	120789	7920	806	533012
Nov-14	72616	22643	8069	11506	94613	34472	4337	529	248785	72616	33965	24207	34518	283839	155124	19517	2381	626166
Dec-14	80338	22617	7990	13746	94667	35844	5398	360	260960	80338	33926	23970	41238	284001	161298	24291	1620	650682
Jan-15	79877	21372	9123	11304	92226	39192	5252	212	258558	79877	32058	27369	33912	276678	176364	23634	954	650846
Feb-15	76085	20825	8246	10243	78818	36621	3505	123	234466	76085	31238	24738	30729	236454	164795	15773	554	580364
Mar-15	73032	24292	9018	10732	84925	42635	2516	38	247188	73032	36438	27054	32196	254775	191858	11322	171	626846
Total	707967	237439	148466	205082	914257	345977	26912	2462	2588562	707967	356159	445398	615246	2742771	1556897	121104	11079	6556620
Avg/month	58997	19787	12372	17090	76188	28831	2243	205	215714	58997	29680	37117	51271	228564	129741	10092	923	546385
Avg/day	**1967**	**660**	**412**	**570**	**2540**	**961**	**75**	**7**	**7190**	**1967**	**989**	**1237**	**1709**	**7619**	**4325**	**336**	**31**	**18213**
FY - 2015-16																		
Apr-15	67214	22643	6723	11283	80575	39396	1453	30	229317	67214	33965	20169	33849	241725	177282	6539	135	580877
May-15	78191	23198	6711	12567	82891	44754	1445	29	249786	78191	34797	20133	37701	248673	201393	6503	131	627521
Jun-15	68497	22167	5887	11454	69005	48334	1169	15	226528	68497	33251	17661	34362	207015	217503	5261	68	583617
Jul-15	58944	21161	5562	10613	66637	49020	976	28	212941	58944	31742	16686	31839	199911	220590	4392	126	564230
Aug-15	62946	20902	6360	10951	65645	47469	435	22	214730	62946	31353	19080	32853	196935	213611	1958	99	558834
Sep-15	57176	20552	6202	11354	68573	53764	56	39	217716	57176	30828	18606	34062	205719	241938	252	176	588757
Oct-15	67599	21170	8017	11466	60605	51626	34	30	220547	67599	31755	24051	34398	181815	232317	153	135	572223
Nov-15	71613	22095	7181	10779	65616	55519	52	15	232870	71613	33143	21543	32337	196848	249836	234	68	605621
Dec-15	73701	18873	6784	15574	69375	55429	85	39	239860	73701	28310	20352	46722	208125	249431	383	176	627198
Jan-16	70900	16881	7242	15968	70896	55528	52	42	237509	70900	25322	21726	47904	212688	249876	234	189	628839
Feb-16	70146	16495	6361	17155	69771	56115	28	29	236100	70146	24743	19083	51465	209313	252518	126	131	627524
Mar-16	69512	17854	7130	17794	65387	61143	30	38	238888	69512	26781	21390	53382	196161	275144	135	171	642676
Total	816439	243991	80160	156958	834976	618097	5815	356	2756792	816439	365987	240480	470874	2504928	2781437	26168	1602	7207914
Avg/month	68037	20333	6680	13080	69581	51508	485	30	229733	68037	30499	20040	39240	208744	231786	2181	134	600659
Avg/day	**2268**	**678**	**223**	**436**	**2319**	**1717**	**16**	**1**	**7658**	**2268**	**1017**	**668**	**1308**	**6958**	**7726**	**73**	**4**	**20022**

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
FY - 2016-17																		
Apr-16	65956	16436	6436	19469	59661	55614	199	22	223793	65956	24654	19308	58407	178983	250263	896	99	598566
May-16	70260	17983	5781	20930	65352	55498	235	15	236054	70260	26975	17343	62790	196056	249741	1058	68	624290
Jun-16	62835	16827	5226	19756	58866	57673	35	25	221243	62835	25241	15678	59268	176598	259529	158	113	599418
Jul-16	59007	14632	7409	19290	57632	56731	10	13	214724	59007	21948	22227	57870	172896	255290	45	59	589341
Aug-16	58139	14473	5858	18311	51169	57342	31	26	205349	58139	21710	17574	54933	153507	258039	140	117	564158
Sep-16	52173	13985	6568	18877	49269	59571	12	26	200481	52173	20978	19704	56631	147807	268070	54	117	565533
Oct-16	61977	13327	7431	18628	50342	60485	18	22	212230	61977	19991	22293	55884	151026	272183	81	99	583533
Nov-16	18121	3747	1922	4653	14308	17627	9	3	60390	18121	5621	5766	13959	42924	79322	41	14	165766
Dec-16	70992	15974	6624	18970	56847	70890	21	13	240331	70992	23961	19872	56910	170541	319005	95	59	661434
Jan-17	64578	15386	7577	16131	51802	63787	18	20	219299	64578	23079	22731	48393	155406	287042	81	90	601400
Feb-17	58973	13896	6472	14887	44794	56547	37	9	195615	58973	20844	19416	44661	134382	254462	167	41	532945
Mar-17	59990	15506	8377	19325	50472	66899	45	31	220645	59990	23259	25131	57975	151416	301046	203	140	619159
Total	703001	172172	75681	209227	610514	678664	670	225	2450154	703001	258258	227043	627681	1831542	3053988	3015	1013	6705541
Avg/month	58583	14348	6307	17436	50876	56555	56	19	204180	58583	21522	18920	52307	152629	254499	251	84	558795
Avg/day	**1953**	**478**	**210**	**581**	**1696**	**1885**	**2**	**1**	**6806**	**1953**	**717**	**631**	**1744**	**5088**	**8483**	**8**	**3**	**18627**
FY - 2017-18																		
Apr-17	58224	14765	7348	18628	50017	64562	35	23	213602	58224	22148	22044	55884	150051	290529	158	104	599141
May-17	65635	17704	7382	19480	55293	65942	20	9	231465	65635	26556	22146	58440	165879	296739	90	41	635526
Jun-17	63681	16801	6773	18492	57326	64700	46	12	227831	63681	25202	20319	55476	171978	291150	207	54	628067
Jul-17	60821	15643	7006	17877	49600	61563	37	7	212554	60821	23465	21018	53631	148800	277034	167	32	584966
Aug-17	59763	16626	6774	20133	55028	70515	45	11	228895	59763	24939	20322	60399	165084	317318	203	50	648077
Sep-17	62066	14866	7516	20227	48584	71294	43	5	224601	62066	22299	22548	60681	145752	320823	194	23	634385
Oct-17	71134	13274	8525	18457	43336	68191	53	17	222987	71134	19911	25575	55371	130008	306860	239	77	609174
Nov-17	78305	10840	8138	21086	54694	89832	69	16	262980	78305	16260	24414	63258	164082	404244	311	72	750946
Dec-17	88741	11139	9287	21989	57114	93626	67	15	281978	88741	16709	27861	65967	171342	421317	302	68	792306
Jan-18	83306	10265	8563	22242	57319	95669	59	8	277431	83306	15398	25689	66726	171957	430511	266	36	793888
Feb-18	83498	10385	7930	22412	62119	94966	63	0	281373	83498	15578	23790	67236	186357	427347	284	0	804089
Mar-18	82251	12305	8288	24224	63333	89279	77	5	279762	82251	18458	24864	72672	189999	401756	347	23	790368
Total	857425	164613	93530	245247	653763	930139	614	128	2945459	857425	246920	280590	735741	1961289	4185626	2763	576	8270929
Avg/month	71452	13718	7794	20437	54480	77512	51	11	245455	71452	20577	23383	61312	163441	348802	230	48	689244

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1	1.5	3	3	3	4.5	4.5	4.5	PCU
										Car/LMV	CV/Mini bu	Bus	2 Axle	3 Axle	MAV	HCM	Oversized	
Avg/day	**2382**	**457**	**260**	**681**	**1816**	**2584**	**2**	**0**	**8182**	**2382**	**686**	**779**	**2044**	**5448**	**11627**	**8**	**2**	**22975**
FY - 2018-19																		
Apr-18	89293	11292	7661	23816	57957	82566	54	7	272646	89293	16938	22983	71448	173871	371547	243	32	746355
May-18	90743	12557	7247	25082	61491	86945	59	5	284129	90743	18836	21741	75246	184473	391253	266	23	782579
Jun-18	93288	12726	6700	23633	59227	82321	50	4	277949	93288	19089	20100	70899	177681	370445	225	18	751745
Jul-18	87694	13505	6379	23606	53896	88756	57	9	273902	87694	20258	19137	70818	161688	399402	257	41	759294
Aug-18	81622	12305	6739	22277	58564	90202	42	3	271754	81622	18458	20217	66831	175692	405909	189	14	768931
Sep-18	74512	11685	7328	23707	53643	90600	33	1	261509	74512	17528	21984	71121	160929	407700	149	5	753927
Oct-18	88612	11856	8028	24803	59309	92830	80	0	285518	88612	17784	24084	74409	177927	417735	360	0	800911
Nov-18	90024	11463	7672	22530	55893	94687	55	2	282326	90024	17195	23016	67590	167679	426092	248	9	791852
Dec-18	97258	12039	7434	24603	60834	100029	63	10	302270	97258	18059	22302	73809	182502	450131	284	45	844389
Jan-19	98592	11524	7913	23466	58262	101417	59	6	301239	98592	17286	23739	70398	174786	456377	266	27	841470
Feb-19	89658	11232	7010	23202	56764	95606	48	1	283521	89658	16848	21030	69606	170292	430227	216	5	797882
Mar-19	95812	13133	8020	25476	54438	104535	63	5	301482	95812	19700	24060	76428	163314	470408	284	23	850027
Total	1077108	145317	88131	286201	690278	1110494	663	53	3398245	1077108	217976	264393	858603	2070834	4997223	2984	239	9489359
Avg/month	89759	12110	7344	23850	57523	92541	55	4	283187	89759	18165	22033	71550	172570	416435	249	20	790780
Avg/day	**2992**	**404**	**245**	**795**	**1917**	**3085**	**2**	**0**	**9440**	**2992**	**605**	**734**	**2385**	**5752**	**13881**	**8**	**1**	**26359**
FY - 2019-20																		
Apr-19	85623	12065	6881	24265	60301	94305	40	12	283492	85623	18098	20643	72795	180903	424373	180	54	802668
May-19	95424	12997	6256	25196	65663	94584	56	9	300185	95424	19496	18768	75588	196989	425628	252	41	832185
Jun-19	104050	13598	6884	24566	56063	86176	44	12	291393	104050	20397	20652	73698	168189	387792	198	54	775030
Jul-19	92303	13717	6555	26072	55623	88226	81	14	282591	92303	20576	19665	78216	166869	397017	365	63	775073
Aug-19	91344	13367	7028	25176	47618	90667	52	6	275258	91344	20051	21084	75528	142854	408002	234	27	759123
Sep-19	80099	12546	7216	25662	45498	85034	32	10	256097	80099	18819	21648	76986	136494	382653	144	45	716888
Oct-19	98919	12667	8115	25195	44106	84300	37	16	273355	98919	19001	24345	75585	132318	379350	167	72	729756
Nov-19	102950	12966	7449	24173	56978	95289	51	3	299859	102950	19449	22347	72519	170934	428801	230	14	817243
Dec-19	103452	11981	7035	22438	56246	98719	63	4	299938	103452	17972	21105	67314	168738	444236	284	18	823118
Jan-20	93301	10738	10538	18739	47110	89733	42	37	270238	93301	16107	31614	56217	141330	403799	189	167	742723
Feb-20	92064	9851	9150	20837	51817	90018	35	76	273848	92064	14777	27450	62511	155451	405081	158	342	757833
Mar-20	76953	8256	6626	16606	40854	68861	27	52	218235	76953	12384	19878	49818	122562	309875	122	234	591825
Total	1116482	144749	89733	278925	627877	1065912	560	251	3324489	1116482	217124	269199	836775	1883631	4796604	2520	1130	9123464

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1	1.5	3	3	3	4.5	4.5	4.5	PCU
										Car/LMV	CV/Mini bu	Bus	2 Axle	3 Axle	MAV	HCM	Oversized	
Avg/month	93040	12062	7478	23244	52323	88826	47	21	277041	93040	18094	22433	69731	156969	399717	210	94	760289
Avg/day	**3101**	**402**	**249**	**775**	**1744**	**2961**	**2**	**1**	**9235**	**3101**	**603**	**748**	**2324**	**5232**	**13324**	**7**	**3**	**25343**
FY - 2020-21																		
Apr-20	8325	2063	59	2243	8990	18326	15	37	40058	8325	3095	177	6729	26970	82467	68	167	127997
May-20	82744	10270	7785	11501	26345	70062	51	88	208846	82744	15405	23355	34503	79035	315279	230	396	550947
Jun-20	121760	10921	5304	19797	32110	87066	42	83	277083	121760	16382	15912	59391	96330	391797	189	374	702134
Jul-20	108311	11109	3600	24344	36706	89993	37	67	274167	108311	16664	10800	73032	110118	404969	167	302	724361
Aug-20	125773	10459	5084	23143	49933	90343	50	76	304861	125773	15689	15252	69429	149799	406544	225	342	783052
Sep-20	135289	10658	6879	23741	58074	95154	32	73	329900	135289	15987	20637	71223	174222	428193	144	329	846024
Oct-20	140904	10716	7693	25216	54902	98220	46	66	337763	140904	16074	23079	75648	164706	441990	207	297	862905
Nov-20	151938	10614	9341	24310	57928	102225	73	98	356527	151938	15921	28023	72930	173784	460013	329	441	903378
Dec-20	144630	10628	9998	24968	63098	111978	34	95	365429	144630	15942	29994	74904	189294	503901	153	428	959246
Jan-21	118797	9804	7477	23136	55549	112435	48	100	327346	118797	14706	22431	69408	166647	505958	216	450	898613
Feb-21	100643	8317	5956	22985	49743	101258	37	118	289057	100643	12476	17868	68955	149229	455661	167	531	805529
Mar-21	115976	9844	9759	27449	72909	113296	26	86	349345	115976	14766	29277	82347	218727	509832	117	387	971429
Total	1355090	115403	78935	252833	566287	1090356	491	987	3460382	1355090	173105	236805	758499	1698861	4906602	2210	4442	9135613
Avg/month	112924	9617	6578	21069	47191	90863	41	82	288365	112924	14425	19734	63208	141572	408884	184	370	761301
Avg/day	**3764**	**321**	**219**	**702**	**1573**	**3029**	**1**	**3**	**9612**	**3764**	**481**	**658**	**2107**	**4719**	**13629**	**6**	**12**	**25377**
FY - 2021-22																		
Apr-21	104340	8988	9277	24820	60885	103872	25	79	312286	104340	13482	27831	74460	182655	467424	113	356	870660
May-21	81885	7178	4499	18073	51710	84609	20	69	248043	81885	10767	13497	54219	155130	380741	90	311	696639
Jun-21	100140	7938	2908	22096	45675	91829	16	82	270684	100140	11907	8724	66288	137025	413231	72	369	737756
Jul-21	123810	8796	5038	27060	48783	99674	15	92	313268	123810	13194	15114	81180	146349	448533	68	414	828662
Aug-21	114817	8860	6732	27287	43251	105213	25	82	306267	114817	13290	20196	81861	129753	473459	113	369	833857
Sep-21	101208	8734	6600	27233	37017	107652	23	71	288538	101208	13101	19800	81699	111051	484434	104	320	811716
Oct-21	121529	9104	8669	28586	33311	108608	12	83	309902	121529	13656	26007	85758	99933	488736	54	374	836047
Nov-21	131544	8129	9557	25293	32134	116634	15	95	323401	131544	12194	28671	75879	96402	524853	68	428	870038
Dec-21	137776	8777	9367	28123	41618	133230	24	133	359048	137776	13166	28101	84369	124854	599535	108	599	988507
Jan-22	106981	7830	7285	25739	41669	124447	16	122	314089	106981	11745	21855	77217	125007	560012	72	549	903438
Feb-22	119042	8691	7908	25309	38328	113649	10	125	313062	119042	13037	23724	75927	114984	511421	45	563	858742
Mar-22	125072	9166	9406	29349	44367	128215	20	424	346019	125072	13749	28218	88047	133101	576968	90	1908	967153

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
Total	1368144	102191	87246	308968	518748	1317632	221	1457	3704607	1368144	153287	261738	926904	1556244	5929344	995	6557	10203212
Avg/month	114012	8516	7271	25747	43229	109803	18	121	308717	114012	12774	21812	77242	129687	494112	83	546	850268
Avg/day	**3800**	**284**	**242**	**858**	**1441**	**3660**	**1**	**4**	**10291**	**3800**	**426**	**727**	**2575**	**4323**	**16470**	**3**	**18**	**28342**
FY - 2022-23																		
Apr-22	119723	9191	8201	28141	39052	104206	17	113	308644	119723	13787	24603	84423	117156	468927	77	509	829204
May-22	138969	9230	9334	28758	36437	102679	12	98	325517	138969	13845	28002	86274	109311	462056	54	441	838952
Jun-22	128260	8062	8609	28487	31327	97893	9	125	302772	128260	12093	25827	85461	93981	440519	41	563	786744
Jul-22	122554	8365	8437	30836	31320	97942	7	150	299611	122554	12548	25311	92508	93960	440739	32	675	788326
Aug-22	114254	9868	8916	28357	29494	92648	6	132	283675	114254	14802	26748	85071	88482	416916	27	594	746894
Sep-22	104198	10329	9083	31969	31799	96814	8	129	284329	104198	15494	27249	95907	95397	435663	36	581	774524
Oct-22	131065	8893	10087	28218	28290	92045	12	144	298754	131065	13340	30261	84654	84870	414203	54	648	759094
Nov-22	133098	9693	9991	28390	32671	111848	14	148	325853	133098	14540	29973	85170	98013	503316	63	666	864839
Dec-22	137373	8579	9349	28433	34889	118605	14	132	337374	137373	12869	28047	85299	104667	533723	63	594	902634
Jan-23	131510	7623	9505	27520	35319	119913	8	167	331565	131510	11435	28515	82560	105957	539609	36	752	900373
Feb-23	127163	7389	9084	27840	30287	110877	12	135	312787	127163	11084	27252	83520	90861	498947	54	608	839488
Mar-23	128761	7992	9602	30888	31869	112775	10	134	322031	128761	11988	28806	92664	95607	507488	45	603	865962
Total	1516928	105214	110198	347837	392754	1258245	129	1607	3732912	1516928	157821	330594	1043511	1178262	5662103	581	7232	9897031
Avg/month	126411	8768	9183	28986	32730	104854	11	134	311076	126411	13152	27550	86959	98189	471842	48	603	824753
Avg/day	**4214**	**292**	**306**	**966**	**1091**	**3495**	**0**	**4**	**10369**	**4214**	**438**	**918**	**2899**	**3273**	**15728**	**2**	**20**	**27492**
FY - 2023-24																		
Apr-23	118684	7956	8636	30204	31206	106839	6	170	303701	118684	11934	25908	90612	93618	480776	27	765	822324
May-23	148938	8433	9927	31373	30090	103134	6	131	332032	148938	12650	29781	94119	90270	464103	27	590	840477
Jun-23	129976	7589	8534	29407	29471	100250	13	144	305384	129976	11384	25602	88221	88413	451125	59	648	795427
Jul-23	119428	7772	8087	32473	28559	105268	8	159	301754	119428	11658	24261	97419	85677	473706	36	716	812901
Aug-23	117232	7987	8001	31493	30827	104029	8	114	299691	117232	11981	24003	94479	92481	468131	36	513	808855
Sep-23	113173	7875	8227	30951	29248	102196	4	138	291812	113173	11813	24681	92853	87744	459882	18	621	790785
Oct-23																		
Nov-23																		
Dec-23																		
Jan-23																		
Feb-23																		

Monthly Traffic at Beliyad Toll Plaza, Ch. 507+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1	1.5	3	3	3	4.5	4.5	4.5	PCU
										Car/LMV	CV/Mini bu	Bus	2 Axle	3 Axle	MAV	HCM	Oversized	
Mar-23																		
Total	747431	47612	51412	185901	179401	621716	45	856	1834374	747431	71418	154236	557703	538203	2797722	203	3852	4870768
Avg/month	124572	7935	8569	30984	29900	103619	8	143	305729	124572	11903	25706	92951	89701	466287	34	642	811795
Avg/day	**4152**	**265**	**286**	**1033**	**997**	**3454**	**0**	**5**	**10191**	**4152**	**397**	**857**	**3098**	**2990**	**15543**	**1**	**21**	**27060**

Monthly Traffic at Banskopa Toll Plaza, Ch. 438+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
FY - 2017-18																		
Apr-17																		
May-17																		
Jun-17																		
Jul-17																		
Aug-17																		
Sep-17																		
Oct-17	26842	5195	2346	7933	13115	10926	2	17	66376	26842	7793	7038	23799	39345	49167	9	77	154069
Nov-17	234223	41174	15254	75607	110494	101243	522	60	578577	234223	61761	45762	226821	331482	455594	2349	270	1358262
Dec-17	276124	40838	17087	80356	107364	108294	1183	18	631264	276124	61257	51261	241068	322092	487323	5324	81	1444530
Jan-18	257703	38113	19890	77757	103678	103366	2062	18	602587	257703	57170	59670	233271	311034	465147	9279	81	1393355
Feb-18	237890	40394	16485	73522	94233	95657	1108	16	559305	237890	60591	49455	220566	282699	430457	4986	72	1286716
Mar-18	251255	38199	16474	78342	101052	96210	1387	9	582928	251255	57299	49422	235026	303156	432945	6242	41	1335385
Total	1284037	203913	87536	393517	529936	515696	6264	138	3021037	1284037	305870	262608	1180551	1589808	2320632	28188	621	6972315
Avg/month	214006	33986	14589	65586	88323	85949	1044	23	503506	214006	50978	43768	196759	264968	386772	4698	104	1162052
Avg/day	**7134**	**1133**	**486**	**2186**	**2944**	**2865**	**35**	**1**	**16784**	**7134**	**1699**	**1459**	**6559**	**8832**	**12892**	**157**	**3**	**38735**
FY - 2018-19																		
Apr-18	235678	38492	17591	80210	103175	106851	237	23	582257	235678	57738	52773	240630	309525	480830	1067	104	1378344
May-18	256267	38690	16393	83389	111121	113698	255	12	619825	256267	58035	49179	250167	333363	511641	1148	54	1459854
Jun-18	221681	36409	29718	63453	96226	102638	247	0	550372	221681	54614	89154	190359	288678	461871	1112	0	1307468
Jul-18	225840	38702	31668	63009	94396	102499	241	0	556355	225840	58053	95004	189027	283188	461246	1085	0	1313442
Aug-18	221288	37233	30086	60743	90226	103651	220	0	543447	221288	55850	90258	182229	270678	466430	990	0	1287722
Sep-18	214171	37174	29321	62695	92161	101682	208	0	537412	214171	55761	87963	188085	276483	457569	936	0	1280968
Oct-18	218242	34640	27837	58444	88741	97130	216	0	525250	218242	51960	83511	175332	266223	437085	972	0	1233325
Nov-18	209937	35493	27476	57260	90103	102612	283	0	523164	209937	53240	82428	171780	270309	461754	1274	0	1250721
Dec-18	229952	37901	29553	59305	93738	112431	282	0	563162	229952	56852	88659	177915	281214	505940	1269	0	1341800
Jan-19	231141	37976	32428	59820	92920	112947	275	0	567507	231141	56964	97284	179460	278760	508262	1238	0	1353108
Feb-19	202237	35390	26834	57440	86547	100019	254	0	508721	202237	53085	80502	172320	259641	450086	1143	0	1219014
Mar-19	229087	40027	27807	64296	96165	114065	252	8	571707	229087	60041	83421	192888	288495	513293	1134	36	1368394
Total	2695521	448127	326712	770064	1135519	1270223	2970	43	6649179	2695521	672191	980136	2310192	3406557	5716004	13365	194	15794159
Avg/month	224627	37344	27226	64172	94627	105852	248	4	554098	224627	56016	81678	192516	283880	476334	1114	16	1316180
Avg/day	**7488**	**1245**	**908**	**2139**	**3154**	**3528**	**8**	**0**	**18470**	**7488**	**1867**	**2723**	**6417**	**9463**	**15878**	**37**	**1**	**43873**

Monthly Traffic at Banskopa Toll Plaza, Ch. 438+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
FY - 2019-20																		
Apr-19	204626	37769	26087	58099	86076	105660	236	15	518568	204626	56654	78261	174297	258228	475470	1062	68	1248665
May-19	211420	38334	25612	61458	90140	108238	223	9	535434	211420	57501	76836	184374	270420	487071	1004	41	1288666
Jun-19	220697	36494	25816	59142	85404	99005	241	7	526806	220697	54741	77448	177426	256212	445523	1085	32	1233163
Jul-19	210406	38836	26449	61579	94742	110247	229	2	542490	210406	58254	79347	184737	284226	496112	1031	9	1314121
Aug-19	207079	36725	26064	55253	79310	106842	188	6	511467	207079	55088	78192	165759	237930	480789	846	27	1225710
Sep-19	192821	35460	24809	55884	71048	104038	215	7	484282	192821	53190	74427	167652	213144	468171	968	32	1170404
Oct-19	228257	32718	27163	50024	64639	95993	181	9	498984	228257	49077	81489	150072	193917	431969	815	41	1135636
Nov-19	213904	36505	27862	57584	78195	116334	228	12	530624	213904	54758	83586	172752	234585	523503	1026	54	1284168
Dec-19	225324	35593	28334	57412	88239	128083	252	7	563244	225324	53390	85002	172236	264717	576374	1134	32	1378208
Jan-20	215105	34835	28751	64058	90785	121074	231	57	554896	215105	52253	86253	192174	272355	544833	1040	257	1364269
Feb-20	195706	31204	25179	55464	96599	127865	203	30	532250	195706	46806	75537	166392	289797	575393	914	135	1350679
Mar-20	169384	23471	17358	41556	67721	94779	152	15	414436	169384	35207	52074	124668	203163	426506	684	68	1011753
Total	2494729	417944	309484	677513	992898	1318158	2579	176	6213481	2494729	626916	928452	2032539	2978694	5931711	11606	792	15005439
Avg/month	207894	34829	25790	56459	82742	109847	215	15	517790	207894	52243	77371	169378	248225	494309	967	66	1250453
Avg/day	**6930**	**1161**	**860**	**1882**	**2758**	**3662**	**7**	**0**	**17260**	**6930**	**1741**	**2579**	**5646**	**8274**	**16477**	**32**	**2**	**41682**
FY - 2020-21																		
Apr-20	21964	6601	503	7605	7498	22467	6	6	66650	21964	9902	1509	22815	22494	101102	27	27	179839
May-20	148139	25399	10627	31460	38615	79751	61	16	334068	148139	38099	31881	94380	115845	358880	275	72	787570
Jun-20	252236	29365	13701	53750	92032	117384	123	21	558612	252236	44048	41103	161250	276096	528228	554	95	1303609
Jul-20	237574	29143	13658	69088	110867	130507	130	26	590993	237574	43715	40974	207264	332601	587282	585	117	1450111
Aug-20	238681	27230	15014	69588	115961	123302	139	31	589946	238681	40845	45042	208764	347883	554859	626	140	1436839
Sep-20	270057	31676	22024	74303	119065	125887	189	52	643253	270057	47514	66072	222909	357195	566492	851	234	1531323
Oct-20	296385	31418	25388	78127	124741	139047	180	63	695349	296385	47127	76164	234381	374223	625712	810	284	1655085
Nov-20	298760	32196	26857	73956	124843	140435	205	38	697290	298760	48294	80571	221868	374529	631958	923	171	1657073
Dec-20	294505	34163	28813	67327	127495	153368	241	36	705948	294505	51245	86439	201981	382485	690156	1085	162	1708057
Jan-21	265097	35212	28446	62781	113098	154663	208	44	659549	265097	52818	85338	188343	339294	695984	936	198	1628008
Feb-21	219065	27223	23192	56860	94526	137200	155	68	558289	219065	40835	69576	170580	283578	617400	698	306	1402037
Mar-21	214892	27903	25266	63015	102178	150093	110	119	583576	214892	41855	75798	189045	306534	675419	495	536	1504573
Total	2757355	337529	233489	707860	1170919	1474104	1747	520	6683523	2757355	506294	700467	2123580	3512757	6633468	7862	2340	16244122
Avg/month	229780	28127	19457	58988	97577	122842	146	43	556960	229780	42191	58372	176965	292730	552789	655	195	1353677

Monthly Traffic at Banskopa Toll Plaza, Ch. 438+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1	1.5	3	3	3	4.5	4.5	4.5	PCU
										Car/LMV	CV/Mini bu	Bus	2 Axle	3 Axle	MAV	HCM	Oversized	
Avg/day	**7659**	**938**	**649**	**1966**	**3253**	**4095**	**5**	**1**	**18565**	**7659**	**1406**	**1946**	**5899**	**9758**	**18426**	**22**	**7**	**45123**
FY - 2021-22																		
Apr-21	268176	31344	28216	70571	112619	150784	63	80	661853	268176	47016	84648	211713	337857	678528	284	360	1628582
May-21	205077	20923	11332	48564	69636	114477	53	62	470124	205077	31385	33996	145692	208908	515147	239	279	1140722
Jun-21	270615	21558	5502	51506	56802	105735	45	51	511814	270615	32337	16506	154518	170406	475808	203	230	1120622
Jul-21	309728	24597	21594	61596	70974	120380	27	52	608948	309728	36896	64782	184788	212922	541710	122	234	1351181
Aug-21	308661	25315	26758	61174	69131	132336	45	34	623454	308661	37973	80274	183522	207393	595512	203	153	1413690
Sep-21	285765	24577	25949	61012	64758	132853	29	47	594990	285765	36866	77847	183036	194274	597839	131	212	1375968
Oct-21	322974	24948	30186	61742	65199	137589	31	35	642704	322974	37422	90558	185226	195597	619151	140	158	1451225
Nov-21	316756	24090	30726	57653	63521	148183	51	25	641005	316756	36135	92178	172959	190563	666824	230	113	1475757
Dec-21	328013	27036	31604	66672	77821	182812	52	63	714073	328013	40554	94812	200016	233463	822654	234	284	1720030
Jan-22	278017	26504	26141	65668	77842	182781	49	92	657094	278017	39756	78423	197004	233526	822515	221	414	1649875
Feb-22	295475	25790	27530	62691	74155	163342	33	103	649119	295475	38685	82590	188073	222465	735039	149	464	1562939
Mar-22	324590	28769	31009	70709	85295	182762	33	131	723298	324590	43154	93027	212127	255885	822429	149	590	1751950
Total	3513847	305451	296547	739558	887753	1754034	511	775	7498476	3513847	458177	889641	2218674	2663259	7893153	2300	3488	17642538
Avg/month	292821	25454	24712	61630	73979	146170	43	65	624873	292821	38181	74137	184890	221938	657763	192	291	1470211
Avg/day	**9761**	**848**	**824**	**2054**	**2466**	**4872**	**1**	**2**	**20829**	**9761**	**1273**	**2471**	**6163**	**7398**	**21925**	**6**	**10**	**49007**
FY - 2022-23																		
Apr-22	296350	28551	28125	66743	83630	163530	28	69	667026	296350	42827	84375	200229	250890	735885	126	311	1610992
May-22	310966	27112	29424	66131	77413	153603	40	88	664777	310966	40668	88272	198393	232239	691214	180	396	1562328
Jun-22	302542	26477	27736	65640	83970	160848	49	81	667343	302542	39716	83208	196920	251910	723816	221	365	1598697
Jul-22	305289	25971	28785	67023	85400	166688	28	112	679296	305289	38957	86355	201069	256200	750096	126	504	1638596
Aug-22	291187	23956	26502	61226	74016	169911	30	104	646932	291187	35934	79506	183678	222048	764600	135	468	1577556
Sep-22	285199	25881	25758	66174	66323	164041	26	86	633488	285199	38822	77274	198522	198969	738185	117	387	1537474
Oct-22	313145	23704	28643	56796	55941	149449	19	76	627773	313145	35556	85929	170388	167823	672521	86	342	1445789
Nov-22	305250	26568	29392	62176	67994	189373	37	106	680896	305250	39852	88176	186528	203982	852179	167	477	1676610
Dec-22	324587	24991	29629	62419	69054	194319	35	82	705116	324587	37487	88887	187257	207162	874436	158	369	1720342
Jan-23	316981	24031	30122	61769	66256	193303	33	98	692593	316981	36047	90366	185307	198768	869864	149	441	1697922
Feb-23	280303	22426	26435	62778	62746	186998	29	77	641792	280303	33639	79305	188334	188238	841491	131	347	1611787
Mar-23	308955	23043	27849	67998	68801	203971	38	122	700777	308955	34565	83547	203994	206403	917870	171	549	1756053
Total	3640754	302711	338400	766873	861544	2096034	392	1101	8007809	3640754	454067	1015200	2300619	2584632	9432153	1764	4955	19434143

Monthly Traffic at Banskopa Toll Plaza, Ch. 438+000

Month	Traffic (Nos)									PCU								
	Car/LMV	LCV/ Mini bus	Bus	Truck 2 Axle	Truck 3 Axle	MAV	HCM	Oversized	Traffic	1 Car/LMV	1.5 CV/Mini bu	3 Bus	3 2 Axle	3 3 Axle	4.5 MAV	4.5 HCM	4.5 Oversized	PCU
Avg/month	303396	25226	28200	63906	71795	174670	33	92	667317	303396	37839	84600	191718	215386	786013	147	413	1619512
Avg/day	**10113**	**841**	**940**	**2130**	**2393**	**5822**	**1**	**3**	**22244**	**10113**	**1261**	**2820**	**6391**	**7180**	**26200**	**5**	**14**	**53984**
FY - 2023-24																		
Apr-23	284348	22739	25907	64338	63924	200826	34	103	662219	284348	34109	77721	193014	191772	903717	153	464	1685297
May-23	324975	23047	28124	66267	65561	201842	26	72	709914	324975	34571	84372	198801	196683	908289	117	324	1748132
Jun-23	298566	21949	25685	62442	66673	184066	31	85	659497	298566	32924	77055	187326	200019	828297	140	383	1624709
Jul-23	293593	22969	25957	63838	63476	178497	20	45	648395	293593	34454	77871	191514	190428	803237	90	203	1591389
Aug-23	294431	22605	26446	61312	63806	174578	30	28	643236	294431	33908	79338	183936	191418	785601	135	126	1568893
Sep-23	281842	22241	24710	61072	58924	179881	27	65	628762	281842	33362	74130	183216	176772	809465	122	293	1559200
Oct-23																		
Nov-23																		
Dec-23																		
Jan-23																		
Feb-23																		
Mar-23																		
Total	1777755	135550	156829	379269	382364	1119690	168	398	3952023	1777755	203325	470487	1137807	1147092	5038605	756	1791	9777618
Avg/month	296293	22592	26138	63212	63727	186615	28	66	658671	296293	33888	78415	189635	191182	839768	126	299	1629603
Avg/day	**9876**	**753**	**871**	**2107**	**2124**	**6221**	**1**	**2**	**21956**	**9876**	**1130**	**2614**	**6321**	**6373**	**27992**	**4**	**10**	**54320**

Appendix 2.1

Axle Load Survey Data at KM 438+500

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Summary

Location	:	KM 438+500						
Type of Vehicle	Total no. of Veh.	Sample size	Sample (%)	Panagarh - Dhanbad		Dhanbad - Panagarh		Adopted VDF
				No. of Veh.	VDF	No. of Veh.	VDF	
LCV	265	152	57.4%	73	1.34	79	1.49	1.40
2-Axle Truck	1033	196	19.0%	86	3.21	110	2.51	2.90
3-Axle Truck	997	301	30.2%	162	5.61	139	6.49	6.00
M-Axle Truck	3454	807	23.4%	383	8.48	424	11.52	10.00
Bus	286	59	20.6%	45	1.89	14	1.54	1.70

Load (t)	% of Total Axles					
	Panagarh - Dhanbad			Dhanbad - Panagarh		
	Single Axle	Tandem Axle	Tridem Axle	Single Axle	Tandem Axle	Tridem Axle
0-7	22.70	1.42	0.35	19.12	3.54	0.00
7-9	11.97	5.59	3.81	12.97	3.45	0.08
9-11	8.95	0.18	0.44	12.97	2.95	0.25
11-13	4.88	0.44	0.00	2.44	3.79	0.08
13-15	1.68	0.80	0.00	1.68	2.53	0.00
15-17	0.27	0.89	0.00	0.59	3.96	0.25
17-19	0.00	1.77	0.00	0.25	3.96	0.08
19-21	0.00	3.10	0.27	0.17	1.77	0.08
21-23	0.00	5.76	0.18	0.00	2.61	0.08
23-25	0.00	3.90	0.53	0.00	2.19	0.00
25-27	0.00	7.45	3.01	0.00	4.13	0.17
27-29	0.00	2.84	1.42	0.00	4.13	0.08
29-31	0.00	1.60	0.89	0.00	1.94	0.08
31-33	0.00	0.27	0.80	0.00	1.60	1.01
33-35	0.00	0.09	0.27	0.00	0.84	1.77
35-37	0.00	0.00	0.09	0.00	0.51	0.51
37-39	0.00	0.00	0.09	0.00	0.17	0.25
39-41	0.00	0.00	0.44	0.00	0.00	0.00
41-43	0.00	0.00	0.71	0.00	0.00	0.25
43-45	0.00	0.00	0.09	0.00	0.00	0.25
45-47	0.00	0.00	0.00	0.00	0.00	0.25
47-49	0.00	0.00	0.09	0.00	0.00	0.00
49-51	0.00	0.00	0.00	0.00	0.00	0.17
	50.44	**36.08**	**13.48**	**50.21**	**44.06**	**5.73**

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Summary

Location	:	KM 438+500						
Type of Vehicle	Total no. of Veh.	Sample size	Sample (%)	Panagarh - Dhanbad		Dhanbad - Panagarh		Adopted VDF
				No. of Veh.	VDF	No. of Veh.	VDF	
LCV	265	152	57.4%	73	1.34	79	1.49	1.40
2-Axle Truck	1033	196	19.0%	86	3.21	110	2.51	2.90
3-Axle Truck	997	301	30.2%	162	5.61	139	6.49	6.00
M-Axle Truck	3454	807	23.4%	383	8.48	424	11.52	10.00
Bus	286	59	20.6%	45	1.89	14	1.54	1.70

Load (t)	% of Vehicle wise Axles					
	Panagarh - Dhanbad			Dhanbad - Panagarh		
	Single Axle	Tandem Axle	Tridem Axle	Single Axle	Tandem Axle	Tridem Axle
0-7	44.99	3.93	2.63	38.09	8.03	0.00
7-9	23.73	15.48	28.29	25.84	7.84	1.47
9-11	17.75	0.49	3.29	25.84	6.69	4.41
11-13	9.67	1.23	0.00	4.87	8.60	1.47
13-15	3.34	2.21	0.00	3.36	5.74	0.00
15-17	0.53	2.46	0.00	1.17	8.99	4.41
17-19	0.00	4.91	0.00	0.50	8.99	1.47
19-21	0.00	8.60	1.97	0.34	4.02	1.47
21-23	0.00	15.97	1.32	0.00	5.93	1.47
23-25	0.00	10.81	3.95	0.00	4.97	0.00
25-27	0.00	20.64	22.37	0.00	9.37	2.94
27-29	0.00	7.86	10.53	0.00	9.37	1.47
29-31	0.00	4.42	6.58	0.00	4.40	1.47
31-33	0.00	0.74	5.92	0.00	3.63	17.65
33-35	0.00	0.25	1.97	0.00	1.91	30.88
35-37	0.00	0.00	0.66	0.00	1.15	8.82
37-39	0.00	0.00	0.66	0.00	0.38	4.41
39-41	0.00	0.00	3.29	0.00	0.00	0.00
41-43	0.00	0.00	5.26	0.00	0.00	4.41
43-45	0.00	0.00	0.66	0.00	0.00	4.41
45-47	0.00	0.00	0.00	0.00	0.00	4.41
47-49	0.00	0.00	0.66	0.00	0.00	0.00
49-51	0.00	0.00	0.00	0.00	0.00	2.94
	100.00	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 438+500

Direction:	Panagarh - Dhanbad

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
0	-	7	36	1	17	0	202	256	44.99	22.70	1	15	16	3.93	1.42	4	2.63	0.35
7	-	9	25	36	18	0	56	135	23.73	11.97	22	41	63	15.48	5.59	43	28.29	3.81
9	-	11	5	8	21	0	67	101	17.75	8.95	0	2	2	0.49	0.18	5	3.29	0.44
11	-	13	5	0	27	0	23	55	9.67	4.88	1	4	5	1.23	0.44	0	0.00	0.00
13	-	15	2	0	3	0	14	19	3.34	1.68	3	6	9	2.21	0.80	0	0.00	0.00
15	-	17	0	0	0	0	3	3	0.53	0.27	4	6	10	2.46	0.89	0	0.00	0.00
17	-	19	0	0	0	0	0	0	0.00	0.00	14	6	20	4.91	1.77	0	0.00	0.00
19	-	21	0	0	0	0	0	0	0.00	0.00	26	9	35	8.60	3.10	3	1.97	0.27
21	-	23	0	0	0	0	0	0	0.00	0.00	44	21	65	15.97	5.76	2	1.32	0.18
23	-	25	0	0	0	0	0	0	0.00	0.00	18	26	44	10.81	3.90	6	3.95	0.53
25	-	27	0	0	0	0	0	0	0.00	0.00	21	63	84	20.64	7.45	34	22.37	3.01
27	-	29	0	0	0	0	0	0	0.00	0.00	4	28	32	7.86	2.84	16	10.53	1.42
29	-	31	0	0	0	0	0	0	0.00	0.00	3	15	18	4.42	1.60	10	6.58	0.89
31	-	33	0	0	0	0	0	0	0.00	0.00	1	2	3	0.74	0.27	9	5.92	0.80
33	-	35	0	0	0	0	0	0	0.00	0.00	0	1	1	0.25	0.09	3	1.97	0.27
35	-	37	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	1	0.66	0.09
37	-	39	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	1	0.66	0.09

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 438+500

Direction:	Panagarh - Dhanbad

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
39	-	41	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	5	3.29	0.44
41	-	43	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	8	5.26	0.71
43	-	45	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	1	0.66	0.09
45	-	47	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
47	-	49	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	1	0.66	0.09
49	-	51	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
					Total :			**569**	**100.00**	**50**			**407**	**100**	**36**	**152**	**100**	**13**

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 438+500

Direction:	Dhanbad - Panagarh

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
0	-	7	47	1	23	0	156	227	38.09	19.12	1	41	42	8.03	3.54	0	0.00	0.00
7	-	9	18	10	47	0	79	154	25.84	12.97	19	22	41	7.84	3.45	1	1.47	0.08
9	-	11	10	3	26	0	115	154	25.84	12.97	1	34	35	6.69	2.95	3	4.41	0.25
11	-	13	4	0	8	0	17	29	4.87	2.44	3	42	45	8.60	3.79	1	1.47	0.08
13	-	15	0	0	5	0	15	20	3.36	1.68	1	29	30	5.74	2.53	0	0.00	0.00
15	-	17	0	0	0	0	7	7	1.17	0.59	14	33	47	8.99	3.96	3	4.41	0.25
17	-	19	0	0	0	0	3	3	0.50	0.25	16	31	47	8.99	3.96	1	1.47	0.08
19	-	21	0	0	1	0	1	2	0.34	0.17	11	10	21	4.02	1.77	1	1.47	0.08
21	-	23	0	0	0	0	0	0	0.00	0.00	13	18	31	5.93	2.61	1	1.47	0.08
23	-	25	0	0	0	0	0	0	0.00	0.00	16	10	26	4.97	2.19	0	0.00	0.00
25	-	27	0	0	0	0	0	0	0.00	0.00	22	27	49	9.37	4.13	2	2.94	0.17
27	-	29	0	0	0	0	0	0	0.00	0.00	18	31	49	9.37	4.13	1	1.47	0.08
29	-	31	0	0	0	0	0	0	0.00	0.00	2	21	23	4.40	1.94	1	1.47	0.08
31	-	33	0	0	0	0	0	0	0.00	0.00	1	18	19	3.63	1.60	12	17.65	1.01
33	-	35	0	0	0	0	0	0	0.00	0.00	0	10	10	1.91	0.84	21	30.88	1.77
35	-	37	0	0	0	0	0	0	0.00	0.00	1	5	6	1.15	0.51	6	8.82	0.51
37	-	39	0	0	0	0	0	0	0.00	0.00	0	2	2	0.38	0.17	3	4.41	0.25

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 438+500

Direction:	Dhanbad - Panagarh

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
39	-	41	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
41	-	43	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	3	4.41	0.25
43	-	45	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	3	4.41	0.25
45	-	47	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	3	4.41	0.25
47	-	49	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
49	-	51	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	2	2.94	0.17
					Total :			**596**	**100.00**	**50**			**523**	**100**	**44**	**68**	**100**	**6**

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
1	2 Axle	1.2	2	NL015115	Parcel	SASW	SADW	-	-	7.02	12.22				19.24	1.26	5.04			6.30
2	4 Axle	1.1.22	1	WB372675	Empty	SASW	SASW	TADW	-	4.42		3.82	3.74		11.98	0.20		0.06		0.26
3	3 Axle	1.22	2	NL018792	Parcel	SASW	TADW	-	-	6.02	11.02	10.08			27.12	0.68	3.82			4.50
4	LCV	1.2	2	HR384526	Tea	SASW	SADW	-	-	3.82	7.18				11.00	0.11	0.60			0.71
5	BUS	1.2	2	WB373334	Passanger	SASW	SADW	-	-	4.42	9.13				13.55	0.20	1.57			1.77
6	3 Axle	1.22	1	WB372492	Empty	SASW	TADW	-	-	4.72	4.22	3.98			12.92	0.26	0.09			0.34
7	4 Axle	1.1.22	1	WB376391	Empty	SASW	SASW	TADW	-	4.82	4.42	4.22	4.08		17.54	0.28	0.20	0.09		0.57
8	BUS	1.2	2	JH107584	Passanger	SASW	SADW	-	-	4.02	7.82				11.84	0.14	0.84			0.98
9	4 Axle	1.1.22	2	HL010523	Chemical	SASW	SASW	TADW	-	7.82		13.82	13.14		34.78	1.94		10.17		12.11
10	3 Axle	1.22	2	RJ023807	Parcel	SASW	TADW	-	-	6.42	10.22	10.06			26.70	0.88	3.26			4.14
11	3 Axle	1.22	2	JH058388	Parcel	SASW	TADW	-	-	6.82	11.02	10.26			28.10	1.12	3.95			5.07
12	4 Axle	1.1.22	2	HR550585	Pipe	SASW	SASW	TADW	-	7.39	6.42	13.82	12.62		40.25	1.55	0.88	9.41		11.83
13	BUS	1.2	2	JH019613	Passanger	SASW	SADW	-	-	3.82	6.02				9.84	0.11	0.30			0.41
14	LCV	1.2	1	HL012534	Empty	SASW	SADW	-	-	4.22	3.82				8.04	0.16	0.05			0.21
15	LCV	1.2	2	UP728138	Parcel	SASW	SADW	-	-	3.82	7.92				11.74	0.11	0.89			1.00
16	4 Axle	1.1.22	1	JH108425	Empty	SASW	SASW	TADW	-	4.82		4.32	4.08		13.22	0.28		0.10		0.38
17	4 Axle	1.2.22	2	NL011714	Iron	SASW	SADW	TADW	-	7.82	10.22	15.02	14.08		47.14	1.94	2.46	13.80		18.21
18	5 Axle	1.1.122	2	RJ046362	Milk	SASW	SASW	TRADW	-	7.82	10.03		13.02	12.04	42.91	1.94	5.24	1.45		8.63
19	LCV	1.2	2	WB114780	Parcel	SASW	SADW	-	-	4.14	8.42				12.56	0.15	1.14			1.29
20	3 Axle	1.22	2	RJ321590	Parcel	SASW	TADW	-	-	6.42	10.22	9.82			26.46	0.88	3.10			3.99
21	4 Axle	1.1.22	2	JH115877	Iron	SASW	SASW	TADW	-	7.92	8.62	15.02	14.08		45.64	2.04	2.86	13.80		18.70
22	4 Axle	1.1.22	1	NL012109	Empty	SASW	SASW	TADW	-	4.82		4.42	4.08		13.32	0.28		0.10		0.38
23	4 Axle	1.1.22	2	HL014945	Iron	SASW	SASW	TADW	-	7.91	12.84	14.02	13.14		47.91	2.03	14.08	10.48		26.59
24	4 Axle	1.1.22	1	NL011377	Empty	SASW	SASW	TADW	-	4.82	4.42	4.23	4.18		17.65	0.28	0.20	0.10		0.57
25	3 Axle	1.22	2	NL016575	Choclate	SASW	TADW	-	-	6.20	9.02	8.18			23.40	0.77	1.68			2.45
26	4 Axle	1.1.22	2	NL012180	Car	SASW	SASW	TADW	-	6.42	9.02	7.02	7.58		30.04	0.88	3.43	0.87		5.18
27	3 Axle	1.22	2	MP074228	Parcel	SASW	TADW	-	-	6.52	11.02	10.08			27.62	0.94	3.82			4.75
28	3 Axle	1.22	2	UP214088	Tealeaves	SASW	TADW	-	-	7.82	13.82	13.14			34.78	1.94	10.17			12.11
29	4 Axle	1.1.22	2	NL015809	Car	SASW	SASW	TADW	-	7.18	10.22	9.02	8.18		34.60	1.38	5.65	1.68		8.71
30	4 Axle	1.1.22	2	JH022294	Oil	SASW	SASW	TADW	-	6.82		13.82	13.18		33.82	1.12		10.23		11.35
31	2 Axle	1.2	1	AP299939	Empty	SASW	SADW	-	-	2.42	2.42				4.84	0.02	0.01			0.03

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
32	3 Axle	1.22	1	WB370486	Empty	SASW	TADW	-	-	4.64	4.02	3.84			12.50	0.24	0.07			0.31
33	4 Axle	1.1.22	2	UP53ET2326	Powder	SASW	SASW	TADW	-	8.04		13.06	12.08		33.18	2.17		7.69		9.85
34	4 Axle	1.1.22	2	WB11E3428	Animalfood	SASW	SASW	TADW	-	7.04		10.84	12.04		29.92	1.27		5.28		6.55
35	4 Axle	1.1.22	2	TN282450	Parcel	SASW	SASW	TADW	-	7.44	4.64	13.88	14.04		40.00	1.59	0.24	11.70		13.53
36	3 Axle	1.22	2	NL012885	Oil	SASW	TADW	-	-	8.44	12.08	12.84			33.36	2.63	7.42			10.05
37	5 Axle	1.1.122	1	JH168863	Empty	SASW	SASW	TRADW	-	3.84	4.08		3.84	4.42	16.18	0.11	0.14	0.02		0.27
38	4 Axle	1.1.22	2	NL01E2060	Powder	SASW	SASW	TADW	-	7.44		13.28	13.84		34.56	1.59		10.41		12.00
39	4 Axle	1.1.22	2	JH032882	Coal	SASW	SASW	TADW	-	6.04	6.24	12.64	12.44		37.36	0.69	0.79	7.62		9.09
40	4 Axle	1.1.22	2	JH10B2679	Coal	SASW	SASW	TADW	-	6.04	6.28	12.44	13.24		38.00	0.69	0.81	8.37		9.87
41	4 Axle	1.1.22	2	JH021313	Dust	SASW	SASW	TADW	-	6.04		11.24	13.64		30.92	0.69		7.38		8.07
42	3 Axle	1.22	2	RJ184401	Waterbottle	SASW	TADW	-	-	7.44	11.64	11.84			30.92	1.59	5.85			7.44
43	4 Axle	1.1.22	2	JH030724	Parcel	SASW	SASW	TADW	-	6.24	8.10	13.64			27.98	0.79	2.23	0.67		3.68
44	4 Axle	1.1.22	2	HR55A3980	Parcel	SASW	SASW	TADW	-	4.64	10.84	11.84			27.32	0.24	7.15	0.38		7.77
45	4 Axle	1.1.22	2	MH40B8353	Biscuit	SASW	SASW	TADW	-	5.64	10.68	11.64			27.96	0.52	6.74	0.35		7.62
46	4 Axle	1.1.22	2	GJ28594	Iron	SASW	SASW	TADW	-	6.82	8.42		13.62		28.86	1.12	2.60	0.66		4.39
47	4 Axle	1.1.22	2	UP506139	Iron	SASW	SASW	TADW	-	6.03		13.02	12.42		31.47	0.69		8.06		8.75
48	4 Axle	1.1.22	2	NL015249	Gas	SASW	SASW	TADW	-	2.42	13.82	15.02	14.08		45.34	0.02	18.90	13.80		32.72
49	LCV	1.2	1	UP210341	Empty	SASW	SADW	-	-	2.42	2.08				4.50	0.02	0.00			0.02
50	5 Axle	1.1.122	2	JH104840	Gas	SASW	SASW	TRADW	-	7.82	10.42		13.82	12.94	45.00	1.94	6.11	1.88		9.93
51	4 Axle	1.1.22	2	RJ143410	Parcel	SASW	SASW	TADW	-	6.22		13.03	12.42		31.67	0.78		8.08		8.85
52	4 Axle	1.1.22	2	NL012701	Iron	SASW	SASW	TADW	-	5.14	12.08	13.02	12.42		42.66	0.36	11.03	8.06		19.46
53	4 Axle	1.1.22	2	JH401236	Coal	SASW	SASW	TADW	-	6.42	5.82	13.42	13.02		38.68	0.88	0.59	9.41		10.88
54	4 Axle	1.1.22	1	JH024648	Empty	SASW	SASW	TADW	-	4.42		4.32	4.08		12.82	0.20		0.10		0.29
55	3 Axle	1.22	1	HR384504	Empty	SASW	TADW	-	-	4.82	4.42	4.32			13.56	0.28	0.11			0.39
56	LCV	1.2	2	WB235502	Coal	SASW	SADW	-	-	2.58	2.02				4.60	0.02	0.00			0.03
57	5 Axle	1.1.122	2	OD039319	Animalfood	SASW	SASW	TRADW	-	7.02	8.42		13.82	13.42	42.68	1.26	2.60	2.02		5.89
58	5 Axle	1.1.122	2	BR027185	Iron	SASW	SASW	TRADW	-	7.22	8.42		13.82	13.02	42.48	1.41	2.60	1.91		5.92
59	LCV	1.2	2	UP107025	Powder	SASW	SADW	-	-	2.62	9.82				12.44	0.02	2.10			2.12
60	4 Axle	1.1.22	2	UP174826	Gas	SASW	SASW	TADW	-	7.02	13.82	15.02	14.02		49.88	1.26	18.90	13.69		33.85
61	4 Axle	1.1.22	1	JH105142	Empty	SASW	SASW	TADW	-	7.22		3.94	3.68		14.84	1.41		0.06		1.47
62	3 Axle	1.22	2	NL016605	Powder	SASW	TADW	-	-	2.62	11.82	11.08			25.52	0.02	5.29			5.32

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
63	4 Axle	1.1.22	2	WB234218	Iron	SASW	SASW	TADW	-	7.02		13.82	12.95		33.79	1.26		9.89		11.14
64	3 Axle	1.22	1	JH027533	Empty	SASW	TADW	-	-	4.22	4.08	3.94			12.24	0.16	0.08			0.24
65	3 Axle	1.22	1	JH103443	Empty	SASW	TADW	-	-	6.42	3.82	3.66			13.90	0.88	0.06			0.94
66	4 Axle	1.1.22	1	JH104055	Empty	SASW	SASW	TADW	-	6.82		3.83	3.62		14.27	1.12		0.06		1.18
67	4 Axle	1.1.22	1	UP755286	Empty	SASW	SASW	TADW	-	4.22		4.22	3.82		12.26	0.16		0.08		0.24
68	4 Axle	1.1.22	2	NL010848	Cloth	SASW	SASW	TADW	-	4.82	7.02	13.02	12.04		36.90	0.28	1.26	7.59		9.13
69	4 Axle	1.1.22	1	WB374760	Empty	SASW	SASW	TADW	-	5.38	5.02		4.72		15.12	0.43	0.33	0.01		0.77
70	LCV	1.2	2	DL130427	Choclate	SASW	SADW	-	-	3.62	7.38				11.00	0.09	0.67			0.76
71	4 Axle	1.1.22	2	UP700228	Car	SASW	SASW	TADW	-	7.38	13.02	15.14	14.02		49.56	1.54	14.89	13.92		30.35
72	4 Axle	1.1.22	2	UP946120	Gas	SASW	SASW	TADW	-	6.73	12.82	13.02	12.04		44.61	1.06	14.00	7.59		22.65
73	4 Axle	1.1.22	1	WB675161	Empty	SASW	SASW	TADW	-	4.22		4.08	3.91		12.21	0.16		0.08		0.24
74	5 Axle	1.1.122	2	JH025631	Powder	SASW	SASW	TRADW	-	7.38	7.78		13.02	12.04	40.22	1.54	1.90	1.45		4.88
75	4 Axle	1.1.22	2	WB223021	Rice	SASW	SASW	TADW	-	7.02		15.02	14.02		36.06	1.26		13.69		14.95
76	3 Axle	1.22	2	JH103283	Parcel	SASW	TADW	-	-	6.34	9.74	9.10			25.18	0.84	2.43			3.26
77	3 Axle	1.22	1	WB196215	Empty	SASW	TADW	-	-	4.22	3.81	3.74			11.77	0.16	0.06			0.23
78	2 Axle	1.2	2	WB112115	Paper	SASW	SADW	-	-	4.94	11.02				15.96	0.31	3.33			3.64
79	2 Axle	1.2	2	UP505723	Food	SASW	SADW	-	-	5.78	10.94				16.72	0.58	3.24			3.81
80	3 Axle	1.22	2	RJ103049	Iron	SASW	TADW	-	-	7.74	13.68	13.14			34.56	1.86	9.96			11.82
81	BUS	1.2	2	WB417105	Passanger	SASW	SADW	-	-	4.34	7.74				12.08	0.18	0.81			0.99
82	LCV	1.2	2	DL028125	Led	SASW	SADW	-	-	4.36	6.94				11.30	0.19	0.52			0.71
83	4 Axle	1.1.22	2	HP644743	Car	SASW	SASW	TADW	-	6.10		13.88	13.56		33.54	0.72		10.91		11.63
84	2 Axle	1.2	2	NL018445	Passanger	SASW	SADW	-	-	7.28	11.88				19.16	1.46	4.50			5.95
85	5 Axle	1.1.122	1	JH022685	Empty	SASW	SASW	TRADW	-	4.22	3.82		3.62	3.48	15.14	0.16	0.11	0.01		0.28
86	4 Axle	1.1.22	1	JH026826	Empty	SASW	SASW	TADW	-	4.02		3.74	3.84		11.60	0.14		0.06		0.20
87	3 Axle	1.22	2	NL016217	Iron	SASW	TADW	-	-	7.28	12.34	11.96			31.58	1.46	6.71			8.17
88	5 Axle	1.1.122	1	WB579551	Empty	SASW	SASW	TRADW	-	4.62	4.08		3.94	3.64	16.28	0.24	0.14	0.01		0.39
89	BUS	1.2	1	JH106108	Empty	SASW	SADW	-	-	6.14	8.54				14.68	0.74	1.20			1.94
90	3 Axle	1.22	2	HR553057	Parcel	SASW	TADW	-	-	6.54	11.74	10.86			29.14	0.95	5.02			5.97
91	LCV	1.2	2	WB198053	Parcel	SASW	SADW	-	-	7.74	5.34				13.08	1.86	0.18			2.04
92	5 Axle	1.1.122	2	PB654783	Maize	SASW	SASW	TRADW	-	7.68	7.28		12.14	13.08	40.18	1.80	1.46	1.49		4.74
93	4 Axle	1.1.22	2	PB654848	Soil	SASW	SASW	TADW	-	6.62	9.74	14.36	13.88		44.60	1.00	4.66	12.24		17.90

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
94	LCV	1.2	2	WB372755	Floor	SASW	SADW	-	-	5.88	7.88				13.76	0.62	0.87			1.49
95	5 Axle	1.1.122	1	JH028452	Empty	SASW	SASW	TRADW	-	4.08	3.86		3.74	3.84	15.52	0.14	0.12	0.01		0.27
96	4 Axle	1.1.22	2	WB371771	Wood	SASW	SASW	TADW	-	6.82		10.94	10.24		28.00	1.12		3.87		4.99
97	5 Axle	1.1.122	1	JH029070	Empty	SASW	SASW	TRADW	-	3.88	3.74		3.96	3.74	15.32	0.12	0.10	0.01		0.23
98	4 Axle	1.1.22	2	UP708978	Oil	SASW	SASW	TADW	-	7.88	9.74	14.26	13.48		45.36	2.00	4.66	11.40		18.06
99	2 Axle	1.2	2	HR387105	Parcel	SASW	SADW	-	-	7.84	10.34				18.18	1.96	2.58			4.54
100	LCV	1.2	1	JH011201	Empty	SASW	SADW	-	-	2.32	1.74				4.06	0.02	0.00			0.02
101	2 Axle	1.2	1	JH109691	Empty	SASW	SADW	-	-	4.34	3.84				8.18	0.18	0.05			0.23
102	5 Axle	1.1.122	1	JH134579	Empty	SASW	SASW	TRADW	-	3.56	4.74		4.10	3.84	16.24	0.08	0.26	0.01		0.36
103	BUS	1.2	2	JH093180	Passanger	SASW	SADW	-	-	4.54	7.28				11.82	0.22	0.63			0.85
104	5 Axle	1.1.122	1	JH026081	Empty	SASW	SASW	TRADW	-	4.34	4.94		4.02	3.96	17.26	0.18	0.31	0.01		0.51
105	5 Axle	1.1.122	1	JH025441	Empty	SASW	SASW	TRADW	-	3.56	3.34		4.20	3.78	14.88	0.08	0.06	0.01		0.16
106	4 Axle	1.1.22	2	UP668847	Pipe	SASW	SASW	TADW	-	7.34	9.74	12.42	13.08		42.58	1.50	4.66	8.14		14.31
107	2 Axle	1.2	1	RJ403711	Empty	SASW	SADW	-	-	3.78	4.54				8.32	0.11	0.10			0.20
108	4 Axle	1.1.22	2	JH103622	Rice	SASW	SASW	TADW	-	9.56		13.68	13.22		36.46	4.33		10.08		14.41
109	4 Axle	1.1.22	2	WB117005	Gas	SASW	SASW	TADW	-	6.62		15.22	12.04		33.88	1.00		10.63		11.63
110	4 Axle	1.1.22	1	JH018102	Empty	SASW	SASW	TADW	-	5.06		3.56	3.74		12.36	0.34		0.05		0.39
111	3 Axle	1.22	2	MH120543	Parcel	SASW	TADW	-	-	7.02	15.02	16.14			38.18	1.26	18.15			19.41
112	3 Axle	1.22	2	HR557007	Iron	SASW	TADW	-	-	7.48	9.62	9.40			26.50	1.62	2.52			4.14
113	BUS	1.2	2	WB394217	Passanger	SASW	SADW	-	-	7.34	8.40				15.74	1.50	1.12			2.63
114	3 Axle	1.22	2	RJ149445	Powder	SASW	TADW	-	-	6.82	8.94	10.21			25.97	1.12	2.59			3.71
115	4 Axle	1.1.22	2	UP708949	Gas	SASW	SASW	TADW	-	4.34	13.74	10.02	10.60		38.70	0.18	18.47	3.48		22.13
116	LCV	1.2	2	RJ143710	Powder	SASW	SADW	-	-	5.82	13.02				18.84	0.59	6.49			7.09
117	LCV	1.2	2	HR749564	Powder	SASW	SADW	-	-	4.94	12.86				17.80	0.31	6.18			6.49
118	4 Axle	1.1.22	2	JH020280	Powder	SASW	SASW	TADW	-	7.74		13.00	12.34		33.08	1.86		7.94		9.80
119	4 Axle	1.1.22	2	WB110775	Pipe	SASW	SASW	TADW	-	8.61		12.62	12.34		33.57	2.85		7.47		10.32
120	4 Axle	1.1.22	1	WB154270	Empty	SASW	SASW	TADW	-	4.34		4.02	3.94		12.30	0.18		0.08		0.26
121	5 Axle	1.1.122	2	PB131202	Iron	SASW	SASW	TRADW	-	8.16	9.62		14.42	13.46	45.66	2.30	4.44	2.22		8.96
122	6 Axle	1.22.222	2	RJ231496	Iron	SASW	TADW	TRADW	-	6.74	8.62	9.16		14.54	39.06	1.07	1.92	1.16		4.15
123	BUS	1.2	2	JH014308	Passanger	SASW	SADW	-	-	6.34	8.52				14.86	0.84	1.19			2.03
124	3 Axle	1.22	2	WB551227	Parcel	SASW	TADW	-	-	7.22	9.00	8.34			24.56	1.41	1.74			3.15

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
125	3 Axle	1.22	2	MH446217	Parcel	SASW	TADW	-	-	7.62	9.82	9.48			26.92	1.75	2.67			4.42
126	4 Axle	1.1.22	2	UP708637	Gas	SASW	SASW	TADW	-	5.14	10.74	8.54	9.40		33.82	0.36	6.89	1.99		9.25
127	4 Axle	1.1.22	2	UP700583	Gas	SASW	SASW	TADW	-	5.02	9.42	11.82	11.21		37.47	0.33	4.08	5.42		9.82
128	4 Axle	1.1.22	2	UP705075	Gas	SASW	SASW	TADW	-	4.94	7.21	11.48	10.32		33.95	0.31	1.40	4.35		6.06
129	4 Axle	1.1.22	2	GJ06555070	Oil	SASW	SASW	TADW	-	7.22	9.74	12.98	12.34		42.28	1.41	4.66	7.91		13.98
130	4 Axle	1.1.22	2	UP946062	Oil	SASW	SASW	TADW	-	4.66	13.96	10.48	11.42		40.52	0.24	19.68	4.43		24.35
131	5 Axle	1.1.122	2	JH107185	Coal	SASW	SASW	TRADW	-	6.62	8.44	6.48	18.24	16.16	55.94	1.00	2.63	10.26		13.89
132	5 Axle	1.1.122	2	JH020081	Powder	SASW	SASW	TRADW	-	4.62	5.22		4.26	4.52	18.62	0.24	0.38	0.02		0.64
133	4 Axle	1.1.22	2	WB230111	Biscuit	SASW	SASW	TADW	-	6.62		14.24	13.48		34.34	1.00		11.37		12.36
134	LCV	1.2	1	WB118295	Empty	SASW	SADW	-	-	3.41	6.42				9.83	0.07	0.38			0.45
135	4 Axle	1.1.22	1	WB141144	Empty	SASW	SASW	TADW	-	4.72		3.68	3.41		11.81	0.26		0.05		0.31
136	2 Axle	1.2	2	JH011108	Plastic	SASW	SADW	-	-	5.02	5.82				10.84	0.33	0.26			0.59
137	4 Axle	1.1.22	2	JH047208	Coal	SASW	SASW	TADW	-	6.42		9.62	10.22		26.26	0.88		2.98		3.86
138	3 Axle	1.22	2	NL013549	Cloth	SASW	TADW	-	-	6.22	8.76	9.02			24.00	0.78	1.92			2.70
139	LCV	1.2	1	JH171630	Empty	SASW	SADW	-	-	2.81	3.40				6.21	0.03	0.03			0.06
140	2 Axle	1.2	2	HR551108	Parcel	SASW	SADW	-	-	7.28	11.88				19.16	1.46	4.50			5.95
141	3 Axle	1.22	2	RJ140830	Parcel	SASW	TADW	-	-	6.90	11.40	10.64			28.94	1.17	4.54			5.72
142	5 Axle	1.1.122	2	WB736217	Iron	SASW	SASW	TRADW	-	7.94	9.70		13.40	12.68	43.72	2.06	4.59	1.70		8.35
143	2 Axle	1.2	2	BR254251	Gas	SASW	SADW	-	-	5.82	8.54				14.36	0.59	1.20			1.80
144	4 Axle	1.1.22	2	NL014808	Gas	SASW	SASW	TADW	-	8.02	9.74	11.48	10.24		39.48	2.14	4.66	4.28		11.09
145	BUS	1.2	2	WB176208	Passanger	SASW	SADW	-	-	6.34	8.20				14.54	0.84	1.02			1.86
146	5 Axle	1.1.122	2	NL017820	Road	SASW	SASW	TRADW	-	7.34	9.74	13.74	14.24		45.06	1.50	4.66	2.25		8.42
147	4 Axle	1.1.22	2	UP708959	Gas	SASW	SASW	TADW	-	8.34	9.90	13.40	12.84		44.48	2.51	4.98	9.13		16.61
148	LCV	1.2	2	WB817108	Parcel	SASW	SADW	-	-	6.34	8.46				14.80	0.84	1.16			1.99
149	3 Axle	1.22	2	HR538012	Parcel	SASW	TADW	-	-	7.20	9.70	11.34			28.24	1.39	3.77			5.16
150	3 Axle	1.22	2	RJ144170	Parcel	SASW	TADW	-	-	7.14	11.62	10.86			29.62	1.35	4.92			6.26
151	5 Axle	1.1.122	2	NL011972	Chemical	SASW	SASW	TRADW	-	7.48	9.74		12.66	12.34	42.22	1.62	4.66	1.44		7.72
152	4 Axle	1.1.22	2	BR476213	Oil	SASW	SASW	TADW	-	7.22	14.44	12.34	11.84		45.84	1.41	22.50	6.58		30.49
153	5 Axle	1.1.122	2	RJ045018	Oil	SASW	SASW	TRADW	-	7.68	9.48	12.14	13.00		42.30	1.80	4.19	1.47		7.46
154	4 Axle	1.1.22	2	NL046107	Oil	SASW	SASW	TADW	-	7.48	9.10	11.64	11.22		39.44	1.62	3.55	5.26		10.43
155	2 Axle	1.2	2	HR301187	Parcel	SASW	SADW	-	-	6.34	11.66				18.00	0.84	4.18			5.01

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
156	5 Axle	1.1.122	2	PB116303	Iron	SASW	SASW	TRADW	-	7.94	10.20		12.14	13.14	43.42	2.06	5.61	1.50		9.17
157	4 Axle	1.1.22	2	PB116303	Passanger	SASW	SASW	TADW	-	7.48	8.06	11.62	10.86		38.02	1.62	2.19	4.92		8.73
158	BUS	1.2	2	PB110850	Biscuit	SASW	SADW	-	-	6.24	8.84				15.08	0.79	1.38			2.17
159	LCV	1.2	2	WB415807	Parcel	SASW	SADW	-	-	3.08	7.76				10.84	0.05	0.82			0.87
160	3 Axle	1.22	2	WB233072	Parcel	SASW	TADW	-	-	4.22	10.21	10.42			24.85	0.16	3.49			3.65
161	3 Axle	1.22	2	GJ213718	Coal	SASW	TADW	-	-	8.04	10.34	10.06			28.44	2.17	3.33			5.50
162	4 Axle	1.1.22	2	NL015634	Coal	SASW	SASW	TADW	-	8.12		13.02	12.64		33.78	2.25		8.35		10.60
163	6 Axle	1.22.222	1	NL012136	Empty	SASW	TADW	TRADW	-	5.66	9.29	10.33		17.88	43.16	0.53	2.85	2.33		5.71
164	5 Axle	1.1.122	1	JH106575	Empty	SASW	SASW	TRADW	-	4.06	4.88		3.70	3.48	16.12	0.14	0.29	0.01		0.44
165	LCV	1.2	1	UP428623	Empty	SASW	SADW	-	-	2.90	3.24				6.14	0.04	0.02			0.06
166	4 Axle	1.1.22	1	PB139795	Empty	SASW	SASW	TADW	-	4.98		4.04	3.62		12.64	0.32		0.07		0.38
167	3 Axle	1.22	2	RJ405885	Parcel	SASW	TADW	-	-	6.82	9.44	8.62			24.88	1.12	2.05			3.17
168	4 Axle	1.1.22	2	JH105310	Iron	SASW	SASW	TADW	-	8.04		11.66	10.86		30.56	2.17		4.95		7.12
169	3 Axle	1.22	2	WB895417	Road	SASW	TADW	-	-	7.74	11.62	10.94			30.30	1.86	4.99			6.85
170	4 Axle	1.1.22	1	JH020250	Empty	SASW	SASW	TADW	-	4.21		3.70	3.58		11.49	0.16		0.05		0.22
171	4 Axle	1.1.22	2	UP700482	Gas	SASW	SASW	TADW	-	6.80	9.74	13.70	13.00		43.24	1.11	4.66	9.78		15.55
172	4 Axle	1.1.22	2	UP700752	Gas	SASW	SASW	TADW	-	7.22	8.34	12.68	12.10		40.34	1.41	2.51	7.26		11.17
173	3 Axle	1.22	2	HR550780	Grocery	SASW	TADW	-	-	7.48	13.70	12.62			33.80	1.62	9.24			10.86
174	BUS	1.2	2	NL011307	Passanger	SASW	SADW	-	-	7.48	8.54				16.02	1.62	1.20			2.82
175	4 Axle	1.1.22	2	RJ149278	Powder	SASW	SASW	TADW	-	8.34		13.02	12.24		33.60	2.51		7.84		10.34
176	4 Axle	1.1.22	2	WB146217	Gas	SASW	SASW	TADW	-	7.42	8.44	11.62	10.64		38.12	1.57	2.63	4.73		8.93
177	3 Axle	1.22	2	HR384215	Parcel	SASW	TADW	-	-	6.84	11.54	9.86			28.24	1.13	4.04			5.17
178	3 Axle	1.22	2	JH101025	Pipe	SASW	TADW	-	-	7.48	11.74	10.84			30.06	1.62	5.00			6.63
179	4 Axle	1.1.22	2	UP171105	Gas	SASW	SASW	TADW	-	6.42	8.98	12.86	12.14		40.40	0.88	3.37	7.52		11.77
180	BUS	1.2	2	JH110580	Passanger	SASW	SADW	-	-	5.94	8.34				14.28	0.65	1.09			1.74
181	3 Axle	1.22	2	MH464658	Parcel	SASW	TADW	-	-	6.64	9.74	9.04			25.42	1.01	2.39			3.40
182	LCV	1.2	1	WB117604	Empty	SASW	SADW	-	-	2.54	3.10				5.64	0.02	0.02			0.04
183	2 Axle	1.2	2	PB657833	Biscuit	SASW	SADW	-	-	6.84	9.84				16.68	1.13	2.12			3.25
184	3 Axle	1.22	1	HR381040	Empty	SASW	TADW	-	-	4.18	3.74	3.60			11.52	0.16	0.06			0.21
185	2 Axle	1.2	2	WB231917	Garbage	SASW	SADW	-	-	3.28	5.62				8.90	0.06	0.23			0.29
186	3 Axle	1.22	2	WB111127	Iron	SASW	TADW	-	-	5.62	10.82	9.86			26.30	0.52	3.52			4.04

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
187	2 Axle	1.2	2	HR469526	Parcel	SASW	SADW	-	-	4.82	5.68				10.50	0.28	0.24			0.51
188	4 Axle	1.1.22	2	WB239133	Oil	SASW	SASW	TADW	-	8.32	4.30	13.80	13.10		39.52	2.48	0.18	10.08		12.74
189	BUS	1.2	2	JH051182	Passanger	SASW	SADW	-	-	7.22	9.42				16.64	1.41	1.78			3.19
190	5 Axle	1.1.122	2	WB117671	Iron	SASW	SASW	TRADW	-	5.62	14.82		16.06	17.70	54.20	0.52	25.00	4.77		30.29
191	5 Axle	1.1.122	2	GJ121936	Chemical	SASW	SASW	TRADW	-	5.94	6.02		15.26	16.90	44.12	0.65	0.68	3.93		5.26
192	5 Axle	1.1.122	1	JH025173	Empty	SASW	SASW	TRADW	-	4.46	4.94		4.08	5.58	19.06	0.21	0.31	0.03		0.55
193	2 Axle	1.2	2	HR550810	Parcel	SASW	SADW	-	-	6.24	7.74				13.98	0.79	0.81			1.60
194	5 Axle	1.1.122	1	JH025844	Empty	SASW	SASW	TRADW	-	4.28	4.16		4.60	3.64	16.68	0.17	0.16	0.02		0.35
195	5 Axle	1.1.122	1	GJ024759	Empty	SASW	SASW	TRADW	-	4.54	4.22		4.82	3.94	17.52	0.22	0.16	0.02		0.41
196	5 Axle	1.1.122	2	BR243110	Iron	SASW	SASW	TRADW	-	8.64	9.62		11.02	9.74	39.02	2.89	4.44	0.68		8.01
197	LCV	1.2	1	WB257108	Empty	SASW	SADW	-	-	3.50	3.60				7.10	0.08	0.04			0.12
198	4 Axle	1.1.22	2	NL010725	Iron	SASW	SASW	TADW	-	5.12	7.30	10.88	8.70		32.00	0.36	1.47	2.83		4.66
199	4 Axle	1.1.22	2	WB376181	Floor	SASW	SASW	TADW	-	8.34		13.80	12.34		34.48	2.51		8.99		11.49
200	5 Axle	1.1.122	1	UP153013	Empty	SASW	SASW	TRADW	-	4.08	3.74		3.50	3.78	15.10	0.14	0.10	0.01		0.26
201	6 Axle	1.22.222	1	WB710614	Empty	SASW	TADW	TRADW	-	4.34	4.04	3.58		4.10	16.06	0.18	0.06	0.01		0.26
202	5 Axle	1.1.122	1	NL011108	Empty	SASW	SASW	TRADW	-	4.62	4.34		4.38	4.82	18.16	0.24	0.18	0.03		0.45
203	3 Axle	1.22	2	RJ097143	Parcel	SASW	TADW	-	-	7.96	6.24	9.96			24.16	2.08	1.33			3.41
204	5 Axle	1.1.122	2	WB117300	Parcel	SASW	SASW	TRADW	-	4.50	6.84		15.94	15.50	42.78	0.21	1.13	3.59		4.94
205	4 Axle	1.1.22	2	WB216218	Iron	SASW	SASW	TADW	-	7.02		11.48	11.02		29.52	1.26		4.93		6.19
206	4 Axle	1.1.22	1	WB376765	Empty	SASW	SASW	TADW	-	5.02		3.84	4.28		13.14	0.33		0.08		0.41
207	3 Axle	1.22	2	WB110540	Oil	SASW	TADW	-	-	7.32	11.46	12.64			31.42	1.49	6.49			7.98
208	2 Axle	1.2	2	WB259110	Fish	SASW	SADW	-	-	5.82	11.90				17.72	0.59	4.53			5.12
209	5 Axle	1.1.122	1	BR266807	Empty	SASW	SASW	TRADW	-	4.34	4.42		4.66	3.64	17.06	0.18	0.20	0.02		0.40
210	3 Axle	1.22	2	MH430522	Parcel	SASW	TADW	-	-	4.68	6.81	6.56			18.05	0.25	0.62			0.86
211	3 Axle	1.22	1	RJ296343	Empty	SASW	TADW	-	-	4.02	4.00	3.78			11.80	0.14	0.07			0.21
212	2 Axle	1.2	2	RJ144120	Colour	SASW	SADW	-	-	4.76	5.66				10.42	0.27	0.23			0.50
213	5 Axle	1.1.122	2	WB276271	Coal	SASW	SASW	TRADW	-	6.82	9.30		15.42	16.46	48.00	1.12	3.88	3.80		8.79
214	3 Axle	1.22	1	WB372558	Empty	SASW	TADW	-	-	4.52	3.74	3.34			11.60	0.22	0.05			0.26
215	LCV	1.2	2	WB114845	Iron	SASW	SADW	-	-	3.70	10.04				13.74	0.10	2.30			2.39
216	5 Axle	1.1.122	2	BR267781	Iron	SASW	SASW	TRADW	-	7.41	8.62		13.74	12.64	42.41	1.56	2.86	1.78		6.20
217	3 Axle	1.22	2	HR553870	Parcel	SASW	TADW	-	-	6.80	10.94	10.48			28.22	1.11	4.05			5.16

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
218	BUS	1.2	2	JH403705	Passanger	SASW	SADW	-	-	6.76	8.60				15.36	1.08	1.24			2.32
219	4 Axle	1.1.22	1	NL010378	Empty	SASW	SASW	TADW	-	4.60		4.24	3.96		12.80	0.23		0.09		0.32
220	5 Axle	1.1.122	2	GJ064270	Gas	SASW	SASW	TRADW	-	7.50	8.54		13.78	13.34	43.16	1.64	2.76	1.99		6.38
221	5 Axle	1.1.122	2	GJ056175	Gas	SASW	SASW	TRADW	-	7.16	8.14		13.08	12.82	41.20	1.36	2.27	1.65		5.29
222	2 Axle	1.2	2	HR381107	Parcel	SASW	SADW	-	-	6.24	9.44				15.68	0.79	1.79			2.58
223	3 Axle	1.22	2	HR554080	Biscuit	SASW	TADW	-	-	6.84	11.74	10.84			29.42	1.13	5.00			6.14
224	5 Axle	1.1.122	2	NE018660	Pots	SASW	SASW	TRADW	-	7.62	8.14	6.84	8.44	9.50	40.54	1.75	2.27	1.39		5.41
225	2 Axle	1.2	2	PB651568	Chips	SASW	SADW	-	-	4.90	7.30				12.20	0.30	0.64			0.94
226	BUS	1.2	2	WB370758	Passanger	SASW	SADW	-	-	6.26	8.44				14.70	0.80	1.15			1.94
227	BUS	1.2	2	WB371170	Passanger	SASW	SADW	-	-	4.74	8.04				12.78	0.26	0.94			1.21
228	LCV	1.2	1	RJ164070	Empty	SASW	SADW	-	-	5.34	8.26				13.60	0.42	1.05			1.47
229	3 Axle	1.22	2	HR556805	Powder	SASW	TADW	-	-	7.22	7.44	9.94			24.60	1.41	1.76			3.16
230	3 Axle	1.22	2	JH040870	Parcel	SASW	TADW	-	-	6.02	5.48	8.64			20.14	0.68	0.77			1.45
231	4 Axle	1.1.22	2	WB147080	Dust	SASW	SASW	TADW	-	6.12	8.42	14.94	14.06		43.54	0.73	2.60	13.62		16.95
232	4 Axle	1.1.22	1	WB398884	Empty	SASW	SASW	TADW	-	5.64		4.58	4.32		14.54	0.52		0.12		0.65
233	2 Axle	1.2	1	HR474416	Empty	SASW	SADW	-	-	4.46	4.68				9.14	0.21	0.11			0.31
234	5 Axle	1.1.122	2	RJ022617	Blade	SASW	SASW	TRADW	-	5.48	15.68		14.42	16.14	51.72	0.47	31.32	3.21		34.99
235	5 Axle	1.1.122	2	AP390339	Pipe	SASW	SASW	TRADW	-	7.68	8.04	6.80	10.90	10.74	44.16	1.80	2.17	2.40		6.37
236	5 Axle	1.1.122	1	JH145416	Empty	SASW	SASW	TRADW	-	3.64	4.34		3.48	3.86	15.32	0.09	0.18	0.01		0.29
237	4 Axle	1.1.22	1	NL015651	Empty	SASW	SASW	TADW	-	5.82		10.02	9.40		25.24	0.59		2.74		3.33
238	LCV	1.2	2	DL018884	Quilt	SASW	SADW	-	-	4.88	8.34				13.22	0.29	1.09			1.39
239	2 Axle	1.2	2	HR396797	Parcel	SASW	SADW	-	-	5.22	11.64				16.86	0.38	4.15			4.53
240	4 Axle	1.1.22	2	NL021507	Oil	SASW	SASW	TADW	-	5.60	5.40	13.46	12.84		37.30	0.51	0.44	9.21		10.16
241	LCV	1.2	2	HR384055	Parcel	SASW	SADW	-	-	4.03	6.34				10.37	0.14	0.36			0.50
242	6 Axle	1.22.222	1	NL018400	Empty	SASW	TADW	TRADW	-	4.42	3.96	4.28		2.24	14.90	0.20	0.09	0.01		0.29
243	4 Axle	1.1.22	2	NL015081	Cement	SASW	SASW	TADW	-	4.02	4.08	5.16	4.68		17.94	0.14	0.14	0.18		0.46
244	LCV	1.2	2	UP333473	Towel	SASW	SADW	-	-	3.44	4.56				8.00	0.07	0.10			0.17
245	3 Axle	1.22	2	MH015512	Oil	SASW	TADW	-	-	6.40	8.56	11.62			26.58	0.87	3.19			4.06
246	4 Axle	1.1.22	1	BR018212	Empty	SASW	SASW	TADW	-	3.90		3.70	3.24		10.84	0.12		0.04		0.16
247	4 Axle	1.1.22	1	JH026162	Empty	SASW	SASW	TADW	-	3.70		3.42	3.34		10.46	0.10		0.04		0.14
248	5 Axle	1.1.122	2	WB374017	Coal	SASW	SASW	TRADW	-	8.54	10.20		13.74	12.84	45.32	2.76	5.61	1.83		10.20

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
249	5 Axle	1.1.122	1	JH020480	Empty	SASW	SASW	TRADW	-	4.24	4.06		3.96	4.34	16.60	0.17	0.14	0.02		0.33
250	2 Axle	1.2	2	UP216217	Parcel	SASW	SADW	-	-	6.34	9.50				15.84	0.84	1.84			2.68
251	4 Axle	1.1.22	2	GJ169463	Machine	SASW	SASW	TADW	-	4.68	13.84	9.56	13.04		41.12	0.25	19.01	5.02		24.28
252	LCV	1.2	2	HR384880	Powder	SASW	SADW	-	-	6.26	9.50				15.76	0.80	1.84			2.64
253	5 Axle	1.1.122	2	NL016378	Cement	SASW	SASW	TRADW	-	4.76	6.94		13.74	12.24	37.68	0.27	1.20	1.67		3.14
254	4 Axle	1.1.22	2	JH110433	Oil	SASW	SASW	TADW	-	6.62		12.44	12.04		31.10	1.00		6.91		7.91
255	4 Axle	1.1.22	2	JH117178	Oil	SASW	SASW	TADW	-	7.42	8.42	13.60	12.84		42.28	1.57	2.60	9.41		13.58
256	4 Axle	1.1.22	2	JH144280	Oil	SASW	SASW	TADW	-	7.62	8.36	13.44	12.56		41.98	1.75	2.53	8.80		13.07
257	5 Axle	1.1.122	2	JH042832	Oil	SASW	SASW	TRADW	-	4.34	4.16		4.34	4.16	17.00	0.18	0.16	0.02		0.36
258	4 Axle	1.1.22	2	BR181128	Cement	SASW	SASW	TADW	-	8.62		10.94	10.36		29.92	2.86		3.96		6.82
259	4 Axle	1.1.22	2	UP611262	Powder	SASW	SASW	TADW	-	6.42		13.82	15.02		35.26	0.88		13.32		14.20
260	4 Axle	1.1.22	2	RJ141981	Pipe	SASW	SASW	TADW	-	7.14		15.02	14.02		36.18	1.35		13.69		15.04
261	3 Axle	1.22	2	WB374396	Tealeaves	SASW	TADW	-	-	6.22	7.98	9.02			23.22	0.78	1.61			2.38
262	5 Axle	1.1.122	2	HR551077	Cloth	SASW	SASW	TRADW	-	7.42	9.02	10.22	15.22	14.43	56.31	1.57	3.43	9.29		14.29
263	4 Axle	1.1.22	2	RJ191756	Iron	SASW	SASW	TADW	-	7.02		14.08	13.82		34.92	1.26		11.66		12.92
264	4 Axle	1.1.22	2	WB018595	Iron	SASW	SASW	TADW	-	6.22	8.42	14.02	13.42		42.08	0.78	2.60	10.91		14.29
265	3 Axle	1.22	2	WB175257	Parcel	SASW	TADW	-	-	6.22	13.02	12.04			31.28	0.78	7.59			8.37
266	2 Axle	1.2	2	MH015210	Parcel	SASW	SADW	-	-	6.42	9.22				15.64	0.88	1.63			2.51
267	3 Axle	1.22	2	WB113636	Oil	SASW	TADW	-	-	6.46	13.81	13.42			33.69	0.90	10.58			11.49
268	2 Axle	1.2	2	HR555941	Iron	SASW	SADW	-	-	6.42	10.62				17.04	0.88	2.87			3.75
269	5 Axle	1.1.122	2	WB673324	Iron	SASW	SASW	TRADW	-	6.82	9.32		13.82	14.02	43.98	1.12	3.91	2.21		7.24
270	4 Axle	1.1.22	2	HL090490	Gas	SASW	SASW	TADW	-	6.42	13.82	14.02	15.02		49.28	0.88	18.90	13.69		33.47
271	5 Axle	1.1.122	2	JH096742	Iron	SASW	SASW	TRADW	-	7.82	7.38		13.83	13.02	42.05	1.94	1.54	1.91		5.38
272	2 Axle	1.2	1	WB113875	Empty	SASW	SADW	-	-	4.22	4.08				8.30	0.16	0.06			0.23
273	BUS	1.2	2	WB116117	Passanger	SASW	SADW	-	-	5.38	8.62				14.00	0.43	1.25			1.68
274	6 Axle	1.22.222	2	RJ613931	Iron	SASW	TADW	TRADW	-	5.68	12.20	12.75		14.85	45.48	0.54	7.46	2.13		10.13
275	2 Axle	1.2	1	N/A	Empty	SASW	SADW	-	-	2.62	2.98				5.60	0.02	0.02			0.04
276	4 Axle	1.1.22	2	UP611159	Iron	SASW	SASW	TADW	-	7.38		13.83	13.14		34.35	1.54		10.19		11.72
277	4 Axle	1.1.22	1	JH099099	Empty	SASW	SASW	TADW	-	4.82	4.32		3.91		13.05	0.28	0.18	0.00		0.46
278	LCV	1.2	1	WB379717	Empty	SASW	SADW	-	-	2.22	1.88				4.10	0.01	0.00			0.02
279	6 Axle	1.22.222	2	RJ095851	Iron	SASW	TADW	TRADW	-	6.09	11.61	12.50		15.00	45.21	0.71	6.51	2.10		9.33

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
280	5 Axle	1.1.122	2	NL015988	Powder	SASW	SASW	TRADW	-	7.38	9.18		13.02	12.48	42.06	1.54	3.68	1.55		6.77
281	LCV	1.2	2	UP842443	Pipe	SASW	SADW	-	-	4.62	12.04				16.66	0.24	4.75			4.98
282	4 Axle	1.1.22	2	WB113225	Iron	SASW	SASW	TADW	-	6.91		12.62	12.04		31.57	1.18		7.12		8.30
283	4 Axle	1.1.22	2	UP380838	Oil	SASW	SASW	TADW	-	7.02		13.82	12.04		32.88	1.26		8.61		9.87
284	4 Axle	1.1.22	2	CG048229	Chemical	SASW	SASW	TADW	-	7.39		14.02	13.02		34.43	1.55		10.29		11.84
285	4 Axle	1.1.22	1	WB531378	Empty	SASW	SASW	TADW	-	3.82		3.02	3.30		10.14	0.11		0.03		0.14
286	4 Axle	1.1.22	1	PB650927	Empty	SASW	SASW	TADW	-	3.30	2.06	3.50	3.32		12.18	0.06	0.01	0.04		0.11
287	LCV	1.2	2	WB113904	Paper	SASW	SADW	-	-	2.84	5.38				8.22	0.03	0.19			0.22
288	4 Axle	1.1.22	2	WB116854	Power	SASW	SASW	TADW	-	7.22		12.62	12.04		31.88	1.41		7.12		8.53
289	4 Axle	1.1.22	2	GJ129185	Gas	SASW	SASW	TADW	-	4.28	13.62	12.04	12.83		42.77	0.17	17.83	7.36		25.37
290	3 Axle	1.22	2	WB678420	Cement	SASW	TADW	-	-	6.14	12.68	8.70			27.52	0.74	4.03			4.76
291	4 Axle	1.1.22	2	JH103244	Gipsam	SASW	SASW	TADW	-	5.70		15.02			20.72	0.55		0.98		1.53
292	3 Axle	1.22	2	WB115244	Animalfood	SASW	TADW	-	-	6.12	13.83	13.02			32.97	0.73	10.00			10.73
293	4 Axle	1.2.22	2	WB413642	Rice	SASW	SADW	TADW	-	5.52	4.02	13.50	10.70		33.74	0.48	0.06	6.60		7.14
294	3 Axle	1.22	2	JH020996	Iron	SASW	TADW	-	-	9.66	10.86	12.79			33.31	4.51	6.02			10.53
295	5 Axle	1.1.122	2	BR0319343	Iron	SASW	SASW	TRADW	-	9.66	0.93		12.61	10.13	33.33	4.52	0.00	0.98		5.50
296	2 Axle	1.2	1	NL014345	Empty	SASW	SADW	-	-	4.22	4.08				8.30	0.16	0.06			0.23
297	2 Axle	1.2	2	HR389257	Machine	SASW	SADW	-	-	6.42	12.22				18.64	0.88	5.04			5.92
298	3 Axle	1.22	1	JH029874	Empty	SASW	TADW	-	-	4.23	4.03	3.82			12.08	0.17	0.07			0.24
299	4 Axle	1.1.22	1	NL010478	Empty	SASW	SASW	TADW	-	4.42		4.08	4.35		12.85	0.20		0.10		0.29
300	5 Axle	1.1.122	1	JH027740	Empty	SASW	SASW	TRADW	-	4.83	4.42		3.84	3.68	16.77	0.28	0.20	0.01		0.49
301	2 Axle	1.2	2	RJ142562	Iron	SASW	SADW	-	-	7.82	13.94				21.76	1.94	8.53			10.47
302	2 Axle	1.2	2	HL013259	Tealeaves	SASW	SADW	-	-	6.42	12.22				18.64	0.88	5.04			5.92
303	5 Axle	1.1.122	2	NL011310	Iron	SASW	SASW	TRADW	-	0.72	8.42		13.02	12.02	34.18	0.00	2.60	1.44		4.05
304	2 Axle	1.2	1	MH141088	Empty	SASW	SADW	-	-	4.22	4.08				8.30	0.16	0.06			0.23
305	3 Axle	1.22	1	MH015659	Empty	SASW	TADW	-	-	4.42	4.32	3.68			12.42	0.20	0.08			0.28
306	5 Axle	1.1.122	1	WB371313	Empty	SASW	SASW	TRADW	-	5.22	4.09		4.02	3.83	17.16	0.38	0.14	0.01		0.54
307	4 Axle	1.1.22	2	UK067880	Medicine	SASW	SASW	TADW	-	6.42	9.08	10.22			25.72	0.88	3.52	0.21		4.61
308	3 Axle	1.22	2	NL012417	Parcel	SASW	TADW	-	-	6.43	11.22	6.02			23.67	0.89	1.70			2.59
309	3 Axle	1.22	2	HR559971	Tealeaves	SASW	TADW	-	-	7.38	10.22	10.08			27.68	1.54	3.27			4.81
310	4 Axle	1.1.22	1	BR023295	Empty	SASW	SASW	TADW	-	6.22		3.83	3.68		13.73	0.78		0.06		0.84

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
311	2 Axle	1.2	2	HR477922	Tealeaves	SASW	SADW	-	-	6.43	13.82				20.25	0.89	8.24			9.13
312	5 Axle	1.1.122	1	WB113554	Empty	SASW	SASW	TRADW	-	7.39	9.18	13.02	14.02	14.43	58.04	1.55	3.68	10.87		16.09
313	3 Axle	1.22	2	WB371367	Tealeaves	SASW	TADW	-	-	5.68	7.22	14.03			26.93	0.54	3.93			4.46
314	4 Axle	1.1.22	2	RJ231577	Oil	SASW	SASW	TADW	-	8.62		16.42	16.02		41.06	2.86		21.32		24.18
315	BUS	1.2	2	JH109558	Passanger	SASW	SADW	-	-	4.02	8.30				12.32	0.14	1.07			1.21
316	2 Axle	1.2	2	UP732125	Coal	SASW	SADW	-	-	5.58	11.02				16.60	0.50	3.33			3.83
317	4 Axle	1.1.22	2	NL010651	Gas	SASW	SASW	TADW	-	4.74	12.58	11.62	12.04		40.98	0.26	12.98	6.03		19.27
318	4 Axle	1.1.22	2	BR022928	Iron	SASW	SASW	TADW	-	9.50		12.43	15.03		36.96	4.22		10.95		15.17
319	5 Axle	1.1.122	2	BR027696	Oil	SASW	SASW	TRADW	-	6.91	7.56		16.94	16.04	47.45	1.18	1.69	4.35		7.22
320	4 Axle	1.1.22	2	BR018784	Gas	SASW	SASW	TADW	-	5.79	12.30	11.22	10.26		39.57	0.58	11.86	4.10		16.54
321	4 Axle	1.1.22	2	NL015667	Machine	SASW	SASW	TADW	-	4.92	11.62	11.84	11.24		39.62	0.30	9.45	5.46		15.21
322	4 Axle	1.1.22	2	WB235394	Iron	SASW	SASW	TADW	-	7.22		12.42	12.04		31.68	1.41		6.89		8.30
323	3 Axle	1.22	2	UK080562	Sweet	SASW	TADW	-	-	6.54	12.62	10.82			29.98	0.95	5.81			6.76
324	4 Axle	1.1.22	1	WB231733	Empty	SASW	SASW	TADW	-	4.14		4.42	4.30		12.86	0.15		0.11		0.26
325	4 Axle	1.1.22	2	UP172951	Gas	SASW	SASW	TADW	-	5.84	12.98	12.04	11.82		42.68	0.60	14.71	6.24		21.55
326	2 Axle	1.2	2	WB447719	Oil	SASW	SADW	-	-	4.32	11.76				16.08	0.18	4.32			4.50
327	3 Axle	1.22	2	WB156610	Iron	SASW	TADW	-	-	7.39	13.82	13.40			34.61	1.55	10.57			12.11
328	BUS	1.2	2	JH026862	Passanger	SASW	SADW	-	-	4.22	8.43				12.65	0.16	1.14			1.31
329	2 Axle	1.2	2	WB392025	Oil	SASW	SADW	-	-	4.34	12.43				16.77	0.18	5.39			5.58
330	4 Axle	1.1.22	2	UP700369	Gas	SASW	SASW	TADW	-	5.12	12.22	11.42	12.04		40.80	0.36	11.55	5.83		17.74
331	3 Axle	1.22	2	RJ071191	Rice	SASW	TADW	-	-	6.90	13.83	12.58			33.31	1.17	9.37			10.54
332	3 Axle	1.22	2	WB156562	Iron	SASW	TADW	-	-	6.42	13.82	13.14			33.38	0.88	10.17			11.05
333	3 Axle	1.22	2	HR555277	Powder	SASW	TADW	-	-	8.22	13.02	12.54			33.78	2.37	8.22			10.58
334	4 Axle	1.1.22	2	PB063543	Iron	SASW	SASW	TADW	-	5.78	3.82	12.62	12.04		34.26	0.58	0.11	7.12		7.81
335	LCV	1.2	2	UP783657	Parcel	SASW	SADW	-	-	5.42	8.34				13.76	0.45	1.09			1.54
336	3 Axle	1.22	2	HR374426	Biscuit	SASW	TADW	-	-	6.90	11.24	10.62			28.76	1.17	4.40			5.57
337	4 Axle	1.1.22	2	UP771108	Gas	SASW	SASW	TADW	-	5.34	11.64	10.84	11.46		39.28	0.42	9.51	4.76		14.69
338	4 Axle	1.1.22	2	UP704207	Gas	SASW	SASW	TADW	-	6.14	12.24	11.14	10.60		40.12	0.74	11.63	4.30		16.67
339	5 Axle	1.1.122	2	WB812058	Coal	SASW	SASW	TRADW	-	7.68	10.34		13.74	12.86	44.62	1.80	5.92	1.84		9.57
340	5 Axle	1.1.122	2	WB701405	Coal	SASW	SASW	TRADW	-	7.34	10.06		13.26	12.10	42.76	1.50	5.31	1.52		8.33
341	5 Axle	1.1.122	2	WB806690	Coal	SASW	SASW	TRADW	-	7.62	10.62		13.62	13.08	44.94	1.75	6.59	1.87		10.21

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
342	LCV	1.2	2	UK070807	Machine	SASW	SADW	-	-	5.74	8.50				14.24	0.56	1.18			1.74
343	3 Axle	1.22	2	UP627674	Pipe	SASW	TADW	-	-	7.44	9.74	9.40			26.58	1.59	2.58			4.17
344	3 Axle	1.22	2	NL014990	Paper	SASW	TADW	-	-	7.24	11.66	11.02			29.92	1.42	5.09			6.52
345	3 Axle	1.22	2	UP673152	Coal	SASW	TADW	-	-	7.74	8.64	11.86			28.24	1.86	3.40			5.26
346	5 Axle	1.1.122	1	UP507606	Empty	SASW	SASW	TRADW	-	4.34	3.84	3.74			11.92	0.18	0.11	0.00		0.30
347	5 Axle	1.1.122	2	MP091808	Coal	SASW	SASW	TRADW	-	7.74	9.50		13.54	12.64	43.42	1.86	4.22	1.73		7.81
348	5 Axle	1.1.122	2	RJ040978	Iron	SASW	SASW	TRADW	-	8.14	8.64	14.24	14.10	13.86	58.98	2.27	2.89	11.65		16.82
349	3 Axle	1.22	2	NL016810	Grocery	SASW	TADW	-	-	7.62	11.86	11.34			30.82	1.75	5.58			7.32
350	6 Axle	1.22.222	2	GJ115870	Chemical	SASW	TADW	TRADW	-	7.87	8.15	7.42	12.21	12.97	48.62	1.99	1.13	4.15		7.27
351	2 Axle	1.2	2	WB254948	Parcel	SASW	SADW	-	-	6.94	8.64				15.58	1.20	1.26			2.46
352	4 Axle	1.1.22	1	WB597108	Empty	SASW	SASW	TADW	-	4.22	3.66	3.86	3.74		15.48	0.16	0.09	0.06		0.32
353	BUS	1.2	2	WB706830	Passanger	SASW	SADW	-	-	4.34	7.74				12.08	0.18	0.81			0.99
354	3 Axle	1.22	2	NL016491	Grocery	SASW	TADW	-	-	6.94	11.82	11.46			30.22	1.20	5.65			6.86
355	5 Axle	1.1.122	2	RJ040995	Iron	SASW	SASW	TRADW	-	7.96	9.74	13.74	14.26	13.86	59.56	2.08	4.66	11.28		18.03
356	3 Axle	1.22	2	HR557708	Parcel	SASW	TADW	-	-	6.62	11.62	10.86			29.10	1.00	4.92			5.91
357	5 Axle	1.1.122	1	MH461108	Empty	SASW	SASW	TRADW	-	4.28	5.02		4.68	3.64	17.62	0.17	0.33	0.02		0.52
358	LCV	1.2	2	JH041140	Soap	SASW	SADW	-	-	3.86	5.20				9.06	0.12	0.17			0.28
359	4 Axle	1.1.22	1	WB708014	Empty	SASW	SASW	TADW	-	4.70		3.94	3.66		12.30	0.25		0.06		0.32
360	2 Axle	1.2	2	WB 11 7193	Petrol	SASW	SADW	-	-	6.02	9.66				15.68	0.68	1.97			2.65
361	3 Axle	1.22	2	NL 01 8480	Parcel	SASW	TADW	-	-	7.24	10.66	10.86			28.76	1.42	4.13			5.55
362	3 Axle	1.22	2	NL 01 9939	Parcel	SASW	TADW	-	-	6.14	11.34	10.64			28.12	0.74	4.49			5.23
363	2 Axle	1.2	2	HR 38 4362	Cloth	SASW	SADW	-	-	6.78	11.42				18.20	1.09	3.84			4.94
364	2 Axle	1.2	2	HR 38 4407	Fridge	SASW	SADW	-	-	6.54	7.74				14.28	0.95	0.81			1.76
365	3 Axle	1.22	2	WB 23 9086	Grocery	SASW	TADW	-	-	3.66	7.94	7.02			18.62	0.09	0.96			1.06
366	3 Axle	1.22	2	RJ 14 8715	Waste	SASW	TADW	-	-	6.50	11.66	10.86			29.02	0.92	4.95			5.88
367	4 Axle	1.1.22	2	GJ 01 7711	Iron	SASW	SASW	TADW	-	3.86	5.74	12.34	11.94		33.88	0.12	0.56	6.69		7.37
368	5 Axle	1.1.122	2	WB 11 7970	Oil	SASW	SASW	TRADW	-	7.86	8.24		13.74	12.64	42.48	1.98	2.39	1.78		6.15
369	LCV	1.2	2	WB 05 8594	Soil	SASW	SADW	-	-	4.38	7.42				11.80	0.19	0.68			0.88
370	BUS	1.2	2	WB 04 2875	Passenger	SASW	SADW	-	-	6.34	8.66				15.00	0.84	1.27			2.11
371	6 Axle	1.22.222	2	RJ 29 7451	Blade	SASW	TADW	TRADW	-	7.21	7.75	8.84	12.31	12.04	48.15	1.40	1.46	4.46		7.31
372	LCV	1.2	2	WB 29 7106	Biscuit	SASW	SADW	-	-	6.64	9.42				16.06	1.01	1.78			2.79

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
373	3 Axle	1.22	1	WB 29 0747	Empty	SASW	TADW	-	-	3.94	4.02	3.56			11.52	0.12	0.06			0.19
374	3 Axle	1.22	2	HR 37 0870	Parcel	SASW	TADW	-	-	7.34	11.44	9.78			28.56	1.50	3.90			5.41
375	BUS	1.2	2	WB 37 6870	Passenger	SASW	SADW	-	-	7.34	8.64				15.98	1.50	1.26			2.76
376	3 Axle	1.22	2	HR 67 1160	Water botel	SASW	TADW	-	-	6.84	11.48	11.02			29.34	1.13	4.93			6.07
377	5 Axle	1.1.122	1	PB 11 8891	Empty	SASW	SASW	TRADW	-	4.26	4.14		3.94	3.66	16.00	0.17	0.15	0.01		0.34
378	2 Axle	1.2	2	UP 70 9392	Parcel	SASW	SADW	-	-	6.94	8.34				15.28	1.20	1.09			2.29
379	5 Axle	1.1.122	1	JK 02 48B	Empty	SASW	SASW	TRADW	-	4.76	4.36		4.14	3.84	17.10	0.27	0.19	0.01		0.47
380	5 Axle	1.2.222	1	UP 17 7453	Empty	SASW	SADW	TRADW	-	4.26	4.64		4.24	3.96	17.10	0.17	0.10	0.02		0.29
381	3 Axle	1.22	2	BR 23 1579	Tyre	SASW	TADW	-	-	6.24	11.74	10.86			28.84	0.79	5.02			5.81
382	3 Axle	1.22	2	WB 25 5207	Cocunet	SASW	TADW	-	-	7.50	13.40	12.86			33.76	1.64	9.15			10.79
383	LCV	1.2	2	WB 11 8210	Machine	SASW	SADW	-	-	6.14	6.62				12.76	0.74	0.43			1.17
384	5 Axle	1.1.122	1	UP 64 5171	Empty	SASW	SASW	TRADW	-	4.76	4.34		4.16	3.94	17.20	0.27	0.18	0.02		0.47
385	5 Axle	1.1.122	1	BR 26 5114	Empty	SASW	SASW	TRADW	-	4.34	4.14		3.96	3.76	16.20	0.18	0.15	0.01		0.35
386	LCV	1.2	2	WB 37 2542	Wheat	SASW	SADW	-	-	5.82	7.48				13.30	0.59	0.71			1.30
387	3 Axle	1.22	2	WB 23 7879	Iron	SASW	TADW	-	-	7.48	9.74	9.16			26.38	1.62	2.46			4.08
388	2 Axle	1.2	2	NL 0 1613	Rope	SASW	SADW	-	-	6.34	8.66				15.00	0.84	1.27			2.11
389	3 Axle	1.22	2	NL 04 1125	Feed	SASW	TADW	-	-	8.02	11.42	11.18			30.62	2.14	5.02			7.17
390	3 Axle	1.22	2	RJ 18 7750	Tea	SASW	TADW	-	-	7.42	9.74	8.84			26.00	1.57	2.29			3.86
391	3 Axle	1.22	2	RJ 18 6529	Hen Feed	SASW	TADW	-	-	7.06	9.57	8.74			25.37	1.29	2.16			3.45
392	LCV	1.2	2	UP 78 7837	Machine	SASW	SADW	-	-	5.50	7.44				12.94	0.47	0.69			1.17
393	3 Axle	1.22	2	HR 55 7105	Parcel	SASW	TADW	-	-	6.94	12.24	11.50			30.68	1.20	6.11			7.32
394	4 Axle	1.2.22	1	NL 01 7837	Empty	SASW	SADW	TADW	-	4.34	4.14	4.44	4.28		17.20	0.18	0.07	0.11		0.36
395	LCV	1.2	2	WB 05 7837	Biscuit	SASW	SADW	-	-	5.34	6.90				12.24	0.42	0.51			0.93
396	3 Axle	1.22	2	HR 55 8027	Parcel	SASW	TADW	-	-	7.22	11.86	11.44			30.52	1.41	5.67			7.08
397	5 Axle	1.2.222	2	BR 50 1058	Iron	SASW	SADW	TRADW	-	7.74	9.74		15.08	14.24	46.80	1.86	2.03	2.72		6.61
398	4 Axle	1.1.22	2	WB 37 4923	Coal	SASW	SASW	TADW	-	9.62	8.94	15.66	15.06		49.28	4.44	3.31	17.14		24.89
399	2 Axle	1.2	2	RJ 24 8619	Parcel	SASW	SADW	-	-	5.46	8.76				14.22	0.46	1.33			1.79
400	4 Axle	1.1.22	1	WB 37 5500	Empty	SASW	SASW	TADW	-	4.28		4.62	4.16		13.06	0.17		0.11		0.29
401	4 Axle	1.2.22	2	RJ 14 8710	iron	SASW	SADW	TADW	-	7.74	10.24	13.66	12.34		43.98	1.86	2.48	8.80		13.14
402	4 Axle	1.2.22	2	NL 01 2594	Petrol	SASW	SADW	TADW	-	7.62	8.54	13.06	12.36		41.58	1.75	1.20	8.04		10.99
403	4 Axle	1.1.22	2	JH 11 7807	iron	SASW	SASW	TADW	-	6.68		13.34	12.64		32.66	1.03		8.77		9.80

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
404	BUS	1.2	2	WB 71 7015	Passenger	SASW	SADW	-	-	6.34	8.86				15.20	0.84	1.39			2.23
405	4 Axle	1.1.22	2	JH 02 1580	Coal	SASW	SASW	TADW	-	7.74		12.26	11.48		31.48	1.86		6.11		7.97
406	2 Axle	1.2	2	HR 74 6380	Parcel	SASW	SADW	-	-	6.34	9.46				15.80	0.84	1.81			2.65
407	3 Axle	1.22	2	NL 01 5315	Medicine	SASW	TADW	-	-	8.64	13.00	11.88			33.52	2.89	7.38			10.26
408	2 Axle	1.2	2	HR 38 8671	Iron	SASW	SADW	-	-	6.84	10.14				16.98	1.13	2.39			3.52
409	6 Axle	1.22.222	2	RJ 06 0148	Road	SASW	TADW	TRADW	-	4.70	8.64	9.74		12.34	35.42	0.25	2.20	0.87		3.32
410	2 Axle	1.2	2	HR 71 3025	PlyBoard	SASW	SADW	-	-	7.52	11.12				18.64	1.66	3.45			5.11
411	5 Axle	1.2.222	1	WB 37 4780	Empty	SASW	SADW	TRADW	-	4.34	4.14		4.26	3.96	16.70	0.18	0.07	0.02		0.27
412	LCV	1.2	2	WB 19 9768	Transformer	SASW	SADW	-	-	2.94	6.46				9.40	0.04	0.39			0.43
413	2 Axle	1.2	2	NL 01 8175	Parcel	SASW	SADW	-	-	6.34	11.26				17.60	0.84	3.63			4.47
414	3 Axle	1.22	2	HR 46 7708	Pipe	SASW	TADW	-	-	7.62	10.86	11.78			30.26	1.75	5.06			6.80
415	3 Axle	1.22	1	HR 47 6827	Empty	SASW	TADW	-	-	4.34	3.96	3.50			11.80	0.18	0.06			0.24
416	LCV	1.2	2	WB 27 2444	Hey	SASW	SADW	-	-	2.96	3.94				6.90	0.04	0.05			0.09
417	3 Axle	1.22	2	WB 23 5690	Parcel	SASW	TADW	-	-	5.74	12.10	11.74			29.58	0.56	6.22			6.78
418	4 Axle	1.1.22	2	JH 10 2622	Giris	SASW	SASW	TADW	-	7.50		14.62	13.74		35.86	1.64		12.45		14.09
419	LCV	1.2	2	HR 55 1611	Gas	SASW	SADW	-	-	5.40	6.86				12.26	0.44	0.50			0.94
420	LCV	1.2	1	JH 10 2915	Empty	SASW	SADW	-	-	2.90	2.34				5.24	0.04	0.01			0.04
421	6 Axle	1.22.222	2	RJ 06 2220	Iron	SASW	TADW	TRADW	-	6.33	12.68	12.29		14.57	45.88	0.83	7.49	1.92		10.24
422	3 Axle	1.22	2	WB 23 316	Grocery	SASW	TADW	-	-	7.02	9.86	10.54			27.42	1.26	3.33			4.59
423	4 Axle	1.1.22	1	WB 39 3367	Empty	SASW	SASW	TADW	-	4.08	3.74	3.86			11.68	0.14	0.10	0.00		0.25
424	4 Axle	1.1.22	2	NL 01 0127	Oil	SASW	SASW	TADW	-	7.02	5.48	13.77			26.27	1.26	0.47	0.69		2.42
425	LCV	1.2	2	HR 55 7389	Hen Feed	SASW	SADW	-	-	6.17	12.94				19.11	0.75	6.33			7.08
426	3 Axle	1.22	2	DL 1G 3675	Grocery	SASW	TADW	-	-	7.94	10.94	11.94			30.82	2.06	5.28			7.33
427	3 Axle	1.22	2	NL 01 5707	Hen Feed	SASW	TADW	-	-	7.74	12.86	12.26			32.86	1.86	7.67			9.52
428	2 Axle	1.2	2	HR 38 7015	Parcel	SASW	SADW	-	-	5.16					5.16	0.37				0.37
429	3 Axle	1.22	2	WB 11 4886	Shempoo	SASW	TADW	-	-	6.13	12.20	11.50			29.83	0.73	6.07			6.81
430	4 Axle	1.1.22	2	NL 02 6174	Wire	SASW	SASW	TADW	-	7.94	8.54	13.02	12.34		41.84	2.06	2.76	7.96		12.78
431	3 Axle	1.22	2	UP 21 7227	Dhah	SASW	TADW	-	-	7.34	12.34	12.17			31.85	1.50	6.95			8.45
432	LCV	1.1	1	BR 11 7301	Empty	SASW	SASW	-	-	2.30	3.54				5.84	0.01	0.08			0.10
433	4 Axle	1.1.22	2	WB 31 7085	Pan	SASW	SASW	TADW	-	6.10	5.58	11.96	10.36		34.00	0.72	0.50	4.78		6.00
434	4 Axle	1.1.22	2	WB 61 7835	Oil	SASW	SASW	TADW	-	9.70		13.74	12.82		36.26	4.59		9.58		14.17

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
435	5 Axle	1.2.222	2	UP 70 9138	Petrol	SASW	SADW	TRADW	-	6.13	8.66	9.41	8.86	10.14	43.20	0.73	1.27	2.39		4.40
436	5 Axle	1.2.222	2	NL 01 0078	Machine	SASW	SADW	TRADW	-	6.25	9.30	11.13	9.50	8.24	44.42	0.79	1.69	2.55		5.03
437	5 Axle	1.2.222	2	NL 01 8396	Iron	SASW	SADW	TRADW	-	5.86	8.30	11.66	8.86	8.14	42.82	0.61	1.07	2.48		4.16
438	5 Axle	1.2.222	2	JH 05 5004	Iron	SASW	SADW	TRADW	-	5.08	8.46	8.54	8.62	8.14	38.84	0.35	1.16	1.51		3.01
439	LCV	1.1	1	WB 70 7830	Empty	SASW	SASW	-	-	2.94	3.36				6.30	0.04	0.07			0.10
440	4 Axle	1.222	2	WB 31 7891	Pan	SASW	TRADW	-	-	6.32	5.94	7.56	6.34		26.16	0.83	0.57			1.40
441	2 Axle	1.2	2	AP 39 5499	Oil	SASW	SADW	-	-	7.74	11.74				19.48	1.86	4.29			6.15
442	2 Axle	1.2	2	RJ 18 1408	Parcel	SASW	SADW	-	-	6.54	8.60				15.14	0.95	1.24			2.18
443	3 Axle	1.22	2	NL 01 3780	Grocery	SASW	TADW	-	-	7.38	11.56	11.22			30.16	1.54	5.18			6.72
444	4 Axle	1.1.22	2	WB 11 8057	oil	SASW	SASW	TADW	-	8.14	8.60	13.46	12.94		43.14	2.27	2.83	9.35		14.46
445	3 Axle	1.22	2	WB 80 7580	Machine	SASW	TADW	-	-	6.82	11.62	10.46			28.90	1.12	4.58			5.70
446	BUS	1.2	2	WB 71 6015	Passenger	SASW	SADW	-	-	6.34	9.00				15.34	0.84	1.48			2.32
447	LCV	1.2	2	JH 04 7115	Feed	SASW	SADW	-	-	7.22	8.96				16.18	1.41	1.46			2.86
448	BUS	1.2	2	JH 17 8175	Passenger	SASW	SADW	-	-	6.53	9.50				16.03	0.94	1.84			2.78
449	3 Axle	1.22	2	MH 04 5864	Grocery	SASW	TADW	-	-	7.30	9.52	9.96			26.78	1.47	2.77			4.24
450	2 Axle	1.2	2	NL 07 6275	Parcel	SASW	SADW	-	-	6.82	11.74				18.56	1.12	4.29			5.41
451	4 Axle	1.1.22	1	WB 48 6170	Empty	SASW	SASW	TADW	-	4.34		3.96	3.68		11.98	0.18		0.07		0.25
452	3 Axle	1.22	2	NL 02 8572	Parcel	SASW	TADW	-	-	6.30	10.94	10.24			27.48	0.82	3.87			4.69
453	LCV	1.2	2	HR 37 5107	Tea	SASW	SADW	-	-	3.88	6.94				10.82	0.12	0.52			0.64
454	BUS	1.2	2	WB 27 6470	Passenger	SASW	SADW	-	-	4.64	7.74				12.38	0.24	0.81			1.05
455	3 Axle	1.22	1	WB 71 1280	Empty	SASW	TADW	-	-	4.72	4.23	3.81			12.76	0.26	0.08			0.34
456	4 Axle	1.1.22	1	WB 17 7105	Empty	SASW	SASW	TADW	-	4.82	4.23	4.54	4.08		17.67	0.28	0.17	0.11		0.55
457	BUS	1.2	2	JH 11 7830	Passenger	SASW	SADW	-	-	6.08	7.94				14.02	0.71	0.90			1.61
458	4 Axle	1.1.22	2	NL 05 0523	Chemical	SASW	SASW	TADW	-	7.62		13.43	12.14		33.19	1.75		8.23		9.98
459	3 Axle	1.22	2	RJ 14 7075	Parcel	SASW	TADW	-	-	6.25	10.08	9.94			26.27	0.79	3.09			3.88
460	3 Axle	1.22	2	JH 14 1105	Parcel	SASW	TADW	-	-	6.83	11.13	10.64			28.60	1.13	4.32			5.45
461	4 Axle	1.1.22	2	HR 54 6565	Pipe	SASW	SASW	TADW	-	7.34	6.24	13.66	12.93		40.17	1.50	0.79	9.62		11.91
462	BUS	1.2	2	JH 12 1177	Passenger	SASW	SADW	-	-	4.86	7.70				12.56	0.29	0.79			1.08
463	4 Axle	1.1.22	2	JH 10 5431	Coal	SASW	SASW	TADW	-	7.66		14.24	13.86		35.76	1.78		12.00		13.79
464	2 Axle	1.2	2	NL 01 1016	Parcel	SASW	SADW	-	-	7.23	10.53				17.76	1.42	2.78			4.19
465	3 Axle	1.22	2	WB 11 6698	Oil	SASW	TADW	-	-	6.48	13.02	12.43			31.93	0.91	8.08			8.99

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
466	4 Axle	1.1.22	2	UP 81 6975	Oil	SASW	SASW	TADW	-	7.38	9.62	11.02	10.43		38.45	1.54	4.44	4.08		10.05
467	5 Axle	1.1.1.22	1	JH 10 5265	Empty	SASW	SASW	SASW	TADW	4.62	4.43		3.22	3.06	15.33	0.24	0.20		0.00	0.44
468	3 Axle	1.22	2	DL 1G 5381	Parcel	SASW	TADW	-	-	6.42	13.02	12.46			31.90	0.88	8.11			8.99
469	5 Axle	1.1.122	1	JH 2 9415	Empty	SASW	SASW	TRADW	-	4.83	4.62		4.22	4.08	17.75	0.28	0.24	0.02		0.54
470	6 Axle	1.22.222	2	RJ 02 9021	Iron	SASW	TADW	TRADW	-	6.12	12.05	13.16		14.66	45.98	0.73	7.77	2.20		10.70
471	4 Axle	1.1.22	2	WB 29 4327	Oil	SASW	SASW	TADW	-	7.38		13.80	13.02		34.20	1.54		9.96		11.50
472	5 Axle	1.1.122	2	NL 01 0990	Oil	SASW	SASW	TRADW	-	7.38	12.02		13.96	12.43	45.79	1.54	10.82	1.78		14.14
473	5 Axle	1.1.1.22	1	WB 37 3776	Empty	SASW	SASW	SASW	TADW	5.38	4.82		4.35	4.08	18.63	0.43	0.28		0.01	0.72
474	3 Axle	1.22	1	WB 03 0944	Empty	SASW	TADW	-	-	4.22	4.08	3.94			12.24	0.16	0.08			0.24
475	4 Axle	1.2.22	2	GJ 07 0679	Gas	SASW	SADW	TADW	-	7.46	12.42	15.18	14.08		49.14	1.60	5.37	14.11		21.09
476	2 Axle	1.2	2	HR 55 3628	Parcel	SASW	SADW	-	-	6.52	13.42				19.94	0.94	7.33			8.26
477	4 Axle	1.2.22	2	NL 01 7804	Gas	SASW	SADW	TADW	-	7.82	12.22	12.38	13.06		45.48	1.94	5.04	8.06		15.04
478	4 Axle	1.2.22	2	NL 01 6348	Gas	SASW	SADW	TADW	-	6.72	13.18	14.62	14.02		48.54	1.06	6.82	12.95		20.82
479	4 Axle	1.1.22	2	RJ M 4300	Tea	SASW	SASW	TADW	-	6.73	8.46	13.68	14.08		42.95	1.06	2.65	11.43		15.15
480	2 Axle	1.2	2	UP 17 8928	Parcel	SASW	SADW	-	-	7.38	11.02				18.40	1.54	3.33			4.87
481	4 Axle	1.1.22	1	JH 02 6904	Empty	SASW	SASW	TADW	-	4.62		4.32	4.08		13.02	0.24		0.10		0.33
482	3 Axle	1.22	2	NL 01 0682	Parcel	SASW	TADW	-	-	6.52	11.82	11.18			29.52	0.94	5.39			6.32
483	4 Axle	1.1.22	2	RJ 11 4703	Feed	SASW	SASW	TADW	-	7.38	9.18	13.82	13.14		43.52	1.54	3.68	10.17		15.39
484	5 Axle	1.1.122	1	NL 01 4655	Empty	SASW	SASW	TRADW	-	4.22	4.02		3.83	3.34	15.41	0.16	0.14	0.01		0.31
485	BUS	1.2	2	JH 11 4655	Passenger	SASW	SADW	-	-	4.72	7.82				12.54	0.26	0.84			1.10
486	5 Axle	1.1.122	2	UP 65 0765	Oil	SASW	SASW	TRADW	-	7.42	12.43		14.42	14.08	48.35	1.57	12.37	2.42		16.36
487	3 Axle	1.22	2	WB 11 3911	Oil	SASW	TADW	-	-	7.38	15.02	14.09			36.49	1.54	13.82			15.36
488	LCV	1.2	1	WB 11 2928	Empty	SASW	SADW	-	-	2.22	1.94				4.16	0.01	0.00			0.02
489	5 Axle	1.1.122	2	JH 10 5755	Pipe	SASW	SASW	TRADW	-	7.42	9.18		13.82	13.08	43.50	1.57	3.68	1.92		7.17
490	5 Axle	1.1.122	2	WB 29 3159	Feed	SASW	SASW	TRADW	-	7.83	9.83	6.42	12.42	12.14	48.64	1.95	4.84	3.38		10.17
491	5 Axle	1.1.122	1	WB 37 4078	Empty	SASW	SASW	TRADW	-	5.43	4.82		5.18	4.93	20.36	0.45	0.28	0.04		0.77
492	5 Axle	1.1.122	1	WB 37 3408	Empty	SASW	SASW	TRADW	-	5.02	4.83		4.32	4.08	18.25	0.33	0.28	0.02		0.63
493	3 Axle	1.22	2	UP 21 4445	Powder	SASW	TADW	-	-	6.52	13.83	13.03			33.38	0.94	10.02			10.96
494	3 Axle	1.22	2	PB 13 0254	Parcel	SASW	TADW	-	-	6.16	10.23	12.24			28.63	0.75	4.91			5.65
495	5 Axle	1.1.122	2	JH 02 6261	Coal	SASW	SASW	TRADW	-	6.92	8.92	10.22	15.82	16.32	58.20	1.19	3.28	11.83		16.30
496	2 Axle	1.2	1	UP 67 6754	Empty	SASW	SADW	-	-	4.08	3.64				7.72	0.14	0.04			0.18

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
497	2 Axle	1.2	2	HR 39 8063	Parcel	SASW	SADW	-	-	6.22	11.02				17.24	0.78	3.33			4.11
498	2 Axle	1.2	2	WB 11 5845	Cloth	SASW	SADW	-	-	5.92	12.22				18.14	0.64	5.04			5.67
499	4 Axle	1.1.22	1	OD 9 5311	Empty	SASW	SASW	TADW	-	4.22		3.94	3.23		11.39	0.16		0.05		0.22
500	3 Axle	1.22	2	JH 10 4485	Foam	SASW	TADW	-	-	5.78	6.38	5.62			17.78	0.58	0.40			0.98
501	2 Axle	1.2	2	UP 70 6227	Parcel	SASW	SADW	-	-	7.38	11.61				18.99	1.54	4.10			5.64
502	4 Axle	1.2.22	2	NL 01 3880	Gas	SASW	SADW	TADW	-	7.22	9.74	13.66	12.76		43.38	1.41	2.03	9.38		12.82
503	BUS	1.2	2	WB 47 8065	Passenger	SASW	SADW	-	-	6.94	9.25				16.19	1.20	1.65			2.86
504	5 Axle	1.1.122	1	JH 04 4123	Empty	SASW	SASW	TRADW	-	4.90	4.74		4.86	4.24	18.74	0.30	0.26	0.03		0.59
505	LCV	1.2	2	JH 10 1115	Pipe	SASW	SADW	-	-	5.66	8.33				13.99	0.53	1.09			1.62
506	3 Axle	1.22	2	RJ 14 7879	Grocery	SASW	TADW	-	-	6.53	9.34	8.93			24.80	0.94	2.14			3.09
507	4 Axle	1.2.22	2	NL 01 6462	Gas	SASW	SADW	TADW	-	5.34	9.36	11.48	10.62		36.80	0.42	1.73	4.59		6.75
508	LCV	1.2	2	MH 04 5612	rmy Equipme	SASW	SADW	-	-	4.76	8.14				12.90	0.27	0.99			1.26
509	6 Axle	1.22.222	2	MH 40 3113	Iron	SASW	TADW	TRADW	-	5.68	8.14	8.86		10.38	33.06	0.54	1.61	0.50		2.65
510	3 Axle	1.22	2	NL 03 6503	Machine	SASW	TADW	-	-	5.74	11.48	10.94			28.16	0.56	4.86			5.43
511	3 Axle	1.22	2	NL 02 1924	Cloth	SASW	TADW	-	-	8.78	11.18	10.24			30.20	3.08	4.05			7.13
512	4 Axle	1.1.22	1	JH 05 8448	Empty	SASW	SASW	TADW	-	4.23		4.13	4.29		12.65	0.17		0.10		0.26
513	4 Axle	1.1.22	2	NL 04 3170	Iron	SASW	SASW	TADW	-	7.62	10.08	14.42	14.30		46.42	1.75	5.35	13.10		20.19
514	5 Axle	1.1.122	2	RJ 05 6367	Milk	SASW	SASW	TRADW	-	7.62	10.34		12.82	12.02	42.80	1.75	5.92	1.40		9.07
515	LCV	1.2	2	WB 12 4705	Parcel	SASW	SADW	-	-	4.09	8.64				12.73	0.14	1.26			1.40
516	3 Axle	1.22	2	RJ 32 1970	Parcel	SASW	TADW	-	-	6.42	10.02	9.74			26.18	0.88	2.93			3.82
517	4 Axle	1.1.22	2	JH 12 8565	Iron	SASW	SASW	TADW	-	7.72	8.54	14.90	14.24		45.40	1.84	2.76	13.88		18.48
518	4 Axle	1.1.22	1	NL 01 2904	Empty	SASW	SASW	TADW	-	4.85		4.27	4.16		13.28	0.29		0.10		0.38
519	4 Axle	1.1.22	2	NL 05 1135	Iron	SASW	SASW	TADW	-	7.95	12.64	14.02	13.06		47.67	2.07	13.23	10.35		25.65
520	3 Axle	1.22	1	NL 04 3570	Empty	SASW	TADW	-	-	4.34	3.96	3.48			11.78	0.18	0.06			0.24
521	2 Axle	1.2	1	AP 29 1514	Empty	SASW	SADW	-	-	3.46	4.34				7.80	0.07	0.08			0.15
522	3 Axle	1.22	1	WB 37 6530	Empty	SASW	TADW	-	-	4.26	4.02	3.86			12.14	0.17	0.07			0.24
523	3 Axle	1.22	2	HR 55 8714	Parcel	SASW	TADW	-	-	7.23	9.78	9.36			26.37	1.42	2.58			4.00
524	BUS	1.2	2	WB 47 1185	Passenger	SASW	SADW	-	-	7.98	9.50				17.48	2.10	1.84			3.94
525	5 Axle	1.1.122	1	WB 37 5670	Empty	SASW	SASW	TRADW	-	4.94	4.48		4.34	4.62	18.38	0.31	0.21	0.02		0.54
526	4 Axle	1.2.22	2	NL 01 3108	Tractor	SASW	SADW	TADW	-	7.62	9.00	9.82	9.50		35.94	1.75	1.48	2.68		5.91
527	3 Axle	1.22	2	HR 55 1843	Grocery	SASW	TADW	-	-	7.74	7.94	7.42			23.10	1.86	1.07			2.93

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
528	4 Axle	1.2.22	2	NL 01 8315	Pipe	SASW	SADW	TADW	-	6.18	8.34	13.74	12.68		40.94	0.76	1.09	9.38		11.23
529	3 Axle	1.22	2	HR 38 4287	Parcel	SASW	TADW	-	-	6.94	11.62	10.94			29.50	1.20	4.99			6.19
530	4 Axle	1.2.22	2	GJ 06 8070	Gas	SASW	SADW	TADW	-	6.94	9.34	13.74	12.90		42.92	1.20	1.72	9.70		12.62
531	LCV	1.2	2	WB 19 8763	Transport	SASW	SADW	-	-	4.94	7.28				12.22	0.31	0.63			0.94
532	4 Axle	1.1.22	2	WB 29 4375	Oil	SASW	SASW	TADW	-	8.45		15.48	13.14		37.07	2.64		12.92		15.56
533	4 Axle	1.1.22	2	WB 29 7823	Coal	SASW	SASW	TADW	-	7.48	5.42	13.40	13.68		39.98	1.62	0.45	10.35		12.42
534	4 Axle	1.2.22	2	UP 70 8930	Petrol	SASW	SADW	TADW	-	5.08	9.74	10.90	10.72		36.44	0.35	2.03	4.21		6.58
535	5 Axle	1.1.122	1	JH 04 2090	Empty	SASW	SASW	TRADW	-	4.58	4.20		2.06	3.53	14.37	0.23	0.16	0.00		0.39
536	3 Axle	1.22	2	HR 54 8015	Parcel	SASW	TADW	-	-	7.36	11.56	10.74			29.66	1.52	4.76			6.28
537	BUS	1.2	2	WB 41 8174	Parcel	SASW	SADW	-	-	7.48	8.94				16.42	1.62	1.44			3.06
538	2 Axle	1.2	2	HR 55 8577	Parcel	SASW	SADW	-	-	6.34	8.46				14.80	0.84	1.16			1.99
539	3 Axle	1.22	2	NL 01 8708	Pipe	SASW	TADW	-	-	7.68	13.56	12.70			33.94	1.80	9.15			10.96
540	6 Axle	1.22.222	2	RJ 01 1995	Road	SASW	TADW	TRADW	-	6.56	13.14	12.30		14.24	46.24	0.96	8.06	1.82		10.85
541	5 Axle	1.2.222	1	NL 01 0428	Empty	SASW	SADW	TRADW	-	4.36	2.90		3.02	3.67	13.95	0.19	0.02	0.01		0.21
542	LCV	1.2	2	KA 01 2873	Biscuit	SASW	SADW	-	-	3.89	7.56				11.45	0.12	0.74			0.86
543	2 Axle	1.2	2	GJ 03 0628	Chips	SASW	SADW	-	-	5.94	7.20				13.14	0.65	0.61			1.25
544	5 Axle	1.1.122	2	PB 10 8523	Rice	SASW	SASW	TRADW	-	7.82	7.22		15.18	14.10	44.32	1.94	1.41	2.70		6.05
545	2 Axle	1.2	2	NL 01 8124	Railway Mail	SASW	SADW	-	-	6.61	11.34				17.95	0.99	3.74			4.72
546	LCV	1.2	1	UP 75 9831	Empty	SASW	SADW	-	-	3.08	2.94				6.02	0.05	0.02			0.06
547	LCV	1.2	2	UP 14 7830	Pipe	SASW	SADW	-	-	3.44	10.34				13.78	0.07	2.58			2.65
548	4 Axle	1.1.22	2	JH 10 7075	Rice	SASW	SASW	TADW	-	9.34	4.62	14.62	13.40		41.98	3.94	0.24	11.87		16.05
549	LCV	1.2	2	WB 17 7108	Machine	SASW	SADW	-	-	5.50	7.56				13.06	0.47	0.74			1.21
550	2 Axle	1.2	2	HR 55 3895	Parcel	SASW	SADW	-	-	5.74	7.48				13.22	0.56	0.71			1.27
551	2 Axle	1.2	2	HR 47 1466	Medicine	SASW	SADW	-	-	6.38	9.74				16.12	0.86	2.03			2.89
552	5 Axle	1.1.122	1	BR 11 2643	Empty	SASW	SASW	TRADW	-	5.34	3.14		4.28	4.10	16.86	0.42	0.05	0.02		0.49
553	4 Axle	1.1.22	2	BR 14 6270	Iron	SASW	SASW	TADW	-	6.94		9.48	8.56		24.98	1.20		2.04		3.24
554	3 Axle	1.22	2	JH 02 9647	Namkeen	SASW	TADW	-	-	4.98	10.86	10.14			25.98	0.32	3.74			4.06
555	4 Axle	1.1.22	2	BR 23 7073	Chokar	SASW	SASW	TADW	-	6.88	4.64	10.78	10.24		32.54	1.16	0.24	3.76		5.16
556	5 Axle	1.1.122	2	WB 53 6196	Dust	SASW	SASW	TRADW	-	7.60	9.78		15.78	14.76	47.92	1.73	4.74	3.20		9.67
557	4 Axle	1.1.22	2	BR 40 7505	Chokar	SASW	SASW	TADW	-											
558	3 Axle	1.22	2	WB 19 4006	Machine	SASW	TADW	-	-	7.68	11.94	11.34			30.96	1.80	5.65			7.46

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
559	LCV	1.2	2	WB 71 2515	Parcel	SASW	SADW	-	-	4.10	6.83				10.93	0.15	0.49			0.64
560	4 Axle	1.1.22	2	BR 24 3517	Bhusi	SASW	SASW	TADW	-	8.62		14.28	13.78		36.68	2.86		11.93		14.79
561	3 Axle	1.22	2	NL 01 8527	Parcel	SASW	TADW	-	-	5.94	9.56	10.24			25.74	0.65	2.96			3.60
562	5 Axle	1.1.122	2	JH 04 7035	Barood	SASW	SASW	TRADW	-	6.38	8.84	11.74	12.86	12.24	52.06	0.86	3.16	6.77		10.79
563	5 Axle	1.1.122	2	WB 40 7125	Cement	SASW	SASW	TRADW	-	9.34	8.34		13.68	13.14	44.50	3.94	2.51	1.90		8.35
564	LCV	1.2	2	WB 19 6540	Machine	SASW	SADW	-	-	5.46	7.94				13.40	0.46	0.90			1.36
565	2 Axle	1.2	2	RJ 40 5694	Parcel	SASW	SADW	-	-	5.94	7.08				13.02	0.65	0.57			1.21
566	5 Axle	1.2.222	2	NL 02 8575	Iron	SASW	SADW	TRADW	-	5.74	16.14		15.74	15.96	53.58	0.56	15.33	3.71		19.60
567	2 Axle	1.2	2	UP 21 3508	Pipe	SASW	SADW	-	-	7.08	10.34				17.42	1.30	2.58			3.88
568	BUS	1.2	2	WB 21 4270	Passenger	SASW	SADW	-	-	7.13	9.02				16.15	1.34	1.50			2.83
569	3 Axle	1.22	2	HR 55 1108	Parcel	SASW	TADW	-	-	7.74	11.44	10.86			30.04	1.86	4.76			6.62
570	4 Axle	1.1.22	2	WB 39 5708	Cement	SASW	SASW	TADW	-	9.74		10.34	10.16		30.24	4.66		3.40		8.06
571	2 Axle	1.2	2	NL 01 2743	Chips	SASW	SADW	-	-	5.14	8.15				13.29	0.36	1.00			1.36
572	4 Axle	1.2.22	2	UP 70 9351	Petrol	SASW	SADW	TADW	-	5.14	9.40	11.34	14.06		39.94	0.36	1.76	8.01		10.14
573	4 Axle	1.2.22	2	NL 01 7247	Container	SASW	SADW	TADW	-	4.74	8.15	9.74	9.34		31.97	0.26	1.00	2.55		3.81
574	5 Axle	1.1.122	2	JH 19 8949	Iron	SASW	SASW	TRADW	-	6.10	7.74		14.64	14.10	42.58	0.72	1.86	2.51		5.08
575	2 Axle	1.2	2	MH 04 7165	Basket	SASW	SADW	-	-	5.48	9.66				15.14	0.47	1.97			2.43
576	5 Axle	1.1.122	2	RJ 19 6289	Feed	SASW	SASW	TRADW	-	7.48	9.74		13.74	13.00	43.96	1.62	4.66	1.88		8.16
577	3 Axle	1.22	2	HR 37 6494	Parcel	SASW	TADW	-	-	6.06	10.60	9.50			26.16	0.70	3.14			3.84
578	3 Axle	1.22	2	NL 04 3660	Grocery	SASW	TADW	-	-	6.86	11.48	10.86			29.20	1.15	4.79			5.94
579	3 Axle	1.22	2	MH 44 4877	Parcel	SASW	TADW	-	-	6.42	9.44	9.94			25.80	0.88	2.72			3.60
580	LCV	1.2	1	WB 14 7830	Empty	SASW	SADW	-	-	2.58	3.10				5.68	0.02	0.02			0.04
581	2 Axle	1.2	2	PB 65 3765	Biscuit	SASW	SADW	-	-	7.48	10.34				17.82	1.62	2.58			4.20
582	3 Axle	1.22	1	HR 38 7065	Empty	SASW	TADW	-	-	4.18	3.34	3.48			11.00	0.16	0.04			0.20
583	2 Axle	1.2	2	WB 31 1719	Waste	SASW	SADW	-	-	3.74	5.90				9.64	0.10	0.27			0.38
584	3 Axle	1.22	2	WB 40 3711	Iron	SASW	TADW	-	-	5.42	6.74	8.34			20.50	0.45	1.00			1.44
585	2 Axle	1.2	2	HR 47 7845	Parcel	SASW	SADW	-	-	5.94	5.96				11.90	0.65	0.29			0.93
586	4 Axle	1.1.22	2	WB 47 8870	Oil	SASW	SASW	TADW	-	8.12	4.36	13.50	12.98		38.96	2.25	0.19	9.46		11.90
587	BUS	1.2	2	WB 71 9365	Passenger	SASW	SADW	-	-	6.94	8.90				15.84	1.20	1.42			2.62
588	5 Axle	1.2.222	2	WB 39 7678	Iron	SASW	SADW	TRADW	-	6.34	14.30		16.14	15.84	52.62	0.84	9.45	3.84		14.13
589	5 Axle	1.2.222	2	GJ 40 3670	Chemical	SASW	SADW	TRADW	-	5.94	6.24		15.16	14.24	41.58	0.65	0.34	2.75		3.73

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
590	5 Axle	1.2.222	1	JH 57 7015	Empty	SASW	SADW	TRADW	-	4.46	4.78		4.14	5.02	18.40	0.21	0.12	0.03		0.35
591	2 Axle	1.2	2	HR 55 5837	Parcel	SASW	SADW	-	-	6.42	8.34				14.76	0.88	1.09			1.97
592	5 Axle	1.1.122	1	JH 04 7590	Empty	SASW	SASW	TRADW	-	4.28	4.16		4.54	3.84	16.82	0.17	0.16	0.02		0.35
593	5 Axle	1.1.122	2	GJ 02 5970	Iron	SASW	SASW	TRADW	-	7.68	8.54		13.14	12.54	41.90	1.80	2.76	1.60		6.16
594	3 Axle	1.22	2	WB 14 7015	Parcel	SASW	TADW	-	-	5.99	9.50	9.02			24.51	0.67	2.26			2.93
595	4 Axle	1.1.22	2	WB 35 2213	Coal	SASW	SASW	TADW	-	6.04		13.86	13.06		32.96	0.69		10.11		10.80
596	3 Axle	1.22	2	WB 17 3170	Parcel	SASW	TADW	-	-	6.94	10.34	10.42			27.70	1.20	3.58			4.78
597	3 Axle	1.22	2	RJ 10 7297	Chips	SASW	TADW	-	-	6.34	11.20	10.64			28.18	0.84	4.38			5.22
598	4 Axle	1.1.22	2	WB 23 3661	Coal	SASW	SASW	TADW	-	7.70		12.14	13.06		32.90	1.82		7.76		9.58
599	2 Axle	1.2	2	HR 55 7855	Parcel	SASW	SADW	-	-	6.34	8.14				14.48	0.84	0.99			1.83
600	5 Axle	1.1.122	1	JH 04 4077	Empty	SASW	SASW	TRADW	-	4.63	4.24		3.94	3.74	16.55	0.24	0.17	0.01		0.42
601	2 Axle	1.2	2	RJ 15 6217	Iron	SASW	SADW	-	-	7.82	12.18				20.00	1.94	4.97			6.91
602	2 Axle	1.2	2	NL 02 8815	Tea	SASW	SADW	-	-	5.74	8.84				14.58	0.56	1.38			1.94
603	5 Axle	1.1.122	2	WB 41 5870	Oil	SASW	SASW	TRADW	-	7.01	9.98	12.84	14.02	14.26	58.11	1.25	5.14	10.51		16.90
604	5 Axle	1.2.222	2	WB 13 7010	Machine	SASW	SADW	TRADW	-	5.48	7.42	14.20	15.02	14.24	56.36	0.47	0.68	13.11		14.26
605	4 Axle	1.1.22	2	RJ 23 7751	Oil	SASW	SASW	TADW	-	8.70		16.34	15.98		41.02	2.97		21.01		23.97
606	3 Axle	1.22	2	NL 01 7105	Parcel	SASW	TADW	-	-	7.22	9.42	10.62			27.26	1.41	3.10			4.51
607	4 Axle	1.1.22	2	WB 15 2918	Chemical	SASW	SASW	TADW	-	7.42		15.42	14.08		36.92	1.57		14.58		16.15
608	LCV	1.2	1	UP 37 5387	Empty	SASW	SADW	-	-	3.42	3.43				6.85	0.07	0.03			0.10
609	LCV	1.2	2	WB 37 2807	Food	SASW	SADW	-	-	3.83	7.82				11.65	0.11	0.84			0.96
610	5 Axle	1.2.222	2	UP 70 5218	Gas	SASW	SADW	TRADW	-	7.92	12.22		13.42	12.46	46.02	2.04	5.04	1.65		8.72
611	4 Axle	1.1.22	1	JH 02 1335	Empty	SASW	SASW	TADW	-	4.42		3.94	3.66		12.02	0.20		0.06		0.26
612	5 Axle	1.1.122	2	JH 10 4840	Oil	SASW	SASW	TRADW	-	7.83	9.82		15.82	15.02	48.49	1.95	4.82	3.32		10.09
613	5 Axle	1.1.122	1	RJ 02 8881	Empty	SASW	SASW	TRADW	-	4.62	4.32		3.98	3.68	16.60	0.24	0.18	0.01		0.43
614	5 Axle	1.2.222	2	WB 11 6662	Cloth	SASW	SADW	TRADW	-	7.02	1.28	7.82	16.80	16.04	48.96	1.26	0.00	10.04		11.30
615	5 Axle	1.1.122	1	JH 02 9241	Empty	SASW	SASW	TRADW	-	4.82	4.43		4.18	3.94	17.37	0.28	0.20	0.02		0.50
616	4 Axle	1.1.22	2	WB 19 1995	Oil	SASW	SASW	TADW	-	7.38		13.83	13.03		34.24	1.54		10.02		11.56
617	3 Axle	1.22	1	WB 37 0977	Empty	SASW	TADW	-	-	4.82	4.32	4.09			13.23	0.28	0.10			0.38
618	5 Axle	1.1.122	1	JH 02 4082	Empty	SASW	SASW	TRADW	-	5.02	4.72		4.22	4.08	18.04	0.33	0.26	0.02		0.60
619	LCV	1.2	1	WB 37 5061	Empty	SASW	SADW	-	-	2.22	2.08				4.30	0.01	0.00			0.02
620	3 Axle	1.22	2	NL 01 5600	Hen Feed	SASW	TADW	-	-	6.42	13.02	14.03			33.47	0.88	10.31			11.19

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
621	3 Axle	1.22	2	HR 38 7571	Tea	SASW	TADW	-	-	7.30	14.02	12.62			33.94	1.47	9.70			11.17
622	3 Axle	1.22	2	NL 01 4874	Powder	SASW	TADW	-	-	7.22	13.42	12.00			32.64	1.41	8.04			9.45
623	4 Axle	1.1.22	2	NL 01 8345	Coal	SASW	SASW	TADW	-	7.03	11.02		12.22		30.27	1.27	7.64	0.43		9.34
624	6 Axle	1.22.222	2	RJ 19 8761	Iron	SASW	TADW	TRADW	-	5.22	9.13	10.39	12.10	11.92	48.77	0.39	2.80	5.16		8.34
625	3 Axle	1.22	2	RJ 13 6677	Parcel	SASW	TADW	-	-	6.43	12.22	12.04			30.69	0.89	6.67			7.55
626	4 Axle	1.1.22	2	WB 17 0598	Pipe	SASW	SASW	TADW	-	0.88		13.82	12.43		27.13	0.00		9.14		9.14
627	6 Axle	1.22.222	2	JH 91 7198	Holder	SASW	TADW	TRADW	-	7.22	13.82	1.28	11.02	12.02	45.36	1.41	1.00	1.29		3.69
628	3 Axle	1.22	2	HR 37 4038	Parcel	SASW	TADW	-	-	6.22	11.02	10.06			27.30	0.78	3.80			4.58
629	4 Axle	1.1.22	2	WB 37 9077	Rice	SASW	SASW	TADW	-	7.38		12.82	12.04		32.24	1.54		7.35		8.89
630	5 Axle	1.1.122	2	HR 67 0580	Road	SASW	SASW	TRADW	-	7.62	8.58		13.56	12.68	42.44	1.75	2.81	1.74		6.30
631	5 Axle	1.2.222	1	NL 01 4678	Empty	SASW	SADW	TRADW	-	4.62	4.34		4.18	3.94	17.08	0.24	0.08	0.02		0.33
632	2 Axle	1.2	2	HR 38 9710	Parcel	SASW	SADW	-	-	7.22	9.58				16.80	1.41	1.90			3.31
633	3 Axle	1.22	2	MH 12 9870	Machine	SASW	TADW	-	-	7.74	11.48	10.86			30.08	1.86	4.79			6.65
634	5 Axle	1.1.122	2	BR 02 9837	Coal	SASW	SASW	TRADW	-	7.21	9.10		12.14	12.86	41.31	1.40	3.55	1.44		6.39
635	2 Axle	1.2	2	WB 03 1578	Parcel	SASW	SADW	-	-	6.86	11.66				18.52	1.15	4.18			5.32
636	5 Axle	1.1.122	2	WB 29 6768	Hen Feed	SASW	SASW	TRADW	-	7.42	9.48		13.50	12.86	43.26	1.57	4.19	1.77		7.53
637	3 Axle	1.22	2	HR 55 6073	Machine	SASW	TADW	-	-	7.42	12.38	11.66			31.46	1.57	6.43			8.00
638	BUS	1.2	2	WB 70 6708	Passenger	SASW	SADW	-	-	6.62	8.34				14.96	1.00	1.09			2.09
639	4 Axle	1.1.22	2	JH 10 7837	Iron	SASW	SASW	TADW	-	7.50		15.68	14.76		37.94	1.64		16.53		18.17
640	4 Axle	1.1.22	2	WB 41 7015	Oil	SASW	SASW	TADW	-	8.02		13.40	12.62		34.04	2.14		8.82		10.97
641	4 Axle	1.1.22	2	JH 02 8178	Coal	SASW	SASW	TADW	-	7.82					7.82	1.94				1.94
642	BUS	1.2	2	WB 48 6570	Machine	SASW	SADW	-	-	7.34	9.30				16.64	1.50	1.69			3.19
643	3 Axle	1.22	2	HR 57 0765	Meda	SASW	TADW	-	-	7.48	12.34	11.44			31.26	1.62	6.16			7.78
644	4 Axle	1.2.22	2	NL 01 1407	J.C.B.	SASW	SADW	TADW	-	6.34	8.54	9.82	9.00		33.70	0.84	1.20	2.41		4.45
645	3 Axle	1.22	2	HR 38 7108	Gas	SASW	TADW	-	-	7.74	9.62	9.18			26.54	1.86	2.40			4.26
646	3 Axle	1.22	2	MP 07 7005	Parcel	SASW	TADW	-	-	6.34	11.74	10.86			28.94	0.84	5.02			5.86
647	5 Axle	1.1.122	2	PB 65 8570	Iron	SASW	SASW	TRADW	-	8.14	9.66		14.24	13.86	45.90	2.27	4.51	2.29		9.08
648	3 Axle	1.22	2	WB 25 7035	Parcel	SASW	TADW	-	-	6.94	10.34	9.68			26.96	1.20	3.09			4.29
649	4 Axle	1.1.22	2	RJ 19 6515	Coal	SASW	SASW	TADW	-	7.42		13.82	13.14		34.38	1.57		10.17		11.74
650	LCV	1.2	2	MH 06 0873	Chips	SASW	SADW	-	-	5.48	7.34				12.82	0.47	0.66			1.12
651	4 Axle	1.1.22	1	JH 01 8710	Empty	SASW	SASW	TADW	-	4.62		4.02	3.90		12.54	0.24		0.08		0.31

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
652	2 Axle	1.2	2	JH 06 7535	Machine	SASW	SADW	-	-	6.80	9.74				16.54	1.11	2.03			3.14
653	4 Axle	1.1.22	2	JH 02 2343	Coal	SASW	SASW	TADW	-	6.34		11.66	10.94		28.94	0.84		5.02		5.86
654	LCV	1.2	2	WB 47 0575	Grocery	SASW	SADW	-	-	3.82	0.72				4.54	0.11	0.00			0.11
655	2 Axle	1.2	2	HR 34 9732	Plastic	SASW	SADW	-	-	6.84	11.66				18.50	1.13	4.18			5.31
656	4 Axle	1.1.22	2	JH 02 7135	Iron	SASW	SASW	TADW	-	7.56		13.62	13.06		34.24	1.69		9.75		11.45
657	2 Axle	1.2	2	NL 01 7408	Parcel	SASW	SADW	-	-	7.62	12.34				19.96	1.75	5.24			6.98
658	4 Axle	1.1.22	2	WB 15 8902	Iron	SASW	SASW	TADW	-	7.93		1.58	13.82		23.33	2.05		1.08		3.13
659	4 Axle	1.2.22	2	HR 63 6587	Pipe	SASW	SADW	TADW	-	7.62	9.12	13.83	14.02		44.59	1.75	1.56	11.58		14.89
660	6 Axle	1.22.222	2	RJ 19 6586	Iron	SASW	TADW	TRADW	-	7.82	8.28		15.39	14.65	46.14	1.94	0.09	2.99		5.02
661	4 Axle	1.1.22	2	WB 11 1164	Transport	SASW	SASW	TADW	-	8.42		13.74	12.96		35.12	2.60		9.78		12.39
662	3 Axle	1.22	1	UP 21 5002	Empty	SASW	TADW	-	-	4.34	4.18	4.20			12.72	0.18	0.09			0.28
663	5 Axle	1.2.222	1	PB 10 6629	Empty	SASW	SADW	TRADW	-	4.82	4.42		4.22	4.28	17.74	0.28	0.09	0.02		0.39
664	3 Axle	1.22	2	WB 41 5034	Rice	SASW	TADW	-	-	7.78	13.62	13.06			34.46	1.90	9.75			11.65
665	5 Axle	1.2.222	2	RJ 02 1737	J.C.B.	SASW	SADW	TRADW	-	6.54	8.42		13.74	12.66	41.36	0.95	1.14	1.78		3.87
666	LCV	1.2	2	HR 63 2037	Grocery	SASW	SADW	-	-	4.34	6.42				10.76	0.18	0.38			0.57
667	4 Axle	1.1.22	2	UP 67 9068	Iron	SASW	SASW	TADW	-	8.14					8.14	2.27				2.27
668	LCV	1.2	2	WB 14 4763	Biscuit	SASW	SADW	-	-	5.62	7.38				13.00	0.52	0.67			1.19
669	4 Axle	1.1.22	2	WB 11 2556	Cement	SASW	SASW	TADW	-	8.30		13.86	12.81		34.97	2.46		9.74		12.20
670	3 Axle	1.22	2	HR 38 3240	Daal	SASW	TADW	-	-	7.56	13.80	12.26			33.62	1.69	8.88			10.57
671	5 Axle	1.2.222	2	NL 01 6573	Iron	SASW	SADW	TRADW	-	8.54	10.32		13.82	12.68	45.36	2.76	2.56	1.81		7.13
672	BUS	1.2	2	WB 17 8517	Passenger	SASW	SADW	-	-	6.86	8.34				15.20	1.15	1.09			2.24
673	2 Axle	1.2	2	HR 55 4870	Parcel	SASW	SADW	-	-	5.86	8.54				14.40	0.61	1.20			1.81
674	4 Axle	1.1.22	2	RJ 19 3105	Coal	SASW	SASW	TADW	-	7.74		13.62	12.76		34.12	1.86		9.32		11.18
675	4 Axle	1.1.22	2	JH 02 1882	Coal	SASW	SASW	TADW	-	7.02	8.42	14.42	14.03		43.89	1.26	2.60	12.61		16.47
676	4 Axle	1.1.22	1	JH 02 9224	Empty	SASW	SASW	TADW	-	4.82		4.03	3.83		12.68	0.28		0.07		0.35
677	4 Axle	1.1.22	1	JH 02 7011	Empty	SASW	SASW	TADW	-	4.22		3.83	3.74		11.79	0.16		0.06		0.23
678	3 Axle	1.22	1	NL 01 2723	Empty	SASW	TADW	-	-	4.18	3.83	3.74			11.75	0.16	0.06			0.22
679	4 Axle	1.2.22	2	UP 41 4919	Powder	SASW	SADW	TADW	-	7.38	1.02	1.74	10.08		20.22	1.54	0.00	0.38		1.91
680	3 Axle	1.22	2	WB 23 6535	Parcel	SASW	TADW	-	-	7.54	14.22	13.96			35.72	1.67	12.14			13.81
681	4 Axle	1.2.22	2	NL 01 8732	Iron	SASW	SADW	TADW	-	7.38	16.08	17.02	16.22		56.70	1.54	15.10	23.50		40.14
682	4 Axle	1.1.22	2	WB 11 1505	Tea	SASW	SASW	TADW	-	7.82	10.42	15.02	14.08		47.34	1.94	6.11	13.80		21.85

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
683	4 Axle	1.1.22	1	JH 10 2523	Empty	SASW	SASW	TADW	-	4.82		2.98	3.62		11.42	0.28		0.04		0.32
684	3 Axle	1.22	2	UP 75 8727	Iron	SASW	TADW	-	-	7.82	15.02	14.03			36.87	1.94	13.71			15.65
685	5 Axle	1.1.122	2	NL 01 2236	Iron	SASW	SASW	TRADW	-	6.42	11.02		15.82	15.18	48.44	0.88	7.64	3.39		11.92
686	4 Axle	1.1.22	2	WB 37 0715	Oil	SASW	SASW	TADW	-	7.18	8.44	13.90	13.06		42.58	1.38	2.63	10.17		14.18
687	6 Axle	1.22.222	2	RJ 14 6101	Iron	SASW	TADW	TRADW	-	6.87	1.20	13.20	10.63	14.11	46.01	1.16	0.83	7.62		9.60
688	4 Axle	1.1.22	2	RJ 14 6384	Powder	SASW	SASW	TADW	-	7.02	0.98	13.02	14.02		35.04	1.26	0.00	10.29		11.55
689	2 Axle	1.2	2	WB 37 2602	Parcel	SASW	SADW	-	-	6.22	12.02				18.24	0.78	4.72			5.49
690	3 Axle	1.22	2	HR 47 4958	Cloth	SASW	TADW	-	-	7.02	15.02	14.08			36.12	1.26	13.80			15.06
691	4 Axle	1.1.22	2	UP 63 9420	Oil	SASW	SASW	TADW	-	6.42	8.42	14.02	12.22		41.08	0.88	2.60	9.13		12.61
692	5 Axle	1.1.122	2	HR 38 8009	Iron	SASW	SASW	TRADW	-	6.42	8.42	1.38	15.82	15.03	47.07	0.88	2.60	3.97		7.45
693	3 Axle	1.22	2	UP 21 4710	Parcel	SASW	TADW	-	-	7.02	10.14	10.08			27.24	1.26	3.22			4.48
694	3 Axle	1.22	2	WB 25 2441	Iron	SASW	TADW	-	-	7.02	13.82	13.06			33.90	1.26	10.05			11.31
695	LCV	1.2	2	DL 17 3452	Milk	SASW	SADW	-	-	2.82	5.82				8.64	0.03	0.26			0.29
696	4 Axle	1.1.22	2	HL 01 4685	Car	SASW	SASW	TADW	-	6.42	8.42	0.79	7.06		22.69	0.88	2.60	0.07		3.56
697	4 Axle	1.1.22	1	JH 10 3635	Empty	SASW	SASW	TADW	-	4.22		3.82	3.68		11.72	0.16		0.06		0.23
698	4 Axle	1.1.22	1	JH 02 1213	Empty	SASW	SASW	TADW	-	4.82		4.32	4.08		13.22	0.28		0.10		0.38
699	LCV	1.2	2	UP 25 6140	Food	SASW	SADW	-	-	5.22	11.02				16.24	0.38	3.33			3.72
700	3 Axle	1.22	2	UP 21 6578	Parcel	SASW	TADW	-	-	6.43	10.22	10.08			26.73	0.89	3.27			4.15
701	3 Axle	1.22	1	WB 27 8103	Empty	SASW	TADW	-	-	4.42	4.20	4.08			12.70	0.20	0.09			0.29
702	3 Axle	1.22	2	UP 84 5884	Iron	SASW	TADW	-	-	7.91	13.02	12.66			33.59	2.03	8.37			10.40
703	BUS	1.2	2	WB 21 8992	Passenger	SASW	SADW	-	-	5.82	8.82				14.64	0.59	1.37			1.96
704	BUS	1.2	2	BR 02 5886	Passenger	SASW	SADW	-	-	4.08	8.43				12.51	0.14	1.14			1.28
705	2 Axle	1.2	2	RJ 01 7043	Parcel	SASW	SADW	-	-	6.42	9.18				15.60	0.88	1.60			2.48
706	4 Axle	1.1.22	2	RJ 41 6721	Powder	SASW	SASW	TADW	-	7.23		12.42	12.04		31.69	1.42		6.89		8.31
707	5 Axle	1.1.122	2	NL 01 5321	Iron	SASW	SASW	TRADW	-	7.23	9.82		12.82	12.66	42.53	1.42	4.82	1.55		7.78
708	3 Axle	1.22	2	HR 58 9086	Parcel	SASW	TADW	-	-	7.20	12.22	10.60			30.02	1.39	5.22			6.61
709	BUS	1.2	2	BR 31 3210	Passenger	SASW	SADW	-	-	5.22	7.82				13.04	0.38	0.84			1.23
710	BUS	1.2	2	BR 27 1345	Passenger	SASW	SADW	-	-	4.42	7.83				12.25	0.20	0.85			1.05
711	4 Axle	1.1.22	2	RJ 14 7995	iron	SASW	SASW	TADW	-	7.83	10.42	14.22	13.62		46.09	1.95	6.11	11.56		19.62
712	5 Axle	1.1.122	1	JH 19 6158	Empty	SASW	SASW	TRADW	-	5.22	4.83		4.42	4.38	18.85	0.38	0.28	0.02		0.69
713	LCV	1.2	1	JH 12 4175	Empty	SASW	SADW	-	-	3.02	2.43				5.45	0.04	0.01			0.05

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
714	4 Axle	1.1.22	2	UK 8 9660	Medicine	SASW	SASW	TADW	-	7.22		12.82	1.24		21.28	1.41		0.75		2.16
715	LCV	1.2	2	WB 25 7695	Milk	SASW	SADW	-	-	5.02	11.18				16.20	0.33	3.53			3.86
716	4 Axle	1.1.22	2	WB 31 8595	Powder	SASW	SASW	TADW	-	7.83	11.02	13.82	13.06		45.73	1.95	7.64	10.05		19.64
717	4 Axle	1.1.22	2	JH 02 9206	Chemical	SASW	SASW	TADW	-	6.22	10.08	12.22	12.66		41.18	0.78	5.35	7.38		13.50
718	5 Axle	1.2.222	2	WB 37 9623	Iron	SASW	SADW	TRADW	-	6.42	13.91		15.82	15.02	51.17	0.88	8.46	3.32		12.66
719	LCV	1.2	1	WB 19 0945	Empty	SASW	SADW	-	-	2.22	1.94				4.16	0.01	0.00			0.02
720	4 Axle	1.1.22	2	WB 25 6224	Oil	SASW	SASW	TADW	-	7.22		13.82	12.43		33.47	1.41		9.14		10.55
721	5 Axle	1.2.222	2	NL 01 8666	Iron	SASW	SADW	TRADW	-	5.91	12.19	12.83	14.59	14.48	60.00	0.63	4.99	11.33		16.94
722	5 Axle	1.1.122	1	WB 19 8097	Empty	SASW	SASW	TRADW	-	4.83	4.42		3.85	3.28	16.38	0.28	0.20	0.01		0.49
723	5 Axle	1.2.222	2	PB 04 8188	Iron	SASW	SADW	TRADW	-	5.22	5.91	16.49	16.53	15.85	60.00	0.38	0.28	20.95		21.62
724	3 Axle	1.22	1	WB 72 8900	Empty	SASW	TADW	-	-	4.22	3.94	3.64			11.80	0.16	0.06			0.23
725	4 Axle	1.1.22	2	NL 01 3757	Powder	SASW	SASW	TADW	-	7.38		13.83	12.04		33.25	1.54		8.62		10.16
726	5 Axle	1.1.122	2	BP 26 9870	Oil	SASW	SASW	TRADW	-	7.38	3.62	10.34	15.86	15.03	52.23	1.54	0.09	10.62		12.24
727	4 Axle	1.1.22	2	NL 01 2042	Tea	SASW	SASW	TADW	-	7.02		12.22	11.52		30.76	1.26		6.11		7.37
728	5 Axle	1.1.122	1	BR 02 5483	Empty	SASW	SASW	TRADW	-	4.22	4.08		3.82	3.62	15.74	0.16	0.14	0.01		0.32
729	5 Axle	1.1.122	2	WB 29 1102	Oil	SASW	SASW	TRADW	-	6.21	11.17	12.21	15.60	14.81	60.00	0.77	8.06	12.12		20.95
730	5 Axle	1.1.122	2	RJ 06 9971	Iron	SASW	SASW	TRADW	-	7.32	9.18	10.68	13.82	16.04	57.04	1.49	3.68	9.93		15.09
731	BUS	1.2	2	BR 01 6151	Passenger	SASW	SADW	-	-	4.42	8.04				12.46	0.20	0.94			1.14
732	4 Axle	1.2.22	1	WB 29 0887	Empty	SASW	SADW	TADW	-	4.42		3.88	2.56		10.86	0.20		0.03		0.23
733	BUS	1.2	2	BR 02 6651	Passenger	SASW	SADW	-	-	4.63	7.82				12.45	0.24	0.84			1.08
734	5 Axle	1.1.122	2	UP 84 4285	Powder	SASW	SASW	TRADW	-	7.62	11.82	8.42	12.22	12.04	52.12	1.75	10.11	4.19		16.05
735	4 Axle	1.1.22	1	NL 01 4792	Empty	SASW	SASW	TADW	-	5.22		4.08	3.98		13.28	0.38		0.08		0.47
736	3 Axle	1.22	2	CG 04 8445	Iron	SASW	TADW	-	-	6.42	12.91	12.46			31.79	0.88	7.97			8.86
737	4 Axle	1.1.22	2	JH 10 9627	Iron	SASW	SASW	TADW	-	7.39	9.82	13.02	13.02		43.25	1.55	4.82	8.85		15.22
738	BUS	1.2	2	WB 76 5660	Passenger	SASW	SADW	-	-	5.38	8.02				13.40	0.43	0.93			1.37
739	BUS	1.2	2	WB 76 7574	Passenger	SASW	SADW	-	-	4.02	9.42				13.44	0.14	1.78			1.91
740	4 Axle	1.1.22	2	JH 18 3440	Powder	SASW	SASW	TADW	-	7.22	10.22	13.86	12.49		43.79	1.41	5.65	9.28		16.34
741	4 Axle	1.1.22	1	JH 02 8168	Empty	SASW	SASW	TADW	-	4.82		4.38	4.08		13.28	0.28		0.10		0.38
742	4 Axle	1.1.22	2	PB 11 4438	Iron	SASW	SASW	TADW	-	6.82	11.02	13.02	16.08		46.94	1.12	7.64	13.80		22.57
743	4 Axle	1.1.22	2	WB 94 7941	Road	SASW	SASW	TADW	-	6.22	10.22	1.28	1.21		18.93	0.78	5.65	0.00		6.43
744	2 Axle	1.2	2	NL 01 1280	Parcel	SASW	SADW	-	-	6.02	9.82				15.84	0.68	2.10			2.78

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
745	5 Axle	1.2.222	2	NL 01 3477	Iron	SASW	SADW	TRADW	-	5.59	14.59	9.91	15.45	14.46	60.00	0.51	10.22	9.24		19.97
746	LCV	1.2	2	HR 19 8840	Parcel	SASW	SADW	-	-	4.72	13.60				18.32	0.26	7.73			7.98
747	5 Axle	1.2.222	1	JH 09 9019	Empty	SASW	SADW	TRADW	-	5.23	4.82		4.23	4.10	18.38	0.39	0.12	0.02		0.53
748	2 Axle	1.2	2	UP 21 1916	Parcel	SASW	SADW	-	-	6.22	10.02				16.24	0.78	2.28			3.05
749	2 Axle	1.2	2	UP 21 7432	Parcel	SASW	SADW	-	-	6.18	10.46				16.64	0.76	2.70			3.46

Single Axle with single wheel - SASW
Single Axle with dual wheels - SADW
Tandem Axle with dual wheels - TADW
Tandem Axle Single wheel - TASW
Tridem Axel Dual Wheel - TRADW

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
1	3 Axle	1.22	1	NL01Q6964	Empty	SASW	TADW	-	-	4.02	3.90	4.14			12.06	0.14	0.08			0.22
2	4 Axle	1.1.22	2	WD39B2817	Oil	SASW	SASW	TADW	-	9.96	10.86	13.84	11.24		45.90	5.10	7.21	7.62		19.92
3	4 Axle	1.1.22	1	WB65C9293	Empty	SASW	SASW	TADW	-	4.06	3.44	3.78	5.38		16.66	0.14	0.07	0.14		0.35
4	4 Axle	1.1.22	2	TN36B9834	Mahandi	SASW	SASW	TADW	-	6.74	7.14	14.44	15.58		43.90	1.07	1.35	15.63		18.05
5	3 Axle	1.22	2	WV737105	Grocery	SASW	TADW	-	-	5.94	6.20	5.68			17.82	0.65	0.38			1.03
6	5 Axle	1.1.1.22	2	JH025029	Coal	SASW	SASW	SASW	TADW	6.37	8.98		16.80	13.28	45.43	0.85	3.37		0.60	4.82
7	LCV	1.2	2	H4385139	Pipe	SASW	SADW	-	-	4.61	7.88				12.49	0.23	0.87			1.10
8	3 Axle	1.22	1	JH107562	Empty	SASW	TADW	-	-	4.84	7.80	8.28			20.92	0.28	1.29			1.57
9	4 Axle	1.1.22	2	WV379995	Coal	SASW	SASW	TADW	-	5.82	7.68	19.48	19.34		52.32	0.59	1.80	43.72		46.12
10	3 Axle	1.22	2	RJ097140	Grocery	SASW	TADW	-	-	5.28	13.80	13.68			32.76	0.40	10.98			11.38
11	4 Axle	1.1.22	2	JH199081	Coal	SASW	SASW	TADW	-	8.48	10.86	12.48	12.69		44.51	2.68	7.21	7.73		17.61
12	4 Axle	1.1.22	2	JH199318	Coal	SASW	SASW	TADW	-	8.00	10.86	15.68	15.88		50.42	2.12	7.21	19.10		28.43
13	4 Axle	1.1.22	2	WV394098	Rice	SASW	SASW	TADW	-	7.28	13.82	14.20	13.78		49.08	1.46	18.90	11.80		32.16
14	6 Axle	1.22.222	2	RJ022111	Document	SASW	TADW	TRADW	-	4.35	10.49	10.19	10.98	12.03	48.03	0.19	3.52	4.46		8.16
15	4 Axle	1.1.22	2	JH025831	Coal	SASW	SASW	TADW	-	7.08	5.88	15.78	13.59		42.33	1.30	0.62	14.32		16.25
16	5 Axle	1.1.1.22	1	BR073544	Empty	SASW	SASW	SASW	TADW	4.42	5.88	3.60	5.08	5.28	24.26	0.20	0.62	0.09	0.01	0.92
17	4 Axle	1.1.22	1	HR016435	Empty	SASW	SASW	TADW	-	4.80		4.02	3.70		12.52	0.28		0.07		0.34
18	5 Axle	1.1.1.22	2	HR387706	Powder	SASW	SASW	SASW	TADW	8.74	8.20		17.42	18.20	52.56	3.02	2.34		2.11	7.48
19	3 Axle	1.22	2	WB230219	Glass	SASW	TADW	-	-	7.74	8.84	10.90			27.48	1.86	2.92			4.78
20	4 Axle	1.1.22	2	JH020538	Coal	SASW	SASW	TADW	-	9.74	10.86	13.84	14.48		48.92	4.66	7.21	12.38		24.25
21	5 Axle	1.1.1.22	2	NL019245	Machine	SASW	SASW	SASW	TADW	4.48	8.14	9.04	12.34	7.74	41.74	0.21	2.27	3.46	0.07	6.01
22	2 Axle	1.2	2	UP8CA2269	Oil	SASW	SADW	-	-	5.88	10.92				16.80	0.62	3.21			3.83
23	BUS	1.2	2	JH211782	Passanger	SASW	SADW	-	-	6.48	9.50				15.98	0.91	1.84			2.75
24	5 Axle	1.1.1.22	1	WB152955	Empty	SASW	SASW	SASW	TADW	4.48	4.83		7.48	5.02	21.81	0.21	0.28		0.01	0.50
25	5 Axle	1.1.1.22	1	WB150327	Empty	SASW	SASW	SASW	TADW	5.34	4.94		7.34	6.84	24.46	0.42	0.31		0.04	0.77
26	4 Axle	1.1.22	1	HR556596	Empty	SASW	SASW	TADW	-	4.94	4.62	6.34	5.34		21.24	0.31	0.24	0.36		0.90
27	5 Axle	1.2.222	2	JH118497	Tarcoal	SASW	SADW	TRADW	-	5.84	6.54	17.40	14.50	13.22	57.50	0.60	0.41	15.23		16.25
28	5 Axle	1.1.1.22	1	WB150267	Empty	SASW	SASW	SASW	TADW	5.34	4.54		6.08	5.74	21.70	0.42	0.22		0.02	0.66
29	5 Axle	1.1.1.22	2	JH026270	Coal	SASW	SASW	SASW	TADW	7.21	7.14		16.10	15.64	46.09	1.40	1.35		1.15	3.90
30	5 Axle	1.1.1.22	2	NL014655	Powder	SASW	SASW	SASW	TADW	6.88	8.02	9.78	12.68	15.62	52.98	1.16	2.14	4.74	1.15	9.19
31	4 Axle	1.1.22	1	GJ065270	Empty	SASW	SASW	TADW	-	4.94	4.64	3.96	6.34		19.88	0.31	0.24	0.22		0.77

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
32	2 Axle	1.2	2	WB112055	Pipe	SASW	SADW	-	-	5.06	9.50				14.56	0.34	1.84			2.18
33	5 Axle	1.1.1.22	2	UP752767	Floor	SASW	SASW	SASW	TADW	7.68	7.34		17.42	16.95	49.39	1.80	1.50		1.59	4.90
34	5 Axle	1.1.1.22	2	NL011403	Iron	SASW	SASW	SASW	TADW	4.94	9.74	8.54	8.94	9.40	41.56	0.31	4.66	2.76	0.15	7.88
35	5 Axle	1.1.1.22	1	NL018323	Empty	SASW	SASW	SASW	TADW	4.24	3.74		4.10	3.88	15.96	0.17	0.10		0.00	0.27
36	5 Axle	1.2.222	2	PB138791	Chemecial	SASW	SADW	TRADW	-	7.50	17.34	10.34	12.54	9.56	57.28	1.64	20.42	4.07		26.13
37	3 Axle	1.22	2	KA425540	Cheese	SASW	TADW	-	-	9.74	11.20	10.94			31.88	4.66	4.63			9.29
38	LCV	1.2	2	DL121851	Shoes	SASW	SADW	-	-	2.10	5.94				8.04	0.01	0.28			0.29
39	2 Axle	1.2	1	RJ142037	Empty	SASW	SADW	-	-	3.84	4.34				8.18	0.11	0.08			0.19
40	4 Axle	1.1.22	2	WB578178	Floor	SASW	SASW	TADW	-	7.68	6.26	14.36	13.06		41.36	1.80	0.80	10.88		13.48
41	5 Axle	1.1.1.22	2	UP616770	Floor	SASW	SASW	SASW	TADW	5.48	9.94		15.82	14.56	45.80	0.47	5.06		0.87	6.39
42	BUS	1.2	2	WB315286	Passanger	SASW	SADW	-	-	5.42	7.48				12.90	0.45	0.71			1.15
43	4 Axle	1.1.22	2	JH195850	Coal	SASW	SASW	TADW	-	7.50	10.86	12.94	12.14		43.44	1.64	7.21	7.62		16.46
44	2 Axle	1.2	2	RJ323007	Passanger	SASW	SADW	-	-	5.84	7.34				13.18	0.60	0.66			1.26
45	4 Axle	1.1.22	1	NL014305	Empty	SASW	SASW	TADW	-	4.74	3.96	3.56	3.30		15.56	0.26	0.13	0.04		0.43
46	LCV	1.2	1	WB171375	Empty	SASW	SADW	-	-	3.64	4.21				7.85	0.09	0.07			0.16
47	3 Axle	1.22	2	UP784997	Fruits	SASW	TADW	-	-	4.62	11.84	10.94			27.40	0.24	5.18			5.42
48	6 Axle	1.22.222	2	RJ049202	Oil	SASW	TADW	TRADW	-	4.90	11.22	11.48	11.31	10.82	49.73	0.30	5.11	4.69		10.10
49	5 Axle	1.1.1.22	2	RJ292219	Oil	SASW	SASW	SASW	TADW	4.77	16.54	9.14	15.16	14.24	59.85	0.27	38.78	3.62	0.79	43.46
50	LCV	1.2	2	UP647918	Paper	SASW	SADW	-	-	3.74	10.34				14.08	0.10	2.58			2.68
51	5 Axle	1.1.1.22	2	GJ028899	Milk	SASW	SASW	SASW	TADW	7.04	5.94		11.08	10.34	34.40	1.27	0.65		0.22	2.14
52	3 Axle	1.22	2	TN041584	Cloth	SASW	TADW	-	-	9.17	13.40	12.94			35.51	3.66	9.27			12.93
53	5 Axle	1.1.1.22	2	RJ290032	Oil	SASW	SASW	SASW	TADW	7.33	13.52	12.98	11.76	14.40	60.00	1.50	17.32	14.72	0.83	34.37
54	3 Axle	1.22	2	UP213559	Paper	SASW	TADW	-	-	7.31	12.28	11.74			31.33	1.48	6.41			7.89
55	6 Axle	1.22.222	2	RJ291905	Oil	SASW	TADW	TRADW	-	5.09	11.14	11.29	10.50	10.51	48.53	0.35	4.88	4.00		9.22
56	5 Axle	1.1.1.22	2	JH024885	Coal	SASW	SASW	SASW	TADW	4.94	7.84		18.96	18.34	50.08	0.31	1.96		2.18	4.44
57	LCV	1.2	2	WB230522	Animalfood	SASW	SADW	-	-	4.48	10.80				15.28	0.21	3.07			3.28
58	4 Axle	1.1.22	2	JH100627	Coal	SASW	SASW	TADW	-	7.74	10.86	13.44	12.68		44.72	1.86	7.21	8.96		18.03
59	5 Axle	1.1.1.22	2	RJ143770	Potato	SASW	SASW	SASW	TADW	5.78	7.96	9.74	10.64	11.96	46.08	0.58	2.08	4.66	0.39	7.72
60	5 Axle	1.1.1.22	2	UP323334	Onion	SASW	SASW	SASW	TADW	6.96	8.00		15.60	16.20	46.76	1.22	2.12		1.33	4.66
61	5 Axle	1.1.1.22	2	CG071215	Onion	SASW	SASW	SASW	TADW	6.80	7.20		12.80	16.20	43.00	1.11	1.39		1.33	3.83
62	5 Axle	1.1.1.22	2	UP336876	Hen food	SASW	SASW	SASW	TADW	8.48	9.20		15.80	16.20	49.68	2.68	3.71		1.33	7.72

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
63	4 Axle	1.1.22	2	UP260662	Wood	SASW	SASW	TADW	-	7.00	10.86	14.80	14.20		46.86	1.24	7.21	13.62		22.07
64	5 Axle	1.2.222	2	RJ480803	Machine	SASW	SADW	TRADW	-	5.43	12.50	17.84	16.28	7.95	60.00	0.45	5.52	11.51		17.48
65	4 Axle	1.1.22	1	HR475590	Empty	SASW	SASW	TADW	-	7.20		12.80	11.63		31.63	1.39		6.86		8.25
66	5 Axle	1.1.1.22	2	UP257179	Onion	SASW	SASW	SASW	TADW	8.80	7.20		17.40	16.80	50.20	3.11	1.39		1.53	6.03
67	4 Axle	1.1.22	2	JH195623	Coal	SASW	SASW	TADW	-	7.88	10.86	16.80	17.42		52.96	2.00	7.21	26.40		35.60
68	3 Axle	1.22	2	WB370977	Coal	SASW	TADW	-	-	7.32	14.20	13.88			35.40	1.49	11.97			13.46
69	4 Axle	1.1.22	2	NL016771	Brick	SASW	SASW	TADW	-	8.90	10.86	15.48	16.30		51.54	3.25	7.21	19.64		30.09
70	5 Axle	1.1.1.22	2	JH023587	Coal	SASW	SASW	SASW	TADW	8.78	8.80		18.20	17.40	53.18	3.08	3.11		1.76	7.95
71	4 Axle	1.1.22	2	MH422655	Coal	SASW	SASW	TADW	-	7.88	10.86	14.20	14.96		47.90	2.00	7.21	13.92		23.12
72	BUS	1.2	2	BR023868	Passanger	SASW	SADW	-	-	5.93	7.68				13.61	0.64	0.79			1.43
73	2 Axle	1.2	2	HR386758	Plastic	SASW	SADW	-	-	6.85	9.60				16.45	1.14	1.92			3.06
74	BUS	1.2	2	JH102611	Passanger	SASW	SADW	-	-	5.60	7.35				12.95	0.51	0.66			1.17
75	3 Axle	1.22	2	GJ011815	Parcel	SASW	TADW	-	-	8.20	7.80	9.10			25.10	2.34	1.57			3.91
76	5 Axle	1.1.1.22	2	NL010492	Pulses	SASW	SASW	SASW	TADW	8.32	8.80		15.60	16.20	48.92	2.48	3.11		1.33	6.92
77	4 Axle	1.1.22	1	JH107310	Empty	SASW	SASW	TADW	-	4.40		3.88	4.48		12.76	0.19		0.09		0.29
78	4 Axle	1.1.22	1	NL013192	Empty	SASW	SASW	TADW	-	4.13	6.58	4.00	4.93		19.64	0.15	0.97	0.12		1.24
79	4 Axle	1.1.22	1	NL012086	Empty	SASW	SASW	TADW	-	4.20	6.20	5.08	5.07		20.55	0.16	0.77	0.20		1.13
80	5 Axle	1.1.1.22	1	UP174547	Empty	SASW	SASW	SASW	TADW	3.88	4.92		5.30	4.91	19.01	0.12	0.30		0.01	0.43
81	2 Axle	1.2	2	UK044345	Parcel	SASW	SADW	-	-	6.80	8.82				15.62	1.11	1.37			2.47
82	3 Axle	1.22	2	WB410152	Gas cylinder	SASW	TADW	-	-	4.80	8.00	6.80			19.60	0.28	0.92			1.20
83	5 Axle	1.1.1.22	1	UP174661	Empty	SASW	SASW	SASW	TADW	4.80	7.00		5.97	5.68	23.45	0.28	1.24		0.02	1.54
84	3 Axle	1.22	1	WB372131	Empty	SASW	TADW	-	-	4.68	3.12	4.20			12.00	0.25	0.06			0.30
85	4 Axle	1.1.22	2	JH013142	Coal	SASW	SASW	TADW	-	7.88	10.86	16.20	15.60		50.54	2.00	7.21	19.69		28.89
86	4 Axle	1.1.22	1	WB398833	Empty	SASW	SASW	TADW	-	3.28	2.68	3.54	3.07		12.57	0.06	0.03	0.04		0.12
87	4 Axle	1.1.22	2	JK084489	Apple	SASW	SASW	TADW	-	6.08	10.86	11.88	12.04		40.86	0.71	7.21	6.30		14.22
88	2 Axle	1.2	2	NL01F1641	Parcel	SASW	SADW	-	-	6.24	8.85				15.09	0.79	1.39			2.17
89	5 Axle	1.2.222	2	UP122360	Paper	SASW	SADW	TRADW	-	6.48	18.10		15.88	16.96	57.42	0.91	24.24	4.27		29.43
90	5 Axle	1.1.1.22	2	JH099546	Iron	SASW	SASW	SASW	TADW	5.78	14.20		14.80	16.20	50.98	0.58	21.07		1.33	22.97
91	6 Axle	1.22.222	2	UP224055	Potato	SASW	TADW	TRADW	-	8.00	7.60		19.20	14.48	49.28	2.12	0.06	4.73		6.91
92	BUS	1.2	2	UP650031	Passanger	SASW	SADW	-	-	7.68	7.88				15.56	1.80	0.87			2.67
93	LCV	1.2	1	WB372667	Empty	SASW	SADW	-	-	3.17	3.60				6.77	0.05	0.04			0.09

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
94	4 Axle	1.1.22	2	NL019998	Car	SASW	SASW	TADW	-	5.68	8.68	8.51	8.26		31.13	0.54	2.94	1.52		5.00
95	LCV	1.2	2	WB050034	Parcel	SASW	SADW	-	-	4.48	7.71				12.19	0.21	0.80			1.01
96	4 Axle	1.1.22	1	WB050034	Empty	SASW	SASW	TADW	-	4.48	5.31	5.68	5.02		20.49	0.21	0.41	0.25		0.87
97	BUS	1.2	2	WB379321	Passanger	SASW	SADW	-	-	5.36	8.20				13.56	0.43	1.02			1.45
98	4 Axle	1.1.22	2	HR386080	Car	SASW	SASW	TADW	-	5.60	8.96	7.88	8.30		30.74	0.51	3.34	1.32		5.17
99	4 Axle	1.1.22	2	UP654318	Coal	SASW	SASW	TADW	-	9.20	10.86	17.80	16.80		54.66	3.71	7.21	27.59		38.51
100	LCV	1.2	1	UP192213	Empty	SASW	SADW	-	-	2.48	2.71				5.19	0.02	0.01			0.03
101	LCV	1.2	1	WB516648	Empty	SASW	SADW	-	-	2.10	2.23				4.33	0.01	0.01			0.02
102	5 Axle	1.1.1.22	2	JH021194	Coal	SASW	SASW	SASW	TADW	8.20	8.80		17.72	17.98	52.70	2.34	3.11		2.01	7.46
103	3 Axle	1.22	2	HR554800	Coal	SASW	TADW	-	-	10.52	19.72	16.20			46.44	6.35	32.05			38.39
104	3 Axle	1.22	2	RJ321191	Courier	SASW	TADW	-	-	8.43	7.59	11.22			27.24	2.62	2.41			5.03
105	3 Axle	1.22	2	HR384874	Medicine	SASW	TADW	-	-	7.02	13.83	10.42			31.27	1.26	6.66			7.92
106	3 Axle	1.22	1	WB115835	Empty	SASW	TADW	-	-	4.48	4.23	3.61			12.32	0.21	0.07			0.28
107	2 Axle	1.2	2	RJ236448	Parcel	SASW	SADW	-	-	5.60	8.80				14.40	0.51	1.35			1.86
108	3 Axle	1.22	1	BR014126	Empty	SASW	TADW	-	-	7.60	13.60	14.23			35.43	1.73	11.55			13.28
109	LCV	1.2	1	JH100689	Empty	SASW	SADW	-	-	4.20	3.62				7.82	0.16	0.04			0.20
110	LCV	1.1	1	WB894466	Empty	SASW	SASW	-	-	1.78	1.48				3.26	0.01	0.00			0.01
111	4 Axle	1.1.22	2	PB109235	Potato	SASW	SASW	TADW	-	6.09	10.86	14.92	13.65		45.52	0.71	7.21	12.83		20.75
112	5 Axle	1.1.1.22	2	WB351805	Chemecial	SASW	SASW	SASW	TADW	7.04	8.02	13.29	15.60	16.05	60.00	1.27	2.14	16.19	1.28	20.87
113	2 Axle	1.2	2	HR476158	Parcel	SASW	SADW	-	-	6.18	13.20				19.38	0.76	6.86			7.61
114	4 Axle	1.1.22	2	WB110994	Chemecial	SASW	SASW	TADW	-	6.40	10.86	12.96	13.43		43.65	0.87	7.21	9.34		17.41
115	4 Axle	1.1.22	2	PB032711	Plastic	SASW	SASW	TADW	-	6.85	10.86	17.62	14.96		50.29	1.14	7.21	21.69		30.04
116	LCV	1.2	2	RJ325506	Parcel	SASW	SADW	-	-	3.68	6.42				10.10	0.10	0.38			0.48
117	4 Axle	1.1.22	2	UP720069	Potato	SASW	SASW	TADW	-	7.88	10.86	16.20	15.23		50.17	2.00	7.21	18.79		27.99
118	4 Axle	1.1.22	1	WB676498	Empty	SASW	SASW	TADW	-	4.01		3.62	3.81		11.44	0.13		0.06		0.19
119	6 Axle	1.22.222	2	RJ094044	Chemecial	SASW	TADW	TRADW	-	4.71	10.30	9.76	11.38	12.46	48.62	0.26	3.12	4.69		8.06
120	4 Axle	1.1.22	2	UP178926	Potato	SASW	SASW	TADW	-	4.83	5.60	5.82	6.25		22.50	0.28	0.51	0.41		1.20
121	4 Axle	1.1.22	2	UP610027	Coal	SASW	SASW	TADW	-	10.15	10.86	15.60	16.20		52.81	5.50	7.21	19.69		32.39
122	5 Axle	1.1.1.22	2	UP039816	Potato	SASW	SASW	SASW	TADW	7.92	8.45		16.20	16.96	49.53	2.04	2.64		1.59	6.27
123	3 Axle	1.22	2	UP789117	Parcel	SASW	TADW	-	-	7.20	12.96	13.45			33.61	1.39	9.37			10.76
124	2 Axle	1.2	2	RJ405644	Grocery	SASW	SADW	-	-	5.60	8.97				14.57	0.51	1.46			1.97

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
125	3 Axle	1.22	2	WB236213	Grocery	SASW	TADW	-	-	7.20	13.42	14.36			34.98	1.39	11.46			12.86
126	3 Axle	1.22	2	WB599998	Power	SASW	TADW	-	-	7.88	11.60	10.25			29.73	2.00	4.39			6.39
127	5 Axle	1.2.222	2	RJ071185	Parcel	SASW	SADW	TRADW	-	5.88	12.87		16.20	16.95	51.90	0.62	6.20	4.44		11.25
128	2 Axle	1.2	2	HR553816	Potato	SASW	SADW	-	-	6.80	11.60				18.40	1.11	4.09			5.20
129	5 Axle	1.2.222	2	UP122057	Potato	SASW	SADW	TRADW	-	5.60	12.20		16.80	17.51	52.11	0.51	5.00	5.09		10.61
130	5 Axle	1.2.222	2	UP154386	Grocery	SASW	SADW	TRADW	-	5.60	12.20		15.25	15.96	49.01	0.51	5.00	3.49		9.00
131	2 Axle	1.2	2	WB198553	Grocery	SASW	SADW	-	-	6.80	9.60				16.40	1.11	1.92			3.03
132	4 Axle	1.2.22	1	NL010344	Empty	SASW	SADW	TADW	-	4.40	5.60	5.34	5.88		21.22	0.19	0.22	0.31		0.72
133	3 Axle	1.22	2	JH055695	Grocery	SASW	TADW	-	-	7.20	13.80	13.42			34.42	1.39	10.57			11.96
134	5 Axle	1.1.1.22	2	HR697689	Potato	SASW	SASW	SASW	TADW	5.60	13.42		16.96	18.20	54.18	0.51	16.81		2.11	19.43
135	5 Axle	1.1.1.22	2	HR749968	Potato	SASW	SASW	SASW	TADW	7.23	9.86		18.24	16.43	51.76	1.42	4.90		1.40	7.72
136	4 Axle	1.1.22	2	NL014398	Potato	SASW	SASW	TADW	-	7.80	10.86	15.20	15.88		49.74	1.92	7.21	17.96		27.09
137	3 Axle	1.22	2	HR554329	Grocery	SASW	TADW	-	-	7.38	12.80	13.42			33.60	1.54	9.10			10.64
138	4 Axle	1.1.22	2	RJ146288	Potato	SASW	SASW	TADW	-	7.88	10.86	16.28	16.85		51.87	2.00	7.21	23.19		32.40
139	LCV	1.2	1	WB238550	Empty	SASW	SADW	-	-	3.60	1.92				5.52	0.09	0.00			0.09
140	LCV	1.2	2	WB451877	Parcel	SASW	SADW	-	-	5.60	8.43				14.03	0.51	1.14			1.65
141	3 Axle	1.22	2	WB376256	Chemecial	SASW	TADW	-	-	6.80	10.20	10.01			27.01	1.11	3.21			4.32
142	2 Axle	1.2	1	KA514699	Empty	SASW	SADW	-	-	5.39	7.48				12.87	0.44	0.71			1.14
143	4 Axle	1.1.22	2	HR553683	Fruits	SASW	SASW	TADW	-	4.80	8.20	8.80	8.50		30.30	0.28	2.34	1.72		4.34
144	3 Axle	1.22	2	WB115586	Grocery	SASW	TADW	-	-	7.20	12.96	12.20			32.36	1.39	7.71			9.11
145	4 Axle	1.1.22	1	WB674181	Empty	SASW	SASW	TADW	-	4.38	2.80	3.68	3.30		14.16	0.19	0.03	0.05		0.27
146	4 Axle	1.1.22	1	WB676389	Empty	SASW	SASW	TADW	-	5.04		4.48	4.01		13.53	0.33		0.10		0.43
147	BUS	1.2	2	WB416799	Passanger	SASW	SADW	-	-	5.20	7.20				12.40	0.38	0.61			0.99
148	4 Axle	1.1.22	1	UP174716	Empty	SASW	SASW	TADW	-	4.40	5.60	5.80	5.43		21.23	0.19	0.51	0.31		1.01
149	5 Axle	1.1.1.22	2	NL013719	Tin shade	SASW	SASW	SASW	TADW	5.60	14.63	10.30	10.36	11.36	52.25	0.51	23.74	5.83	0.32	30.40
150	LCV	1.2	2	UP418544	Pipe	SASW	SADW	-	-	5.20	8.48				13.68	0.38	1.17			1.55
151	5 Axle	1.1.1.22	2	NL014744	Machine	SASW	SASW	SASW	TADW	5.60	8.96		12.20	12.90	39.66	0.51	3.34		0.53	4.38
152	5 Axle	1.1.1.22	2	PB052235	Potato	SASW	SASW	SASW	TADW	5.42	12.96		16.20	16.92	51.50	0.45	14.62		1.58	16.64
153	LCV	1.2	2	DL17923	Parts	SASW	SADW	-	-	5.68	7.88				13.56	0.54	0.87			1.41
154	3 Axle	1.22	2	UP625111	Grocery	SASW	TADW	-	-	6.40	9.68	10.20			26.28	0.87	3.01			3.88
155	5 Axle	1.1.1.22	2	PB083711	Potato	SASW	SASW	SASW	TADW	5.68	15.80		14.48	13.60	49.56	0.54	32.29		0.66	33.49

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
156	4 Axle	1.1.22	2	NL013422	Grocery	SASW	SASW	TADW	-	5.60	8.20	8.48	8.70		30.98	0.51	2.34	1.68		4.53
157	2 Axle	1.2	2	UP254486	Parcel	SASW	SADW	-	-	5.28	8.20				13.48	0.40	1.02			1.42
158	2 Axle	1.2	2	RJ143217	Fruniture	SASW	SADW	-	-	5.42	10.38				15.80	0.45	2.62			3.07
159	2 Axle	1.2	2	HR381445	Parcel	SASW	SADW	-	-	5.60	9.80				15.40	0.51	2.08			2.59
160	4 Axle	1.1.22	1	JH105638	Empty	SASW	SASW	TADW	-	4.42	3.98	4.62	4.50		17.52	0.20	0.13	0.13		0.46
161	4 Axle	1.1.22	1	JH100399	Empty	SASW	SASW	TADW	-	4.20	3.28	4.70	4.24		16.42	0.16	0.06	0.12		0.34
162	BUS	1.2	2	WB553159	Passanger	SASW	SADW	-	-	5.68	7.20				12.88	0.54	0.61			1.15
163	2 Axle	1.2	2	HR552028	Machine	SASW	SADW	-	-	5.64	12.10				17.74	0.52	4.84			5.37
164	2 Axle	1.2	2	GJ017883	Parcel	SASW	SADW	-	-	5.80	8.96				14.76	0.59	1.46			2.04
165	2 Axle	1.2	2	HR614310	Parcel	SASW	SADW	-	-	5.60	8.91				14.51	0.51	1.42			1.93
166	3 Axle	1.22	2	WB351615	Coal	SASW	TADW	-	-	7.60	12.80	12.77			33.17	1.73	8.23			9.96
167	LCV	1.1	2	WB058485	Fish food	SASW	SASW	-	-	2.86	4.29				7.15	0.03	0.18			0.21
168	LCV	1.2	2	UP780831	Potato	SASW	SADW	-	-	6.20	9.96				16.16	0.77	2.22			2.99
169	4 Axle	1.1.22	1	UP722958	Empty	SASW	SASW	TADW	-	4.80	5.62	5.58	5.89		21.89	0.28	0.52	0.33		1.13
170	2 Axle	1.2	2	HR389988	Parts	SASW	SADW	-	-	5.20	8.84				14.04	0.38	1.38			1.76
171	4 Axle	1.1.22	1	JH105031	Empty	SASW	SASW	TADW	-	4.42	4.20	4.92	4.70		18.24	0.20	0.16	0.16		0.52
172	2 Axle	1.2	1	WB113759	Empty	SASW	SADW	-	-	4.40	4.80				9.20	0.19	0.12			0.31
173	4 Axle	1.1.22	2	RJ991432	Grocery	SASW	SASW	TADW	-	7.20	10.86	14.20	13.51		45.77	1.39	7.21	11.35		19.95
174	2 Axle	1.2	2	UP215888	Parcel	SASW	SADW	-	-	5.20	7.78				12.98	0.38	0.83			1.21
175	5 Axle	1.1.1.22	2	RJ018721	Marbels	SASW	SASW	SASW	TADW	5.60	12.96		12.20	11.98	42.74	0.51	14.62		0.40	15.52
176	2 Axle	1.2	2	NL014277	Grocery	SASW	SADW	-	-	6.80	11.60				18.40	1.11	4.09			5.20
177	3 Axle	1.22	2	NL016284	Grocery	SASW	TADW	-	-	7.20	12.20	12.91			32.31	1.39	7.65			9.05
178	4 Axle	1.1.22	1	NL010651	Empty	SASW	SASW	TADW	-	3.60	5.60	5.20	5.40		19.80	0.09	0.51	0.24		0.84
179	4 Axle	1.1.22	1	NL010231	Empty	SASW	SASW	TADW	-	4.40	5.40	5.88	6.10		21.78	0.19	0.44	0.40		1.03
180	LCV	1.1	1	JH029304	Empty	SASW	SASW	-	-	0.78	0.82				1.60	0.00	0.00			0.00
181	LCV	1.1	1	WB372956	Empty	SASW	SASW	-	-	1.12	1.20				2.32	0.00	0.00			0.00
182	LCV	1.1	2	JH107111	Cloth	SASW	SASW	-	-	3.10	5.02				8.12	0.05	0.33			0.38
183	3 Axle	1.22	2	WB372956	Coal	SASW	TADW	-	-	7.44	12.02	11.25			30.71	1.59	5.64			7.23
184	5 Axle	1.2.222	2	NL013551	Railways	SASW	SADW	TRADW	-	6.17	15.25	13.32	12.93	12.34	60.00	0.75	12.20	8.15		21.10
185	LCV	1.2	2	BR014785	Gas cylinder	SASW	SADW	-	-	5.60	0.72				6.32	0.51	0.00			0.51
186	LCV	1.2	1	JH096981	Empty	SASW	SADW	-	-	3.48	2.80				6.28	0.08	0.01			0.09

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
187	5 Axle	1.2.222	2	RJ095245	Machine	SASW	SADW	TRADW	-	6.20	19.82		13.65	12.09	51.76	0.77	34.86	1.61		37.24
188	2 Axle	1.2	2	HP126899	Parcel	SASW	SADW	-	-	5.60	8.20				13.80	0.51	1.02			1.53
189	LCV	1.2	2	WB115786	Parts	SASW	SADW	-	-	6.20	11.85				18.05	0.77	4.45			5.22
190	5 Axle	1.1.1.22	2	NH016652	Potato	SASW	SASW	SASW	TADW	5.60	13.80		16.20	17.23	52.83	0.51	18.79		1.70	21.00
191	LCV	1.2	2	BR018020	Maize	SASW	SADW	-	-	4.52	12.10				16.62	0.22	4.84			5.06
192	LCV	1.2	2	DL122561	Machine	SASW	SADW	-	-	3.37	6.01				9.38	0.07	0.29			0.36
193	LCV	1.2	2	WB516351	Grocery	SASW	SADW	-	-	6.20	12.20				18.40	0.77	5.00			5.77
194	3 Axle	1.22	2	UP217345	Medicine	SASW	TADW	-	-	6.70	12.18	11.31			30.19	1.04	5.86			6.91
195	5 Axle	1.1.1.22	2	WB375670	Parts	SASW	SASW	SASW	TADW	8.42	8.00	14.42	14.00	13.60	58.44	2.60	2.12	22.40	0.66	27.79
196	5 Axle	1.1.1.22	2	WB374776	Animal food	SASW	SASW	SASW	TADW	8.00	5.60	14.90	13.60	14.24	56.34	2.12	0.51	25.54	0.79	28.96
197	4 Axle	1.1.22	1	UP125021	Empty	SASW	SASW	TADW	-	4.40	5.60	5.88	5.42		21.30	0.19	0.51	0.31		1.02
198	LCV	1.2	2	MH048921	Parcel	SASW	SADW	-	-	5.60	7.88				13.48	0.51	0.87			1.38
199	4 Axle	1.1.22	2	WB038432	Grocery	SASW	SASW	TADW	-	7.45	10.86	12.80	13.42		44.53	1.60	7.21	9.10		17.90
200	4 Axle	1.1.22	2	JH106217	Onion	SASW	SASW	TADW	-	7.98	8.46	13.88	11.96		42.28	2.10	2.65	8.58		13.34
201	4 Axle	1.1.22	1	HR381039	Empty	SASW	SASW	TADW	-	4.48	5.60	5.92	13.43		29.43	0.21	0.51	2.70		3.42
202	4 Axle	1.1.22	1	UP178391	Empty	SASW	SASW	TADW	-	4.60	5.20	5.48	14.96		30.24	0.23	0.38	3.36		3.97
203	3 Axle	1.22	1	WB230751	Empty	SASW	TADW	-	-	4.40	3.62	3.30			11.32	0.19	0.04			0.24
204	4 Axle	1.1.22	1	BR717973	Empty	SASW	SASW	TADW	-	4.20	4.92	5.78	5.83		20.73	0.16	0.30	0.35		0.81
205	4 Axle	1.1.22	1	KA015173	Empty	SASW	SASW	TADW	-	4.60	5.20	5.67	3.56		19.03	0.23	0.38	0.14		0.75
206	6 Axle	1.22.222	2	RJ140771	Chemecial	SASW	TADW	TRADW	-	4.87	11.28	11.68	8.51	11.28	47.62	0.29	5.35	3.60		9.25
207	2 Axle	1.2	2	RJ387270	Parcel	SASW	SADW	-	-	5.60	7.88				13.48	0.51	0.87			1.38
208	LCV	1.1	2	WB191232	Pasta	SASW	SASW	-	-	3.65	4.68				8.33	0.09	0.25			0.34
209	3 Axle	1.22	2	HR465071	Cloth	SASW	TADW	-	-	9.01	13.82	11.85			34.68	3.41	8.36			11.77
210	4 Axle	1.1.22	1	BR113586	Empty	SASW	SASW	TADW	-	4.80	5.60	5.88	5.62		21.90	0.28	0.51	0.34		1.12
211	2 Axle	1.2	2	RJ142124	Parcel	SASW	SADW	-	-	5.20	8.43				13.63	0.38	1.14			1.52
212	BUS	1.2	2	WB371772	Passanger	SASW	SADW	-	-	5.00	6.48				11.48	0.32	0.40			0.72
213	5 Axle	1.1.1.22	2	WB371313	Coal	SASW	SASW	SASW	TADW	6.74	9.10		18.68	17.62	52.14	1.07	3.55		1.86	6.48
214	5 Axle	1.1.1.22	2	JH108332	Potato	SASW	SASW	SASW	TADW	6.60	16.80		16.80	16.40	56.60	0.98	41.28		1.39	43.65
215	2 Axle	1.2	2	HR570845	Brick	SASW	SADW	-	-	5.42	11.74				17.16	0.45	4.29			4.74
216	2 Axle	1.2	2	RJ112003	Parcel	SASW	SADW	-	-	6.20	7.88				14.08	0.77	0.87			1.64
217	2 Axle	1.2	2	HR552835	Courier	SASW	SADW	-	-	6.20	9.60				15.80	0.77	1.92			2.68

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
218	5 Axle	1.1.1.22	2	BH017938	Coal	SASW	SASW	SASW	TADW	8.62	8.82		17.32	17.80	52.56	2.86	3.14		1.93	7.93
219	2 Axle	1.2	2	HR382913	Par	SASW	SADW	-	-	5.88	8.92				14.80	0.62	1.43			2.05
220	4 Axle	1.1.22	2	PB039611	Coal	SASW	SASW	TADW	-	8.20	8.80	13.96	14.97		45.93	2.34	3.11	13.48		18.93
221	3 Axle	1.22	2	NL012690	Parcel	SASW	TADW	-	-	5.60	10.80	11.42			27.82	0.51	4.69			5.20
222	4 Axle	1.1.22	2	HR387894	Potato	SASW	SASW	TADW	-	7.20	8.20	14.36	13.99		43.75	1.39	2.34	12.44		16.17
223	LCV	1.2	2	WB312495	Grocery	SASW	SADW	-	-	6.00	8.20				14.20	0.67	1.02			1.69
224	4 Axle	1.1.22	1	GJ066773	Empty	SASW	SASW	TADW	-	4.62	5.48	5.92	5.63		21.65	0.24	0.47	0.34		1.05
225	3 Axle	1.22	2	HR694571	Paper	SASW	TADW	-	-	5.60	8.80	9.82			24.22	0.51	2.31			2.82
226	2 Axle	1.2	2	HR384363	Medicine	SASW	SADW	-	-	5.20	9.62				14.82	0.38	1.93			2.31
227	2 Axle	1.2	2	UP210132	Parcel	SASW	SADW	-	-	5.60	8.20				13.80	0.51	1.02			1.53
228	3 Axle	1.22	2	UK080269	Medicine	SASW	TADW	-	-	6.60	12.20	10.90			29.70	0.98	5.48			6.46
229	2 Axle	1.2	2	PB118105	Blanket	SASW	SADW	-	-	5.60	9.60				15.20	0.51	1.92			2.43
230	4 Axle	1.1.22	1	DL012535	Empty	SASW	SASW	TADW	-	4.40	5.20	3.96	3.34		16.90	0.19	0.38	0.05		0.63
231	2 Axle	1.2	2	MH045512	Grocery	SASW	SADW	-	-	5.92	10.20				16.12	0.64	2.44			3.08
232	4 Axle	1.1.22	2	UP503961	Cream	SASW	SASW	TADW	-	8.80	10.86	14.80	14.32		48.78	3.11	7.21	13.84		24.16
233	4 Axle	1.1.22	2	JH108434	Coal	SASW	SASW	TADW	-	8.20	10.86	15.96	15.25		50.27	2.34	7.21	18.26		27.82
234	5 Axle	1.2.222	2	WB392906	Coal	SASW	SADW	TRADW	-	8.06	8.52	16.13	16.75	10.54	60.00	2.19	1.19	13.06		16.44
235	LCV	1.2	1	WB113929	Empty	SASW	SADW	-	-	2.01	2.36				4.37	0.01	0.01			0.02
236	4 Axle	1.1.22	2	JH106368	Rice	SASW	SASW	TADW	-	8.27	10.86	17.42	17.62		54.17	2.42	7.21	29.02		38.65
237	4 Axle	1.1.22	2	WB117248	Grocery	SASW	SASW	TADW	-	6.48	10.86	12.20	12.91		42.45	0.91	7.21	7.65		15.77
238	5 Axle	1.1.1.22	2	JH027071	Rice	SASW	SASW	SASW	TADW	9.88	10.20		17.60	15.60	53.28	4.94	5.61		1.14	11.69
239	2 Axle	1.2	2	UP330935	Medicine	SASW	SADW	-	-	4.20	9.40				13.60	0.16	1.76			1.92
240	2 Axle	1.2	2	UP213840	Bed	SASW	SADW	-	-	6.20	6.48				12.68	0.77	0.40			1.16
241	4 Axle	1.1.22	2	UP327544	Floor	SASW	SASW	TADW	-	9.20	3.08	11.80	13.24		37.32	3.71	0.05	7.57		11.33
242	2 Axle	1.2	2	WB255228	Pulses	SASW	SADW	-	-	6.40	11.60				18.00	0.87	4.09			4.96
243	5 Axle	1.1.1.22	2	UP319418	Sugar	SASW	SASW	SASW	TADW	8.20	8.96		16.32	16.90	50.38	2.34	3.34		1.57	7.25
244	4 Axle	1.1.22	2	JH028310	Coal	SASW	SASW	TADW	-	7.20	10.86	14.02	14.91		46.99	1.39	7.21	13.48		22.08
245	3 Axle	1.22	1	WB371240	Empty	SASW	TADW	-	-	3.68	3.84	4.20			11.72	0.10	0.08			0.18
246	LCV	1.2	1	MH475017	Empty	SASW	SADW	-	-	2.80	2.40				5.20	0.03	0.01			0.04
247	3 Axle	1.22	2	NL017657	Grocery	SASW	TADW	-	-	6.40	12.82	11.04			30.26	0.87	6.24			7.11
248	4 Axle	1.1.22	2	UP627090	Seat	SASW	SASW	TADW	-	6.52	10.86	11.84	11.36		40.58	0.94	7.21	5.58		13.72

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
249	BUS	1.2	2	WB410191	Passanger	SASW	SADW	-	-	4.96	9.60				14.56	0.31	1.92			2.23
250	BUS	1.2	2	JH022318	Passanger	SASW	SADW	-	-	5.40	9.45				14.85	0.44	1.80			2.24
251	3 Axle	1.22	2	HP722528	Wood	SASW	TADW	-	-	9.60	11.60	10.85			32.05	4.40	4.89			9.29
252	3 Axle	1.22	2	WB031433	Coal	SASW	TADW	-	-	7.16	12.40	12.30			31.86	1.36	7.17			8.53
253	LCV	1.2	2	UP477810	Spices	SASW	SADW	-	-	4.26	6.80				11.06	0.17	0.48			0.65
254	4 Axle	1.1.22	2	WB331951	Floor	SASW	SASW	TADW	-	8.01	6.60	14.80	15.20		44.61	2.13	0.98	15.59		18.71
255	5 Axle	1.1.1.22	2	JH107161	Coal	SASW	SASW	SASW	TADW	11.20	7.60		19.02	18.16	55.98	8.15	1.73		2.09	11.98
256	5 Axle	1.1.1.22	2	JH100057	Coal	SASW	SASW	SASW	TADW	10.28	12.81		18.70	18.21	60.00	5.79	13.96		2.12	21.87
257	5 Axle	1.1.1.22	2	UP178390	Wheat	SASW	SASW	SASW	TADW	9.46	8.80		15.98	16.76	51.00	4.15	3.11		1.52	8.78
258	2 Axle	1.2	2	UP788997	Kurkure	SASW	SADW	-	-	5.28	7.60				12.88	0.40	0.75			1.16
259	5 Axle	1.2.222	2	NL016654	Gluecous	SASW	SADW	TRADW	-	5.82	16.20	11.96	12.24	12.20	58.42	0.59	15.56	6.45		22.60
260	LCV	1.2	2	WB153197	Cotton	SASW	SADW	-	-	4.52	6.34				10.86	0.22	0.36			0.58
261	6 Axle	1.22.222	2	UP638037	Floor	SASW	TADW	TRADW	-	7.96	7.63	7.73	11.93	11.70	46.95	2.08	1.07	3.55		6.70
262	3 Axle	1.22	2	HR554802	Courier	SASW	TADW	-	-	5.27	15.40	12.90			33.57	0.40	12.35			12.75
263	LCV	1.2	1	JH056912	Empty	SASW	SADW	-	-	2.10	2.23				4.33	0.01	0.01			0.02
264	LCV	1.2	2	WB415403	Animal food	SASW	SADW	-	-	4.20	7.20				11.40	0.16	0.61			0.77
265	4 Axle	1.1.22	1	WB297373	Empty	SASW	SASW	TADW	-	4.49	14.48	3.60	3.30		25.87	0.21	22.78	0.04		23.03
266	5 Axle	1.2.222	2	PB105116	Potato	SASW	SADW	TRADW	-	7.03	14.83	12.70	13.00	12.45	60.00	1.26	10.91	7.78		19.96
267	5 Axle	1.2.222	2	UP129997	Potato	SASW	SADW	TRADW	-	5.60	12.20		16.42	16.90	51.12	0.51	5.00	4.53		10.04
268	5 Axle	1.2.222	2	UP719615	Potato	SASW	SADW	TRADW	-	8.40	8.96		16.20	13.88	47.44	2.58	1.46	3.01		7.04
269	LCV	1.2	2	UP414626	Grocery	SASW	SADW	-	-	6.42	9.60				16.02	0.88	1.92			2.80
270	2 Axle	1.2	2	PB055488	Passanger	SASW	SADW	-	-	4.82	7.90				12.72	0.28	0.88			1.16
271	3 Axle	1.22	2	NL022471	Paper	SASW	TADW	-	-	4.16	6.42	5.88			16.46	0.16	0.44			0.60
272	5 Axle	1.1.1.22	2	HR469495	Coal	SASW	SASW	SASW	TADW	6.57	9.04		17.02	13.30	45.93	0.97	3.46		0.60	5.03
273	3 Axle	1.22	2	WB37B4047	Paper	SASW	TADW	-	-	5.08	7.82	8.50			21.40	0.35	1.37			1.71
274	4 Axle	1.222	2	WB76C3776	Coal	SASW	TRADW	-	-	5.84	7.88	19.64	19.48		52.84	0.60	17.93			18.53
275	3 Axle	1.22	2	WB451877	Grocery	SASW	TADW	-	-	5.96	6.42	10.60			22.98	0.65	1.62			2.27
276	6 Axle	1.22.222	2	NL662666	Chemecial	SASW	TADW	TRADW	-	4.35	10.48	10.31	10.94	11.99	48.07	0.19	3.59	4.48		8.26
277	2 Axle	1.2	2	UP21A9666	Pipe	SASW	SADW	-	-	4.61	7.90				12.51	0.23	0.88			1.11
278	3 Axle	1.22	2	RJ261596	Grocery	SASW	TADW	-	-	5.44	13.90	12.04			31.38	0.45	8.72			9.17
279	2 Axle	1.2	2	RJ321513	Grocery	SASW	SADW	-	-	4.61	7.90				12.51	0.23	0.88			1.11

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
280	3 Axle	1.22	2	BR26B6209	Coal	SASW	TADW	-	-	5.06	7.82	8.36			21.24	0.34	1.32			1.66
281	5 Axle	1.1.1.22	1	UP152598	Empty	SASW	SASW	SASW	TADW	4.26	3.64		5.48	4.56	17.94	0.17	0.09		0.01	0.27
282	3 Axle	1.22	1	UP509250	Empty	SASW	TADW	-	-	4.02	4.02	4.36			12.40	0.14	0.09			0.23
283	3 Axle	1.22	2	RJ19D6250	Grocery	SASW	TADW	-	-	5.48	13.90	13.58			32.96	0.47	10.98			11.44
284	3 Axle	1.22	2	JH0424162	Grocery	SASW	TADW	-	-	5.84	13.64	13.78			33.26	0.60	10.88			11.48
285	4 Axle	1.1.22	2	RJ040195	Oil	SASW	SASW	TADW	-	9.70	10.86	14.04	11.72		46.32	4.59	7.21	8.48		20.27
286	2 Axle	1.2	2	WB242550	Pipe	SASW	SADW	-	-	4.82	7.98				12.80	0.28	0.92			1.20
287	3 Axle	1.22	2	HR551614	Parcel	SASW	TADW	-	-	4.14	6.24	5.90			16.28	0.15	0.42			0.57
288	4 Axle	1.1.22	2	HR619659	Coal	SASW	SASW	TADW	-	5.84	7.76	19.56	19.24		52.40	0.60	1.88	43.63		46.11
289	4 Axle	1.2.22	1	UP652552	Empty	SASW	SADW	TADW	-	5.68	6.24	4.68	4.42		21.02	0.54	0.34	0.13		1.01
290	4 Axle	1.2.22	1	UP65D6669	Empty	SASW	SADW	TADW	-	5.04	7.70	4.90	4.64		22.28	0.33	0.79	0.16		1.29
291	3 Axle	1.22	1	WB29T1235	Empty	SASW	TADW	-	-	5.08	4.43	3.96			13.47	0.35	0.10			0.44
292	4 Axle	1.1.22	2	UP736713	Mahendi	SASW	SASW	TADW	-	6.76	7.24	14.64	15.68		44.32	1.08	1.42	16.27		18.77
293	2 Axle	1.2	2	RJ326001	Pipe	SASW	SADW	-	-	4.62	7.84				12.46	0.24	0.85			1.09
294	3 Axle	1.22	2	DL166372	Parcel	SASW	TADW	-	-	3.88	6.44	9.96			20.28	0.12	1.39			1.51
295	4 Axle	1.1.22	1	BR658356	Empty	SASW	SASW	TADW	-	4.10		3.68	4.02		11.80	0.15		0.07		0.21
296	3 Axle	1.22	1	WB304520	Empty	SASW	TADW	-	-	4.48	4.24	3.70			12.42	0.21	0.08			0.29
297	6 Axle	1.22.222	2	RJ022214	Chemecial	SASW	TADW	TRADW	-	4.60	10.12	10.54	11.12	12.34	48.73	0.23	3.51	4.91		8.66
298	4 Axle	1.2.22	2	GJ02834	Banana	SASW	SADW	TADW	-	6.85	10.86	17.70	15.92		51.33	1.14	3.14	24.59		28.88
299	3 Axle	1.22	1	RJ047320	Empty	SASW	TADW	-	-	4.48	4.24	3.68			12.40	0.21	0.08			0.28
300	LCV	1.2	1	WB418489	Empty	SASW	SADW	-	-	2.90	3.74				6.64	0.04	0.04			0.08
301	4 Axle	1.1.22	2	JH0249435	Potato	SASW	SASW	TADW	-	5.64	8.82	10.96	12.42		37.84	0.52	3.14	5.75		9.41
302	2 Axle	1.2	1	NLO1A0391	Empty	SASW	SADW	-	-	4.20	3.78				7.98	0.16	0.05			0.21
303	4 Axle	1.1.22	1	JH118972	Empty	SASW	SASW	TADW	-	4.02	3.90	4.16	3.78		15.86	0.14	0.12	0.08		0.33
304	3 Axle	1.22	2	JH168863	Oils	SASW	TADW	-	-	9.98	10.98	13.84			34.80	5.14	7.31			12.45
305	4 Axle	1.1.22	1	NL017999	Empty	SASW	SASW	TADW	-	4.06	3.48	3.56	5.30		16.40	0.14	0.08	0.12		0.34
306	5 Axle	1.1.1.22	2	WB373621	Grocery	SASW	SASW	SASW	TADW	4.16	6.22	3.48	7.96	5.30	27.12	0.16	0.78	0.08	0.02	1.02
307	3 Axle	1.22	2	WB737215	Coal	SASW	TADW	-	-	6.37	9.04	12.24			27.65	0.85	3.95			4.80
308	5 Axle	1.2.222	2	JH026072	Coal	SASW	SADW	TRADW	-	4.23	6.66	17.14	17.01	14.97	60.00	0.17	0.44	21.39		22.00
309	4 Axle	1.1.22	2	WB379815	Coal	SASW	SASW	TADW	-	8.04	10.86	15.90	14.04		48.84	2.17	7.21	15.47		24.84
310	4 Axle	1.1.22	1	JH1920	Empty	SASW	SASW	TADW	-	4.42	5.88	3.64	5.10		19.04	0.20	0.62	0.11		0.93

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
311	5 Axle	1.2.222	1	BR013648	Empty	SASW	SADW	TRADW	-	4.82	2.46	4.30	3.92	3.78	19.28	0.28	0.01	0.08		0.36
312	4 Axle	1.1.22	2	JH016437	Tales	SASW	SASW	TADW	-	5.98	11.12	12.42	11.78		41.30	0.66	7.92	6.60		15.19
313	2 Axle	1.2	1	NL019446	Empty	SASW	SADW	-	-	4.50	4.84				9.34	0.21	0.12			0.34
314	5 Axle	1.1.1.22	1	WB152956	Empty	SASW	SASW	SASW	TADW	6.37	9.04		17.14	13.48	46.03	0.85	3.46		0.64	4.95
315	3 Axle	1.22	2	WB374607	Coal	SASW	TADW	-	-	7.44	12.10	11.52			31.06	1.59	5.99			7.58
316	5 Axle	1.2.222	2	RJ095245	Machine	SASW	SADW	TRADW	-	6.24	2.04		13.86	12.08	34.22	0.79	0.00	1.66		2.45
317	LCV	1.2	2	DL122662	Machine	SASW	SADW	-	-	3.37	6.10				9.47	0.07	0.31			0.38
318	4 Axle	1.1.22	2	JH106219	Tin shade	SASW	SASW	TADW	-	6.90	10.86	2.68	13.84		34.28	1.17	7.21	1.43		9.82
319	2 Axle	1.2	2	RJ367270	Parcel	SASW	SADW	-	-	5.60	7.90				13.50	0.51	0.88			1.39
320	3 Axle	1.22	2	HR465971	Cloth	SASW	TADW	-	-	9.22	13.90	12.64			35.76	3.74	9.55			13.30
321	4 Axle	1.222	1	UP178371	Empty	SASW	TRADW	-	-	4.62	5.30	5.52	5.64		21.08	0.24	0.27			0.51
322	3 Axle	1.22	1	WB230752	Empty	SASW	TADW	-	-	4.70	3.84	3.68			12.22	0.25	0.06			0.31
323	4 Axle	1.2.22	1	KA015173	Empty	SASW	SADW	TADW	-	5.02	5.48	5.64	5.90		22.04	0.33	0.20	0.34		0.87
324	5 Axle	1.1.1.22	2	KA017822	Coal	SASW	SASW	SASW	TADW	8.42	8.84		17.44	17.84	52.54	2.60	3.16		1.95	7.72
325	3 Axle	1.22	2	NL012680	Parcel	SASW	TADW	-	-	5.64	10.68	11.22			27.54	0.52	4.43			4.95
326	4 Axle	1.2.22	1	GJ066772	Empty	SASW	SADW	TADW	-	4.62	5.24	5.92	5.48		21.26	0.24	0.17	0.33		0.73
327	3 Axle	1.22	2	HR694638	Cotton	SASW	TADW	-	-	5.84	9.11	9.84			24.79	0.60	2.48			3.09
328	2 Axle	1.2	2	GJ384250	Parcel	SASW	SADW	-	-	5.70	8.24				13.94	0.55	1.04			1.59
329	5 Axle	1.2.222	2	WB392906	Coal	SASW	SADW	TRADW	-	7.71	7.89	15.67	15.95	12.78	60.00	1.83	0.88	14.28		16.99
330	5 Axle	1.2.222	2	UP31B1179	Coal	SASW	SADW	TRADW	-	7.67	8.16	15.05	15.92	13.21	60.00	1.79	1.00	13.99		16.78
331	5 Axle	1.1.1.22	1	WB114020	Empty	SASW	SASW	SASW	TADW	2.01	2.32		3.78	3.52	11.63	0.01	0.02		0.00	0.03
332	LCV	1.22	2	HR384366	Cartoon	SASW	TADW	-	-	15.68	9.04				24.72	31.32	0.13			31.45
333	3 Axle	1.22	2	UP211050	Parcel	SASW	TADW	-	-	5.68	8.42	6.80			20.90	0.54	1.03			1.57
334	2 Axle	1.2	2	NL010391	Passanger	SASW	SADW	-	-	5.92	9.84				15.76	0.64	2.12			2.75
335	2 Axle	1.2	2	WB31A4269	Coal	SASW	SADW	-	-	7.88	9.96				17.84	2.00	2.22			4.22
336	4 Axle	1.1.22	2	NL015071	Passanger	SASW	SASW	TADW	-	7.42	0.96	13.12	13.96		35.46	1.57	0.00	10.35		11.92
337	2 Axle	1.2	1	WB170436	Empty	SASW	SADW	-	-	2.40	1.92				4.32	0.02	0.00			0.02
338	2 Axle	1.2	2	WB237162	Passanger	SASW	SADW	-	-	7.20	9.22				16.42	1.39	1.63			3.02
339	BUS	1.2	2	NL01A1772	Fan	SASW	SADW	-	-	4.86	7.90				12.76	0.29	0.88			1.17
340	2 Axle	1.2	2	PB118410	Coal	SASW	SADW	-	-	7.32	14.24				21.56	1.49	9.29			10.78
341	3 Axle	1.22	2	WB118939	Coal	SASW	TADW	-	-	8.04	10.68	14.50			33.22	2.17	7.74			9.91

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
342	4 Axle	1.1.22	2	WB118939	Onion	SASW	SASW	TADW	-	9.04	7.58	11.78	17.70		46.10	3.46	1.71	14.54		19.71
343	5 Axle	1.1.1.22	2	WB736738	Parcel	SASW	SASW	SASW	TADW	7.42	5.96	13.10	11.44	9.78	47.70	1.57	0.65	15.26	0.18	17.66
344	4 Axle	1.1.22	1	BR119031	Empty	SASW	SASW	TADW	-	4.50	4.28	3.62	3.56		15.96	0.21	0.17	0.05		0.44
345	3 Axle	1.22	2	PB709958	Onion	SASW	TADW	-	-	9.04	7.58	8.64			25.26	3.46	1.33			4.79
346	4 Axle	1.1.22	2	UP218543	Potato	SASW	SASW	TADW	-	7.90	10.86	16.58	15.50		50.84	2.02	7.21	20.39		29.61
347	2 Axle	1.2	2	UP701045	Parcel	SASW	SADW	-	-	3.68	6.64				10.32	0.10	0.44			0.53
348	4 Axle	1.1.22	1	PB129614	Empty	SASW	SASW	TADW	-	4.02		3.88	4.02		11.92	0.14		0.07		0.21
349	3 Axle	1.22	2	UK081338	Parcel	SASW	TADW	-	-	7.22	12.84	13.42			33.48	1.41	9.15			10.56
350	2 Axle	1.2	2	WB116662	Parcel	SASW	SADW	-	-	6.84	9.88				16.72	1.13	2.15			3.29
351	4 Axle	1.1.22	2	JH100990	Parcel	SASW	SASW	TADW	-	6.48	10.86	12.42	13.04		42.80	0.91	7.21	8.09		16.21
352	3 Axle	1.22	1	WB375061	Empty	SASW	TADW	-	-	4.84	3.96	4.42			13.22	0.28	0.09			0.38
353	5 Axle	1.1.1.22	2	WB613481	Onion	SASW	SASW	SASW	TADW	7.08	8.24		15.88	16.52	47.72	1.30	2.39		1.43	5.12
354	4 Axle	1.1.22	2	NL011645	Wood	SASW	SASW	TADW	-	7.02	10.86	14.96	14.28		47.12	1.26	7.21	14.07		22.54
355	3 Axle	1.22	2	UP2370	Coal	SASW	TADW	-	-	7.34	14.42	14.04			35.80	1.50	12.63			14.13
356	4 Axle	1.1.22	2	UK044346	Coal	SASW	SASW	TADW	-	7.90	10.86	14.24	15.08		48.08	2.02	7.21	14.23		23.45
357	2 Axle	1.2	2	NL012087	Fan	SASW	SADW	-	-	6.84	9.70				16.54	1.13	2.00			3.13
358	4 Axle	1.1.22	2	JH013250	Drink	SASW	SASW	TADW	-	8.90	10.86	9.74	15.50		45.00	3.25	7.21	7.81		18.27
359	2 Axle	1.2	2	JK084820	Passanger	SASW	SADW	-	-	5.92	9.70				15.62	0.64	2.00			2.64
360	5 Axle	1.1.1.22	2	WB410153	Onion	SASW	SASW	SASW	TADW	8.82	7.30		17.64	17.02	50.78	3.14	1.47		1.62	6.22
361	2 Axle	1.2	2	GJ22T2520	Parcel	SASW	SADW	-	-	6.82	8.64				15.46	1.12	1.26			2.38
362	6 Axle	1.22.222	2	NL012826	Potato	SASW	TADW	TRADW	-	4.39	10.04	11.24	11.24	11.64	48.56	0.19	3.95	4.98		9.12
363	3 Axle	1.22	2	RJ409570	Parcel	SASW	TADW	-	-	8.04	7.64	9.38			25.06	2.17	1.62			3.78
364	2 Axle	1.2	2	WB372856	Parcel	SASW	SADW	-	-	7.04	9.64				16.68	1.27	1.95			3.22
365	3 Axle	1.22	2	JH145618	Gas cylinder	SASW	TADW	-	-	4.82	9.04	6.82			20.68	0.28	1.22			1.50
366	4 Axle	1.2.22	1	UP811318	Empty	SASW	SADW	TADW	-	4.42	5.68	5.96	5.44		21.50	0.20	0.24	0.33		0.76
367	4 Axle	1.1.22	2	RJ146617	Potato	SASW	SASW	TADW	-	7.90	10.86	19.28	15.84		53.88	2.02	7.21	29.29		38.51
368	4 Axle	1.1.22	2	BR0A3567	Vegetables	SASW	SASW	TADW	-	4.84	8.22	8.84	8.50		30.40	0.28	2.37	1.74		4.39
369	2 Axle	1.2	1	WB912668	Empty	SASW	SADW	-	-	5.39	7.48				12.87	0.44	0.71			1.14
370	4 Axle	1.2.22	1	UP329877	Empty	SASW	SADW	TADW	-	4.42	5.68	5.90	5.44		21.44	0.20	0.24	0.32		0.75
371	3 Axle	1.22	2	UK068831	Onion	SASW	TADW	-	-	6.82	10.24	11.96			29.02	1.12	4.68			5.80
372	5 Axle	1.2.222	2	UP17A4660	Chemecial	SASW	SADW	TRADW	-	5.62	14.63	10.30	6.96	1.04	38.55	0.52	10.35	0.41		11.28

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
373	4 Axle	1.1.22	2	RJ1G0464	Potato	SASW	SASW	TADW	-	4.82	4.48	14.44	13.70		37.44	0.28	0.21	12.07		12.56
374	2 Axle	1.2	2	WB307001	Passanger	SASW	SADW	-	-	7.24	19.50				26.74	1.42	32.66			34.08
375	4 Axle	1.1.22	1	HR743442	Empty	SASW	SASW	TADW	-	4.51	2.22	3.90	2.84		13.47	0.21	0.01	0.04		0.27
376	3 Axle	1.22	2	WB655708	Chemecial	SASW	TADW	-	-	7.02	10.44	10.38			27.84	1.26	3.62			4.88
377	2 Axle	1.2	1	PB084534	Empty	SASW	SADW	-	-	2.40	1.96				4.36	0.02	0.00			0.02
378	4 Axle	1.2.22	1	UP709373	Empty	SASW	SADW	TADW	-	4.84	5.70	5.44	5.90		21.88	0.28	0.24	0.32		0.84
379	5 Axle	1.1.1.22	2	WB372225	Potato	SASW	SASW	SASW	TADW	5.62	13.84		12.50	11.92	43.88	0.52	19.01		0.39	19.92
380	3 Axle	1.22	2	WB452355	Coal	SASW	TADW	-	-	7.70	13.64	12.88			34.22	1.82	9.52			11.34
381	4 Axle	1.1.22	2	UP424399	Grocery	SASW	SASW	TADW	-	7.30	10.86	14.50	13.64		46.30	1.47	7.21	12.07		20.75
382	2 Axle	1.2	2	RJ32GD3802	Coal	SASW	SADW	-	-	5.10	8.90				14.00	0.35	1.42			1.77
383	5 Axle	1.1.1.22	2	HR745751	Grocery	SASW	SASW	SASW	TADW	8.02	5.44	14.88	13.70	14.44	56.48	2.14	0.45	25.40	0.84	28.84
384	2 Axle	1.2	2	HR635483	Potato	SASW	SADW	-	-	4.98	6.48				11.46	0.32	0.40			0.72
385	4 Axle	1.1.22	2	JH024924	Gitti	SASW	SASW	TADW	-	6.64	7.56	10.68	13.44		38.32	1.01	1.69	6.52		9.22
386	2 Axle	1.2	2	DL140001	Parcel	SASW	SADW	-	-	3.44	4.84				8.28	0.07	0.12			0.20
387	4 Axle	1.1.22	2	UP392284	Coal	SASW	SASW	TADW	-	8.42	10.94	10.42	13.44		43.22	2.60	7.42	6.24		16.27
388	5 Axle	1.1.1.22	1	JH116265	Empty	SASW	SASW	SASW	TADW	4.02	2.24	4.84	3.78	3.52	18.40	0.14	0.01	0.28	0.00	0.44
389	4 Axle	1.1.22	2	JH629070	Soil	SASW	SASW	TADW	-	10.14	11.96	12.24	15.88		50.22	5.48	10.60	12.04		28.12
390	4 Axle	1.1.22	1	NL012443	Empty	SASW	SASW	TADW	-	4.62	4.20	3.78	3.30		15.90	0.24	0.16	0.05		0.45
391	5 Axle	1.2.222	2	RJ47G6223	Animal food	SASW	SADW	TRADW	-	6.02	17.62		15.28	17.04	55.96	0.68	21.77	4.01		26.46
392	LCV	1.2	2	HR551479	Passanger	SASW	SADW	-	-	3.47	5.14				8.61	0.08	0.16			0.23
393	5 Axle	1.1.1.22	2	JH029158	Coal	SASW	SASW	SASW	TADW	6.76	8.24	14.00	15.88	15.11	60.00	1.08	2.39	19.93	1.00	24.41
394	LCV	1.1	1	JH106646	Empty	SASW	SASW	-	-	3.00	1.80				4.80	0.04	0.01			0.05
395	2 Axle	1.2	2	WB378698	Cloth	SASW	SADW	-	-	3.68	5.44				9.12	0.10	0.20			0.29
396	4 Axle	1.1.22	2	PB3B3451	Potato	SASW	SASW	TADW	-	10.84	10.86	16.88	18.44		57.02	7.15	7.21	29.96		44.32
397	5 Axle	1.1.1.22	2	UP63A4849	Onion	SASW	SASW	SASW	TADW	9.24	8.64		17.68	18.04	53.60	3.78	2.89		2.04	8.70
398	5 Axle	1.2.222	2	WB392531	Rice	SASW	SADW	TRADW	-	6.64	7.64	17.24	14.84	12.98	59.34	1.01	0.77	15.15		16.93
399	4 Axle	1.1.22	2	UP0198485	Soil	SASW	SASW	TADW	-	6.42	3.88	16.50	14.92		41.72	0.88	0.12	18.76		19.76
400	5 Axle	1.1.1.22	1	NL01A3477	Empty	SASW	SASW	SASW	TADW	4.42	5.48	3.78	3.52	3.52	20.72	0.20	0.47	0.11	0.00	0.77
401	5 Axle	1.1.1.22	2	JH059663	Engine	SASW	SASW	SASW	TADW	6.02	13.44		16.50	14.68	50.64	0.68	16.91		0.89	18.48
402	2 Axle	1.2	1	WB114555	Empty	SASW	SADW	-	-	2.94	3.24				6.18	0.04	0.02			0.06
403	4 Axle	1.1.22	1	NL0129172	Empty	SASW	SASW	TADW	-	4.02	6.62	6.42	6.42		23.48	0.14	1.00	0.52		1.65

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
404	3 Axle	1.22	2	BR039229	Animal food	SASW	TADW	-	-	6.22	7.22	8.46			21.90	0.78	1.16			1.94
405	4 Axle	1.1.22	2	NL018569	Paper	SASW	SASW	TADW	-	8.42	10.86	13.64	11.62		44.54	2.60	7.21	7.84		17.65
406	4 Axle	1.1.22	2	NL017246	Car	SASW	SASW	TADW	-	4.80	6.49	9.08	10.76		31.13	0.28	0.92	2.98		4.18
407	3 Axle	1.22	2	N/A	Parcel	SASW	TADW	-	-	6.80	8.20	15.10			30.10	1.11	5.67			6.78
408	2 Axle	1.2	2	WB650612	Parcel	SASW	SADW	-	-	4.40	5.02				9.42	0.19	0.14			0.34
409	5 Axle	1.2.222	2	RJ14716	Potato	SASW	SADW	TRADW	-	7.62	7.20	6.63	14.65	14.30	50.40	1.75	0.61	5.89		8.24
410	4 Axle	1.2.22	1	NL010232	Empty	SASW	SADW	TADW	-	2.54	2.36	3.56	3.08		11.54	0.02	0.01	0.04		0.07
411	4 Axle	1.2.22	1	JH109791	Empty	SASW	SADW	TADW	-	4.80	3.96	3.56	3.30		15.62	0.28	0.06	0.04		0.37
412	LCV	1.2	2	HR550136	Courier	SASW	SADW	-	-	5.08	7.80				12.88	0.35	0.84			1.18
413	LCV	1.2	2	WB615856	Rice	SASW	SADW	-	-	9.60	10.96				20.56	4.40	3.26			7.66
414	2 Axle	1.2	2	RJ101310	Parcel	SASW	SADW	-	-	6.20	11.48				17.68	0.77	3.92			4.69
415	LCV	1.1	1	UP325926	Empty	SASW	SASW	-	-	4.43	5.80				10.23	0.20	0.59			0.79
416	LCV	1.1	1	UP723475	Empty	SASW	SASW	-	-	6.20	6.00				12.20	0.77	0.67			1.44
417	LCV	1.1	2	WB372560	Chilly	SASW	SASW	-	-	3.56	5.40				8.96	0.08	0.44			0.52
418	3 Axle	1.22	1	WB116351	Empty	SASW	TADW	-	-	4.80	3.78	4.20			12.78	0.28	0.08			0.35
419	LCV	1.2	2	MP094634	Biscuit	SASW	SADW	-	-	3.96	3.72				7.68	0.13	0.04			0.17
420	BUS	1.2	2	WB378191	Passanger	SASW	SADW	-	-	4.80	8.96				13.76	0.28	1.46			1.73
421	3 Axle	1.22	1	WB115264	Empty	SASW	TADW	-	-	5.88	3.96	3.06			12.90	0.62	0.05			0.67
422	5 Axle	1.2.222	2	JH026649	Soail	SASW	SADW	TRADW	-	5.49	11.60	12.40	11.05	11.68	52.22	0.47	4.09	5.60		10.16
423	5 Axle	1.2.222	2	GJ148665	Plastic	SASW	SADW	TRADW	-	5.64	12.28	11.69	15.41	14.99	60.00	0.52	5.13	11.52		17.18
424	LCV	1.2	1	WB232208	Empty	SASW	SADW	-	-	7.20	8.20				15.40	1.39	1.02			2.41
425	5 Axle	1.2.222	2	WB117186	Butter	SASW	SADW	TRADW	-	4.40	6.00	5.42	4.90	6.38	27.10	0.19	0.29	0.29		0.77
426	3 Axle	1.22	1	WB117186	Empty	SASW	TADW	-	-	4.82	5.00	3.56			13.38	0.28	0.10			0.38
427	4 Axle	1.2.22	2	WB252206	Soil	SASW	SADW	TADW	-	5.78	7.52	9.98	10.46		33.74	0.58	0.72	3.36		4.66
428	4 Axle	1.2.22	2	CG143557	Animal food	SASW	SADW	TADW	-	3.60	3.20	3.08	7.74		17.62	0.09	0.02	0.26		0.37
429	4 Axle	1.2.22	2	GJ153357	Soil	SASW	SADW	TADW	-	7.78	8.76	10.76	12.64		39.94	1.90	1.33	5.77		9.00
430	4 Axle	1.2.22	1	NL019478	Empty	SASW	SADW	TADW	-	7.20	8.78	12.96	14.38		43.32	1.39	1.34	10.76		13.49
431	4 Axle	1.2.22	1	NL013614	Empty	SASW	SADW	TADW	-	6.48	4.80	5.48	5.80		22.56	0.91	0.12	0.31		1.35
432	4 Axle	1.2.22	2	NL012810	Soail	SASW	SADW	TADW	-	4.00	4.80	5.60	5.43		19.83	0.13	0.12	0.28		0.54
433	4 Axle	1.2.22	1	JH197742	Empty	SASW	SADW	TADW	-	3.91	4.92	5.42	5.88		20.13	0.12	0.13	0.31		0.57
434	5 Axle	1.2.222	1	UP703639	Empty	SASW	SADW	TRADW	-	6.80	3.08	3.56	3.30	3.56	20.30	1.11	0.02	0.04		1.17

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
435	4 Axle	1.2.22	2	NL012750	Wood	SASW	SADW	TADW	-	6.60	15.12	14.62	14.42		50.76	0.98	11.81	13.69		26.48
436	2 Axle	1.2	2	UP720056	Plywood	SASW	SADW	-	-	5.08	7.60				12.68	0.35	0.75			1.10
437	LCV	1.2	2	HR550274	Chemecial	SASW	SADW	-	-	4.80	6.49				11.29	0.28	0.40			0.68
438	5 Axle	1.2.222	2	GJ022590	Butter	SASW	SADW	TRADW	-	6.80	8.20	15.10	11.60	11.96	53.66	1.11	1.02	8.21		10.34
439	4 Axle	1.2.22	1	UP177979	Empty	SASW	SADW	TADW	-	4.40	5.02	4.68	4.20		18.30	0.19	0.14	0.12		0.46
440	5 Axle	1.2.222	2	WB117800	Floor	SASW	SADW	TRADW	-	7.62	7.20	6.63	14.65	14.30	50.40	1.75	0.61	5.89		8.24
441	LCV	1.1	2	WB158285	Flipcart	SASW	SASW	-	-	2.54	2.36				4.90	0.02	0.02			0.04
442	6 Axle	1.22.222	2	RJ421690	Oil	SASW	TADW	TRADW	-	3.96	10.93	10.93	5.61	14.69	46.11	0.13	4.39	3.49		8.01
443	2 Axle	1.2	2	HR398002	Parcel	SASW	SADW	-	-	5.08	7.80				12.88	0.35	0.84			1.18
444	4 Axle	1.2.22	2	NL013589	Power	SASW	SADW	TADW	-	9.60	10.78	12.64	14.51		47.53	4.40	3.05	10.46		17.91
445	LCV	1.2	1	HR559012	Empty	SASW	SADW	-	-	6.20	7.48				13.68	0.77	0.71			1.47
446	4 Axle	1.2.22	1	UP652299	Empty	SASW	SADW	TADW	-	4.43	5.80	4.84	5.75		20.82	0.20	0.26	0.24		0.70
447	4 Axle	1.2.22	2	WB675162	Road dust	SASW	SADW	TADW	-	6.20	6.00	14.20	11.36		37.76	0.77	0.29	8.22		9.27
448	5 Axle	1.2.222	1	WB191517	Empty	SASW	SADW	TRADW	-	3.56	5.40		4.60	3.81	17.37	0.08	0.19	0.02		0.29
449	4 Axle	1.2.22	1	WB194605	Empty	SASW	SADW	TADW	-	4.80	3.78	4.20	3.81		16.59	0.28	0.05	0.08		0.40
450	5 Axle	1.2.222	1	RJ021737	Empty	SASW	SADW	TRADW	-	3.96	3.72	3.62	3.76	3.56	18.62	0.13	0.04	0.05		0.22
451	5 Axle	1.2.222	2	PB134481	Potato	SASW	SADW	TRADW	-	4.80	12.96		16.96	17.78	52.50	0.28	6.37	5.35		12.00
452	4 Axle	1.1.22	2	OD042918	Soail	SASW	SASW	TADW	-	5.88	10.86	13.44	12.85		43.03	0.62	7.21	9.20		17.02
453	6 Axle	1.22.222	2	PB138089	Oil	SASW	TADW	TRADW	-	4.87	10.28	10.99	12.69	10.35	49.19	0.29	3.94	4.93		9.17
454	6 Axle	1.22.222	2	RJ299216	Gitti	SASW	TADW	TRADW	-	5.05	10.99	10.46	10.80	10.78	48.09	0.34	4.08	3.87		8.29
455	5 Axle	1.2.222	2	JH024539	Soail	SASW	SADW	TRADW	-	7.20	8.20		16.42	14.68	46.50	1.39	1.02	3.44		5.85
456	5 Axle	1.2.222	1	UP147224	Empty	SASW	SADW	TRADW	-	4.40	6.00	5.42	4.90	6.38	27.10	0.19	0.29	0.29		0.77
457	5 Axle	1.2.222	1	UP174662	Empty	SASW	SADW	TRADW	-	4.82	5.00		5.20	5.78	20.80	0.28	0.14	0.05		0.47
458	LCV	1.1	2	WB417732	Milk	SASW	SASW	-	-	1.38	1.74				3.12	0.00	0.00			0.01
459	6 Axle	1.22.222	1	NL010035	Empty	SASW	TADW	TRADW	-	3.60	3.20	3.08	14.32	2.96	27.16	0.09	0.03	0.63		0.75
460	LCV	1.1	2	JH100436	Milk	SASW	SASW	-	-	1.63	2.10				3.73	0.00	0.01			0.01
461	4 Axle	1.2.22	2	RJ093640	Grocery	SASW	SADW	TADW	-	7.20	10.86	12.96	14.38		45.40	1.39	3.14	10.76		15.29
462	4 Axle	1.2.22	1	UP832576	Empty	SASW	SADW	TADW	-	6.48	4.80	5.48	5.80		22.56	0.91	0.12	0.31		1.35
463	4 Axle	1.2.22	1	UP175075	Empty	SASW	SADW	TADW	-	4.00	4.80	5.60	5.43		19.83	0.13	0.12	0.28		0.54
464	4 Axle	1.2.22	1	NL010510	Empty	SASW	SADW	TADW	-	3.91	4.92	5.42	5.88		20.13	0.12	0.13	0.31		0.57
465	4 Axle	1.2.22	2	WB237624	Grocery	SASW	SADW	TADW	-	6.80	10.86	12.96	14.33		44.95	1.11	3.14	10.68		14.93

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
466	6 Axle	1.22.222	2	NL015201	Marbles	SASW	TADW	TRADW	-	5.20	11.22	10.85	10.63	11.19	49.09	0.38	4.57	4.19		9.13
467	4 Axle	1.1.22	2	OD090119	Soil	SASW	SASW	TADW	-	7.80	4.36	15.60	14.20		41.96	1.92	0.19	15.18		17.29
468	4 Axle	1.1.22	1	BR046106	Empty	SASW	SASW	TADW	-	4.40	5.20	5.48	5.24		20.32	0.19	0.38	0.25		0.83
469	4 Axle	1.1.22	2	MH012663	Generator	SASW	SASW	TADW	-	5.02	9.00	7.60	6.80		28.42	0.33	3.40	0.83		4.56
470	4 Axle	1.1.22	2	JH016907	Soil	SASW	SASW	TADW	-	9.04	10.86	15.80	13.63		49.33	3.46	7.21	14.44		25.11
471	5 Axle	1.1.1.22	2	HR483714	Chairs	SASW	SASW	SASW	TADW	4.48	12.20		10.32	10.67	37.67	0.21	11.48		0.25	11.94
472	5 Axle	1.1.1.22	1	UP755254	Empty	SASW	SASW	SASW	TADW	4.40	4.92		5.60	5.25	20.17	0.19	0.30		0.01	0.51
473	3 Axle	1.22	2	RJ141634	Courier	SASW	TADW	-	-	7.20	8.63	8.64			24.47	1.39	1.71			3.10
474	6 Axle	1.22.222	2	RJ066641	Machine	SASW	TADW	TRADW	-	6.56	11.88	11.37	9.38	8.10	47.29	0.96	5.63	2.55		9.13
475	4 Axle	1.1.22	2	UP771886	Potato	SASW	SASW	TADW	-	7.80	10.86	16.80	16.42		51.88	1.92	7.21	23.44		32.57
476	3 Axle	1.22	2	HR550185	Courier	SASW	TADW	-	-	4.80	5.80	5.08			15.68	0.28	0.27			0.54
477	4 Axle	1.1.22	2	OD099118	Soil	SASW	SASW	TADW	-	7.20	10.86	16.20	13.40		47.66	1.39	7.21	14.78		23.38
478	LCV	1.2	2	UP820758	Grocery	SASW	SADW	-	-	6.00	12.80				18.80	0.67	6.06			6.73
479	3 Axle	1.22	1	NL011123	Empty	SASW	TADW	-	-	3.68	4.22	3.93			11.83	0.10	0.08			0.18
480	5 Axle	1.1.1.22	2	BR025001	Cake	SASW	SASW	SASW	TADW	9.00	7.20		18.20	15.60	50.00	3.40	1.39		1.14	5.93
481	4 Axle	1.2.22	1	UP656539	Empty	SASW	SADW	TADW	-	4.42	4.80	4.68	5.20		19.10	0.20	0.12	0.18		0.50
482	4 Axle	1.1.22	2	NL014364	Car	SASW	SASW	TADW	-	4.80	7.88	7.60	7.20		27.48	0.28	2.00	0.92		3.20
483	LCV	1.2	2	UP787245	Machine	SASW	SADW	-	-	5.22	7.40				12.62	0.38	0.68			1.06
484	4 Axle	1.1.22	1	NL013611	Empty	SASW	SASW	TADW	-	4.40	4.80	4.72	5.03		18.95	0.19	0.28	0.17		0.64
485	LCV	1.2	2	WB115225	Banana	SASW	SADW	-	-	5.22	9.48				14.70	0.38	1.82			2.21
486	3 Axle	1.22	2	JH108153	Machine	SASW	TADW	-	-	7.62	8.92	7.92			24.46	1.75	1.55			3.30
487	4 Axle	1.1.22	2	JK029772	Fruits	SASW	SASW	TADW	-	9.34	10.86	14.48	12.84		47.52	3.94	7.21	10.72		21.87
488	4 Axle	1.1.22	2	RJ110790	Grocery	SASW	SASW	TADW	-	5.60	10.86	12.80	14.20		43.46	0.51	7.21	10.23		17.95
489	5 Axle	1.1.1.22	1	JH103745	Empty	SASW	SASW	SASW	TADW	4.42	5.60		4.48	5.60	20.10	0.20	0.51		0.02	0.73
490	LCV	1.2	2	WB238356	Parcel	SASW	SADW	-	-	1.80	2.30				4.10	0.01	0.01			0.01
491	4 Axle	1.1.22	1	UP630471	Empty	SASW	SASW	TADW	-	4.60	5.20	5.88	6.24		21.92	0.23	0.38	0.42		1.03
492	4 Axle	1.1.22	2	WB116135	Grocery	SASW	SASW	TADW	-	6.80	10.86	12.20	12.96		42.82	1.11	7.21	7.71		16.03
493	4 Axle	1.1.22	2	OD091144	Soil	SASW	SASW	TADW	-	7.88	10.86	16.20	16.80		51.74	2.00	7.21	22.83		32.03
494	4 Axle	1.1.22	2	OD090470	Soil	SASW	SASW	TADW	-	7.20	10.86	16.20	16.80		51.06	1.39	7.21	22.83		31.43
495	LCV	1.2	2	DL143710	Parcel	SASW	SADW	-	-	1.82	2.30				4.12	0.01	0.01			0.01
496	2 Axle	1.2	2	NL013714	Grocery	SASW	SADW	-	-	6.48	10.32				16.80	0.91	2.56			3.48

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
497	2 Axle	1.2	2	GJ166001	Chips	SASW	SADW	-	-	6.20	7.60				13.80	0.77	0.75			1.52
498	6 Axle	1.22.222	2	RJ024267	Oils	SASW	TADW	TRADW	-	4.40	10.06	10.55	11.25	11.63	47.90	0.19	3.47	4.59		8.26
499	5 Axle	1.1.1.22	2	JH020676	Coal	SASW	SASW	SASW	TADW	7.88	8.92		17.80	18.48	53.08	2.00	3.28		2.25	7.52
500	4 Axle	1.1.22	2	KA258125	Parcel	SASW	SASW	TADW	-	7.20	7.88	13.88	14.20		43.16	1.39	2.00	11.97		15.36
501	4 Axle	1.1.22	1	UP708952	Empty	SASW	SASW	TADW	-	4.40	5.20	5.48	5.60		20.68	0.19	0.38	0.29		0.86
502	LCV	1.2	2	HR475253	Chips	SASW	SADW	-	-	5.60	7.88				13.48	0.51	0.87			1.38
503	4 Axle	1.1.22	2	JH020992	Soil	SASW	SASW	TADW	-	8.20	10.86	16.20	15.80		51.06	2.34	7.21	20.19		29.74
504	3 Axle	1.22	2	WB398969	Gas cylinder	SASW	TADW	-	-	6.48	8.20	8.96			23.64	0.91	1.67			2.58
505	4 Axle	1.1.22	2	JH015431	Floor	SASW	SASW	TADW	-	8.20	8.96	15.88	16.20		49.24	2.34	3.34	20.39		26.07
506	6 Axle	1.22.222	1	RJ261116	Empty	SASW	TADW	TRADW	-	4.42	3.36	3.88	14.32	4.20	30.18	0.20	0.05	0.93		1.18
507	6 Axle	1.22.222	2	RJ025906	Marbles	SASW	TADW	TRADW	-	3.81	10.15	10.62	11.35	11.48	47.41	0.11	3.58	4.60		8.30
508	4 Axle	1.1.22	1	BR013374	Empty	SASW	SASW	TADW	-	4.20	4.80	4.62	4.48		18.10	0.16	0.28	0.13		0.57
509	5 Axle	1.1.1.22	2	GJ079235	Road dust	SASW	SASW	SASW	TADW	5.88	14.20	13.80	13.42	11.20	58.50	0.62	21.07	18.79	0.30	40.78
510	3 Axle	1.22	2	WB235042	Paper	SASW	TADW	-	-	7.20	13.80	17.47			38.47	1.39	18.41			19.80
511	3 Axle	1.22	2	WB410295	Floor	SASW	TADW	-	-	7.80	13.80	14.96			36.56	1.92	13.17			15.09
512	5 Axle	1.1.1.22	2	RJ140269	Onion	SASW	SASW	SASW	TADW	7.73	8.48	11.56	10.98	15.88	54.63	1.85	2.68	9.25	1.22	15.01
513	6 Axle	1.22.222	2	RJ019183	Pipe	SASW	TADW	TRADW	-	5.29	10.58	11.30	12.07	10.47	49.70	0.41	4.41	4.82		9.63
514	6 Axle	1.22.222	2	RJ027112	Marbles	SASW	TADW	TRADW	-	4.57	11.33	11.22	10.58	10.53	48.23	0.23	4.97	4.01		9.21
515	3 Axle	1.22	2	WB398772	Gas cylinder	SASW	TADW	-	-	5.60	8.80	9.96			24.36	0.51	2.38			2.89
516	3 Axle	1.22	2	NL015939	Grocery	SASW	TADW	-	-	7.20	13.82	13.96			34.98	1.39	11.46			12.86
517	5 Axle	1.2.222	2	PB109235	Potato	SASW	SADW	TRADW	-	8.20	8.92	11.78	12.68	16.96	58.54	2.34	1.43	10.82		14.59
518	5 Axle	1.1.1.22	1	RJ292355	Empty	SASW	SASW	SASW	TADW	3.60	3.24		3.78	3.40	14.02	0.09	0.06		0.00	0.15
519	4 Axle	1.1.22	1	UP651067	Empty	SASW	SASW	TADW	-	4.40	4.80	3.78	4.20		17.18	0.19	0.28	0.08		0.55
520	4 Axle	1.1.22	2	HR747325	Potato	SASW	SASW	TADW	-	8.53	9.05	12.90	15.20		45.68	2.74	3.48	12.00		18.22
521	2 Axle	1.2	2	HR468385	Parcel	SASW	SADW	-	-	5.60	7.62				13.22	0.51	0.76			1.27
522	2 Axle	1.2	2	WB030562	Courier	SASW	SADW	-	-	5.20	8.20				13.40	0.38	1.02			1.40
523	3 Axle	1.22	2	NL016606	Vegetables	SASW	TADW	-	-	7.80	12.90	13.45			34.15	1.92	9.28			11.20
524	5 Axle	1.1.1.22	2	RJ016221	Marbles	SASW	SASW	SASW	TADW	5.60	13.80		18.20	18.96	56.56	0.51	18.79		2.49	21.79
525	3 Axle	1.22	2	HR559651	Grocery	SASW	TADW	-	-	7.20	9.88	10.20			27.28	1.39	3.13			4.52
526	3 Axle	1.22	2	HR470965	Grocery	SASW	TADW	-	-	7.02	12.20	12.88			32.10	1.26	7.62			8.87
527	4 Axle	1.1.22	2	NH014470	Car	SASW	SASW	TADW	-	5.60	8.48	8.63	8.48		31.19	0.51	2.68	1.65		4.84

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
528	4 Axle	1.1.22	2	NL011260	Car	SASW	SASW	TADW	-	5.30	8.80	8.60	8.28		30.98	0.41	3.11	1.56		5.08
529	3 Axle	1.22	2	HR554208	Grocery	SASW	TADW	-	-	6.80	13.42	12.88			33.10	1.11	9.21			10.32
530	LCV	1.2	2	HR474463	Courier	SASW	SADW	-	-	4.80	7.88				12.68	0.28	0.87			1.15
531	5 Axle	1.1.1.22	2	HR582102	Potato	SASW	SASW	SASW	TADW	8.80	9.36		16.20	16.80	51.16	3.11	3.98		1.53	8.62
532	3 Axle	1.22	2	RJ096984	Parcel	SASW	TADW	-	-	6.20	10.20	10.96			27.36	0.77	3.86			4.62
533	3 Axle	1.22	1	WB113584	Empty	SASW	TADW	-	-	4.20	3.68	4.20			12.08	0.16	0.07			0.24
534	3 Axle	1.22	2	HR739294	Potato	SASW	TADW	-	-	7.20	13.40	14.38			34.98	1.39	11.46			12.86
535	4 Axle	1.1.22	2	JH020433	Soil	SASW	SASW	TADW	-	8.42	8.90	16.20	16.81		50.33	2.60	3.25	22.86		28.71
536	4 Axle	1.1.22	2	WB372932	Soil	SASW	SASW	TADW	-	8.96	10.86	18.40	17.60		55.82	3.34	7.21	32.33		42.88
537	4 Axle	1.1.22	1	JH109431	Empty	SASW	SASW	TADW	-	4.60	3.60	4.96	4.64		17.80	0.23	0.09	0.16		0.48
538	3 Axle	1.22	2	HR551618	Grocery	SASW	TADW	-	-	6.92	13.80	12.97			33.69	1.19	9.89			11.07
539	LCV	1.2	1	WB117301	Empty	SASW	SADW	-	-	1.60	1.88				3.48	0.00	0.00			0.01
540	4 Axle	1.1.22	2	JH199024	Soilo	SASW	SASW	TADW	-	7.88	10.86	16.80	17.60		53.14	2.00	7.21	26.96		36.16
541	4 Axle	1.1.22	2	JH028553	Soil	SASW	SASW	TADW	-	8.40	9.20	18.02	17.62		53.24	2.58	3.71	31.06		37.35
542	2 Axle	1.2	1	WB374396	Empty	SASW	SADW	-	-	3.60	3.34				6.94	0.09	0.03			0.12
543	3 Axle	1.22	1	NL015946	Empty	SASW	TADW	-	-	7.88	12.80	13.40			34.08	2.00	9.07			11.07
544	3 Axle	1.22	2	HR746108	Grocery	SASW	TADW	-	-	7.20	10.80	11.83			29.83	1.39	5.05			6.44
545	4 Axle	1.1.22	2	PB139899	Pipe	SASW	SASW	TADW	-	7.88	10.86	13.20	14.42		46.36	2.00	7.21	11.20		20.41
546	LCV	1.2	2	UP329117	Onion	SASW	SADW	-	-	5.60	9.78				15.38	0.51	2.07			2.58
547	3 Axle	1.22	2	WB192160	Fan	SASW	TADW	-	-	6.80	12.20	10.82			29.82	1.11	5.41			6.51
548	3 Axle	1.22	2	WB196763	Grocery	SASW	TADW	-	-	7.20	11.80	10.88			29.88	1.39	5.09			6.49
549	3 Axle	1.22	2	NL019417	Grocery	SASW	TADW	-	-	7.20	14.80	14.32			36.32	1.39	13.84			15.23
550	5 Axle	1.1.1.22	2	WB111231	Grocery	SASW	SASW	SASW	TADW	3.60	3.20		3.48	2.90	13.18	0.09	0.05		0.00	0.14
551	LCV	1.2	2	OD019106	Chilly	SASW	SADW	-	-	4.40	4.82				9.22	0.19	0.12			0.32
552	LCV	1.2	2	HR387705	Amazon	SASW	SADW	-	-	5.60	8.82				14.42	0.51	1.37			1.88
553	3 Axle	1.22	2	WB232199	Grocery	SASW	TADW	-	-	6.92	11.88	12.20			31.00	1.19	6.47			7.66
554	4 Axle	1.1.22	2	NL011566	Grocery	SASW	SASW	TADW	-	5.60	8.20	8.90	8.63		31.33	0.51	2.34	1.82		4.67
555	4 Axle	1.1.22	1	BR112826	Empty	SASW	SASW	TADW	-	4.80	4.40	5.02	5.48		19.70	0.28	0.19	0.23		0.70
556	3 Axle	1.22	2	WB172544	Grocery	SASW	TADW	-	-	7.20	12.20	11.80			31.20	1.39	6.39			7.78
557	3 Axle	1.22	2	GJ122021	Parcel	SASW	TADW	-	-	5.60	8.80	9.83			24.23	0.51	2.32			2.83
558	LCV	1.2	2	WB250523	Kurkure	SASW	SADW	-	-	4.40	5.28				9.68	0.19	0.18			0.37

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
559	4 Axle	1.1.22	2	HR637677	Bats	SASW	SASW	TADW	-	7.80	10.86	12.10	12.96		43.72	1.92	7.21	7.59		16.72
560	4 Axle	1.1.22	2	WB111481	Acid	SASW	SASW	TADW	-	5.20	10.86	12.80	13.43		42.29	0.38	7.21	9.11		16.70
561	2 Axle	1.2	2	HR464423	Courier	SASW	SADW	-	-	5.20	7.88				13.08	0.38	0.87			1.25
562	4 Axle	1.1.22	2	OD343845	Iron	SASW	SASW	TADW	-	8.20	9.60	14.80	15.60		48.20	2.34	4.40	16.44		23.18
563	2 Axle	1.2	1	WB290487	Empty	SASW	SADW	-	-	3.68	4.30				7.98	0.10	0.08			0.17
564	4 Axle	1.1.22	2	OD091533	Iron	SASW	SASW	TADW	-	8.72	9.68	12.20	13.48		44.08	3.00	4.55	8.37		15.92
565	5 Axle	1.1.1.22	1	WB371243	Empty	SASW	SASW	SASW	TADW	4.48	3.20	3.56	3.60	3.34	18.18	0.21	0.05	0.08	0.00	0.35
566	4 Axle	1.1.22	2	WB112915	Paper	SASW	SASW	TADW	-	8.48	10.86	17.60	17.22		54.16	2.68	7.21	28.30		38.18
567	6 Axle	1.22.222	2	RJ025956	Paper	SASW	TADW	TRADW	-	4.82	7.35	10.68	11.74	12.88	47.47	0.28	2.03	5.71		8.02
568	5 Axle	1.1.1.22	2	NL014673	Powder	SASW	SASW	SASW	TADW	8.96	9.62		19.60	2.03	40.21	3.34	4.44		0.00	7.78
569	5 Axle	1.1.1.22	2	UP394953	Gram	SASW	SASW	SASW	TADW	7.88	8.42		15.88	15.76	47.94	2.00	2.60		1.19	5.79
570	5 Axle	1.1.1.22	2	UP635088	Powder	SASW	SASW	SASW	TADW	7.88	8.62		17.20	17.45	51.15	2.00	2.86		1.78	6.64
571	LCV	1.2	2	JH111798	Flaxboard	SASW	SADW	-	-	0.98	1.34				2.32	0.00	0.00			0.00
572	4 Axle	1.1.22	1	NL010829	Empty	SASW	SASW	TADW	-	4.40	4.62	4.90	5.38		19.30	0.19	0.24	0.21		0.65
573	3 Axle	1.22	2	WB232062	Maize	SASW	TADW	-	-	6.80	12.80	12.31			31.91	1.11	7.65			8.76
574	6 Axle	1.22.222	2	RJ064209	Oils	SASW	TADW	TRADW	-	4.61	10.04	12.66	9.66	11.69	48.66	0.23	5.11	4.92		10.26
575	4 Axle	1.1.22	2	HR559160	Grocery	SASW	SASW	TADW	-	7.80	10.86	12.00	12.82		43.48	1.92	7.21	7.31		16.43
576	2 Axle	1.2	2	NL014616	Tata	SASW	SADW	-	-	5.80	8.96				14.76	0.59	1.46			2.04
577	4 Axle	1.1.22	2	UP207863	Chemecial	SASW	SASW	TADW	-	7.60	10.86	14.80	15.28		48.54	1.73	7.21	15.76		24.70
578	5 Axle	1.1.1.22	2	WB372339	Wheat	SASW	SASW	SASW	TADW	6.80	8.20		13.40	14.20	42.60	1.11	2.34		0.78	4.23
579	3 Axle	1.22	2	WB196096	Cup	SASW	TADW	-	-	6.42	9.60	10.32			26.34	0.88	3.03			3.91
580	2 Axle	1.2	2	NL012722	Parcel	SASW	SADW	-	-	5.20	7.88				13.08	0.38	0.87			1.25
581	LCV	1.2	2	JH103242	Rice	SASW	SADW	-	-	5.88	9.60				15.48	0.62	1.92			2.54
582	4 Axle	1.1.22	2	JH027257	Rice	SASW	SASW	TADW	-	6.80	10.86	12.20	12.96		42.82	1.11	7.21	7.71		16.03
583	4 Axle	1.1.22	2	JH029057	Oil	SASW	SASW	TADW	-	6.62	10.86	12.80	13.42		43.70	1.00	7.21	9.10		17.30
584	2 Axle	1.2	2	RJ146358	Pipe	SASW	SADW	-	-	6.20	8.96				15.16	0.77	1.46			2.22
585	3 Axle	1.22	2	RJ148783	Cup	SASW	TADW	-	-	6.20	8.20	8.60			23.00	0.77	1.53			2.30
586	LCV	1.2	1	WB199045	Empty	SASW	SADW	-	-	1.80	1.42				3.22	0.01	0.00			0.01
587	4 Axle	1.1.22	2	HR381802	Rice	SASW	SASW	TADW	-	6.80	10.86	13.42	12.96		44.04	1.11	7.21	9.32		17.64
588	6 Axle	1.22.222	2	RJ091339	Document	SASW	TADW	TRADW	-	4.57	10.96	10.78	12.09	12.45	50.85	0.23	4.30	5.72		10.25
589	4 Axle	1.1.22	2	WB379680	Soil	SASW	SASW	TADW	-	8.80	10.86	17.60	16.20		53.46	3.11	7.21	25.12		35.44

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
590	5 Axle	1.1.1.22	2	GJ122030	Chemecial	SASW	SASW	SASW	TADW	7.60	8.20		16.20	15.88	47.88	1.73	2.34		1.22	5.30
591	4 Axle	1.1.22	2	JK139995	Potato	SASW	SASW	TADW	-	7.80	10.86	13.80	14.20		46.66	1.92	7.21	11.83		20.96
592	3 Axle	1.22	2	RJ090320	Powder	SASW	TADW	-	-	6.80	12.42	11.68			30.90	1.11	6.49			7.60
593	6 Axle	1.22.222	2	RJ027099	Powder	SASW	TADW	TRADW	-	4.47	10.21	11.49	11.55	10.96	48.67	0.21	4.27	4.91		9.38
594	LCV	1.2	2	UP651591	Paper	SASW	SADW	-	-	5.60	8.82				14.42	0.51	1.37			1.88
595	3 Axle	1.22	2	NL017656	Grocery	SASW	TADW	-	-	7.39	13.83	13.02			34.24	1.55	10.00			11.55
596	5 Axle	1.1.1.22	2	HR557362	Food	SASW	SASW	SASW	TADW	7.02	12.22		13.18	13.66	46.08	1.26	11.55		0.67	13.48
597	LCV	1.2	2	UP537497	Food	SASW	SADW	-	-	3.82	7.58				11.40	0.11	0.75			0.86
598	5 Axle	1.1.1.22	2	PB227099	Powder	SASW	SASW	SASW	TADW	7.02	12.22		13.03	13.18	45.45	1.26	11.55		0.58	13.39
599	6 Axle	1.22.222	2	RJ067883	Oils	SASW	TADW	TRADW	-	4.24	10.38	11.08	11.27	11.67	48.64	0.17	4.08	4.93		9.18
600	5 Axle	1.1.1.22	2	JH022411	Bags	SASW	SASW	SASW	TADW	7.02	9.82		15.18	14.08	46.10	1.26	4.82		0.76	6.83
601	BUS	1.2	2	WB376711	Passanger	SASW	SADW	-	-	2.83	7.38				10.21	0.03	0.67			0.70
602	2 Axle	1.2	2	UP812285	Powder	SASW	SADW	-	-	6.42	12.63				19.05	0.88	5.75			6.63
603	LCV	1.2	1	WB317090	Empty	SASW	SADW	-	-	1.60	1.92				3.52	0.00	0.00			0.01
604	4 Axle	1.1.22	2	NL016693	Car	SASW	SASW	TADW	-	5.60	8.20	8.68	8.50		30.98	0.51	2.34	1.68		4.53
605	5 Axle	1.1.1.22	1	NL016341	Empty	SASW	SASW	SASW	TADW	3.60	4.20		3.20	3.46	14.46	0.09	0.16		0.00	0.25
606	3 Axle	1.22	2	NL018618	Grocery	SASW	TADW	-	-	6.80	12.90	13.96			33.66	1.11	10.02			11.13
607	4 Axle	1.1.22	2	JK027177	Grocery	SASW	SASW	TADW	-	6.80	10.86	12.20	12.96		42.82	1.11	7.21	7.71		16.03
608	4 Axle	1.1.22	2	UP755335	Fruits	SASW	SASW	TADW	-	4.40	4.80	4.62	4.42		18.24	0.19	0.28	0.13		0.60
609	5 Axle	1.1.1.22	1	RJ197259	Empty	SASW	SASW	SASW	TADW	6.96	8.20		13.76	14.82	43.74	1.22	2.34		0.93	4.49
610	5 Axle	1.1.1.22	2	RJ193223	Milk	SASW	SASW	SASW	TADW	7.60	8.80		16.20	16.83	49.43	1.73	3.11		1.54	6.38
611	2 Axle	1.2	2	HR383213	Powder	SASW	SADW	-	-	5.60	8.20				13.80	0.51	1.02			1.53
612	2 Axle	1.2	2	DL141170	Parcel	SASW	SADW	-	-	1.60	1.96				3.56	0.00	0.00			0.01
613	4 Axle	1.1.22	2	WB673184	Parcel	SASW	SASW	TADW	-	7.04	10.86	12.42	12.68		43.00	1.27	7.21	7.64		16.12
614	5 Axle	1.2.222	2	WB37D7676	Fruits	SASW	SADW	TRADW	-	6.11	3.71	17.68	16.27	16.23	60.00	0.72	0.04	23.30		24.07
615	3 Axle	1.22	1	NL01A8345	Empty	SASW	TADW	-	-	3.82	4.42	3.12			11.36	0.11	0.06			0.17
616	4 Axle	1.1.22	1	NL403057	Empty	SASW	SASW	TADW	-	4.42	4.84	4.70	4.44		18.40	0.20	0.28	0.13		0.62
617	6 Axle	1.22.222	2	RJ068927	Fruits	SASW	TADW	TRADW	-	5.37	10.45	10.95	11.27	11.08	49.11	0.43	4.04	4.52		8.98
618	3 Axle	1.22	1	JH206857	Empty	SASW	TADW	-	-	4.70	3.96	4.02			12.68	0.25	0.08			0.33
619	2 Axle	1.2	2	HR606744	Paper	SASW	SADW	-	-	5.84	9.10				14.94	0.60	1.55			2.15
620	3 Axle	1.22	2	HP128471	Rice	SASW	TADW	-	-	6.82	10.96	13.74			31.52	1.12	7.17			8.29

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
621	4 Axle	1.1.22	1	KA014445	Empty	SASW	SASW	TADW	-	4.82	5.44	5.64	6.36		22.26	0.28	0.45	0.40		1.13
622	2 Axle	1.2	2	RJ323081	Parcel	SASW	SADW	-	-	3.83	7.50				11.33	0.11	0.71			0.83
623	4 Axle	1.1.22	2	PB119938	Potato	SASW	SASW	TADW	-	7.88	10.86	13.84	14.48		47.06	2.00	7.21	12.38		21.59
624	3 Axle	1.22	2	NL227441	Grocery	SASW	TADW	-	-	7.28	13.84	13.34			34.46	1.46	10.51			11.96
625	3 Axle	1.22	2	PB211483	Grocery	SASW	TADW	-	-	7.58	13.84	13.24			34.66	1.71	10.35			12.06
626	3 Axle	1.22	2	HR315148	Grocery	SASW	TADW	-	-	7.84	7.44	8.42			23.70	1.96	1.22			3.18
627	3 Axle	1.22	2	NL012756	Parcel	SASW	TADW	-	-	8.22	7.64	9.24			25.10	2.37	1.56			3.93
628	3 Axle	1.22	2	HP151057	Parcel	SASW	TADW	-	-	8.44	7.90	9.44			25.78	2.63	1.74			4.37
629	4 Axle	1.1.22	2	UP771891	Soil	SASW	SASW	TADW	-	7.84	10.86	16.42	15.08		50.20	1.96	7.21	18.95		28.12
630	4 Axle	1.1.22	1	WB374756	Empty	SASW	SASW	TADW	-	2.08	2.44	3.56	3.30		11.38	0.01	0.02	0.04		0.07
631	3 Axle	1.22	2	HR381956	Gas cylinder	SASW	TADW	-	-	4.62	11.88	10.64			27.14	0.24	4.95			5.19
632	5 Axle	1.1.1.22	2	AP165238	Charcoal	SASW	SASW	SASW	TADW	8.04	9.04		17.48	14.64	49.20	2.17	3.46		0.88	6.51
633	4 Axle	1.1.22	1	NL012538	Empty	SASW	SASW	TADW	-	4.24	6.48	5.08	4.90		20.70	0.17	0.91	0.19		1.27
634	3 Axle	1.22	2	UP219081	Gas cylinder	SASW	TADW	-	-	4.90	8.10	7.04			20.04	0.30	1.01			1.31
635	LCV	1.2	2	WB112554	Cloth	SASW	SADW	-	-	5.62	7.22				12.84	0.52	0.61			1.13
636	2 Axle	1.2	2	HR387720	Parcel	SASW	SADW	-	-	6.90	8.84				15.74	1.17	1.38			2.55
637	6 Axle	1.22.222	2	RJ198501	Oils	SASW	TADW	TRADW	-	5.52	9.21	9.65	13.13	11.10	48.61	0.48	2.43	4.84		7.76
638	2 Axle	1.2	1	JH056378	Empty	SASW	SADW	-	-	3.03	3.42				6.45	0.04	0.03			0.07
639	4 Axle	1.1.22	1	NL624592	Empty	SASW	SASW	TADW	-	4.02		6.12	6.44		16.58	0.14		0.48		0.61
640	4 Axle	1.1.22	2	UP873162	Wheat	SASW	SASW	TADW	-	6.68	9.84	9.30	8.64		34.46	1.03	4.86	1.99		7.88
641	3 Axle	1.22	1	WB116513	Empty	SASW	TADW	-	-	4.42	4.02	3.64			12.08	0.20	0.07			0.26
642	2 Axle	1.2	2	UP788278	Passanger	SASW	SADW	-	-	4.22	10.12				14.34	0.16	2.37			2.53
643	2 Axle	1.2	2	GJ067668	Pea	SASW	SADW	-	-	5.23	7.42				12.65	0.39	0.68			1.07
644	4 Axle	1.1.22	2	UP692972	Soil	SASW	SASW	TADW	-	7.26	4.88	13.30	9.64		35.08	1.44	0.29	5.33		7.06
645	5 Axle	1.1.1.22	2	UP659513	Oils	SASW	SASW	SASW	TADW	7.10	7.66		14.28	13.44	42.48	1.32	1.78		0.63	3.73
646	2 Axle	1.2	2	HR386223	Passanger	SASW	SADW	-	-	4.24	8.10				12.34	0.17	0.97			1.14
647	2 Axle	1.2	2	UP813232	Marbles	SASW	SADW	-	-	4.82	5.44				10.26	0.28	0.20			0.48
648	5 Axle	1.1.1.22	2	BR013233	Potato	SASW	SASW	SASW	TADW	7.64	13.24		16.68	13.70	51.26	1.77	15.92		0.68	18.37
649	4 Axle	1.1.22	2	WB236854	Wheat	SASW	SASW	TADW	-	7.64	10.86	9.64	9.04		37.18	1.77	7.21	2.34		11.32
650	4 Axle	1.1.22	1	NL0A1432	Empty	SASW	SASW	TADW	-	4.04	6.24	4.82	4.62		19.72	0.14	0.79	0.15		1.08
651	4 Axle	1.1.22	2	WB172219	Wheat	SASW	SASW	TADW	-	6.08	10.86	16.50	16.32		49.76	0.71	7.21	22.34		30.25

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
652	4 Axle	1.1.22	1	NL613623	Empty	SASW	SASW	TADW	-	4.30	6.04	5.22	4.68		20.24	0.18	0.69	0.18		1.05
653	4 Axle	1.1.22	1	UP179993	Empty	SASW	SASW	TADW	-	4.34	6.08	5.44	4.42		20.28	0.18	0.71	0.18		1.07
654	4 Axle	1.1.22	1	HR385620	Empty	SASW	SASW	TADW	-	5.50	6.10	5.64	4.90		22.14	0.47	0.72	0.24		1.43
655	4 Axle	1.1.22	2	WB659294	Rice	SASW	SASW	TADW	-	8.24	7.88	10.68	16.04		42.84	2.39	2.00	9.81		14.20
656	3 Axle	1.22	2	WB190012	Chemecial	SASW	TADW	-	-	7.24	9.48	9.24			25.96	1.42	2.36			3.79
657	5 Axle	1.1.1.22	2	JH026518	Grocery	SASW	SASW	SASW	TADW	5.60	6.20		16.40	14.82	43.02	0.51	0.77		0.93	2.20
658	4 Axle	1.1.22	2	UP651390	Potato	SASW	SASW	TADW	-	7.68	10.86	16.00	16.28		50.82	1.80	7.21	20.90		29.91
659	LCV	1.2	1	WB379237	Empty	SASW	SADW	-	-	1.88	1.60				3.48	0.01	0.00			0.01
660	4 Axle	1.1.22	2	BR023445	Floor	SASW	SASW	TADW	-	10.84	10.86	15.60	16.80		54.10	7.15	7.21	21.21		35.58
661	3 Axle	1.22	1	WB328343	Empty	SASW	TADW	-	-	4.40	3.60	3.89			11.89	0.19	0.06			0.25
662	LCV	1.2	1	DL121133	Empty	SASW	SADW	-	-	1.40	1.68				3.08	0.00	0.00			0.00
663	LCV	1.2	1	JH023016	Empty	SASW	SADW	-	-	1.88	2.36				4.24	0.01	0.01			0.01
664	LCV	1.2	2	WB430411	Cotton	SASW	SADW	-	-	2.48	5.20				7.68	0.02	0.17			0.18
665	LCV	1.2	2	RJ142556	Cloth	SASW	SADW	-	-	4.80	9.12				13.92	0.28	1.56			1.84
666	4 Axle	1.1.22	2	UP384163	Coal	SASW	SASW	TADW	-	10.32	10.86	16.80	14.20		52.18	5.88	7.21	17.78		30.86
667	2 Axle	1.2	2	UP422821	Parcel	SASW	SADW	-	-	5.84	14.48				20.32	0.60	9.93			10.53
668	4 Axle	1.1.22	1	UP782588	Empty	SASW	SASW	TADW	-	4.02	5.70	5.88	6.30		21.90	0.14	0.55	0.42		1.11
669	5 Axle	1.1.1.22	2	UP381576	Machine	SASW	SASW	SASW	TADW	8.18	2.11		18.08	17.04	45.41	2.32	0.01		1.62	3.95
670	4 Axle	1.1.22	2	PB104117	Maize	SASW	SASW	TADW	-	8.84	10.86	14.48	15.70		49.88	3.16	7.21	15.97		26.34
671	3 Axle	1.22	2	NL018001	Potato	SASW	TADW	-	-	8.22	11.04	9.64			28.90	2.37	3.52			5.89
672	4 Axle	1.1.22	1	WB102410	Empty	SASW	SASW	TADW	-	4.02	5.02	5.64	6.28		20.96	0.14	0.33	0.39		0.85
673	5 Axle	1.1.1.22	2	UP775154	Battery	SASW	SASW	SASW	TADW	9.42	9.64		16.42	15.68	51.16	4.08	4.47		1.16	9.72
674	4 Axle	1.1.22	2	OD692825	Soil	SASW	SASW	TADW	-	5.44	5.64	14.68	14.84		40.60	0.45	0.52	14.62		15.60
675	5 Axle	1.1.1.22	2	JH060963	Soil	SASW	SASW	SASW	TADW	5.70	8.28		15.28	13.04	42.30	0.55	2.44		0.56	3.54
676	4 Axle	1.1.22	1	UP532451	Empty	SASW	SASW	TADW	-	4.30	4.64	5.50	6.42		20.86	0.18	0.24	0.39		0.81
677	5 Axle	1.1.1.22	2	NL010483	Paper	SASW	SASW	SASW	TADW	8.64	7.48		18.90	15.88	50.90	2.89	1.62		1.22	5.73
678	3 Axle	1.22	2	GJ095351	Coal	SASW	TADW	-	-	6.24	8.68	10.96			25.88	0.79	2.86			3.65
679	6 Axle	1.22.222	2	UP774797	Toilet sheat	SASW	TADW	TRADW	-	5.68	8.30	9.56	11.92	11.66	47.12	0.54	1.96	4.43		6.93
680	2 Axle	1.2	2	WB387381	Powder	SASW	SADW	-	-	5.62	14.28				19.90	0.52	9.39			9.91
681	4 Axle	1.1.22	2	WB371251	Powder	SASW	SASW	TADW	-	7.50	10.86	16.48	13.84		48.68	1.64	7.21	16.27		25.12
682	5 Axle	1.1.1.22	2	BR066607	Grocery	SASW	SASW	SASW	TADW	4.64	6.90		18.48	17.04	47.06	0.24	1.17		1.62	3.04

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
683	5 Axle	1.1.1.22	2	NL012072	Iron	SASW	SASW	SASW	TADW	6.64	10.48		16.04	15.84	49.00	1.01	6.25		1.21	8.47
684	4 Axle	1.1.22	2	JH103286	Coal	SASW	SASW	TADW	-	9.64	10.76	12.60	16.14		49.14	4.47	6.95	13.13		24.55
685	5 Axle	1.1.1.22	2	PB349647	Potato	SASW	SASW	SASW	TADW	7.24	14.10		16.48	14.48	52.30	1.42	20.48		0.85	22.75
686	5 Axle	1.1.1.22	2	UP329050	Parcel	SASW	SASW	SASW	TADW	5.04	15.04		14.08	13.04	47.20	0.33	26.51		0.56	27.40
687	4 Axle	1.1.22	1	NL012332	Empty	SASW	SASW	TADW	-	4.08	3.78	3.34	3.34		14.54	0.14	0.11	0.04		0.29
688	4 Axle	1.1.22	1	UP702359	Empty	SASW	SASW	TADW	-	4.90	3.78	3.74	3.34		15.76	0.30	0.11	0.05		0.45
689	3 Axle	1.22	1	JH609067	Empty	SASW	TADW	-	-	7.44	9.04	10.90			27.38	1.59	3.04			4.63
690	4 Axle	1.1.22	1	WB115850	Empty	SASW	SASW	TADW	-	4.64	6.42	6.10	7.24		24.40	0.24	0.88	0.61		1.73
691	4 Axle	1.1.22	1	JH103169	Empty	SASW	SASW	TADW	-	4.54	6.68	6.10	7.08		24.40	0.22	1.03	0.58		1.83
692	4 Axle	1.1.22	2	NL619022	Coal	SASW	SASW	TADW	-	8.48	9.98	15.64	13.04		47.14	2.68	5.14	13.02		20.84
693	5 Axle	1.1.1.22	1	NL010293	Empty	SASW	SASW	SASW	TADW	4.10	5.64	5.04	4.68	3.96	23.42	0.15	0.52	0.33	0.00	1.01
694	5 Axle	1.1.1.22	1	UP719196	Empty	SASW	SASW	SASW	TADW	4.06	5.58	5.24	4.90	3.56	23.34	0.14	0.50	0.39	0.00	1.04
695	2 Axle	1.2	1	PB13112	Empty	SASW	SADW	-	-	2.00	1.90				3.90	0.01	0.00			0.01
696	3 Axle	1.22	2	UP211471	Grocery	SASW	TADW	-	-	7.82	10.68	12.24			30.74	1.94	5.31			7.25
697	5 Axle	1.1.1.22	2	JH105942	Soil	SASW	SASW	SASW	TADW	8.10	9.68		17.04	12.68	47.50	2.23	4.55		0.50	7.28
698	5 Axle	1.1.1.22	1	NL016849	Empty	SASW	SASW	SASW	TADW	5.44	3.96	3.57	3.30	3.08	19.35	0.45	0.13	0.08	0.00	0.67
699	4 Axle	1.1.22	1	HR384579	Empty	SASW	SASW	TADW	-	5.32	5.68	5.26	4.84		21.10	0.42	0.54	0.20		1.15
700	2 Axle	1.2	2	NL05528	Floor	SASW	SADW	-	-	4.62	7.44				12.06	0.24	0.69			0.93
701	5 Axle	1.1.1.22	2	UP112585	Potato	SASW	SASW	SASW	TADW	8.27	7.70		15.28	14.64	45.89	2.42	1.82		0.88	5.13
702	5 Axle	1.1.1.22	2	GJ113695	Cloth	SASW	SASW	SASW	TADW	10.44	11.08		15.70	14.52	51.74	6.16	7.81		0.86	14.82
703	4 Axle	1.1.22	2	UP607233	Coal	SASW	SASW	TADW	-	9.04	10.86	15.64	13.08		48.62	3.46	7.21	13.10		23.77
704	2 Axle	1.2	1	HR380952	Empty	SASW	SADW	-	-	3.68	4.42				8.10	0.10	0.09			0.18
705	2 Axle	1.2	2	HR383166	Grocery	SASW	SADW	-	-	6.42	10.44				16.86	0.88	2.68			3.56
706	3 Axle	1.22	2	RJ321128	Floor	SASW	TADW	-	-	7.88	12.84	15.64			36.36	2.00	12.66			14.66
707	5 Axle	1.1.1.22	1	UP173996	Empty	SASW	SASW	SASW	TADW	4.42	3.44	3.88	3.78	4.10	19.62	0.20	0.07	0.12	0.01	0.39
708	4 Axle	1.1.22	2	UP706643	Potato	SASW	SASW	TADW	-	6.30	10.86	13.46	13.68		44.30	0.82	7.21	10.44		18.47
709	5 Axle	1.1.1.22	1	TN885454	Empty	SASW	SASW	SASW	TADW	4.50	3.78	4.02	3.56	4.30	20.16	0.21	0.11	0.14	0.01	0.46
710	3 Axle	1.22	2	HR671475	Pipe	SASW	TADW	-	-	4.10	9.24	8.48			21.82	0.15	1.90			2.04
711	2 Axle	1.2	2	UP788351	Chips	SASW	SADW	-	-	5.62	8.10				13.72	0.52	0.97			1.49
712	5 Axle	1.1.1.22	2	UP190665	Rice	SASW	SASW	SASW	TADW	7.08	6.28		13.76	12.84	39.96	1.30	0.81		0.52	2.63
713	4 Axle	1.1.22	2	WB098464	Soil	SASW	SASW	TADW	-	8.44	10.86	14.88	13.44		47.62	2.63	7.21	12.38		22.22

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
714	5 Axle	1.1.1.22	1	GJ121720	Empty	SASW	SASW	SASW	TADW	4.42	3.64	4.02	3.74	4.42	20.24	0.20	0.09	0.14	0.01	0.43
715	5 Axle	1.1.1.22	1	WB012797	Empty	SASW	SASW	SASW	TADW	4.10	3.84	4.02	3.56	4.30	19.82	0.15	0.11	0.14	0.01	0.40
716	2 Axle	1.2	2	HR552050	Parcel	SASW	SADW	-	-	5.62	7.84				13.46	0.52	0.85			1.37
717	2 Axle	1.2	2	NL745719	Courier	SASW	SADW	-	-	5.30	8.64				13.94	0.41	1.26			1.67
718	4 Axle	1.1.22	2	NL015718	Coal	SASW	SASW	TADW	-	8.96	10.86	16.50	17.04		53.36	3.34	7.21	24.36		34.91
719	5 Axle	1.1.1.22	2	RJ141414	Potato	SASW	SASW	SASW	TADW	9.72	9.24		16.42	17.24	52.62	4.63	3.78		1.70	10.10
720	3 Axle	1.22	2	WB27774	Passanger	SASW	TADW	-	-	6.82	13.84	13.04			33.70	1.12	10.05			11.17
721	4 Axle	1.1.22	2	JH226692	Coal	SASW	SASW	TADW	-	8.42	9.44	9.08	17.98		44.92	2.60	4.11	10.32		17.04
722	2 Axle	1.2	2	RJ329338	Soil	SASW	SADW	-	-	5.62	9.04				14.66	0.52	1.51			2.03
723	5 Axle	1.1.1.22	2	WB703213	Powder	SASW	SASW	SASW	TADW	8.98	9.42		19.44	2.04	39.88	3.37	4.08		0.00	7.45
724	4 Axle	1.1.22	1	JH106179	Empty	SASW	SASW	TADW	-	4.64	5.30	5.64	5.34		20.92	0.24	0.41	0.28		0.93
725	2 Axle	1.2	2	UP783938	Grocery	SASW	SADW	-	-	5.70	7.84				13.54	0.55	0.85			1.40
726	3 Axle	1.22	2	NL014222	Potato	SASW	TADW	-	-	7.22	13.44	14.44			35.10	1.41	11.63			13.04
727	2 Axle	1.2	2	NL011056	Chilly	SASW	SADW	-	-	4.42	5.12				9.54	0.20	0.16			0.35
728	4 Axle	1.1.22	2	HR730040	Iron	SASW	SASW	TADW	-	8.30	9.62	15.04	15.84		48.80	2.46	4.44	17.50		24.40
729	3 Axle	1.22	2	UP211054	Parcel	SASW	TADW	-	-	5.64	8.84	9.84			24.32	0.52	2.34			2.87
730	3 Axle	1.22	2	WB876009	Household	SASW	TADW	-	-	6.62	9.84	10.48			26.94	1.00	3.28			4.28
731	3 Axle	1.22	2	NL018614	Floor	SASW	TADW	-	-	7.02	9.10	8.42			24.54	1.26	1.81			3.07
732	4 Axle	1.1.22	2	HR552692	Potato	SASW	SASW	TADW	-	9.70	10.86	11.64	10.48		42.68	4.59	7.21	4.61		16.40
733	4 Axle	1.1.22	2	UP788733	Pipe	SASW	SASW	TADW	-	9.52	10.86	11.84	10.84		43.06	4.26	7.21	5.09		16.56
734	LCV	1.2	1	WB197646	Empty	SASW	SADW	-	-	1.60	2.02				3.62	0.00	0.00			0.01
735	2 Axle	1.2	2	UP147061	Apple	SASW	SADW	-	-	5.02	12.42				17.44	0.33	5.37			5.70
736	3 Axle	1.22	2	UP235544	Cup	SASW	TADW	-	-	6.24	8.44	8.88			23.56	0.79	1.73			2.52
737	2 Axle	1.2	2	HR553139	Pipe	SASW	SADW	-	-	6.24	9.64				15.88	0.79	1.95			2.74
738	3 Axle	1.22	2	WB389798	Parcel	SASW	TADW	-	-	7.30	13.04	14.28			34.62	1.47	10.72			12.20
739	3 Axle	1.22	2	HR475885	Gas cylinder	SASW	TADW	-	-	5.62	9.04	8.68			23.34	0.52	1.90			2.41
740	3 Axle	1.22	2	HR558150	Cloth	SASW	TADW	-	-	7.90	13.64	13.68			35.22	2.02	10.72			12.74
741	4 Axle	1.1.22	1	NL012410	Empty	SASW	SASW	TADW	-	4.02	5.08	5.90	5.28		20.28	0.14	0.35	0.30		0.78
742	5 Axle	1.1.1.22	2	NL054268	Iron	SASW	SASW	SASW	TADW	8.10	9.50	7.04	7.28	6.42	38.34	2.23	4.22	1.27	0.03	7.76
743	5 Axle	1.1.1.22	2	WB155070	Chemecial	SASW	SASW	SASW	TADW	4.10	6.08	13.04	11.48	11.96	46.66	0.15	0.71	14.98	0.39	16.23
744	5 Axle	1.1.1.22	2	HL557360	Potato	SASW	SASW	SASW	TADW	5.82	6.48	12.90	12.08	11.44	48.72	0.59	0.91	14.35	0.33	16.19

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 438+500

Location :	KM 438+500	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
745	2 Axle	1.2	2	PB019636	Grocery	SASW	SADW	-	-	6.02	13.04				19.06	0.68	6.53			7.21
746	4 Axle	1.1.22	1	UP187059	Empty	SASW	SASW	TADW	-	4.02	5.28	5.92	4.72		19.94	0.14	0.40	0.25		0.78
747	4 Axle	1.1.22	1	JH028032	Empty	SASW	SASW	TADW	-	4.10	4.84	5.64	4.84		19.42	0.15	0.28	0.23		0.66
748	5 Axle	1.1.1.22	2	JH027561	Soil	SASW	SASW	SASW	TADW	6.08	6.90		12.08	11.44	36.50	0.71	1.17		0.33	2.21
749	5 Axle	1.1.1.22	1	NL016448	Empty	SASW	SASW	SASW	TADW	3.68	4.62		3.70	3.44	15.44	0.10	0.24		0.00	0.33
750	3 Axle	1.22	2	RJ140795	Parcel	SASW	TADW	-	-	6.84	13.04	13.64			33.52	1.13	9.75			10.89
751	3 Axle	1.22	2	JH027008	Parcel	SASW	TADW	-	-	7.04	13.24	16.64			36.92	1.27	15.34			16.62
752	4 Axle	1.1.22	2	WB397753	Chemecial	SASW	SASW	TADW	-	7.62	4.08	13.50	12.88		38.08	1.75	0.14	9.32		11.21
753	3 Axle	1.22	2	WB830263	Animal food	SASW	TADW	-	-	6.08	12.82	11.52			30.42	0.71	6.76			7.46
754	2 Axle	1.2	1	WB150894	Empty	SASW	SADW	-	-	3.68	4.50				8.18	0.10	0.09			0.19
755	4 Axle	1.1.22	1	NO14447	Empty	SASW	SASW	TADW	-	4.10	3.64	4.22	3.78		15.74	0.15	0.09	0.08		0.32
756	4 Axle	1.1.22	2	NO79778	Soil	SASW	SASW	TADW	-	7.90	10.86	14.04	14.42		47.22	2.02	7.21	12.63		21.86
757	5 Axle	1.1.1.22	1	WB852224	Empty	SASW	SASW	SASW	TADW	4.42	5.88	3.84	5.12	5.44	24.70	0.20	0.62	0.11	0.02	0.95
758	5 Axle	1.1.1.22	1	NL011094	Empty	SASW	SASW	SASW	TADW	4.62	5.64	4.02	4.88	5.24	24.40	0.24	0.52	0.14	0.01	0.91
759	2 Axle	1.2	2	RJ321420	Oils	SASW	SADW	-	-	5.88	10.92				16.80	0.62	3.21			3.83
760	5 Axle	1.1.1.22	2	WB016420	Iron	SASW	SASW	SASW	TADW	9.52	9.04		2.18	17.28	38.02	4.26	3.46		1.72	9.43
761	2 Axle	1.2	2	UP709568	Oils	SASW	SADW	-	-	5.90	10.84				16.74	0.63	3.12			3.75
762	4 Axle	1.1.22	1	BR410810	Empty	SASW	SASW	TADW	-	4.84		4.02	3.88		12.74	0.28		0.07		0.36
763	2 Axle	1.2	1	NO18796	Empty	SASW	SADW	-	-	1.64	4.28				5.92	0.00	0.08			0.08
764	3 Axle	1.22	2	UP217660	Parcel	SASW	TADW	-	-	5.66	8.82	10.96			25.44	0.53	2.95			3.48
765	4 Axle	1.1.22	1	UP387098	Empty	SASW	SASW	TADW	-	4.84	5.28	5.64	5.88		21.64	0.28	0.40	0.34		1.03
766	4 Axle	1.1.22	2	WB218498	Potato	SASW	SASW	TADW	-	7.82	10.86	13.64	14.28		46.60	1.94	7.21	11.70		20.84

Single Axle with single wheel - SASW
Single Axle with dual wheels - SADW
Tandem Axle with dual wheels - TADW
Tandem Axle Single wheel - TASW
Tridem Axel Dual Wheel - TRADW

Appendix 2.2

Axle Load Survey Data at KM 507+100

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Summary

Location	:	KM 507+100						
Type of Vehicle	Total no. of Veh.	Sample size	Sample (%)	Panagarh - Dhanbad		Dhanbad - Panagarh		Adopted VDF
				No. of Veh.	VDF	No. of Veh.	VDF	
LCV	753	149	19.8%	63	0.66	86	1.05	0.90
2-Axle Truck	2107	312	14.8%	182	2.97	130	1.94	2.50
3-Axle Truck	2124	375	17.7%	216	4.92	159	5.28	5.10
M-Axle Truck	6221	755	12.1%	418	10.39	337	10.67	10.50
Bus	871	43	4.9%	21	1.80	22	1.23	1.50

Load (t)	% of Total Axles					
	Panagarh - Dhanbad			Dhanbad - Panagarh		
	Single Axle	Tandem Axle	Tridem Axle	Single Axle	Tandem Axle	Tridem Axle
0-7	19.41	1.21	0.30	23.93	4.39	0.00
7-9	7.28	8.79	3.94	14.67	5.61	0.00
9-11	15.24	0.61	1.52	9.35	3.55	0.09
11-13	7.73	0.08	0.23	2.62	1.50	0.19
13-15	1.36	0.76	0.00	0.93	2.71	0.09
15-17	0.15	0.53	0.00	0.75	3.93	0.00
17-19	0.00	1.82	0.00	0.19	2.80	0.00
19-21	0.08	1.74	0.08	0.00	3.27	0.19
21-23	0.00	2.81	0.00	0.00	2.24	0.00
23-25	0.00	4.55	0.00	0.00	4.21	0.00
25-27	0.00	7.96	0.15	0.00	2.80	0.00
27-29	0.00	2.12	0.00	0.00	1.78	0.09
29-31	0.00	2.05	0.15	0.00	1.21	0.00
31-33	0.00	0.23	0.15	0.00	1.12	0.93
33-35	0.00	0.30	0.76	0.00	0.47	0.75
35-37	0.00	0.00	0.45	0.00	0.09	0.37
37-39	0.00	0.08	1.67	0.00	0.00	0.37
39-41	0.00	0.00	1.44	0.00	0.09	0.56
41-43	0.00	0.00	1.44	0.00	0.09	0.56
43-45	0.00	0.00	0.68	0.00	0.00	1.03
45-47	0.00	0.00	0.15	0.00	0.00	0.28
47-49	0.00	0.00	0.00	0.00	0.00	0.19
49-51	0.00	0.00	0.00	0.00	0.00	0.00
	51.25	**35.63**	**13.12**	**52.43**	**41.87**	**5.70**

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Summary

Location	:	KM 507+100						
Type of Vehicle	Total no. of Veh.	Sample size	Sample (%)	Panagarh - Dhanbad		Dhanbad - Panagarh		Adopted VDF
				No. of Veh.	VDF	No. of Veh.	VDF	
LCV	753	149	19.8%	63	0.66	86	1.05	0.90
2-Axle Truck	2107	312	14.8%	182	2.97	130	1.94	2.50
3-Axle Truck	2124	375	17.7%	216	4.92	159	5.28	5.10
M-Axle Truck	6221	755	12.1%	418	10.39	337	10.67	10.50
Bus	871	43	4.9%	21	1.80	22	1.23	1.50

Load (t)	% of Vehiclewise Axles					
	Panagarh - Dhanbad			Dhanbad - Panagarh		
	Single Axle	Tandem Axle	Tridem Axle	Single Axle	Tandem Axle	Tridem Axle
0-7	37.87	3.40	2.31	45.63	10.49	0.00
7-9	14.20	24.68	30.06	27.99	13.39	0.00
9-11	29.73	1.70	11.56	17.83	8.48	1.64
11-13	15.09	0.21	1.73	4.99	3.57	3.28
13-15	2.66	2.13	0.00	1.78	6.47	1.64
15-17	0.30	1.49	0.00	1.43	9.38	0.00
17-19	0.00	5.11	0.00	0.36	6.70	0.00
19-21	0.15	4.89	0.58	0.00	7.81	3.28
21-23	0.00	7.87	0.00	0.00	5.36	0.00
23-25	0.00	12.77	0.00	0.00	10.04	0.00
25-27	0.00	22.34	1.16	0.00	6.70	0.00
27-29	0.00	5.96	0.00	0.00	4.24	1.64
29-31	0.00	5.74	1.16	0.00	2.90	0.00
31-33	0.00	0.64	1.16	0.00	2.68	16.39
33-35	0.00	0.85	5.78	0.00	1.12	13.11
35-37	0.00	0.00	3.47	0.00	0.22	6.56
37-39	0.00	0.21	12.72	0.00	0.00	6.56
39-41	0.00	0.00	10.98	0.00	0.22	9.84
41-43	0.00	0.00	10.98	0.00	0.22	9.84
43-45	0.00	0.00	5.20	0.00	0.00	18.03
45-47	0.00	0.00	1.16	0.00	0.00	4.92
47-49	0.00	0.00	0.00	0.00	0.00	3.28
49-51	0.00	0.00	0.00	0.00	0.00	0.00
	100.00	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 507+100

Direction:	Panagarh - Dhanbad

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
0	-	7	45	2	51	0	158	256	37.87	19.41	2	14	16	3.40	1.21	4	2.31	0.30
7	-	9	11	13	24	0	48	96	14.20	7.28	67	49	116	24.68	8.79	52	30.06	3.94
9	-	11	2	6	58	0	135	201	29.73	15.24	4	4	8	1.70	0.61	20	11.56	1.52
11	-	13	5	0	40	0	57	102	15.09	7.73	0	1	1	0.21	0.08	3	1.73	0.23
13	-	15	0	0	8	0	10	18	2.66	1.36	4	6	10	2.13	0.76	0	0.00	0.00
15	-	17	0	0	1	0	1	2	0.30	0.15	3	4	7	1.49	0.53	0	0.00	0.00
17	-	19	0	0	0	0	0	0	0.00	0.00	18	6	24	5.11	1.82	0	0.00	0.00
19	-	21	0	0	0	0	1	1	0.15	0.08	18	5	23	4.89	1.74	1	0.58	0.08
21	-	23	0	0	0	0	0	0	0.00	0.00	31	6	37	7.87	2.81	0	0.00	0.00
23	-	25	0	0	0	0	0	0	0.00	0.00	34	26	60	12.77	4.55	0	0.00	0.00
25	-	27	0	0	0	0	0	0	0.00	0.00	21	84	105	22.34	7.96	2	1.16	0.15
27	-	29	0	0	0	0	0	0	0.00	0.00	5	23	28	5.96	2.12	0	0.00	0.00
29	-	31	0	0	0	0	0	0	0.00	0.00	7	20	27	5.74	2.05	2	1.16	0.15
31	-	33	0	0	0	0	0	0	0.00	0.00	0	3	3	0.64	0.23	2	1.16	0.15
33	-	35	0	0	0	0	0	0	0.00	0.00	2	2	4	0.85	0.30	10	5.78	0.76
35	-	37	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	6	3.47	0.45
37	-	39	0	0	0	0	0	0	0.00	0.00	0	1	1	0.21	0.08	22	12.72	1.67

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 507+100

Direction:	Panagarh - Dhanbad

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
39	-	41	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	19	10.98	1.44
41	-	43	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	19	10.98	1.44
43	-	45	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	9	5.20	0.68
45	-	47	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	2	1.16	0.15
47	-	49	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
49	-	51	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
					Total :			**676**	**100.00**	**51**			**470**	**100**	**36**	**173**	**100**	**13**

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 507+100

Direction:	Dhanbad - Panagarh

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
0	-	7	57	9	43	0	147	256	45.63	23.93	1	46	47	10.49	4.39	0	0.00	0.00
7	-	9	11	11	40	0	95	157	27.99	14.67	34	26	60	13.39	5.61	0	0.00	0.00
9	-	11	13	2	34	0	51	100	17.83	9.35	5	33	38	8.48	3.55	1	1.64	0.09
11	-	13	4	0	11	0	13	28	4.99	2.62	1	15	16	3.57	1.50	2	3.28	0.19
13	-	15	1	0	1	0	8	10	1.78	0.93	3	26	29	6.47	2.71	1	1.64	0.09
15	-	17	0	0	1	0	7	8	1.43	0.75	7	35	42	9.38	3.93	0	0.00	0.00
17	-	19	0	0	0	0	2	2	0.36	0.19	20	10	30	6.70	2.80	0	0.00	0.00
19	-	21	0	0	0	0	0	0	0.00	0.00	27	8	35	7.81	3.27	2	3.28	0.19
21	-	23	0	0	0	0	0	0	0.00	0.00	13	11	24	5.36	2.24	0	0.00	0.00
23	-	25	0	0	0	0	0	0	0.00	0.00	22	23	45	10.04	4.21	0	0.00	0.00
25	-	27	0	0	0	0	0	0	0.00	0.00	13	17	30	6.70	2.80	0	0.00	0.00
27	-	29	0	0	0	0	0	0	0.00	0.00	4	15	19	4.24	1.78	1	1.64	0.09
29	-	31	0	0	0	0	0	0	0.00	0.00	3	10	13	2.90	1.21	0	0.00	0.00
31	-	33	0	0	0	0	0	0	0.00	0.00	2	10	12	2.68	1.12	10	16.39	0.93
33	-	35	0	0	0	0	0	0	0.00	0.00	3	2	5	1.12	0.47	8	13.11	0.75
35	-	37	0	0	0	0	0	0	0.00	0.00	0	1	1	0.22	0.09	4	6.56	0.37
37	-	39	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	4	6.56	0.37

Barwa-Adda Panagarh Section of NH-2

Axle load spectrum at Km KM 507+100

Direction:	Dhanbad - Panagarh

Axle Load, tonnes			Frequency															
			Rear Single Axle								Rear Tandom Axle					Rear Tridem Axle		
			LCV	Bus	2A	3A	MAV	Total	% of Single Axle Loads	% of Total Axle Loads	3A	MAV	Total	% of Tandem Axle Loads	% of Total Axle Loads	MAV	% of Tridem Axle Loads	% of Total Axle Loads
39	-	41	0	0	0	0	0	0	0.00	0.00	1	0	1	0.22	0.09	6	9.84	0.56
41	-	43	0	0	0	0	0	0	0.00	0.00	0	1	1	0.22	0.09	6	9.84	0.56
43	-	45	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	11	18.03	1.03
45	-	47	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	3	4.92	0.28
47	-	49	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	2	3.28	0.19
49	-	51	0	0	0	0	0	0	0.00	0.00	0	0	0	0.00	0.00	0	0.00	0.00
					Total :			**561**	**100.00**	**52**			**448**	**100**	**42**	**61**	**100**	**6**

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
1	2 Axle	1.2	2	WB 67 0764	Oil	SASW	SADW	-	-	5.52	13.14				18.66	0.48	6.73			7.21
2	2 Axle	1.2	2	MH47 5364	Parcel	SASW	SADW	-	-	5.08	9.74				14.82	0.35	2.03			2.38
3	4 Axle	1.1.22	2	NL01 7571	Oil	SASW	SASW	TADW	-	7.02	8.42	14.15	13.82		43.41	1.26	2.60	11.78		15.64
4	3 Axle	1.22	1	WB 53 A 928	Empty	SASW	TADW	-	-	4.54	4.30	3.82			12.66	0.22	0.08			0.30
5	LCV	1.2	1	WB 37 2062	Empty	SASW	SADW	-	-	1.82	1.74				3.56	0.01	0.00			0.01
6	5 Axle	1.1.122	1	WB 25 L 032	Empty	SASW	SASW	TRADW	-	5.65	5.02		6.42	6.02	23.11	0.53	0.33	0.09		0.95
7	3 Axle	1.22	2	WB 11 1670	Iron	SASW	TADW	-	-	7.02	12.83	12.04			31.89	1.26	7.36			8.62
8	4 Axle	1.1.22	1	WB 39 4833	Empty	SASW	SASW	TADW	-	4.72		3.82	3.68		12.22	0.26		0.06		0.32
9	LCV	1.1	2	DL 1L 6375	Milk	SASW	SASW	-	-	2.96	2.68				5.64	0.04	0.03			0.07
10	4 Axle	1.2.22	2	UP 17 4982	Gas	SASW	SADW	TADW	-	7.02	11.18	12.02	11.24		41.46	1.26	3.53	5.63		10.42
11	3 Axle	1.22	2	WB 39 0067	Oil	SASW	TADW	-	-	7.22	9.82	9.06			26.10	1.41	2.45			3.85
12	3 Axle	1.22	2	WB 39 1644	Coal	SASW	TADW	-	-	8.32	15.18	14.02			37.52	2.48	13.99			16.48
13	5 Axle	1.1.1.22	1	JK 19 4511	Empty	SASW	SASW	SASW	TADW	5.04	4.42		4.22	4.08	17.76	0.33	0.20		0.01	0.54
14	2 Axle	1.2	2	NL01 8444	Parcel	SASW	SADW	-	-	7.02	9.14				16.16	1.26	1.58			2.83
15	3 Axle	1.22	2	MP 9 0460	Clothes	SASW	TADW	-	-	7.62	15.18	14.08			36.88	1.75	14.11			15.86
16	3 Axle	1.22	2	WB 39 1644	Coal	SASW	TADW	-	-	7.02	12.82	12.04			31.88	1.26	7.35			8.61
17	4 Axle	1.1.22	2	WB 29 8631	Coal	SASW	SASW	TADW	-	6.85	7.78	12.18	4.02		30.83	1.14	1.90	1.33		4.37
18	5 Axle	1.1.122	2	WB 29 2553	Coal	SASW	SASW	TRADW	-	4.48	7.38	14.02	15.18	16.32	57.38	0.21	1.54	15.78		17.52
19	3 Axle	1.22	1	WB 39 1648	Empty	SASW	TADW	-	-	4.34	5.02	4.63			13.99	0.18	0.17			0.35
20	2 Axle	1.2	1	WB 39 2584	Empty	SASW	SADW	-	-	2.94	1.88				4.82	0.04	0.00			0.04
21	3 Axle	1.22	1	WB 23 6568	Empty	SASW	TADW	-	-	3.74	4.68	4.28			12.70	0.10	0.12			0.23
22	4 Axle	1.2.22	2	WB 41 9329	Gas	SASW	SADW	TADW	-	5.74	9.90	8.82	8.34		32.80	0.56	2.17	1.67		4.40
23	6 Axle	1.22.222	1	RJ 14 9401	Empty	SASW	TADW	TRADW	-	4.54	5.28		4.82	4.34	18.98	0.22	0.01	0.03		0.26
24	2 Axle	1.2	2	NL01 8444	Parcel	SASW	SADW	-	-	5.88	7.48				13.36	0.62	0.71			1.33
25	3 Axle	1.22	1	WB 61 2953	Empty	SASW	TADW	-	-	4.54	3.74	3.36			11.64	0.22	0.05			0.27
26	2 Axle	1.2	2	WB 41 8530	Gas	SASW	SADW	-	-	4.28	3.88				8.16	0.17	0.05			0.23
27	5 Axle	1.1.122	1	WB 39 1965	Empty	SASW	SASW	TRADW	-	5.82	5.68		5.42	5.16	22.08	0.59	0.54	0.05		1.18
28	2 Axle	1.2	1	WB 73 1918	Empty	SASW	SADW	-	-	4.34	5.34				9.68	0.18	0.18			0.37
29	2 Axle	1.2	2	WB 55 8783	Petrol	SASW	SADW	-	-	5.68	9.16				14.84	0.54	1.59			2.13
30	5 Axle	1.1.122	1	WB 85 1421	Empty	SASW	SASW	TRADW	-	3.68	3.42		3.64	3.22	13.96	0.10	0.07	0.01		0.17
31	2 Axle	1.2	2	WB 11 6924	Coal	SASW	SADW	-	-	5.88	8.02				13.90	0.62	0.93			1.55

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
32	4 Axle	1.1.22	2	WB 37 7238	Petrol	SASW	SASW	TADW	-	6.36	5.68	12.48	11.74		36.26	0.85	0.54	6.62		8.01
33	3 Axle	1.22	2	WB 37 2151	Petrol	SASW	TADW	-	-	5.68	1.17	12.24			19.09	0.54	0.62			1.16
34	2 Axle	1.2	2	WB 19 6510	Dabur	SASW	SADW	-	-	4.99	8.11				13.10	0.32	0.98			1.30
35	2 Axle	1.2	2	WB 39 2947	Urea	SASW	SADW	-	-	7.18	9.58				16.76	1.38	1.90			3.28
36	2 Axle	1.2	2	WB 67 1590	Oil	SASW	SADW	-	-	5.38	9.82				15.20	0.43	2.10			2.53
37	2 Axle	1.2	2	WB 39	Oil	SASW	SADW	-	-	7.58	9.83				17.41	1.71	2.11			3.82
38	LCV	1.2	2	WB 37 1608	Grocery	SASW	SADW	-	-	3.38	7.83				11.21	0.07	0.85			0.92
39	3 Axle	1.22	2	WB 19 5965	Parcel	SASW	TADW	-	-	7.38	11.02	10.18			28.58	1.54	3.89			5.43
40	3 Axle	1.22	1	WB 39 3081	Empty	SASW	TADW	-	-	6.22	3.82	3.74			13.78	0.78	0.06			0.84
41	LCV	1.2	2	WB 25 3272	Parcel	SASW	SADW	-	-	2.62	5.02				7.64	0.02	0.14			0.17
42	4 Axle	1.2.22	2	UP 17 5080	Gas	SASW	SADW	TADW	-	7.38	11.02	13.02	12.04		43.46	1.54	3.33	7.59		12.46
43	3 Axle	1.22	2	BR 10 7704	Rice	SASW	TADW	-	-	7.02	12.82	12.04			31.88	1.26	7.35			8.61
44	5 Axle	1.1.1.22	2	NL01 7972	Iron	SASW	SASW	SASW	TADW	7.42	9.02	10.94	13.82	13.14	54.34	1.57	3.43	7.42	0.57	13.00
45	2 Axle	1.2	1	WB 37 6173	Empty	SASW	SADW	-	-	3.82	3.74				7.56	0.11	0.04			0.15
46	4 Axle	1.1.22	2	CG 03 3110	Rice	SASW	SASW	TADW	-	7.02	9.52	13.82	13.02		43.38	1.26	4.26	9.99		15.50
47	2 Axle	1.2	2	WB 37 2986	Oil	SASW	SADW	-	-	7.38	9.06				16.44	1.54	1.52			3.06
48	4 Axle	1.2.22	2	UP17 9059	Gas	SASW	SADW	TADW	-	7.39	12.22	13.02	12.43		45.06	1.55	5.04	8.08		14.66
49	LCV	1.2	2	WB 53 4942	Gas	SASW	SADW	-	-	7.39	11.14				18.53	1.55	3.48			5.02
50	4 Axle	1.2.22	2	UP83 5409	Gas	SASW	SADW	TADW	-	7.94	9.22	11.02	10.04		38.22	2.06	1.63	3.79		7.48
51	LCV	1.2	1	WB 19 6590	Empty	SASW	SADW	-	-	2.22	1.28				3.50	0.01	0.00			0.01
52	LCV	1.2	2	WB 29 4128	Rice	SASW	SADW	-	-	3.58	7.14				10.72	0.09	0.59			0.67
53	4 Axle	1.1.22	2	BR 02 9275	Oil	SASW	SASW	TADW	-	8.43	9.52	14.16	13.82		45.93	2.62	4.26	11.80		18.67
54	5 Axle	1.1.122	2	WB 53 5782	Cement	SASW	SASW	TRADW	-	7.42	9.18	10.94	13.82	13.14	54.50	1.57	3.68	7.58		12.83
55	5 Axle	1.1.122	2	WB 53 6783	Gitti	SASW	SASW	TRADW	-	7.82	9.02	10.94	13.82	13.18	54.78	1.94	3.43	7.61		12.98
56	4 Axle	1.1.22	2	WB 15 5764	Grocery	SASW	SASW	TADW	-	6.42	9.52	12.22	13.18		41.34	0.88	4.26	8.01		13.15
57	4 Axle	1.1.22	2	WB 39 2875	Oil	SASW	SASW	TADW	-	7.38	5.38	12.42	12.04		37.22	1.54	0.43	6.89		8.86
58	3 Axle	1.22	1	WB 39 8432	Empty	SASW	TADW	-	-	6.08	3.82	3.68			13.58	0.71	0.06			0.77
59	2 Axle	1.2	2	WB 73 5106	Iron	SASW	SADW	-	-	7.78	12.82				20.60	1.90	6.10			8.00
60	LCV	1.2	1	UP78 2920	Empty	SASW	SADW	-	-	2.38	1.94				4.32	0.02	0.00			0.02
61	6 Axle	1.22.222	1	WB 65 D 816	Empty	SASW	TADW	TRADW	-	3.46	2.82		3.82	3.68	13.78	0.07	0.00	0.01		0.09
62	4 Axle	1.1.22	1	WB 37 3146	Empty	SASW	SASW	TADW	-	5.38		4.42	4.32		14.12	0.43		0.11		0.55

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
63	LCV	1.2	2	WB 37 0867	Gas	SASW	SADW	-	-	3.18	7.58				10.76	0.05	0.75			0.80
64	LCV	1.2	1	UP71 A 9699	Empty	SASW	SADW	-	-	2.42	2.08				4.50	0.02	0.00			0.02
65	LCV	1.2	2	WB 41 5402	Hey	SASW	SADW	-	-	3.58	7.82				11.40	0.09	0.84			0.93
66	LCV	1.1	2	WB 37 C 671	Iron	SASW	SASW	-	-	2.42	5.58				8.00	0.02	0.50			0.52
67	5 Axle	1.1.1.22	2	WB 71 6097	Gitti	SASW	SASW	SASW	TADW	7.82	9.38	10.94	13.82	13.14	55.10	1.94	4.01	7.42	0.57	13.95
68	3 Axle	1.22	1	WB 39 9392	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
69	2 Axle	1.2	2	HR 46 1966	Parcel	SASW	SADW	-	-	7.03	9.38				16.41	1.27	1.75			3.01
70	5 Axle	1.1.1.22	1	WB 67 1368	Empty	SASW	SASW	SASW	TADW	4.72	4.32		4.08	3.83	16.95	0.26	0.18		0.00	0.44
71	5 Axle	1.1.1.22	1	WB 89 4588	Empty	SASW	SASW	SASW	TADW	3.92	3.62		3.82	3.46	14.82	0.12	0.09		0.00	0.21
72	4 Axle	1.1.22	1	WB 51 0984	Empty	SASW	SASW	TADW	-	5.09		4.78	4.42		14.29	0.35		0.14		0.49
73	2 Axle	1.2	2	WB 39 0561	Gas	SASW	SADW	-	-	7.38	9.82				17.20	1.54	2.10			3.64
74	4 Axle	1.1.22	2	UP 17 5353	Gas	SASW	SASW	TADW	-	6.42	6.82	14.04	13.18		40.46	0.88	1.12	10.57		12.57
75	LCV	1.2	1	WB 53 6026	Empty	SASW	SADW	-	-	2.36	1.82				4.18	0.02	0.00			0.02
76	5 Axle	1.1.122	1	WB 23 5437	Empty	SASW	SASW	TRADW	-	4.68	5.02		5.62	4.72	20.04	0.25	0.33	0.04		0.62
77	5 Axle	1.1.122	1	UP66 1188	Empty	SASW	SASW	TRADW	-	4.82	5.38		5.46	4.98	20.64	0.28	0.43	0.04		0.76
78	3 Axle	1.22	1	WB 67 1102	Empty	SASW	TADW	-	-	4.82	4.42	4.08			13.32	0.28	0.10			0.38
79	3 Axle	1.22	1	WB 41 7745	Empty	SASW	TADW	-	-	4.22	4.02	3.94			12.18	0.16	0.08			0.24
80	3 Axle	1.22	2	WB 41 7725	Oil	SASW	TADW	-	-	7.82	4.42	10.06			22.30	1.94	0.85			2.78
81	3 Axle	1.22	2	WB 39 0337	Oil	SASW	TADW	-	-	7.02	4.32	10.02			21.36	1.26	0.81			2.07
82	2 Axle	1.2	2	WB 11 4449	Parcel	SASW	SADW	-	-	4.37	5.62				9.99	0.19	0.23			0.41
83	4 Axle	1.1.22	2	WB 99 0059	Oil	SASW	SASW	TADW	-	6.43	5.22	12.82	12.04		36.51	0.89	0.38	7.35		8.62
84	4 Axle	1.1.22	2	UP76 0192	Gas	SASW	SASW	TADW	-	7.42	4.90	13.18	12.04		37.54	1.57	0.30	7.79		9.66
85	5 Axle	1.1.122	1	WB 39 1965	Empty	SASW	SASW	TRADW	-	4.98	5.08		4.72	4.42	19.20	0.32	0.35	0.03		0.69
86	2 Axle	1.2	2	HR 55 1178	Parcel	SASW	SADW	-	-	7.02	10.23				17.25	1.26	2.47			3.73
87	LCV	1.1	2	WB 11 D 231	Medicine	SASW	SASW	-	-	2.10	1.71				3.81	0.01	0.00			0.01
88	3 Axle	1.22	2	HR 67 7467	Iron	SASW	TADW	-	-	7.43	13.02	12.04			32.49	1.58	7.59			9.17
89	2 Axle	1.2	1	WB 37 7141	Empty	SASW	SADW	-	-	2.18	3.74				5.92	0.01	0.04			0.06
90	3 Axle	1.22	1	WB 37 3285	Empty	SASW	TADW	-	-	4.22	3.94	3.69			11.85	0.16	0.07			0.23
91	2 Axle	1.2	2	WB 87 7994	Oil	SASW	SADW	-	-	7.02	9.82				16.84	1.26	2.10			3.36
92	4 Axle	1.2.22	2	UP 75 03 07	Gas	SASW	SADW	TADW	-	7.38	12.82	13.18	12.42		45.80	1.54	6.10	8.27		15.91
93	5 Axle	1.1.122	2	WB 29 0368	Cement	SASW	SASW	TRADW	-	8.42	10.42	10.94	14.03	13.19	57.00	2.60	6.11	7.79		16.51

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
94	5 Axle	1.1.122	2	NL01 2887	JCB	SASW	SASW	TRADW	-	7.02	8.58	12.04	11.58	10.42	49.64	1.26	2.81	4.93		9.00
95	2 Axle	1.2	2	WB 23 1274	Milk	SASW	SADW	-	-	7.38	10.34				17.72	1.54	2.58			4.12
96	5 Axle	1.2.222	2	HR 55 4948	JCB	SASW	SADW	TRADW	-	7.62	9.74	13.18	12.04	12.28	54.86	1.75	2.03	7.27		11.05
97	2 Axle	1.2	1	WB 37 1382	Empty	SASW	SADW	-	-	3.33	2.42				5.75	0.06	0.01			0.07
98	4 Axle	1.2.22	2	NL01 4699	Car	SASW	SADW	TADW	-	7.02	9.14	8.22	7.94		32.32	1.26	1.58	1.31		4.15
99	5 Axle	1.2.222	2	WB 11 4551	Iron	SASW	SADW	TRADW	-	7.38	11.22	13.14	14.02	13.82	59.58	1.54	3.58	10.36		15.48
100	4 Axle	1.1.22	1	WB 11 4008	Empty	SASW	SASW	TADW	-	6.08		3.82	3.74		13.64	0.71		0.06		0.77
101	4 Axle	1.1.22	2	WB 19 2024	Oil	SASW	SASW	TADW	-	7.02	10.82	12.82	12.08		42.74	1.26	7.10	7.40		15.76
102	2 Axle	1.2	1	WB 39 7231	Empty	SASW	SADW	-	-	3.22	2.38				5.60	0.06	0.01			0.06
103	2 Axle	1.2	2	WB 23 7268	Oil	SASW	SADW	-	-	6.32	13.02				19.34	0.83	6.49			7.32
104	3 Axle	1.22	1	WB 89 2424	Empty	SASW	TADW	-	-	6.22	4.08	3.94			14.24	0.78	0.08			0.86
105	2 Axle	1.2	2	WB 55 6182	Oil	SASW	SADW	-	-	3.76	13.02				16.78	0.10	6.49			6.60
106	LCV	1.1	1	WB 37 1932	Empty	SASW	SASW	-	-	2.18	1.74				3.92	0.01	0.00			0.02
107	LCV	1.2	1	WB 39 0543	Empty	SASW	SADW	-	-	2.42	1.94				4.36	0.02	0.00			0.02
108	2 Axle	1.2	2	WB 39 1237	Gas	SASW	SADW	-	-	7.02	12.82				19.84	1.26	6.10			7.36
109	2 Axle	1.2	2	WB 39 1242	Gas	SASW	SADW	-	-	4.42	13.42				17.84	0.20	7.33			7.52
110	2 Axle	1.2	2	HR 61 7012	Parcel	SASW	SADW	-	-	6.22	11.22				17.44	0.78	3.58			4.36
111	2 Axle	1.2	2	WB 34 4717	Oil	SASW	SADW	-	-	7.02	11.42				18.44	1.26	3.84			5.10
112	2 Axle	1.2	2	WB 39 1393	Gas	SASW	SADW	-	-	4.22	10.22				14.44	0.16	2.46			2.63
113	2 Axle	1.2	2	WB 39 5457	Gas	SASW	SADW	-	-	4.82	12.22				17.04	0.28	5.04			5.32
114	4 Axle	1.2.22	2	UP 70 0811	Gas	SASW	SADW	TADW	-	7.18	12.82	13.78	13.14		46.92	1.38	6.10	10.11		17.59
115	2 Axle	1.2	1	WB 25 8597	Empty	SASW	SADW	-	-	3.14	2.54				5.68	0.05	0.01			0.06
116	5 Axle	1.1.122	1	WB 43 8786	Empty	SASW	SASW	TRADW	-	5.35	5.98		4.23	3.80	19.36	0.42	0.66	0.02		1.10
117	5 Axle	1.1.122	1	WB 67 1169	Empty	SASW	SASW	TRADW	-	5.21	5.62		4.42	4.32	19.57	0.38	0.52	0.02		0.92
118	LCV	1.2	2	MH 46 1907	Milk	SASW	SADW	-	-	4.22	7.18				11.40	0.16	0.60			0.76
119	3 Axle	1.22	2	HR 37 0864	Parcel	SASW	TADW	-	-	7.02	13.02	12.04			32.08	1.26	7.59			8.85
120	5 Axle	1.1.122	1	WB 41 1568	Empty	SASW	SASW	TRADW	-	5.02	4.82		4.32	4.08	18.24	0.33	0.28	0.02		0.63
121	2 Axle	1.2	2	NL01 1150	Parcel	SASW	SADW	-	-	6.42	10.12				16.54	0.88	2.37			3.25
122	5 Axle	1.1.122	1	WB 67 1857	Empty	SASW	SASW	TRADW	-	4.72	4.08		3.82	3.74	16.36	0.26	0.14	0.01		0.41
123	2 Axle	1.2	1	NL01 1209	Empty	SASW	SADW	-	-	6.42	9.18				15.60	0.88	1.60			2.48
124	5 Axle	1.1.122	1	WB 67 1161	Empty	SASW	SASW	TRADW	-	5.22	5.12		4.42	0.92	15.68	0.38	0.36	0.00		0.74

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
125	LCV	1.2	1	WB 25 1251	Empty	SASW	SADW	-	-	2.02	1.88				3.90	0.01	0.00			0.01
126	2 Axle	1.2	2	NL01 2432	Grocery	SASW	SADW	-	-	7.18	10.34				17.52	1.38	2.58			3.96
127	3 Axle	1.22	2	HR 55 1975	Iron	SASW	TADW	-	-	7.02	11.02	10.06			28.10	1.26	3.80			5.06
128	5 Axle	1.2.222	2	UP 85 8937	Gas	SASW	SADW	TRADW	-	6.42	12.22	13.14	12.82	12.04	56.64	0.88	5.04	7.66		13.58
129	3 Axle	1.22	2	WB 49 1924	Gas	SASW	TADW	-	-	7.02	13.42	12.02			32.46	1.26	8.06			9.32
130	5 Axle	1.1.122	1	WB 15 0567	Empty	SASW	SASW	TRADW	-	4.72	4.42		3.82	3.74	16.70	0.26	0.20	0.01		0.47
131	5 Axle	1.1.122	1	WB 67 1830	Empty	SASW	SASW	TRADW	-	5.22	4.82		4.32	4.08	18.44	0.38	0.28	0.02		0.68
132	2 Axle	1.2	1	WB 41 7616	Empty	SASW	SADW	-	-	4.22	3.82				8.04	0.16	0.05			0.21
133	5 Axle	1.1.122	2	AP 39 5499	Food	SASW	SASW	TRADW	-	6.30	9.82	13.82	15.02	14.08	59.04	0.82	4.82	12.47		18.10
134	2 Axle	1.2	2	WB 97 7610	Oil	SASW	SADW	-	-	4.88	12.22				17.10	0.29	5.04			5.33
135	5 Axle	1.1.122	1	WB 39 2728	Empty	SASW	SASW	TRADW	-	5.02	4.32		4.22	4.08	17.64	0.33	0.18	0.02		0.53
136	4 Axle	1.1.22	2	WB 39 4520	Gitti	SASW	SASW	TADW	-	9.50	5.43	15.02	14.03		43.98	4.22	0.45	13.71		18.38
137	5 Axle	1.2.222	2	WB 41 1361	Iron	SASW	SADW	TRADW	-	6.07	13.20	14.14	13.35	13.23	60.00	0.71	6.86	10.11		17.67
138	3 Axle	1.22	2	WB 49 1944	Gas	SASW	TADW	-	-	6.18	8.82	7.42			22.42	0.76	1.34			2.09
139	4 Axle	1.1.22	1	WB 41 6499	Empty	SASW	SASW	TADW	-	5.13		4.02	4.09		13.24	0.36		0.08		0.44
140	3 Axle	1.22	2	NL01 0788	Parcel	SASW	TADW	-	-	6.22	11.02	10.06			27.30	0.78	3.80			4.58
141	5 Axle	1.1.122	2	WB 75 1559	Iron	SASW	SASW	TRADW	-	6.47	11.58	13.61	13.61	14.72	60.00	0.91	9.31	11.38		21.60
142	3 Axle	1.22	2	WB 39 3798	Iron	SASW	TADW	-	-	7.38	12.82	12.04			32.24	1.54	7.35			8.89
143	3 Axle	1.22	1	WB 33 2089	Empty	SASW	TADW	-	-	4.22	4.08	3.94			12.24	0.16	0.08			0.24
144	2 Axle	1.2	1	WB 19 0373	Empty	SASW	SADW	-	-	4.02	3.94				7.96	0.14	0.05			0.19
145	5 Axle	1.1.122	2	PB 13 7402	Chemical	SASW	SASW	TRADW	-	6.29	12.07	13.26	14.34	14.04	60.00	0.81	11.00	11.05		22.86
146	5 Axle	1.2.222	1	NL01 3339	Empty	SASW	SADW	TRADW	-	4.22	4.08		3.94	0.37	12.61	0.16	0.06	0.00		0.23
147	5 Axle	1.2.222	2	UP 70 5263	gas	SASW	SADW	TRADW	-	6.66	11.77	12.89	14.66	14.02	60.00	1.02	4.33	10.98		16.33
148	3 Axle	1.22	2	WB 37 9044	Oil	SASW	TADW	-	-	7.38	12.82	11.02			31.22	1.54	6.22			7.76
149	4 Axle	1.2.22	2	UP 70 9126	Gas	SASW	SADW	TADW	-	6.22	10.82	12.92	12.04		42.00	0.78	3.10	7.47		11.34
150	3 Axle	1.22	1	WB 37 3008	Empty	SASW	TADW	-	-	4.62	4.32	3.44			12.38	0.24	0.07			0.31
151	4 Axle	1.1.22	1	WB 37 5326	Empty	SASW	SASW	TADW	-	4.42		3.94	3.74		12.10	0.20		0.07		0.26
152	5 Axle	1.1.122	2	WB 15 9600	Iron	SASW	SASW	TRADW	-	7.21	9.00	15.35	14.40	14.04	60.00	1.40	3.41	13.51		18.31
153	3 Axle	1.22	1	WB 19 1741	Empty	SASW	TADW	-	-	4.42	4.32	4.08			12.82	0.20	0.10			0.29
154	3 Axle	1.22	2	WB 39 5620	Cement	SASW	TADW	-	-	7.38	9.02	14.08			30.48	1.54	5.48			7.02
155	3 Axle	1.22	2	WB 25 0800	Gas	SASW	TADW	-	-	7.38	12.82	12.04			32.24	1.54	7.35			8.89

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
156	3 Axle	1.22	2	WB 37 6575	Oil	SASW	TADW	-	-	7.82	13.96	13.14			34.92	1.94	10.38			12.32
157	4 Axle	1.1.22	2	NL01	Iron	SASW	SASW	TADW	-	7.40	11.81	12.42	12.08		43.71	1.55	10.08	6.94		18.57
158	3 Axle	1.22	2	WB 39 1372	Gitti	SASW	TADW	-	-	7.82	15.02	14.08			36.92	1.94	13.80			15.74
159	4 Axle	1.1.22	1	WB 29 6720	Empty	SASW	SASW	TADW	-	3.82		3.74	3.46		11.02	0.11		0.05		0.16
160	5 Axle	1.2.222	2	WB 37 5332	Coal	SASW	SADW	TRADW	-	7.27	9.68	10.27	16.93	15.85	60.00	1.45	1.98	12.62		16.05
161	2 Axle	1.2	2	BR	Parcel	SASW	SADW	-	-	6.72	9.18				15.90	1.06	1.60			2.66
162	2 Axle	1.2	2	WB 37 3376	Gas	SASW	SADW	-	-	7.38	11.02				18.40	1.54	3.33			4.87
163	5 Axle	1.1.122	1	WB 67 1055	Empty	SASW	SASW	TRADW	-	5.38	4.82		4.32	4.08	18.60	0.43	0.28	0.02		0.73
164	5 Axle	1.1.122	1	WB 67 1011	Empty	SASW	SASW	TRADW	-	5.58	5.18		4.92	4.48	20.16	0.50	0.37	0.03		0.90
165	3 Axle	1.22	2	WB 27 6677	Oil	SASW	TADW	-	-	7.78	13.82	13.14			34.74	1.90	10.17			12.07
166	3 Axle	1.22	2	WB 39 8796	Iron	SASW	TADW	-	-	7.38	13.12	12.04			32.54	1.54	7.71			9.25
167	4 Axle	1.1.22	2	WB 39 1003	Oil	SASW	SASW	TADW	-	7.59	12.66	12.08	13.56		45.89	1.72	13.31	8.32		23.35
168	4 Axle	1.1.22	1	WB 25 5867	Empty	SASW	SASW	TADW	-	4.62		4.08	3.94		12.64	0.24		0.08		0.32
169	3 Axle	1.22	1	WB 53 70 86	Empty	SASW	TADW	-	-	4.02	3.94	3.66			11.62	0.14	0.06			0.20
170	4 Axle	1.1.22	2	WB 39 6701	Cement	SASW	SASW	TADW	-	7.38	9.52	13.82	13.14		43.86	1.54	4.26	10.17		15.96
171	4 Axle	1.2.22	2	PB 10 3922	Pipe	SASW	SADW	TADW	-	7.82	13.82	15.18	14.08		50.90	1.94	8.24	14.11		24.29
172	LCV	1.2	2	UP 14 4419	Parcel	SASW	SADW	-	-	3.82	7.12				10.94	0.11	0.58			0.69
173	4 Axle	1.1.22	2	RJ 06 2794	Chemical	SASW	SASW	TADW	-	7.82	8.43	13.02	12.04		41.31	1.94	2.62	7.59		12.15
174	5 Axle	1.1.122	2	WB 33 3231	Cement	SASW	SASW	TRADW	-	7.74	12.10	10.83	15.03	14.29	60.00	1.86	11.11	9.55		22.53
175	3 Axle	1.22	2	WB 51 1892	Milk	SASW	TADW	-	-	6.02	11.18	10.06			27.26	0.68	3.92			4.60
176	3 Axle	1.22	1	WB 27 4337	Empty	SASW	TADW	-	-	4.22	3.94	3.74			11.90	0.16	0.07			0.23
177	2 Axle	1.2	2	NL01 5902	Parcel	SASW	SADW	-	-	6.42	10.34				16.76	0.88	2.58			3.46
178	3 Axle	1.22	1	WB 39 6611	Empty	SASW	TADW	-	-	4.33	4.08	3.94			12.35	0.18	0.08			0.26
179	3 Axle	1.22	2	NL 01 2890	Parcel	SASW	TADW	-	-	7.38	11.82	11.06			30.26	1.54	5.28			6.81
180	5 Axle	1.1.122	1	WB 39 2596	Empty	SASW	SASW	TRADW	-	4.72	4.32		4.08	3.82	16.94	0.26	0.18	0.01		0.45
181	4 Axle	1.1.22	2	WB 29 0805	Coal	SASW	SASW	TADW	-	7.92	9.52	15.18	14.08		46.70	2.04	4.26	14.11		20.41
182	3 Axle	1.22	1	WB 39 2429	Empty	SASW	TADW	-	-	4.18	3.94	3.74			11.86	0.16	0.07			0.23
183	5 Axle	1.2.222	1	WB 67 1992	Empty	SASW	SADW	TRADW	-	7.38	5.06		4.92	4.42	21.78	1.54	0.15	0.03		1.71
184	4 Axle	1.2.22	2	WB 56 5212	Oil	SASW	SADW	TADW	-	7.82	12.22	15.02	14.08		49.14	1.94	5.04	13.80		20.78
185	5 Axle	1.1.122	2	UP 71	Iron	SASW	SASW	TRADW	-	7.83	9.92	13.18	13.66	12.42	57.01	1.95	5.02	8.73		15.70
186	5 Axle	1.1.122	1	WB 41 2003	Empty	SASW	SASW	TRADW	-	7.22	4.92		4.58	4.32	21.04	1.41	0.30	0.02		1.73

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
187	LCV	1.2	2	WB 20	Gas	SASW	SADW	-	-	6.22	11.02				17.24	0.78	3.33			4.11
188	3 Axle	1.22	2	HR 37 1467	Parcel	SASW	TADW	-	-	6.58	11.82	11.06			29.46	0.97	5.28			6.25
189	2 Axle	1.2	2	WB 39 8208	Oil	SASW	SADW	-	-	7.22	1.28				8.50	1.41	0.00			1.41
190	3 Axle	1.22	1	WB 37 7081	Empty	SASW	TADW	-	-	6.08	3.96	3.74			13.78	0.71	0.07			0.78
191	5 Axle	1.2.222	2	WB 45 8145	Gitti	SASW	SADW	TRADW	-	6.75	10.16	13.98	14.51	14.61	60.00	1.07	2.40	12.68		16.15
192	4 Axle	1.1.22	2	WB 39 4851	Gitti	SASW	SASW	TADW	-	8.22	10.42	16.42	16.08		51.14	2.37	6.11	21.48		29.95
193	3 Axle	1.22	2	TN 3028	Dhaga	SASW	TADW	-	-	6.42	12.22	13.08			31.72	0.88	7.89			8.77
194	4 Axle	1.1.22	2	KA 1 8449	Gas	SASW	SASW	TADW	-	6.48	12.43	13.14	13.46		45.51	0.91	12.37	9.64		22.92
195	4 Axle	1.1.22	2	WB 37 5101	Iron	SASW	SASW	TADW	-	7.38	13.82	13.02	12.48		46.70	1.54	18.90	8.14		28.58
196	4 Axle	1.1.22	1	WB 97 5580	Empty	SASW	SASW	TADW	-	4.82		4.32	4.08		13.22	0.28		0.10		0.38
197	3 Axle	1.22	2	KA 25 9347	Parcel	SASW	TADW	-	-	6.42	11.18	10.06			27.66	0.88	3.92			4.80
198	5 Axle	1.2.222	1	WB 39 1876	Empty	SASW	SADW	TRADW	-	5.39	4.82		4.32	4.08	18.61	0.44	0.12	0.02		0.58
199	2 Axle	1.2	2	WB 37 8057	Oil	SASW	SADW	-	-	7.38	11.02				18.40	1.54	3.33			4.87
200	2 Axle	1.2	2	JH 02 4822	Oil	SASW	SADW	-	-	6.42	10.14				16.56	0.88	2.39			3.27
201	4 Axle	1.1.22	2	WB 57 4115	Gitti	SASW	SASW	TADW	-	7.38	11.02	16.82	16.03		51.25	1.54	7.64	22.42		31.60
202	5 Axle	1.1.122	2	WB 33 8523	Tiles	SASW	SASW	TRADW	-	7.42	9.82	13.82	13.14	12.42	56.62	1.57	4.82	8.84		15.23
203	5 Axle	1.2.222	2	UP 67 2466	Gas	SASW	SADW	TRADW	-	7.38	10.22	12.42	13.18	12.04	55.24	1.54	2.46	7.38		11.38
204	3 Axle	1.22	2	RJ 32 4415	Parcel	SASW	TADW	-	-	7.02	12.32	6.04			25.38	1.26	2.19			3.45
205	LCV	1.2	1	UP 66 2292	Empty	SASW	SADW	-	-	2.34	1.34				3.68	0.02	0.00			0.02
206	3 Axle	1.22	2	HR 55 2299	Pipe	SASW	TADW	-	-	7.38	13.14	12.48			33.00	1.54	8.29			9.83
207	3 Axle	1.22	1	WB 27 3221	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
208	3 Axle	1.22	2	NL 01 2806	Parcel	SASW	TADW	-	-	6.42	13.14	12.34			31.90	0.88	8.11			8.99
209	3 Axle	1.22	2	NL01 4872	Parcel	SASW	TADW	-	-	6.82	12.48	12.04			31.34	1.12	6.96			8.08
210	3 Axle	1.22	2	WB 41 4068	Food	SASW	TADW	-	-	7.68	12.22	12.04			31.94	1.80	6.67			8.47
211	5 Axle	1.1.122	1	WB 67 1227	Empty	SASW	SASW	TRADW	-	5.38	4.82		5.23	4.63	20.06	0.43	0.28	0.03		0.75
212	3 Axle	1.22	1	WB 39 2244	Empty	SASW	TADW	-	-	4.02	3.94	3.74			11.70	0.14	0.07			0.20
213	4 Axle	1.1.22	2	WB 39 5029	Cement	SASW	SASW	TADW	-	7.38	9.52	13.82	13.14		43.86	1.54	4.26	10.17		15.96
214	4 Axle	1.1.22	1	WB 65 1369	Empty	SASW	SASW	TADW	-	6.82		4.32	4.08		15.22	1.12		0.10		1.22
215	4 Axle	1.1.22	2	WB 11 7411	Iron	SASW	SASW	TADW	-	7.82	9.82	12.62	12.04		42.30	1.94	4.82	7.12		13.88
216	4 Axle	1.1.22	2	JH 10 3505	Rice	SASW	SASW	TADW	-	7.38	9.82	5.02	14.08		36.30	1.54	4.82	2.56		8.92
217	3 Axle	1.22	2	WB 37 3495	Gitti	SASW	TADW	-	-	7.38	12.62	14.02			34.02	1.54	9.70			11.23

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
218	5 Axle	1.2.222	2	WB 39 3528	Rice	SASW	SADW	TRADW	-	6.28	9.74	12.54	12.02	11.48	52.06	0.81	2.03	6.20		9.04
219	5 Axle	1.2.222	2	UP 70 9523	Gas	SASW	SADW	TRADW	-	7.04	12.22	9.86	15.56	15.33	60.00	1.27	5.04	10.13		16.43
220	4 Axle	1.1.22	2	WB 41 7868	Gitti	SASW	SASW	TADW	-	7.82	9.82	15.18	14.08		46.90	1.94	4.82	14.11		20.87
221	3 Axle	1.22	2	UP 7 6403	Parcel	SASW	TADW	-	-	7.38	10.32	9.82			27.52	1.54	3.17			4.70
222	Bus	1.2	2	BR 08 5043	Passenger	SASW	SADW	-	-	6.02	8.42				14.44	0.68	1.14			1.82
223	2 Axle	1.2	2	CH 01 2987	Parcel	SASW	SADW	-	-	6.42	10.32				16.74	0.88	2.56			3.44
224	5 Axle	1.1.122	2	PB 05 7911	Pipe	SASW	SASW	TRADW	-	7.38	8.42	10.94	13.82	13.14	53.70	1.54	2.60	7.58		11.72
225	5 Axle	1.1.122	1	WB 67 1095	Empty	SASW	SASW	TRADW	-	4.72	4.32		4.08	3.82	16.94	0.26	0.18	0.01		0.45
226	4 Axle	1.1.22	2	HR 74 7793	Oil	SASW	SASW	TADW	-	7.38	8.42	15.02	14.43		45.25	1.54	2.60	14.48		18.62
227	4 Axle	1.2.22	2	UP 42 3561	Gas	SASW	SADW	TADW	-	7.82	9.18	11.02	10.26		38.28	1.94	1.60	3.95		7.49
228	5 Axle	1.1.1.22	1	PB 06 9041	Empty	SASW	SASW	SASW	TADW	4.22	4.08		3.82	3.74	15.86	0.16	0.14		0.00	0.31
229	5 Axle	1.1.1.22	2	WB 67 7879	Gitti	SASW	SASW	SASW	TADW	7.83	9.92	12.42	14.02	14.46	58.65	1.95	5.02	12.33	0.84	20.14
230	3 Axle	1.22	2	WB 11 2191	Bike	SASW	TADW	-	-	6.42	10.32	9.14			25.88	0.88	2.76			3.64
231	4 Axle	1.1.22	2	WB 11 6447	Gitti	SASW	SASW	TADW	-	7.38	10.42	14.02	13.95		45.77	1.54	6.11	11.78		19.43
232	4 Axle	1.1.22	2	WB 31 4741	Gitti	SASW	SASW	TADW	-	7.82	10.62	15.18	14.08		47.70	1.94	6.59	14.11		22.64
233	4 Axle	1.1.22	2	NL 02 0159	Iron	SASW	SASW	TADW	-	6.42	10.82	13.82	13.14		44.20	0.88	7.10	10.17		18.15
234	4 Axle	1.1.22	2	TR 01 1755	Cement	SASW	SASW	TADW	-	7.38	10.42	13.92	12.94		44.66	1.54	6.11	10.02		17.67
235	3 Axle	1.22	2	RJ 32 3342	Rice	SASW	TADW	-	-	7.38	13.83	13.34			34.55	1.54	10.49			12.03
236	3 Axle	1.22	2	WB 25 9055	Iron	SASW	TADW	-	-	7.52	14.42	14.08			36.02	1.66	12.70			14.36
237	LCV	1.2	2	WB 11 8772	Cement	SASW	SADW	-	-	3.58	6.48				10.06	0.09	0.40			0.48
238	4 Axle	1.2.22	2	WB 11 6555	Cement	SASW	SADW	TADW	-	7.38	13.82	15.82	15.14		52.16	1.54	8.24	17.69		27.46
239	4 Axle	1.1.22	2	BR 25 4665	Tiles	SASW	SASW	TADW	-	7.26	9.52	12.42	13.82		43.02	1.44	4.26	9.13		14.82
240	4 Axle	1.1.22	1	NL01 9766	Empty	SASW	SASW	TADW	-	4.82		4.32	4.08		13.22	0.28		0.10		0.38
241	4 Axle	1.1.22	2	RJ 19 5213	Parcel	SASW	SASW	TADW	-	6.22	9.52	12.42	12.04		40.20	0.78	4.26	6.89		11.92
242	4 Axle	1.1.22	1	WB 25 5498	Empty	SASW	SASW	TADW	-	4.62		4.22	3.94		12.78	0.24		0.09		0.32
243	3 Axle	1.22	2	NL01 5513	Parcel	SASW	TADW	-	-	7.38	10.22	9.92			27.52	1.54	3.17			4.70
244	2 Axle	1.2	2	WB 37 9330	Gas	SASW	SADW	-	-	7.56	10.22				17.78	1.69	2.46			4.16
245	Bus	1.2	2	BR 31 2709	Passenger	SASW	SADW	-	-	7.38	8.83				16.21	1.54	1.37			2.91
246	4 Axle	1.1.22	2	NL01 3265	Oil	SASW	SASW	TADW	-	7.78	9.82	13.82	13.14		44.56	1.90	4.82	10.17		16.89
247	4 Axle	1.1.22	1	UP 73 7029	Empty	SASW	SASW	TADW	-	6.82		4.62	4.42		15.86	1.12		0.13		1.25
248	3 Axle	1.22	2	HR 55 0407	Parcel	SASW	TADW	-	-	7.22	10.22	10.14			27.58	1.41	3.31			4.72

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
249	LCV	1.2	2	BR 01	Milk	SASW	SADW	-	-	2.62	6.42				9.04	0.02	0.38			0.41
250	LCV	1.2	2	UP 17 0078	Parcel	SASW	SADW	-	-	2.82	6.32				9.14	0.03	0.36			0.39
251	4 Axle	1.1.22	2	BR 11 5059	Iron	SASW	SASW	TADW	-	7.38	9.84	13.91	13.14		44.27	1.54	4.86	10.31		16.70
252	LCV	1.2	2	MH 48 9933	Milk	SASW	SADW	-	-	3.62	7.82				11.44	0.09	0.84			0.93
253	LCV	1.2	1	WB 39 1208	Empty	SASW	SADW	-	-	2.42	9.88				12.30	0.02	2.15			2.17
254	4 Axle	1.1.22	2	HR 38 2725	Food	SASW	SASW	TADW	-	7.38	8.42	13.83	13.03		42.66	1.54	2.60	10.02		14.16
255	3 Axle	1.22	1	JH 10	Empty	SASW	TADW	-	-	4.22	4.08	3.83			12.13	0.16	0.08			0.24
256	5 Axle	1.2.222	2	NL01 5887	Iron	SASW	SADW	TRADW	-	7.48	9.48	10.94	13.48	13.50	54.88	1.62	1.82	7.60		11.04
257	5 Axle	1.2.222	2	NL 01 0188	Pipe	SASW	SADW	TRADW	-	6.94	9.48	10.94	11.68	10.68	49.72	1.20	1.82	4.52		7.54
258	3 Axle	1.22	2	GJ 27 4305	Parcel	SASW	TADW	-	-	7.74	11.74	10.54			30.02	1.86	4.74			6.60
259	3 Axle	1.22	1	WB 11 3778	Empty	SASW	TADW	-	-	4.34	4.74	4.16			13.24	0.18	0.12			0.30
260	2 Axle	1.2	2	WB 23 3796	Medicine	SASW	SADW	-	-	5.42	7.48				12.90	0.45	0.71			1.15
261	5 Axle	1.2.222	1	PB 13 9943	Empty	SASW	SADW	TRADW	-	6.34	4.74		4.02	3.88	18.98	0.84	0.11	0.01		0.97
262	5 Axle	1.1.122	1	WB 23 5529	Empty	SASW	SASW	TRADW	-	7.10	4.82		3.94	3.68	19.54	1.32	0.28	0.01		1.61
263	5 Axle	1.1.122	2	HR 60 5370	Refind	SASW	SASW	TRADW	-	6.66	5.82	10.94	12.34	12.03	47.79	1.02	0.59	5.71		7.33
264	4 Axle	1.1.22	2	NL 01 8715	Iron	SASW	SASW	TADW	-	6.34	7.62	9.70	8.98		32.64	0.84	1.75	2.34		4.93
265	3 Axle	1.22	2	HR 38 3765	Refind	SASW	TADW	-	-	7.16	11.48	12.16			30.80	1.36	6.01			7.37
266	5 Axle	1.1.122	1	WB 11 7317	Empty	SASW	SASW	TRADW	-	4.62	4.94		5.34	4.62	19.52	0.24	0.31	0.04		0.58
267	3 Axle	1.22	2	WB 39 8715	Gas	SASW	TADW	-	-	6.34	11.64	10.94			28.92	0.84	5.00			5.84
268	5 Axle	1.1.122	1	WB 29 8589	Empty	SASW	SASW	TRADW	-	3.74	3.36		3.88	7.56	18.54	0.10	0.07	0.06		0.23
269	5 Axle	1.1.122	2	WB 39 3840	Iron	SASW	SASW	TRADW	-	6.34	8.14	10.94	11.70	10.82	47.94	0.84	2.27	4.61		7.72
270	5 Axle	1.2.222	1	WB 11 3992	Empty	SASW	SADW	TRADW	-	4.22	3.90		3.74	3.58	15.44	0.16	0.05	0.01		0.23
271	3 Axle	1.22	2	WB 37 4754	Iron	SASW	TADW	-	-	6.23	9.62	9.34			25.19	0.78	2.49			3.27
272	5 Axle	1.1.122	1	WB 25 0502	Empty	SASW	SASW	TRADW	-	4.82	4.24		4.74	4.16	17.96	0.28	0.17	0.02		0.47
273	3 Axle	1.22	1	WB 29 8733	Empty	SASW	TADW	-	-	4.28	4.14	3.94			12.36	0.17	0.08			0.26
274	3 Axle	1.22	2	WB 25 8214	Gas	SASW	TADW	-	-	6.23	8.14	9.34			23.71	0.78	1.80			2.58
275	5 Axle	1.1.122	1	WB 43 2945	Empty	SASW	SASW	TRADW	-	7.23	4.82		4.84	4.74	21.63	1.42	0.28	0.03		1.73
276	3 Axle	1.22	2	WB 17 7489	Parsal	SASW	TADW	-	-	7.82	8.54	8.14			24.50	1.94	1.49			3.43
277	2 Axle	1.2	1	NL01 9431	Empty	SASW	SADW	-	-	6.23	4.08				10.31	0.78	0.06			0.84
278	5 Axle	1.2.222	1	MH 42 8715	Empty	SASW	SADW	TRADW	-	5.23	4.28		4.84	4.48	18.83	0.39	0.08	0.03		0.49
279	5 Axle	1.2.222	1	MH 14 7815	Empty	SASW	SADW	TRADW	-	4.43	4.20		4.68	4.23	17.54	0.20	0.07	0.02		0.29

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
280	4 Axle	1.1.22	1	TN 71 8415	Empty	SASW	SASW	TADW	-	4.62		4.34	4.16		13.12	0.24		0.10		0.34
281	5 Axle	1.1.122	2	WB 33 1142	Stone	SASW	SASW	TRADW	-	6.42	8.54	10.94	11.62	11.28	48.80	0.88	2.76	4.82		8.46
282	3 Axle	1.22	1	WB 37 1672	Empty	SASW	TADW	-	-	4.34	3.94	3.34			11.62	0.18	0.05			0.24
283	3 Axle	1.22	2	DL 1G 3972	Rice	SASW	TADW	-	-	4.54	9.74	8.56			22.84	0.22	2.16			2.38
284	6 Axle	1.22.222	2	NL 01 4888	Chemical	SASW	TADW	TRADW	-	5.53	10.75	9.77	11.96	11.38	49.39	0.48	3.41	4.42		8.31
285	4 Axle	1.1.22	2	JH 02 5686	Rice	SASW	SASW	TADW	-	5.02	9.52	14.48	14.08		43.10	0.33	4.26	12.81		17.39
286	5 Axle	1.1.122	1	WB 69 9066	Empty	SASW	SASW	TRADW	-	4.56	4.10		3.88	3.56	16.10	0.22	0.15	0.01		0.38
287	5 Axle	1.1.122	2	WB 29 3906	Iron	SASW	SASW	TRADW	-	4.54	4.94	10.94	9.74	9.36	39.52	0.22	0.31	2.99		3.52
288	4 Axle	1.1.22	2	WB 11 4033	Rice	SASW	SASW	TADW	-	5.48	9.52	13.74	12.96		41.70	0.47	4.26	9.78		14.51
289	5 Axle	1.1.122	1	WB 65 6284	Empty	SASW	SASW	TRADW	-	5.08	3.70		4.42	3.62	16.82	0.35	0.10	0.02		0.46
290	5 Axle	1.1.122	1	UP 14 1025	Empty	SASW	SASW	TRADW	-	4.82	3.74		4.63	4.16	17.35	0.28	0.10	0.02		0.40
291	2 Axle	1.2	2	WB 11 30 75	Biskut	SASW	SADW	-	-	4.34	7.28				11.62	0.18	0.63			0.82
292	5 Axle	1.1.122	2	WB 31 5754	Coal	SASW	SASW	TRADW	-	7.48	8.56	10.12	11.64	10.64	48.44	1.62	2.78	4.05		8.45
293	3 Axle	1.22	2	HR 55 4130	Parsal	SASW	TADW	-	-	4.30	4.02	3.94			12.26	0.18	0.08			0.25
294	5 Axle	1.1.122	1	WB 17 6877	Empty	SASW	SASW	TRADW	-	4.28	4.68		4.14	4.30	17.40	0.17	0.25	0.02		0.44
295	5 Axle	1.1.1.22	1	WB 11 7092	Empty	SASW	SASW	SASW	TADW	4.34	4.96		4.68	4.40	18.38	0.18	0.31		0.01	0.50
296	5 Axle	1.2.222	2	WB 67 1530	Gitti	SASW	SADW	TRADW	-	6.54	8.14	10.94	11.70	10.80	48.12	0.95	0.99	4.59		6.53
297	2 Axle	1.2	2	NL 01 6954	Parsal	SASW	SADW	-	-	6.34	9.78				16.12	0.84	2.07			2.90
298	3 Axle	1.22	1	WB 39 8519	Empty	SASW	TADW	-	-	4.43	4.16	3.94			12.53	0.20	0.08			0.28
299	4 Axle	1.1.22	2	WB 33 4737	Powder	SASW	SASW	TADW	-	5.88	9.52	10.14	10.02		35.56	0.62	4.26	3.18		8.06
300	3 Axle	1.22	2	HR 55 7707	Dana	SASW	TADW	-	-	6.54	10.94	11.08			28.56	0.95	4.53			5.47
301	2 Axle	1.2	2	WB 41 0383	Oil	SASW	SADW	-	-	5.34	11.48				16.82	0.42	3.92			4.34
302	3 Axle	1.22	2	WB 65 8766	Parsal	SASW	TADW	-	-	5.02	9.54	10.98			25.54	0.33	3.41			3.74
303	4 Axle	1.1.22	2	WB 37 8901	Oil	SASW	SASW	TADW	-	6.82	8.74	14.21	13.74		43.51	1.12	3.02	11.75		15.89
304	3 Axle	1.22	1	WB 50 2061	Empty	SASW	TADW	-	-	4.52	4.22	3.94			12.68	0.22	0.09			0.30
305	2 Axle	1.2	1	WB 43 4837	Empty	SASW	SADW	-	-	1.82	1.74				3.56	0.01	0.00			0.01
306	5 Axle	1.1.122	1	BR 02 6221	Empty	SASW	SASW	TRADW	-	5.63	4.94		5.42	5.03	21.02	0.52	0.31	0.04		0.87
307	3 Axle	1.22	2	WB 67 1126	Iron	SASW	TADW	-	-	5.22	12.76	12.14			30.12	0.38	7.40			7.78
308	4 Axle	1.1.22	1	JH 10 0713	Empty	SASW	SASW	TADW	-	4.72		4.34	3.88		12.94	0.26		0.09		0.35
309	2 Axle	1.2	2	WB 27 3793	Milk	SASW	SADW	-	-	5.43	7.34				12.77	0.45	0.66			1.11
310	4 Axle	1.2.22	2	WB 19 4377	Gas	SASW	SADW	TADW	-	5.02	13.02	12.34	11.96		42.34	0.33	6.49	6.71		13.53

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
311	4 Axle	1.1.22	1	PB 11 7938	Empty	SASW	SASW	TADW	-	4.62		4.34	4.18		13.14	0.24		0.10		0.34
312	3 Axle	1.22	1	JH 02 5104	Empty	SASW	TADW	-	-	4.94	4.54	4.23			13.71	0.31	0.11			0.42
313	3 Axle	1.22	2	WB 21 4451	Oil	SASW	TADW	-	-	7.14	9.56	8.98			25.68	1.35	2.27			3.62
314	3 Axle	1.22	2	WB 53 0450	Coal	SASW	TADW	-	-	8.14	13.74	12.96			34.84	2.27	9.78			12.06
315	4 Axle	1.1.22	2	JH 10 0430	Potato	SASW	SASW	TADW	-	8.94	9.52	13.94	12.28		44.68	3.31	4.26	9.10		16.66
316	4 Axle	1.1.22	2	WB 41 4923	Coal	SASW	SASW	TADW	-	7.74	9.52	13.14	12.62		43.02	1.86	4.26	8.48		14.59
317	5 Axle	1.1.122	1	WB 53 6262	Empty	SASW	SASW	TRADW	-	4.82	4.34		4.22	3.83	17.21	0.28	0.18	0.02		0.48
318	2 Axle	1.2	2	WB 37 1125	par	SASW	SADW	-	-	6.42	8.36				14.78	0.88	1.10			1.98
319	3 Axle	1.22	2	WB 33 6421	Clothes	SASW	TADW	-	-	5.23	12.36	11.48			29.07	0.39	6.22			6.61
320	6 Axle	1.22.222	1	WB 29 1624	Empty	SASW	TADW	TRADW	-	3.88	3.74		3.96	3.74	15.32	0.12	0.00	0.01		0.13
321	4 Axle	1.1.22	2	WB 15 4417	Coal	SASW	SASW	TADW	-	6.94	9.52	13.42	12.96		42.84	1.20	4.26	9.32		14.78
322	4 Axle	1.1.22	1	WB 39 3197	Empty	SASW	SASW	TADW	-	4.92		4.42	13.56		22.90	0.30		2.01		2.32
323	4 Axle	1.222	2	UP 15 1297	Chemical	SASW	TRADW	-	-	5.42	9.52	12.54	4.28		31.76	0.45	1.77			2.22
324	2 Axle	1.2	1	WB 41 3662	Empty	SASW	SADW	-	-	2.94	2.76				5.70	0.04	0.01			0.05
325	4 Axle	1.1.22	2	BR 02 1791	Coal	SASW	SASW	TADW	-	5.22	9.52	12.68	12.14		39.56	0.38	4.26	7.31		11.95
326	2 Axle	1.2	2	WB 39 1634	Hey	SASW	SADW	-	-	3.88	6.34				10.22	0.12	0.36			0.48
327	2 Axle	1.2	2	WB 57 7568	Iron	SASW	SADW	-	-	2.94	5.36				8.30	0.04	0.19			0.23
328	5 Axle	1.1.122	2	WB 41 9465	Gitti	SASW	SASW	TRADW	-	7.42	9.36	10.94	13.63	13.14	54.49	1.57	3.98	7.43		12.98
329	3 Axle	1.22	1	JH 02 2611	Empty	SASW	TADW	-	-	4.23	4.02	3.96			12.21	0.17	0.08			0.24
330	3 Axle	1.22	1	WB 16 4170	Empty	SASW	TADW	-	-	4.22	4.16	3.88			12.26	0.16	0.08			0.24
331	3 Axle	1.22	2	WB 29 8062	Parcel	SASW	TADW	-	-	6.42	9.76	8.74			24.92	0.88	2.25			3.14
332	2 Axle	1.2	2	NL01 1551	Bulb	SASW	SADW	-	-	6.56	12.08				18.64	0.96	4.81			5.77
333	5 Axle	1.1.122	1	WB 51 7686	Empty	SASW	SASW	TRADW	-	4.42	4.34		4.08	3.96	16.80	0.20	0.18	0.02		0.40
334	5 Axle	1.2.222	2	RJ 51 1588	Iron	SASW	SADW	TRADW	-	6.48	13.74	13.08	13.54	13.08	59.92	0.91	8.05	9.13		18.09
335	2 Axle	1.2	1	UP 34 1522	Empty	SASW	SADW	-	-	2.84	2.76				5.60	0.03	0.01			0.05
336	5 Axle	1.1.122	2	WB 45 7166	Gitti	SASW	SASW	TRADW	-	7.88	10.77	9.55	16.19	15.61	60.00	1.99	6.98	10.74		19.72
337	4 Axle	1.1.22	1	WB 37 5265	Empty	SASW	SASW	TADW	-	4.62		4.34	3.96		12.92	0.24		0.09		0.33
338	4 Axle	1.1.22	2	WB 41 0910	Iron	SASW	SASW	TADW	-	7.40	8.54	13.68	12.94		42.56	1.55	2.76	9.67		13.98
339	5 Axle	1.1.122	1	WB 41 6913	Empty	SASW	SASW	TRADW	-	4.82	5.08		5.48	4.76	20.14	0.28	0.35	0.04		0.67
340	5 Axle	1.1.122	1	UP 17 1970	Empty	SASW	SASW	TRADW	-	4.62	4.34		4.88	4.56	18.40	0.24	0.18	0.03		0.45
341	3 Axle	1.22	1	WB 31 1734	Empty	SASW	TADW	-	-	4.62	4.28	4.14			13.04	0.24	0.10			0.33

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
342	3 Axle	1.22	1	WB 03 3872	Empty	SASW	TADW	-	-	4.94	4.42	4.18			13.54	0.31	0.11			0.41
343	3 Axle	1.22	2	HR 38 4356	Parcel	SASW	TADW	-	-	6.54	9.82	9.58			25.94	0.95	2.73			3.67
344	3 Axle	1.22	2	WB 41 5360	Oil	SASW	TADW	-	-	4.34	8.54	8.18			21.06	0.18	1.50			1.69
345	2 Axle	1.2	2	WB 14 4370	Parcel	SASW	SADW	-	-	5.82	8.48				14.30	0.59	1.17			1.76
346	2 Axle	1.2	2	WB 40 5220	Oil	SASW	SADW	-	-	7.14	9.43				16.57	1.35	1.79			3.13
347	4 Axle	1.1.22	2	UP 77 4710	Gas	SASW	SASW	TADW	-	7.02	12.54	13.14	12.36		45.06	1.26	12.81	8.14		22.21
348	5 Axle	1.1.122	2	WB 14 0368	Cement	SASW	SASW	TRADW	-	8.23	10.28	10.94	14.21	13.88	57.54	2.38	5.79	8.53		16.69
349	5 Axle	1.1.122	2	NL 01 4071	JCB	SASW	SASW	TRADW	-	4.94	8.36	12.14	11.36	10.94	47.74	0.31	2.53	5.17		8.01
350	2 Axle	1.2	2	WB 44 7105	Milk	SASW	SADW	-	-	7.14	10.10				17.24	1.35	2.35			3.70
351	5 Axle	1.2.222	2	WB 70 4270	Iron	SASW	SADW	TRADW	-	7.96	9.94	13.94	13.08	12.34	57.26	2.08	2.21	8.82		13.10
352	2 Axle	1.2	1	WB 40 6270	Empty	SASW	SADW	-	-	3.33	2.62				5.95	0.06	0.01			0.07
353	4 Axle	1.2.22	2	WB 17 6042	Car	SASW	SADW	TADW	-	6.83	1.10	12.94	13.88		34.75	1.13	0.00	9.96		11.09
354	3 Axle	1.22	2	UP 21 0794	Parcel	SASW	TADW	-	-	6.42	9.94	8.76			25.12	0.88	2.35			3.23
355	2 Axle	1.2	2	UP 16 1079	Cement	SASW	SADW	-	-	3.28	7.22				10.50	0.06	0.61			0.67
356	5 Axle	1.1.122	2	WB 14 6070	Iron	SASW	SASW	TRADW	-	7.68	11.08	13.14	14.08	13.42	59.40	1.80	7.81	10.02		19.64
357	2 Axle	1.2	2	WB 37 4267	Potato	SASW	SADW	-	-	5.68	14.36				20.04	0.54	9.60			10.14
358	4 Axle	1.1.22	1	WB 41 6216	Empty	SASW	SASW	TADW	-	4.08		3.82	3.78		11.68	0.14		0.06		0.21
359	4 Axle	1.1.22	2	NL01 7464	Oil	SASW	SASW	TADW	-	6.82	13.14	13.74	13.08		46.78	1.12	15.45	9.96		26.53
360	4 Axle	1.1.22	1	WB 48 6217	Empty	SASW	SASW	TADW	-	4.54		4.34	4.18		13.06	0.22		0.10		0.32
361	2 Axle	1.2	2	NL01 1250	Parcel	SASW	SADW	-	-	6.23	10.21				16.44	0.78	2.45			3.24
362	3 Axle	1.22	1	WB 17 1650	Empty	SASW	TADW	-	-	5.22	4.08	3.97			13.27	0.38	0.08			0.47
363	2 Axle	1.2	2	WB 53 4412	Grocery	SASW	SADW	-	-	4.17	11.68				15.85	0.16	4.20			4.36
364	4 Axle	1.1.22	2	PB 11 4093	Machine	SASW	SASW	TADW	-	7.68	12.68	13.74	12.34		46.44	1.80	13.40	8.91		24.10
365	4 Axle	1.1.22	2	NL 01 6435	Potato	SASW	SASW	TADW	-	7.96	9.52	9.74	8.74		35.96	2.08	4.26	2.25		8.58
366	3 Axle	1.22	2	MH 04 1126	Parcel	SASW	TADW	-	-	0.62	9.78	8.74			19.14	0.00	2.26			2.26
367	3 Axle	1.22	2	HR 38 8247	Iron	SASW	TADW	-	-	7.23	11.63	10.34			29.20	1.42	4.48			5.90
368	5 Axle	1.2.222	2	WB 41 4270	Gas	SASW	SADW	TRADW	-	7.28	12.08	12.54	13.34	12.08	57.32	1.46	4.81	7.63		13.90
369	3 Axle	1.22	2	WB 13 1692	Gas	SASW	TADW	-	-	6.26	12.41	11.92			30.59	0.80	6.75			7.54
370	2 Axle	1.2	2	JH 04 5906	Potato	SASW	SADW	-	-	5.62	11.68				17.30	0.52	4.20			4.72
371	3 Axle	1.22	1	HR 55 6114	Empty	SASW	TADW	-	-	4.30	3.88	3.56			11.74	0.18	0.06			0.24
372	2 Axle	1.2	1	UP 76 1240	Empty	SASW	SADW	-	-	4.68	4.34				9.02	0.25	0.08			0.33

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
373	5 Axle	1.1.122	1	WB 48 4270	Empty	SASW	SASW	TRADW	-	4.62	4.43		3.94	3.72	16.71	0.24	0.20	0.01		0.45
374	2 Axle	1.2	1	WB 17 1470	Empty	SASW	SADW	-	-	4.23	3.82				8.05	0.17	0.05			0.21
375	5 Axle	1.1.122	2	AP 71 1270	Food	SASW	SASW	TRADW	-	6.70	10.34	13.74	14.48	14.02	59.28	1.04	5.92	11.70		18.67
376	4 Axle	1.1.22	2	WB 25 5699	Cement	SASW	SASW	TADW	-	6.22	9.52	15.36	14.08		45.18	0.78	4.26	14.46		19.49
377	2 Axle	1.2	1	WB 37 4780	Empty	SASW	SADW	-	-	3.10	3.94				7.04	0.05	0.05			0.10
378	4 Axle	1.1.22	1	WB 40 4270	Empty	SASW	SASW	TADW	-	4.62		4.30	4.02		12.94	0.24		0.09		0.33
379	3 Axle	1.22	2	KA 42 9650	Parcel	SASW	TADW	-	-	5.62	10.34	10.36			26.32	0.52	3.53			4.05
380	5 Axle	1.2.222	1	WB 39 4092	Empty	SASW	SADW	TRADW	-	4.42	4.22		4.32	4.02	16.98	0.20	0.07	0.02		0.29
381	2 Axle	1.2	2	UP 38 1670	Oil	SASW	SADW	-	-	7.14	10.34				17.48	1.35	2.58			3.93
382	3 Axle	1.22	2	KA 51 1865	Gas	SASW	TADW	-	-	7.48	10.81	10.16			28.45	1.62	3.72			5.34
383	4 Axle	1.1.22	2	WB 65 1870	Gitti	SASW	SASW	TADW	-	7.03	1.21	14.27	14.10		36.61	1.27	0.00	12.47		13.74
384	4 Axle	1.2.22	2	UP 65 0961	Gas	SASW	SADW	TADW	-	7.63	9.48	13.90	13.08		44.09	1.76	1.82	10.20		13.78
385	5 Axle	1.2.222	2	WB 40 4092	Tiles	SASW	SADW	TRADW	-	7.62	10.34	13.68	13.34	12.54	57.52	1.75	2.58	9.00		13.33
386	3 Axle	1.22	2	WB 27 2935	Parcel	SASW	TADW	-	-	6.34	9.70	9.34			25.38	0.84	2.53			3.37
387	3 Axle	1.22	1	JH 01 1187	Empty	SASW	TADW	-	-	2.70	3.90	3.74			10.34	0.03	0.07			0.09
388	3 Axle	1.22	2	UP 67 6040	Gitti	SASW	TADW	-	-	7.30	12.34	11.98			31.62	1.47	6.73			8.21
389	5 Axle	1.2.222	2	WB 11 6217	Gas	SASW	SADW	TRADW	-	6.90	10.12	12.34	12.94	12.76	55.06	1.17	2.37	7.69		11.24
390	3 Axle	1.22	2	WB 37 1671	Gas	SASW	TADW	-	-	7.62	11.62	11.96			31.20	1.75	5.95			7.70
391	5 Axle	1.1.122	1	WB 41 1127	Empty	SASW	SASW	TRADW	-	5.14	4.81		5.22	4.63	19.80	0.36	0.28	0.03		0.67
392	3 Axle	1.22	2	HR 66 1287	Parcel	SASW	TADW	-	-	6.94	11.68	10.94			29.56	1.20	5.04			6.24
393	3 Axle	1.22	1	WB 67 4170	Empty	SASW	TADW	-	-	4.23	4.14	3.88			12.25	0.17	0.08			0.25
394	5 Axle	1.1.122	1	PB 11 2634	Empty	SASW	SASW	TRADW	-	4.34	3.74		4.48	4.08	16.64	0.18	0.10	0.02		0.30
395	4 Axle	1.1.22	2	WB 29 2476	Cement	SASW	SASW	TADW	-	7.36	9.52	13.74	13.08		43.70	1.52	4.26	9.96		15.74
396	4 Axle	1.1.22	1	WB 29 4071	Empty	SASW	SASW	TADW	-	4.82		4.28	4.06		13.16	0.28		0.09		0.37
397	3 Axle	1.22	2	RJ 04 6434	Parcel	SASW	TADW	-	-	6.96	10.34	11.90			29.20	1.22	4.71			5.93
398	4 Axle	1.1.22	2	WB 41 5425	Iron	SASW	SASW	TADW	-	7.76	9.94	14.28	13.62		45.60	1.88	5.06	11.66		18.60
399	4 Axle	1.1.22	2	WB 25 7421	Rice	SASW	SASW	TADW	-	7.18	9.74	14.94	14.16		46.02	1.38	4.66	13.80		19.84
400	2 Axle	1.2	2	WB 39 2119	Gas	SASW	SADW	-	-	5.74	9.14				14.88	0.56	1.58			2.14
401	5 Axle	1.2.222	1	RJ 48 0872	Empty	SASW	SADW	TRADW	-	4.94	4.34		4.08	3.96	17.32	0.31	0.08	0.02		0.40
402	3 Axle	1.22	2	WB 39 3556	Gitti	SASW	TADW	-	-	7.14	13.48	13.08			33.70	1.35	9.58			10.93
403	5 Axle	1.2.222	2	WB 71 4270	Rice	SASW	SADW	TRADW	-	6.54	9.48	12.30	12.14	11.48	51.94	0.95	1.82	6.12		8.89

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
404	5 Axle	1.2.222	2	UP 25 1870	Gas	SASW	SADW	TRADW	-	7.08	12.72	14.19	13.36	12.65	60.00	1.30	5.91	9.60		16.81
405	4 Axle	1.1.22	2	WB 17 6217	Parcel	SASW	SASW	TADW	-	7.14	10.74	10.28	14.90		43.06	1.35	6.89	7.74		15.98
406	2 Axle	1.2	2	WB 17 6219	Medicine	SASW	SADW	-	-	2.62	7.56				10.18	0.02	0.74			0.76
407	4 Axle	1.1.22	2	PB 11 6814	Rice	SASW	SASW	TADW	-	7.56	8.54	13.48	12.96		42.54	1.69	2.76	9.41		13.86
408	4 Axle	1.1.22	2	UP 71 6840	Oil	SASW	SASW	TADW	-	7.02	8.34	14.74	14.36		44.46	1.26	2.51	13.80		17.57
409	4 Axle	1.1.22	2	UP 40 3417	Gas	SASW	SASW	TADW	-	7.42	9.34	11.34	10.28		38.38	1.57	3.94	4.21		9.72
410	5 Axle	1.1.122	1	PB 06 1762	Empty	SASW	SASW	TRADW	-	4.22	4.16		3.94	3.68	16.00	0.16	0.16	0.01		0.33
411	5 Axle	1.1.122	2	WB 17 6217	Gitti	SASW	SASW	TRADW	-	7.82	9.74	12.34	14.10	14.28	58.28	1.94	4.66	10.10		16.70
412	3 Axle	1.22	2	WB 40 1670	Bike	SASW	TADW	-	-	6.34	10.08	9.94			26.36	0.84	3.09			3.93
413	4 Axle	1.1.22	2	WB 14 6017	Gitti	SASW	SASW	TADW	-	7.48	11.34	14.08	13.74		46.64	1.62	8.57	11.53		21.72
414	2 Axle	1.2	2	NHL 01 6271	Parcel	SASW	SADW	-	-	5.08	7.74				12.82	0.35	0.81			1.16
415	5 Axle	1.1.122	1	WB 39 3881	Empty	SASW	SASW	TRADW	-	3.85	5.66		5.24	5.48	20.23	0.11	0.53	0.05		0.69
416	2 Axle	1.2	2	WB 40 7840	Gas	SASW	SADW	-	-	6.34	9.34				15.68	0.84	1.72			2.56
417	2 Axle	1.2	1	NL 01 8840	Empty	SASW	SADW	-	-	4.46	5.34				9.80	0.21	0.18			0.39
418	4 Axle	1.1.22	2	WB 61 4220	Iron	SASW	SASW	TADW	-	6.82	10.83	13.02	12.56		43.23	1.12	7.13	8.24		16.49
419	5 Axle	1.1.122	2	WB 29 4245	Gitti	SASW	SASW	TRADW	-	8.54	8.05	10.56	16.88	15.97	60.00	2.75	2.18	13.05		17.98
420	5 Axle	1.1.122	2	CH 01 6217	Iron	SASW	SASW	TRADW	-	7.54	9.74	10.94	14.54	13.94	56.70	1.67	4.66	8.87		15.21
421	4 Axle	1.1.22	2	WB 29 4001	CPFS	SASW	SASW	TADW	-	7.65	9.52	14.96	13.74		45.87	1.77	4.26	13.06		19.09
422	3 Axle	1.22	2	WB 39 5328	Cement	SASW	TADW	-	-	7.02	14.48	13.41			34.91	1.26	11.65			12.91
423	4 Axle	1.1.22	2	WB 53 9315	Gitti	SASW	SASW	TADW	-	7.74	0.96	14.54	13.94		37.18	1.86	0.00	12.66		14.52
424	4 Axle	1.2.22	2	WB 62 1022	Gitti	SASW	SADW	TADW	-	7.34	10.34	13.70	13.14		44.52	1.50	2.58	9.99		14.08
425	3 Axle	1.22	2	HR 38 6270	Parcel	SASW	TADW	-	-	6.48	10.21	9.88			26.57	0.91	3.14			4.05
426	4 Axle	1.2.22	2	GJ 08 4454	Gas	SASW	SADW	TADW	-	7.64	9.90	13.56	12.94		44.04	1.77	2.17	9.49		13.43
427	3 Axle	1.22	2	NL 01 7483	Parcel	SASW	TADW	-	-	6.83	11.42	9.88			28.13	1.13	3.96			5.09
428	4 Axle	1.1.22	1	WB 33 3006	Empty	SASW	SASW	TADW	-	4.42		4.34	4.18		12.94	0.20		0.10		0.30
429	4 Axle	1.1.22	1	WB 97 6232	Empty	SASW	SASW	TADW	-	4.68		4.30	4.16		13.14	0.25		0.10		0.35
430	2 Axle	1.2	2	WB 39 1668	Gas	SASW	SADW	-	-	6.28	9.50				15.78	0.81	1.84			2.65
431	3 Axle	1.22	2	WB 29 3805	Parcel	SASW	TADW	-	-	7.48	11.68	10.48			29.64	1.62	4.64			6.26
432	5 Axle	1.2.222	1	WB 55 4546	Empty	SASW	SADW	TRADW	-	5.10	4.76		4.54	4.16	18.56	0.35	0.12	0.02		0.49
433	2 Axle	1.2	2	WB 25 1559	Oil	SASW	SADW	-	-	7.34	10.94				18.28	1.50	3.24			4.74
434	4 Axle	1.1.22	2	WB 27 5858	Gitti	SASW	SASW	TADW	-	7.96	11.74	15.74	14.74		50.18	2.08	9.84	16.61		28.54

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
435	3 Axle	1.22	1	WB 11 5147	Empty	SASW	TADW	-	-	4.42	4.08	3.94			12.44	0.20	0.08			0.28
436	5 Axle	1.1.122	2	WB 29 2848	Coal	SASW	SASW	TRADW	-	8.11	9.16	10.64	16.47	15.63	60.00	2.24	3.64	12.26		18.14
437	2 Axle	1.2	2	WB 51 6550	Coal	SASW	SADW	-	-	3.56	9.56				13.12	0.08	1.89			1.97
438	5 Axle	1.1.122	2	WB 41 9564	Iron	SASW	SASW	TRADW	-	7.35	10.58	10.39	16.27	15.41	60.00	1.51	6.49	11.51		19.51
439	4 Axle	1.1.22	2	WB 15 6907	Potato	SASW	SASW	TADW	-	7.81	9.52	12.54	11.68		41.55	1.93	4.26	6.62		12.81
440	5 Axle	1.1.122	2	WB 23 3655	Coal	SASW	SASW	TRADW	-	6.68	8.14	10.94	17.94	15.56	59.26	1.03	2.27	14.33		17.64
441	5 Axle	1.1.122	2	WB 29 3955	Coal	SASW	SASW	TRADW	-	7.30	9.69	8.10	16.06	18.85	60.00	1.47	4.57	12.57		18.61
442	2 Axle	1.2	1	WB 41 3086	Empty	SASW	SADW	-	-	4.34	4.08				8.42	0.18	0.06			0.25
443	3 Axle	1.22	2	WB 29 8989	Gas	SASW	TADW	-	-	7.34	11.74	12.08			31.16	1.50	6.20			7.70
444	2 Axle	1.2	1	WB 25 5450	Empty	SASW	SADW	-	-	4.74	4.22				8.96	0.26	0.07			0.33
445	4 Axle	1.1.22	2	WB 39 3574	Gitti	SASW	SASW	TADW	-	5.61	19.70	13.48	12.74		51.53	0.51	78.04	9.10		87.65
446	2 Axle	1.2	2	WB 41 8415	Gas	SASW	SADW	-	-	4.34	9.74				14.08	0.18	2.03			2.22
447	3 Axle	1.22	1	WB 15 7620	Empty	SASW	TADW	-	-	4.38	4.16	3.94			12.48	0.19	0.08			0.27
448	5 Axle	1.1.122	1	WB 17 1869	Empty	SASW	SASW	TRADW	-	4.68	4.22		3.94	3.56	16.40	0.25	0.16	0.01		0.42
449	3 Axle	1.22	1	NL 01 4229	Empty	SASW	TADW	-	-	4.34	4.16	3.94			12.44	0.18	0.08			0.27
450	3 Axle	1.22	2	WB 59 6211	Gas	SASW	TADW	-	-	5.34	10.34	10.16			25.84	0.42	3.40			3.82
451	4 Axle	1.2.22	2	WB 29 7363	Coal	SASW	SADW	TADW	-	7.74	8.54	13.88	11.62		41.78	1.86	1.20	8.14		11.20
452	3 Axle	1.22	2	WB 25 7938	Parcel	SASW	TADW	-	-	6.94	10.34	10.08			27.36	1.20	3.35			4.55
453	3 Axle	1.22	1	WB 39 9574	Empty	SASW	TADW	-	-	4.34	4.16	3.94			12.44	0.18	0.08			0.27
454	4 Axle	1.1.22	1	WB 29 0280	Empty	SASW	SASW	TADW	-	4.74	4.34	4.02	3.88		16.98	0.26	0.18	0.07		0.52
455	3 Axle	1.22	1	UP 50 9590	Empty	SASW	TADW	-	-	4.34	4.18	3.94			12.46	0.18	0.08			0.27
456	3 Axle	1.22	2	HR 38 1843	Parcel	SASW	TADW	-	-	4.74	11.74	10.74			27.22	0.26	4.92			5.18
457	2 Axle	1.2	2	WB 39 4384	Parcel	SASW	SADW	-	-	0.65	9.74				10.39	0.00	2.03			2.03
458	4 Axle	1.222	2	CG 07 5200	Chemical	SASW	TRADW	-	-	5.74	9.94	13.48	12.94		42.10	0.56	6.42			6.99
459	4 Axle	1.1.22	2	WB 62 1213	Gitti	SASW	SASW	TADW	-	7.94	9.30	13.48	12.34		43.06	2.06	3.88	8.56		14.49
460	4 Axle	1.1.22	2	WB 29 0883	Coal	SASW	SASW	TADW	-	7.34	2.14	11.74	10.28		31.50	1.50	0.01	4.53		6.04
461	3 Axle	1.22	2	WB 70 7615	Chemical	SASW	TADW	-	-	8.14	7.48	11.94			27.56	2.27	2.74			5.01
462	5 Axle	1.1.122	1	WB 67 1479	Empty	SASW	SASW	TRADW	-	4.52	4.36		3.88	3.68	16.44	0.22	0.19	0.01		0.42
463	2 Axle	1.2	2	NL 01 1408	Parcel	SASW	SADW	-	-	6.94	9.74				16.68	1.20	2.03			3.23
464	5 Axle	1.1.122	1	WB 57 3810	Empty	SASW	SASW	TRADW	-	5.02	0.47		4.28	4.02	13.79	0.33	0.00	0.02		0.35
465	2 Axle	1.2	1	WB 73 8138	Empty	SASW	SADW	-	-	4.16	3.94				8.10	0.16	0.05			0.21

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
466	2 Axle	1.2	2	WB 11 5310	Petrol	SASW	SADW	-	-	7.61	11.48				19.09	1.74	3.92			5.66
467	2 Axle	1.2	2	WB 19 4448	Bajaj	SASW	SADW	-	-	3.56	3.22				6.78	0.08	0.02			0.11
468	2 Axle	1.2	2	HR 84 9443	Grocery	SASW	SADW	-	-	6.34	9.44				15.78	0.84	1.79			2.63
469	3 Axle	1.22	1	WB 39 0959	Empty	SASW	TADW	-	-	4.83	4.34	4.14			13.31	0.28	0.10			0.38
470	4 Axle	1.1.22	2	WB 53 6154	Gitti	SASW	SASW	TADW	-	5.74	9.42	13.48	12.94		41.58	0.56	4.08	9.38		14.02
471	4 Axle	1.1.22	2	UP 50 4070	Iron	SASW	SASW	TADW	-	7.23	8.54	13.68	12.94		42.39	1.42	2.76	9.67		13.84
472	4 Axle	1.2.22	1	MH 04 7025	Empty	SASW	SADW	TADW	-	4.94	4.24	4.16	3.94		17.28	0.31	0.07	0.08		0.46
473	2 Axle	1.2	2	NL 01 15114	Parcel	SASW	SADW	-	-	6.42	9.92				16.34	0.88	2.19			3.07
474	4 Axle	1.1.22	1	A/F	Empty	SASW	SASW	TADW	-	4.72	4.32	4.08	3.82		16.94	0.26	0.18	0.07		0.51
475	5 Axle	1.2.222	2	UP 17 3082	Gas	SASW	SADW	TRADW	-	7.38	10.22	12.42	13.18	12.48	55.68	1.54	2.46	7.73		11.73
476	4 Axle	1.2.22	2	NL 01 4849	Gas	SASW	SADW	TADW	-	7.82	10.48	13.82	13.14		45.26	1.94	2.72	10.17		14.83
477	LCV	1.2	1	WB 25 6989	Empty	SASW	SADW	-	-	2.22	1.88				4.10	0.01	0.00			0.02
478	4 Axle	1.2.22	2	NL 01 0542	Gas	SASW	SADW	TADW	-	7.38	11.18	12.08	11.34		41.98	1.54	3.53	5.79		10.86
479	4 Axle	1.1.22	2	WB 53 5830	Gas	SASW	SASW	TADW	-	7.42	10.88	13.82	13.14		45.26	1.57	7.26	10.17		19.00
480	4 Axle	1.1.22	2	RJ 07 7461	Parcel	SASW	SASW	TADW	-	6.42	8.42	12.32	11.82		38.98	0.88	2.60	6.54		10.02
481	5 Axle	1.1.122	1	WB 97 5806	Empty	SASW	SASW	TRADW	-	4.82	4.32		4.08	3.82	17.04	0.28	0.18	0.01		0.47
482	4 Axle	1.2.22	2	UP 94 6131	Gas	SASW	SADW	TADW	-	7.02	12.22	13.82	13.14		46.20	1.26	5.04	10.17		16.47
483	LCV	1.2	1	WB 29 8061	Empty	SASW	SADW	-	-	2.38	1.94				4.32	0.02	0.00			0.02
484	5 Axle	1.1.1.22	1	WB 67 1245	Empty	SASW	SASW	SASW	TADW	5.38	4.82	3.08	4.32	4.08	21.68	0.43	0.28	0.05	0.01	0.77
485	4 Axle	1.2.22	2	UP 70 8481	Gas	SASW	SADW	TADW	-	7.38	11.80	13.02	6.42		38.62	1.54	4.38	2.75		8.67
486	4 Axle	1.2.22	2	WB 5330	Parsal	SASW	SADW	TADW	-	6.42	9.52	12.42	6.04		34.40	0.88	1.86	2.24		4.97
487	5 Axle	1.1.122	2	OD 1 9987	Oil	SASW	SASW	TRADW	-	7.18	8.54	10.26	12.42	12.08	50.48	1.38	2.76	5.36		9.50
488	5 Axle	1.1.1.22	2	WB 19 3839	Iron	SASW	SASW	SASW	TADW	7.82	10.42	12.46	15.18	14.08	59.96	1.94	6.11	12.49	0.76	21.29
489	4 Axle	1.2.22	2	NL 01 4866	Chemical	SASW	SADW	TADW	-	7.38	10.42	14.08	13.82		45.70	1.54	2.66	11.66		15.86
490	3 Axle	1.22	1	AP39 2359	Empty	SASW	TADW	-	-	5.38	4.82	4.32			14.52	0.43	0.13			0.57
491	BUS	1.2	2	WB 39 5929	Grocery	SASW	SADW	-	-	4.72	9.18				13.90	0.26	1.60			1.86
492	3 Axle	1.22	2	NL 01 7327	Grocery	SASW	TADW	-	-	7.38	11.82	11.08			30.28	1.54	5.29			6.83
493	4 Axle	1.2.22	2	UP 78 6188	Gas	SASW	SADW	TADW	-	7.83	12.32	15.18	14.08		49.41	1.95	5.20	14.11		21.26
494	4 Axle	1.2.22	2	WB 91	Gas	SASW	SADW	TADW	-	7.38	11.18	12.22	12.08		42.86	1.54	3.53	6.71		11.78
495	4 Axle	1.2.22	2	NL 01 0062	Gas	SASW	SADW	TADW	-	7.38	12.62	13.62	13.14		46.76	1.54	5.73	9.87		17.14
496	4 Axle	1.1.22	2	WB 37 7332	Cement	SASW	SASW	TADW	-	7.38	9.52	13.82	13.14		43.86	1.54	4.26	10.17		15.96

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
497	LCV	1.2	2	RJ 14 8382	Food	SASW	SADW	-	-	6.42	11.18				17.60	0.88	3.53			4.41
498	LCV	1.2	2	UP 37 3862	Gas	SASW	SADW	-	-	5.16	7.82				12.98	0.37	0.84			1.21
499	LCV	1.1	1	WB 27 9587	Empty	SASW	SASW	-	-	1.62	1.49				3.11	0.00	0.00			0.01
500	LCV	1.2	1	WB 57 8069	Empty	SASW	SADW	-	-	2.42	2.08				4.50	0.02	0.00			0.02
501	3 Axle	1.22	2	NL 01 3326	Parsal	SASW	TADW	-	-	6.22	10.22	10.08			26.52	0.78	3.27			4.04
502	4 Axle	1.1.22	2	WB 25 4353	Iron	SASW	SASW	TADW	-	7.28	11.82	13.02	13.96		46.08	1.46	10.11	10.20		21.77
503	2 Axle	1.2	2	HR 38 1966	Parsal	SASW	SADW	-	-	6.22	12.22				18.44	0.78	5.04			5.81
504	LCV	1.2	1	RJ 19 9079	Empty	SASW	SADW	-	-	2.42	2.08				4.50	0.02	0.00			0.02
505	4 Axle	1.1.22	2	BR 01 5159	Milk	SASW	SASW	TADW	-	7.38	9.82	13.02	12.08		42.30	1.54	4.82	7.64		14.00
506	5 Axle	1.1.122	1	WB 19 5735	Empty	SASW	SASW	TRADW	-	4.72	4.42		4.22	4.08	17.44	0.26	0.20	0.02		0.47
507	4 Axle	1.1.22	2	WB 29 0809	Coal	SASW	SASW	TADW	-	7.30	10.42	13.82	13.14		44.68	1.47	6.11	10.17		17.75
508	4 Axle	1.1.22	2	RJ 19 5754	Tiles	SASW	SASW	TADW	-	6.22	9.02	12.82	12.08		40.14	0.78	3.43	7.40		11.61
509	4 Axle	1.2.22	2	UP 17 8113	Gas	SASW	SADW	TADW	-	7.22	11.82	13.82	13.14		46.00	1.41	4.41	10.17		15.99
510	LCV	1.1	1	WB 39 3134	Empty	SASW	SASW	-	-	2.22	2.08				4.30	0.01	0.01			0.02
511	LCV	1.2	2	UP 24 7450	Clothes	SASW	SADW	-	-	4.68	8.42				13.10	0.25	1.14			1.38
512	LCV	1.2	1	WB 41 9776	Empty	SASW	SADW	-	-	2.88	2.90				5.78	0.04	0.02			0.05
513	LCV	1.2	1	WB 25 2688	Empty	SASW	SADW	-	-	0.30	2.68				2.98	0.00	0.01			0.01
514	2 Axle	1.2	2	NL 01 2414	Clothes	SASW	SADW	-	-	5.82	7.14				12.96	0.59	0.59			1.18
515	LCV	1.1	2	WB 37 0053	Rice	SASW	SASW	-	-	3.03	4.27				7.30	0.04	0.17			0.22
516	5 Axle	1.1.122	2	UP 70 9202	Gas	SASW	SASW	TRADW	-	7.20	10.42	13.82	13.02	12.04	56.50	1.39	6.11	8.40		15.90
517	BUS	1.2	2	WB 27 5281	Passenger	SASW	SADW	-	-	6.42	8.22				14.64	0.88	1.03			1.91
518	3 Axle	1.22	1	WB 37 9738	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
519	3 Axle	1.22	2	UP 21 2531	Clothes	SASW	TADW	-	-	7.48	13.82	13.14			34.44	1.62	10.17			11.79
520	4 Axle	1.1.22	1	WB 53 9507	Empty	SASW	SASW	TADW	-	4.82	4.22	4.08	3.82		16.94	0.28	0.16	0.07		0.52
521	2 Axle	1.2	2	NL01 9505	Parsal	SASW	SADW	-	-	6.23	12.62				18.85	0.78	5.73			6.51
522	LCV	1.2	2	WB 37 8316	Flour	SASW	SADW	-	-	6.22	11.08				17.30	0.78	3.40			4.18
523	3 Axle	1.22	2	WB 29 3503	Chemical	SASW	TADW	-	-	6.22	12.62	13.14			31.98	0.78	8.48			9.25
524	4 Axle	1.2.22	2	UP 57 9859	Gas	SASW	SADW	TADW	-	7.38	12.22	13.82	13.14		46.56	1.54	5.04	10.17		16.74
525	4 Axle	1.1.22	1	WB 89 2828	Empty	SASW	SASW	TADW	-	4.22	4.18	3.82	3.66		15.88	0.16	0.16	0.06		0.38
526	5 Axle	1.2.222	2	NL 01 2952	Plastic	SASW	SADW	TRADW	-	5.82	2.02	13.62	16.82	16.02	54.30	0.59	0.00	17.13		17.73
527	4 Axle	1.1.22	2	WB 29 9337	Oil	SASW	SASW	TADW	-	7.38	9.52	13.83	13.02		43.75	1.54	4.26	10.00		15.80

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
528	4 Axle	1.1.22	1	WB 3 6263	Empty	SASW	SASW	TADW	-	4.08	3.82	3.62	3.48		15.00	0.14	0.11	0.05		0.30
529	LCV	1.2	1	WB 11 1032	Empty	SASW	SADW	-	-	2.92	2.62				5.54	0.04	0.01			0.05
530	5 Axle	1.1.1.22	2	DL 1 G	Parsal	SASW	SASW	SASW	TADW	6.22	12.82	12.04	12.92	13.96	57.96	0.78	14.00	10.89	0.73	26.39
531	4 Axle	1.1.22	1	WB 19 8177	Empty	SASW	SASW	TADW	-	4.82		4.62	4.22		13.66	0.28		0.12		0.40
532	LCV	1.2	1	J 19	Empty	SASW	SADW	-	-	2.42	2.34				4.76	0.02	0.01			0.02
533	4 Axle	1.2.22	2	BR 01 4777	Gas	SASW	SADW	TADW	-	7.82	12.22	13.02	12.04		45.10	1.94	5.04	7.59		14.57
534	4 Axle	1.1.22	2	WB 76 1986	Iron	SASW	SASW	TADW	-	6.42	9.52	13.02	12.82		41.78	0.88	4.26	8.58		13.72
535	4 Axle	1.1.22	2	J 19 6221	Iron	SASW	SASW	TADW	-	7.38	10.22	13.83	12.62		44.05	1.54	5.65	9.42		16.61
536	2 Axle	1.2	1	WB 73 8601	Empty	SASW	SADW	-	-	3.70	3.22				6.92	0.10	0.02			0.12
537	2 Axle	1.2	1	WB 41 1144	Empty	SASW	SADW	-	-	3.82	3.43				7.25	0.11	0.03			0.14
538	5 Axle	1.1.1.22	2	NL 01 4719	Food	SASW	SASW	SASW	TADW	5.38	6.42	10.94	13.82	12.83	49.39	0.43	0.88	7.42	0.52	9.26
539	5 Axle	1.2.222	2	H 63 0966	Powder	SASW	SADW	TRADW	-	7.38	12.83	10.94	14.02	13.06	58.23	1.54	6.12	7.68		15.34
540	LCV	1.2	2	NL 01 1003	Milk	SASW	SADW	-	-	3.82	7.02				10.84	0.11	0.55			0.66
541	3 Axle	1.22	2	WB 27 1340	Powder	SASW	TADW	-	-	6.20	12.22	12.04			30.46	0.77	6.67			7.43
542	4 Axle	1.2.22	2	UP 27 2364	Iron	SASW	SADW	TADW	-	6.12	9.52	12.23	12.82		40.69	0.73	1.86	7.58		10.16
543	4 Axle	1.2.22	2	UP 17 3984	Gas	SASW	SADW	TADW	-	7.92	12.82	15.02	14.08		49.84	2.04	6.10	13.80		21.94
544	2 Axle	1.2	2	WB 27 1227	Clothes	SASW	SADW	-	-	3.82	7.02				10.84	0.11	0.55			0.66
545	3 Axle	1.22	2	WB 27 6675	Oil	SASW	TADW	-	-	6.43	12.02	11.02			29.47	0.89	5.42			6.31
546	LCV	1.2	2	WB 15 0786	Cement	SASW	SADW	-	-	6.22	11.82				18.04	0.78	4.41			5.18
547	4 Axle	1.2.22	2	PB 65 2069	Courier	SASW	SADW	TADW	-	6.02	11.02	10.02	10.43		37.49	0.68	3.33	3.37		7.38
548	2 Axle	1.2	2	WB 41 6808	Wood	SASW	SADW	-	-	3.74	14.36				18.10	0.10	9.60			9.71
549	4 Axle	1.2.22	2	KA 51 5172	Medicine	SASW	SADW	TADW	-	7.82	11.02	13.02	12.04		43.90	1.94	3.33	7.59		12.86
550	3 Axle	1.22	2	WB 76 7066	Iron	SASW	TADW	-	-	7.38	12.32	12.04			31.74	1.54	6.78			8.32
551	2 Axle	1.2	2	WB 10 3375	Food	SASW	SADW	-	-	3.58	6.62				10.20	0.09	0.43			0.52
552	3 Axle	1.22	2	WB 41 7754	Oil	SASW	TADW	-	-	7.38	15.02	14.08			36.48	1.54	13.80			15.34
553	4 Axle	1.2.22	2	BR 1 7708	Iron	SASW	SADW	TADW	-	7.38	11.02	12.82	14.02		45.24	1.54	3.33	9.99		14.86
554	3 Axle	1.22	2	WB 37 0952	Oil	SASW	TADW	-	-	7.38	12.22	12.04			31.64	1.54	6.67			8.21
555	2 Axle	1.2	2	WB 76 0985	Clothes	SASW	SADW	-	-	5.42	12.22				17.64	0.45	5.04			5.48
556	3 Axle	1.22	2	HR 39 0313	Powder	SASW	TADW	-	-	7.23	14.02	13.52			34.77	1.42	11.07			12.49
557	2 Axle	1.2	2	WB 41 7714	Oil	SASW	SADW	-	-	7.42	1.22				8.64	1.57	0.00			1.57
558	5 Axle	1.1.1.22	1	WB 83 2871	Empty	SASW	SASW	SASW	TADW	4.77	4.82		4.42	4.22	18.23	0.27	0.28		0.01	0.55

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
559	2 Axle	1.2	2	WB 95 9256	Clothes	SASW	SADW	-	-	7.22	8.42				15.64	1.41	1.14			2.54
560	4 Axle	1.1.22	2	WB 29 0662	Iron	SASW	SASW	TADW	-	5.42	6.90	17.10	15.36		44.78	0.45	1.17	21.37		22.99
561	3 Axle	1.22	2	WB 37 9171	Gas	SASW	TADW	-	-	6.42	12.82	12.04			31.28	0.88	7.35			8.23
562	4 Axle	1.1.22	2	TN 4514	Dhaga	SASW	SASW	TADW	-	7.42	10.42	14.03	13.82		45.69	1.57	6.11	11.58		19.26
563	4 Axle	1.2.22	2	UP 78 2663	Gas	SASW	SADW	TADW	-	6.23	11.02	12.22	12.04		41.51	0.78	3.33	6.67		10.78
564	4 Axle	1.2.22	2	UP 70 8229	Gas	SASW	SADW	TADW	-	6.82	12.03	13.18	12.43		44.46	1.12	4.73	8.28		14.13
565	3 Axle	1.22	2	NL 01 2273	Tea	SASW	TADW	-	-	10.12	13.02	11.92			35.06	5.43	7.45			12.88
566	3 Axle	1.22	1	WB 41 0995	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
567	3 Axle	1.22	2	NL01 1995	Tea	SASW	TADW	-	-	7.02	12.22	12.04			31.28	1.26	6.67			7.93
568	2 Axle	1.2	2	UP 7 9098	Parsal	SASW	SADW	-	-	6.43	12.42				18.85	0.89	5.37			6.26
569	LCV	1.2	1	HR 47 2489	Empty	SASW	SADW	-	-	2.22	1.88				4.10	0.01	0.00			0.02
570	BUS	1.2	2	WB 79 7878	Passenger	SASW	SADW	-	-	5.38	9.02				14.40	0.43	1.50			1.93
571	4 Axle	1.2.22	2	BR 25 8347	Gas	SASW	SADW	TADW	-	7.82	12.82	15.02	14.08		49.74	1.94	6.10	13.80		21.84
572	4 Axle	1.1.22	2	WB 37 9446	Powder	SASW	SASW	TADW	-	5.78	8.42	12.02	12.23		38.45	0.58	2.60	6.66		9.84
573	4 Axle	1.1.22	2	NL 01 3257	Oil	SASW	SASW	TADW	-	7.39	8.42	12.03	13.02		40.86	1.55	2.60	7.58		11.73
574	4 Axle	1.1.22	1	WB 37 3615	Empty	SASW	SASW	TADW	-	3.82		3.62	3.88		11.32	0.11		0.06		0.17
575	5 Axle	1.1.122	1	WB 17 6651	Empty	SASW	SASW	TRADW	-	4.25	4.02		3.82	3.62	15.71	0.17	0.14	0.01		0.32
576	2 Axle	1.2	2	WB 34 7047	Medicine	SASW	SADW	-	-	4.31	12.22				16.53	0.18	5.04			5.22
577	LCV	1.2	1	WB 41 0062	Empty	SASW	SADW	-	-	2.82	2.28				5.10	0.03	0.01			0.04
578	3 Axle	1.22	2	WB 27 1446	Gas	SASW	TADW	-	-	7.38	13.82	13.14			34.34	1.54	10.17			11.71
579	2 Axle	1.2	2	WB 37 7993	Oil	SASW	SADW	-	-	7.22	1.28				8.50	1.41	0.00			1.41
580	2 Axle	1.2	2	NL 01 3116	Parsal	SASW	SADW	-	-	6.42	12.02				18.44	0.88	4.72			5.60
581	4 Axle	1.1.22	2	WB 11 8507	Conical	SASW	SASW	TADW	-	7.23	8.42	12.42	12.04		40.11	1.42	2.60	6.89		10.91
582	4 Axle	1.1.22	2	WB 39 8998	Oil	SASW	SASW	TADW	-	7.42	8.62	12.83	12.05		40.92	1.57	2.86	7.38		11.81
583	3 Axle	1.22	2	WB 37 3418	Oil	SASW	TADW	-	-	6.42	9.82	12.63			28.87	0.88	4.89			5.77
584	2 Axle	1.2	1	WB 5621	Empty	SASW	SADW	-	-	3.82	3.02				6.84	0.11	0.02			0.13
585	3 Axle	1.22	2	UP52 5888	Iron	SASW	TADW	-	-	7.26	9.83	12.82			29.91	1.44	5.07			6.51
586	3 Axle	1.22	1	WB 41 7682	Empty	SASW	TADW	-	-	2.42	3.42	3.22			9.06	0.02	0.04			0.06
587	3 Axle	1.22	2	WB 39 9395	Oil	SASW	TADW	-	-	4.08	13.82	13.02			30.92	0.14	9.99			10.13
588	5 Axle	1.1.122	2	WB 67 0840	Gitti	SASW	SASW	TRADW	-	7.67	10.22	13.56	14.74	13.81	60.00	1.79	5.66	11.55		19.00
589	2 Axle	1.2	2	HR 35 7857	Clothes	SASW	SADW	-	-	6.42	11.48				17.90	0.88	3.92			4.80

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
590	4 Axle	1.2.22	2	UP 75 5006	Gas	SASW	SADW	TADW	-	7.42	10.42	13.14	12.22		43.20	1.57	2.66	7.96		12.20
591	LCV	1.1	1	WB 11 1581	Empty	SASW	SASW	-	-	1.82	1.64				3.46	0.01	0.00			0.01
592	4 Axle	1.1.22	2	UP 83 2578	Gas	SASW	SASW	TADW	-	6.82	12.82	15.02	14.08		48.74	1.12	14.00	13.80		28.92
593	4 Axle	1.2.22	2	UP 75 5013	Gas	SASW	SADW	TADW	-	7.02	12.02	13.02	12.48		44.54	1.26	4.72	8.14		14.11
594	3 Axle	1.22	2	HR 55 1098	Clothes	SASW	TADW	-	-	6.22	12.82	12.02			31.06	0.78	7.33			8.10
595	4 Axle	1.1.22	1	WB 47 0319	Empty	SASW	SASW	TADW	-	3.82		3.62	3.42		10.86	0.11		0.05		0.16
596	2 Axle	1.2	2	HR 55 6310	Clothes	SASW	SADW	-	-	6.42	11.02				17.44	0.88	3.33			4.21
597	4 Axle	1.2.22	2	UP 70 9220	Oil	SASW	SADW	TADW	-	6.42	13.82	14.22	13.18		47.64	0.88	8.24	10.85		19.97
598	5 Axle	1.2.222	2	UP 25 8190	Oil	SASW	SADW	TRADW	-	7.82	12.82	0.90	15.02	14.08	50.64	1.94	6.10	2.98		11.02
599	3 Axle	1.22	2	UP 07 3999	Clothes	SASW	TADW	-	-	6.22	17.22	15.98			39.42	0.78	23.39			24.16
600	2 Axle	1.2	2	NL 01 2933	Parsal	SASW	SADW	-	-	6.82	12.22				19.04	1.12	5.04			6.16
601	2 Axle	1.2	2	WB 41 8667	Iron	SASW	SADW	-	-	7.22	13.82				21.04	1.41	8.24			9.65
602	2 Axle	1.2	2	HR 38 8499	Parsal	SASW	SADW	-	-	6.42	11.02				17.44	0.88	3.33			4.21
603	BUS	1.2	2	WB 76 0086	Passenger	SASW	SADW	-	-	6.22	8.23				14.45	0.78	1.04			1.81
604	4 Axle	1.1.22	2	WB 29 6599	Oil	SASW	SASW	TADW	-	7.42	10.22	15.02	14.08		46.74	1.57	5.65	13.80		21.03
605	3 Axle	1.22	2	RJ 11 5159	Parsal	SASW	TADW	-	-	6.42	11.02	6.12			23.56	0.88	1.66			2.54
606	4 Axle	1.2.22	2	WB 29 2551	Clothes	SASW	SADW	TADW	-	7.38	11.02	12.82	12.04		43.26	1.54	3.33	7.35		12.22
607	3 Axle	1.22	2	WB 35 3148	Oil	SASW	TADW	-	-	7.24	12.22	12.02			31.48	1.42	6.65			8.07
608	2 Axle	1.2	2	WB 39 1294	Gas	SASW	SADW	-	-	6.42	6.83				13.25	0.88	0.49			1.37
609	4 Axle	1.2.22	2	NL 01 7281	Gas	SASW	SADW	TADW	-	7.38	12.82	15.18	14.02		49.40	1.54	6.10	13.99		21.63
610	2 Axle	1.2	2	WB 39 4030	Cement	SASW	SADW	-	-	7.02	12.18				19.20	1.26	4.97			6.23
611	2 Axle	1.2	2	NH 11	Oil	SASW	SADW	-	-	6.22	11.18				17.40	0.78	3.53			4.30
612	2 Axle	1.2	2	WB 39 5159	Oil	SASW	SADW	-	-	7.23	11.83				19.06	1.42	4.42			5.84
613	2 Axle	1.2	2	HR 38 2397	Tea	SASW	SADW	-	-	6.42	10.32				16.74	0.88	2.56			3.44
614	5 Axle	1.1.122	2	WB 25 6626	Tea	SASW	SASW	TRADW	-	7.38	8.42	10.94	12.22	12.04	51.00	1.54	2.60	5.64		9.78
615	3 Axle	1.22	1	WB 39 9780	Empty	SASW	TADW	-	-	4.03	3.82	3.68			11.53	0.14	0.06			0.20
616	2 Axle	1.2	2	NL 01 4546	Clothes	SASW	SADW	-	-	6.22	12.42				18.64	0.78	5.37			6.15
617	2 Axle	1.2	2	WB 37 1344	Oil	SASW	SADW	-	-	6.82	10.42				17.24	1.12	2.66			3.78
618	3 Axle	1.22	1	WB 53 7535	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
619	2 Axle	1.2	2	WB 41 1174	Oil	SASW	SADW	-	-	5.82	11.58				17.40	0.59	4.06			4.66
620	2 Axle	1.2	2	WB 39 6242	Oil	SASW	SADW	-	-	6.22	12.02				18.24	0.78	4.72			5.49

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
621	5 Axle	1.1.122	2	WB 19 6740	Cement	SASW	SASW	TRADW	-	7.22	11.02	10.94	13.82	12.04	55.04	1.41	7.64	6.74		15.79
622	LCV	1.2	1	WB 25 9289	Empty	SASW	SADW	-	-	2.42	2.08				4.50	0.02	0.00			0.02
623	5 Axle	1.1.122	1	WB 29 1374	Empty	SASW	SASW	TRADW	-	4.82	4.42		3.82	3.62	16.68	0.28	0.20	0.01		0.49
624	3 Axle	1.22	2	BR 1979	Gas	SASW	TADW	-	-	6.42	10.22	10.96			27.60	0.88	3.87			4.75
625	4 Axle	1.1.22	2	WB 39 5505	Oil	SASW	SASW	TADW	-	7.38	10.42	13.82	14.02		45.64	1.54	6.11	11.56		19.21
626	5 Axle	1.2.222	2	NL 01 1316	Clothes	SASW	SADW	TRADW	-	7.02	1.18	10.94	13.83	13.86	46.83	1.26	0.00	8.18		9.44
627	2 Axle	1.2	1	WB 53 6297	Empty	SASW	SADW	-	-	3.82	3.66				7.48	0.11	0.04			0.15
628	3 Axle	1.22	1	WB 41 7998	Empty	SASW	TADW	-	-	4.22	3.82	3.68			11.72	0.16	0.06			0.23
629	3 Axle	1.22	2	WB 39 6410	Gas	SASW	TADW	-	-	5.38	12.62	12.04			30.04	0.43	7.12			7.55
630	2 Axle	1.2	2	NL 01 9144	Clothes	SASW	SADW	-	-	5.38	15.10				20.48	0.43	11.74			12.18
631	3 Axle	1.22	2	WB 25 0186	Gas	SASW	TADW	-	-	6.42	13.02	12.02			31.46	0.88	7.57			8.45
632	5 Axle	1.1.122	1	WB 41 1998	Empty	SASW	SASW	TRADW	-	5.41	5.02		4.82	4.63	19.88	0.44	0.33	0.03		0.80
633	4 Axle	1.1.22	2	WB 11 6375	Medicine	SASW	SASW	TADW	-	4.78	3.42	8.92	8.02		25.14	0.27	0.07	1.59		1.93
634	4 Axle	1.1.22	2	BR 02 6648	Food	SASW	SASW	TADW	-	8.03	3.34	16.82	16.42		44.61	2.15	0.06	23.50		25.72
635	3 Axle	1.22	2	WB 41 6028	Iron	SASW	TADW	-	-	5.39	14.02	15.02			34.43	0.44	13.69			14.13
636	3 Axle	1.22	1	WB 37 2406	Empty	SASW	TADW	-	-	3.82	3.62	3.46			10.90	0.11	0.05			0.16
637	LCV	1.2	1	WB 25 4609	Empty	SASW	SADW	-	-	2.22	1.88				4.10	0.01	0.00			0.02
638	3 Axle	1.22	2	WB 67 8629	Parsal	SASW	TADW	-	-	4.63	13.62	13.02			31.27	0.24	9.70			9.93
639	5 Axle	1.1.122	1	WB 65 0563	Empty	SASW	SASW	TRADW	-	4.42	4.22		4.08	15.82	28.54	0.20	0.16	0.58		0.94
640	6 Axle	1.22.222	2	HR 01 4661	Chemical	SASW	TADW	TRADW	-	5.47	8.79	7.34	11.77	12.79	46.15	0.46	1.30	3.80		5.57
641	LCV	1.2	1	WB 41 9573	Empty	SASW	SADW	-	-	2.70	3.02				5.72	0.03	0.02			0.05
642	2 Axle	1.2	2	WB 41 7991	Oil	SASW	SADW	-	-	5.62	12.62				18.24	0.52	5.73			6.25
643	3 Axle	1.22	1	WB 41 85895	Empty	SASW	TADW	-	-	2.62	2.82	3.34			8.78	0.02	0.03			0.05
644	4 Axle	1.1.22	1	WB 25 3705	Empty	SASW	SASW	TADW	-	4.22		3.82	3.14		11.18	0.16		0.05		0.21
645	5 Axle	1.1.122	1	WB 67 1861	Empty	SASW	SASW	TRADW	-	4.82	4.62		4.02	3.82	17.28	0.28	0.24	0.01		0.53
646	2 Axle	1.2	2	UP 78 6778	Parsal	SASW	SADW	-	-	6.22	12.02				18.24	0.78	4.72			5.49
647	5 Axle	1.1.122	1	WB 67 1752	Empty	SASW	SASW	TRADW	-	4.54	4.22		4.02	3.98	16.76	0.22	0.16	0.02		0.40
648	5 Axle	1.1.122	1	WB 67 1886	Empty	SASW	SASW	TRADW	-	4.82	4.42		4.02	3.94	17.20	0.28	0.20	0.01		0.49
649	5 Axle	1.2.222	2	PB 10 9561	Oil	SASW	SADW	TRADW	-	7.02	11.72	11.54	15.17	14.55	60.00	1.26	4.26	10.66		16.17
650	3 Axle	1.22	1	WB 45 2300	Empty	SASW	TADW	-	-	4.72	4.22	4.08			13.02	0.26	0.09			0.35
651	2 Axle	1.2	1	WB 25 6353	Empty	SASW	SADW	-	-	3.94	3.62				7.56	0.12	0.04			0.16

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
652	4 Axle	1.1.22	1	WB 29 7426	Empty	SASW	SASW	TADW	-	4.82		4.32	4.14		13.28	0.28		0.10		0.38
653	5 Axle	1.1.122	2	WB 53 6117	Gitti	SASW	SASW	TRADW	-	7.16	12.66	10.02	15.42	14.73	60.00	1.37	13.32	9.57		24.25
654	5 Axle	1.1.122	1	WB 67 1084	Empty	SASW	SASW	TRADW	-	5.22	5.82		4.32	4.02	19.38	0.38	0.59	0.02		1.00
655	LCV	1.2	1	WB 41 6555	Empty	SASW	SADW	-	-	3.23	2.82				6.05	0.06	0.01			0.07
656	3 Axle	1.22	1	WB 41 9861	Empty	SASW	TADW	-	-	4.42	4.02	3.82			12.26	0.20	0.07			0.27
657	4 Axle	1.2.22	2	UP 78 05 07	Gas	SASW	SADW	TADW	-	7.38	12.82	15.02	14.08		49.30	1.54	6.10	13.80		21.44
658	4 Axle	1.1.22	2	WB 39 0217	Clothes	SASW	SASW	TADW	-	7.02	13.02	12.04	13.02		45.10	1.26	14.89	7.59		23.74
659	2 Axle	1.2	2	WB 37 0988	Oil	SASW	SADW	-	-	6.42	12.32				18.74	0.88	5.20			6.08
660	3 Axle	1.22	1	WB 47 2132	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
661	3 Axle	1.22	1	WB 15 9482	Empty	SASW	TADW	-	-	4.22	3.82	3.66			11.70	0.16	0.06			0.22
662	2 Axle	1.2	2	HR55 3955	Parsal	SASW	SADW	-	-	6.42	12.22				18.64	0.88	5.04			5.92
663	5 Axle	1.1.122	1	WB 57 1157	Empty	SASW	SASW	TRADW	-	4.22	4.02		3.82	3.02	15.08	0.16	0.14	0.01		0.31
664	5 Axle	1.1.122	1	WB 67 1103	Empty	SASW	SASW	TRADW	-	5.38	4.82		4.42	4.32	18.94	0.43	0.28	0.02		0.74
665	2 Axle	1.2	2	WB 27 2896	Tea	SASW	SADW	-	-	6.42	12.23				18.65	0.88	5.05			5.93
666	3 Axle	1.22	2	WB 25 8689	Clothes	SASW	TADW	-	-	6.52	12.42	12.08			31.02	0.94	6.94			7.87
667	6 Axle	1.22.222	2	RJ 09 2134	Chemical	SASW	TADW	TRADW	-	6.69	12.81	12.07		14.29	45.86	1.04	7.37	1.77		10.18
668	2 Axle	1.2	2	HR 46 8922	Oil	SASW	SADW	-	-	6.12	13.62				19.74	0.73	7.77			8.50
669	5 Axle	1.2.222	2	RJ 10 2522	Iron	SASW	SADW	TRADW	-	7.00	12.42	10.94	15.18	14.08	59.62	1.24	5.37	9.60		16.22
670	5 Axle	1.1.122	1	WB 67 1663	Empty	SASW	SASW	TRADW	-	5.38	6.82		4.22	3.82	20.24	0.43	1.12	0.02		1.57
671	3 Axle	1.22	1	WB 61 2993	Empty	SASW	TADW	-	-	4.22	4.08	3.82			12.12	0.16	0.07			0.24
672	2 Axle	1.2	2	WB 39 2025	Oil	SASW	SADW	-	-	7.22	10.22				17.44	1.41	2.46			3.87
673	BUS	1.2	2	WB 41 6723	Passenger	SASW	SADW	-	-	6.42	9.82				16.24	0.88	2.10			2.98
674	4 Axle	1.1.22	2	WB 41 6870	Gitti	SASW	SASW	TADW	-	7.86	11.82	19.02	18.08		56.78	1.98	10.11	36.47		48.56
675	2 Axle	1.2	2	WB 39 9247	Oil	SASW	SADW	-	-	6.02	10.42				16.44	0.68	2.66			3.34
676	5 Axle	1.1.122	1	WB 41 0160	Empty	SASW	SASW	TRADW	-	4.82	4.22		4.08	3.98	17.10	0.28	0.16	0.02		0.46
677	2 Axle	1.2	2	WB 57 6563	gas	SASW	SADW	-	-	3.82	8.02				11.84	0.11	0.93			1.04
678	2 Axle	1.2	1	BR 3 1972	Empty	SASW	SADW	-	-	4.22	4.08				8.30	0.16	0.06			0.23
679	2 Axle	1.2	2	NL 01 2252	Tea	SASW	SADW	-	-	7.02	12.02				19.04	1.26	4.72			5.97
680	LCV	1.2	1	WB 11 0156	Empty	SASW	SADW	-	-	1.55	1.22				2.77	0.00	0.00			0.00
681	2 Axle	1.2	2	WB 11 5799	Oil	SASW	SADW	-	-	6.22	12.22				18.44	0.78	5.04			5.81
682	5 Axle	1.1.122	1	WB 41 1670	Empty	SASW	SASW	TRADW	-	4.72	4.22		4.08	3.82	16.84	0.26	0.16	0.01		0.44

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
683	4 Axle	1.1.22	1	WB 67 5640	Empty	SASW	SASW	TADW	-	4.82		4.22	4.08		13.12	0.28		0.09		0.37
684	2 Axle	1.2	1	WB 41 7727	Empty	SASW	SADW	-	-	6.22	11.22				17.44	0.78	3.58			4.36
685	4 Axle	1.1.22	2	WB 27 3141	Clothes	SASW	SASW	TADW	-	7.22	9.52	13.82	13.06		43.62	1.41	4.26	10.05		15.71
686	LCV	1.2	1	WB 29 3243	Empty	SASW	SADW	-	-	2.34	2.08				4.42	0.02	0.00			0.02
687	LCV	1.1	2	TR 01 1630	Milk	SASW	SASW	-	-	3.12	4.22				7.34	0.05	0.16			0.21
688	3 Axle	1.22	1	WB 11	Empty	SASW	TADW	-	-	3.82	3.74	3.46			11.02	0.11	0.05			0.16
689	3 Axle	1.22	2	WB 39 5260	Cement	SASW	TADW	-	-	6.42	12.42	12.08			30.92	0.88	6.94			7.82
690	4 Axle	1.1.22	1	WB 11 3353	Empty	SASW	SASW	TADW	-	4.22		3.82	3.68		11.72	0.16		0.06		0.23
691	2 Axle	1.2	2	WB 39 6537	Oil	SASW	SADW	-	-	7.22	7.22				14.44	1.41	0.61			2.02
692	LCV	1.2	1	WB 33 5447	Empty	SASW	SADW	-	-	3.48	2.62				6.10	0.08	0.01			0.09
693	4 Axle	1.2.22	2	NL 02 3715	Gas	SASW	SADW	TADW	-	4.22	12.22	13.82	13.14		43.40	0.16	5.04	10.17		15.37
694	5 Axle	1.2.222	2	BR 01 3561	Gas	SASW	SADW	TRADW	-	5.87	11.98	14.25	13.30	14.59	60.00	0.62	4.65	11.60		16.86
695	LCV	1.1	1	A/F	Empty	SASW	SASW	-	-	2.09	1.68				3.77	0.01	0.00			0.01
696	2 Axle	1.2	2	WB 39 6576	Oil	SASW	SADW	-	-	6.42	12.22				18.64	0.88	5.04			5.92
697	4 Axle	1.1.22	1	WB 91 6558	Empty	SASW	SASW	TADW	-	4.82		4.42	2.38		11.62	0.28		0.04		0.32
698	4 Axle	1.2.22	2	HR 38 1578	Iron	SASW	SADW	TADW	-	5.02	14.02	12.98	13.86		45.88	0.33	8.73	9.99		19.05
699	2 Axle	1.2	2	WB 39 1371	Gas	SASW	SADW	-	-	6.42	12.08				18.50	0.88	4.81			5.69
700	4 Axle	1.1.22	2	WB 11 9284	Chemical	SASW	SASW	TADW	-	6.42	9.52	13.82	13.02		42.78	0.88	4.26	9.99		15.13
701	4 Axle	1.1.22	2	JH 10 9606	Powder	SASW	SASW	TADW	-	4.18	9.52	15.02	14.08		42.80	0.16	4.26	13.80		18.22
702	LCV	1.1	1	WB 37 1931	Empty	SASW	SASW	-	-	1.62	1.28				2.90	0.00	0.00			0.00
703	5 Axle	1.1.122	2	WB 57 5728	Powder	SASW	SASW	TRADW	-	4.42	0.82	10.94	13.82	13.06	43.06	0.20	0.00	7.52		7.72
704	5 Axle	1.1.122	2	WB 23 9603	Cement	SASW	SASW	TRADW	-	6.52	9.41	10.94	12.34	11.62	50.83	0.94	4.06	5.45		10.45
705	2 Axle	1.2	2	KA 01 5300	Parsal	SASW	SADW	-	-	4.21	6.54				10.75	0.16	0.41			0.58
706	5 Axle	1.1.122	2	WB 37 2405	Coal	SASW	SASW	TRADW	-	6.82	8.54	10.94	13.48	12.94	52.72	1.12	2.76	7.16		11.04
707	3 Axle	1.22	1	WB 39 6970	Empty	SASW	TADW	-	-	4.28	4.08	3.88			12.24	0.17	0.08			0.25
708	4 Axle	1.2.22	2	NL 01 1386	Gas	SASW	SADW	TADW	-	7.74	8.36	12.22	11.88		40.20	1.86	1.10	6.49		9.46
709	2 Axle	1.2	2	WB 39 1806	Petrol	SASW	SADW	-	-	4.94	7.74				12.68	0.31	0.81			1.12
710	3 Axle	1.22	1	WB 41 7404	Empty	SASW	TADW	-	-	4.21	3.82	3.74			11.77	0.16	0.06			0.23
711	2 Axle	1.2	1	WB 57 2529	Empty	SASW	SADW	-	-	4.63	4.21				8.84	0.24	0.07			0.31
712	3 Axle	1.22	2	RJ 52 6879	Parsal	SASW	TADW	-	-	6.94	11.68	10.86			29.48	1.20	4.97			6.17
713	3 Axle	1.22	1	WB 39 2741	Empty	SASW	TADW	-	-	4.34	4.08	3.98			12.40	0.18	0.08			0.27

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
714	4 Axle	1.1.22	2	BR 27 1280	Coal	SASW	SASW	TADW	-	7.42	8.54	11.62	10.76		38.34	1.57	2.76	4.83		9.16
715	3 Axle	1.22	1	WB 53 1270	Empty	SASW	TADW	-	-	4.48	4.36	4.10			12.94	0.21	0.10			0.31
716	5 Axle	1.1.122	1	WB 67 3210	Empty	SASW	SASW	TRADW	-	4.62	4.34		4.16	3.94	17.06	0.24	0.18	0.02		0.44
717	2 Axle	1.2	1	HR 55 1270	Empty	SASW	SADW	-	-	4.28	4.08				8.36	0.17	0.06			0.24
718	2 Axle	1.2	1	WB 19 3540	Empty	SASW	SADW	-	-	4.68	4.22				8.90	0.25	0.07			0.32
719	2 Axle	1.2	2	UP 80 5958	Tea	SASW	SADW	-	-	6.94	9.18				16.12	1.20	1.60			2.81
720	3 Axle	1.22	2	WB 77 0574	Parsal	SASW	TADW	-	-	7.48	9.74	8.62			25.84	1.62	2.19			3.81
721	3 Axle	1.22	2	RJ 32 3172	Tea	SASW	TADW	-	-	6.84	11.74	10.64			29.22	1.13	4.83			5.96
722	5 Axle	1.1.122	2	RJ 04 4728	Iron	SASW	SASW	TRADW	-	7.28	8.74	10.94	11.56	10.94	49.46	1.46	3.02	4.59		9.07
723	3 Axle	1.22	1	WB 39 4097	Empty	SASW	TADW	-	-	4.34	4.02	3.96			12.32	0.18	0.08			0.26
724	4 Axle	1.1.22	2	WB 39 8816	Cement	SASW	SASW	TADW	-	8.54	9.52	14.01	13.68		45.75	2.76	4.26	11.32		18.33
725	4 Axle	1.1.22	2	WB 33 5290	Gitti	SASW	SASW	TADW	-	7.62	8.62	13.74	12.86		42.84	1.75	2.86	9.64		14.25
726	2 Axle	1.2	2	WB 11 5672	Petrol	SASW	SADW	-	-	6.42	9.74				16.16	0.88	2.03			2.91
727	3 Axle	1.22	2	WB 39 3294	Petrol	SASW	TADW	-	-	7.62	11.74	10.54			29.90	1.75	4.74			6.49
728	2 Axle	1.2	2	WB 39 1325	Gas	SASW	SADW	-	-	6.28	8.54				14.82	0.81	1.20			2.01
729	2 Axle	1.2	1	WB 39 3015	Empty	SASW	SADW	-	-	4.21	3.96				8.17	0.16	0.06			0.22
730	4 Axle	1.1.22	2	WB 93 8217	Iron	SASW	SASW	TADW	-	7.34	8.54	13.74	12.86		42.48	1.50	2.76	9.64		13.90
731	4 Axle	1.2.22	2	NL02 7971	Pipe	SASW	SADW	TADW	-	6.52	15.18	16.46	16.88		55.04	0.94	11.99	23.78		36.72
732	4 Axle	1.1.22	2	WB 11 7911	Iron	SASW	SASW	TADW	-	7.48	9.74	13.48	12.36		43.06	1.62	4.66	8.58		14.87
733	3 Axle	1.22	2	HR 69 1809	Parsal	SASW	TADW	-	-	6.54	9.74	8.74			25.02	0.95	2.25			3.19
734	3 Axle	1.22	1	WB 23 0599	Empty	SASW	TADW	-	-	4.68	4.34	4.18			13.20	0.25	0.10			0.35
735	3 Axle	1.22	2	WB 75 7005	Cement	SASW	TADW	-	-	7.74	9.94	8.76			26.44	1.86	2.35			4.21
736	2 Axle	1.2	2	WB 29 1385	Gas	SASW	SADW	-	-	7.34	9.50				16.84	1.50	1.84			3.34
737	3 Axle	1.22	2	HR 55 3262	Parsal	SASW	TADW	-	-	7.74	11.34	10.76			29.84	1.86	4.59			6.45
738	2 Axle	1.2	2	WB 24 1270	Gas	SASW	SADW	-	-	7.56	10.34				17.90	1.69	2.58			4.27
739	BUS	1.2	2	WB 17 1605	Bus	SASW	SADW	-	-	4.34	9.04				13.38	0.18	1.51			1.69
740	4 Axle	1.1.22	2	J 14 6275	Coal	SASW	SASW	TADW	-	7.34	8.48	13.48	12.76		42.06	1.50	2.68	9.13		13.31
741	3 Axle	1.22	2	WB 17 6180	Parsal	SASW	TADW	-	-	7.56	10.94	10.34			28.84	1.69	3.95			5.64
742	5 Axle	1.1.122	2	JH 02 8588	Pipe	SASW	SASW	TRADW	-	8.34	9.74	10.94	14.16	13.56	56.74	2.51	4.66	8.21		15.38
743	2 Axle	1.2	2	WB 17 2115	Gas	SASW	SADW	-	-	7.34	10.24				17.58	1.50	2.48			3.99
744	2 Axle	1.2	2	WB 39 1270	Gas	SASW	SADW	-	-	7.02	10.84				17.86	1.26	3.12			4.38

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
745	2 Axle	1.2	2	WB 39 3378	Gas	SASW	SADW	-	-	6.98	12.08				19.06	1.23	4.81			6.04
746	4 Axle	1.2.22	2	GJ 12 3179	Chemical	SASW	SADW	TADW	-	7.68	9.34	13.74	13.08		43.84	1.80	1.72	9.96		13.48
747	2 Axle	1.2	1	WB 23 5603	Empty	SASW	SADW	-	-	4.83	7.48				12.31	0.28	0.71			0.99
748	5 Axle	1.2.222	1	NL 01 3476	Empty	SASW	SADW	TRADW	-	4.74	4.22	4.54	4.28	4.18	21.96	0.26	0.07	0.10		0.44
749	3 Axle	1.22	2	WB 23 9548	Oil	SASW	TADW	-	-	5.94	13.34	12.34			31.62	0.65	8.37			9.02
750	5 Axle	1.1.122	2	WB 53 5158	Gitti	SASW	SASW	TRADW	-	7.14	8.74	12.84	15.84	14.42	58.98	1.35	3.02	12.68		17.05
751	4 Axle	1.1.22	2	WB 17 2323	Rice	SASW	SASW	TADW	-	8.34	9.52	13.74	12.66		44.26	2.51	4.26	9.35		16.11
752	4 Axle	1.2.22	2	UP 17 1943	Petrol	SASW	SADW	TADW	-	7.74	9.44	13.48	12.86		43.52	1.86	1.79	9.27		12.92
753	4 Axle	1.1.22	2	WB 41 2323	Iron	SASW	SASW	TADW	-	8.54	10.28	13.74	13.08		45.64	2.76	5.79	9.96		18.50
754	4 Axle	1.1.22	2	WB 41 4342	Coal	SASW	SASW	TADW	-	8.16	9.44	13.14	12.64		43.38	2.30	4.11	8.50		14.92
755	2 Axle	1.2	2	WB 74 8245	Parsal	SASW	SADW	-	-	7.74	9.94				17.68	1.86	2.21			4.06
756	3 Axle	1.22	2	UP 74 7101	Iron	SASW	TADW	-	-	7.94	11.94	11.24			31.12	2.06	5.56			7.62
757	4 Axle	1.1.22	2	WB 41 6455	Gitti	SASW	SASW	TADW	-	8.56	11.74	13.44	13.16		46.90	2.78	9.84	9.64		22.26
758	2 Axle	1.2	2	NL 01 8310	Parsal	SASW	SADW	-	-	7.74	10.54				18.28	1.86	2.79			4.65
759	BUS	1.2	2	WB 30 6270	Passenger	SASW	SADW	-	-	5.74	8.34				14.08	0.56	1.09			1.66
760	5 Axle	1.1.122	1	WB 25 1713	Empty	SASW	SASW	TRADW	-	4.94	4.44		4.34	4.02	17.74	0.31	0.20	0.02		0.53
761	5 Axle	1.2.222	2	M 04 4707	Pipe	SASW	SADW	TRADW	-	5.74	9.44	13.74	12.86	12.34	54.12	0.56	1.79	8.45		10.81
762	5 Axle	1.1.122	2	WB 33 9780	Gitti	SASW	SASW	TRADW	-	7.96	10.24	13.48	12.34	12.04	56.06	2.08	5.70	7.55		15.33
763	2 Axle	1.2	2	WB 44 4270	gas	SASW	SADW	-	-	6.84	10.28				17.12	1.13	2.52			3.66
764	2 Axle	1.2	2	RJ 32 2947	Parsal	SASW	SADW	-	-	7.38	10.39				17.77	1.54	2.63			4.17
765	5 Axle	1.1.122	2	TN 14 7216	Iron	SASW	SASW	TRADW	-	7.48	9.70	10.94	13.74	13.02	54.88	1.62	4.59	7.42		13.63
766	5 Axle	1.1.122	2	WB 33 0980	Gitti	SASW	SASW	TRADW	-	9.90	9.27	9.90	15.69	15.24	60.00	4.98	3.82	10.22		19.01
767	4 Axle	1.2.22	2	NL 01 1764	Petrol	SASW	SADW	TADW	-	7.96	9.50	14.24	13.86		45.56	2.08	1.84	12.00		15.92
768	2 Axle	1.2	2	WB 01 1364	Petrol	SASW	SADW	-	-	6.84	10.26				17.10	1.13	2.50			3.64
769	3 Axle	1.22	2	NL 01 7120	Parsal	SASW	TADW	-	-	7.64	12.34	11.84			31.82	1.77	6.58			8.35
770	4 Axle	1.1.22	2	WB 39 2161	Iron	SASW	SASW	TADW	-	8.56	9.50	13.44	12.86		44.36	2.78	4.22	9.21		16.21
771	4 Axle	1.1.22	2	JH 01 0293	Iron	SASW	SASW	TADW	-	7.96	8.68	12.74	11.96		41.34	2.08	2.94	7.17		12.19
772	3 Axle	1.22	2	WB 37 6938	Coal	SASW	TADW	-	-	8.34	13.42	12.86			34.62	2.51	9.18			11.69
773	3 Axle	1.22	2	HR 46 7875	Parsal	SASW	TADW	-	-	7.76	11.74	11.26			30.76	1.88	5.39			7.27
774	3 Axle	1.22	2	NL 01 0278	Parsal	SASW	TADW	-	-	7.36	11.74	10.64			29.74	1.52	4.83			6.35
775	3 Axle	1.22	2	JH 15 1517	Gas	SASW	TADW	-	-	9.21	13.74	12.94			35.89	3.73	9.75			13.48
776	4 Axle	1.1.22	2	WB 11 5940	Iron	SASW	SASW	TADW	-	7.96	9.50	13.50	12.34		43.30	2.08	4.22	8.58		14.88

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
777	3 Axle	1.22	1	WB 35 4270	Empty	SASW	TADW	-	-	4.34	4.02	3.94			12.30	0.18	0.08			0.26
778	4 Axle	1.1.22	2	HP 16 1187	Parsal	SASW	SASW	TADW	-	7.84	8.84	13.46	12.64		42.78	1.96	3.16	8.93		14.05
779	3 Axle	1.22	2	HR 38 1187	Parsal	SASW	TADW	-	-	7.74	11.84	10.96			30.54	1.86	5.20			7.06
780	4 Axle	1.1.22	2	BR 47 4170	Rice	SASW	SASW	TADW	-	8.14	9.56	13.44	12.94		44.08	2.27	4.33	9.32		15.93
781	4 Axle	1.2.22	2	NL 01 8809	Car	SASW	SADW	TADW	-	7.22	9.02	6.22	7.38		29.84	1.41	1.50	0.66		3.56
782	4 Axle	1.1.22	2	JH 10 3209	Powder	SASW	SASW	TADW	-	6.42	9.52	13.82	13.06		42.82	0.88	4.26	10.05		15.19
783	4 Axle	1.1.22	1	WB 61 4641	Empty	SASW	SASW	TADW	-	4.22		3.82	3.68		11.72	0.16		0.06		0.23
784	BUS	1.2	2	WB 76 6184	Passenger	SASW	SADW	-	-	7.38	9.46				16.84	1.54	1.81			3.35
785	3 Axle	1.22	1	WB 99 7269	Empty	SASW	TADW	-	-	4.32	5.62	3.82			13.76	0.18	0.15			0.33
786	4 Axle	1.2.22	1	H 38 8548	Empty	SASW	SADW	TADW	-	4.82	4.52	4.22	4.12		17.68	0.28	0.09	0.09		0.47
787	BUS	1.2	2	BR 02 6151	Passenger	SASW	SADW	-	-	7.82	9.22				17.04	1.94	1.63			3.57
788	LCV	1.1	1	WB 19 7561	Empty	SASW	SASW	-	-	1.82	1.66				3.48	0.01	0.00			0.01
789	3 Axle	1.22	2	NL 01 3330	Chemical	SASW	TADW	-	-	6.72	12.82	12.04			31.58	1.06	7.35			8.41
790	2 Axle	1.2	2	NL 01 1572	Parsal	SASW	SADW	-	-	6.34	10.54				16.88	0.84	2.79			3.62
791	3 Axle	1.22	2	WB 41 3148	Coal	SASW	TADW	-	-	7.48	11.85	11.02			30.35	1.62	5.27			6.89
792	3 Axle	1.22	2	UP 38 1172	Parsal	SASW	TADW	-	-	7.28	12.24	11.84			31.36	1.46	6.47			7.93
793	5 Axle	1.1.122	2	WB 23 1910	Gitti	SASW	SASW	TRADW	-	7.88	9.50	10.94	13.62	13.08	55.02	2.00	4.22	7.38		13.59
794	3 Axle	1.22	2	WB 23 1287	Coal	SASW	TADW	-	-	7.08	11.82	11.22			30.12	1.30	5.42			6.73
795	2 Axle	1.2	2	PB 10 1803	Parsal	SASW	SADW	-	-	7.63	10.34				17.97	1.76	2.58			4.34
796	3 Axle	1.22	2	WB 39 9197	Iron	SASW	TADW	-	-	3.63	10.28	10.54			24.45	0.09	3.62			3.71
797	2 Axle	1.2	1	WB 25 5335	Empty	SASW	SADW	-	-	4.34	3.98				8.32	0.18	0.06			0.24
798	BUS	1.2	2	WB 41 9817	Passenger	SASW	SADW	-	-	6.54	8.30				14.84	0.95	1.07			2.02
799	2 Axle	1.2	2	NL 01 7580	Parsal	SASW	SADW	-	-	6.34	8.50				14.84	0.84	1.18			2.02
800	5 Axle	1.1.122	2	WB 17 4517	Sand	SASW	SASW	TRADW	-	7.71	8.22	10.71	17.36	15.99	60.00	1.83	2.37	13.85		18.06
801	BUS	1.2	2	WB 81 1758	Parsal	SASW	SADW	-	-	5.30	7.14				12.44	0.41	0.59			1.00
802	2 Axle	1.2	2	WB 29 4205	Parsal	SASW	SADW	-	-	5.62	9.22				14.84	0.52	1.63			2.15
803	3 Axle	1.22	2	WB 39 3634	Gitti	SASW	TADW	-	-	6.92	16.34	17.02			40.28	1.19	23.84			25.03
804	2 Axle	1.2	2	WB 41 0804	Oil	SASW	SADW	-	-	5.63	9.16				14.79	0.52	1.59			2.11
805	4 Axle	1.1.22	2	WB 11 0480	Iron	SASW	SASW	TADW	-	5.60	9.74	9.40	9.16		33.90	0.51	4.66	2.28		7.46
806	4 Axle	1.1.22	2	RJ 10 1070	Dust	SASW	SASW	TADW	-	7.22	9.52	14.36	13.94		45.04	1.41	4.26	12.35		18.01
807	4 Axle	1.1.22	2	WB 42 4210	Grocery	SASW	SASW	TADW	-	7.22	9.52	14.96	13.08		44.78	1.41	4.26	11.90		17.56
808	4 Axle	1.1.22	1	WB 40 1750	Empty	SASW	SASW	TADW	-	4.20		3.96	3.74		11.90	0.16		0.07		0.23

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
809	5 Axle	1.1.1.22	1	WB 45 8010	Empty	SASW	SASW	SASW	TADW	4.62	3.34		4.42	4.70	17.08	0.24	0.06		0.01	0.31
810	4 Axle	1.1.22	1	WB 14 8007	Empty	SASW	SASW	TADW	-	3.94	3.42	3.84	3.60		14.80	0.12	0.07	0.06		0.25
811	BUS	1.2	2	WB 37 6336	Passenger	SASW	SADW	-	-	3.20	6.83				10.03	0.05	0.49			0.55
812	BUS	1.2	2	B 01 1675	Passenger	SASW	SADW	-	-	5.60	7.50				13.10	0.51	0.71			1.22
813	3 Axle	1.22	2	WB 19 1762	Grocery	SASW	TADW	-	-	7.20	12.34	11.64			31.18	1.39	6.37			7.76
814	2 Axle	1.2	2	WB 14 6175	Passenger	SASW	SADW	-	-	6.80	8.54				15.34	1.11	1.20			2.31
815	3 Axle	1.22	1	NL 0 1 6017	Empty	SASW	TADW	-	-	3.81	4.34	4.84			12.99	0.11	0.14			0.25
816	2 Axle	1.2	1	WB 11 1671	Empty	SASW	SADW	-	-	3.94	4.10				8.04	0.12	0.06			0.19
817	5 Axle	1.1.122	2	WB 29 6270	Gitti	SASW	SASW	TRADW	-	7.96	9.74	10.94	16.34	14.74	59.72	2.08	4.66	11.46		18.20
818	4 Axle	1.2.22	1	WB 37 9896	Empty	SASW	SADW	TADW	-	5.68	4.80	4.42	4.35		19.25	0.54	0.12	0.11		0.77
819	2 Axle	1.2	2	WB 23 0647	Parsal	SASW	SADW	-	-	5.94	8.54				14.48	0.65	1.20			1.85
820	4 Axle	1.2.22	1	WB 25 4117	Empty	SASW	SADW	TADW	-	5.20	4.74	4.54	4.34		18.82	0.38	0.11	0.12		0.61
821	4 Axle	1.2.22	1	WB 41 0554	Empty	SASW	SADW	TADW	-	5.02	4.34	4.36	4.16		17.88	0.33	0.08	0.10		0.51
822	BUS	1.2	2	J 04 6215	Passenger	SASW	SADW	-	-	5.40	7.74				13.14	0.44	0.81			1.25
823	2 Axle	1.2	2	WB 29 6106	Biskut	SASW	SADW	-	-	5.34	6.56				11.90	0.42	0.42			0.84
824	BUS	1.2	2	WB 41 5661	Passenger	SASW	SADW	-	-	6.54	8.36				14.90	0.95	1.10			2.05
825	4 Axle	1.2.22	1	WB 62 7105	Empty	SASW	SADW	TADW	-	4.94	4.62	4.02	3.98		17.56	0.31	0.10	0.08		0.49
826	5 Axle	1.2.222	2	WB 17 6722	Cement	SASW	SADW	TRADW	-	6.34	9.62	12.94	13.56	13.08	55.54	0.84	1.93	9.02		11.79
827	3 Axle	1.22	2	WB 53 2683	Cement	SASW	TADW	-	-	6.14	8.94	8.68			23.76	0.74	1.86			2.59
828	2 Axle	1.2	1	WB 535877	Empty	SASW	SADW	-	-	4.18	3.90				8.08	0.16	0.05			0.21
829	5 Axle	1.1.122	2	WB 76 5660	Dust	SASW	SASW	TRADW	-	8.02	9.24	10.65	16.29	15.80	60.00	2.14	3.78	12.26		18.18
830	4 Axle	1.1.22	2	WB 41 8701	Beldset	SASW	SASW	TADW	-	7.80	9.52	14.22	14.02		45.56	1.92	4.26	12.24		18.42
831	2 Axle	1.2	1	WB 33 6066	Empty	SASW	SADW	-	-	4.34	3.90				8.24	0.18	0.05			0.24
832	5 Axle	1.1.122	2	RJ 06 5310	Sand	SASW	SASW	TRADW	-	7.90	8.84	10.36	16.79	16.11	60.00	2.01	3.17	12.87		18.05
833	5 Axle	1.2.222	1	WB 37 5302	Empty	SASW	SADW	TRADW	-	4.62	4.48		4.94	4.34	18.38	0.24	0.09	0.03		0.35
834	2 Axle	1.2	2	WB 41 8284	Gas	SASW	SADW	-	-	5.74	8.34				14.08	0.56	1.09			1.66
835	4 Axle	1.2.22	1	WB 459322	Empty	SASW	SADW	TADW	-	3.30	4.62	4.80	4.24		16.96	0.06	0.10	0.13		0.29
836	4 Axle	1.2.22	1	WB 33 0198	Empty	SASW	SADW	TADW	-	3.84	4.34	4.48	4.18		16.84	0.11	0.08	0.11		0.30
837	5 Axle	1.2.222	1	GJ 04 6108	Empty	SASW	SADW	TRADW	-	4.54	4.34		4.62	4.14	17.64	0.22	0.08	0.02		0.32
838	5 Axle	1.1.122	1	WB 37 1108	Empty	SASW	SASW	TRADW	-	4.48	4.34		4.54	4.28	17.64	0.21	0.18	0.02		0.41
839	2 Axle	1.2	1	WB 41 7256	Empty	SASW	SADW	-	-	3.96	4.21				8.17	0.13	0.07			0.20
840	3 Axle	1.22	2	WB 41 7105	Parsal	SASW	TADW	-	-	6.24	9.64	8.41			24.29	0.79	2.04			2.83

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
841	3 Axle	1.22	2	WB 67 5310	Paper	SASW	TADW	-	-	6.92	10.94	11.44			29.30	1.19	4.83			6.02
842	3 Axle	1.22	1	WB 53 1208	Empty	SASW	TADW	-	-	4.24	3.84	4.10			12.18	0.17	0.08			0.24
843	4 Axle	1.1.22	1	MH 40 6217	Empty	SASW	SASW	TADW	-	3.82	4.20	4.00	3.90		15.92	0.11	0.16	0.07		0.35
844	5 Axle	1.1.122	2	WB 53 1608	Dust	SASW	SASW	TRADW	-	7.00	8.24	10.94	14.82	14.24	55.24	1.24	2.39	9.41		13.04
845	5 Axle	1.1.122	2	WB 37 6080	Dust	SASW	SASW	TRADW	-	8.13	9.59	10.77	16.09	15.42	60.00	2.27	4.38	11.74		18.39
846	4 Axle	1.1.22	2	WB 54 1605	Pipe	SASW	SASW	TADW	-	7.92	9.52	14.34	13.66		45.44	2.04	4.26	11.83		18.13
847	2 Axle	1.2	1	WB 11 7060	Empty	SASW	SADW	-	-	3.94	4.34				8.28	0.12	0.08			0.21
848	5 Axle	1.1.122	2	WB 14 4117	Sand	SASW	SASW	TRADW	-	8.12	9.18	10.31	16.72	15.66	60.00	2.26	3.68	12.21		18.15
849	5 Axle	1.2.222	1	WB 37 1608	Empty	SASW	SADW	TRADW	-	4.64	4.48		5.95	4.34	19.41	0.24	0.09	0.04		0.37
850	2 Axle	1.2	2	WB 49 1618	Gas	SASW	SADW	-	-	5.74	9.02				14.76	0.56	1.50			2.06
851	4 Axle	1.2.22	1	WB 45 7018	Empty	SASW	SADW	TADW	-	3.36	4.81	4.74	4.28		17.19	0.07	0.12	0.13		0.31
852	4 Axle	1.2.22	1	WB 17 1405	Empty	SASW	SADW	TADW	-	3.74	4.62	4.22	4.18		16.76	0.10	0.10	0.10		0.30
853	5 Axle	1.2.222	1	WB 39 3902	Empty	SASW	SADW	TRADW	-	4.48	4.28		4.62	4.02	17.40	0.21	0.08	0.02		0.31
854	5 Axle	1.1.122	1	WB 76 2170	Empty	SASW	SASW	TRADW	-	4.34	4.20		5.08	4.62	18.24	0.18	0.16	0.03		0.38
855	2 Axle	1.2	1	WB 10 6105	Empty	SASW	SADW	-	-	3.96	4.34				8.30	0.13	0.08			0.21
856	3 Axle	1.22	2	WB 17 4217	Iron	SASW	TADW	-	-	6.34	9.41	8.34			24.09	0.84	1.91			2.75
857	3 Axle	1.22	2	WB 42 1107	Paper	SASW	TADW	-	-	6.28	10.94	10.44			27.66	0.81	4.02			4.83
858	4 Axle	1.1.22	1	NL 10 1127	Empty	SASW	SASW	TADW	-	3.84	3.74	3.44	3.34		14.36	0.11	0.10	0.04		0.25
859	5 Axle	1.1.122	2	HR 38 1182	Dust	SASW	SASW	TRADW	-	7.00	8.36	10.94	15.74	14.66	56.70	1.24	2.53	10.73		14.51
860	4 Axle	1.1.22	2	JH 04 1400	Iron	SASW	SASW	TADW	-	7.20	9.52	14.21	13.40		44.33	1.39	4.26	11.19		16.84
861	2 Axle	1.2	1	WB 11 6807	Empty	SASW	SADW	-	-	3.56	3.74				7.30	0.08	0.04			0.13
862	LCV	1.2	1	WB 41 8702	Empty	SASW	SADW	-	-	1.66	2.14				3.80	0.00	0.00			0.01
863	LCV	1.2	2	NL 01 6110	Parle g	SASW	SADW	-	-	4.68	7.34				12.02	0.25	0.66			0.90
864	3 Axle	1.22	2	WB 61 6084	Gas	SASW	TADW	-	-	5.61	7.40	7.00			20.01	0.51	0.83			1.34
865	LCV	1.2	2	RJ 04 3217	Parcel	SASW	SADW	-	-	5.78	6.54				12.32	0.58	0.41			0.99
866	3 Axle	1.22	1	WB 17 1182	Empty	SASW	TADW	-	-	3.48	3.74	3.84			11.06	0.08	0.06			0.14
867	3 Axle	1.22	1	WB 75 1408	Empty	SASW	TADW	-	-	4.26	3.88	3.78			11.92	0.17	0.07			0.24
868	LCV	1.2	1	WB 31 7132	Empty	SASW	SADW	-	-	2.94	3.56				6.50	0.04	0.04			0.07
869	BUS	1.2	2	WB 33 8638	Passenger	SASW	SADW	-	-	5.02	6.43				11.45	0.33	0.39			0.72
870	5 Axle	1.1.122	1	WB 70 2569	Empty	SASW	SASW	TRADW	-	4.14	4.94		4.62	4.34	18.04	0.15	0.31	0.02		0.48
871	3 Axle	1.22	2	NL 01 1218	Pipe	SASW	TADW	-	-	5.94	9.42	9.14			24.50	0.65	2.28			2.93
872	BUS	1.2	2	WB 37 1478	Passenger	SASW	SADW	-	-	5.42	7.62				13.04	0.45	0.76			1.21

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
873	4 Axle	1.2.22	1	JH 02 6217	Empty	SASW	SADW	TADW	-	4.42	4.94	4.62	4.16		18.14	0.20	0.13	0.11		0.45
874	BUS	1.2	2	WB 02 6217	Passenger	SASW	SADW	-	-	5.34	7.34				12.68	0.42	0.66			1.08
875	LCV	1.2	2	WB 15 1126	Biskut	SASW	SADW	-	-	5.74	9.16				14.90	0.56	1.59			2.15
876	2 Axle	1.2	2	WB 27 7805	Goods	SASW	SADW	-	-	6.34	9.70				16.04	0.84	2.00			2.84
877	4 Axle	1.1.22	2	WB 29 1475	Clothes	SASW	SASW	TADW	-	6.54	8.34	11.74	11.18		37.80	0.95	2.51	5.31		8.77
878	LCV	1.2	2	WB 51 7388	Machine	SASW	SADW	-	-	3.34	4.30				7.64	0.06	0.08			0.14
879	3 Axle	1.22	2	WB 53 6113	Parcel	SASW	TADW	-	-	6.34	9.68	9.38			25.40	0.84	2.54			3.38
880	3 Axle	1.22	2	WB 23 6161	Dust	SASW	TADW	-	-	7.72	15.56	14.50			37.78	1.84	15.72			17.56
881	3 Axle	1.22	2	WB 23 9323	Dust	SASW	TADW	-	-	7.00	15.00	14.46			36.46	1.24	14.50			15.74
882	5 Axle	1.1.122	2	WB 45 7665	Dust	SASW	SASW	TRADW	-	7.32	7.94	14.32	13.21	14.20	56.99	1.49	2.06	11.14		14.69
883	4 Axle	1.2.22	1	WB 15 2551	Empty	SASW	SADW	TADW	-	4.20	3.81	4.34	4.10		16.45	0.16	0.05	0.10		0.31
884	3 Axle	1.22	2	UK 04 9461	Chemical	SASW	TADW	-	-	7.62	13.74	12.40			33.76	1.75	8.99			10.73
885	3 Axle	1.22	1	NL 01 6070	Empty	SASW	TADW	-	-	4.34	4.10	3.80			12.24	0.18	0.07			0.26
886	4 Axle	1.1.22	2	PB 11 1187	Iron	SASW	SASW	TADW	-	7.88	8.54	13.74	12.68		42.84	2.00	2.76	9.38		14.13
887	4 Axle	1.2.22	2	PB 13 8284	Gitti	SASW	SADW	TADW	-	7.14	9.74	13.40	12.90		43.18	1.35	2.03	9.21		12.59
888	BUS	1.2	2	WB 37 1180	Passenger	SASW	SADW	-	-	5.34	7.74				13.08	0.42	0.81			1.23
889	2 Axle	1.2	2	NL 01 7411	Parcel	SASW	SADW	-	-	7.94	10.08				18.02	2.06	2.33			4.39
890	3 Axle	1.22	2	H 38 1017	Grocery	SASW	TADW	-	-	6.62	10.02	9.42			26.06	1.00	2.75			3.74
891	4 Axle	1.1.22	2	WB 25 7808	Vegitable	SASW	SASW	TADW	-	7.42	8.43	13.74	12.86		42.45	1.57	2.62	9.64		13.83
892	4 Axle	1.1.22	2	B 02 9740	Rice	SASW	SASW	TADW	-	7.96	9.74	12.62	12.10		42.42	2.08	4.66	7.19		13.93
893	3 Axle	1.22	1	UP 21 9595	Empty	SASW	TADW	-	-	4.02	4.08	3.94			12.04	0.14	0.08			0.21
894	5 Axle	1.1.122	2	WB 27 4088	Iron	SASW	SASW	TRADW	-	7.92	9.69	10.88	16.25	15.27	60.00	2.03	4.56	11.88		18.47
895	5 Axle	1.1.122	2	WB 67 0680	Gitti	SASW	SASW	TRADW	-	8.14	9.44	14.36	13.88	13.08	58.90	2.27	4.11	10.71		17.10
896	4 Axle	1.1.22	2	WB 01 6108	Rice	SASW	SASW	TADW	-	7.54	8.24	13.60	13.00		42.38	1.67	2.39	9.64		13.70
897	3 Axle	1.22	1	WB 11 7022	Empty	SASW	TADW	-	-	4.34	4.14	3.84			12.32	0.18	0.08			0.26
898	3 Axle	1.22	2	HR 55 5811	Parcel	SASW	TADW	-	-	6.54	9.60	8.90			25.04	0.95	2.25			3.20
899	2 Axle	1.2	2	NL 01 3278	Passenger	SASW	SADW	-	-	5.62	7.96				13.58	0.52	0.91			1.42
900	4 Axle	1.1.22	2	WB 41 6108	Gitti	SASW	SASW	TADW	-	6.96	9.16	12.86	12.10		41.08	1.22	3.65	7.47		12.34

Single Axle with single wheel - SASW
Single Axle with dual wheels - SADW
Tandem Axle Single wheel - TASW
Tridem Axel Dual Wheel - TRADW

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Dhanbad

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
	Tandem Axle with dual wheels			-	TADW															

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
1	4 Axle	1.1.22	2	WB 16 4310	Cement	SASW	SASW	TADW	-	9.08	10.78	2.54	16.88		39.28	3.52	7.00	2.74		13.26
2	2 Axle	1.2	2	B 73 CG 205	Gas	SASW	SADW	-	-	4.30	7.94				12.24	0.18	0.90			1.07
3	5 Axle	1.1.1.22	2	WB 41 K 832	Dust	SASW	SASW	SASW	TADW	8.06	8.88	9.00	14.50	14.24	54.68	2.18	3.22	3.40	0.79	9.60
4	5 Axle	1.1.1.22	1	WB 23 B 977	Empty	SASW	SASW	SASW	TADW	4.88	3.64		4.08	3.64	16.24	0.29	0.09		0.00	0.39
5	2 Axle	1.2	1	WB 15 F 090	Empty	SASW	SADW	-	-	2.28	2.78				5.06	0.01	0.01			0.03
6	2 Axle	1.2	2	WB 11 D 599	Flipkart	SASW	SADW	-	-	2.92	4.68				7.60	0.04	0.11			0.15
7	5 Axle	1.1.1.22	2	WB 39 B 164	Sand	SASW	SASW	SASW	TADW	9.30	8.28	8.78	15.80	16.28	58.44	3.88	2.44	3.08	1.35	10.74
8	4 Axle	1.2.22	2	DL 1 GC 588	Butter	SASW	SADW	TADW	-	7.60	8.80	13.88	13.60		43.88	1.73	1.35	10.98		14.06
9	5 Axle	1.2.222	2	J 12 BW 183	Powder	SASW	SADW	TRADW	-	4.20	6.48	13.60	14.80	15.96	55.04	0.16	0.40	14.23		14.79
10	5 Axle	1.1.1.22	1	WB 35 1918	Empty	SASW	SASW	SASW	TADW	5.20	11.60		11.80	12.00	40.60	0.38	9.38		0.40	10.16
11	5 Axle	1.2.222	2	J 02 GC 329	Rode	SASW	SADW	TRADW	-	5.60	13.20	9.60	11.83	10.02	50.25	0.51	6.86	3.59		10.96
12	LCV	1.2	1	WB 11 E 588	Empty	SASW	SADW	-	-	2.26	1.28				3.54	0.01	0.00			0.01
13	5 Axle	1.2.222	1	WB 39 A 969	Empty	SASW	SADW	TRADW	-	4.48	4.92	3.28	3.24	4.33	20.25	0.21	0.13	0.05		0.39
14	4 Axle	1.1.22	2	WB 41 J	Cement	SASW	SASW	TADW	-	8.62	10.07	22.73	18.58		60.00	2.87	5.34	56.02		64.22
15	5 Axle	1.2.222	2	WB 41 J 927	Coal	SASW	SADW	TRADW	-	6.60	6.91	14.31	16.32	15.86	60.00	0.98	0.51	17.17		18.67
16	2 Axle	1.2	2	WB 05 A 157	Flipkart	SASW	SADW	-	-	4.48	10.32				14.80	0.21	2.56			2.77
17	2 Axle	1.2	1	WB 11 1852	Empty	SASW	SADW	-	-	3.72	5.20				8.92	0.10	0.17			0.26
18	5 Axle	1.2.222	2	HR 55 AR	Medical	SASW	SADW	TRADW	-	6.18	13.93	7.92	12.23	12.19	52.45	0.76	8.51	4.02		13.28
19	3 Axle	1.22	1	WB 39 A 307	Empty	SASW	TADW	-	-	4.33	3.96	3.80			12.09	0.18	0.07			0.25
20	5 Axle	1.2.222	2	WB 11 F 033	Parcel	SASW	SADW	TRADW	-	6.86	15.80	11.20	8.81	8.50	51.17	1.15	14.08	2.43		17.65
21	5 Axle	1.1.1.22	1	WB 29 E 294	Empty	SASW	SASW	SASW	TADW	3.28	4.68		2.86	3.68	14.50	0.06	0.25		0.00	0.31
22	5 Axle	1.1.1.22	2	WB 41 K 041	Stone	SASW	SASW	SASW	TADW	5.88	7.50	13.08	13.84	11.08	51.38	0.62	1.64	15.17	0.29	17.72
23	2 Axle	1.2	2	P 70 GT 525	Parcel	SASW	SADW	-	-	4.86	9.04				13.90	0.29	1.51			1.80
24	5 Axle	1.1.1.22	2	WB 39 C 294	Bulb	SASW	SASW	SASW	TADW	6.58	10.64	9.46	14.48	13.04	54.20	0.97	6.64	4.15	0.56	12.32
25	2 Axle	1.2	2	B 11 CB 168	Medical	SASW	SADW	-	-	5.66	9.04				14.70	0.53	1.51			2.04
26	5 Axle	1.1.1.22	2	GJ 02 2618	Milk	SASW	SASW	SASW	TADW	7.82	8.44	10.68	10.04	9.08	46.06	1.94	2.63	6.74	0.13	11.44
27	3 Axle	1.22	1	WB 53 C 612	Empty	SASW	TADW	-	-	4.78	3.84	3.84			12.46	0.27	0.07			0.34
28	3 Axle	1.22	2	J 14 GR 835	Parcel	SASW	TADW	-	-	8.86	10.64	10.08			29.58	3.19	3.55			6.74
29	5 Axle	1.1.1.22	2	WB 39 C 196	Stone	SASW	SASW	SASW	TADW	8.33	9.91	8.96	16.24	16.56	60.00	2.50	5.00	3.34	1.45	12.29
30	2 Axle	1.2	2	HR 46 E 011	Flipkart	SASW	SADW	-	-	6.50	12.31				18.81	0.92	5.19			6.11
31	5 Axle	1.1.1.22	2	WB 67 C 122	Sand	SASW	SASW	SASW	TADW	8.48	9.04	8.78	17.30	15.28	58.88	2.68	3.46	3.08	1.05	10.27

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
32	3 Axle	1.22	2	P 21 CN 441	Shandon	SASW	TADW	-	-	8.52	11.04	9.64			29.20	2.73	3.52			6.25
33	5 Axle	1.1.1.22	2	WB 67 C 136	Sand	SASW	SASW	SASW	TADW	10.02	10.64	9.76	15.04	14.04	59.50	5.22	6.64	4.70	0.75	17.31
34	5 Axle	1.1.1.22	2	WB 67 C 136	Sand	SASW	SASW	SASW	TADW	8.44	7.08	7.34	17.88	17.28	58.02	2.63	1.30	1.50	1.72	7.15
35	6 Axle	1.22.222	2	WB 67 C 156	Tiles	SASW	TADW	TRADW	-	4.68	10.90	10.17	11.10	10.71	47.57	0.25	3.79	3.85		7.89
36	3 Axle	1.22	1	RJ 05 GB 771	Empty	SASW	TADW	-	-	4.68	3.84	3.42			11.94	0.25	0.05			0.30
37	2 Axle	1.2	1	HR 55 AG 75	Empty	SASW	SADW	-	-	2.82	2.44				5.26	0.03	0.01			0.04
38	5 Axle	1.1.1.22	2	WB 19 5725	Parcel	SASW	SASW	SASW	TADW	6.02	5.68	5.84	13.10	12.08	42.72	0.68	0.54	0.60	0.41	2.23
39	3 Axle	1.22	2	WB 11 F 744	Parcel	SASW	TADW	-	-	4.82	9.44	10.04			24.30	0.28	2.77			3.05
40	LCV	1.2	2	WB 37 E 086	Gas	SASW	SADW	-	-	2.24	2.64				4.88	0.01	0.01			0.02
41	4 Axle	1.2.22	2	NL 01 N 384	Car	SASW	SADW	TADW	-	5.68	6.10	7.04	6.82		25.64	0.54	0.31	0.71		1.56
42	2 Axle	1.2	2	WB 67 C 073	Gas	SASW	SADW	-	-	4.02	7.84				11.86	0.14	0.85			0.99
43	5 Axle	1.2.222	2	WB 37 E 383	Cement	SASW	SADW	TRADW	-	6.75	15.06	10.68	14.21	13.29	60.00	1.08	11.63	7.81		20.52
44	5 Axle	1.1.1.22	2	WB 41 K 137	Parcel	SASW	SASW	SASW	TADW	5.16	7.84	9.52	15.84	16.04	54.40	0.37	1.96	4.26	1.27	7.86
45	4 Axle	1.2.22	2	A 51 AH 445	Parcel	SASW	SADW	TADW	-	6.56	6.74	9.24	9.64		32.18	0.96	0.47	2.45		3.87
46	BUS	1.2	2	WB 53 0229	Passenger	SASW	SADW	-	-	4.92	5.62				10.54	0.30	0.23			0.53
47	2 Axle	1.2	2	WB 39 B 983	Oil	SASW	SADW	-	-	5.60	9.20				14.80	0.51	1.62			2.13
48	4 Axle	1.2.22	1	P 70 HT 022	Empty	SASW	SADW	TADW	-	4.80	4.72	4.30	4.72		18.54	0.28	0.11	0.13		0.51
49	5 Axle	1.1.1.22	1	WB 49 N 214	Empty	SASW	SASW	SASW	TADW	4.72	4.91		5.13	4.85	19.61	0.26	0.30		0.01	0.57
50	5 Axle	1.1.1.22	1	WB 39 9069	Empty	SASW	SASW	SASW	TADW	4.40	3.60		4.29	4.48	16.77	0.19	0.09		0.01	0.29
51	LCV	1.1	2	WB 37 E 571	Parcel	SASW	SASW	-	-	2.10	2.35				4.45	0.01	0.02			0.03
52	2 Axle	1.2	2	WB 39 5851	Oil	SASW	SADW	-	-	5.60	8.96				14.56	0.51	1.46			1.97
53	3 Axle	1.22	1	WB 37 7081	Empty	SASW	TADW	-	-	4.80	3.94	4.22			12.96	0.28	0.09			0.36
54	3 Axle	1.22	1	WB 41 4934	Empty	SASW	TADW	-	-	4.53	4.63	4.48			13.64	0.22	0.13			0.35
55	5 Axle	1.1.1.22	2	WB 25 L 272	Flour	SASW	SASW	SASW	TADW	8.80	8.36	6.58	15.60	16.31	55.65	3.11	2.53	0.97	1.36	7.97
56	2 Axle	1.2	2	WB 11 7575	Parcel	SASW	SADW	-	-	5.60	8.96				14.56	0.51	1.46			1.97
57	LCV	1.2	1	WB 41 0290	Empty	SASW	SADW	-	-	2.20	2.10				4.30	0.01	0.00			0.02
58	BUS	1.2	2	WB 37 9232	Passenger	SASW	SADW	-	-	3.69	5.25				8.94	0.10	0.17			0.27
59	3 Axle	1.22	2	WB 29 4960	Oil	SASW	TADW	-	-	4.20	10.20	11.78			26.18	0.16	4.49			4.65
60	3 Axle	1.22	2	NL 01 0618	Vegitables	SASW	TADW	-	-	7.20	12.96	14.33			34.49	1.39	10.68			12.07
61	5 Axle	1.1.1.22	2	WB 33 2059	Grocery	SASW	SASW	SASW	TADW	7.20	8.20	8.58	15.68	16.32	55.98	1.39	2.34	2.81	1.37	7.91
62	5 Axle	1.1.1.22	2	PB 06 4757	Rice	SASW	SASW	SASW	TADW	7.88	8.20	9.96	14.00	15.57	55.61	2.00	2.34	5.10	1.13	10.57

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
63	BUS	1.2	2	WB 39 5916	Passenger	SASW	SADW	-	-	3.60	4.83				8.43	0.09	0.12			0.21
64	LCV	1.2	2	IH 36 AA 094	Drum	SASW	SADW	-	-	3.86	5.84				9.70	0.12	0.26			0.38
65	LCV	1.2	1	MP 09 6414	Empty	SASW	SADW	-	-	2.10	3.16				5.26	0.01	0.02			0.03
66	2 Axle	1.2	2	HR 38 8662	Courier	SASW	SADW	-	-	6.37	9.01				15.38	0.85	1.49			2.34
67	LCV	1.2	2	DL 1 MB 205	Furniture	SASW	SADW	-	-	2.70	4.14				6.84	0.03	0.07			0.09
68	3 Axle	1.22	2	WB 23 7875	Gas	SASW	TADW	-	-	4.49	5.96	5.89			16.34	0.21	0.38			0.59
69	5 Axle	1.1.1.22	2	WB 67 1241	Dust	SASW	SASW	SASW	TADW	7.23	8.39	9.93	16.90	14.64	57.09	1.42	2.57	5.04	0.88	9.91
70	4 Axle	1.1.22	2	WB 39 9497	Cement	SASW	SASW	TADW	-	8.40	7.43	7.96	11.40		35.19	2.58	1.58	2.70		6.86
71	LCV	1.2	2	G 04 NV 642	Fruits	SASW	SADW	-	-	6.40	10.96				17.36	0.87	3.26			4.13
72	3 Axle	1.22	2	NV 01 8980	Muttan	SASW	TADW	-	-	7.40	10.20	9.60			27.20	1.55	2.96			4.51
73	6 Axle	1.22.222	2	WB 39 5076	Rode	SASW	TADW	TRADW	-	6.62	8.65	8.58	10.55	12.69	47.09	0.99	1.70	3.77		6.46
74	LCV	1.2	2	CG 04 7728	Muttan	SASW	SADW	-	-	5.34	10.43				15.77	0.42	2.67			3.09
75	4 Axle	1.2.22	2	NL 01 G 9365	Car	SASW	SADW	TADW	-	5.72	8.28	8.48	7.92		30.40	0.55	1.06	1.39		3.01
76	5 Axle	1.2.222	2	PB 10 9408	Vegitables	SASW	SADW	TRADW	-	5.03	13.34	12.07	15.00	14.55	60.00	0.33	7.16	11.03		18.52
77	3 Axle	1.22	1	WB 39 2769	Empty	SASW	TADW	-	-	4.68	5.02	4.93			14.63	0.25	0.19			0.44
78	3 Axle	1.22	2	WB 39 8809	Coal	SASW	TADW	-	-	6.80	11.62	12.76			31.18	1.11	6.80			7.91
79	LCV	1.2	2	WB 53 C 469	Clothes	SASW	SADW	-	-	5.68	10.92				16.60	0.54	3.21			3.75
80	5 Axle	1.1.1.22	1	WB 57 7729	Empty	SASW	SASW	SASW	TADW	4.43	5.02		4.92	4.65	19.02	0.20	0.33		0.01	0.54
81	5 Axle	1.2.222	2	WB 37 6561	Cement	SASW	SADW	TRADW	-	6.88	7.74	15.56	14.03	15.80	60.00	1.16	0.81	15.59		17.56
82	2 Axle	1.2	1	WB 73 5593	Empty	SASW	SADW	-	-	4.62	4.80				9.42	0.24	0.12			0.36
83	4 Axle	1.1.22	2	UP 77 52 73	Oil	SASW	SASW	TADW	-	9.78	10.78	12.68	12.96		46.20	4.74	7.00	8.32		20.06
84	LCV	1.2	2	WB 19 7070	Flour	SASW	SADW	-	-	4.52	4.30				8.82	0.22	0.08			0.29
85	3 Axle	1.22	1	WB 23 2112	Empty	SASW	TADW	-	-	4.48	3.29	3.88			11.65	0.21	0.05			0.26
86	4 Axle	1.2.22	2	NL 01 6442	Parcel	SASW	SADW	TADW	-	4.80	12.97	13.96	15.08		46.81	0.28	6.39	13.69		20.36
87	4 Axle	1.1.22	2	JH 11 8966	Pulses	SASW	SASW	TADW	-	8.68	10.78	13.03	10.39		42.88	2.94	7.00	5.79		15.73
88	5 Axle	1.2.222	2	PB 04 9633	Ply	SASW	SADW	TRADW	-	5.51	17.34	3.70	17.23	16.22	60.00	0.48	20.43	7.00		27.90
89	5 Axle	1.2.222	2	PB 04 4382	Goods	SASW	SADW	TRADW	-	5.25	16.27	12.88	13.37	12.23	60.00	0.39	15.82	8.06		24.27
90	4 Axle	1.2.22	2	NL 01 6501	Car	SASW	SADW	TADW	-	5.36	7.89	8.62	7.89		29.76	0.43	0.88	1.43		2.73
91	5 Axle	1.1.1.22	2	WB 39 1419	Cement	SASW	SASW	SASW	TADW	5.88	7.00	6.69	13.80	12.96	46.33	0.62	1.24	1.04	0.54	3.44
92	5 Axle	1.1.1.22	2	KJK 05 2627	Apple	SASW	SASW	SASW	TADW	6.60	7.20	9.80	13.88	14.96	52.44	0.98	1.39	4.78	0.96	8.12
93	LCV	1.2	2	WB 19 6380	Flipkart	SASW	SADW	-	-	3.74	5.46				9.20	0.10	0.20			0.30

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
94	5 Axle	1.1.1.22	2	WB 67 1780	Dust	SASW	SASW	SASW	TADW	7.94	8.46	11.22	16.42	15.95	60.00	2.06	2.66	8.23	1.25	14.19
95	LCV	1.2	1	WB 67 4885	Empty	SASW	SADW	-	-	2.48	2.70				5.18	0.02	0.01			0.03
96	BUS	1.2	2	WB 39 2017	Passenger	SASW	SADW	-	-	4.20	4.91				9.11	0.16	0.13			0.29
97	5 Axle	1.1.1.22	1	WB 29 2569	Empty	SASW	SASW	SASW	TADW	5.80	4.20		4.71	4.48	19.19	0.59	0.16		0.01	0.76
98	2 Axle	1.2	2	WB 29 5603	Gas	SASW	SADW	-	-	5.72	10.40				16.12	0.55	2.64			3.20
99	BUS	1.2	2	WB 19 9258	Passenger	SASW	SADW	-	-	5.88	7.68				13.56	0.62	0.79			1.41
100	2 Axle	1.2	1	WB 11 7370	Empty	SASW	SADW	-	-	3.60	3.88				7.48	0.09	0.05			0.14
101	4 Axle	1.1.22	2	WB 17 4446	Sand	SASW	SASW	TADW	-	8.00	7.20	10.98	12.24		38.42	2.12	1.39	5.60		9.11
102	3 Axle	1.22	2	WB 47 1753	Sand	SASW	TADW	-	-	8.48	9.60	10.98			29.06	2.68	3.45			6.13
103	4 Axle	1.1.22	2	WB 11 1506	Wire	SASW	SASW	TADW	-	5.80	1.68	14.96	15.20		37.64	0.59	0.00	15.93		16.52
104	5 Axle	1.1.1.22	2	WB 67 1213	Sand	SASW	SASW	SASW	TADW	7.88	7.20	10.63	15.60	15.88	57.19	2.00	1.39	6.62	1.22	11.23
105	LCV	1.2	2	WB 39 3711	Coal	SASW	SADW	-	-	3.88	8.20				12.08	0.12	1.02			1.14
106	LCV	1.2	1	WB 37 6156	Empty	SASW	SADW	-	-	1.78	3.92				5.70	0.01	0.05			0.06
107	4 Axle	1.1.22	1	WB 23 7766	Empty	SASW	SASW	TADW	-	3.60	3.20	4.68	4.43		15.91	0.09	0.05	0.13		0.27
108	LCV	1.2	2	WB 11 6328	Gas	SASW	SADW	-	-	5.80	9.78				15.58	0.59	2.07			2.65
109	2 Axle	1.2	2	WB 23 4194	Gas	SASW	SADW	-	-	5.92	9.91				15.83	0.64	2.18			2.82
110	2 Axle	1.2	2	WB 39 6659	Oil	SASW	SADW	-	-	6.40	10.32				16.72	0.87	2.56			3.43
111	5 Axle	1.1.1.22	2	WB 67 1718	Coal	SASW	SASW	SASW	TADW	7.64	8.13	12.07	16.36	15.81	60.00	1.76	2.26	10.98	1.20	16.21
112	3 Axle	1.22	2	PB 10 8288	Grocery	SASW	TADW	-	-	5.78	10.84	10.20			26.82	0.58	3.77			4.35
113	4 Axle	1.1.22	1	WB 37 9841	Empty	SASW	SASW	TADW	-	7.20		14.20	13.88		35.28	1.39		11.97		13.36
114	3 Axle	1.22	2	NL 01 6120	Neslay	SASW	TADW	-	-	6.43	8.96	9.96			25.35	0.89	2.47			3.35
115	4 Axle	1.2.22	1	NL 01 3709	Empty	SASW	SADW	TADW	-	4.50	5.20	4.20	3.89		17.79	0.21	0.17	0.08		0.46
116	2 Axle	1.2	2	WB 11 7435	Parcel	SASW	SADW	-	-	5.88	8.96				14.84	0.62	1.46			2.08
117	3 Axle	1.22	2	NL 01 1305	Courier	SASW	TADW	-	-	7.04	8.80	8.65			24.49	1.27	1.78			3.06
118	4 Axle	1.1.22	2	WB 37 6381	Brickes	SASW	SASW	TADW	-	8.64	10.78	15.28	14.92		49.62	2.89	7.00	16.01		25.90
119	5 Axle	1.1.1.22	2	JH 14 8665	Tank	SASW	SASW	SASW	TADW	7.44	8.92	10.98	13.80	14.20	55.34	1.59	3.28	7.53	0.78	13.18
120	3 Axle	1.22	2	WB 39 6734	Gas	SASW	TADW	-	-	3.60	3.30	4.20			11.10	0.09	0.06			0.15
121	2 Axle	1.2	2	WB 39 3378	Gas	SASW	SADW	-	-	4.48	3.60				8.08	0.21	0.04			0.25
122	3 Axle	1.22	1	WB 67 3123	Empty	SASW	TADW	-	-	3.88	4.02	3.44			11.34	0.12	0.06			0.18
123	5 Axle	1.1.1.22	2	WB 39 6077	Cement	SASW	SASW	SASW	TADW	6.76	9.20	14.65	15.60	4.26	50.47	1.08	3.71	23.87	0.01	28.67
124	5 Axle	1.1.1.22	2	WB 39 1759	Sand	SASW	SASW	SASW	TADW	7.20	8.02	15.76	11.60	11.20	53.78	1.39	2.14	31.97	0.30	35.81

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
125	5 Axle	1.1.1.22	2	WB 39 2084	Sand	SASW	SASW	SASW	TADW	7.60	8.20	15.88	11.92	6.31	49.91	1.73	2.34	32.95	0.03	37.05
126	4 Axle	1.2.22	2	NL 01 9776	Car	SASW	SADW	TADW	-	5.60	6.48	5.60	7.88		25.56	0.51	0.40	0.64		1.54
127	3 Axle	1.22	2	WB 39 0784	Parcel	SASW	TADW	-	-	7.00	13.60	6.42			27.02	1.24	3.09			4.34
128	5 Axle	1.1.1.22	2	WB 39 3881	Dust	SASW	SASW	SASW	TADW	8.33	9.00	9.93	15.56	15.69	58.51	2.49	3.40	5.04	1.17	12.10
129	3 Axle	1.22	2	WB 55 7421	Gas	SASW	TADW	-	-	6.40	7.60	8.80			22.80	0.87	1.39			2.26
130	2 Axle	1.2	2	WB 41 8929	Gas	SASW	SADW	-	-	5.00	8.80				13.80	0.32	1.35			1.68
131	2 Axle	1.2	2	NL 01 4330	Bike	SASW	SADW	-	-	5.42	7.80				13.22	0.45	0.84			1.28
132	LCV	1.2	2	WB 05 9691	Flipkart	SASW	SADW	-	-	3.24	2.50				5.74	0.06	0.01			0.07
133	5 Axle	1.1.1.22	2	WB 37 3828	Sand	SASW	SASW	SASW	TADW	6.48	6.80	10.00	13.00	11.80	48.08	0.91	1.11	5.18	0.37	7.58
134	3 Axle	1.22	2	WB 19 9820	Powder	SASW	TADW	-	-	7.20	12.40	11.02			30.62	1.39	5.79			7.18
135	5 Axle	1.1.1.22	2	WB 25 5465	Sand	SASW	SASW	SASW	TADW	7.30	7.68	12.17	16.48	16.37	60.00	1.47	1.80	11.38	1.38	16.03
136	LCV	1.2	2	WB 39 1148	Gas	SASW	SADW	-	-	5.60	7.80				13.40	0.51	0.84			1.35
137	5 Axle	1.1.1.22	2	WB 25 0975	Cement	SASW	SASW	SASW	TADW	6.38	7.20	8.59	15.60	17.79	55.56	0.86	1.39	2.82	1.93	7.00
138	4 Axle	1.1.22	2	WB 25 8253	Sand	SASW	SASW	TADW	-	7.36	10.98	13.80	14.20		46.34	1.52	7.53	11.83		20.88
139	4 Axle	1.1.22	2	WB 37 1249	Sand	SASW	SASW	TADW	-	7.80	9.96	15.96	16.80		50.52	1.92	5.10	22.17		29.19
140	5 Axle	1.1.1.22	2	WB 67 1206	Dust	SASW	SASW	SASW	TADW	7.50	8.46	10.38	16.92	16.74	60.00	1.64	2.65	6.02	1.51	11.82
141	LCV	1.2	2	WB 57 5068	Gas	SASW	SADW	-	-	5.56	12.48				18.04	0.50	5.48			5.97
142	4 Axle	1.1.22	2	WB 19	Dust	SASW	SASW	TADW	-	6.48	7.96	17.80	17.20		49.44	0.91	2.08	28.89		31.88
143	2 Axle	1.2	2	WB 39 0502	Pipe	SASW	SADW	-	-	3.74	9.78				13.52	0.10	2.07			2.17
144	5 Axle	1.1.1.22	2	WB 67 1157	Sand	SASW	SASW	SASW	TADW	7.56	7.63	11.12	17.40	14.96	58.67	1.69	1.76	7.92	0.96	12.34
145	4 Axle	1.1.22	2	WB 51 3888	Dust	SASW	SASW	TADW	-	8.60	8.78	15.96	16.40		49.74	2.83	3.08	21.11		27.02
146	5 Axle	1.1.1.22	2	JK 15 6098	Potato	SASW	SASW	SASW	TADW	7.37	7.95	12.68	16.29	15.71	60.00	1.53	2.07	13.41	1.17	18.18
147	4 Axle	1.1.22	2	WB 95 5831	Dust	SASW	SASW	TADW	-	8.12	10.56	13.80	17.46		49.94	2.25	6.44	18.38		27.08
148	3 Axle	1.22	2	WB 39 9780	Cement	SASW	TADW	-	-	6.88	9.20	14.80			30.88	1.16	6.39			7.55
149	3 Axle	1.22	1	WB 39 3614	Empty	SASW	TADW	-	-	4.20	3.60	3.43			11.23	0.16	0.05			0.21
150	4 Axle	1.1.22	2	UP 78 8856	Sand	SASW	SASW	TADW	-	7.40	10.20	16.20	17.40		51.20	1.55	5.61	24.54		31.70
151	5 Axle	1.1.1.22	1	WB 33 8896	Empty	SASW	SASW	SASW	TADW	4.32	4.80		4.43	4.21	17.76	0.18	0.28		0.01	0.46
152	5 Axle	1.1.1.22	1	WB 33 8696	Empty	SASW	SASW	SASW	TADW	4.40	4.79		4.60	4.20	17.99	0.19	0.27		0.01	0.47
153	2 Axle	1.2	2	WB 37 1123	Cement	SASW	SADW	-	-	5.60	9.20				14.80	0.51	1.62			2.13
154	5 Axle	1.1.1.22	2	WB 19 4026	Dust	SASW	SASW	SASW	TADW	7.35	9.50	12.35	15.66	15.14	60.00	1.51	4.22	12.06	1.01	18.80
155	LCV	1.2	1	WB 39 1860	Empty	SASW	SADW	-	-	2.84	2.21				5.05	0.03	0.01			0.04

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
156	4 Axle	1.1.22	2	WB 29 2762	Gitti	SASW	SASW	TADW	-	7.20	8.78	13.20	12.20		41.38	1.39	3.08	8.01		12.48
157	BUS	1.2	2	WB 41 5161	Passenger	SASW	SADW	-	-	6.80	5.60				12.40	1.11	0.22			1.33
158	LCV	1.2	2	DL 1L 6375	Milk	SASW	SADW	-	-	2.84	3.60				6.44	0.03	0.04			0.07
159	5 Axle	1.1.1.22	2	WB 67 1077	Sand	SASW	SASW	SASW	TADW	7.20	8.20	10.98	17.60	10.30	54.28	1.39	2.34	7.53	0.22	11.48
160	5 Axle	1.1.1.22	2	WB 67 1734	Sand	SASW	SASW	SASW	TADW	7.38	8.42	11.90	15.77	16.53	60.00	1.54	2.61	10.38	1.44	15.96
161	LCV	1.2	2	UP 37 2867	Parcel	SASW	SADW	-	-	7.88	8.20				16.08	2.00	1.02			3.02
162	5 Axle	1.1.1.22	2	WB 67 1197	Sand	SASW	SASW	SASW	TADW	7.09	8.33	11.72	16.09	16.76	60.00	1.31	2.50	9.79	1.52	15.12
163	3 Axle	1.22	2	NL 01 3330	Gas	SASW	TADW	-	-	6.72	10.40	9.88			27.00	1.06	3.26			4.31
164	3 Axle	1.22	2	NL 02 9761	Cement	SASW	TADW	-	-	9.00	12.80	12.43			34.23	3.40	7.80			11.20
165	4 Axle	1.1.22	2	WB 39 4081	Gitti	SASW	SASW	TADW	-	7.20	8.74	8.96	12.87		37.77	1.39	3.02	4.37		8.79
166	5 Axle	1.2.222	2	JH 05 9499	Steel	SASW	SADW	TRADW	-	7.16	12.48	10.43	9.80	12.20	52.07	1.36	5.48	4.06		10.91
167	LCV	1.2	2	WB 37 3862	Gas	SASW	SADW	-	-	5.68	12.69				18.37	0.54	5.86			6.40
168	4 Axle	1.1.22	1	WB 31 5196	Empty	SASW	SASW	TADW	-	3.36	3.08	3.60	3.36		13.40	0.07	0.05	0.05		0.16
169	LCV	1.1	2	WB 11 1253	Soil	SASW	SASW	-	-	3.26	3.52				6.78	0.06	0.08			0.14
170	BUS	1.2	2	WB 25 7116	Passenger	SASW	SADW	-	-	4.80	6.23				11.03	0.28	0.34			0.62
171	LCV	1.2	1	WB 23 4470	Empty	SASW	SADW	-	-	2.90	3.08				5.98	0.04	0.02			0.06
172	4 Axle	1.1.22	2	WB 45 5895	Dust	SASW	SASW	TADW	-	8.66	10.78	14.44	13.43		47.31	2.91	7.00	11.61		21.53
173	5 Axle	1.1.1.22	2	WB 67 1488	Sand	SASW	SASW	SASW	TADW	7.86	8.23	10.36	16.94	16.60	60.00	1.98	2.37	5.97	1.46	11.79
174	LCV	1.2	2	WB 23 8860	Fish	SASW	SADW	-	-	5.20	10.85				16.05	0.38	3.13			3.51
175	4 Axle	1.1.22	2	WB 89 2977	Grocery	SASW	SASW	TADW	-	8.42	5.10	15.48	15.00		44.00	2.60	0.35	16.61		19.57
176	5 Axle	1.1.1.22	1	NL 01 2972	Empty	SASW	SASW	SASW	TADW	3.94	3.60		3.26	3.56	14.36	0.12	0.09		0.00	0.21
177	6 Axle	1.22.222	2	PB 11 9891	Potato	SASW	TADW	TRADW	-	5.29	9.10	9.93	9.04	13.83	47.19	0.41	2.52	4.25		7.18
178	LCV	1.2	2	UP 16 4931	Laider	SASW	SADW	-	-	2.48	4.02				6.50	0.02	0.06			0.08
179	LCV	1.2	1	WB 11 8150	Empty	SASW	SADW	-	-	2.00	1.63				3.63	0.01	0.00			0.01
180	LCV	1.1	2	WB 11 8605	Vegitables	SASW	SASW	-	-	2.01	3.96				5.97	0.01	0.13			0.14
181	5 Axle	1.2.222	2	WB 11 2092	Steel	SASW	SADW	TRADW	-	5.60	12.20	8.60	14.20	13.80	54.40	0.51	5.00	6.59		12.11
182	4 Axle	1.1.22	2	WB 67 1199	Gitti	SASW	SASW	TADW	-	7.62	3.60	14.32	16.74		42.28	1.75	0.09	17.92		19.75
183	4 Axle	1.1.22	2	WB 51 8697	Gitti	SASW	SASW	TADW	-	7.42	4.00	14.00	10.83		36.25	1.57	0.13	7.32		9.02
184	5 Axle	1.2.222	2	PB 03 4023	Dhaga	SASW	SADW	TRADW	-	6.01	14.31	10.98	12.82	13.13	57.25	0.68	9.47	6.83		16.98
185	3 Axle	1.22	2	WB 39 6239	Oil	SASW	TADW	-	-	6.40	11.48	12.20			30.08	0.87	6.05			6.92
186	LCV	1.2	2	UP 86 0557	Vegitables	SASW	SADW	-	-	6.48	11.40				17.88	0.91	3.82			4.73

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
187	LCV	1.2	2	WB 61 1026	Gas	SASW	SADW	-	-	2.72	5.78				8.50	0.03	0.25			0.28
188	LCV	1.2	2	WB 39 2020	Gas	SASW	SADW	-	-	6.32	9.18				15.50	0.83	1.60			2.43
189	LCV	1.2	2	WB 39 4962	Chair	SASW	SADW	-	-	3.42	4.26				7.68	0.07	0.07			0.15
190	LCV	1.2	2	WB 39 1582	Paper	SASW	SADW	-	-	5.70	10.00				15.70	0.55	2.26			2.81
191	3 Axle	1.22	2	WB 73 1769	Gas	SASW	TADW	-	-	6.76	10.68	11.87			29.31	1.08	4.98			6.06
192	3 Axle	1.22	2	WB 41 3535	Brickes	SASW	TADW	-	-	7.16	11.80	12.20			31.16	1.36	6.39			7.75
193	5 Axle	1.2.222	1	WB 39 8461	Empty	SASW	SADW	TRADW	-	4.40	6.40	3.60	3.30	5.16	22.86	0.19	0.38	0.08		0.65
194	6 Axle	1.22.222	2	RJ 18 2353	Powder	SASW	TADW	TRADW	-	4.21	10.31	9.78	10.49	12.25	47.03	0.16	3.13	4.11		7.40
195	4 Axle	1.1.22	2	WB 57 3684	Coal	SASW	SASW	TADW	-	8.20	10.78	15.60	14.42		49.00	2.34	7.00	15.63		24.97
196	BUS	1.2	2	WB 57 4396	Passenger	SASW	SADW	-	-	5.58	7.76				13.34	0.50	0.82			1.32
197	5 Axle	1.1.1.22	2	WB 11 6755	Drum	SASW	SASW	SASW	TADW	7.20	8.80	10.44	13.40	14.30	54.14	1.39	3.11	6.16	0.80	11.46
198	4 Axle	1.2.22	2	NL 01 0879	Steel	SASW	SADW	TADW	-	5.78	14.62	17.60	11.80		49.80	0.58	10.32	14.38		25.28
199	4 Axle	1.1.22	2	RJ 11 5523	Potato	SASW	SASW	TADW	-	6.96	6.64	13.00	12.90		39.50	1.22	1.01	8.66		10.89
200	3 Axle	1.22	2	WB 27 1374	Steel	SASW	TADW	-	-	6.92	10.96	9.82			27.70	1.19	3.59			4.78
201	5 Axle	1.1.1.22	2	JK 02 4813	Potato	SASW	SASW	SASW	TADW	7.00	7.20	7.72	15.03	13.80	50.75	1.24	1.39	1.84	0.70	5.18
202	4 Axle	1.1.22	2	RJ 11 0319	Potato	SASW	SASW	TADW	-	9.60	7.82	12.80	14.20		44.42	4.40	1.94	10.23		16.57
203	3 Axle	1.22	2	HR 38 1552	Onion	SASW	TADW	-	-	7.20	15.40	12.96			35.56	1.39	12.45			13.85
204	5 Axle	1.1.1.22	2	WB 11 8511	Steel	SASW	SASW	SASW	TADW	5.60	6.82	9.80	11.06	9.88	43.16	0.51	1.12	4.78	0.18	6.59
205	3 Axle	1.22	2	WB 67 3862	Gas	SASW	TADW	-	-	6.20	7.00	8.20			21.40	0.77	1.03			1.79
206	LCV	1.2	2	WB 53 1481	Cement	SASW	SADW	-	-	4.52	9.60				14.12	0.22	1.92			2.13
207	4 Axle	1.1.22	1	JH 10 3244	Empty	SASW	SASW	TADW	-	4.28		4.74	3.70		12.72	0.17		0.10		0.27
208	BUS	1.2	2	WB 57 0896	Passenger	SASW	SADW	-	-	5.94	9.00				14.94	0.65	1.48			2.13
209	3 Axle	1.22	2	NL 01 6947	Car	SASW	TADW	-	-	5.54	7.60	7.60			20.74	0.49	1.03			1.52
210	3 Axle	1.22	2	NL 01 9534	Stone	SASW	TADW	-	-	6.20	9.60	9.91			25.71	0.77	2.79			3.55
211	LCV	1.2	2	DL 1 5027	Grocery	SASW	SADW	-	-	2.34	3.04				5.38	0.02	0.02			0.03
212	3 Axle	1.22	2	WB 23 3596	Drip	SASW	TADW	-	-	6.68	12.68	11.68			31.04	1.03	6.78			7.81
213	3 Axle	1.22	2	WB 41 F 506	Iron	SASW	TADW	-	-	6.78	12.08	12.04			30.90	1.09	6.52			7.61
214	5 Axle	1.1.1.22	2	WB 67 1704	Sand	SASW	SASW	SASW	TADW	6.80	8.20	13.52	13.60	14.20	56.32	1.11	2.34	17.31	0.78	21.55
215	4 Axle	1.1.22	2	WB 67 5164	Grocery	SASW	SASW	TADW	-	5.68	11.08	11.96	12.55		41.27	0.54	7.81	6.95		15.30
216	LCV	1.2	2	HR 09 2722	Pulses	SASW	SADW	-	-	2.98	10.98				13.96	0.04	3.28			3.32
217	5 Axle	1.2.222	2	HR 55 4481	Steel	SASW	SADW	TRADW	-	7.40	13.00	14.20	13.51	11.88	59.99	1.55	6.45	9.03		17.03

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
218	2 Axle	1.2	1	WB 37 2190	Empty	SASW	SADW	-	-	4.42	4.88				9.30	0.20	0.13			0.33
219	4 Axle	1.1.22	2	WB 37 9768	Gitti	SASW	SASW	TADW	-	7.39	10.78	15.88	15.20		49.25	1.55	7.00	17.96		26.51
220	LCV	1.2	2	WB 99 5984	Oxygen	SASW	SADW	-	-	3.28	4.82				8.10	0.06	0.12			0.18
221	2 Axle	1.2	2	HR 55 4377	Grocery	SASW	SADW	-	-	5.12	10.20				15.32	0.36	2.44			2.80
222	LCV	1.2	2	WB 19 1982	Pulses	SASW	SADW	-	-	2.76	8.42				11.18	0.03	1.14			1.17
223	2 Axle	1.2	1	WB 81 0160	Empty	SASW	SADW	-	-	3.60	3.64				7.24	0.09	0.04			0.13
224	3 Axle	1.22	1	RJ 14 2562	Empty	SASW	TADW	-	-	4.40	4.22	3.96			12.58	0.19	0.09			0.28
225	4 Axle	1.1.22	2	WB 41 8169	Cement	SASW	SASW	TADW	-	7.62	6.40	11.80	12.80		38.62	1.75	0.87	7.05		9.67
226	LCV	1.2	2	WB 11 5110	Cement	SASW	SADW	-	-	4.20	8.20				12.40	0.16	1.02			1.18
227		1.2.22	2	NL 01 1989	Bike	SASW	SADW	TADW	-	5.74	9.59	9.80	10.00		35.13	0.56	1.91	2.96		5.43
228	4 Axle	1.1.22	2	RJ 19 5211	Onion	SASW	SASW	TADW	-	7.20	8.20	10.40	11.78		37.58	1.39	2.34	4.66		8.39
229	5 Axle	1.2.222	2	WB 29 3551	Iron	SASW	SADW	TRADW	-	6.01	12.20	11.87	15.41	14.51	60.00	0.67	5.01	11.21		16.89
230	LCV	1.2	1	WB 41 2312	Empty	SASW	SADW	-	-	3.60	2.96				6.56	0.09	0.02			0.10
231	5 Axle	1.1.1.22	2	WB 89 4386	Sand	SASW	SASW	SASW	TADW	7.96	7.20	8.64	11.80	12.20	47.80	2.08	1.39	2.89	0.43	6.79
232	4 Axle	1.1.22	2	WB 23 4954	Gitti	SASW	SASW	TADW	-	6.56	10.20	12.20	12.90		41.86	0.96	5.61	7.64		14.21
233	5 Axle	1.1.1.22	1	NL 01 5686	Empty	SASW	SASW	SASW	TADW	4.40	4.68		4.80	4.60	18.48	0.19	0.25		0.01	0.45
234	5 Axle	1.2.222	2	UP 63 3637	Pulses	SASW	SADW	TRADW	-	7.21	7.97	11.02	16.71	17.10	60.00	1.40	0.91	14.84		17.14
235	5 Axle	1.2.222	2	WB 63 1498	Sand	SASW	SADW	TRADW	-	7.41	7.80	11.58	16.20	17.00	60.00	1.57	0.84	14.78		17.18
236	LCV	1.2	2	UP 36 2588	Vegitables	SASW	SADW	-	-	5.60	8.68				14.28	0.51	1.28			1.79
237	3 Axle	1.22	2	WB 23 C 047	Iron	SASW	TADW	-	-	7.84	11.44	11.68			30.96	1.96	5.50			7.46
238	4 Axle	1.1.22	2	H 10 AS 051	Parcel	SASW	SASW	TADW	-	7.82	11.60	10.68	11.44		41.54	1.94	9.38	4.61		15.93
239	3 Axle	1.22	2	WB 64 A 641	Potato	SASW	TADW	-	-	6.48	11.24	12.04			29.76	0.91	5.65			6.57
240	4 Axle	1.1.22	2	HR 45 C 459	Potato	SASW	SASW	TADW	-	7.68	4.60	17.64	17.64		47.56	1.80	0.23	29.82		31.86
241	4 Axle	1.1.22	2	WB 37 C 773	Sand	SASW	SASW	TADW	-	7.68	10.78	15.94	16.64		51.04	1.80	7.00	21.69		30.49
242	LCV	1.2	2	HR 47 F 099	Courier	SASW	SADW	-	-	2.62	4.22				6.84	0.02	0.07			0.10
243	2 Axle	1.2	2	WB 87 K 580	Clothes	SASW	SADW	-	-	6.12	8.04				14.16	0.73	0.94			1.67
244	3 Axle	1.22	2	WB 57 B 215	Steel	SASW	TADW	-	-	6.02	11.20	9.28			26.50	0.68	3.39			4.07
245	4 Axle	1.1.22	2	WB 17 N 006	Steel	SASW	SASW	TADW	-	5.84	4.68	15.08	13.04		38.64	0.60	0.25	12.04		12.89
246	4 Axle	1.1.22	2	RJ 31 GB 232	Steel	SASW	SASW	TADW	-	3.84	4.08	12.90	13.22		34.04	0.11	0.14	8.96		9.22
247	6 Axle	1.22.222	2	RJ 06 GB 414	Oil	SASW	TADW	TRADW	-	5.13	11.00	10.53	10.53	11.18	48.36	0.36	4.13	3.97		8.46
248	2 Axle	1.2	2	NL 01 AL 051	Rode	SASW	SADW	-	-	4.02	7.84				11.86	0.14	0.85			0.99

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
249	6 Axle	1.22.222	2	RJ 14 GP 843	Oil	SASW	TADW	TRADW	-	5.40	9.69	9.54	9.96	11.78	46.36	0.44	2.63	3.52		6.59
250	4 Axle	1.1.22	2	H 02 AJ 433	Iron	SASW	SASW	TADW	-	3.64	5.04	14.08	14.84		37.60	0.09	0.33	13.47		13.89
251	4 Axle	1.1.22	2	R 63 GB 324	Flour	SASW	SASW	TADW	-	7.42	5.68	12.74	12.04		37.88	1.57	0.54	7.26		9.37
252	4 Axle	1.1.22	2	WB 11 D 011	Flour	SASW	SASW	TADW	-	4.02	4.42	12.64	12.28		33.36	0.14	0.20	7.42		7.76
253	4 Axle	1.1.22	2	JH 02 A 5401	Flour	SASW	SASW	TADW	-	4.28	4.84	12.84	12.04		34.00	0.17	0.28	7.38		7.83
254	4 Axle	1.1.22	2	WB 37 C 918	Flour	SASW	SASW	TADW	-	4.68	5.84	12.08	12.64		35.24	0.25	0.60	7.19		8.04
255	5 Axle	1.2.222	2	RJ 01 G 9104	Murdal	SASW	SADW	TRADW	-	6.62	12.42	12.04	13.18	15.00	59.26	1.00	5.37	9.62		15.99
256	2 Axle	1.2	2	HR 69 E 2901	Grocery	SASW	SADW	-	-	4.82	5.84				10.66	0.28	0.26			0.54
257	2 Axle	1.2	2	H 02 BG 098	Rice	SASW	SADW	-	-	3.42	4.38				7.80	0.07	0.08			0.15
258	2 Axle	1.2	1	WB 11 4891	Empty	SASW	SADW	-	-	2.62	3.36				5.98	0.02	0.03			0.05
259	2 Axle	1.2	2	P 62 BT 027	Rode	SASW	SADW	-	-	7.02	0.94				7.96	1.26	0.00			1.26
260	2 Axle	1.2	2	B 06 BF 929	Apple	SASW	SADW	-	-	5.02	7.62				12.64	0.33	0.76			1.09
261	5 Axle	1.1.1.22	1	UP 84 T 4728	Empty	SASW	SASW	SASW	TADW	5.02	3.88		4.22	3.82	16.94	0.33	0.12		0.00	0.45
262	4 Axle	1.1.22	2	JH 15 R 7756	Cement	SASW	SASW	TADW	-	8.22	7.24	10.04	11.98		37.48	2.37	1.42	4.53		8.32
263	4 Axle	1.1.22	2	WB 41 F 070	Cement	SASW	SASW	TADW	-	8.04	7.44	1.78	10.42		27.68	2.17	1.59	0.43		4.18
264	6 Axle	1.22.222	2	L 01 AD 394	Chemical	SASW	TADW	TRADW	-	5.52	10.70	9.76	11.97	11.43	49.38	0.48	3.37	4.44		8.29
265	2 Axle	1.2	1	WB 23 C 516	Empty	SASW	SADW	-	-	4.23	4.08				8.31	0.17	0.06			0.23
266	3 Axle	1.22	2	L 01 AC 537	Parcel	SASW	TADW	-	-	4.02	8.52	8.04			20.58	0.14	1.45			1.58
267	4 Axle	1.1.22	2	L 01 AB 008	Grocery	SASW	SASW	TADW	-	7.02	10.78	14.48	14.04		46.32	1.26	7.00	12.74		20.99
268	4 Axle	1.1.22	2	H 10 AV 925	Oil	SASW	SASW	TADW	-	7.78	9.82	13.82	13.14		44.56	1.90	4.82	10.17		16.89
269	2 Axle	1.2	2	L 01 AC 537	Parcel	SASW	SADW	-	-	7.38	12.83				20.21	1.54	6.12			7.66
270	2 Axle	1.2	2	JH 12 E 7366	Gas	SASW	SADW	-	-	7.98	10.22				18.20	2.10	2.46			4.57
271	3 Axle	1.22	2	NL 01 AA841	Apple	SASW	TADW	-	-	6.42	8.04	9.52			23.98	0.88	1.83			2.71
272	5 Axle	1.1.1.22	1	H 10 AV 925	Empty	SASW	SASW	SASW	TADW	4.82	4.24		4.74	4.12	17.92	0.28	0.17		0.01	0.45
273	3 Axle	1.22	1	WB 23 D 668	Empty	SASW	TADW	-	-	4.28	4.14	3.88			12.30	0.17	0.08			0.25
274	3 Axle	1.22	2	WB 57 R 248	Gas	SASW	TADW	-	-	6.23	8.14	9.24			23.61	0.78	1.76			2.54
275	3 Axle	1.22	2	WB 59 C 991	Parcel	SASW	TADW	-	-	4.02	8.54	8.12			20.68	0.14	1.48			1.62
276	4 Axle	1.1.22	2	WB 33 C 263	Rice	SASW	SASW	TADW	-	7.02	10.78	8.48	14.04		40.32	1.26	7.00	4.95		13.21
277	4 Axle	1.1.22	1	WB 41 H 632	Empty	SASW	SASW	TADW	-	4.62		4.34	4.02		12.98	0.24		0.09		0.33
278	2 Axle	1.2	1	WB 23 E 516	Empty	SASW	SADW	-	-	2.34	1.94				4.28	0.02	0.00			0.02
279	3 Axle	1.22	2	L 01 AE 537	Pipe	SASW	TADW	-	-	0.74	13.14	12.48			26.36	0.00	8.29			8.29

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
280	3 Axle	1.22	2	NL 01 A 0087	Parcel	SASW	TADW	-	-	6.42	13.04	12.22			31.68	0.88	7.84			8.72
281	2 Axle	1.2	1	H 10 AV 925	Empty	SASW	SADW	-	-	4.22	4.08				8.30	0.16	0.06			0.23
282	5 Axle	1.1.1.22	2	R 01 AE 537	Tiles	SASW	SASW	SASW	TADW	7.42	9.84	13.82	13.14	12.44	56.66	1.57	4.86	18.90	0.46	25.79
283	2 Axle	1.2	2	L 01 AE 537	Parcel	SASW	SADW	-	-	6.24	11.02				17.26	0.79	3.33			4.12
284	4 Axle	1.1.22	2	VB 57 A 248	Oil	SASW	SASW	TADW	-	7.78	9.82	13.82	13.14		44.56	1.90	4.82	10.17		16.89
285	3 Axle	1.22	2	HP 12 D 857	Parcel	SASW	TADW	-	-	7.22	10.24	8.14			25.60	1.41	2.20			3.60
286	2 Axle	1.2	2	VB 20 B 980	Grocery	SASW	SADW	-	-	4.48	3.64				8.12	0.21	0.04			0.25
287	5 Axle	1.1.1.22	2	VB 11 D 461	Dust	SASW	SASW	SASW	TADW	7.22	8.04	15.76	11.64	17.28	59.94	1.41	2.17	31.97	1.72	37.26
288	2 Axle	1.2	2	P 21 CN 095	Bikes	SASW	SADW	-	-	7.42	7.88				15.30	1.57	0.87			2.44
289	LCV	1.2	2	VB 44 B 619	Flipkart	SASW	SADW	-	-	3.24	2.50				5.74	0.06	0.01			0.07
290	3 Axle	1.22	1	J 06 GB 820	Empty	SASW	TADW	-	-	4.48	3.37	3.88			11.73	0.21	0.05			0.26
291	4 Axle	1.1.22	2	B 13 BP 734	Sand	SASW	SASW	TADW	-	7.82	16.84	14.82	14.08		53.56	1.94	41.67	13.43		57.04
292	2 Axle	1.2	1	B 13 BE 284	Empty	SASW	SADW	-	-	3.62	3.84				7.46	0.09	0.05			0.14
293	3 Axle	1.22	2	H 09 BA 493	Iron	SASW	TADW	-	-	7.04	8.82	8.46			24.32	1.27	1.72			2.99
294	5 Axle	1.1.1.22	2	B 13 AR 831	Sand	SASW	SASW	SASW	TADW	7.22	8.10	15.66	11.68	11.24	53.90	1.41	2.23	31.16	0.31	35.11
295	LCV	1.2	2	B 13 AB 960	Oil	SASW	SADW	-	-	6.42	10.04				16.46	0.88	2.30			3.18
296	3 Axle	1.22	1	VB 15 D 227	Empty	SASW	TADW	-	-	4.42	15.28	3.84			23.54	0.20	2.57			2.77
297	2 Axle	1.2	2	VB 37 D 266	Pase	SASW	SADW	-	-	3.68	5.02				8.70	0.10	0.14			0.24
298	4 Axle	1.1.22	2	B 10 FF 835	Iron	SASW	SASW	TADW	-	7.82	16.84	14.84	14.80		54.30	1.94	41.67	14.86		58.47
299	3 Axle	1.22	1	R 02 AA 538	Empty	SASW	TADW	-	-	4.48	3.54	3.88			11.90	0.21	0.06			0.27
300	3 Axle	1.22	2	P 50 BT 303	Iron	SASW	TADW	-	-	7.42	10.24	9.82			27.48	1.57	3.12			4.69
301	5 Axle	1.1.1.22	2	B 10 FF 835	Rice	SASW	SASW	SASW	TADW	7.88	8.04	12.26	14.02	15.44	57.64	2.00	2.17	11.71	1.09	16.96
302	5 Axle	1.1.1.22	2	VB 37 C 569	Grocery	SASW	SASW	SASW	TADW	7.11	8.07	13.73	15.36	15.73	60.00	1.32	2.20	18.41	1.18	23.11
303	2 Axle	1.2	2	K 02 CX 347	Passenger	SASW	SADW	-	-	3.68	5.02				8.70	0.10	0.14			0.24
304	LCV	1.2	2	VB 33 E 214	Drum	SASW	SADW	-	-	0.88	6.08				6.96	0.00	0.31			0.31
305	3 Axle	1.22	2	VB 23 E 622	Muttan	SASW	TADW	-	-	7.42	10.24	9.82			27.48	1.57	3.12			4.69
306	4 Axle	1.1.22	2	H 10 AV 775	Oil	SASW	SASW	TADW	-	9.56	10.78	12.64	12.96		45.94	4.33	7.00	8.27		19.59
307	3 Axle	1.22	1	VB 41 G 672	Empty	SASW	TADW	-	-	4.48	3.29	3.88			11.65	0.21	0.05			0.26
308	4 Axle	1.1.22	2	VB 11 F 733	Pulses	SASW	SASW	TADW	-	8.69	6.80	13.03	10.28		38.80	2.95	1.11	5.68		9.75
309	5 Axle	1.2.222	2	H 10 AV 510	Ply	SASW	SADW	TRADW	-	5.51	17.41	3.70	17.18	16.20	60.00	0.48	20.76	6.95		28.19
310	4 Axle	1.2.22	2	H 21 EZ 289	Sand	SASW	SADW	TADW	-	5.36	7.89	8.62	7.89		29.76	0.43	0.88	1.43		2.73

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
311	4 Axle	1.1.22	2	WB 33 F 199	Sand	SASW	SASW	TADW	-	7.82	16.84	14.82	14.04		53.52	1.94	41.67	13.35		56.96
312	2 Axle	1.2	1	NL 01 N 5188	Empty	SASW	SADW	-	-	3.60	3.88				7.48	0.09	0.05			0.14
313	5 Axle	1.1.1.22	2	WB 37 C 145	Sand	SASW	SASW	SASW	TADW	7.82	7.24	10.68	15.72	15.84	57.30	1.94	1.42	6.74	1.21	11.31
314	2 Axle	1.2	2	WB 57 C 118	Garbage	SASW	SADW	-	-	3.88	8.34				12.22	0.12	1.09			1.21
315	2 Axle	1.2	1	WB 19 BJ 128	Empty	SASW	SADW	-	-	2.48	2.70				5.18	0.02	0.01			0.03
316	2 Axle	1.2	1	WB 23 D 283	Empty	SASW	SADW	-	-	5.92	9.91				15.83	0.64	2.18			2.81
317	3 Axle	1.22	2	WB 41 K 199	Grocery	SASW	TADW	-	-	5.78	10.86	10.24			26.88	0.58	3.82			4.39
318	3 Axle	1.22	2	WB 23 F 294	Courier	SASW	TADW	-	-	7.04	8.82	8.65			24.51	1.27	1.79			3.07
319	2 Axle	1.2	2	H 10 AZ 960	Oil	SASW	SADW	-	-	6.42	10.24				16.66	0.88	2.48			3.36
320	5 Axle	1.1.1.22	2	J 06 GC 893	Junk	SASW	SASW	SASW	TADW	7.44	8.92	10.98	12.82	14.24	54.40	1.59	3.28	7.53	0.79	13.19
321	3 Axle	1.22	2	J 06 GC 893	Courier	SASW	TADW	-	-	7.04	8.82	8.44			24.30	1.27	1.71			2.98
322	4 Axle	1.1.22	2	WB 41 K 185	Pay	SASW	SASW	TADW	-	7.34	10.78	14.24	13.90		46.26	1.50	7.00	12.07		20.57
323	2 Axle	1.2	2	WB 15 D 961	Oil	SASW	SADW	-	-	6.42	10.24				16.66	0.88	2.48			3.36
324	5 Axle	1.1.1.22	2	L 01 AD 469	Sand	SASW	SASW	SASW	TADW	7.22	8.06	15.68	11.66	11.24	53.86	1.41	2.19	31.32	0.31	35.22
325	LCV	1.2	2	WB 39 A 946	Rode	SASW	SADW	-	-	2.60	4.42				7.02	0.02	0.09			0.11
326	4 Axle	1.1.22	2	B 03 AA 957	Iron	SASW	SASW	TADW	-	7.78	6.40	15.04	14.08		43.30	1.90	0.87	13.84		16.61
327	5 Axle	1.2.222	2	WB 39 5056	Parcel	SASW	SADW	TRADW	-	6.02	12.84	12.22	12.62	11.64	55.34	0.68	6.14	6.51		13.33
328	4 Axle	1.1.22	2	WB 25 L 118	Balo	SASW	SASW	TADW	-	8.42	6.20	13.42	15.88		43.92	2.60	0.77	14.19		17.56
329	4 Axle	1.1.22	2	B 13 AR 220	Potato	SASW	SASW	TADW	-	8.42	4.58	13.64	13.88		40.52	2.60	0.23	11.04		13.87
330	2 Axle	1.2	2	WB 37 B 492	Furniture	SASW	SADW	-	-	2.82	4.28				7.10	0.03	0.08			0.11
331	3 Axle	1.22	2	B 29 BB 847	Cement	SASW	TADW	-	-	8.42	8.04	12.24			28.70	2.60	3.26			5.86
332	2 Axle	1.2	2	WB 37 D 213	Stone	SASW	SADW	-	-	4.50	8.10				12.60	0.21	0.97			1.18
333	5 Axle	1.1.1.22	1	HR 62 A 184	Empty	SASW	SASW	SASW	TADW	4.24	6.80		6.48	5.02	22.54	0.17	1.11		0.01	1.29
334	4 Axle	1.2.22	1	L 01 AA 145	Empty	SASW	SADW	TADW	-	4.28	5.24	3.64	6.48		19.64	0.17	0.17	0.20		0.55
335	2 Axle	1.2	2	WB 39 B 197	Gas	SASW	SADW	-	-	4.12	5.10				9.22	0.15	0.15			0.30
336	5 Axle	1.2.222	2	NL 01 L 9752	Machine	SASW	SADW	TRADW	-	5.34	6.08	8.18	6.48	5.84	31.92	0.42	0.31	0.65		1.38
337	2 Axle	1.2	2	A 02 AJ 460	Oil	SASW	SADW	-	-	5.34	11.48				16.82	0.42	3.92			4.34
338	3 Axle	1.22	2	B 10 FF 509	Parcel	SASW	TADW	-	-	5.02	9.54	9.96			24.52	0.33	2.78			3.11
339	4 Axle	1.1.22	2	R 01 GL 338	Oil	SASW	SASW	TADW	-	6.82	8.74	14.21	12.14		41.91	1.12	3.02	9.28		13.42
340	3 Axle	1.22	1	P 60 BT 299	Empty	SASW	TADW	-	-	4.52	4.22	3.94			12.68	0.22	0.09			0.30
341	2 Axle	1.2	1	WB 25 J 969	Empty	SASW	SADW	-	-	1.82	1.74				3.56	0.01	0.00			0.01

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
342	3 Axle	1.22	2	WB 15 D 987	Iron	SASW	TADW	-	-	7.22	12.76	12.14			32.12	1.41	7.40			8.81
343	2 Axle	1.2	2	WB 39 C 291	Milk	SASW	SADW	-	-	7.43	7.28				14.71	1.58	0.63			2.21
344	3 Axle	1.22	1	WB 23 D 695	Empty	SASW	TADW	-	-	4.94	4.54	4.23			13.71	0.31	0.11			0.42
345	4 Axle	1.1.22	2	JH 15 N 353	Apple	SASW	SASW	TADW	-	8.94	10.78	13.94	12.28		45.94	3.31	7.00	9.10		19.41
346	4 Axle	1.1.22	2	JH 14 F 3461	Fruits	SASW	SASW	TADW	-	7.74	6.58	13.14	12.62		40.08	1.86	0.97	8.48		11.31
347	5 Axle	1.1.1.22	1	WB 67 B 592	Empty	SASW	SASW	SASW	TADW	4.82	4.34		4.22	3.83	17.21	0.28	0.18		0.00	0.47
348	2 Axle	1.2	2	UP 62 CT 104	Parcel	SASW	SADW	-	-	6.42	8.36				14.78	0.88	1.10			1.98
349	3 Axle	1.22	2	JH 14 J 9218	Parcel	SASW	TADW	-	-	7.23	12.36	11.48			31.07	1.42	6.22			7.63
350	6 Axle	1.22.222	1	WB 14 F 299	Empty	SASW	TADW	TRADW	-	3.88	3.74	3.78	3.96	3.74	19.10	0.12	0.06	0.06		0.24
351	2 Axle	1.2	2	WB 73 8601	Gas	SASW	SADW	-	-	6.82	8.24				15.06	1.12	1.04			2.16
352	4 Axle	1.1.22	2	WB 19 H 127	Cement	SASW	SASW	TADW	-	6.02	6.20	14.08	13.32		39.62	0.68	0.77	10.85		12.30
353	3 Axle	1.22	1	WB 13 8784	Empty	SASW	TADW	-	-	4.28	4.16	3.88			12.32	0.17	0.08			0.25
354	3 Axle	1.22	1	WB 27 3735	Empty	SASW	TADW	-	-	4.23	4.02	3.96			12.21	0.17	0.08			0.24
355	4 Axle	1.1.22	1	H 02 AN 658	Empty	SASW	SASW	TADW	-	4.92		4.62	4.48		14.02	0.30		0.13		0.44
356	4 Axle	1.1.22	2	WB 65 B 211	Gas	SASW	SASW	TADW	-	5.62	4.62	5.18	6.64		22.06	0.52	0.24	0.38		1.13
357	5 Axle	1.2.222	2	JH 02 BK 87	Machine	SASW	SADW	TRADW	-	4.38	5.86	7.80	6.08	6.16	30.28	0.19	0.27	0.59		1.05
358	2 Axle	1.2	2	NL 01 K 8175	Bulb	SASW	SADW	-	-	6.56	12.08				18.64	0.96	4.81			5.77
359	3 Axle	1.22	1	WB 17 7337	Empty	SASW	TADW	-	-	4.94	4.42	4.18			13.54	0.31	0.11			0.41
360	3 Axle	1.22	2	WB 11 B 861	Oil	SASW	TADW	-	-	6.34	8.54	8.18			23.06	0.84	1.50			2.34
361	3 Axle	1.22	2	WB 37 D 092	Parcel	SASW	TADW	-	-	6.24	9.68	8.76			24.68	0.79	2.23			3.01
362	2 Axle	1.2	2	WB 97 1218	Bulb	SASW	SADW	-	-	6.54	12.08				18.62	0.95	4.81			5.76
363	5 Axle	1.1.1.22	1	UP 54 T 606	Empty	SASW	SASW	SASW	TADW	4.42	5.76		4.08	3.96	18.22	0.20	0.57		0.00	0.77
364	2 Axle	1.2	1	WB 29 B 278	Empty	SASW	SADW	-	-	2.84	2.76				5.60	0.03	0.01			0.05
365	5 Axle	1.1.1.22	2	WB 25 L 421	Gitti	SASW	SASW	SASW	TADW	7.52	10.28	11.85	15.45	14.90	60.00	1.65	5.79	10.22	0.95	18.61
366	4 Axle	1.1.22	1	RJ 25 GA 324	Empty	SASW	SASW	TADW	-	4.62		4.34	3.96		12.92	0.24		0.09		0.33
367	5 Axle	1.1.1.22	1	WB 41 H 036	Empty	SASW	SASW	SASW	TADW	4.82	5.08		5.94	4.76	20.60	0.28	0.35		0.01	0.63
368	3 Axle	1.22	2	IL 01 AE 754	Parcel	SASW	TADW	-	-	6.54	9.82	9.98			26.34	0.95	2.96			3.91
369	4 Axle	1.2.22	2	WB 41 F 029	Iron	SASW	SADW	TADW	-	4.02	5.12	4.70	6.24		20.08	0.14	0.16	0.28		0.57
370	2 Axle	1.2	2	UP 21 CT 815	Oil	SASW	SADW	-	-	7.02	9.63				16.65	1.26	1.94			3.20
371	4 Axle	1.1.22	1	RJ 25 GA 326	Empty	SASW	SASW	TADW	-	4.22	5.22	4.48	6.30		20.22	0.16	0.38	0.26		0.81
372	3 Axle	1.22	2	WB 37 7199	Parcel	SASW	TADW	-	-	6.42	9.94	8.76			25.12	0.88	2.35			3.23

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Configuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
373	4 Axle	1.1.22	1	WB 37 C 318	Empty	SASW	SASW	TADW	-	4.08		3.82	3.78		11.68	0.14		0.06		0.21
374	4 Axle	1.1.22	1	P 21 CM 599	Empty	SASW	SASW	TADW	-	4.22	5.02	4.62	6.08		19.94	0.16	0.33	0.25		0.75
375	2 Axle	1.2	2	WB 39 B 773	Oil	SASW	SADW	-	-	7.02	9.83				16.85	1.26	2.11			3.37
376	3 Axle	1.22	2	RJ 25 A 3264	Onion	SASW	TADW	-	-	6.38	10.48	12.84			29.70	0.86	5.69			6.55
377	2 Axle	1.2	2	WB 23 E 673	Flipkart	SASW	SADW	-	-	6.88	4.68				11.56	1.16	0.11			1.27
378	5 Axle	1.1.1.22	2	H 09 AJ 386	Cement	SASW	SASW	SASW	TADW	8.76	4.84	6.08	5.90	10.96	36.54	3.05	0.28	0.71	0.28	4.32
379	4 Axle	1.1.22	1	R 11 GD 281	Empty	SASW	SASW	TADW	-	5.52		4.42	4.28		14.22	0.48		0.11		0.59
380	4 Axle	1.2.22	1	P 17 AT 447	Empty	SASW	SADW	TADW	-	4.56	5.64	4.22	6.30		20.72	0.22	0.23	0.24		0.69
381	5 Axle	1.1.1.22	2	WB 39 C 075	Iron	SASW	SASW	SASW	TADW	5.28	6.64	8.58	10.64	9.84	40.98	0.40	1.01	2.81	0.18	4.40
382	6 Axle	1.22.222	2	R 21 GB 152	Potato	SASW	TADW	TRADW	-	5.64	9.40	10.32	11.64	12.30	49.31	0.52	2.91	5.07		8.51
383	LCV	1.2	1	WB 33 F 221	Empty	SASW	SADW	-	-	1.96	4.46				6.42	0.01	0.09			0.10
384	2 Axle	1.2	2	P 21 BN 913	Parcel	SASW	SADW	-	-	6.42	8.36				14.78	0.88	1.10			1.98
385	4 Axle	1.1.22	1	WB 25 D 082	Empty	SASW	SASW	TADW	-	4.72		4.34	3.88		12.94	0.26		0.09		0.35
386	2 Axle	1.2	2	WB 23 1918	Milk	SASW	SADW	-	-	5.44	7.28				12.72	0.45	0.63			1.09
387	5 Axle	1.1.1.22	2	WB 67 C 154	Sand	SASW	SASW	SASW	TADW	7.59	9.31	11.86	16.13	15.10	60.00	1.72	3.89	10.26	1.00	16.88
388	5 Axle	1.1.1.22	2	WB 67 C 114	Desal	SASW	SASW	SASW	TADW	8.50	6.04	8.48	15.88	16.44	55.34	2.70	0.69	2.68	1.41	7.48
389	4 Axle	1.1.22	1	NL 01 Q 723	Empty	SASW	SASW	TADW	-	4.04	3.88	3.64	3.44		15.00	0.14	0.12	0.05		0.30
390	2 Axle	1.2	1	UP 45 T 631	Empty	SASW	SADW	-	-	4.42	5.64				10.06	0.20	0.23			0.43
391	5 Axle	1.1.1.22	2	JK 03 H 6102	Sand	SASW	SASW	SASW	TADW	8.25	9.03	11.02	16.83	14.87	60.00	2.40	3.45	7.63	0.94	14.42
392	3 Axle	1.22	2	WB 37 C 741	Shuden	SASW	TADW	-	-	8.52	11.64	9.64			29.80	2.73	3.95			6.68
393	5 Axle	1.1.1.22	2	WB 11 E 466	Sand	SASW	SASW	SASW	TADW	9.91	10.52	10.80	14.88	13.89	60.00	5.00	6.36	7.05	0.72	19.13
394	6 Axle	1.22.222	2	WB 55 61 82	Tiles	SASW	TADW	TRADW	-	4.94	7.40	11.20	11.99	11.32	46.86	0.31	2.30	5.22		7.83
395	3 Axle	1.22	1	R 55 AK 690	Empty	SASW	TADW	-	-	4.68	3.94	35.22			43.84	0.25	45.27			45.52
396	2 Axle	1.2	2	WB 37 E 061	Gas	SASW	SADW	-	-	3.84	2.64				6.48	0.11	0.01			0.12
397	5 Axle	1.2.222	2	NL 01 K 2398	Cement	SASW	SADW	TRADW	-	7.34	11.18	11.60	15.44	14.44	60.00	1.50	3.53	10.88		15.91
398	2 Axle	1.2	2	WB 55 B 182	Furniture	SASW	SADW	-	-	2.70	4.14				6.84	0.03	0.07			0.09
399	4 Axle	1.1.22	2	H 62 BE 883	Cement	SASW	SASW	TADW	-	8.40	7.63	11.24	11.40		38.67	2.58	1.76	5.06		9.39
400	2 Axle	1.2	2	WB 67 A 159	Muttan	SASW	SADW	-	-	5.34	10.44				15.78	0.42	2.68			3.10
401	3 Axle	1.22	1	WB 37 E 167	Empty	SASW	TADW	-	-	4.68	5.02	4.93			14.63	0.25	0.19			0.44
402	3 Axle	1.22	2	WB 33 C 497	Coal	SASW	TADW	-	-	6.80	17.62	12.74			37.16	1.11	16.35			17.46
403	4 Axle	1.1.22	2	WB 38 5299	Oil	SASW	SASW	TADW	-	9.56	10.78	12.68	12.96		45.98	4.33	7.00	8.32		19.65

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
404	2 Axle	1.2	1	WB 11 D 953	Empty	SASW	SADW	-	-	4.48	15.29				19.77	0.21	12.35			12.55
405	4 Axle	1.1.22	2	WB 33 F 453	Pulses	SASW	SASW	TADW	-	8.69	8.58	13.03	10.39		40.69	2.95	2.81	5.79		11.55
406	LCV	1.2	2	HR 38 9846	Wood	SASW	SADW	-	-	4.46	5.82				10.28	0.21	0.26			0.46
407	2 Axle	1.2	2	WB 39 3083	Cement	SASW	SADW	-	-	6.04	6.33				12.37	0.69	0.36			1.05
408	4 Axle	1.1.22	1	WB 33 4979	Empty	SASW	SASW	TADW	-	6.80		3.40	3.60		13.80	1.11		0.05		1.15
409	5 Axle	1.1.1.22	2	WB67 1848	Sand	SASW	SASW	SASW	TADW	7.55	8.53	12.12	15.53	16.27	60.00	1.69	2.74	11.16	1.35	16.94
410	5 Axle	1.1.1.22	2	WB 76 2625	Rice	SASW	SASW	SASW	TADW	10.79	9.12	10.64	15.69	13.76	60.00	7.03	3.59	6.63	0.69	17.94
411	3 Axle	1.22	2	OD 11 7797	Grocery	SASW	TADW	-	-	6.48	9.60	9.88			25.96	0.91	2.77			3.69
412	LCV	1.1	1	WB 19 7583	Empty	SASW	SASW	-	-	2.36	1.80				4.16	0.02	0.01			0.02
413	5 Axle	1.1.1.22	2	WB 39 2053	Cement	SASW	SASW	SASW	TADW	7.20	7.88	11.76	16.20	15.43	58.47	1.39	2.00	9.91	1.09	14.39
414	4 Axle	1.1.22	2	JH 12 2481	Coal	SASW	SASW	TADW	-	5.06	9.52	13.16	11.40		39.14	0.34	4.26	7.00		11.60
415	5 Axle	1.1.1.22	2	WB 67 1773	Sand	SASW	SASW	SASW	TADW	6.67	7.45	11.90	16.56	17.41	60.00	1.02	1.60	10.40	1.77	14.79
416	4 Axle	1.2.22	1	NL 01 1522	Empty	SASW	SADW	TADW	-	4.80	4.72	5.08	5.24		19.84	0.28	0.11	0.22		0.61
417	3 Axle	1.22	1	JH 15 6108	Empty	SASW	TADW	-	-	3.60	4.28	4.10			11.98	0.09	0.09			0.18
418	5 Axle	1.2.222	2	WB 41 0095	Dust	SASW	SADW	TRADW	-	7.35	8.44	10.23	16.74	17.24	60.00	1.51	1.15	14.05		16.70
419	4 Axle	1.2.22	1	NL 01 5355	Empty	SASW	SADW	TADW	-	5.60	5.28	5.00	5.22		21.10	0.51	0.18	0.21		0.90
420	4 Axle	1.2.22	1	UP 17 0754	Empty	SASW	SADW	TADW	-	5.90	4.68	5.80	4.93		21.31	0.63	0.11	0.26		0.99
421	5 Axle	1.2.222	2	WB 67 1126	Sand	SASW	SADW	TRADW	-	5.74	8.11	12.54	17.60	16.02	60.00	0.56	0.98	16.68		18.22
422	BUS	1.2	2	WB 41 6772	Passenger	SASW	SADW	-	-	5.20	6.49				11.69	0.38	0.40			0.78
423	2 Axle	1.2	2	GJ 02 2981	Parcel	SASW	SADW	-	-	5.60	9.34				14.94	0.51	1.72			2.23
424	3 Axle	1.22	2	WB 67 6777	Soil	SASW	TADW	-	-	6.72	16.42	17.05			40.19	1.06	24.16			25.21
425	2 Axle	1.2	2	WB 37 7633	Oil	SASW	SADW	-	-	5.60	8.96				14.56	0.51	1.46			1.97
426	4 Axle	1.2.22	2	NL 04 7665	Garbage	SASW	SADW	TADW	-	5.60	8.58	7.88	8.36		30.42	0.51	1.22	1.34		3.07
427	4 Axle	1.1.22	2	WB 19 4504	Dust	SASW	SASW	TADW	-	7.42	6.56	15.42	16.32		45.72	1.57	0.96	19.54		22.07
428	4 Axle	1.1.22	2	OD 05 0217	Grocery	SASW	SASW	TADW	-	7.20	7.52	14.20	13.30		42.22	1.39	1.66	11.01		14.06
429	4 Axle	1.1.22	1	WB 65 1297	Empty	SASW	SASW	TADW	-	4.20		3.74	3.30		11.24	0.16		0.05		0.21
430	5 Axle	1.1.1.22	1	WB 24 2846	Empty	SASW	SASW	SASW	TADW	4.92	3.20		4.40	3.78	16.30	0.30	0.05		0.00	0.36
431	4 Axle	1.1.22	1	WB 24 2940	Empty	SASW	SASW	TADW	-	3.60	3.42	3.88	4.20		15.10	0.09	0.07	0.08		0.24
432	BUS	1.2	2	WB 39 6765	Dust	SASW	SADW	-	-	5.20	6.93				12.13	0.38	0.52			0.90
433	BUS	1.2	2	WB 37 1963	Passenger	SASW	SADW	-	-	5.60	7.20				12.80	0.51	0.61			1.12
434	3 Axle	1.22	2	WB 37 7333	Grocery	SASW	TADW	-	-	7.20	12.00	11.93			31.13	1.39	6.31			7.71

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
435	BUS	1.2	2	WB 67 0990	Passenger	SASW	SADW	-	-	4.80	8.20				13.00	0.28	1.02			1.30
436	3 Axle	1.22	1	WB 39 3385	Empty	SASW	TADW	-	-	3.60	4.28	4.40			12.28	0.09	0.11			0.20
437	LCV	1.2	1	WB 73 2046	Empty	SASW	SADW	-	-	2.66	2.10				4.76	0.03	0.00			0.03
438	LCV	1.1	1	WB 07 1085	Empty	SASW	SASW	-	-	2.66	1.54				4.20	0.03	0.00			0.03
439	5 Axle	1.1.1.22	1	WB 67 11705	Empty	SASW	SASW	SASW	TADW	7.80	8.33		4.82	16.30	37.25	1.92	2.49		1.36	5.77
440	4 Axle	1.2.22	1	KA 01 2128	Empty	SASW	SADW	TADW	-	5.68	4.80	4.40	4.20		19.08	0.54	0.12	0.11		0.76
441	2 Axle	1.2	2	HR 37 2625	Curier	SASW	SADW	-	-	5.88	9.68				15.56	0.62	1.98			2.60
442	4 Axle	1.2.22	1	NL 01 4536	Empty	SASW	SADW	TADW	-	5.20	4.91	5.30	4.80		20.21	0.38	0.13	0.20		0.71
443	4 Axle	1.2.22	1	NL 01 7356	Empty	SASW	SADW	TADW	-	4.80	4.60	3.78	3.52		16.70	0.28	0.10	0.05		0.43
444	BUS	1.2	2	WB 39 1955	Passenger	SASW	SADW	-	-	5.20	7.88				13.08	0.38	0.87			1.25
445	LCV	1.2	2	AS 01 1307	Biskut	SASW	SADW	-	-	2.76	3.84				6.60	0.03	0.05			0.08
446	BUS	1.2	2	WB 39 1431	Passenger	SASW	SADW	-	-	7.88	9.24				17.12	2.00	1.65			3.64
447	4 Axle	1.2.22	1	GJ12 2364	Empty	SASW	SADW	TADW	-	5.60	5.88	4.82	5.10		21.40	0.51	0.27	0.19		0.97
448	5 Axle	1.2.222	2	WB 41 9938	Cement	SASW	SADW	TRADW	-	5.87	13.65	12.93	13.37	14.17	60.00	0.61	7.85	9.87		18.33
449	3 Axle	1.22	2	WB 25 7024	Cement	SASW	TADW	-	-	6.48	8.96	8.20			23.64	0.91	1.67			2.58
450	LCV	1.2	1	WB 67 0971	Empty	SASW	SADW	-	-	3.12	2.80				5.92	0.05	0.01			0.06
451	5 Axle	1.2.222	2	WB 39 2030	Dust	SASW	SADW	TRADW	-	7.86	8.37	10.96	15.98	16.84	60.00	1.97	1.11	13.49		16.57
452	4 Axle	1.1.22	2	WB 57 4259	bed Sheet	SASW	SASW	TADW	-	7.80	8.58	14.40	14.10		44.88	1.92	2.81	12.70		17.43
453	LCV	1.2	1	WB 41 3027	Empty	SASW	SADW	-	-	1.80	1.50				3.30	0.01	0.00			0.01
454	5 Axle	1.2.222	2	WB 15 9633	Sand	SASW	SADW	TRADW	-	8.90	9.20	11.76	17.98	4.92	52.76	3.25	1.62	5.30		10.17
455	5 Axle	1.1.1.22	1	WB 53 6345	Empty	SASW	SASW	SASW	TADW	4.64	4.48		5.03	5.27	19.42	0.24	0.21		0.01	0.46
456	2 Axle	1.2	2	WB 39 5457	Gas	SASW	SADW	-	-	5.60	8.96				14.56	0.51	1.46			1.97
457	5 Axle	1.2.222	1	UP 65 3189	Empty	SASW	SADW	TRADW	-	3.20	4.80	5.20	5.68	3.74	22.62	0.05	0.12	0.17		0.34
458	4 Axle	1.2.22	1	NL 01 7771	Empty	SASW	SADW	TADW	-	3.80	4.72	5.08	6.32		19.92	0.11	0.11	0.33		0.55
459	5 Axle	1.1.1.22	1	UP 70 9207	Empty	SASW	SASW	SASW	TADW	4.80	4.48		4.80	6.20	20.28	0.28	0.21		0.03	0.51
460	5 Axle	1.1.1.22	1	WB 11 8554	Empty	SASW	SASW	SASW	TADW	4.48	4.28		5.20	4.52	18.48	0.21	0.17		0.01	0.39
461	LCV	1.2	1	JH 11 1649	Empty	SASW	SADW	-	-	3.30	3.60				6.90	0.06	0.04			0.10
462	3 Axle	1.22	2	WB 55 8087	Coal	SASW	TADW	-	-	4.44	8.94	8.25			21.63	0.20	1.68			1.88
463	3 Axle	1.22	2	WB 41 9194	Paper	SASW	TADW	-	-	6.93	10.90	11.60			29.43	1.20	4.93			6.13
464	4 Axle	1.1.22	1	AP 39 2367	Empty	SASW	SASW	TADW	-	3.20	2.06	3.04	2.92		11.22	0.05	0.01	0.02		0.09
465	3 Axle	1.22	2	WB 25 3134	Dust	SASW	TADW	-	-	7.20	8.20	11.78			27.18	1.39	3.07			4.46

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
466	4 Axle	1.1.22	2	WB 19 3434	Sand	SASW	SASW	TADW	-	7.60	4.38	15.40	16.20		43.58	1.73	0.19	19.19		21.11
467	2 Axle	1.2	2	HR 38 7401	Pampers	SASW	SADW	-	-	6.20	10.28				16.48	0.77	2.52			3.29
468	LCV	1.2	1	WB 47 0023	Empty	SASW	SADW	-	-	1.63	2.16				3.79	0.00	0.00			0.01
469	LCV	1.2	2	MH 04 3224	Goods	SASW	SADW	-	-	4.88	7.00				11.88	0.29	0.54			0.84
470	3 Axle	1.22	2	WB 39 6416	Gas	SASW	TADW	-	-	5.60	7.60	7.20			20.40	0.51	0.92			1.43
471	LCV	1.2	2	CG 04 7743	Grocery	SASW	SADW	-	-	5.80	11.56				17.36	0.59	4.03			4.62
472	3 Axle	1.22	1	WB 39 0596	Empty	SASW	TADW	-	-	3.28	3.58	3.65			10.51	0.06	0.05			0.11
473	3 Axle	1.22	1	WB 41 0191	Empty	SASW	TADW	-	-	4.04	3.82	3.24			11.10	0.14	0.05			0.19
474	LCV	1.2	1	WB 23 4523	Empty	SASW	SADW	-	-	2.69	3.25				5.94	0.03	0.03			0.05
475	BUS	1.2	2	WB 39 6932	Passenger	SASW	SADW	-	-	4.80	5.60				10.40	0.28	0.22			0.50
476	5 Axle	1.1.1.22	1	WB 45 7714	Empty	SASW	SASW	SASW	TADW	3.92	5.02		5.14	4.92	19.00	0.12	0.33		0.01	0.46
477	LCV	1.1	2	WB 39 5609	Roti	SASW	SASW	-	-	1.24	1.91				3.15	0.00	0.01			0.01
478	BUS	1.2	2	WB 37 4545	Passenger	SASW	SADW	-	-	5.20	7.47				12.67	0.38	0.70			1.08
479	4 Axle	1.2.22	1	KA 51 8916	Empty	SASW	SADW	TADW	-	4.50	5.34	5.08	5.63		20.55	0.21	0.18	0.25		0.65
480	BUS	1.2	2	WB 39 2794	Passenger	SASW	SADW	-	-	5.60	7.28				12.88	0.51	0.63			1.14
481	LCV	1.2	2	WB 25 3067	Biskut	SASW	SADW	-	-	5.88	9.20				15.08	0.62	1.62			2.24
482	2 Axle	1.2	2	HR 38 7738	Helmit	SASW	SADW	-	-	5.92	10.92				16.84	0.64	3.21			3.85
483	2 Axle	1.2	2	HE 55 2608	Helmit	SASW	SADW	-	-	6.48	7.88				14.36	0.91	0.87			1.78
484	4 Axle	1.1.22	2	NL 01 9524	Clothes	SASW	SASW	TADW	-	6.24	7.60	11.80	12.30		37.94	0.79	1.73	6.49		9.01
485	LCV	1.2	2	DL 1 M 9378	Furtilizer	SASW	SADW	-	-	3.10	2.40				5.50	0.05	0.01			0.06
486	3 Axle	1.22	2	WB 39 8416	Dust	SASW	TADW	-	-	7.92	15.82	16.40			40.14	2.04	20.75			22.79
487	3 Axle	1.22	2	WB 53 7431	Dust	SASW	TADW	-	-	0.88	16.20	16.80			33.88	0.00	22.83			22.83
488	5 Axle	1.2.222	2	WB 97 5492	Dust	SASW	SADW	TRADW	-	7.20	7.88	14.33	13.26	14.96	57.63	1.39	0.87	12.05		14.31
489	4 Axle	1.2.22	1	NL 01 0172	Empty	SASW	SADW	TADW	-	4.20	3.60	4.80	4.72		17.32	0.16	0.04	0.16		0.36
490	LCV	1.2	2	WB 39 6576	Grocery	SASW	SADW	-	-	4.88	13.60				18.48	0.29	7.73			8.02
491	3 Axle	1.22	2	WB 39 2845	Rice	SASW	TADW	-	-	8.20	13.42	12.80			34.42	2.34	9.10			11.44
492	2 Axle	1.2	2	OD 02 2719	Parcel	SASW	SADW	-	-	5.60	8.20				13.80	0.51	1.02			1.53
493	LCV	1.2	2	WB 39 2053	Tank	SASW	SADW	-	-	5.60	7.20				12.80	0.51	0.61			1.12
494	5 Axle	1.1.1.22	2	WB 25 9264	Rice	SASW	SASW	SASW	TADW	7.20	7.88	12.68	12.80	13.56	54.12	1.39	2.00	13.40	0.65	17.44
495	5 Axle	1.1.1.22	1	WB 29 2037	Empty	SASW	SASW	SASW	TADW	4.00	3.68		4.28	4.52	16.48	0.13	0.10		0.01	0.24
496	LCV	1.2	2	WB 41 9150	TV	SASW	SADW	-	-	5.12	7.20				12.32	0.36	0.61			0.96

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
497	LCV	1.1	2	WB 30 3002	Refrigrator	SASW	SASW	-	-	0.92	1.48				2.40	0.00	0.00			0.00
498	5 Axle	1.1.1.22	1	WB 11 7652	Empty	SASW	SASW	SASW	TADW	4.42	5.00		3.72	3.48	16.62	0.20	0.32		0.00	0.52
499	5 Axle	1.1.1.22	1	BR 25 8326	Empty	SASW	SASW	SASW	TADW	3.60	4.80		4.72	4.50	17.62	0.09	0.28		0.01	0.37
500	LCV	1.2	1	WB 11 0037	Empty	SASW	SADW	-	-	2.70	2.50				5.20	0.03	0.01			0.04
501	LCV	1.2	1	WB 67 8281	Empty	SASW	SADW	-	-	2.48	2.60				5.08	0.02	0.01			0.03
502	LCV	1.2	2	WB 39 3067	Vegitables	SASW	SADW	-	-	4.28	6.30				10.58	0.17	0.36			0.53
503	LCV	1.2	2	WB 39 3095	Vegitables	SASW	SADW	-	-	4.48	7.25				11.73	0.21	0.62			0.83
504	BUS	1.2	2	WB 39 6646	Passenger	SASW	SADW	-	-	5.60	7.20				12.80	0.51	0.61			1.12
505	2 Axle	1.2	2	HR 38 8789	Parcel	SASW	SADW	-	-	5.20	8.91				14.11	0.38	1.42			1.80
506	LCV	1.2	2	HR 6 2047	Parcel	SASW	SADW	-	-	5.48	8.48				13.96	0.47	1.17			1.64
507	3 Axle	1.22	2	WB 39 7408	Oil	SASW	TADW	-	-	6.48	9.28	10.24			26.00	0.91	2.79			3.71
508	LCV	1.2	2	WB 41 1141	Grocery	SASW	SADW	-	-	5.93	9.67				15.60	0.64	1.98			2.62
509	3 Axle	1.22	2	NL 01 1618	Grocery	SASW	TADW	-	-	6.80	12.20	12.71			31.71	1.11	7.41			8.52
510	3 Axle	1.22	2	WB 23 0747	Oil	SASW	TADW	-	-	7.20	9.60	10.20			27.00	1.39	2.96			4.35
511	LCV	1.2	1	WB 19 7004	Empty	SASW	SADW	-	-	2.80	2.50				5.30	0.03	0.01			0.04
512	2 Axle	1.2	2	NL 01 5814	Courier	SASW	SADW	-	-	5.60	8.80				14.40	0.51	1.35			1.86
513	3 Axle	1.22	2	WB 37 7754	Oil	SASW	TADW	-	-	6.20	10.80	11.30			28.30	0.77	4.59			5.36
514	3 Axle	1.22	2	WB 39 5432	Oil	SASW	TADW	-	-	6.48	19.60	10.90			36.98	0.91	16.66			17.57
515	3 Axle	1.22	1	WB 39 5403	Empty	SASW	TADW	-	-	3.68	4.20	3.91			11.79	0.10	0.08			0.18
516	3 Axle	1.22	1	WB 37 0954	Empty	SASW	TADW	-	-	4.20	3.68	4.10			11.98	0.16	0.07			0.23
517	3 Axle	1.22	2	WB 53 3855	Grocery	SASW	TADW	-	-	7.20	12.80	12.50			32.50	1.39	7.89			9.28
518	3 Axle	1.22	2	HR 61 5772	Grocery	SASW	TADW	-	-	6.85	13.40	12.27			32.52	1.14	8.36			9.50
519	5 Axle	1.2.222	2	PB 10 5687	Potato	SASW	SADW	TRADW	-	7.33	12.42	12.06	13.81	14.38	60.00	1.50	5.38	9.64		16.52
520	BUS	1.2	2	WB 39 3662	Passenger	SASW	SADW	-	-	6.20	7.28				13.48	0.77	0.63			1.40
521	4 Axle	1.1.22	2	RJ 32 2709	Potato	SASW	SASW	TADW	-	7.20	10.78	13.82	14.24		46.04	1.39	7.00	11.93		20.32
522	2 Axle	1.2	2	NL 01 1389	Parcel	SASW	SADW	-	-	6.48	11.60				18.08	0.91	4.09			5.00
523	3 Axle	1.22	2	WB 33 3367	Gari	SASW	TADW	-	-	6.80	12.20	12.68			31.68	1.11	7.38			8.48
524	3 Axle	1.22	2	RJ 32 0203	Grocery	SASW	TADW	-	-	7.00	12.20	12.90			32.10	1.24	7.64			8.88
525	2 Axle	1.2	2	NL 01 9021	Garbage	SASW	SADW	-	-	4.80	7.80				12.60	0.28	0.84			1.11
526	4 Axle	1.1.22	1	JH 10 0409	Empty	SASW	SASW	TADW	-	4.42		3.60	4.28		12.30	0.20		0.07		0.27
527	5 Axle	1.2.222	2	WB 89 4266	Dust	SASW	SADW	TRADW	-	6.80	6.40	12.90	15.96	13.28	55.34	1.11	0.38	11.59		13.07

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
528	3 Axle	1.22	2	WB 37 3662	Soil	SASW	TADW	-	-	7.60	12.20	11.91			31.71	1.73	6.50			8.23
529	3 Axle	1.22	2	WB 39 7537	Gas	SASW	TADW	-	-	6.40	10.80	10.32			27.52	0.87	3.83			4.70
530	5 Axle	1.1.1.22	1	WB 39 1786	Empty	SASW	SASW	SASW	TADW	3.88	3.20		4.20	4.48	15.76	0.12	0.05		0.01	0.18
531	3 Axle	1.22	2	WB 23 8964	Grocery	SASW	TADW	-	-	6.48	10.80	9.80			27.08	0.91	3.47			4.38
532	5 Axle	1.1.1.22	1	WB 41 9077	Empty	SASW	SASW	SASW	TADW	4.20	3.78		3.68	4.48	16.14	0.16	0.11		0.01	0.27
533	3 Axle	1.22	2	RJ 14 1519	Parcel	SASW	TADW	-	-	6.20	10.80	10.20			27.20	0.77	3.74			4.51
534	2 Axle	1.2	2	WB 11 3735	Basket	SASW	SADW	-	-	6.20	8.48				14.68	0.77	1.17			1.93
535	2 Axle	1.2	2	HR 38 83383	Parcel	SASW	SADW	-	-	6.20	8.96				15.16	0.77	1.46			2.22
536	6 Axle	1.22.222	2	RJ 19 7051	Powder	SASW	TADW	TRADW	-	4.98	8.53	9.06	11.52	12.62	46.71	0.32	1.84	4.46		6.63
537	BUS	1.2	2	WB 39 6964	Passenger	SASW	SADW	-	-	6.48	7.20				13.68	0.91	0.61			1.52
538	4 Axle	1.1.22	1	WB 41 6411	Empty	SASW	SASW	TADW	-	4.62		3.60	4.20		12.42	0.24		0.07		0.31
539	5 Axle	1.1.1.22	1	WB 33 1236	Empty	SASW	SASW	SASW	TADW	4.20	3.60		3.78	3.58	15.16	0.16	0.09		0.00	0.25
540	LCV	1.1	2	WB 15 5558	Pipe	SASW	SASW	-	-	0.84	1.34				2.18	0.00	0.00			0.00
541	3 Axle	1.22	1	WB 11 4393	Empty	SASW	TADW	-	-	6.20	4.80	4.42			15.42	0.77	0.14			0.90
542	2 Axle	1.2	2	WB 25 6386	Gas	SASW	SADW	-	-	5.80	9.60				15.40	0.59	1.92			2.50
543	5 Axle	1.1.1.22	1	BR 53 4333	Empty	SASW	SASW	SASW	TADW	4.40	5.60		5.08	5.44	20.52	0.19	0.51		0.02	0.72
544	LCV	1.2	2	HR 47 3145	Parcel	SASW	SADW	-	-	4.48	7.98				12.46	0.21	0.92			1.12
545	2 Axle	1.2	2	WB 15 9514	Parcel	SASW	SADW	-	-	5.92	8.96				14.88	0.64	1.46			2.09
546	3 Axle	1.22	2	WB 39 7795	Soil	SASW	TADW	-	-	7.88	11.88	12.96			32.72	2.00	7.33			9.33
547	3 Axle	1.22	2	WB 91 7657	Gas	SASW	TADW	-	-	6.58	9.60	9.20			25.38	0.97	2.40			3.38
548	BUS	1.2	2	WB 91 7658	Passenger	SASW	SADW	-	-	6.80	9.78				16.58	1.11	2.07			3.17
549	4 Axle	1.2.22	1	WB 78 5836	Empty	SASW	SADW	TADW	-	4.20	5.00	4.80	4.70		18.70	0.16	0.14	0.16		0.46
550	4 Axle	1.2.22	1	WB 85 1172	Empty	SASW	SADW	TADW	-	4.10	5.48	4.96	5.31		19.85	0.15	0.20	0.21		0.56
551	3 Axle	1.22	2	WB 39 9392	sand	SASW	TADW	-	-	7.68	7.88	14.84			30.40	1.80	5.13			6.93
552	5 Axle	1.1.1.22	1	WB 53 5226	Empty	SASW	SASW	SASW	TADW	5.00	2.90		3.68	4.38	15.96	0.32	0.04		0.01	0.37
553	5 Axle	1.1.1.22	1	WB 41 8476	Empty	SASW	SASW	SASW	TADW	3.80	3.40		3.88	4.10	15.18	0.11	0.07		0.01	0.18
554	5 Axle	1.1.1.22	1	UP 70 9525	Empty	SASW	SASW	SASW	TADW	4.48	5.20		4.90	5.31	19.89	0.21	0.38		0.02	0.60
555	5 Axle	1.2.222	2	NL 01 4552	Rode	SASW	SADW	TRADW	-	5.60	10.80	13.10	13.80	12.91	56.21	0.51	3.07	9.23		12.81
556	3 Axle	1.22	2	WB 23 6668	Cement	SASW	TADW	-	-	5.60	11.20	10.52			27.32	0.51	4.28			4.79
557	3 Axle	1.22	2	WB 23 1319	Grocery	SASW	TADW	-	-	6.80	11.92	12.30			31.02	1.11	6.62			7.73
558	4 Axle	1.2.22	2	NL 01 4474	Gari	SASW	SADW	TADW	-	5.78	8.68	7.82	8.24		30.52	0.58	1.28	1.28		3.14

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
559	LCV	1.2	1	WB 78 7004	Empty	SASW	SADW	-	-	2.48	3.60				6.08	0.02	0.04			0.06
560	6 Axle	1.22.222	2	PB 11	Docx	SASW	TADW	TRADW	-	4.71	8.55	8.28	11.33	13.07	45.93	0.25	1.54	4.19		5.98
561	3 Axle	1.22	2	WB 39 1571	Oil	SASW	TADW	-	-	6.20	12.20	10.94			29.34	0.77	5.52			6.29
562	3 Axle	1.22	2	WB 37 2650	sand	SASW	TADW	-	-	7.80	14.20	14.96			36.96	1.92	13.92			15.84
563	LCV	1.2	1	WB 19 0620	Empty	SASW	SADW	-	-	2.38	1.88				4.26	0.02	0.00			0.02
564	2 Axle	1.2	1	WB 11 5799	Empty	SASW	SADW	-	-	3.58	4.20				7.78	0.09	0.07			0.16
565	4 Axle	1.1.22	2	WB 39 8987	Cement	SASW	SASW	TADW	-	7.78	13.20	10.80	13.10		44.88	1.90	15.73	6.28		23.91
566	3 Axle	1.22	2	WB 41 8915	Gitti	SASW	TADW	-	-	7.92	12.20	13.50			33.62	2.04	8.40			10.44
567	3 Axle	1.22	2	WB 23 6770	Paper	SASW	TADW	-	-	5.60	11.20	10.91			27.71	0.51	4.60			5.11
568	5 Axle	1.1.1.22	2	RJ 14 0317	Amul	SASW	SASW	SASW	TADW	4.02	6.02	14.96	16.43	14.25	55.68	0.14	0.68	25.95	0.79	27.56
569	5 Axle	1.1.1.22	2	UP 67 3013	Grocery	SASW	SASW	SASW	TADW	7.20	8.20	12.46	14.20	14.96	57.02	1.39	2.34	12.49	0.96	17.19
570	3 Axle	1.22	2	WB 41 8043	Gas	SASW	TADW	-	-	5.08	7.20	7.78			20.06	0.35	0.97			1.31
571	5 Axle	1.1.1.22	2	UP 44 5404	Animal	SASW	SASW	SASW	TADW	6.20	3.60	4.90	7.80	7.20	29.70	0.77	0.09	0.30	0.05	1.20
572	3 Axle	1.22	2	WB 23 5401	Grocery	SASW	TADW	-	-	7.20	12.48	11.65			31.33	1.39	6.53			7.92
573	5 Axle	1.1.1.22	2	WB 91 7786	Rode	SASW	SASW	SASW	TADW	6.20	7.72	6.36	11.20	11.56	43.04	0.77	1.84	0.85	0.34	3.80
574	5 Axle	1.1.1.22	2	WB 33 8086	Chemical	SASW	SASW	SASW	TADW	6.40	8.02	9.98	13.40	15.60	53.40	0.87	2.14	5.14	1.14	9.29
575	3 Axle	1.22	2	WB 39 2470	Dust	SASW	TADW	-	-	7.98	12.32	14.20			34.50	2.10	9.52			11.62
576	2 Axle	1.2	2	HR 39 4910	Grocery	SASW	SADW	-	-	5.60	8.82				14.42	0.51	1.37			1.88
577	3 Axle	1.22	2	WB 39 9423	Gas	SASW	TADW	-	-	4.60	8.80	8.48			21.88	0.23	1.72			1.95
578	3 Axle	1.22	2	NL 01 2445	Parcel	SASW	TADW	-	-	6.20	10.80	10.20			27.20	0.77	3.74			4.51
579	3 Axle	1.22	2	WB 39 7179	Dust	SASW	TADW	-	-	7.96	13.91	14.85			36.72	2.08	13.17			15.25
580	5 Axle	1.1.1.22	2	UP 66 9831	Grocery	SASW	SASW	SASW	TADW	6.80	8.40	10.24	14.96	14.25	54.65	1.11	2.58	5.70	0.79	10.18
581	5 Axle	1.2.222	2	WB 95 A 523	sand	SASW	SADW	TRADW	-	7.84	8.97	9.86	16.31	17.02	60.00	1.96	1.46	12.78		16.21
582	5 Axle	1.2.222	2	WB 19 L 170	sand	SASW	SADW	TRADW	-	7.35	9.72	11.80	15.38	15.76	60.00	1.51	2.01	12.49		16.01
583	3 Axle	1.22	2	WB 73 0748	Rode	SASW	TADW	-	-	7.60	13.62	12.91			34.13	1.73	9.54			11.27
584	4 Axle	1.2.22	1	UP 70 8350	Empty	SASW	SADW	TADW	-	4.80	5.20	5.48	5.02		20.50	0.28	0.17	0.23		0.67
585	5 Axle	1.1.1.22	2	WB 39 2037	Chemical	SASW	SASW	SASW	TADW	7.60	8.20	9.10	13.80	12.96	51.66	1.73	2.34	3.55	0.54	8.17
586	2 Axle	1.2	1	WB 39 9788	Empty	SASW	SADW	-	-	3.60	4.00				7.60	0.09	0.06			0.14
587	4 Axle	1.1.22	2	WB 39 9371	Cement	SASW	SASW	TADW	-	6.16	6.68	12.83	11.75		37.42	0.75	1.03	7.03		8.80
588	4 Axle	1.1.22	2	WB 19 3452	sand	SASW	SASW	TADW	-	6.54	10.78	12.04	12.30		41.66	0.95	7.00	6.76		14.70
589	5 Axle	1.1.1.22	1	WB 37 5110	Empty	SASW	SASW	SASW	TADW	3.68	4.48		3.98	3.45	15.59	0.10	0.21		0.00	0.31

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
590	4 Axle	1.1.22	2	WB 30 7025	Grocery	SASW	SASW	TADW	-	7.20	7.96	10.80	11.43		37.39	1.39	2.08	4.70		8.17
591	5 Axle	1.2.222	2	WB 39 1774	Rode	SASW	SADW	TRADW	-	6.96	8.06	11.99	16.31	16.68	60.00	1.22	0.95	15.03		17.21
592	3 Axle	1.22	2	RJ 10 4667	Grocery	SASW	TADW	-	-	7.20	9.60	10.20			27.00	1.39	2.96			4.35
593	3 Axle	1.22	1	NL 01 6214	Empty	SASW	TADW	-	-	3.92	3.68	3.86			11.46	0.12	0.06			0.18
594	4 Axle	1.1.22	1	WB 95 6477	Empty	SASW	SASW	TADW	-	3.60		3.85	4.13		11.58	0.09		0.08		0.17
595	LCV	1.1	1	WB 29 0814	Empty	SASW	SASW	-	-	0.82	1.16				1.98	0.00	0.00			0.00
596	2 Axle	1.2	2	RJ 38 1271	Parcel	SASW	SADW	-	-	5.20	7.88				13.08	0.38	0.87			1.25
597	3 Axle	1.22	1	WB 53 8206	Empty	SASW	TADW	-	-	4.20	3.98	3.47			11.65	0.16	0.06			0.22
598	4 Axle	1.2.22	2	NL 01 7325	Machine	SASW	SADW	TADW	-	5.60	6.48	7.38	6.42		25.88	0.51	0.40	0.70		1.61
599	2 Axle	1.2	2	HR 38 7775	Courier	SASW	SADW	-	-	6.20	8.90				15.10	0.77	1.42			2.18
600	4 Axle	1.2.22	1	NL 01 0087	Empty	SASW	SADW	TADW	-	4.40	4.92	5.36	5.43		20.11	0.19	0.13	0.26		0.59
601	5 Axle	1.1.1.22	1	MH 25 6517	Empty	SASW	SASW	SASW	TADW	3.60	3.20		3.74	4.42	14.96	0.09	0.05		0.01	0.15
602	4 Axle	1.1.22	1	WB 03 D 440	Empty	SASW	SASW	TADW	-	4.82		3.44	3.56		11.82	0.28		0.05		0.33
603	3 Axle	1.22	2	WB 41D 868	Parcel	SASW	TADW	-	-	7.28	9.62	10.22			27.12	1.46	2.98			4.44
604	5 Axle	1.2.222	2	WB 25 L 152	Sand	SASW	SADW	TRADW	-	8.42	9.70	14.60	17.70	1.92	52.34	2.60	2.00	5.04		9.64
605	4 Axle	1.1.22	2	WB 61 B 600	Cement	SASW	SASW	TADW	-	9.22	13.24	11.88	13.96		48.30	3.74	15.92	8.58		28.25
606	5 Axle	1.1.1.22	2	WB 33 E 966	Amul	SASW	SASW	SASW	TADW	5.88	6.02	14.82	16.43	14.26	57.41	0.62	0.68	25.00	0.80	27.09
607	3 Axle	1.22	1	PB RM 8913	Empty	SASW	TADW	-	-	4.42	8.80	8.48			21.70	0.20	1.72			1.91
608	4 Axle	1.1.22	1	WB 19 K 237	Empty	SASW	SASW	TADW	-	3.24		3.44	3.84		10.52	0.06		0.05		0.11
609	3 Axle	1.22	2	WB 61 A 047	Helmit	SASW	TADW	-	-	4.70	13.24	14.04			31.98	0.25	10.66			10.91
610	3 Axle	1.22	2	WB 19 H 400	Soil	SASW	TADW	-	-	6.72	16.42	17.05			40.19	1.06	24.16			25.21
611	3 Axle	1.22	1	WB 11 D 426	Empty	SASW	TADW	-	-	3.04	3.64	4.02			10.70	0.04	0.07			0.11
612	LCV	1.1	2	WB 47 1754	Eggs	SASW	SASW	-	-	1.86	9.02				10.88	0.01	3.43			3.44
613	2 Axle	1.2	2	WB 11 E 381	Rode	SASW	SADW	-	-	3.70	11.04				14.74	0.10	3.36			3.45
614	5 Axle	1.1.1.22	1	WB 29 C 294	Empty	SASW	SASW	SASW	TADW	5.12	4.40		4.48	3.80	17.80	0.36	0.19		0.00	0.55
615	5 Axle	1.1.1.22	1	WB 31 A 739	Empty	SASW	SASW	SASW	TADW	4.02	7.10		4.68	4.02	19.82	0.14	1.32		0.01	1.46
616	3 Axle	1.22	2	WB 39 A 525	Cement	SASW	TADW	-	-	6.64	10.02	10.24			26.90	1.01	3.24			4.25
617	LCV	1.1	1	WB 37 E 240	Empty	SASW	SASW	-	-	2.16	1.50				3.66	0.01	0.00			0.01
618	4 Axle	1.1.22	2	WB 67 A 227	Rode	SASW	SASW	TADW	-	7.22	3.64	12.70	12.32		35.88	1.41	0.09	7.54		9.04
619	2 Axle	1.2	1	IH 14 BG 316	Empty	SASW	SADW	-	-	3.68	3.30				6.98	0.10	0.03			0.12
620	3 Axle	1.22	2	WB 23 B 988	Gas	SASW	TADW	-	-	5.50	6.42	10.76			22.68	0.47	1.68			2.15

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
621	5 Axle	1.1.1.22	1	IL 01 AG 633	Empty	SASW	SASW	SASW	TADW	4.08	4.90		5.04	5.28	19.30	0.14	0.30		0.01	0.46
622	2 Axle	1.2	2	WB 23 8290	Pulses	SASW	SADW	-	-	4.54	8.70				13.24	0.22	1.29			1.51
623	2 Axle	1.2	2	WB 37 C 082	sand	SASW	SADW	-	-	5.28	10.24				15.52	0.40	2.48			2.89
624	4 Axle	1.1.22	2	WB 23 C 808	Parcel	SASW	SASW	TADW	-	7.24	10.78	12.68	12.30		43.00	1.42	7.00	7.50		15.92
625	4 Axle	1.2.22	2	WB 09 3484	Khal	SASW	SADW	TADW	-	6.04	8.50	12.68	11.64		38.86	0.69	1.18	6.73		8.60
626	4 Axle	1.1.22	2	WB 11 B 697	Rode	SASW	SASW	TADW	-	5.64	9.80	10.64	12.24		38.32	0.52	4.78	5.28		10.58
627	2 Axle	1.2	2	WB 39 C 117	Gas	SASW	SADW	-	-	5.04	9.64				14.68	0.33	1.95			2.29
628	2 Axle	1.2	2	WB 11 E 482	Gas	SASW	SADW	-	-	4.28	7.24				11.52	0.17	0.62			0.79
629	5 Axle	1.2.222	2	WB 67 C 124	sand	SASW	SADW	TRADW	-	6.48	7.44	10.90	12.92	15.70	53.44	0.91	0.69	8.96		10.57
630	5 Axle	1.2.222	2	WB 25 4098	sand	SASW	SADW	TRADW	-	7.48	9.52	11.70	12.32	12.76	53.78	1.62	1.86	6.72		10.20
631	2 Axle	1.2	2	WB 57 C 708	Iron	SASW	SADW	-	-	5.12	11.44				16.56	0.36	3.87			4.22
632	2 Axle	1.2	2	WB 05 3768	Mela	SASW	SADW	-	-	3.58	8.14				11.72	0.09	0.99			1.08
633	6 Axle	1.22.222	2	WB 39 C 852	Cement	SASW	TADW	TRADW	-	6.55	8.03	8.88	12.83	12.38	48.67	0.95	1.57	4.96		7.49
634	2 Axle	1.2	2	NL 01 L 2442	Cement	SASW	SADW	-	-	6.02	10.33				16.35	0.68	2.57			3.25
635	2 Axle	1.2	2	WB 11 B 167	Paper	SASW	SADW	-	-	5.64	11.40				17.04	0.52	3.82			4.34
636	4 Axle	1.2.22	2	DD 04 E 577	Pipe	SASW	SADW	TADW	-	6.04	7.44	8.60	12.80		34.88	0.69	0.69	4.04		5.42
637	2 Axle	1.2	2	WB 43 3362	Iron	SASW	SADW	-	-	4.82	12.42				17.24	0.28	5.37			5.65
638	4 Axle	1.1.22	2	WB 11 C 433	Cement	SASW	SASW	TADW	-	6.24	8.54	12.60	13.00		40.38	0.79	2.76	8.27		11.81
639	5 Axle	1.1.1.22	1	WB 11 D 424	Empty	SASW	SASW	SASW	TADW	8.42	10.98		17.70	19.20	56.30	2.60	7.53		2.62	12.75
640	2 Axle	1.2	2	WB 11 D 150	Cement	SASW	SADW	-	-	9.22	13.24				22.46	3.74	6.94			10.69
641	LCV	1.1	2	WB 24 2154	Dust	SASW	SASW	-	-	2.24	1.80				4.04	0.01	0.01			0.02
642	5 Axle	1.1.1.22	2	WB 11 D 738	Coil	SASW	SASW	SASW	TADW	7.20	7.88	9.96	16.30	15.43	56.77	1.39	2.00	5.10	1.09	9.58
643	5 Axle	1.1.1.22	1	WB 01 0336	Empty	SASW	SASW	SASW	TADW	7.82	8.90		17.64	18.31	52.67	1.94	3.25		2.16	7.35
644	4 Axle	1.1.22	2	WB 11 D 323	Dust	SASW	SASW	TADW	-	5.14	8.56	13.16	11.42		38.28	0.36	2.78	7.03		10.17
645	3 Axle	1.22	2	WB 14 D 571	Pipe	SASW	TADW	-	-	3.62	4.28	4.10			12.00	0.09	0.09			0.18
646	LCV	1.2	2	HR 55 S 756	Wood	SASW	SADW	-	-	4.46	5.92				10.38	0.21	0.28			0.48
647	5 Axle	1.2.222	2	WB 23 D 244	Sand	SASW	SADW	TRADW	-	4.98	7.20	11.78	17.34	18.23	59.53	0.32	0.61	18.47		19.40
648	3 Axle	1.22	1	WB 67 A 636	Empty	SASW	TADW	-	-	3.76	4.24	5.70			13.70	0.10	0.19			0.29
649	5 Axle	1.2.222	2	WB 39 A 684	Dust	SASW	SADW	TRADW	-	7.03	8.04	12.54	15.95	16.43	60.00	1.27	0.94	14.97		17.18
650	4 Axle	1.2.22	1	WB 460 647	Empty	SASW	SADW	TADW	-	5.60	5.28	5.02	5.22		21.12	0.51	0.18	0.21		0.90
651	4 Axle	1.2.22	1	NL 01 A 014	Empty	SASW	SADW	TADW	-	5.90	5.28	5.02	4.90		21.10	0.63	0.18	0.19		0.99

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
652	4 Axle	1.1.22	2	WB 29 E 371	Coil	SASW	SASW	TADW	-	5.06	9.96	13.36	17.64		46.02	0.34	5.10	17.78		23.22
653	5 Axle	1.2.222	2	PB 13 7151	Dust	SASW	SADW	TRADW	-	6.72	8.50	12.56	15.74	16.48	60.00	1.06	1.18	14.77		17.01
654	3 Axle	1.22	2	WB 11 C 724	Cement	SASW	TADW	-	-	6.28	10.54	12.68			29.50	0.81	5.60			6.40
655	5 Axle	1.2.222	2	CG 44 0872	sand	SASW	SADW	TRADW	-	6.62	5.86	13.91	16.34	17.28	60.00	0.99	0.27	18.75		20.01
656	3 Axle	1.22	2	WB 11 5900	Parcel	SASW	TADW	-	-	6.48	9.64	9.04			25.16	0.91	2.34			3.26
657	4 Axle	1.1.22	2	WB 39 7949	Dust	SASW	SASW	TADW	-	8.14	5.22	12.88	13.54		39.78	2.27	0.38	9.38		12.04
658	6 Axle	1.22.222	2	WB 67 A 336	Makhal	SASW	TADW	TRADW	-	4.41	8.70	9.31	12.56	12.87	47.85	0.20	2.03	5.36		7.58
659	4 Axle	1.2.22	1	IP 53 ET 865	Empty	SASW	SADW	TADW	-	5.44	15.04	4.48	4.04		29.00	0.45	11.56	0.10		12.11
660	2 Axle	1.2	2	WB 41 J 606	Passenger	SASW	SADW	-	-	5.28	7.86				13.14	0.40	0.86			1.26
661	5 Axle	1.1.1.22	2	H 62 BF 356	Makka	SASW	SASW	SASW	TADW	6.10	6.24	5.24	15.04	10.64	43.26	0.72	0.79	0.39	0.25	2.14
662	5 Axle	1.1.1.22	2	WB 45 5785	Makka	SASW	SASW	SASW	TADW	6.12	7.04	5.02	1.52	10.48	30.18	0.73	1.27	0.33	0.23	2.56
663	5 Axle	1.1.1.22	2	WB 39 C 216	Makka	SASW	SASW	SASW	TADW	6.10	6.04	5.44	15.64	10.06	43.28	0.72	0.69	0.45	0.20	2.06
664	2 Axle	1.2	1	WB 67 A 321	Empty	SASW	SADW	-	-	2.36	1.80				4.16	0.02	0.00			0.02
665	5 Axle	1.1.1.22	2	WB 78 4956	sand	SASW	SASW	SASW	TADW	5.68	4.24	6.68	14.44	14.90	45.94	0.54	0.17	1.03	0.95	2.69
666	3 Axle	1.22	1	WB 11 E 682	Empty	SASW	TADW	-	-	3.84	4.90	4.08			12.82	0.11	0.13			0.24
667	4 Axle	1.1.22	2	WB 37 D 376	sand	SASW	SASW	TADW	-	7.62	12.20	15.50	16.42		51.74	1.75	11.48	19.98		33.21
668	2 Axle	1.2	2	FD 37 D 376	Parcel	SASW	SADW	-	-	6.24	10.90				17.14	0.79	3.19			3.97
669	3 Axle	1.22	2	PB 37 AK 831	Gas	SASW	TADW	-	-	5.62	7.64	11.30			24.56	0.52	2.48			2.99
670	3 Axle	1.22	1	IL 01 AK 200	Empty	SASW	TADW	-	-	4.06	3.90	3.28			11.24	0.14	0.05			0.19
671	2 Axle	1.2	1	WB 4 C 4161	Empty	SASW	SADW	-	-	2.69	3.25				5.94	0.03	0.03			0.05
672	5 Axle	1.1.1.22	1	WB 41 H 111	Empty	SASW	SASW	SASW	TADW	4.80	4.28		4.64	6.10	19.82	0.28	0.17		0.03	0.48
673	5 Axle	1.2.222	2	H 02 BK 324	Dust	SASW	SADW	TRADW	-	7.93	8.48	11.42	15.58	16.59	60.00	2.05	1.17	13.27		16.49
674	5 Axle	1.1.1.22	1	WB 11 0210	Empty	SASW	SASW	SASW	TADW	3.92	5.02		5.14	4.62	18.70	0.12	0.33		0.01	0.46
675	2 Axle	1.2	2	WB 5 TO 347	Passenger	SASW	SADW	-	-	5.82	7.48				13.30	0.59	0.71			1.30
676	2 Axle	1.2	1	WB 31 E 252	Empty	SASW	SADW	-	-	2.68	3.44				6.12	0.03	0.03			0.06
677	4 Axle	1.1.22	2	WB 74 6057	sand	SASW	SASW	TADW	-	7.84	10.78	15.64	16.50		50.76	1.96	7.00	20.54		29.50
678	2 Axle	1.2	2	WB 41 J 507	Passenger	SASW	SADW	-	-	6.28	10.28				16.56	0.81	2.52			3.33
679	3 Axle	1.22	2	WB 41 G 046	Gas	SASW	TADW	-	-	5.90	7.50	7.22			20.62	0.63	0.90			1.53
680	5 Axle	1.1.1.22	1	WB 37 C 057	Empty	SASW	SASW	SASW	TADW	3.90	5.02		5.34	4.84	19.10	0.12	0.33		0.01	0.46
681	2 Axle	1.2	1	WB 37 C 519	Empty	SASW	SADW	-	-	3.04	3.44				6.48	0.04	0.03			0.08
682	5 Axle	1.1.1.22	1	WB 11 F 292	Empty	SASW	SASW	SASW	TADW	4.48	4.28		5.30	4.50	18.56	0.21	0.17		0.01	0.39

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
683	3 Axle	1.22	2	WB 67 B 399	Coal	SASW	TADW	-	-	4.44	8.94	8.25			21.63	0.20	1.68			1.88
684	2 Axle	1.2	1	WB 67 A 231	Empty	SASW	SADW	-	-	0.90	2.46				3.36	0.00	0.01			0.01
685	2 Axle	1.2	2	IP 21 DT 068	Courier	SASW	SADW	-	-	5.70	8.82				14.52	0.55	1.37			1.91
686	3 Axle	1.22	2	R 62 GD 135	Oil	SASW	TADW	-	-	6.24	10.68	11.04			27.96	0.79	4.28			5.07
687	3 Axle	1.22	1	WB 63 C 875	Empty	SASW	TADW	-	-	3.68	4.02	3.84			11.54	0.10	0.07			0.17
688	3 Axle	1.22	2	WB 41 B 956	Parcel	SASW	TADW	-	-	7.36	12.96	12.24			32.56	1.52	7.76			9.28
689	3 Axle	1.22	2	HP 12 D 766	Parcel	SASW	TADW	-	-	7.02	12.30	12.84			32.16	1.26	7.69			8.95
690	2 Axle	1.2	2	DL 1 MA 678	Cars	SASW	SADW	-	-	4.82	7.84				12.66	0.28	0.85			1.13
691	2 Axle	1.2	2	G 14 MF 389	Courier	SASW	SADW	-	-	5.70	9.04				14.74	0.55	1.51			2.06
692	3 Axle	1.22	2	WB 65 A 751	Oil	SASW	TADW	-	-	6.30	10.64	10.66			27.60	0.82	3.96			4.78
693	3 Axle	1.22	2	IH 49 AT 414	Oil	SASW	TADW	-	-	6.30	9.84	10.64			26.78	0.82	3.39			4.20
694	2 Axle	1.2	2	J 40 GA 644	Parcel	SASW	SADW	-	-	6.30	10.24				16.54	0.82	2.48			3.30
695	LCV	1.2	1	UP 21 T 5585	Empty	SASW	SADW	-	-	2.66	1.56				4.22	0.03	0.00			0.03
696	4 Axle	1.2.22	1	P 12 AT 094	Empty	SASW	SADW	TADW	-	5.70	4.64	4.24	4.02		18.60	0.55	0.10	0.09		0.74
697	2 Axle	1.2	2	P 21 CT 664	Courier	SASW	SADW	-	-	5.70	9.44				15.14	0.55	1.79			2.34
698	4 Axle	1.2.22	1	WB 19 5500	Empty	SASW	SADW	TADW	-	4.64	4.62	4.02	3.84		17.12	0.24	0.10	0.07		0.42
699	2 Axle	1.2	2	WB 37 C 413	Bikes	SASW	SADW	-	-	2.64	4.22				6.86	0.03	0.07			0.10
700	4 Axle	1.2.22	1	/B 37 4C 449	Empty	SASW	SADW	TADW	-	5.68	4.64	4.42	4.30		19.04	0.54	0.10	0.11		0.76
701	3 Axle	1.22	1	IL 01 AD 890	Empty	SASW	TADW	-	-	3.84	4.42	4.30			12.56	0.11	0.11			0.22
702	2 Axle	1.2	1	WB 14 D 408	Empty	SASW	SADW	-	-	2.68	2.12				4.80	0.03	0.00			0.03
703	2 Axle	1.2	2	WB 81 B 931	Courier	SASW	SADW	-	-	5.90	9.44				15.34	0.63	1.79			2.42
704	4 Axle	1.2.22	1	WB 41 J 448	Empty	SASW	SADW	TADW	-	5.64	4.64	5.02	4.68		19.98	0.52	0.10	0.17		0.80
705	3 Axle	1.22	2	P 21 CT 344	Parcel	SASW	TADW	-	-	7.24	12.42	13.04			32.70	1.42	8.09			9.51
706	5 Axle	1.1.1.22	2	3R 02 W 643	Parcel	SASW	SASW	SASW	TADW	6.24	3.68	6.80	7.84	7.24	31.80	0.79	0.10	1.11	0.05	2.04
707	4 Axle	1.1.22	2	3R 02 W 655	Coal	SASW	SASW	TADW	-	5.18	10.38	13.24	11.42		40.22	0.37	6.02	7.12		13.51
708	4 Axle	1.2.22	1	P 21 CT 311	Empty	SASW	SADW	TADW	-	4.96	4.72	5.14	5.36		20.18	0.31	0.11	0.23		0.66
709	3 Axle	1.22	1	WB 41 J 440	Empty	SASW	TADW	-	-	3.62	4.30	4.08			12.00	0.09	0.09			0.18
710	5 Axle	1.2.222	2	WB 37 D 706	Dust	SASW	SADW	TRADW	-	7.33	8.95	9.96	16.55	17.20	60.00	1.50	1.45	13.41		16.37
711	LCV	1.1	1	WB 19 K 766	Empty	SASW	SASW	-	-	2.36	1.80				4.16	0.02	0.01			0.02
712	2 Axle	1.2	2	WB 37 C 504	Cement	SASW	SADW	-	-	6.04	10.33				16.37	0.69	2.57			3.26
713	4 Axle	1.1.22	2	WB 37 D 706	Coal	SASW	SASW	TADW	-	5.06	6.58	13.16	11.64		36.44	0.34	0.97	7.28		8.59

Barwa-Adda Panagarh Section of NH-2 - Axle Load Survey Data at KM 507+100

Location :	KM 507+100	Direction:	Towards Panagarh

Sl. No	Vehicle Type	Veh Con figuration	Empty (1), Loaded (2)	Regn. No.	Commodity Type	Axle Configuration				Axle Load (Tonne)						ESAL				
						1st	2nd	3rd	4th	1st	2nd	3rd	4th	5th	Gross	1st	2nd	3rd	4th	Total
714	3 Axle	1.22	1	WB 39 B 858	Empty	SASW	TADW	-	-	3.84	4.02	4.28			12.14	0.11	0.09			0.20
715	4 Axle	1.2.22	1	H 02 BA 356	Empty	SASW	SADW	TADW	-	5.68	4.84	4.28	4.02		18.82	0.54	0.12	0.09		0.75
716	2 Axle	1.2	2	WB 07 98 878	Passenger	SASW	SADW	-	-	5.28	7.90				13.18	0.40	0.88			1.28
717	4 Axle	1.2.22	1	WB 15 D 963	Empty	SASW	SADW	TADW	-	5.62	5.84	4.84	5.18		21.48	0.52	0.26	0.19		0.97
718	3 Axle	1.22	2	H 02 BJ 356	Cement	SASW	TADW	-	-	6.48	8.64	8.24			23.36	0.91	1.56			2.48
719	2 Axle	1.2	1	WB 37 E 274	Empty	SASW	SADW	-	-	3.12	2.84				5.96	0.05	0.01			0.06
720	LCV	1.1	1	WB 37 D 376	Empty	SASW	SASW	-	-	2.66	1.54				4.20	0.03	0.00			0.03
721	5 Axle	1.1.1.22	2	WB 39 3450	Rice	SASW	SASW	SASW	TADW	10.52	9.00	11.47	15.44	13.57	60.00	6.34	3.40	8.98	0.65	19.37
722	4 Axle	1.1.22	1	WB 73 2148	Empty	SASW	SASW	TADW	-	4.82		3.44	3.88		12.14	0.28		0.06		0.33
723	4 Axle	1.1.22	2	WB 68 1095	Coal	SASW	SASW	TADW	-	5.08	9.34	12.82	11.44		38.68	0.35	3.94	6.67		10.96
724	4 Axle	1.2.22	1	NL 01 7350	Empty	SASW	SADW	TADW	-	5.02	4.72	5.08	5.44		20.26	0.33	0.11	0.24		0.68
725	4 Axle	1.1.22	2	NL 01 2760	Coal	SASW	SASW	TADW	-	5.28	10.46	13.28	11.64		40.66	0.40	6.20	7.42		14.03
726	4 Axle	1.2.22	2	NL 04 7666	Gari	SASW	SADW	TADW	-	5.44	8.64	6.50	8.50		29.08	0.45	1.26	0.97		2.69
727	3 Axle	1.22	2	WB 30 1513	Soil	SASW	TADW	-	-	6.92	16.32	17.30			40.54	1.19	24.59			25.78
728	2 Axle	1.2	2	GJ 12 3040	Passenger	SASW	SADW	-	-	5.52	6.64				12.16	0.48	0.44			0.92
729	4 Axle	1.1.22	1	GJ 12 2974	Empty	SASW	SASW	TADW	-	3.84	3.44	3.68	4.30		15.26	0.11	0.07	0.08		0.26
730	2 Axle	1.2	2	WB 42 9920	Passenger	SASW	SADW	-	-	5.72	7.14				12.86	0.55	0.59			1.14
731	3 Axle	1.22	2	WB 41 4450	Parcel	SASW	TADW	-	-	7.22	12.04	11.90			31.16	1.41	6.32			7.73
732	3 Axle	1.22	1	WB 25 7032	Empty	SASW	TADW	-	-	2.88	2.12	2.90			7.90	0.04	0.01			0.05
733	2 Axle	1.2	2	WB 25 7026	Courier	SASW	SADW	-	-	5.88	9.70				15.58	0.62	2.00			2.62
734	4 Axle	1.2.22	1	WB 68 9025	Empty	SASW	SADW	TADW	-	4.90	4.62	3.56	3.52		16.60	0.30	0.10	0.05		0.45
735	3 Axle	1.22	2	WB 01 4450	Cement	SASW	TADW	-	-	6.48	9.62	9.08			25.18	0.91	2.35			3.27

Single Axle with single wheel - SASW
Single Axle with dual wheels - SADW
Tandem Axle with dual wheels - TADW
Tandem Axle Single wheel - TASW
Tridem Axel Dual Wheel - TRADW

INCREMENTAL STUDIES OF DUE DILIGENCE - TECHNICAL STUDY Thiruvananthapuram Road Development Company Limited (TRDCL)

TECHNICAL STUDY REPORT (FINAL)

DEC 2023

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INCREMENTAL STUDIES OF DUE DILIGENCE - TECHNICAL STUDY

Thiruvananthapuram Road Development Company Limited (TRDCL)

TECHNICAL STUDY REPORT (FINAL)

DEC 2023

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CHAPTER 1
INTRODUCTION

1.1 General

Thiruvananthapuram Road Development Company Limited (TRDCL) has been awarded with construction, operations and maintenance of 10 corridors and 3 National Highway bypass links aggregating to 42 km approximately (158 lane Km) in Thiruvananthapuram, Kerala. The project has been awarded on the basis of the lowest annuity receivable from Kerala Road Fund Board during the operations period. The Public Works Department, Government of Kerala issued bids under the Thiruvananthapuram City Roads Improvement Project ("TCRIP") and the project was awarded to a consortium of Punj Lloyd Limited and Consolidated Toll Network India Limited. A concession agreement dated March 16, 2004 was entered into among the Kerala Road Fund Board, Executive Engineer, Roads & Bridges Division (Thiruvananthapuram) and TRDCL. At present Phase I comprising of 14.3 Kms approximately (61 lane Km) is handed back to Authority, now Phase II,III and IV are in operational phase comprising of 28.117 Kms approximately (107 lane Km).

Total road network of roads is divided into four phases and as per the Concession Agreement TRDCL is entitled to receive semi –annual annuity payment as under.

- Phase-1: Rs. 5.90 Cr.
- Phase-II: Rs. 6.59 Cr.
- Phase-III. Rs. 3.33 Cr.
- Phase- IV Rs. 1.929 Cr.

Total concession period is 17.5 years including construction period of 2.5 Years. All phases of road network are under operation and maintenance now. Following are the actual COD dates for each phase.

- Phase- I: 4th July 2007
- Phase-II: 22nd February 2012
- Phase-III: 20th February 2015
- Phase-IV: 30th May 2016

Phase-I part of road network actually has been handed back by TRDCL to Kerala Road Fund Board (KRFB) and TRDCL is now maintaining balance three phases of road network.

Annuity concession agreement dated March 16, 2004 was entered into between the Kerala Road Fund Board and Thiruvananthapuram Road Development Company Limited.

The group has decided to appoint a consultant for independent assessment of operating and maintenance requirement and major maintenance requirement as per scope of work for asset of road network of Thiruvananthapuram Road Development Company Limited (TRDCL).

M/s GMD Consultants was selected for the assignment after due bidding process. GMD consultants had submitted Technical Study Report for road network of Thiruvananthapuram Road Development Company Limited (TRDCL) on 22nd May 2023.

It was desired by client to get the report updated post monsoon period. Accordingly, Consultant's Team visited all road under scope and also reviewed the maintenance requirements post monsoon. During this visit and after consulting with M/s Elsamex representatives (Maintenance Agency), it is observed that not much work has been done at site during monsoon. However, there were some additional maintenance requirements identified during visit and review. The report is hence modified and updated considering available current information during site visit and review of maintenance.

1.1 Project Asset

There are total 18 corridors of project road network. These corridors have been in divided in four phases as discussed previously. Phase- I, which has about 14.3 km of roads has been handed back to KRFB. Following figure shows location of project in regional context.

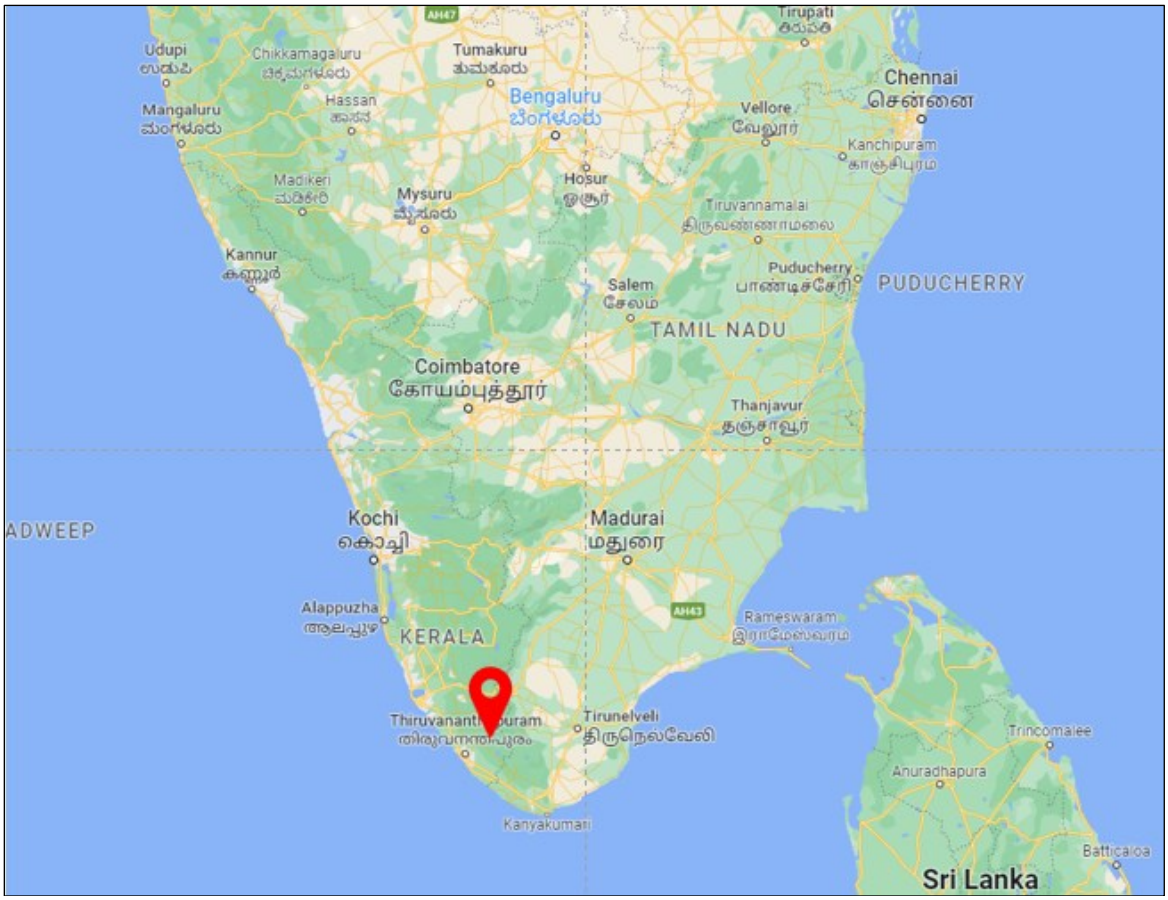


Figure 2-1 : Location Plan in Regional Context

This report fulfils part of the scope of Technical Study of Asset:

1.2 Project Stretch

Entire project road network is divided into four phases based on proximity of roads and handing over status to concessionaire. The total length of all four phases is about 42.38 km. These roads are of varying specifications. Some are four lane and some are six lanes. Few roads are even two lanes. There are some bridges, culverts and flyovers also in road network.

Following table shows summary of salient features of project stretch.

Table 2-1 : Salient Project Details

Sr. No	Item	Details	Remarks
1	Project Stretch	Road Network of Thiruvananthapuram Road Development Company Limited.	
2	Project Length	42 km (Phase-I, II, III and IV)	Phase-I roads of about 15.7 km handed back to owner

Sr. No	Item	Details	Remarks
3	Number of Corridors	18 (Phase-I, II, III and IV)	Phase-I handed back to owner
4	Pavement	Asphalt	
5	Carriageway configuration	Variable	Two Lane, Four Lane and some six lanes as well
6	Flyover	2 Flyovers	
7	Number of Minor Bridges	5 Nos.	
8	Number of underpasses	01 Nos.	Part of Phase-I Roads
9	Other Amenities	Bus Bays, Street Lighting, High mast light, footpath etc.	

1.3 Scope

The main objective of the study is to critically review the current status of project corridor including details pertaining to its construction and maintenance and to provide requisite technical information. The objective of the study can be broadly defined as follows:

I. Operations Phase:

- Undertake detailed reconnaissance to appreciate the Project corridor characteristics.
- Collection of relevant records and documents and critical review of same
- Undertake field investigations visual as well as test mentioned under asset condition assessment and to collect first-hand information on present condition of Project road and establish the requirements for rehabilitation and up-gradation
- Review of safety aspects
- Undertake preliminary designs for immediate rehabilitation requirements based on condition assessment and Concession Agreement specifications
- Review of operation and maintenance system and prepare maintenance schedule for entire duration of concession period based on a technical analysis
- Review and Preparation of O&M and major maintenance cost schedule for the concession period
- Study and highlight other relevant details like penalties, claims, petition, deviations etc which may have impact on future maintenance and cost of project

II. Asset Condition Assessment

- Assessment of road assets in conformance with specifications, standards and codes stipulated in Concession Agreement and O&M manual etc.
- A detailed inventory survey of road assets including main carriageway, structures, service roads, lightings, drains, road furniture including signage, MBCB, guard rails etc. other safety measures, toll collection infrastructure, buildings, plantation, vehicles and other objects. Comparison between requirement and actual availability at site on sampling basis based on the insurance of assets.
- Assessment of condition of the structures including but not limited to visual inspections of bearings, expansion joints, superstructure, substructures, foundations, associated components, pre-stress anchorages (if any)
- Conducting following tests
  - Trial pits for crust verification at every 15 kms
  - Falling Weight Deflectometer (FWD) test of the stretch to ascertain the existing strength of the pavement covering minimum 50% of the length.
- Assessment of condition of the road pavement including but not limited to visual inspections of the pavement, review as-built design and assess design assumptions and provide a detailed report thereon.
- Reviewing of test certificates & outcomes of past few years along with visual road condition
- Assessment of physical dimensions condition of the infrastructure to determine useful lives of the materials and equipment requiring rehabilitation and/or replacement
- Recommendations for any major repair rehabilitation and strengthening based on the condition survey and design reports
- To provide a detail photographic report of the infrastructure assets and its condition to withstand till end of concession period. Suggestion and cost evaluation for any additional repair/rectification /modification required
- Determine the appropriate level and frequency of routine and major maintenance activities required to keep the road assets in good condition and to meet the performance and O&M standards, specifications and requirements.
- Review the major maintenance work undertaken if any and prepare projections for future.

- Major maintenance expenses, so as to ensure compliance with the terms of Concession Agreement
  - Review of condition of SPV assets including ails equipment and vehicles etc.
  - Review of past accidents reports, identification of black spots, deficiency of safety requirement if any and preparation of proposal to curb accidents and safety hazard to road users.
  - Detailed major maintenance cost forecast along with estimation of costs towards handover requirements.
  - Review of existing O&M Contractor's contracts, work order and their provisions
  - Review historical O&M costs data and comment on one-off expenses, if any,
  - Review availability of labour, material and machinery at the project site and provide an assessment of operational challenges involved, if any as well as estimated costs for these

1.4 Methodology

A systematic approach and methodology have been followed for Technical Assessment of project highway. Assignment required site surveys, site data collections, document review and some preliminary designs. This requires a balanced team of experts and site engineers, design professional and senior key professionals with required skill and experience. A team consisting of judicious mix of experience and skill was deployed for the assignment.

Approach and methodology are discussed in brief as under.

A. Team

A team consisting of senior highway experts, site survey engineers, designers and document controller were put for the assignment under project In-charge having good experience in relevant highway projects. Separate teams for site survey and investigations and office design works were deployed.

B. Site Survey and Data Collection

A team of highway engineers, site supervisors and structure engineers were deployed for sufficient period at site which collected the actual field data including road/ structure inventory and supervision of field surveys. Senior expert also visited the entire stretch and interacted with project In-Charge for understanding and appreciating key aspects of project.

C. Survey and Investigations

Various surveys like FWD and trial pits were done as per standard procedures and conditions of contract. Highway and structure engineers were deployed full time for close monitoring of field investigations and surveys.

D. Designs

Designs of repair and rehabilitation for pavement was done with latest relevant tools and software as per standard guidelines like IRC-115. Software like KGP back, IITPave etc were used for analysis and design of pavement overlays.

E. Estimates & BOQs

Senior experts having good experience in road quantity estimation were deployed for estimation of various costs.

All designs and estimates were reviewed by senior highway expert.

1.5 Organization of Report

The Technical Study report covers the assessment of project road in terms of completion, quality, documentation, variations etc. The Report is organized in following 8 chapters.

1. **Introduction** - Provides outline of project asset, brief scope of assignment, methodology to execute assignment and Organization of Report
2. **Asset Appreciation** - Provides detail regarding important features/ concerns of projects including overview of physical condition of the assets.
3. **Survey and Investigations**- Includes details of various survey and investigations carried out in relation to execution of assignment.
4. **Asset Condition Analysis and Preliminary Designs** – Includes analysis of various survey and investigations, outcome of survey and investigations and preliminary designs for major repair of project elements.
5. **Road Safety Assessment and Improvement** – Review of safety compliances and accident reports
6. **Design Review** – Design Review of important elements like pavement and structures
7. **Project Document Review** - Provides analysis of review of relevant project documents like CA, Schedules, Progress Reports, Audit Reports, NCRs, Contractual Correspondence, Variations, Changes, Representations etc.

8. **Major Repair Operation & Maintenance Cost** – Cost of major repair, overlays and regular operation and maintenance
9. **Conclusion & Recommendations**

CHAPTER 2
ASSET APPRECIATION

2.1 General

Thiruvananthapuram is capital city of state of Kerala. Government of Kerala created a body in name of Kerala Road Fund Board (KRFB) which is authorised to plan, commission, operate and maintain all roads under jurisdiction of Government of Kerala.

KRFB selected certain important roads in Thiruvananthapuram city and bundled these to a package and awarded to qualified concessionaire for improvement (construction) and maintenance for certain period in lieu of Semi- Annual Annuity payments. These roads were later divided into four phases based on availability of land for construction and other factors. Start and end of concession period for these phases differ with each other.

Following table shows length of roads and corridors in four phases of project.

Table 2-1 : Project Corridor Details

SL No	Corridor	Stretch	Chainage		Length (KM)
			From	To	
1	C-01	LMS - Vellayambalam - Kowdiar	0+000	2+437	2.437
2	C-02	LMS - Attakulangara Jn.	0+000	3+373	3.373
3	C-03	Museum - Nadavanam - RBI-PanavilaOverbridge	0+000	3+335	3.335
4	C-03A	Asan Square - Palayam Under Pass -Panjapura - RBI	0+462	1+032	0.570
5	C-04	Domestic Airport - Sanghumugham -Chackai - Pettah - Eye Hospital Palayam	(-)0+178	9+325	9.503
6	C-05	Pattoor - Vanchiyoor	1+465	1+961	1.391
		Vanchiyoor - Old Collectorate	1+100	1+465	
		Uppilamoodu - Kaithamukku - Sreekandeswaram	1+300	1+830	
7	C-06	Nalumukku - Old Collectorate - Uppilamoodu -Sreekandeswram - Thakaraparambu - Choorakattupalayam	0+000	3+163	3.163

SL No	Corridor	Stretch	Chainage		Length (KM)
			From	To	
8	C-07	Around Secretariat - North Side	0+000	0+497	1.421
		Around Secretariat - North Side	0+550	0+924	
		Vanross - Press Club	0+000	0+550	
9	C-08	Pattom - Marappalam - Kowdiar	0+055	2+350	2.295
10	C-09	Pattom - Medical College - Ulloor	0+000	2+835	2.835
11	C-10	Kowdiar - Ambalamukku - Peroorkada	0+000	2+035	2.035
12	AL-1	LMS- Student's Centre Road	0+000	0+244	0.244
13	AL-2	Vellayambalam-Sasthamangalam	0+060	1+326	1.264
14	AL-3	Ulloor - Kochulloor road	0+000	0+445	0.445
15	AL-4	Perookada - Vazhayila	0+000	1+433	1.433
16	BP-1	Enchackal - Sreevaraham - Attakulangara road	0+000	1+466	1.466
17	BP-2	Eanchackal - Sreekanteswaram Road	0+000	1+433	1.433
18	BP-3	NH Bypass - KIMS - Kumarapuram	0+000	3+760	3.760
		Total Length			42.385

Out of above Phase-I roads have been handed back to Authority on completion of Concession Period. Following table shows summary of road length in remaining Phase-II, III & IV

Table 2-2 : Phase wise Road Length

Project Corridor Length (KM)	Phase II	Phase III	Phase IV
	15.739	7.6	4.718

Project map in local context is shown in figure below.

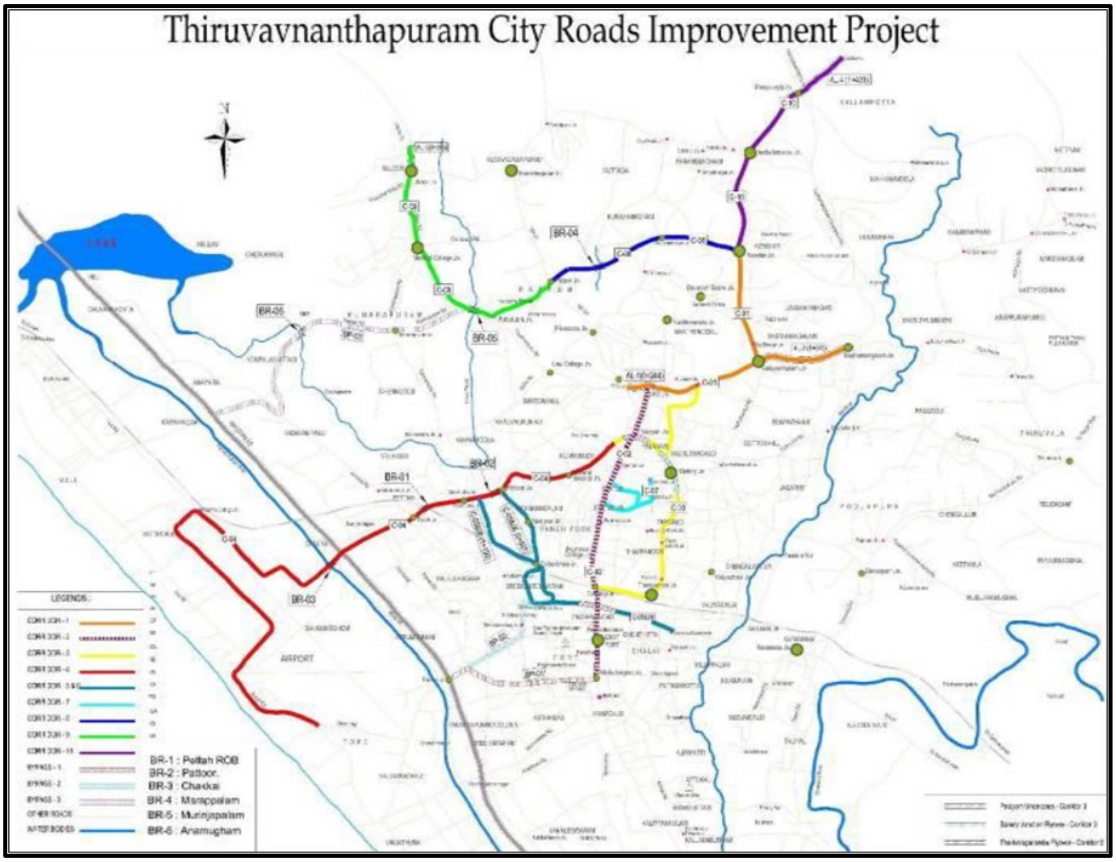


Figure 2-1: Location Plan Project Road

2.2 The Asset

Thiruvananthapuram is a mix of plain and hilly terrain. Some roads have higher longitudinal slope. Hence rainwater drains off quickly on most of the roads. All roads have mixed city traffic including NMTs. Hence most junctions have pedestrian facilities. As happens with all cities there are issues of utility trenches. At multiple location trenching of road was in progress by various authorities (Gas, Electricity, water etc). This has damaged road surface and would have to be restored.

In general condition of roads is good and major damage to road surface is not observed. Kerbs and railings are also maintained in good condition. Following table shows key features of project roads.

Table 2-3 :Key Specifications of Project

Sr. No	Item	C1	C2	C3	C-3A	C4	C5 & C6	C7	C8	C9	C-10	AL-1	AL-2	AL-3	AL-4	BP-1	BP-2	BP-3
1	Length (m)	2437	3373	3335	570	9503	4554	1421	2295	2835	2035	244	1261	445	1433	1466	1433	3760
2	Junction (No)	5	12	6	-	12	5	3	3	5	2	1	1	1	1	1	2	4
3	Signalized Junction (No)	4	13	3	-	5	3	-	-	5	2	-	-	-	-	-	-	1
4	Proposed ROW (m)	18.30 - 23.20	22.3	15-17	27	18.3 - 20.2	10.5 - 27	9 14	14	17.3	17.3	18.3	22.3	19.3	20.2	11.5 - 1.5	10.5 - 14	15
5	Carriageway (lane)	4.6	6	2,3,4,6	6	3,4	2,3,4	2,3	3	4	4	4	6	4	4	2,3	2,3	3
6	Foot Path (Width)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	Bus Bays	9	11	4	-	25	2	-	4	6	4	-	2	1	3	-	2	9
8	high most Lighting	1	4	2	-	-	1	-	-	2	-	-	1	-	-	-	1	-
9	Retaining Wall (m)							-	510	280			50	-	388	-	-	1433
10	Drain	4876	6240	6632	1180	17995	8766	2740	4505	4930	4008	480	2640	805	2858	2140	2866	7250
11	Drain Inspection chamber (Nos)	296	388	379	58	1234	448	138	333	312	245	22	198	84	101	167	-	440
12	Catchpits	296	388	490	63	1234	500	138	332	297	231	19	189	81	116	186	224	432

Sr. No	Item	C1	C2	C3	C-3A	C4	C5 & C6	C7	C8	C9	C-10	AL-1	AL-2	AL-3	AL-4	BP-1	BP-2	BP-3
13	Culvert	4	3	16	-	8	11	9	3	3	2	1	2	-	4	2	-	4
14	Flyover	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
15	Under Pass	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Minor Bridge	-	-	-	-	2	-	-	1	1	-	-	-	-	-	-	-	1
17	Street Lighting	78	103	79	6	168	33	-	-	89	53	5	29	11	43	-	-	-
18	Gantry / Cantilever Board	4	1	-	-	-	1	-	1	5	1	1	-	1	-	-	-	2
19	Details of Trees in ROW	318	99	41	-	472	149	60	143	101	93	33	90	-	100	-	-	305
20.a	Maxcian Grass in Traffic Islands Area (Sqm)	1530	2834	1712	-	621	150	-	69	940	240	285	915	915	290	-	-	427
20.b	Turfing (Sqm)- Buffallo Grass	3860	1250	1721	-	2560	1760	595	3060	1620	1800	480	1920	450	2160	-	-	1785
20.c	Median Plantation (m)- Shrubs	800	480	320	-	850	-	-	-	-	-	-	-	300	1300	-	-	80

2.3 Project Road Network Appreciation

There are total 17 corridors in entire network of project roads. Out of which 2 corridors have been handed over back to authorities by concessionaire. Hence currently 15 corridors of phases 2, 3, and 4 are being maintained by concessionaire. Approximate lengths of roads in these remaining phases is as under.

- Phase-II: 15.8 Km
- Phase-III: 7.6 Km
- Phase-IV: 4.8 Km

In general condition of road is good. Following photographs shows typical condition of airport road in project network. Condition of road assets was verified during site visit in November 2023.

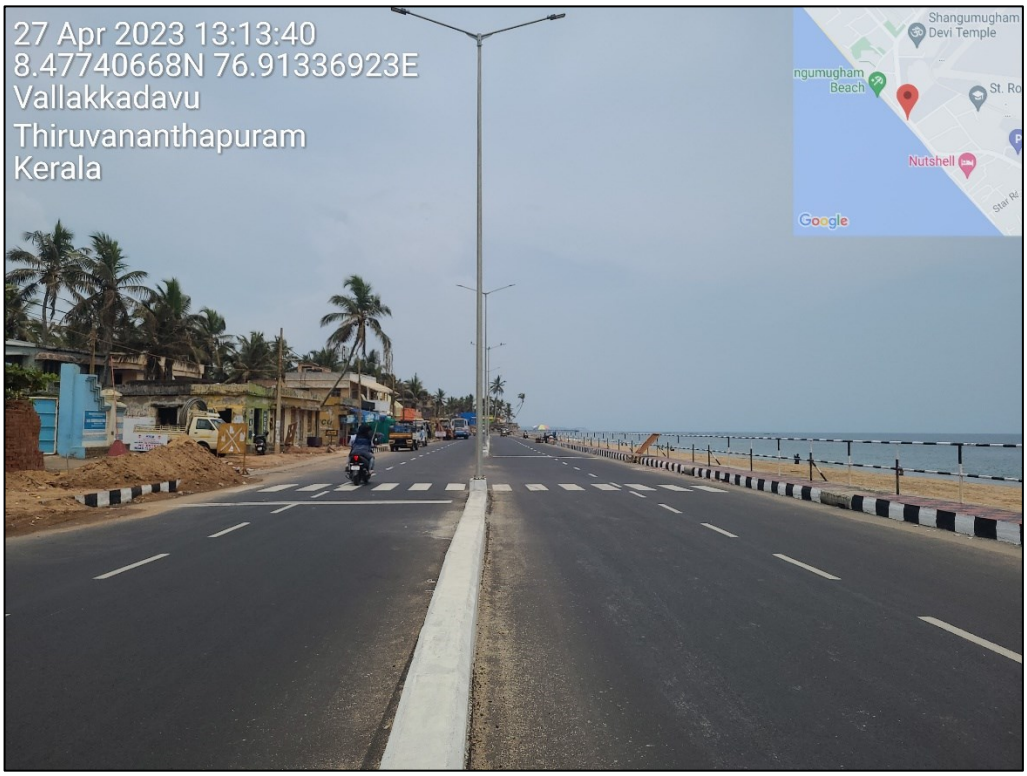


Figure 2-2: Project Roads- Airport Road (May-2023 Site visit)

Figure 2-3: Project Roads- Airport Road (Nov-2023 Site visit)

2.4 Project Road Features

As discussed previously City roads of Thiruvananthapuram under project scope have varying configuration in terms of lanes, configuration and amenities. In general, all assets are maintained in good condition. Various features of project road are illustrated as under.

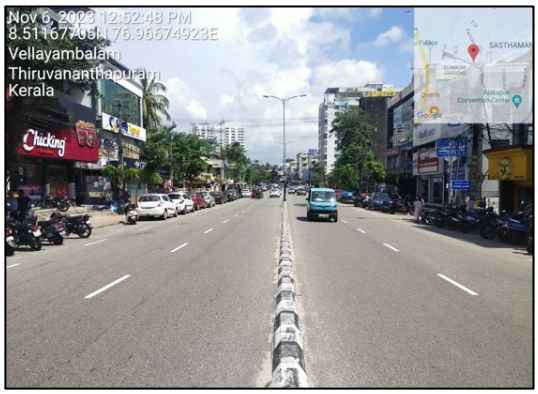
2.4.1 Road Carriageway

There are various type of road configuration in project road network. Some roads are two lane undivided carriageway with footpath on side. Some are four lane divided carriageway and some are six lane road with divided carriageway. Following photographs show typical sections of such roads.

2 Lane Configuration at BP-1 km 1+150

3 Lane Configuration at C-02 km 1+430

4 Lane Configuration at C-05 km 1+100



4 Lane Configuration at AL-02 km 0+480

6 Lane Configuration at C-02 km 1+120

6 Lane Configuration at C-03 km 3+240

Figure 2-4: Typical Road Configuration

Lengths of roads of various configurations are given in table below.

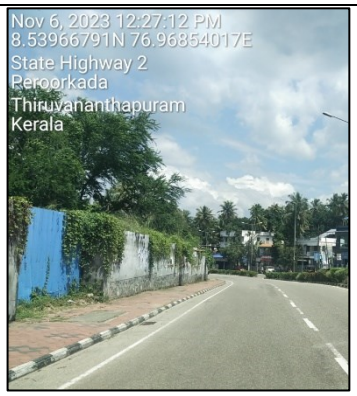
Table 2-4 :Phase wise Lane Configuration Details

Phases	2 Lane Length (m)	3 Lane Length (m)	4 Lane Length (m)	6 Lane Length (m)
Phase -02	1970	4890	4929	3979
Phase -03	2025	1407	4073	145

Phases	2 Lane Length (m)	3 Lane Length (m)	4 Lane Length (m)	6 Lane Length (m)
Phase -04	290	120	2838	147
Total	**4285**	**6417**	**11840**	**4271**

2.4.2 Footpath & Railings

Most of the project roads have footpath on side of road. Railings are also provided for pedestrian safety in some roads. Footpath is fairly maintained in most part. At few places kerb and tiles of footpath are broken.



AL-04 km 0+350

AL-01 at km 0+000

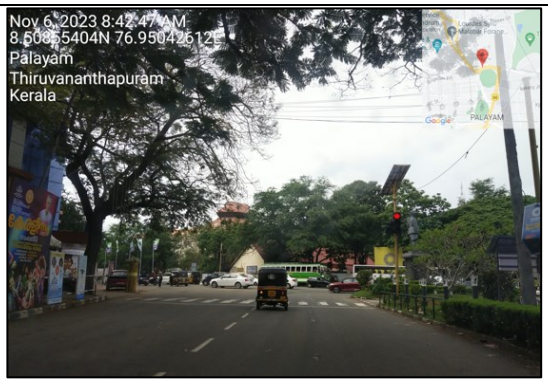
C-08 km 0+050

C-04 at km 5+700

Figure 2-5: Built Up Sections on Project Road

2.4.3 Junctions

There are large number of junctions on project roads. Junctions in general are provided with all marking and separation / channelization island. Pedestrian crossings are provided at majority of junctions.



Jn. AL-01 km 0+210

Jn. AL-04 at km 0+000

Jn. C-03 km 0+500

Jn. C-04 at C-7 km 1+480

Jn. C-07 km 0+050

Jn. C-09 at km 2+840

Figure 2-6: Junctions on Project Road

2.4.4 Bus Shelter and Bus Bays

Bus shelter and bays are provided at some locations. These are maintained by concessionaire and are in good condition.

Figure 2-7: Bus shelter and bays on Project Road

2.4.5 Street Lighting & High Mast Light

About 700 street poles with lamps and 12 high mast lights are provided by concessionaire at various locations as per scope. These are maintained by concessionaire but the bill of electricity is paid by the authority.

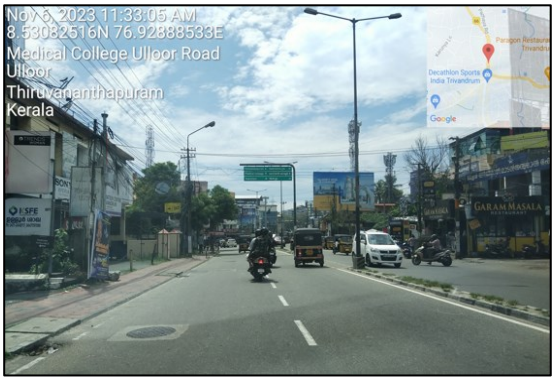


Figure 2-8: Street light and high mast light on Project Road

2.4.6 Cross Drainage Works

There are 2 flyovers, and 5 minor bridges on project road in concessionaire's scope. Condition of all structures is very good. These are recently constructed. At few places though some vegetation has grown in return walls.

MNB at BP-01 km 0+510

MJB at BP-3 km 0+860

Vegetation growth on MNB at C-4 km 5+670

Culvert structure at C-4 km 5+750

MNB Substructure at C-4 km 5+700

Culvert Structure at C-6 km 2+530

Canal structure at C-8 km 0+470

Figure 2-9: Bridges on Project Road

There are some cleaning issues though at some locations. Overall condition of project assets is good.

CHAPTER 3

SURVEYS AND INVESTIGATIONS

3.1 Scope

Consultants have conducted various site investigations and surveys on project road to collect important details for Independent Assessment of Operation and Maintenance of project road and major maintenance if any.

Following survey and investigations have been done on project stretch to capture condition of project assets and for the purpose of preliminary designs to assess maintenance and major maintenance requirements as per scope of work.

- Structural soundness of pavement – FWD (Falling Weight Deflectometer)
- Trial Pits
- Pavement Condition Assessment – Road Inventory
- Structural Condition – Visual Inventory

3.2 Schedule of Survey & Investigation

All survey and investigations were done as per standard guidelines and scope of assignment. Following table provides schedule of survey and investigations.

Table 3-1 : Schedule of Investigations

Sr. No	Type of Survey	Specification	Period
1	Falling Weight Deflectometer (FWD) Test	Entire Length	24-04-2023 to 25-04-2023
2	Trial Pit	At 4 locations	27-04-2023 to 30-04-2023
3	Road Inventory-01	Entire Length	24-04-2023 to 30-04-2023
4	Structure Inventory	Entire Length	24-04-2023 to 30-04-2023
5	Road Inventory-02	Entire Length	06-11-2023

FWD and trial pit testing was done in May 2023 which still holds good as there is practically no change in road and structure condition.

3.3 Falling Weight Deflectometer (FWD)

Structural Condition of pavement is normally evaluated using deflection measurement of pavement with passing load. Benkelman Beam Deflection (BBD) and Falling Weight Deflectometer (FWD) are two popular methods for the purpose. FWD being more accurate among the above methods was used for pavement strength evaluation.

FWD survey and subsequent analysis is carried out to ascertain the relative performance of the pavement for all Project Stretches, in the context of evaluating residual life, overlay and other maintenance requirements.

Methodology of Falling Weight Deflectometer

Falling Weight Deflectometer is a non-destructive pavement testing device which provides relatively accurate data on the response of the pavement (specifically the surface deflection bowl) to dynamic loads by simulating actual wheel loads in both response and duration. This allows more accurate and rapid measurement of pavement deflection under load than traditional methods like BBD.

Figure 3-1 : FWD Survey in progress on project roads in Thiruvananthapuram

A dynamic load is generated by the dropping of a mass from a pre-set height onto a 300 mm diameter plate. The magnitude of the load and the pavement response are measured by a load cell and nine geophones. One geophone is located immediately under the load, whilst the others are located at variable offsets from the centre of the load. The test load is varied between 7 and 150 KN to meet the requirements of the particular task and the pavement response for up to four different magnitudes of load are measured during any test sequence. The offsets of the geophones can be set to any distance up to 1800 mm from the centre of the load and a typical sequence is completed in approximately one minute. Highly accurate deflection bowl measurements are therefore obtained; therefore, it is very useful for carrying out large-scale pavement surveys.

The FWD is integrally mounted in a dedicated vehicle. All testing is controlled by a personal computer which is located in the vehicle. As a result, only one operator is required to conduct a survey on most occasions making it less labour/ equipment intensive than traditional methods. Following is the typical process of FWD survey and investigation.

3.3.1 Working Principle

- A set of weights is dropped onto a platform with springs (rubber buffers) and the impact load is transferred to the pavement through a loading plate.
- The load simulates the dynamic load from a truck.
- Normally, the load applied on road pavements is 40 kn.
- When subjected to a load, the pavement will bend, and a deflection bowl is created. The deflections at various distances from the loading centre are recorded by the sensors (geophones) and stored in a data file.

3.3.2 Survey &Data Collection

Survey and data collection using FWD includes typically the following.

- Preparing the FWD unit for deflection testing
- Bringing the FWD to a stopped position at the beginning of the test section, centred on the outside wheel path (or specific position), and take a measurement by applying load using following sequence:
- One settling drop to ensure proper contact.
- Three drops with an applied load of 40 KN ± 10% (or Specified Load).
- Deflections are recorded from the sensors located at the centre of the loading plate for each drop except the settling drop.
- Along with these deflection data, the parameter like Chainage, Temperature, Date and Time and position of Sensors will also be recorded.
- After each measurement, drive the FWD forward to next measurement point.

Analysis Stages:

Analysis including back calculation of layer moduli and remaining life analysis is done on the basis of standard procedure and guidelines as give in IRC - 115 and KGPBACK, presented in the Chapter 5.

Back calculated FWD field data is placed at Annexure-2

3.4 Trail Pit

Visual inspection of the existing pavement condition has been carried out prior to commencement of pavement investigation work to finalize the test pit locations.

In order to verify the configuration of pavement layers trial pits have been done on edge of pavement. Following Pictures shows trial pit survey in progress at project site. Trial Pits are carried out to assess the adequacy of the pavement layers and effectiveness of the existing pavement layers.

Figure 3-2 : Trail Pit Survey arrangement

Condition and thickness of existing sub-grade, Granular layer Bituminous Layer by taking sample test pits at 4 locations was noted. Trial pit was done at the interface of paved shoulder and earthen shoulder in the size of 1m x 1m. Pavement composition details (pavement course, material type, and thickness) are recorded at every test pit. Trial pits were closed and filled back after testing from road safety point of view.

3.5 Road Inventory

Existing inventory of features of Project Stretch is captured through physical inventory. Features like built-up settlements, carriageway dimensions, service roads, junctions, road furniture etc. are recorded for entire Project Stretch. Chainage of project roads are not clearly marked on city roads. Reference of chainages have been taken from prominent features on project road like junction, bus bay, major showroom etc.

Detailed photos of road inventory are presented in Appendix-1.

A detailed road-wise visual inspection of pavement was done. Most part of pavement in project road is complete and is in good condition. Traffic is plying on road and there are high rains in in this part of country which has resulted damages and stresses at certain location on project roads.

Following some representative photographs depict typical condition of road in this stretch.

AL-01	AL-02
AL-03	AL-04
C-02	C-03

C-04

C-05

C-06

C-07

Figure 3-3 : Pavement Condition at Select Locations

Most of the damages in carriageway have happened at locations where some digging or trench work is done by Utility Authorities.

Following Table depict summary locations where pavement was observed to be under distressed / damaged during site inspection.

Table 3-2 : Pavement Condition

Corridor	Chainage		Side	Stress / Damage Type	Length (m)
	From	To			
AL-01	0+000	0+250	BHS	Fair	250
AL-02	1+100	1+150	LHS	Fair	50
AL-02	0+800	0+815	RHS	Patch Work	15
AL-02	1+150	1+200	RHS	Potholes	50
AL-03	0+000	0+010	LHS	Potholes	10
AL-03	0+150	0+200	LHS	Patch Work	50
AL-04	0+970	1+000	LHS	Potholes	30

Corridor	Chainage		Side	Stress / Damage Type	Length (m)
	From	To			
AL-04	1+100	1+150	BHS	Fair	50
AL-04	0+850	0+900	RHS	Distressed	50
AL-04	1+200	1+250	RHS	Patch Work	50
BP-01	0+000	0+050	BHS	Distressed	50
BP-01	0+050	0+800	BHS	Fair	750
BP-01	0+850	0+900	BHS	Patch Work	50
BP-01	1+335	1+350	BHS	Potholes	15
BP-03	0+000	0+850	LHS	KSEB Work in progress	850
BP-03	0+900	1+200	LHS	KSEB Work in progress	300
BP-03	2+000	2+850	LHS	KSEB Work in progress	850
BP-03	3+450	3+460	LHS	Potholes	10
BP-03	1+100	1+150	RHS	Potholes	50
BP-03	2+150	2+200	RHS	Fair	50
BP-03	3+000	3+350	RHS	KSEB Work in progress	350
BP-03	3+500	3+700	RHS	KSEB Work in progress	200
C-02	1+200	1+250	LHS	Fair	50
C-02	2+300	2+350	BHS	Potholes	50
C-02	2+850	2+950	BHS	Rutting	100
C-02	3+100	3+200	LHS	Rutting	100
C-02	0+950	0+960	RHS	Potholes	10
C-03	2+450	2+500	LHS	Potholes	50
C-03	2+500	2+550	BHS	Potholes	50
C-04	5+350	5+360	LHS	Patch Work	10
C-04	5+360	5+400	RHS	Fair	40
C-04	5+900	6+000	RHS	Fair	100
C-05	1+400	1+450	BHS	Fair	50
C-05	1+550	1+600	LHS	Potholes	50
C-05	1+800	1+850	BHS	Potholes	50

Corridor	Chainage		Side	Stress / Damage Type	Length (m)
	From	To			
C-06	0+050	0+100	LHS	Potholes	50
C-06	0+200	0+230	BHS	Distressed	30
C-06	0+200	0+400	BHS	Fair	200
C-06	0+550	0+600	LHS	Potholes	50
C-06	1+000	1+020	BHS	Patch Work	20
C-06	1+020	1+050	BHS	Fair	30
C-06	1+400	1+450	BHS	Fair	50
C-07	0+000	0+100	BHS	Potholes	100
C-07	0+100	0+550	LHS	Gas pipeline Work in progress	450
C-07	0+000	0+550	RHS	Fair	550
C-08	0+135	0+200	LHS	Distressed	65
C-08	0+200	1+350	LHS	Fair	1150
C-08	1+400	1+950	BHS	Fair	550
C-08	0+150	0+200	RHS	Fair	50
C-08	0+370	1+000	RHS	Fair	630
C-08	1+280	1+350	RHS	Fair	70
C-09	0+100	0+250	LHS	Fair	150
C-09	0+250	0+350	LHS	Gas pipeline Work in progress	100
C-09	0+430	0+750	LHS	Gas pipeline Work in progress	320
C-09	0+750	0+900	LHS	Fair	150
C-09	0+950	1+100	LHS	Fair	150
C-09	1+450	1+500	LHS	Patch Work	50
C-09	1+650	1+750	LHS	Patch Work	100
C-09	1+750	2+000	LHS	Fair	250
C-09	2+500	2+550	LHS	Potholes	50
C-09	0+150	0+250	RHS	Fair	100
C-09	0+430	0+450	RHS	Fair	20

Corridor	Chainage		Side	Stress / Damage Type	Length (m)
	From	To			
C-09	0+750	0+900	RHS	Fair	150
C-09	0+950	1+100	RHS	Fair	150
C-09	1+550	1+650	RHS	Fair	100
C-09	1+750	2+000	RHS	Fair	250
C-10	0+100	0+150	LHS	Potholes	50
C-10	0+250	0+300	LHS	Potholes	50
C-10	0+650	0+700	LHS	Patch Work	50
C-10	1+000	1+050	BHS	Fair	50
C-10	1+200	1+250	LHS	Distressed	50
C-10	1+850	1+900	LHS	Potholes	50

Table 3-3 : Summary of Pavement Condition

Stress / Damage Type	Length (m)
Fair	6190
Potholes	825
Patch Work	395
Distressed	245
Rutting	200
Gas pipeline Work in progress	870
KSEB Work in progress	2550

Potholes, patchwork, distressed or rutting as shown in above are isolated small locations. There is no continuous stretch which is damaged and can be taken up to major repair. Hence only few locations which required urgent repair are taken in immediate repair cost. Rest can be covered in regular yearly maintenance works.

Detailed condition inventory of road is attached at Annexure-1

3.6 Structure Inventory

Detailed site inventory of structures was done during field site surveys. Main features recorded as part of structure inventory survey are as listed below:

- Bridge number/ Name
- Location (Chainage)
- Type of structure (Major bridge, minor bridge, pipe culverts, box culverts, slab culverts, underpasses, flyovers etc.) and year of construction if available from records.
- Span Arrangement details like numbers of spans, span length, vent height from deepest stream bed level.
- Details and type of vehicle restraint systems such as safety barriers or R.C.C railing or parapet wall.
- Clear width and overall width of structure.
- Main features recorded as part of detailed condition survey are listed below.
- Condition of wearing coat such as potholes, cracks, and patches.
- Condition of expansion joints such as bump in riding, leakage in expansion joint, damaged sealing compound, silt and debris filled in expansion joint gap.
- Damaged and missing details of RCC railing/ safety barrier/ parapet wall.
- Damaged and missing details of drainage spouts and down take pipes extended below the soffit of deck slab, status of drainage spout chambers filled with debris and silt and missing or damaged gratings, covered on rainwater collection chambers.
- Spalling of concrete from super structure and sub structure elements.
- Delamination in girders, soffit of deck slab and substructure.
- Corroded reinforcement exposed anywhere in deck slab and substructure.
- Mapping of cracks in girders, deck slabs, sub structure.
- Visible voids and honey combing in concrete surfaces.

All the structures in project roads are completed recently say at the most 15 years back approximately. Hence all elements of structures like slabs, girders, bearings, expansion joints abutments etc are in good condition. There is no repair required other than cleaning.

Following figures show condition and status of few structures.

Flyover at C-03 km 0+990

Vehicular Underpass at C-3A km 0+390

ROB at C-06 km1+250

Flyover at C-06 km 2+040

Figure 3-4 : Typical Structure Condition on project road.

3.7 Safety Items

Concessionaire has provided safety items like crash barriers, railings, etc as per schedule. Solar Blinker, Signages, metal beam crash barrier and Lighting is provided in stretch. Generally, all items are in good shape except that a few locations metal beam crash barrier and Pedestrian guard rail at built-up locations is damaged.

CHAPTER 4
ASSET CONDITION ANALYSIS AND PRELIMINARY DESIGNS

4.1 Road Pavement Condition

Road pavements are layered structures comprising of combination of materials to carry traffic load in given climate for a specified time interval. The pavement structure is designed in such a way that the transmitted stresses due to wheel load are sufficiently reduced, so that they will not exceed bearing capacity of the sub-grade. It should also be able to provide a surface of acceptable riding quality under all weather conditions with the highest possible degree of safety.

The performance of any road pavement is measured by two indicators, namely Functional Performance and Structural Performance. The functional performance includes aspects such as riding quality, surface distress and skid resistance. Whilst recognising these functional requirements, the pavement should also have adequate strength so as to carry the traffic load under the prevailing environmental conditions (structural performance).

Table 4-1 : Typical Distress Types Associated with Performance

Performance Type	Performance Indicator
Functional	Riding Quality (Roughness and Rutting)
Surface	Distress (Cracking, Potholes, Ravelling etc.) Skid Resistance Structural Deflection, Elastic Modulus of Pavement layers and Remaining Life

Information about pavement condition and performance is critical to the decision-making process for successful management of road pavements. The objective of condition assessment of the pavement is to collect accurate and timely data, analyse the level of deterioration, identify maintenance and reconstruction needs, and determine maintenance costs both routine as well as periodic (major maintenance).

In this context, series of investigations and assessments were undertaken using a combination of state of the art, technology driven fully automated and semi-automated processes with high speed of data collection in field.

After collecting the pavement condition data from tests, the data is analysed to evaluate the pavement performance or condition. Following are the key aspects in this regard.

- Test Pit for evaluation of pavement material properties
- Structural Condition Assessment of the pavement and remaining life.

The remaining life of the pavement {in terms of the residual fatigue causing traffic load in MSA (Million Standard Axles) that the pavement can sustain} is evaluated using the data obtained from Falling Weight Deflectometer (FWD) survey and Test-pit survey results. The design traffic in terms of MSA for each year ahead is calculated based on the VDF obtained from axle load data and traffic projections.

The key steps involved in strength evaluation of pavement are as follows

1. Data collected from surveys is analysed for estimating different parameters like Remaining life of Pavement, design traffic projections in MSA.
2. The Remaining Life of the pavement is evaluated using the FWD and Test-pit survey results as per **IRC: 115-2014.**
3. The traffic projections (MSA) are obtained from the combined results of axle load and historical traffic data.
4. Each stretch is divided into homogeneous sections and all the above parameters are listed for each section.
5. The sections with lesser remaining life are proposed for structural overlay.
6. The sections which have remaining life more than the design life but are poor in riding quality or are damaged at surface, are also considered for the functional overlay.
7. Sections which satisfy both the functional parameters as well have a life more than design life are considered for routine maintenance only.

4.1.1 Estimation of Axle load and Vehicle Damage Factor

Concessionaire has provide the design reports of various corridors. It was confirmed that roads have been constructed with the same design. Traffic volume and traffic loading (MSA)for various roads in horizon years is taken from these design reports. Following table shows summary of design and traffic loading of various corridors of project road network.

4.1.2 Estimated Design Traffic

The design traffic is considered in terms of the cumulative number of standard axles in both directions of the carriageway during the design life of the road. This can be computed using the following equation:

$$N = \frac{365 \times [(1+r)^n - 1]}{r} \times A \times D \times F$$

Pavement design of roads has been provided by concessionaire and traffic loading of various road considered in design has been taken for analysis of remaining life of pavement. The estimated yearly design traffic considering the traffic (as per design report) is worked out for each road. One sample traffic loading on road C-08 is given in table below:

Table 4-2 : Traffic Loading at Project road C-08

Year	Lane Factor	VDF	MSA		Remarks
			HS-1	HS-2	
2003	0.75	2	0.28	0.12	Year of Survey
2004			0.3	0.12	Completion of construction
2009			1.56	0.66	
2014			3.36	1.42	First 10 Years
2019			5.45	2.31	
2024			7.88	3.33	Final design period (20 years)

4.1.3 Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to American Society for Testing and Materials (ASTM), roughness is defined as “the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross slope”.

Bump Integrator Roughness (BI) is used to define the characteristics of a longitudinal road profile and constitutes a standardized roughness measurement. BI is measured in

metre per kilometre (m/km). Concessionaire has done testing of roughness as per contract. As per the reports values of roughness index are with in acceptable limits except at those places where some excavation or trenching work is done by utility authorities.

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profile graphs, response type road roughness meters and profiling devices. Roughness investigation was done using fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. Following table gives details of surface riding quality evaluation criteria.

Table 4-3 : Roughness Index Criteria

Condition	Roughness Range BI (in mm/km) for Bituminous Concrete Surface
Excellent	Less than 2000
Good	2000-2500
Average	2500-3000
Poor	More than 3000

**Source: IRC: SP:16-2004

Concessionaire has got roughness test done recently in November 2022. Following graphs show the representation of test results. As per the test report roughness in all the corridor is within acceptable limit of 3000 except on one location.

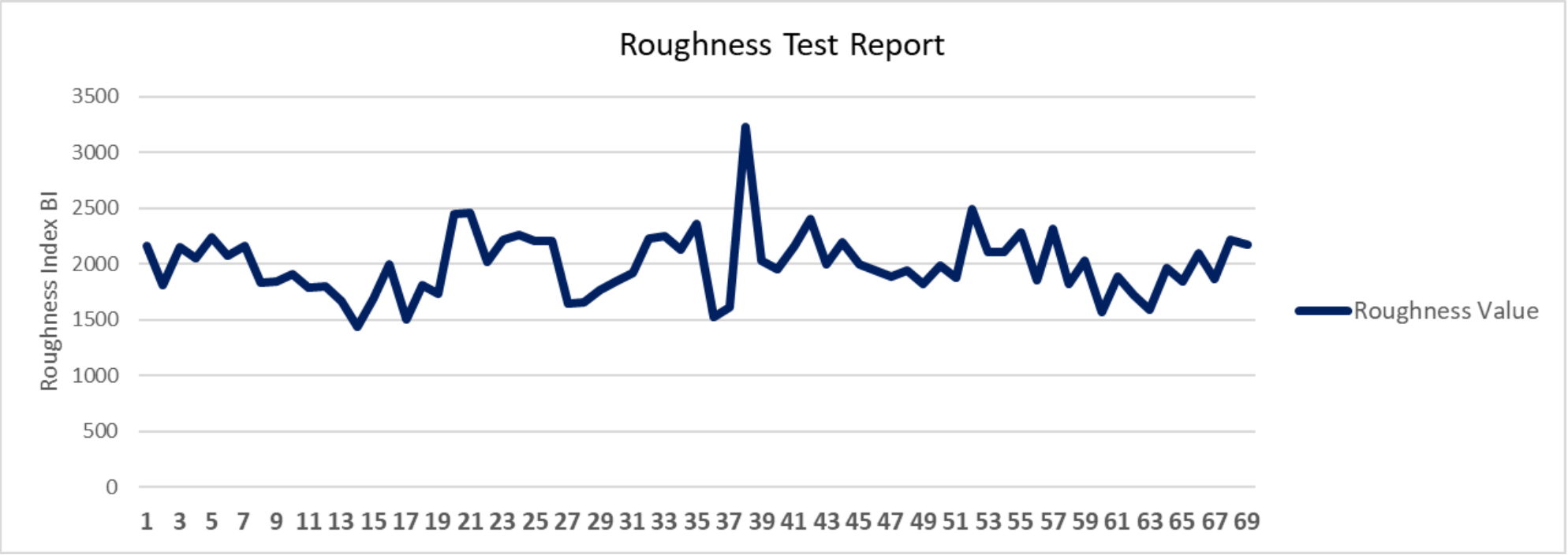


Figure 4-1 : Roughness Index for Project Road Network

4.1.4 Existing Pavement Composition and Analysis

Existing pavement composition (pavement course, material type, and thickness) was recorded at every trial test pit dug at 4 locations along the Project Stretch. The pavement composition was checked at defined interval to understand the construction layers laid on the project road and its correlation and analysis of residual life and strengthening requirement. Pavement of balance stretches is taken from design report

BP-03

C-04

C-07

C-09

Figure 4-2 : Trail Pit Survey

The summary of existing pavement crust thickness as obtained from trial pit testing and is presented in following table.

Table 4-4 : Existing Crust Thickness

Sr.No.	Date	Trial Pit No.	Location / Chainage (Km)	SIDE (LHS/RHS)	BITUMINOUS THICKNESS (mm)	GRANULAR THICKNESS (mm)	TOTAL (mm)
1	29.04.2023	1	C-04	LHS	90	450	540
2	30.04.2023	2	C-07	LHS	90	460	550
3	30.04.2023	3	C -09	LHS	120	510	630
4	30.04.2023	4	BP-03	LHS	90	450	540

The Average granular layer thickness varies from 450 mm to 510 and bituminous layer thickness varies from 90 mm to 120 mm. Pavement thickness of other roads have been taken from design and drawings of pavement.

Detailed photos of Trial pit testing are presented in Appendix-3.

4.1.5 Determination of Structural Strength of Pavement using FWD and Remaining Life Analysis

Pavement structure is typically composed of several layers of different material, each of which receives the loads from the above layer, spreads the load, and then passes the load to the layer below. Material layers are usually arranged with in a pavement structure in order of descending load bearing capacity with the highest load bearing capacity material on the top and the lowest load bearing capacity material on the bottom. In general pavements should be designed to perform satisfactorily without developing unacceptable levels of distresses during the design life period. The structural adequacy of the existing pavement is demonstrated based on the study of structural performance of the pavement. If a pavement shows load associated distress like fracture, permanent deformation etc., then it is considered to have failed structurally. To ensure that unacceptable levels of distresses do not occur during design period, the critical strains developed under the load should be less than the limiting strain values corresponding to the design traffic selected. Structural evaluation of pavements involves application of a standard load to the pavement and measuring its response in terms of stress, strain or deflection. Among the equipment available for structural evaluation of pavements, the Falling Weight Deflectometer (FWD) is extensively used world-wide because it stimulates, to a large extent, the actual loading conditions of the pavement. The resulting load-deflection data can be interpreted through appropriate analytical techniques, such as

back calculation technique, to estimate the elastic module of the pavement layers. The computed module is, in turn, used for

i. The strength evaluation of different layers of in-service pavements
ii. the estimation of the remaining life of in-service pavement
iii. determination of strengthening requirement, if any and
iv. Evaluation of different rehabilitation alternatives (overlay, recycling, partial reconstruction, etc.).

The guidelines for the test and evaluation of structural condition of in-service pavements are detailed in IRC- 115:2014. The test was carried out using 300mm diameter plate and standard load of 40KN (+/-4KN). The deflections were measured at 7 points, each at a radial distance of 0, 200, 300, 450, 600, 900, and 1500 (all mm). The pavement layer thicknesses of Bituminous and Granular layers were obtained from the test pits as given above.

4.1.6 Analysis Methodology

provides detailed procedure for the evaluation of structural condition of in-service pavements using deflection data from Falling Weight Deflectometer as well as other pavement data as inputs to a back-calculation model for determining the elastic module of pavement layers, and, thereafter, using these modules as inputs to a pavement design model for estimating the overlay requirement.

Accordingly, the sequence of analysis steps as per the IRC: 115-2014 is as follows.

1.The recorded data will be normalized to a standard load of 40 KN.

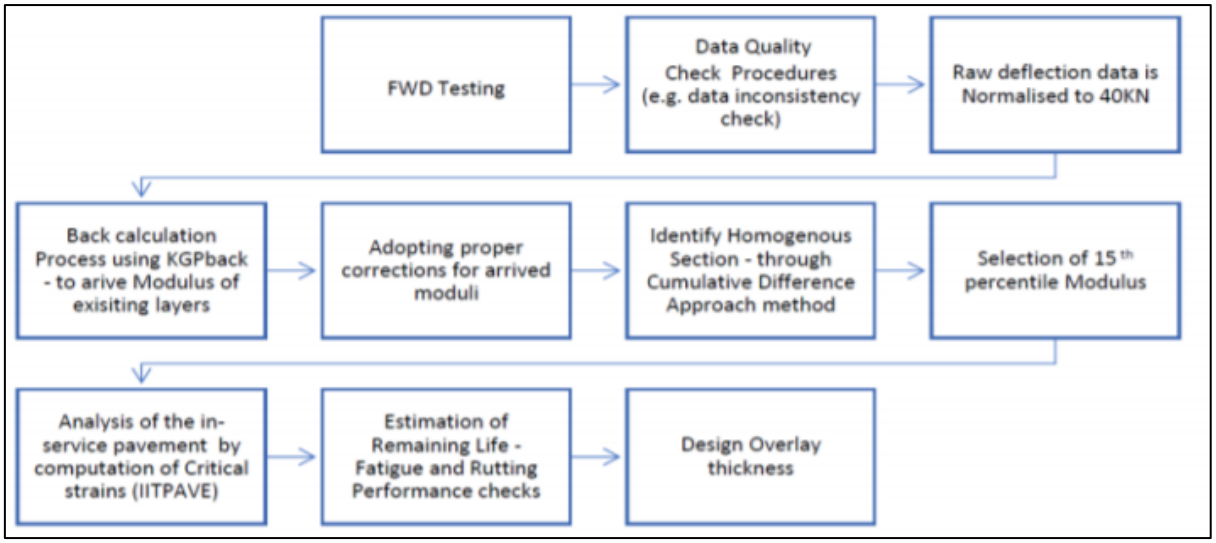
2.The normalized deflections will be then processed and back calculated using KGPBACK to obtain Elastic Modulus values of Bituminous, Granular layer and Sub-grade.

3.The corrections factors for temperature correction sand seasonal variations will be applied to all layers as suggested in IRC: 115-2014.

4.Preparation of Homogenous sections and selecting 15th percentile Module values for the purpose of design.

5.Checking the in-service ability of the Pavement layers through Performance criteria-analysing the Remaining life. Sequence of FWD data analysis and snapshot of applications used for analysis are presented in figures below.

Sequence of FWD data analysis and snapshot of applications used for analysis are presented in figures below.




```
#####################################################
#         !!!  THANKS FOR USING KGPBACK  !!!        #
#             THE RESULTS ARE GIVEN BELOW           #
#####################################################

################
#  INPUT DATA  #
################
No.of Layers                              =  3
FWD Load (N)                              = 40000.00
Contact Pressure (MPa)                    =  .56
No.of Deflection points                   =  7
Deflections measured using FWD (mm)       =  .10200   .09000   .06900   .05900   .05000   .03700   .02900
Radial distances from centre of load(mm) =    .0  200.0  300.0  450.0   600.0   900.0  1500.0
Layer thickness (mm)                      = 130.00 510.00
Poisson ratio values                      = .50 .40 .40
Layer Modulus (MPa) Ranges Selected :-
(a) Bituminous Surfacing                  =  750.0   3000.0
(b) Granular Base                         =  100.0   500.0
(c) Subgrade                              =   30.0   120.0


################
# OUTPUT DATA  #
################

Backcalculated Layer Moduli are:
Surface (MPa)  =    2870.2
Base (MPa)     =     498.0
Subgrade (MPa) =     119.7
```

Figure 4-3 : Typical KGPBACK Output

4.1.7 Procedure

The FWD measurements have been carried out at spacing of 250 and 500 m per lane at slow lane and fast lane respectively in the provided stretches.

Figure 4-4 : FWD Survey in Progress

deflections measured by the FWD equipment are influenced by pavement temperature. Measurements made when the pavement temperature is different than standard temperature has be corrected. The deflection measurements, pavement temperature, subgrade soil & deflection, and other information collected during the deflection study have been recorded.

Following procedure has been followed for measurement of FWD:

- The test location is marked on the field.
- The loading plate along with the deflection sensors have been lowered at the test location.
- The target load has been applied and the deflections have been measured for 3 times.
- The first load is considered as a seating load and the values are not considered for analysis.

Detailed photos of FWD test are presented in Appendix-2.

Temperature Measurement & Correction

The standard temperature for doing the experiment is 35^0C. Since it is always not possible to conduct the test at the standard temperature, a correction factor has to be

applied for the deflection. The correction factor is determined by knowing the temperature at the time of the survey. The pavement temperature during the survey has been measured at every one-hour interval by drilling a hole of 40mm in the pavement and filling it with glycerol and measuring the temperature using digital thermometer. The temperature correction factor applied on bituminous back calculated moduli is calculated as

$$ET1 = \prod ET2$$

Where,

$\prod$, temperature correction factor, is given as

$$\prod = 1\text{-}0.238 \ln T1 / 1\text{-}0.238 \ln T2$$

Where,

ET1 = back calculated modulus (MPa) at temperature T1 (°C)

ET2 = back calculated modulus (MPa) at temperature T2 (°C)

Correction for Seasonal Variation

Moisture content affects the strength of subgrade and granular subbase/base layers. The extent to which the strength is affected will depend on the nature of subgrade soil, gradation and nature of fines in the granular layers, etc. For the purpose of applying these guidelines, it is intended that the pavement layer moduli values should pertain to the period when the subgrade is at its weakest condition. In India, this period occurs during the recession of monsoon. It is, therefore, desirable to conduct deflection measurements during this period. Where the same is not feasible, a correction procedure should be adopted. The correction factor for subgrade and base is as

- **Correction factor for subgrade**

E sub_mon = 3.351* (E sub_win) ^ (0-7688)-28.9

E sub_mon = 0.8554*(E sub_sum) - 8.461

where,

E sub_mon = subgrade modulus in monsoon (MPa)

E sub_win = subgrade modulus in winter (MPa)

E sub_sum = subgrade modulus in summer (MPa)

- **Correction factor for granular layers**

E gran_mon = - 0.0003 *(E gran_sum) ^ 2 + 0.9584* (E gran_sum) - 32.989

E gran_mon = 10.5523 *(E gran_win) ^ 0.624 – 113.857

where, E gran_mon = granular layer modulus in monsoon (MPa)

E gran_win = granular layer modulus in winter (MPa)

E gran_sum = granular layer modulus in summer (MPa)

4.1.8 Back Calculation to Obtain Resilient Modulus of Existing Layers

Software used:

KGPBACK – Genetic Algorithm based software for back calculating the layer moduli. Works on three-layer system (Bituminous, Granular & Subgrade).

Data required:

- Deflections at various radial distances.
- Existing layer thickness – the existing layer thicknesses of various stretches have been obtained from the test pit.
- Layer moduli range – the layer moduli adopted for the analysis is shown in next section.
- Poisson's ratio: BT-0.5, Granular-0.4, Subgrade-0.4 (For Back calculation).

Table 4-5 : Range of module (MPa)

Type of Layer	Lower and Upper Limit (MPa)	
	Good to Fair	Fair to Poor
Subgrade	50 to 100	50 to 100
Granular	100 to 500	100 to 500
Bituminous	750 to 3000	400 to 1500

4.1.9 Data Analysis

Resilient Moduli of each layer are calculated using KGPBACK for each test point. Details of input parameters are given in Annexure-2. The summary of back calculated and corrected module of the all the three layers are presented in the following table.

Table 4-6 : Corrected Back Calculated Module (MPa)

S.No.	Chainage		Length	Lane/ Side	15th Per Centile Modulus		
	From	To			Bituminous Layer	Granular Layer	Subgrade Layer
Corridor AL-01							
1	0+000	0+244	244	LHS	3265.47	369.75	94.04
2	0+000	0+244	244	RHS	3487.07	367.71	93.95
Corridor AL-02							
1	0+046	1+326	1280	LHS	3433.66	253.78	85.97
2	0+046	1+326	1280	RHS	2952.41	367.16	93.93
Corridor AL-03							

S.No.	Chainage		Length	Lane/ Side	15th Per Centile Modulus		
	From	To			Bituminous Layer	Granular Layer	Subgrade Layer
1	0+000	0+445	445	LHS	3328.18	249.93	94.10
2	0+000	0+445	445	RHS	3026.73	256.51	94.02
Corridor AL-04							
1	0+000	0+320	320	LHS	3511.94	368.40	94.19
2	0+320	0+900	580	LHS	3430.65	282.47	94.15
3	0+900	1+433	533	LHS	3427.56	280.13	94.05
4	0+000	0+320	320	RHS	3491.08	368.35	93.78
5	0+320	0+900	580	RHS	3072.01	297.35	78.43
6	0+900	1+433	533	RHS	3434.06	293.50	94.12
Corridor BP-01							
1	0+000	0+400	400	LHS	3124.98	369.28	100.00
2	0+400	0+950	550	LHS	3095.05	155.30	100.00
3	0+950	1+465	515	LHS	3012.39	326.01	100.00
4	0+000	1+465	1465	RHS	3066.41	192.38	100.00
Corridor BP-03							
1	0+000	1+220	1220	LHS	3236.14	335.67	100.00
2	2+000	2+960	960	LHS	3166.52	192.16	100.00
3	2+960	3+760	800	LHS	3103.57	202.55	59.75
4	0+000	1+220	1220	RHS	3544.23	238.99	100.00
5	2+000	2+960	960	RHS	3426.28	262.47	100.00
6	2+960	3+760	800	RHS	3467.18	263.92	84.37
Corridor C-02							
1	0+740	2+580	1840	LHS	3166.02	345.56	94.02
2	2+580	3+360	780	LHS	3179.01	294.62	93.91
3	0+740	2+580	1840	RHS	3087.31	320.54	93.86
4	2+580	3+360	780	RHS	2844.16	344.92	93.98
Corridor C-03A							
1	0+780	1+030	250	LHS	3161.72	365.98	93.98
2	0+780	1+030	250	RHS	3111.90	368.72	94.13
Corridor C-03							
1	0+460	1+032	572	LHS	3058.25	329.09	94.15
2	1+032	2+100	1068	LHS	3110.68	364.77	94.05
3	2+100	3+337	1237	LHS	2881.46	307.15	94.02
4	0+460	1+032	572	RHS	3192.77	367.90	94.10
5	1+032	2+100	1068	RHS	2381.53	108.72	93.93
6	2+100	3+337	1237	RHS	3212.63	336.93	94.10
Corridor C-04							
1	0+760	1+580	820	LHS	3274.65	313.56	94.18
2	5+330	6+000	670	LHS	3205.74	87.17	84.01
3	6+600	7+020	420	LHS	3331.83	359.18	93.83
4	7+780	8+090	310	LHS	3263.65	324.36	94.07

S.No.	Chainage		Length	Lane/ Side	15th Per Centile Modulus		
	From	To			Bituminous Layer	Granular Layer	Subgrade Layer
5	0+760	1+580	820	RHS	3289.54	325.54	90.17
6	5+330	6+000	670	RHS	3258.02	288.52	93.84
7	6+600	7+020	420	RHS	3126.81	368.89	94.19
8	7+780	8+090	310	RHS	3255.06	323.76	94.07
Corridor C-05 (1.3 to 1.83)							
1	1+350	1+830	480	LHS	3200.91	132.27	83.51
2	1+350	1+830	480	RHS	3242.25	228.42	94.08
C-05 Pattoor- Old Collector (1+100 to 1+961)							
1	1+100	1+465	365	LHS	3304.81	201.34	94.19
2	1+465	1+960	495	LHS	3280.80	242.15	94.05
3	1+100	1+465	365	RHS	3359.66	172.83	94.07
4	1+465	1+960	495	RHS	3298.88	307.69	94.19
Corridor C-06							
1	0+000	3+163	3163	LHS	2128.27	154.63	93.99
2	0+000	0+605	605	RHS	2380.16	155.68	80.76
3	0+605	3+163	2558	RHS	3303.76	208.95	87.86
Corridor C-07							
1	0+000	0+550	550	LHS	3454.53	327.14	93.97
2	0+000	0+550	550	RHS	3340.53	294.01	93.99
Corridor C-08							
1	0+000	2+320	2320	LHS	3588.98	167.49	94.61
2	0+000	2+320	2320	RHS	3705.76	191.16	100.00
Corridor C-09							
1	0+000	2+835	2835	LHS	3598.35	138.35	94.02
2	0+000	1+050	1050	RHS	3453.52	303.71	94.02
3	1+050	1+450	400	RHS	2355.74	125.74	94.19
4	1+450	2+835	1385	RHS	3568.69	197.61	93.99
Corridor C-10							
1	0+000	2+035	2035	LHS	3518.85	248.70	94.05
2	0+000	2+035	2035	RHS	3679.13	216.16	94.05

4.1.10 Remaining Life and Overlay Estimation

The in-service three-layer pavement system has been analysed with the 15th percentile back-calculated corrected layer moduli and layer thicknesses. The critical strains have been calculated by IITPAVE program. From the performance criteria equations, the residual/remaining rutting and fatigue life has been estimated.

4.1.11 Performance Criteria

The layer moduli of in-service pavement back calculated from FWD deflection data are used to analyse the pavement for critical strains which are indicators of pavement performance in terms of rutting and fatigue cracking. The remaining life of pavement can be obtained using the Fatigue and Rutting criteria mentioned in IRC – 115:2014 and in IRC-37:2018, the same approach can be used for design of bituminous overlays for existing flexible pavements. The performance models are as follows.

Fatigue in Bituminous layer:

As specified in IRC-37:2018, the fatigue model for 90 percent reliability (4.0 % air voids and 11.5% bitumen) was used as below;

$N_f = 0.9206 * 10^{-04} \times [1/\varepsilon_t] 3.89 * [1/MR] 0.854$

Where, N_f = fatigue life in number of standard axles,

ε_t = Maximum Tensile strain at the bottom of the bituminous layer

MR= resilient modulus of the bituminous layer.

Rutting in Subgrade:

Rutting model for 90 percent reliability level as specified in IRC: 115-2014 was used as below.

$N = 1.41 \times 10^{-08} [1/\varepsilon_v] 4.5337$

Where, N= Number of cumulative standard axles,

ε_v= Vertical strain in the subgrade.

Table 4-7 : Remaining Life of Existing Pavement

Sr.No.	Chainage		Length	Lane/ Side	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA) Before Overlay	Balance life of pavement in years Before Overlay
	From	To						
Corridor AL-01								
1	0+000	0+244	244	LHS	598	29	29	17
2	0+000	0+244	244	RHS	611	31	31	18
Corridor AL-02								
1	0+046	1+326	1280	LHS	257.6	15.2	15	10
2	0+046	1+326	1280	RHS	559.4	26.0	26	16
Corridor AL-03								
1	0+000	0+445	445	LHS	437.2	22.3	22	9
2	0+000	0+445	445	RHS	423.6	20.5	21	8
Corridor AL-04								
1	0+000	0+320	320	LHS	448.5	21.0	21	9

Sr.No.	Chainage		Length	Lane/ Side	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA) Before Overlay	Balance life of pavement in years Before Overlay
	From	To						
2	0+320	0+900	580	LHS	267.3	11.9	12	5
3	0+900	1+433	533	LHS	262.7	11.7	12	5
4	0+000	0+320	320	RHS	443.2	20.8	21	9
5	0+320	0+900	580	RHS	187.8	11.8	12	5
6	0+900	1+433	533	RHS	286.0	12.8	13	6
Corridor BP-01								
1	0+000	0+400	400	LHS	152.4	11.7	12	20
2	0+400	0+950	550	LHS	36.6	1.7	2	4
3	0+950	1+465	515	LHS	117.2	8.4	8	16
4	0+000	1+465	1465	RHS	140.0	2.6	3	6
Corridor BP-03								
1	0+000	1+220	1220	LHS	201.6	15.6	16	21
2	2+000	2+960	960	LHS	47.6	5.1	5	14
3	2+960	3+760	800	LHS	28.8	5.4	5	14
4	0+000	1+220	1220	RHS	120.9	8.8	9	13
5	2+000	2+960	960	RHS	75.2	9.8	10	23
6	2+960	3+760	800	RHS	104.8	10.3	10	22
Corridor C-02								
1	0+740	2+580	1840	LHS	881.1	48.6	49	12
2	2+580	3+360	780	LHS	1810.7	111.0	111	9
3	0+740	2+580	1840	RHS	759.0	41.1	41	11
4	2+580	3+360	780	RHS	2030.4	124.0	124	10
Corridor C-03A								
1	0+780	1+030	250	LHS	133.3	20.3	20	97
2	0+780	1+030	250	RHS	135.5	21.2	21	99
Corridor C-03								
1	0+460	1+032	572	LHS	105.3	13.3	13.28	85
2	1+032	2+100	1068	LHS	957.7	52.5	52.54	14
3	2+100	3+337	1237	LHS	678.6	35.1	35.08	9
4	0+460	1+032	572	RHS	135.5	20.5	21	99
5	1+032	2+100	1068	RHS	195.7	5.3	5	2
6	2+100	3+337	1237	RHS	853.3	50.1	50	13
Corridor C-04								
1	0+760	1+580	820	LHS	156.7	13.7	14	17
2	5+330	6+000	670	LHS	27.2	1.5	2	2
3	6+600	7+020	420	LHS	202.2	18.5	19	21
4	7+780	8+090	310	LHS	165.9	14.6	15	18
5	0+760	1+580	820	RHS	152.8	14.9	15	18
6	5+330	6+000	670	RHS	133.7	11.5	11	15
7	6+600	7+020	420	RHS	208.7	18.6	19	21
8	7+780	8+090	310	RHS	165.1	14.5	15	18

Sr.No.	Chainage		Length	Lane/ Side	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA) Before Overlay	Balance life of pavement in years Before Overlay
	From	To						
Corridor C-05 (1.3 to 1.83)								
1	1+350	1+830	480	LHS	48.6	2.0	2	3
2	1+350	1+830	480	RHS	143.0	5.4	5	8
C-05 Pattoor- Old Collector (1+100 to 1+961)								
1	1+100	1+465	365	LHS	118.6	4.3	4	3
2	1+465	1+960	495	LHS	158.2	6.2	6	9
3	1+100	1+465	365	RHS	96.1	3.3	3	3
4	1+465	1+960	495	RHS	246.6	10.3	10	14
Corridor C-06								
1	0+000	3+163	3163	LHS	67.0	1.6	2	3
2	0+000	0+605	605	RHS	46.9	1.8	2	3
3	0+605	3+163	2558	RHS	105.4	4.6	5	7
Corridor C-07								
1	0+000	0+550	550	LHS	137.2	10.6	11	34
2	0+000	0+550	550	RHS	110.4	8.1	8	29
Corridor C-08								
1	0+000	2+320	2320	LHS	42.9	2.8	3	5
2	0+000	2+320	2320	RHS	60.0	3.7	4	7
Corridor C-09								
1	0+000	2+835	2835	LHS	252.7	10.3	10	5
2	0+000	1+050	1050	RHS	603.3	32.6	33	13
3	1+050	1+450	400	RHS	161.2	4.7	5	2
4	1+450	2+835	1385	RHS	342.1	17.0	17	7
Corridor C-10								
1	0+000	2+035	2035	LHS	151.7	6.0	6	6
2	0+000	2+035	2035	RHS	122.2	4.7	5	5

The initial requirement of the overlay for strengthening of the existing pavement was done increase the residual life of the pavement. The basic principle considered in calculating the initial overlay requirement is as under

- Calculation of overlay thickness on the basis of calculated design traffic in MSA to be on the project road by period.
- The rutting life which is the life of granular layer should be more than the 25yrs design traffic in MSA.
- The remaining fatigue life before every periodic maintenance should be minimum of 30% such that it may have sufficient structural strength and be suitable for

maintenance measures like crack sealing, micro-surfacing and patching (IRC:37-2018).

- There is conventional provision of BC overlay at the end of concession period at the time of handover. Taking this into account stretches having remaining life less than concession period have been taken up for overlay.
- Future strengthening of pavement has been integrated with periodic maintenance to optimize overlay on pavement.

Following table provides summary of overlay requirement on various road sections and enhanced balance life after overlay.

Table 4-8 : Overlay Requirement on Project Roads

S.No.	Chainage		Length	Lane/ Side	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA) After Overlay	Remaining Life of pavement in years After Overlay	Designed Overlay Thickness
	From	To							
Corridor AL-04									
1	0+320	0+900	580	LHS	512.1	27.9	28	11	30
2	0+900	1+433	533	LHS	504.8	27.4	27	11	30
3	0+320	0+900	580	RHS	361.2	26.9	27	11	30
4	0+900	1+433	533	RHS	543.5	29.7	30	12	30
Corridor BP-01									
1	0+400	0+950	550	LHS	87.8	4.9	5	10	30
Corridor C-03									
1	1+032	2+100	1068	RHS	637.5	17.8	18	6	40
Corridor C-04									
1	5+330	6+000	670	LHS	76.2	4.6	5	7	30
Corridor C-05 (1.3 to 1.83)									
1	1+350	1+830	480	LHS	113.2	5.7	6	9	30
C-05 Pattoor- Old Collector (1+100 to 1+961)									
1	1+100	1+465	365	LHS	316.0	15.2	15	11	40
2	1+100	1+465	365	RHS	268.7	12.4	12	9	40
Corridor C-06									
1	0+000	3+163	3163	LHS	203.6	6.1	6	9	40
2	0+000	0+605	605	RHS	141.2	7.0	7	10	40
3	0+605	3+163	2558	RHS	216.6	11.9	12	16	30
Corridor C-09									
1	0+000	2+835	2835	LHS	549.1	24.4	24	10	30
2	1+050	1+450	400	RHS	514.2	15.9	16	7	40
3	1+450	2+835	1385	RHS	693.5	38.1	38	14	30

The overlay thickness recommended for the project road is based on the remaining fatigue life, existing pavement condition, riding quality and maintaining profile of the project road which is presented in table below.

Details calculation of overlay is placed at Annexure -3

Recommended overlay thicknesses per FWD analysis is given as under in various years. The overlay is designed on the assumption that after overlay remaining life of pavement would increase up to end of concession period or beyond that.

Additionally, an overlay of 30 mm SDBC overlay is considered just before handover of respective stretches of various phases. Following table shows handover overlay in various years (end of concession period).

Table 4-9 : Hand back Overlay Schedule

Corridor Name	Chainage From	Chainage To	Length m	Phase	2023-2024 (For 6 Months)	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
C-02	0	740	740	1								
	740	2680	1940	2				30				
	2680	3240	560	4								30
	3240	3360	120	2				30				
C-03	0	780	780	1								
	780	1030	250	2				30				
	1030	1550	520	2				30				
	1550	2100	550	2				30				
	2100	2540	440	3							30	
	2540	2750	210	4								30
	2750	3130	380	4								30
	3130	3190	60	4								30
	3190	3337	147	3							30	
C-03A	0	460	460	1								
	460	1030	570	2				30				
C-04	0	320	320	1								
	320	700	380	1								
	700	760	60	1								
	760	1450	690	2				30				
	1450	1580	130	4								30
	1580	5330	3750	1								
	5330	5350	20	4								30
	5350	5920	570	2				30				
	5920	6000	80	4								30
	6000	6600	600	1								
	6600	7020	420	4								30
	7020	7780	760	1								
	7780	8090	310	4								30
	8090	9325	1235	1								

Corridor Name	Chainage From	Chainage To	Length m	Phase	2023-2024 (For 6 Months)	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
C-05	1100	1450	350	4								30
	1450	1960	510	3							30	
	1350	1830	480	3							30	
C-06	0	1095	1095	3							30	
	1095	1100	5	4								30
	1100	1300	200	4								30
	1300	1350	50	4								30
	1350	1750	400	3							30	
	1750	2060	310	4								30
	2060	2575	515	4								30
	2575	2630	55	4								30
	2630	3163	533	3							30	
C-07	0	550	550	2				30				
	0	497	497	1								
	550	924	374	1								
C-08	0	120	120	3							30	
	120	2320	2200	2				30				
C-09	0	2500	2500	3							30	
	2500	2750	250	4								30
	2750	2835	85	3							30	
C-10	0	2035	2035	2				30				
AL-01	0	244	244	2				30				
AL-02	46	1326	1280	2				30				
AL-03	0	445	445	3							30	
AL-04	0	320	320	2				30				
	320	510	190	4								30
	510	900	390	2								
	900	1433	533	4								30
BP-01	0	580	580	2				30				
	580	600	20	4								30
	600	870	270	2				30				
	870	1420	550	2				30				
	1420	1465	45	3							30	
BP-03	0	1220	1220	2				30				
	1220	2000	780	1								
	2000	2070	70	4								30
	2070	2960	890	2				30				
	2960	3760	800	3							30	

4.2 Structure Condition

Condition of structures is good in project. All structures of project have been recently constructed. All elements of structures including abutments, slabs, girders, bearings, parapet expansion joint etc are in good condition and do not require any repair immediately. There are issues of cleaning and vegetation growth at joints of structure which should be taken care of.

Following table provides visual assessment of condition of structure.

Table 4-10 : Structure details of Project Road

Sr. No	Corridor	Chainage	Type of Structure	Condition of Structure	Proposed construction/repair works
1	BP-3	0+888	MNB	Abutments, Slabs, Parapet, deck are in good condition	Regular cleaning of bed near abutments
2	C-03	1+050	Flyover	Abutments, Piers, girders, deck slab etc are in good condition	Regular maintenance & Cleaning
3	C-04	5+670	MNB	Abutments, Slabs, Parapet, deck are in good condition	Regular cleaning of bed near abutments
4	C-06	1+200	ROB	Abutments, Piers, girders, deck slab etc are in good condition	Regular maintenance & Cleaning
5	C-06	2+100	Flyover	Abutments, Piers, girders, deck slab etc are in good condition	Regular maintenance & Cleaning
6	C-06	2+530	MNB	Abutments, Slabs, Parapet, deck are in good condition	Regular cleaning of bed near abutments
7	C-08	0+470	MNB	Abutments, Slabs, Parapet, deck are in good condition	Regular cleaning of bed near abutments

4.3 Miscellaneous Items

Repair requirement of miscellaneous items like crash barriers, drains, pedestrian guard rails, marking, kerbs etc is derived from road inventory.

CHAPTER 5

ROAD SAFETY ASSESSMENT & IMPROVEMENT

5.1 ROAD SAFETY AUDIT

Road Safety is one of the most important aspect of any highway project which has been assigned high priority in all modern contracts. There has been no formal road safety audit on project.

5.2 Road Safety Audit Observations

Concessionaire has provided various road safety items like railings, pedestrian markings, crash barriers, footpaths, islands, signage, markings etc. Still during inspection of site, it was observed that at number of places marking of hazards and delineation of kerbs and islands is missing which could be important for safety of traffic. Such locations have been identified during inventory of road and required item has been taken as part of improvement.

CHAPTER 6

DESIGN REVIEW

6.1 General

Design is one of the important aspects of highway project. Project roads are city roads where most the traffic in passenger traffic. Hence in general traffic loading on project road is less. Pavement & Structure design of project are discussed here as under.

6.2 Pavement Design

Pavement design is basically interplay between ground strata strength and traffic loading on pavement. Pavement design of TRDCL roads has been reviewed in light of above.

A. Soil Strata

Thiruvananthapuram is partly a hilly city and it is expected that it would have a good sub soil strata. In design of new pavement is done on CBR of 6%. If CBR of existing soil is less than this then it shall be removed and replaced with soil having CBR 6% or more.

B. Traffic Loading & Thickness Design

Design of pavement has been done on the basis of IRC:37-2001. Total design period has been taken as 20 years. Composition of traffic in Thiruvananthapuram is predominantly buses and few LCVs. There are only few trucks. Keeping that in view a VDF of 2 is taken which appears to be appropriate. Traffic growth is taken a 3%. Lane distribution factor is taken as per road configuration. For two lane undivided carriageway lane distribution factor is taken as 0.75.

Granular layer has been designed for entire design period or minimum 20 years. Stage construction for first 10 years of pavement life is considered. Asphalt layers has been designed for minimum design period of 10 years as per new code.

Asphalt layers have been designed for 10 years traffic which shall be strengthened as required. Design Pavement composition for project roads is given as under.

Table 6-1 : Proposed Pavement Crust Thickness for Roads Widening / New

Corridor Name	Pavement Composition widening portion	Pavement Composition Existing Carriage Way	
C1	SDBC -25MM BM - 80MM WMM - 250MM GSB - 260MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
C2	BC - 40 MM DBM - 90 MM WMM - 250 MM GSB - 260MM	BC - 40 MM DBM - 50 MM	PROFILE CORRECTION COURSE IN DBM
C3	BC - 40 MM DBM - 90 MM WMM - 250 MM GSB - 260MM	BC - 40 MM DBM - 50 MM	PROFILE CORRECTION COURSE IN DBM
C-3A	BC - 40 MM DBM - 90 MM WMM - 250 MM GSB - 260MM	BC - 40 MM DBM - 50 MM	PROFILE CORRECTION COURSE IN DBM
C4	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 200 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
C5 & C6	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
C7	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 210 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
C8	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 200 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM
C9	SDBC -40 MM BM - 80 MM WMM - 250 MM GSB - 260 MM	SDBC -40 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM
C-10	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM

Corridor Name	Pavement Composition widening portion	Pavement Composition Existing Carriage Way	
AL-1	SDBC -25 MM BM - 80 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
AL-2	SDBC -25 MM BM - 80 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
AL - 3	SDBC -40 MM BM - 80 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM
AL - 4	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 260 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM
BP - 1	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 200 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM
BP - 2	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 200 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN DBM
BP - 3	SDBC -25 MM BM - 65 MM WMM - 250 MM GSB - 200 MM	SDBC -25 MM BM - 50 MM	PROFILE CORRECTION COURSE IN BM

Strengthening of road has been designed on the basis of BBD analysis and overlay requirement is worked as per IRC-81:1997

Pavement design for project roads is as per IRC provisions and since city roads handle only light traffic, thickness of various layers of pavement appears to be adequate.

6.3 Structure Design

Design drawing of structures were studied at site. All designs of structures are approved by IE.

CHAPTER 7

DOCUMENT REVIEW

7.1 General

Construction of Project roads of TRDCL in Thiruvananthapuram is complete. Various phases of project roads have been completed as under.

- November 16, 2006 (Phase I)
- February 22, 2012 (Phase II)
- February 20, 2015 (Phase III)
- May 31, 2016 (Phase IV)

Roads of phase-I have been handed over to KRFB by concessionaire. Balance roads are under operation and maintenance phase. Documents and correspondence form important part of due diligence and help is getting insight into important aspects of project. Documents of project were studied in concessionaire office in Thiruvananthapuram. Observations of document review are summarised in this chapter.

7.2 Design Documents

Sample of design documents which were made available during site visits were examined. Following is the summary of major design aspects of project.

Pavement Design

Flexible pavement is adopted in entire stretch of road except locations where existing pavement was concrete pavement. Pavement design of project is done in accordance with provision of IRC-37 (Flexible Pavement). Details of pavement design are discussed in separate chapter dedicated to subject.

Structure Design –

There are few structures in project. There are two flyovers and 5 minor bridges. Design of all structure is approved by IE before awarding COD.

7.3 Progress Reports

Progress Report of IE have been studied for insight into project regarding quality, scope, variations, conflicts type concerns. As discussed, construction of all the roads is complete, and project is in operation phase hence no critical balance items is pending. IE reports do not mention and major concern. Most of the issues mentioned

in MPRs are of typical O&M operation pertaining to cleaning, minor damages, debris etc. Concessionaire O&M team attends to such complains and observations. Hence there no critical concern mentioned in progress reports.

7.4 Safety Audits

Formal safety audit of project roads is not done as it is not part of scope of Concessionaire. However, consultant team has identifies some missing safety items on road and same have been incorporated in cost.

7.5 Contract Correspondence

Contract correspondence between IE and Concessionaire and Concessionaire and Authority (KRFB in this case) provides insight into progress of project and various issues / concerns appeared during course of implementation and operation of project. Following table provides summary of major concerns emerged out of Contract Correspondence. The project is already completed hence most of the correspondence is about change of scope and regular maintenance. However, there are two pending issues which are reflected multiple documents and correspondence. These are discussed as under.

1. Handing Over and Taking over of Phase-I roads.

Concessionaire has submitted letters to KRFB regarding handover of all roads of phase-I for which concession period is over. (Ref TRDCL dated 7th November 2022)/ Concession period of phase-I road ended on 7th July 2022 as per COD of phase-I. As per the document overlay of only one road in Phase-I, i.e., BP-03 is balance. There is utility trenching working going on in the stretch. Overlay in this 780 m road will be done only when utility work is completed. Concessionaire has stated that they will not be doing and operation maintenance of Phase-I road now. And in fact concessionaire is not doing any O&M work in phase-I road. Authority (KRFB) is asking for some additional documents which concessionaire has submitted. During discussion with concessionaire on this it was revealed that KRFB intends to float tender for maintenance of Phase-I road and even asked concessionaire to submit their quote for O&M of phase-I roads. Hence it appears that there is no major issue regarding handing over of Phase-I road and it will happen eventually in near future.

2. Holding of Annuity Payment.

As regular requirement of project scope Concessionaire does roughness and BBD test on project roads. In September 2017 KRFB got independent test of roughness done by NATPAC in which some 22540 m of road was found to exceed BI threshold value and was declared non-available. Accordingly, Authority KRFB withheld some part of annuity against non-availability of stretches.

Concessionaire contested the same and got a fresh roughness test done in October 2021 and in which all tests were observed to be within acceptable limits. Later Concessionaire agreed to do overlay on such roads and completed the overlay in all roads except two roads, BP-03 – 780 m and C-03 - 590 m. The work of overlay in these two roads is not done as some utility work is going on in these roads. Now authorities are NOT withholding the annuity payment for such roads but the previous withheld annuity payment is still not released.

Following table shows summary of withheld amount by authority.

Table 7-1 : Statement of Annuity Withheld

TCRIP Annuity Summary (PH-1, PH-2, PH-3 & PH-4) as on 31-03-2023										
SL No	**Deatils of Phase**	**Semi Annuity Amount in Cr.**	**Period**	**Total Due Annuities Amount in Cr.**	**Annuity Received Amount in Cr.**	**Regular Annuity in Process Cr.**	**Annuity Retained (as per CA) Amount in Cr.**	**GST Recovery (Pending) Amount in Cr.**	**Annuity Withheld (Contested by TRDCL) Amount in Cr.**	**Remarks**
1	**Phase - I**	5.90	Up to 30th Annuity	177.00	168.04		6.02		2.94	
2	**Phase - II**	6.59	Up to 22nd Annuity	144.98	122.74			1.1862000	22.24	Phase -II 22nd Annuity payment received on 29-03-2023
3	**Phase - III**	3.33	Up to 16th Annuity	53.28	36.72			0.599400	16.56	Phase -III 16th Annuity payment received on 29-03-2023
4	**Phase - IV**	1.93	Up to 13th Annuity	25.08	19.068				6.009	
	TOTAL	**17.75**		**400.34**	**346.56**	**0.00**	**6.02**	**1.7856**	**47.75**	
Total Amount									**55.56**	

Concessionaire has contested above withheld amount and has submitted a claim of Rs. 358.67 Cr. against additional work beyond scope, idling of resources, interest, escalation of price etc. Matter has gone to arbitration now and is currently under hearing.

7.6 Non- Conformance

The project is complete, and COD is achieved. Hence there is no pending NCR of construction period. There are pending issue of non-available stretches and withheld annuity which has been discussed as above.

CHAPTER 8

MAJOR REPAIR & OPERATION & MAINTENANCE COST

8.1 General

All the road of project are complete and under operation and maintenance now. Projects roads have been constructed to the design and specification regular maintenance of project roads is done by concessionaire. During inspection of project roads, it was observed that there are certain items on project roads which need immediate repair to bring the project road to specification. Such items and works can be taken as immediate repair works. Thus, total cost of Repair, Operation and Maintenance of project road during entire life of project can be classified into following category.

A. **Immediate Repair**

B. Regular Operation and Maintenance

C. Periodic Operation and Maintenance (Major Maintenance)

Details of above operations and cost are discussed in subsequent sections of this chapter.

8.2 Immediate Repair

Items like broken footpaths, railings, crash barriers, faded markings, missing signages etc come under immediate repair and its cost is worked out. Since project roads are actively maintained by Concessionaire, the damaged locations are scattered and are small in lengths, such cost of immediate repair is very less. Table given below shows quantities of various items taken under repair and locations.

Additionally, TRDCL had taken up some major maintenance work which was awarded to contractors. Some part of it is still balance. This cost shall also be part of immediate cost. Same is given in second table below.

Table 8-1 : Immediate Repair Quantity Details(For balanced 6 Months)

From Inventory (Immediate Repair)																	
Item Description	**Unit**	**C-02**	**C-03**	**C-04**	**C-05**	**C-06**	**C-07**	**C-08**	**C-09**	**C-10**	**AL-01**	**AL-02**	**AL-03**	**AL-04**	**BP-01**	**BP-03**	**Total**
Broken PGR	Rmt	44	96			12											152
Median Marker	Nos.	1310	975	1165	300				2700	1000	275	1334	550	1628		80	11317
Hazard Marker	Nos.	13	8	10	10	23	4	19	6	10	8	5	8	25	4	7	160
Road Marking	Sqm		1030.5	1248	367.5	901	187	852.75	1620	870	150	727.2	45	166.5	675	1282.5	10122.95
BC Overlay	Cum		0.3												11.25		11.55
Tack Coat	Sqm		10	0	0	0	0	0	0	0	0	0	0	0	375	0	385
Road Studs at Median opening	Nos.	10		50	20	50	10	20	70	55	10	10		15	5	20	345

Table 8-2 : Balance Cost of MMR work for FY 2023-2024 (For 6 Months)

SL No	Agency Name	Description	Total (in Rs Cr)	Completed (in Rs Cr)	Billed (in Rs Cr)	Un Billed (in Rs Cr)	Balance	Total to be considered post 1st April 2023
1	M/s Thoppil	BM/SDBC	12.39	12.39	11.01	1.38	-	1.38
2	M/s Project IQS	BM/SDBC	2.7	0.87	0.87		1.83	1.83
Total Amount Excluding GST								**3.21**

Cost of above items under immediate repair is given in table below.

Table 8-3 : Immediate Repair Cost Excluding GST (For balanced 6 Months)

Items	Amount (Rs.)
Broken PGR	266000
Median Marker	2942420
Hazard Marker	600000
Road Marking	5132336
BC Overlay	171188
Tack Coat	8855
Road Studs at Median	86250
Total Amount (in Rs.)	9207048
Total Amount (in Cr.)	**0.92**

Table 8-4 : Total Immediate Repair Cost Excluding GST (For 6 Months)

Items	Amounts
Balance cost of MMR work for FY 2023-2024	3.21
Immediate Repair Cost	0.92
Total Amount (in Cr.)	**4.13**

Rates of various items in all costs are taken from current contracts running on project which are relevant.

8.3 Regular Operation and Maintenance

Regular Operation and Maintenance consists of mainly following items.

- Routine Road Repairs
- Routine Structure cleaning
- Route Maintenance
- Drain Cleaning
- Landscape maintenance
- Street Light Maintenance
- Tree Pruning
- Patrolling

- Crane Operation and Maintenance

A dedicated manpower is required for effective maintenance of any asset. Current manpower structure of Concessionaire is effective and sufficient for maintenance of project asset. Following table provides details of manpower taken for cost projection. Current organization of concessionaire is mapped into this manpower.

Table 8-5 : Concessioner Staff Details

Concessionaire Staff	Unit	Base Rate (Rs)	Quantity	Amount (Rs.)
Project Manager	Salary/Month	200000	1	2400000
Asst.Manager	Salary/Month	100000	1	1200000
Site engineer	Salary/Month	75000	2	1800000
Admin Officer/ Account Officer	Salary/Month	40000	1	480000
Office Support staff	Salary/Month	15000	1	180000
Driver	Salary/Month	22000	4	1056000
Miscellaneous	Peon/ Office Boy/ Security etc	20000	3	720000
Total Sub Head				**7836000**

Concessionaire has developed an inspection / maintenance plan as per contract. Various regular damages / repair requirements are generated on the basis of this inspection plan. Inspection / Maintenance plan is attached at Annexure-4.

As discussed previously projects roads are actively maintained and are in good condition. It is proven fact that good maintenance results in less maintenance cost as well due to timely intervention and repair of damaged road. Following assumptions are made for working the regular maintenance cost against pothole, cracks, paint fading, kerbs breaking etc.

Table 8-6 : Assumed Routine Maintenance %

Defect	% Qty per year
Pot Hole	0.10%
Rutting	0.05%
Minor Cracks	0.10%
Major Crack	0.05%
Thermo Paint	50.00%
Kerb Paint	50.00%
Handrail Maintenance & Painting	50.00%

Defect	% Qty per year
Road Studs	30.00%
Signages	2.00%

Annual Cost of above items including miscellaneous costs also like office rents, staff cost, testing cost etc is given in table below. The cost is taken as per existing running contracts.

Table 8-7 : Routine Operation and Maintenance Cost for FY 2023-2024

(For 6 Months)

Items	Amount (Rs.)
A. Routine Civil Repair Work	
Pothole Patch Repairs	3,76,602
Other Repairs	8,28,525
Landscape Watering	1650000
Landscaping	1452000
Tree Pruning	462000
Road Studs	24750
Thermoplastic paint	697125
Kerb painting	583838
Handrail maintenance	350000
Handrail painting	90625
Overhead Sign Painting	13500
Street Light Painting	173950
Replace damaged Sign boards	25000
Signal Maintenance	330000
Removal of weeds on footpath	294840
Catchpit cleaning	300522.6
Bus Shelter cleaning	2310
Signal Aspect cleaning	18585
Construction of street light/signal foundation	33027.75

Items	Amount (Rs.)
Replacement of damaged kerb at edge	118004.25
Replacement of damaged kerb at Median	63525
Cleaning of sign boards	37396.8
Restoration of footpath settlements	458640
Replacement of damaged drain cover	83969.55
Carriageway cleaning 2 lane	264600
Carriageway cleaning 4 lane	148837.5
Covered drain cleaning	1296233.4
Vehicle rent for removal of waste from footpath including	462000
Vehicle rent for removal of waste from Yard	480000
Street light maintenance	1155000
B. Routine Operation Maintenance	
Patrolling Vehicle (CF Test)	192500
Patrolling Vehicle (250km / day)	800250
Crane	55,000
BBD and Roughness Test	392929
Concessioner Man Power	3918000
Office Rent	165000
Yard Rent	178200
Total Amount (in Rs.)	17977285
Total Amount(A+B) (in Cr.)	**1.80**

This regular maintenance cost would vary in subsequent years due to handing over of some roads as their concession period of respective phase gets over. Following table shows cost of routine operation and maintenance in concession period at current price.

Table 8-8 : Cost of Routine Maintenance at current rates over concession period

Year	Routine Maintenance Cost (Cr)
2023-2024 (For 6 Months)	1.80
2024-2025	3.47
2025-2026	3.47
2026-2027	3.42
2027-2028	2.19
2028-2029	2.19
2029-2030	2.16
2030-2031	1.57
2031-2032	0.31

Above cost are exclusive of GST.

8.4 Periodic Operation and Maintenance

Periodic operation and maintenance cost mainly consist of structural overlays on pavements, major repairs and replacements of expansion joints and bearing of structures.

While assessing the major repair cost of pavement with the help of FWD data analysis repair intervention was designed on the basis of remaining life of pavement.

Future periodic intervention is planned on the basis of projected MSA and remaining life of pavement taking original crust design and major repair into consideration. Following table summarises periodic interventions during concession period of project. Overlay is in Bituminous concrete and figure in respective year against a road is overlay of BC in mm.

Table 8-9 : Periodic Maintenance Interventions

S.No.	Chainage		Length	Side	Hand over Year	Balance life of pavement in years Before Overlay	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039
	From	To					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C-02 LMS-Attakulangara Jn. (0+000 to 3+373)																					
	0.00	740.00		LHS	PH-I	0																
1	740.00	2580.00	1840	LHS	2027	12																
2	2580.00	3360.00	780	LHS	2031	9																
	0.00	740.00		RHS	PH-I	0																
3	740.00	2580.00	1840	RHS	2027	11																
4	2580.00	3360.00	780	RHS	2031	10																
C-03 Museum-Nadavanam-RBI-Panavila Overbridge 0+000 to 3+335)																					
	0.00	460.00		LHS	PH-I	0																
1	460.00	1032.00	572	LHS	2027	85																
2	1032.00	2100.00	1068	LHS	2027	14																
3	2100.00	3335.00	1235	LHS	2031	9																
	0.00	460.00		RHS	PH-I	0																
4	460.00	1032.00	572	RHS	2027	99																
5	1032.00	2100.00	1068	RHS	2027	2	40						6 Years									
6	2100.00	3337.00	1237	RHS	2031	13																
C-03A Asan Square-Palayam underpass-Panjapura-RBI (0+462 to 1+032)																					
	462.00	780.00		LHS	PH-I	0																
1	780.00	1030.00	250	LHS	2027	97																
	462.00	780.00		RHS	PH-I	0																
2	780.00	1030.00	250	RHS	2027	99																

S.No.	Chainage		Length	Side	Hand over Year	Balance life of pavement in years Before Overlay	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039
	From	To					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C-04 Domestic airport-Sanghumugham-Chackai-Pettah-Eye hospital-Palayam (0+000 to 9+325)																						
	0.00	760.00		LHS	PH-I	0																
1	760.00	1580.00	820	LHS	2027	17																
	1580.00	5330.00		LHS	PH-I	0																
2	5330.00	6000.00	670	LHS	2027	2	40															
	6000.00	6600.00		LHS	PH-I	0																
3	6600.00	7020.00	420	LHS	2031	21																
	7020.00	7780.00		LHS	PH-I	0																
4	7780.00	8090.00	310	LHS	2031	18																
	8090.00	9325.00		LHS	PH-I	0																
	0.00	760.00		RHS	PH-I	0																
5	760.00	1580.00	820	RHS	2027	18																
	1580.00	5330.00		RHS	PH-I	0																
6	5330.00	6000.00	1270	RHS	2027	15																
	6000.00	6600.00		RHS	PH-I	0																
7	6600.00	7020.00	420	RHS	2031	21																
	7020.00	7780.00		RHS	PH-I	0																
8	7780.00	8090.00	310	RHS	2031	18																
	8090.00	9325.00		RHS	PH-I	0																
C-05 (1+300 to 1+830)																						
1	1350.00	1830.00	480	LHS	2030	3		30														
2	1350.00	1830.00	480	RHS	2030	8																
C-05 Pattoor- Old Collector (1+100 to 1+961)																						
1	1100.00	1465.00	365	LHS	2031	3		40														
2	1465.00	1960.00	495	LHS	2030	9																
3	1100.00	1465.00	365	RHS	2031	3		40														
4	1465.00	1960.00	495	RHS	2030	14																

S.No.	Chainage		Length	Side	Hand over Year	Balance life of pavement in years Before Overlay	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039
	From	To					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C-06 (0 to 3+163)																						
1	0.00	3163.00	3163	LHS		3		40														
2	0.00	605.00	605	RHS		3		40														
3	605.00	3163.00	2558	RHS		7					30											
C-07 Around Secretariat - North side (0+000 to 0+497) Around Secretariat - South side (0+550 to 0+924) Vancross- Press Club(0+000 to 0+550)																						
	0.00	497.00		BHS	PH-I	0																
	550.00	924.00		BHS	PH-I	0																
1	0.00	550.00	550	LHS	2027	34																
2	0.00	550.00	550	RHS	2027	29																
C-08 Pattom - Marappalam-Kowdiar (0+055 to 2+350)																						
1	0.00	120.00	120	LHS		5				30												
2	120.00	2320.00	2200	LHS		5																
2	55.00	2320.00	2265	RHS		7																
C-09 Pattom - Medical college-Ulloor (0+000 to 2+835)																						
1	0.00	2835.00	2835	LHS	2030	5				30												
2	0.00	1050.00	1050	RHS	2030	13																
3	1050.00	1450.00	400	RHS	2030	2	40															
4	1450.00	2835.00	1385	RHS	2030	7					30											
C-10 Kowdiar-Ambalamukku-Peroorkada (0+000 to 2+035)																						
1	0.00	2035.00	2035	LHS	2027	6																
2	0.00	2035.00	2035	RHS	2027	5																
BP-01 Enchanckal-Sreevaraham-Attakulangara Road (0+000 to 1+466)																						
1	0.00	400.00	400	LHS	2027	20																
2	400.00	950.00	550	LHS	2027	4		30														
3	950.00	1465.00	515	LHS	2027	16																
4	0.00	1465.00	1465	RHS	2027	6																

S.No.	Chainage		Length	Side	Hand over Year	Balance life of pavement in years Before Overlay	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039
	From	To					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BP-03 NH bypass-KIMS Kumarapuram (0+000 to 3+760)																						
1	0.00	1220.00	1220	LHS		21																
	1220.00	2000.00		LHS	PH-I	0																
2	2000.00	2960.00	960	LHS		14																
3	2960.00	3760.00	800	LHS		14																
4	0.00	1220.00	1220	RHS		13																
	1220.00	2000.00		RHS	PH-I	0																
5	2000.00	2960.00	960	RHS		23																
6	2960.00	3760.00	800	RHS		22																
AL-01 LMS-Studen's center Toad (0+000 to 0+244)																						
1	0	244	244	LHS	2027	17																
2	0	244	244	RHS	2027	18																
AL-02 Vellayambalam-Sasthamangalam (0+060 to 1+326)																						
1	0.00	1326.00	1326	LHS	2027	10																
2	0.00	1326.00	1326	RHS	2027	16																
AL-03 Ulloor-Kochulloor road (0+000 to 0+445)																						
1	0.00	445.00	445	LHS	2030	9																
2	0.00	445.00	445	RHS	2030	8																
AL-04 Perookada-Vazhayila (0+000 to 1+443)																						
1	0.00	320.00	320	LHS	2027	9															11 Years	
2	320.00	900.00	580	LHS	2031	5				30												
3	900.00	1433.00	533	LHS	2031	5				30												
4	0.00	320.00	320	RHS	2027	9															11 Years	
5	320.00	900.00	580	RHS	2031	5				30												11 Years
6	900.00	1433.00	533	RHS	2031	6					30											12 Years
Total Length (m)							**2138**	**5528**	**0**	**4648**	**4476**											

Cost of overlay as designed above is shown in table below. Cost of handover overlay on roads also has been added in periodic maintenance cost in respective years. The rates for various items are taken from current awarded work. There is a provision of price escalation in awarded contract for variation in rate of bitumen. Rate of asphalt items for current year is escalated as per this clause of escalation. An escalation of 3% is taken in bituminous items while as 5% escalation per year is taken in other ancillary works for future years.

Current rates of major items are given in table below.

Table 8-10 : Base Rates of Periodic Maintenance Items excluding GST

Items	Unit	Rates
SDBC Overlay	Cum	13474
BC Overlay	Cum	14821.4
Milling	Cum	72.15
Tack Coat	Sqm	23
Thermoplastic Road Marking	Sqm	507
Kerb	Rmt	429
Kerb Painting	Sqm	150

Cost of Periodic Maintenance on current rate in current year (2023-24) is given as below.

Table 8-11 : Periodic Maintenance Cost for FY 2023-2024 (For balanced 6 Months)

Items	Amount (Rs.)
BC Overlay	8952745
Tack Coat	347323
Thermoplastic Road Marking	721921
Kerb	3096694
Kerb Painting	384840
Total (in Rs.)	13503523
Total (in Cr.)	**1.35**

Cost of overlay in respective year at current price is given in table below. Concessionaire plans to do a SDBC overlay on all stretches at the time of handover to authority. Same has also been considered in future cost. The costs are exclusive of GST in these tables.

Table 8-12 : Cost of Periodic Maintenance at Current Rates Excluding GST

Year	Periodic Maintenance Cost (Cr)
2023-2024 (For 6 Months)	1.35
2024-2025	1.90
2025-2026	0.00
2026-2027	13.06
2027-2028	1.56
2028-2029	0.00
2029-2030	4.60
2030-2031	4.00
2031-2032	0.00

Above cost are exclusive of GST

8.5 Total Cost of Operation and Maintenance

Total cost of operation and maintenance consist of both regular and periodic maintenance. As discussed previously standard cost of routine maintenance of road is moderated in lieu of major repairs in horizon years.

Combined Operation and Maintenance Expense (OMEX) is given in following table both at current rates and with escalation as discussed previously.

Table 8-13 : Total OMEX (Periodic & Routine) at current rates Excluding GST

Year	Routine Maintenance Cost (Cr)	Immediate Major Repair	Periodic Maintenance Cost (Cr)	Insurance Premium	Total Cost
2023-2024 (For 6 Months)	1.80	4.13	1.35		7.28
2024-2025	3.47		1.90		5.38
2025-2026	3.47		0.00		3.47
2026-2027	3.34		13.06		16.39
2027-2028	2.13		1.56		3.69
2028-2029	2.13		0.00		2.13
2029-2030	2.06		4.60		6.66

Year	Routine Maintenance Cost (Cr)	Immediate Major Repair	Periodic Maintenance Cost (Cr)	Insurance Premium	Total Cost
2030-2031	1.49		4.00		5.49
2031-2032	0.30		0.00		0.30
Total Cost					**50.80**

Cost of Total OMEX after application of escalation and GST is shown in table below.

Table 8-14 : Total OMEX (Periodic & Routine) Including GST & Escalation

Year	Routine Maintenance Cost (Cr)	Immediate Major Repair	Periodic Maintenance Cost (Cr)	Insurance Premium	Total Cost
2023-2024 (For 6 Months)	2.12	4.87	1.59	0.14	8.72
2024-2025	4.31		2.32	0.28	6.91
2025-2026	4.52		0.00	0.30	4.82
2026-2027	4.56		17.03	0.31	21.90
2027-2028	3.06		2.10	0.14	5.30
2028-2029	3.21		0.00	0.15	3.37
2029-2030	3.26		6.63	0.16	10.05
2030-2031	2.48		5.96	0.06	8.50
2031-2032	0.52		0.00	0.07	0.59
Total Cost					**70.16**

For better representation and appreciation above cost of project repair, operation and maintenance is illustrated in following figure.

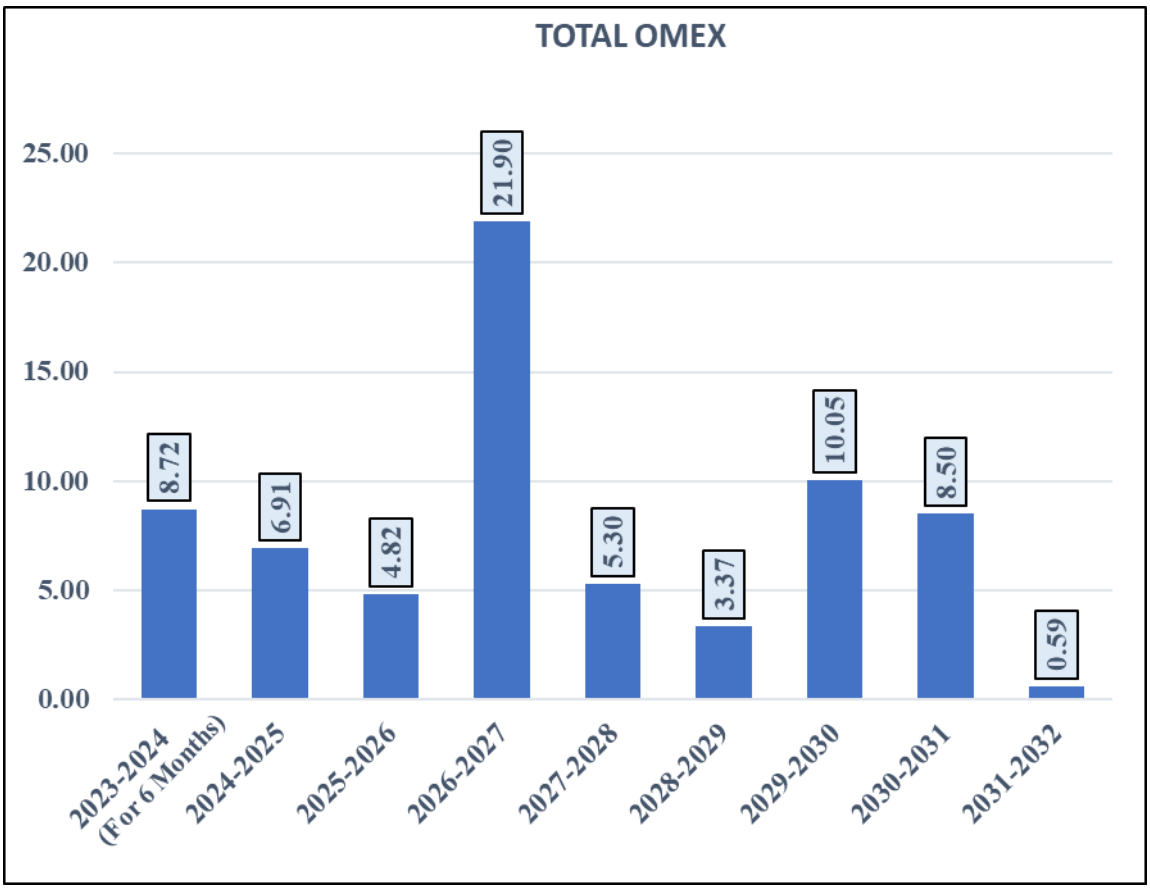


Figure 8-1 : Total OMEX Cost including Escalation and GST

Details of operation and maintenance are given in Annexure-5 (Excel Soft Copy).

CHAPTER 9

CONCLUSION & RECOMMENDATION

9.1 Conclusion & Recommendations

TRDCL was awarded construction and operation maintenance of about 42 km of city roads of Thiruvananthapuram by Kerala Road Fund Bord. TRDCL has completed construction of all roads and all roads are under operation and maintenance. Condition of all the roads is good and Concessionaire has good setup for Operation & maintenance. Assessment of requirement of major repairs and periodic overlays has been worked out and has been presented in report. It is not expected that any additional major repair on project roads would be required under normal circumstances. Concessionaire attends to damages done in road pavement due to works done by Utility departments or others at KRFB Cost which issues work order to Concessionaire for such repairs. Hence such costs are not liability of Concessionaire.

Concessionaire is getting regular payment of Annuity now but previously annuity payment was withheld by authority for non- availability of road stretches. Total of such annuity withheld payment is Rs. 47.75 Cr. TRDCL has requested release of same as all repairs are done now and also has submitted a claim of Rs. 358.67 Cr.

Process of handing over phase-I road is in progress.

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ANNEXURE-01

ROAD INVENTORY

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
Corridor -AL-1																														
1	000+000	000+050	50	Fair	Fair	Fair	Faded	Fair	Fair	Fair	Faded					Good	Good			CH-0+050 to 0+060	44m			CH-0+000 to 0+020	16m		Provided		Bus stop	
2	000+050	000+100	50	Fair	Fair	Fair	Faded	Fair	Fair	Fair	Faded					Good	Good							CH-0+040 to 0+100	53m		Provided			
3	000+100	000+150	50	Fair	Fair	Fair	Faded	Fair	Fair	Fair	Faded					Good	Good							CH0+130 to 0+150	17m		Provided			
4	000+150	000+200	50	Fair	Fair	Fair	Faded	Fair	Fair	Fair	Faded					Good	Good			CH-0+180	26.70m			CH-0+170 to 0+200	22m		Provided			
5	000+200	000+250	50	Fair	Fair	Fair	Faded	Pothole	Pothole	Fair	Faded					20m Poor condition	Good					CH-0+210 to 0+230	20m	Junction	68m		Provided			T-Junction
Corridor - AL-2																														
1	000+050	000+100	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Road edge and median marking					Good	Good			CH-0+020 to 0+060	34m			CH-0+040 to 0+08	40m		Provided			
2	000+100	000+150	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Road edge and median marking					Good	Good										Provided		CH-0+130 Bus stop	
3	000+150	000+200	50	Good	Good	Good	No Median marking	Good	Good	Good	Faded					Good	Good										Provided			
4	000+200	000+250	50	Good	Good	Good	No Median marking	Good	Good	Good	No Road edge and median marking					Good	Good										Provided			
5	000+250	000+300	50	Good	Good	Good	No Median marking	Good	Good	Good	No Road edge and median marking					Good	10m Poor condition										Provided			
6	000+300	000+350	50	Good	Good	Good	No Median marking	Good	Good	Good	No Road edge and median marking					Good	Fair										Provided			CH-0+320 T-Junction & Median Opening
7	000+350	000+400	50	Good	Good	Good	No Median marking	Good	Good	Good	No Median marking					Good	Good										Provided			CH-0+380 Median Opening
8	000+400	000+450	50	Good	Good	Good	No Median marking	Good	Good	Good	No Median marking					Good	Good	Grating Blocked									Provided			
9	000+450	000+500	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Provided			
10	000+500	000+550	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Provided			
11	000+550	000+600	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Light Fair condition		CH-0+560 Bus stop	
12	000+600	000+650	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Light Fair condition			
13	000+650	000+700	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Provided			
14	000+700	000+750	50	Good	Good	Good	No Median marking	Good	Good	Good	No Median marking					Good	Good										Light Fair condition			
15	000+750	000+800	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Median marking					Good	Good										Provided			CH-0+770 Median Opening
16	000+800	000+815	15	Good	Good	Good	No Road edge and median marking	Fair	15m Patch work	15m Patch work	No Road Marking					Good	2m Poor Condition										Provided			

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
17	000+815	000+850	35	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Road edge and median marking					Good	Good										Provided			
18	000+850	000+900	50	Good	Good	Good	No Road edge and median marking	Good	Good	Good	No Road edge and median marking					Good	Good										Provided			
19	000+900	000+950	50	Good	Good	Good	No Median marking	Good	Good	Good	No Median marking					Good	Good										Provided			
20	000+950	001+000	50	Good	Good	Good	No Median marking	Good	Good	Good	No Road edge and median marking					Good	Good							CH-0+990 to 1+020	17m					Sasthamangalam Junction
21	001+000	001+050	50	Good	Good	Good	No Road marking	Good	Good	Good	No Road marking					Good	Good			CH-1+040 1+063	23m			CH-1.030 to 1+040	10m					
22	001+050	001+100	50	Good	Good	Good	No Road marking	Good	Good	Good	No Road marking					Good	Good							CH-1+040 to 1+100	56m		Provided			
23	001+100	001+150	50	Fair		Fair	No Median marking	Good		Good	No Road marking					Good	Good		Grating Blocked	CH-1+070 to 1+105	35m						Provided			
24	001+150	001+200	50	Good		Good	No Median marking	0.5 to 0.5 m Pot hole		Good	No Road edge and median marking					Good	Good										Provided			
25	001+200	001+250	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
26	001+250	001+262	12	Good		Good	Faded	Good		Good	Faded					Poor condition	Good													
Corridor - AL-3																														
1	000+000	000+010	10	Pothole		Fair	Faded	Good		Good	Intact					Fair	Good										Provided			
2	000+010	000+050	40	Good		Good	Faded	Good		Good	Intact					Fair	Good	Grating Blocked		CH-0+010 to 0+050	21m			CH-0+000 to 0+020	15m		Provided			
3	000+050	000+100	50	Good		Good	Faded	Good		Good	Intact					Good	Good			CH-0+060 to 0+080	14.5m			CH-0+050 to 0+090	8m		Provided			CH-0+060 Median Opening
4	000+100	000+150	50	Good		Good	Faded	Good		Good	Intact					Good	Good										Provided			
5	000+150	000+200	50	Good		Patch work	Intact	Good		Good	Intact					Good	Good										Provided			
6	000+200	000+250	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
7	000+250	000+300	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
8	000+300	000+350	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			CH-0+300 Median opening
9	000+350	000+400	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			CH-0+350 median opening & CH-0+380 Median opening
10	000+400	000+450	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
11	000+450	000+500	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
Corridor - AL-4																														
1	000+000	000+050	50	Good		Good	No Road Marking	Good		Good	No Road Marking					Fair	Fair							CH-0+000 to 0+035 Intact	35m		Provided			
2	000+050	000+100	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair										Provided			CH-Junction

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
3	000+100	000+150	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			CH-0+110 T-Junction(Median opening)
4	000+150	000+200	50	Good		Good	Faded	Good		Good	Faded					Good (0+200 end)	Good					CH-0+150 to 0+200 Damaged	50m Damaged				Provided			
5	000+200	000+250	50	Good		Good	Faded	Good		Good	Faded					Poor	Good					Intact					Provided			CH-0+220 Median opening
6	000+250	000+300	50	Good		Good	Intact	Good		Good	Intact					Poor	Good										Provided			
7	000+300	000+350	50	Pothole & Minor Cracks		Pothole & Minor Cracks	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked			CH-0+300 to 0+350 Damaged	50m Damaged				Provided			CH-0+320 Median opening
8	000+350	000+400	50	Pothole & Minor Cracks		Pothole & Minor Cracks	Intact	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked			CH-0+350 to 0+400 Damaged	50m Damaged				Provided			
9	000+400	000+450	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked			CH-0+400 to 0+430 Damaged	30m Damaged				Provided			
10	000+450	000+500	50	Good		Good	Intact	Patch work		Patch work	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			CH-0+480 T- Junction (Median Opening)
11	000+450	000+500	50	Good		Good	Intact	Good		Good	Intact					Fair	Good	Grating Blocked	Grating Blocked			CH-0+475 start Intact					Provided			
12	000+500	000+535	35	Good		Good	Intact	Good		Good	Intact					CH-0+515 end	Good					Intact					Provided			
13	000+535	000+550	15	Poor		Fair	Faded	Good		Good	Intact					CH-0+515 to 0+550 No Footpath	Good					Intact					Provided			
14	000+550	000+600	50	Good		Good	Intact	Good		Good	Faded					CH-0+550 Start Good	Good					CH-0+575 end Intact					Provided			
15	000+600	000+650	50	Good		Good	Intact	Good		Good	Intact					Good	Good		Grating Blocked								Provided			CH-0+620 T-Junction
16	000+650	000+700	50	Good		Good	Intact	Good		Good	Intact					Good	Good		Grating Blocked			CH-0+650 start Intact	10m Damaged				Provided			
17	000+700	000+750	50	Good		Good	Intact	Good		Good	Intact					Good	Good		Grating Blocked			CH-0+720 end and CH-0+735 start					Provided			CH-0+750 T-Junction
18	000+750	000+800	50	Good		Good	Intact	Good		Good	Intact					Good	Good					Intact					Provided			
19	000+800	000+850	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked			Intact					Provided			
20	000+850	000+900	50	Good		Good	Intact	Good		Minor Cracks	Intact					Good	Good		Grating Blocked								Provided			
21	000+900	000+950	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked			Intact	15m Damaged				Provided			
22	000+950	000+970	20	Good		Good	Intact	Good		Good	Intact					CH-0+970 end	Good					CH-0+970 end Intact					Provided			
23	000+970	001+000	30	Pothole		Fair	Intact	Good		Good	Intact					No Footpath	Good		Grating Blocked								Provided			CH-0+970 to 1+020 Median opening
24	001+000	001+050	50	Good		Good	Intact	Fair		cracks	Intact					CH-1+000 Footpath start	Good	Grating Blocked	Grating Blocked								Provided			
25	001+050	001+100	50	Good		Good	Intact	Good		Good	Intact					CH-1+070 Footpath end	CH-1+060 poor condition										Provided			CH-1+100 Median Opening
26	001+100	001+150	50	Fair		Fair	Faded	Fair		Fair	Faded					No Footpath	Poor										Provided			
27	001+150	001+200	50	Good		Good	Intact	Good		Good	Intact					No Footpath	CH-1+160 poor condition		Grating Blocked								Provided			CH-1+160 Median opening
28	001+200	001+250	50	Good		Good	Intact	Good		Pech work	Intact					No Footpath	Good										Provided			CH-1+250 Median opening
29	001+250	001+300	50	Good		Good	Intact	Good		Good	Intact					No Footpath	Good										Provided			CH-1+300 Median opening
30	001+300	001+350	50	Good		Good	Intact	Good		Good	Intact					No Footpath	Good										Provided			

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
31	001+350	001+400	50	Good		Good	Intact	Good		Good	Intact					No Footpath	Good							CH-1+370 start	53m		Provided			
32	001+400	001+430	30	Good		Good	Intact	Good		Good	Intact					No Footpath	Good							CH-1+430 end			Provided			Junction
Corridor - BP-1																														
1	000+000	000+050	50	Cracks			Faded	cracks			Faded					Good	Good	Grating Blocked	Grating Blocked							Provided		Provided		
2	000+050	000+100	50	Fair			Faded	Minor cracks			Faded					Good	Good									Provided		No		
3	000+100	000+150	50	Fair			Faded	Patch work			Faded					Good	Good									Provided		No		
4	000+150	000+200	50	Fair			Faded	Patch work			Faded					Good	Good	Grating Blocked	Grating Blocked							Provided		No		
5	000+200	000+250	50	Fair			Faded	Fair			Faded					Good	Good									Provided		No		
6	000+250	000+300	50	Cracks			Faded	cracks			Faded					Good	10m Poor									Provided		No		
7	000+300	000+350	50	Fair			Faded	Fair			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
8	000+350	000+400	50	Fair			Faded	Fair			Faded					Good	20m poor	Grating Blocked	Grating Blocked							No		Provided		
9	000+400	000+450	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
10	000+450	000+500	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
11	000+450	000+500	50	Fair			Faded	Fair			Faded					CH-0+480 Footpath end on both side, CH-0+570start on BHS										No		Provided		
12	000+500	000+550	50	Fair			Faded	Fair			Faded									CH-0+520 to 0+540	12m			CH-0+520 to 0+530	4m	No		Provided		CH-0+540 Box culvert
13	000+550	000+600	50	Minor cracks			Faded	Minor cracks			Faded															No		Provided		CH-0+600 Junction
14	000+600	000+620	20	Minor cracks			Faded	Minor cracks			Faded					Good	Good									No		Provided		
15	000+620	000+650	30	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
16	000+650	000+700	50	Fair			Faded	Fair			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
17	000+700	000+750	50	Minor cracks			Faded	Minor cracks			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
18	000+750	000+800	50	Fair			Faded	Fair			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
19	000+800	000+850	50	Minor cracks			Faded	Minor cracks			Faded					20m Poor	Good	Grating Blocked	Grating Blocked							No		Provided		CH-0+850 Junction
20	000+850	000+880	30	Patchwork			Faded	Patch work			Faded					Fai	Fair									No		Provided		
21	000+880	000+900	20	Fair			Faded	Fair			Faded					10m Poor	Fair									No		Provided		CH-0+900 Junction
22	000+900	000+950	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
23	000+950	001+000	50	Good			Faded	Good			Faded					Fair	Fair									No		Provided		
24	001+000	001+050	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
25	001+050	001+100	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
26	001+100	001+150	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
27	001+150	001+200	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
28	001+200	001+250	50	Good			Intact	Good			Intact					Fair	Fair									No		Provided		
29	001+250	001+300	50	Good			Intact	Good			Intact					Fair	Fair									No		Provided		
30	001+300	001+335	35	Good			Faded	Good			Faded					Fair	Fair									No		Provided		
31	001+335	001+350	15	Pothole			Faded	Pothole			Faded					Fair	Fair									No		Provided		
32	001+350	001+400	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
33	001+400	001+450	50	Good			Faded	Good			Faded					Poor	Fair			CH-1+410 to 1+430	30m					No		Provided		
Corridor - BP-3																														
1	000+000	000+050	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor	Grating Blocked	Grating Blocked							No		Provided		
2	000+050	000+100	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		
3	000+100	000+150	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		
4	000+150	000+200	50	Good			Faded	Good			Faded					Poor	Poor									No		Provided		
5	000+200	000+250	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided	CH-0+270 Bus stop of LHS	
6	000+250	000+300	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
7	000+300	000+350	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
8	000+350	000+400	50	Good			Faded	Good			Faded					Poor	Poor									No		Provided		
9	000+400	000+450	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		
10	000+450	000+500	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
11	000+450	000+500	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
12	000+500	000+550	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
13	000+550	000+600	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
14	000+600	000+650	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		CH-0+620 T-Junction
15	000+650	000+700	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
16	000+700	000+750	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
17	000+750	000+800	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
18	000+800	000+850	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									Provided		No		
19	000+850	000+900	50	MJB																										

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
20	000+900	000+950	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		CH-0+930 Junction
21	000+950	001+000	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided	CH-1+000 Bus stop LHS	
22	001+000	001+050	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		
23	001+050	001+100	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		
24	001+100	001+150	50	Pothole			Faded	Pothole			Faded					Poor	Poor									Provided		No		
25	001+150	001+200	50	Work in progress of KSEB			Faded	Good			Faded					Poor	Poor									No		Provided		Kendriya Vidyalaya
26	002+000	002+050	50	Good			Faded	Good			Faded					No Footpath	No Footpath									No		No		
27	002+050	002+100	50	Work in progress of KSEB			Faded	Good			Faded					No Footpath	No Footpath									No		No		
28	002+100	002+150	50	Work in progress of KSEB			Faded	Good			Faded					No Footpath	No Footpath									No		No		
29	002+150	002+200	50	Poor			Faded	Fair			Faded					Drain curve broken	Drain curve broken									No		No		
30	002+200	002+250	50	Work in progress of KSEB			Faded	Good			Faded					Footpath Poor	Footpath Poor									No		No		
31	002+250	002+300	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									No		No		
32	002+300	002+350	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									Provided		Provided		
33	002+350	002+400	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									Provided		Provided		
34	002+400	002+450	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									No		Provided		
35	002+450	002+500	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									No		Provided		
36	002+500	002+550	50	Work in progress of KSEB			Faded	Good			Faded					Fair	Fair									No		Provided		
37	002+550	002+600	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									No		Provided		
38	002+600	002+650	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									No		Provided		
39	002+650	002+700	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									Provided		No		
40	002+700	002+750	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									Provided		No		
41	002+750	002+800	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									Provided		No		
42	002+800	002+850	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									Provided		No		
43	002+850	002+900	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									No		Provided		
44	002+900	002+950	50	Work in progress of KSEB			Faded	Good			Faded					Good	Good									No		Provided		
45	002+950	003+000	50	Kumarapuram Junction																										
46	003+000	003+050	50	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
47	003+050	003+100	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									Provided		Provided		

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
48	003+100	003+150	50	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
49	003+150	003+200	50	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
50	003+200	003+250	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									No		Provided		
51	003+250	003+300	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
52	003+300	003+350	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									No		Provided		
53	003+350	003+400	50	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
54	003+400	003+450	50	Good			Faded	Good			Faded					Good	20m poor									Provided		Provided		
55	003+450	003+460	10	Pothole			Faded	Good			Faded					Good	Good									Provided		Provided		
56	003+460	003+500	40	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
57	003+500	003+550	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									Provided		Provided		
58	003+550	003+600	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									Provided		Provided		
59	003+600	003+650	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good									Provided		Provided		
60	003+650	003+700	50	Good			Faded	Work in progress of KSEB			Faded					Good	Good													
61	003+700	003+740	40	Murinjapaoan Junction																										
Corridor - C-02																														
1	000+780	000+800	20	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-0+780 to 0+790	7m			CH-0+780 to 0+800	20m		Provided			
2	000+800	000+850	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-0+790 to 0+810	14.5m			CH-0+820 to 0+830	10m		Provided			
3	000+850	000+900	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-0+850 to 0+870	14m			CH-0+820 to 0+870	42m		Provided			
4	000+900	000+950	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
5	000+950	000+960	10	Good	Good	Good	Intact	Pothole	Good	Good	Intact					Good	Good										Provided			
6	000+960	001+000	40	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-0+970 to 0+990	15m									T-Junction
7	001+000	001+050	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
8	001+050	001+100	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
9	001+100	001+150	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good	Grating Blocked		CH-1+120 to 1+200	79m						Provided		CH-1+140 BUS stop RHS	T-Junction
10	001+150	001+200	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good													T-Junction
11	001+200	001+250	50	Fair	Good	Good	Faded	Good	Good	Good	Faded					20m Poor	Good							CH1+200 to 1+250	50m		Provided			
12	001+250	001+300	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-1+240 to 1+300	36m			CH-1+250 to 1+300	29m		Provided			
13	001+300	001+350	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH_1+300 to 1+330	23m			CH-1+300 to 1+340	27m		Provided			

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
14	001+350	001+400	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good							CH-1+350 to 1+360	6m		Provided		CH-1+370 Bus stop RHS	
15	001+400	001+450	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-1+400 to 1+450	30m						Provided			
16	001+450	001+500	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good													CH-1+470 T-Junction
17	001+500	001+550	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
18	001+550	001+600	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good	Grating Blocked		CH-1+550 to 1+600	28m			CH-1+550 to 1+600	12m					CH-1+600 Junction
19	001+600	001+650	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-1+600 to 1+650	22.5m			CH-1+600 to 1+650	49m		Provided			
20	001+650	001+700	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-1+650 to 1+700	13.7m			CH-1+650 to 1+700	14.6m		Provided			
21	001+700	001+750	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
22	001+750	001+800	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
23	001+800	001+850	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
24	001+850	001+900	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
25	001+900	001+950	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
26	001+950	002+000	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
27	002+000	002+050	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-2+000 to 2+050	20.59m			CH-2+000 to 2+050	16m					CH-2+050 Junction
28	002+050	002+100	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-2+050 to 2+100	14.23m			CH-2+050 to 2+100	13.4m		Provided			
29	002+100	002+150	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
30	002+150	002+200	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
31	002+200	002+220	20	Good	Good	Pothole	Intact	Good	Good	Good	Intact					Good	Good										Provided		CH-2+200 bus stop LHS	CH-2+230 Median opening
32	002+220	002+250	30	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
33	002+250	002+300	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good													
34	002+300	002+350	50	Pothole	Pothole	Pothole	Faded	Pothole	Pothole	Pothole	Faded					No Foothpath	No Foothpath													CH-2+340 Junction
35	002+350	002+400	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good	Utility Box Poor	Utility Box Poor	CH-2+350 to 2+400	27.57m			CH-3+370 to 3+385	Damaged and good		Provided			
36	002+400	002+450	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good					CH-2+400 to 2+450	98m				Provided			
37	002+450	002+500	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good					CH-2+450 to 2+500					Provided			
38	002+500	002+550	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
39	002+550	002+600	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
40	002+600	002+650	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
41	002+650	002+700	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
42	002+700	002+750	50	Good	Good	Good	Intact	Pothole	Good	Good	Intact					Good	Good			CH-2+700 to 2+750	22.4m	CH-2+720 to 2+730	1.55m	CH-2+730 to 2+750	19m		Provided			
43	002+750	002+800	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good					CH-2+750 to 2+800	25m Damaged	CH-2+750 to 2+800	18.5m		Provided			
44	002+800	002+850	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-2+800 to 2+840	33.26m			CH-2+800 to 2+830	15.3m		Provided		CH-2+800 Bus stop RHS	
45	002+850	002+900	50	Rutting	Rutting	Fair	Faded	Fair	Rutting	poor	Faded					Good	Good										Provided			
46	002+900	002+950	50	Rutting	Rutting	Fair	Faded	Fair	Rutting	poor	Faded					Good	Good													Junction
47	002+950	003+000	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-2+940 to 2+3+010	70m						Provided			
48	003+000	003+050	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-3+000 to 3+050	35m			CH-3+000 to 3+050	34m		Provided			
49	003+050	003+100	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-3+050 to 3+100	28.4m			CH-3+.050 to 3+110	58m		Provided			
50	003+100	003+150	50	Rutting	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
51	003+150	003+200	50	Good	Good	Rutting	Faded	Good	Good	Good	Faded					Good	Good					CH-3+150 to 3+165	15m Damaged				Provided			CH-3+180 Median Opening
52	003+200	003+250	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
53	003+250	003+300	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
54	003+300	003+350	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good							CH-3+300 to 3+050	32m					Junction
55	003+350	003+400	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good										Provided			
Corridor - C-03																														
1	000+460	000+500	40	Pothole			Faded	Pothole			Faded					Poor	Poor									No		No		
2	000+500	000+550	50	Pothole			Faded	Pothole			Faded					Fair	Fair									No		No		
3	000+550	000+600	50	Fair			Faded	Fair			Faded					Fair	Fair									Provided		No		
4	000+600	000+650	50	Work in progress of KSEB			Faded	Fair			Faded					10m Poor	Fair	Grating Blocked	Grating Blocked							Provided		No		
5	000+650	000+700	50	Work in progress of KSEB			Faded	Pothole			Faded					15m Poor	Fair	Grating Blocked	Grating Blocked							Provided		No		
6	000+700	000+750	50	Work in progress of KSEB			Faded	Pothole			Faded					Poor	Fair	Grating Blocked	Grating Blocked							Provided		No		
7	000+750	000+800	50	Work in progress of KSEB			Faded	Fair			Faded					Fair	Fair	Grating Blocked	Grating Blocked							Provided		No		
8	000+800	000+850	50	Work in progress of KSEB			Faded	Fair			Faded					20m Poor	Fair	Grating Blocked								Provided		No		
9	000+850	000+900	50	Work in progress of KSEB			Faded	Fair			Faded					Poor	20m Poor	Grating Blocked								Provided		No		
10	000+900	000+950	50	Work in progress of KSEB			Faded	Fair			Faded					Poor	Fair	Grating Blocked								Provided		No		
11	000+950	001+000	50	Work in progress of KSEB			Faded	Poor			Faded					Good	Good							CH-0+990 to 1+000	10m	Provided		No		
12	001+000	001+050	50	Fair			Faded	Fair			Faded	Good	Faded	Good	Faded	Good	Good									No		No		CH-1+050 Fly over bridge start
13	001+050	001+100	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good									Provided		Provided		

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
14	001+100	001+150	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good	Grating Blocked								Provided		Provided		
15	001+150	001+200	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good									Provided		Provided		Junction
16	001+200	001+220	20	Pothole			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good									Provided		Provided		
17	001+220	001+250	30	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good			CH-1+230 to 1+310	70.5m			CH-1+230 to 1+250	17.5m	Provided		Provided		
18	001+250	001+300	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good							CH-1+250 to 1+350	41.30m	Provided		Provided		15m Curve ston Damaged
19	001+300	001+350	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good			CH-1+300 to 1+330	13.5m					Provided		Provided		
20	001+350	001+400	50	Good			Faded	Good			Faded	Good	Faded	Good	Faded	Good	Good									Provided		Provided		
21	001+400	001+450	50	Good		Good	Faded	Good		Good	Faded	Good	Faded	Good	Faded	Good	Good							CH-1+400 to 1+450	48.6m	Provided		Provided		CH-1+420 Fly over bridge end
22	001+450	001+500	50	Good		Good	Faded	Good		Good	Faded					CH-1+480 to 1+500 no foot path	Good							CH-1+450 to 1+500	29.9m		Provided			
23	001+500	001+550	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-1+500 to 1+550	42m			CH-1+500 to 1+550	50m		Provided			Junction
24	001+550	001+600	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-1+550 to 1+600	36.2m			CH-1+560 to 1+620	51m		Provided			
25	001+600	001+650	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-1+600 to 1+620	11.2m						Provided			
26	001+650	001+660	10	Fair		Patch work	Faded	Patch work		Patch work	Faded					Good	Good										Provided			
27	001+660	001+700	40	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
28	001+700	001+750	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked									Provided			
29	001+750	001+800	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
30	001+800	001+850	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
31	001+850	001+900	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
32	001+900	001+950	50	Good		Good	Faded	Good		Good	Faded					30m Poor	Good										Provided			
33	001+950	002+000	50	Pothole		Good	Faded	Good		Good	Faded					Good	Good										Provided			
34	002+000	002+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+000 to 2+060	60m						Provided		CH-2+000 Bus stop LHS	
35	002+050	002+100	50	Pothole		Good	Faded	Good		Good	Faded					Good	Good		Grating Blocked					CH-2+050 to 2+110	54m		Provided			CH-2+100 Junction
36	002+100	002+150	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+100 to 2+150	38m						Provided			
37	002+150	002+200	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+150 to 2+200	13m			CH-2+150 to 2+200	26m		Provided			
38	002+200	002+250	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+200 to2+250	50m			CH-2+200 to 2+260	53m		Provided			
39	002+250	002+300	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked		CH-2+250 to2+300	37m			CH-2+260 to 2+300	18m		Provided			
40	002+300	002+350	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
41	002+350	002+400	50	Pothole		Pothole	Faded	Good		Good	Faded					Good	Good	Grating Blocked									Provided			

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
42	002+400	002+450	50	Good		Pothole	Faded	Pothole		Good	Faded					Good	Good										Provided			
43	002+450	002+500	50	Pothole		Good	Faded	Good		Good	Faded					Good	Good										Provided			
44	002+500	002+550	50	Pothole		Good	Faded	Patch work		Patch work	Faded					Good	Good							CH-2+500 to 2+550	24.5m		Provided			
45	002+550	002+600	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+550 to 2+600	40m			CH-2+550 to 2+600	10m		Provided			CH-2+600 Junction
46	002+600	002+650	50	Good		Good	Faded	Good		Good	Faded					Good	Good							CH-2+600 to 2+630	25.5m		Provided			
47	002+650	002+700	50	Good		Good	Faded	Good		Good	Faded					Good	Good							CH-2+640 to 2+700	53.4m		Provided			
48	002+700	002+750	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+700 to 2+750	9m			CH-2+700 to 2+750	12m					
49	002+750	002+800	50	Good	Good	Good	Faded	Good	Good	Good	Faded					Good	Good			CH-2+750 to 2+800	49m									CH-2+750 Junction
50	002+800	002+850	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good					CH-2+810 to 2+880	63m Brocken	CH-2+800 to 2+850	17m		Provided			
51	002+850	002+900	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-2+850 to 2+900	32m	CH-2+880 to 2+940	33m Brocken	CH-2+850 to 2+900	49.1m		Provided			
52	002+900	002+950	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-2+900 to 2+950	14m						Provided			
53	002+950	003+000	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good			CH-2+950 to 3+000	33m						Provided			
54	003+000	003+050	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
55	003+050	003+100	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
56	003+100	003+150	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
57	003+150	003+200	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good							CH-3+150 to 3+250	76m		Provided			
58	003+200	003+250	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good										Provided			
59	003+250	003+300	50	Good	Good	Good	Intact	Good	Good	Good	Intact					Good	Good							CH-3+250 to 3+300	21m		Provided			
60	003+300	003+350	50	Good	Good	Good	Intact	Good		Good	Intact					Good	Good							CH-3+300 to 3+350	27.9m		Provided			
Corridor - C-3A																														
1	000+180	000+200	20	Good	Fly Over start		Faded	Good	Fly Over start		Faded	SR Fair	Faded	SR Fair	Faded	Good	Good									Provided		Provided		
2	000+200	000+250	50	Good	Fly Over		Faded	Good	Fly Over		Faded	SR Fair	Faded	SR Fair	Faded	Good	Good									Provided		Provided		
3	000+250	000+300	50	Good	Fly Over end		Faded	Good	Fly Over end		Faded	SR Fair	Faded	SR Fair	Faded	Good	Good									Provided		Provided		
4	000+300	000+350	50	Good	Good		Faded	Good	Good		Faded	SR Fair	Faded	SR Fair	Faded	Good	Good													
5	000+350	000+400	50	Good	Good	Good	No Lane Marking	Good	Good	Good	No Lane Marking					Good	Good													
6	000+400	000+450	50	Good	VUP Start	Good	Faded	Good	VUP Start	Good	Faded	SR Good	No Lane Marking	SR Good	No Lane Marking	Fair	Fair													
7	000+450	000+500	50	Good	VUP	Good	Faded	Good	VUP	Good	Faded	SR Good	No Lane Marking	SR Good	No Lane Marking	Fair	Fair			CH-0+450 to 0+500	6.5m			CH-0+450 to 0+500	26m					
8	000+500	000+550	50	Good	VUP	Good	Faded	Good	VUP	Good	Faded									CH-0+500 to 0+550	20m									

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
9	000+550	000+600	50	Good	VUP	Good	Faded	Good	VUP	Good	Faded	SR Fair	No Lane Marking	SR Good	No Lane Marking	Fair	Fair			CH-0+550 to 0+600	27m			CH-0+550 to 0+600	16m					
10	000+600	000+650	50	Good	VUP	Good	Faded	Good	VUP	Good	Faded	SR Fair	No Lane Marking	SR Good	No Lane Marking	Fair	Fair													
11	000+650	000+700	50	Good	VUP	Good	Faded	Good	VUP	Good	Faded	SR Fair	No Lane Marking	SR Good	No Lane Marking	Fair	Fair													
12	000+700	000+750	50	Good	VUP end	Good	Faded	Good	VUP end	Good	Faded	SR Fair	No Lane Marking	SR Good	No Lane Marking	Fair	Fair													
13	000+800	000+850	50	Good	Good	Good	Faded	Good	Good	Good	Faded																			
Corridor - C-04																														
1	000+760	000+800	40	Good		Good	Faded	Good		Good	Faded					Good	Good		10m Drain courved open	CH-0+770 to 1+050	272m						Provided			
2	000+800	000+850	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
3	000+850	000+900	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
4	000+900	000+950	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			CH-0+900 Median Opening
5	000+950	001+000	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
6	001+000	001+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
7	001+050	001+100	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			CH-1+100 Median Opening
8	001+100	001+150	50	Good		Good	Faded	Good		Good	Faded					CH-1+100 Footpath & Kerb stone end	CH-1+030 Footpath & Kerb Stone end										Provided			
9	001+150	001+200	50	Good		Good	Faded	Good		Good	Faded					No Foot path	No Foot path										Provided			CH-1+250 Car Parking RHS
10	001+200	001+250	50	Good		Good	Faded	Good		Good	Faded					No Foot path	No Foot path										Provided			
11	001+250	001+300	50	Good		Good	Faded	Good		Good	Faded					Kerb stone start but poor	Kerb stone start but poor										Provided			
12	001+300	001+350	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor										Provided			
13	001+350	001+400	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor			CH-1+350 to 1+400	34m			CH-1+350 to 1+380	18m		Provided			
14	001+400	001+450	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor										Provided			CH-1+400 Junction
15	001+450	001+500	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor							CH-1+430 to 1+500	70m		Provided			
16	001+500	001+550	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor										Provided			
17	001+550	001+600	50	Good		Good	Faded	Good		Good	Faded					Kerb stone poor	Kerb stone poor										Provided			Median Opening
18	005+330	005+340	10	Good		Good	Faded	Poor		Good	Faded					Good	Good			CH-5+300 to 5+350	44m			CH-5+280 to 5+330	44.2m		Provided			

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
19	005+340	005+350	10	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
20	005+350	005+360	10	Pechwork		Good	Intact	Good		Good	Intact					Poor	Good										Provided			
21	005+360	005+400	40	Good		Good	Intact	Poor		Good	Intact					Poor	Good							CH-5+300 to 5+400	74m		Provided			CH-5+380 Bus stop LHS
22	005+400	005+450	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
23	005+450	005+500	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
24	005+500	005+550	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			T2 Airport
25	005+550	005+600	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
26	005+600	005+650	50	Good		Good	Intact	Good		Good	Intact					Good	Good							CH-5+600 to 5+650	30m		Provided			MJB Ramp start
27	005+650	005+700	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
28	001+700	001+750	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
29	005+750	005+800	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			MJB Ramp end
30	005+800	005+850	50	Good		Good	Faded	Good		Good	Faded					Good	No Foot path		Drain Poor								Provided			Median opening
31	005+850	005+900	50	Good		Good	Faded	Poor		Good	Faded					Good	No Foot path		Drain Poor								Provided			
32	005+900	005+950	50	Good		Good	Faded	Fair		Fair	Faded					Good	No Foot path		Drain Poor								Provided			
33	005+950	006+000	50	Good		Good	Faded	Fair		Fair	Faded					Good	No Foot path		Drain Poor								Provided			Junction
34	006+600	006+650	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided		CH-6+600 Bus stop LHS	
35	006+650	006+700	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
36	006+700	006+750	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Junction
37	006+750	006+800	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			CH-6+750 ROB Start
38	006+800	006+850	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
39	006+850	006+900	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
40	006+900	006+950	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
41	006+950	007+000	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
42	007+000	007+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
43	007+780	007+800	20	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			CH-7+760 Junction
44	007+800	007+850	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
45	007+850	007+900	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
46	007+900	007+950	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
47	007+950	008+000	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
48	008+000	008+050	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
49	008+050	008+100	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			CH-8+030 Median Opening
50	008+100	008+150	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
Corridor - C-05																														
1	001+100	001+150	50	Good		Good	Faded	Good		Good	Faded					Poor	Good										Provided			
2	001+150	001+200	50	Good		Good	Faded	Good		Good	Faded					Poor	Good										Provided			
3	001+200	001+250	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
4	001+250	001+300	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
5	001+300	001+350	50	Poor		Good	Faded	Good		Good	Faded					No Footpath	Good										Provided			
6	001+350	001+400	50	Poor		Good	Faded	Good		Good	Faded					No Footpath	Good										Provided			4-Lane end
7	001+400	001+450	50	Poor			Faded	Fair			Faded					Good	Good									No		No		2-Lane start
8	001+450	001+500	50	Good			Faded	Good			Faded					Good	Good									No		No		
9	001+500	001+550	50	Good			Faded	Good			Faded					10m Poor	10m Poor									Provided		No		
10	001+550	001+600	50	Good			Faded	Good			Faded					30m Poor	25m Poor									Provided		No		
11	001+600	001+650	50	Good			Faded	Good			Faded					Fair	Fair									Provided		No		
12	001+650	001+700	50	Good			Faded	Good			Faded					Fair	Fair									Provided		No		
13	001+700	001+750	50	Good			Faded	Good			Faded					20m Poor	30m Poor									Provided		No		
14	001+750	001+800	50	Good			Faded	Good			Faded					Fair	Fair									Provided		No		
15	001+800	001+850	50	Good			Faded	Good			Faded					Fair	Fair									Provided		No		
16	001+850	001+900	50	Good			Faded	Good			Faded					15m Poor	Fair									Provided		No		
17	001+900	001+950	50	Good			Faded	Good			Faded					Fair	Fair			CH-1+930 to 1+955	22m			CH-1+940 to 1+950	10m	Provided		No		CH-1+961 Junction
18	**Uppilamoodu - Kaithamukku - Sreekandeswaram**																													
19	001+300	001+350	50	Good			Intact	Good			Intact					Good	Good									Provided		Provided		
20	001+350	001+400	50	Good			Faded	Good			Faded					Good	Good									Provided		Provided		
21	001+400	001+450	50	Good			Faded	Good			Faded					No Footpath	Good									Provided		Provided		
22	001+450	001+500	50	Good			Faded	Good			Faded					Poor	Good			CH-1+450 to 1+490	12m			CH-1+450 to 1+490	14m	Provided		Provided		Junction
23	001+500	001+550	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
24	001+550	001+600	50	Pothole			Intact	Good			Faded					Good	15m Poor									No		Provided		

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
25	001+600	001+650	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
26	001+650	001+700	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
27	001+700	001+750	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
28	001+750	001+800	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
29	001+800	001+850	50	Pothole			Faded	Pothole			Faded					Good	Good									No		Provided		Junction
Corridor - C-06																														
1	000+000	000+050	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
2	000+050	000+100	50	Pothole			Faded	Good			Faded					Good	Good	Grating Blocked								No		Provided		
3	000+100	000+150	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
4	000+150	000+200	50	Good			Faded	Good			Faded					Good	Good	Grating Blocked	Grating Blocked	CH-0+150 to 0+200	23m					No		Provided		
5	000+200	000+230	30	Minor Cracks			Faded	Minor Cracks			Faded					30m poor	Fair									No		Provided		
6	000+230	000+250	20	Fair			Faded	Fair			Faded					Fair	Fair									No		Provided		
7	000+250	000+300	50	Fair			Faded	Fair			Faded					Fair	Fair			CH-0+250 to 0+300	50m					No		Provided		
8	000+300	000+350	50	Fair			Intact	Fair			Intact					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
9	000+350	000+390	40	Fair			Faded	Fair			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
10	000+390	000+400	10	Pothole			Faded	Fair			Faded					Good	Good									No		Provided		
11	000+400	000+450	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
12	000+450	000+500	50	Good			Faded	Good			Faded					30m No Footpath	Good									No		Provided		
13	000+500	000+550	50	Good			Faded	Good			Faded					No Footpath	Good									No		Provided	CH-0+500 Bus stop LHS	
14	000+550	000+600	50	Pothole			Faded	Good			Faded					No Footpath	Good									No		Provided		
15	000+600	000+650	50	Good			Faded	Good			Faded					No Footpath	Good									No		Provided		
	000+650	000+700	50	Good			Faded	Good			Faded					No Footpath	Good									No		Provided		
16	000+700	000+750	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
17	000+750	000+800	50	Good			Intact	Good			Intact					Good	Poor									No		Provided		
18	000+800	000+850	50	Good			Intact	Good			Intact					Good	Poor									No		Provided		
19	000+850	000+900	50	Good			Intact	Good			Intact					Good	Poor									No		Provided		
20	000+900	000+950	50	Good			Faded	Good			Faded					Good	Poor									No		Provided		
	000+950	001+000	50	Good			Faded	Good			Faded					Good	Poor									No		Provided		

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
21	001+000	001+020	20	Pechwork			Faded	Pechwork			Faded					Good	Poor									No		Provided		
22	001+020	001+050	30	Fari			Faded	Fair			Faded					Good	Poor									No		Provided		
23	001+100	001+150	50	Good			Faded	Good			Faded					Poor	10m Poor									No		Provided		Junction
24	001+150	001+200	50	Good			Faded	Good			Faded					Fair	Fair			CH-1+120 to 1+250	53m			CH-1+120 to 1+250	60m				Bus stop LHS	
25	001+200	001+250	50	Good			Faded	Good			Faded					Fair	Fair													ROB
26	001+250	001+300	50	Good			Faded	Good			Faded					Fair	Fair							CH-1+250 to 1+300	35m					
27	001+300	001+350	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
28	001+350	001+400	50	Good			Faded	Good			Faded					Poor	Fair									No		Provided		
29	001+400	001+450	50	Pechwork			Faded	Pechwork			Faded					Poor	Fair									No		Provided		
30	001+450	001+500	50	Good			Intact	Good			Intact					Poor	Fair									No		Provided		
31	001+500	001+550	50	Good			Intact	Good			Intact					15m Poor	Fair									No		Provided		
32	001+550	001+600	50	Good			Intact	Good			Intact					10m Poor	Fair									No		Provided		
33	001+600	001+650	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
34	001+650	001+700	50	Good			Faded	Good			Faded					10m Poor	Good									No		Provided		Junction
35	001+700	001+750	50	Good			Faded	Good			Faded					30 Poor	Good			CH-1+700 to 1+800	2m Brocken			CH-1+700 to 1+800	71m(10m Brocken)	No		Provided		
36	001+750	001+800	50	Good			Faded	Good			Faded					20mPoor	Good									No		Provided		
37	001+800	001+850	50	Good		Good	Faded	Good		Good	Faded					Fair	Fai									Provided		No		
38	001+850	001+900	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									Provided		No		
39	001+900	001+950	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									Provided		No		
40	001+950	002+000	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									Provided		No		
41	002+000	002+050	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair													
42	002+050	002+100	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		CH-2+100 Flyover bridge start
43	002+100	002+150	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		
44	002+150	002+200	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	10m Poor	Fair									Provided Fly over LHS		Provided Fly over RHS		
45	002+200	002+250	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		
46	002+250	002+300	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		
47	002+300	002+350	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		
48	002+350	002+400	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
49	002+400	002+450	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		
50	002+450	002+500	50	Good			Faded	Good			Faded	SR Good	Faded	SR Good	Faded	Fair	Fair									Provided Fly over LHS		Provided Fly over RHS		CH-2+500 Fly over bridge end
51	002+500	002+550	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									No		Provided		
52	002+550	002+600	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									Provided		Provided		
53	002+600	002+650	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair			CH-2+600 to 2+700	71m					Provided		Provided		
54	002+650	002+700	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair									Provided		Provided		CH-2+700 Four lane end
55	002+700	002+750	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
56	002+750	002+800	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
57	002+800	002+850	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
58	002+850	002+900	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
59	002+900	002+950	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
60	002+950	003+000	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
61	003+000	003+050	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
62	003+050	003+100	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
63	003+100	003+150	50	Good			Faded	Good			Faded					Fair	Fair									Provided		Provided		
Corridor - C-07																														
1	000+000	000+050	50	Pothole			Faded	Pothole			Faded					Fair	Fair									No		Provided		
2	000+050	000+100	50	Pothole			Faded	Pothole			Faded					Poor	Poor			CH-0+050 to 0+100	18m					Provided		No		
3	000+100	000+150	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Poor	Poor							CH-0+100 to 0+150	18m	Provided		No		
4	000+150	000+200	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Poor	Poor		Grating Blocked							Provided		No		
5	000+200	000+250	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Poor	Poor	Grating Blocked								Provided		No		
6	000+250	000+300	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Poor	Poor									Provided		No		
7	000+300	000+350	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Fair	Fair									No		No		
8	000+350	000+400	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Fair	Fair	Grating Blocked	Grating Blocked							No		No		
9	000+400	000+450	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Fair	Fair									No		No		

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
10	000+450	000+500	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Fair	Fair									No		No		
11	000+500	000+550	50	Work in Progress of Gas pipe line			Faded	Fair			Faded					Poor	Poor			CH-0+500 to 0+550	22m			CH-0+500 to 0+550	6.48m	Provided		No		
Corridor - C-08																														
1	000+055	000+100	45	Good			Faded	Good			Faded					Good	Good			CH-0+050 to 0+100	32m			CH-0+050 to 0+100	41m	No		Provided		
2	000+100	000+135	35	Good			Faded	Good			Faded					Good	Good									No		Provided		
3	000+135	000+150	15	Poor			Faded	Good			Faded					Good	Good									No		Provided		
4	000+150	000+185	35	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
5	000+185	000+200	15	Poor			Faded	Poor			Faded					Good	Good									No		Provided		
6	000+200	000+250	50	Fair			Faded	Good			Faded					Good	Good									No		Provided		
7	000+250	000+300	50	Fair			Faded	Good			Faded					Good	Good									No		Provided		
8	000+300	000+350	50	Fair			Faded	Good			Faded					Good	Good			CH-0+300 to 0+350	48m			CH-0+300 to 0+350	30m	No		Provided		
9	000+350	000+370	20	Fair			Faded	Good			Faded					Good	Good			CH-0+350 to 0+400	29m			CH-0+350 to 0+400	22.50m	No		Provided		
10	000+370	000+400	30	Poor			Faded	Fair			Faded					Good	Good									No		Provided		
11	000+400	000+450	50	Fair			Faded	Fair			Faded					Good	Good			CH-0+400 to 0+450	13m			CH-0+400 to 0+450	42m	No		Provided		Junction
12	000+450	000+500	50	Fair			Faded	Fair			Faded					Poor	Poor									No		Provided		
13	000+500	000+550	50	Fair			Faded	Fair			Faded					Poor	Poor									No		Provided		
14	000+550	000+600	50	Fair			Faded	Fair			Faded					Poor	Poor									No		Provided	Bus stop RHS	
15	000+600	000+620	20	Poor			Faded	Fair			Faded					Fair	Fair									No		Provided		
16	000+620	000+650	30	Fair			Faded	Fair			Faded					Poor	Poor									No		Provided		
17	000+650	000+690	40	Fair			Faded	Fair			Faded					Fair	Fair									No		Provided		
18	000+690	000+700	10	Poor			Faded	Fair			Faded					Fair	Fair		Grating Blocked							No		Provided		
19	000+700	000+750	50	Fair			Faded	Fair			Faded					Fair	Fair	Grating Blocked								No		Provided		
20	000+750	000+775	25	Fair			Faded	Fair			Faded					Fair	Fair									No		Provided		
21	000+775	000+800	25	Poor			Faded	Fair			Faded					Fair	Fair	Grating Blocked								No		Provided		
22	000+800	000+850	50	Fair			Faded	Pechwork			Faded					Poor	Fair		Grating Blocked							No		Provided		
23	000+850	000+900	50	Fair			Faded	Fair			Faded					Fair	Fair									No		Provided		
24	000+900	000+950	50	Fair			Faded	Fair			Faded					Fair	Fair	Grating Blocked								No		Provided		

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
25	000+950	000+970	20	Poor			Faded	Fair			Faded					Poor	Fair		Grating Blocked							No		Provided		
26	000+970	001+000	30	Fair			Faded	Fair			Faded					Poor	Fair									No		Provided		
27	001+000	001+050	50	Good			Faded	Good			Faded					Good	Good	Grating Blocked								No		Provided		
28	001+050	001+100	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
29	001+100	001+150	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
30	001+150	001+200	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
31	001+200	001+250	50	Good			Faded	Good			Faded					Good	Good									No		Provided		
32	001+250	001+280	30	Fair			Faded	Good			Faded					Good	Good									No		Provided		
33	001+280	001+300	20	Poor			Faded	Fair			Faded					Poor	Good		Grating Blocked							No		Provided		
34	001+300	001+350	50	Fair			Faded	Fair			Faded					Fair	Fair									No		Provided		
35	001+350	001+400	50	Good			Faded	Good			Faded					Fair	Fair			CH-1+350 to 1+400	30m			CH-1+350 to 1+400	32m	No		Provided		
36	001+400	001+415	15	Poor			Faded	Fair			Faded					Good	Good									No		Provided		
37	001+415	001+450	35	Fair			Faded	Fair			Faded					Good	Good			CH-1+400 to 1+450	30m			CH-1+400 to 1+450	25m	No		Provided		Junction
38	001+450	001+500	50	Fair			Faded	Fair			Faded					Good	Good			CH-1+450 to 1+500	10m			CH-1+450 to 1+500	4m	No		Provided		
39	001+500	001+550	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided	CH-1+550 Bus stop	
40	001+550	001+600	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
41	001+600	001+650	50	Fair			Faded	Fair			Faded					Good	Good	Grating Blocked	Grating Blocked							No		Provided		
42	001+650	001+700	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
43	001+700	001+750	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
44	001+750	001+800	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
45	001+800	001+850	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
46	001+850	001+900	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
47	001+900	001+950	50	Fair			Faded	Fair			Faded					Good	Good									No		Provided		
48	001+950	002+000	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
49	002+000	002+050	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
50	002+050	002+100	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
51	002+100	002+150	50	Good			Intact	Good			Intact					Good	Good									No		Provided		
52	002+150	002+200	50	Good			Intact	Good			Intact					Good	Good									No		Provided		

S.No	Chainage			Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To	Length	Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
53	002+200	002+250	50	Good			Intact	Good			Intact					Good	Good			CH-2+200 to 2+250	35m			CH-2+200 to 2+250	40m	No		Provided		
Corridor - C-09																														
1	000+000	000+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-0+000 to 0+050	30m						Provided			
2	000+050	000+100	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
3	000+100	000+110	10	Poor		Fair	Faded	Good		Good	Faded					Good	Good										Provided			
4	000+110	000+150	40	Fair		Fair	Faded	Good		Good	Faded					Good	Good										Provided			
5	000+150	000+200	50	Fair		Fair	Faded	Fair		Fair	Faded					20m Poor	20m Poor							CH-0+100 to 0+150	45m		Provided			
6	000+200	000+250	50	Fair		Fair	Faded	Fair		Fair	Faded					Good	Good										Provided			
7	000+250	000+300	50	Work in Progress of Gas pipe line		Fair	Faded	Good		Fair	Faded					20m Poor	Good										Provided			
8	000+300	000+350	50	Work in Progress of Gas pipe line		Fair	Faded	Good		Good	Faded					20m Poor	Good										Provided		CH-0+340 Bus stop RHS	CH-0+340 Median Opening
9	000+350	000+400	50	Good		Good	Faded	Good		Good	Faded					Fair	Good					CH-0+330 to 0+340 m	10m Brocken				Provided			
10	000+400	000+430	30	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
11	000+430	000+450	20	Poor		Fair	Faded	Poor		Fair	Faded					Good	Good										Provided			CH-0+450 Median Opening
12	000+450	000+500	50	Good		Good	Faded	Good		Good	Faded					Fair	Good										Provided			
13	000+500	000+550	50	Work in Progress of Gas pipe line		Good	Faded	Good		Good	Faded					Fair	Good										Provided			CH-0+570 Bus stop LHS
14	000+550	000+600	50	Good		Good	Faded	Good		Good	Faded					Fair	Good										Provided		CH-0+560 Bus stop RHS	
15	000+600	000+650	50	Work in Progress of Gas pipe line		Good	Faded	Good		Good	Faded					Good	10m Poor										Provided		CH-0+600 Median Opening	
16	000+650	000+700	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Junction
17	000+700	000+750	50	Work in Progress of Gas pipe line		Good	Faded	Good		Good	Faded					Good	Good										Provided			
18	000+750	000+800	50	Fair		Fair	Faded	Fair		Fair	Faded					10m Poor	Good										Provided			
19	000+800	000+850	50	Fair		Fair	Faded	Fair		Fair	Faded					20m Poor	Good										Provided			
20	000+850	000+900	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Good	Grating Blocked									Provided			X- Junction
21	000+900	000+950	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			MNB

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
22	000+950	000+965	15	Poor		Fair	Faded	Good		Good	Faded					Good	Good	Grating Blocked									Provided			
23	000+965	001+000	35	Fair		Fair	Faded	Fair		Fair	Faded					Good	Good										Provided		CH-0+950 Bus stop Damaged RHS	
24	001+000	001+050	50	Work in Progress of Gas pipe line		Fair	Faded	Fair		Fair	Faded					Good	Good			CH-1+000 to 1+050	19m			CH-0+950 to 1+050	54m		Provided			
25	001+050	001+100	50	Fair		Fair	Faded	Fair		Fair	Faded					Good	Good			CH-1+050 to 1+100	16m			CH-1+050 to 1+100	12m		Provided			Junction
26	001+100	001+150	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-1+100 to 1+150	37m						Provided			
27	001+150	001+200	50	Good		Good	Faded	Good		Good	Faded					40m Poor	Good			CH-1+150 to 1+200	4m						Provided			
28	001+200	001+250	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
29	001+250	001+300	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair										Provided			
30	001+300	001+350	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair		Grating Blocked								Provided			
31	001+350	001+400	50	Good		Good	Faded	Good		Good	Faded					20m Poor	Fair										Provided			
32	001+400	001+450	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
33	001+450	001+500	50	Pechwork		Good	Faded	Good		Good	Faded					50m Poor	Fair										Provided			CH-1+530 Median Opening
34	001+500	001+550	50	Good		Good	Faded	Good		Good	Faded					50m Poor	Fair										Provided			
35	001+550	001+600	50	Good		Good	Faded	Pothole		Pechwork	Faded					50m Poor	Fair										Provided			
36	001+600	001+650	50	Good		Good	Faded	Pothole		Pechwork	Faded					20m Poor	Fair										Provided			
37	001+650	001+700	50	Pechwork		Pechwork	Faded	Good		Good	Faded					Good	Good										Provided			
38	001+700	001+750	50	Pechwork		Pechwork	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
39	001+750	001+800	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Fair										Provided			Junction Start
40	001+800	001+850	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Fair													Junction
41	001+850	001+900	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Fair													Junction
42	001+900	001+950	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Fair			CH-1+900 to 1+950	15m									Junction
43	001+950	002+000	50	Fair		Fair	Faded	Fair		Fair	Faded					Fair	Fair			CH-1+950 to 2+010	54m									Junction end
44	002+000	002+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good		Grating Blocked								Provided			Bus stop LHS

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
45	002+050	002+100	50	Good		Good	Faded	Good		Good	Faded					Good	Good			CH-2+040 to 2+080	31m						Provided			Median Opening
46	002+100	002+150	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
47	002+150	002+200	50	Good		Good	Faded	Good		Good	Faded					Poor	Fair										Provided			
48	002+200	002+250	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair										Provided			
49	002+250	002+300	50	Good		Good	Faded	Good		Good	Faded					Fair	Fair										Provided			
50	002+300	002+350	50	Good		Good	Faded	Good		Good	Faded					20m Poor	Fair										Provided			
51	002+350	002+400	50	Good		Good	Faded	Good		Good	Faded					Fair	Good										Provided			
52	002+400	002+450	50	Good		Good	Faded	Good		Good	Faded					Fair	Good										Provided			Median Opening
53	002+450	002+500	50	Good		Good	Faded	Good		Good	Faded					Fair	Good										Provided			
54	002+500	002+550	50	Pothole		Good	Faded	Good		Good	Faded					Fair	Good										Provided			
55	002+550	002+600	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			T-Junction
56	002+600	002+650	50	Good		Good	Faded	Good		Good	Faded					Poor	Good	Grating Blocked									Provided			
57	002+650	002+700	50	Good		Good	Faded	Good		Good	Faded					Poor	Good										Provided			
Corridor - C-10																														
1	000+000	000+050	50	Good		Good	Faded	Good		Good	Faded					Good	Good							CH-0+000 to 0+050	50m		Provided			
2	000+050	000+100	50	Good		Good	Faded	Good		Good	Faded					Good	Good							CH-0+050 to 0+100	37.2m		Provided			
3	000+100	000+150	50	Pothole		Good	Faded	Good		Good	Faded					Good	Good			CH-0+100 to 0+150	20m						Provided			
4	000+150	000+200	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
5	000+200	000+250	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
6	000+250	000+300	50	Pothole		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			
7	000+300	000+350	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			
8	000+350	000+400	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked									Provided			
9	000+400	000+450	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			
10	000+450	000+500	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
11	000+500	000+550	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
12	000+550	000+600	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			

S.No	Chainage		Length	Main Carriageway Condition								Fly Over Condition				Footpath		Drain Condition		PGR						Lighting			Bus bay/ Truck lay bay	Remarks (Signage, Median drain etc)
				LHS				RHS																						
	From	To		Outer Lane	Middel lane	Inner lane	Road Marking	Outer Lane	Middel lane	Inner lane	Road Marking	LHS	Lane marking	RHS	Lane marking	LHS	RHS	LHS	RHS	LHS	Length	Median	Length	RHS	Length	LHS	Median	RHS		
13	000+600	000+650	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
14	000+650	000+700	50	Patchwork		Patchwork	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
15	000+700	000+750	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
16	000+750	000+800	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			Median Opening
17	000+800	000+850	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
18	000+850	000+900	50	Good		Good	Intact	Good		Good	Intact					Good	Good	Grating Blocked	Grating Blocked								Provided			
19	000+900	000+950	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided			
20	000+950	001+000	50	Good		Good	Intact	Good		Good	Intact					Good	Good										Provided		Bus stop RHS	
21	001+000	001+050	50	Fair		Fair	Faded	Fair		Fair	Faded					Good	Good										Provided			Junction
22	001+050	001+100	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked	CH-1+050 to 1+100	16m			CH-1+050 to 1+100	16m		Provided			
23	001+100	001+150	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked	CH-1+100 to 1+150	16m			CH-1+100 to 1+150	46m		Provided			
24	001+150	001+200	50	Good		Good	Faded	Good		Good	Faded					Poor	Poor							CH-1+150 to 1+200	22.7m		Provided		CH-1+170 Bus stop	
25	001+200	001+250	50	Minor Cracks		Minor Cracks	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
26	001+250	001+300	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
27	001+300	001+350	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
28	001+350	001+400	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided		CH-1+400 Bus stop & Median	
29	001+400	001+450	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
30	001+450	001+500	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
31	001+500	001+550	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
32	001+550	001+600	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
33	001+600	001+650	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
34	001+650	001+700	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			Median Opening
35	001+700	001+750	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
36	001+750	001+800	50	Good		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
37	001+800	001+850	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			CH-1+800 Median Opening
38	001+850	001+900	50	Pothole		Good	Faded	Good		Good	Faded					Good	Good	Grating Blocked	Grating Blocked								Provided			
39	001+900	001+950	50	Good		Good	Faded	Good		Good	Faded					Good	Good										Provided			
40	001+950	002+000	50	Good		Good	Faded	Good		Good	Faded					Good	Good							CH-1+950 to 2+000	31m		Provided			

ANNEXURE-02

BACK-CALCUALTED FWD DATA

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor AL-01																		
1	LHS	0+000	0.146	0.109	0.071	0.045	0.040	0.028	0.025	38.6	105	510	2747.10	497.70	120.00	3237.51	369.70	94.19
2	LHS	0+877	0.093	0.073	0.057	0.040	0.037	0.023	0.023	38.6	105	510	2929.60	499.60	119.80	3452.59	370.95	94.02
3	LHS	2+055	0.149	0.113	0.075	0.042	0.035	0.019	0.013	38.6	105	510	2826.20	498.00	119.90	3330.73	369.89	94.10
4	RHS	0+244	0.090	0.073	0.055	0.039	0.035	0.023	0.016	38.6	105	510	3000.00	494.10	120.00	3535.55	367.32	94.19
5	RHS	0+001	0.151	0.114	0.096	0.067	0.055	0.034	0.026	38.6	105	510	2991.20	496.10	119.60	3525.18	368.64	93.84
6	RHS	0+000	0.141	0.081	0.075	0.020	0.035	0.012	0.022	38.6	105	510	2945.00	499.60	120.00	3470.73	370.95	94.19
Corridor AL-02																		
1	LHS	0+060	0.177	0.131	0.108	0.076	0.056	0.034	0.027	38.6	105	510	2969.20	494.50	119.80	3499.25	367.58	94.02
2	LHS	0+146	0.644	0.531	0.436	0.335	0.252	0.148	0.106	38.6	105	510	2984.60	107.00	73.40	3517.40	66.13	54.33
3	LHS	0+281	0.330	0.241	0.193	0.127	0.090	0.046	0.031	38.6	105	510	2931.80	488.30	120.00	3455.18	363.47	94.19
4	LHS	0+358	0.362	0.248	0.185	0.120	0.083	0.047	0.031	38.6	105	510	2887.80	498.40	120.00	3403.32	370.16	94.19
5	LHS	0+517	0.149	0.070	0.082	0.056	0.043	0.023	0.019	38.6	105	510	2927.40	499.60	119.80	3449.99	370.95	94.02
6	LHS	0+608	0.359	0.269	0.238	0.137	0.085	0.031	0.025	38.6	105	510	2995.60	472.60	120.00	3530.37	352.95	94.19
7	LHS	0+758	0.206	0.154	0.122	0.086	0.065	0.039	0.026	38.6	105	510	2841.60	500.00	119.90	3348.88	371.21	94.10
8	LHS	0+856	0.266	0.180	0.140	0.087	0.066	0.033	0.024	38.6	105	510	2938.40	497.70	120.00	3462.96	369.70	94.19
9	LHS	1+038	0.222	0.159	0.124	0.090	0.071	0.041	0.029	38.6	105	510	2956.00	498.00	119.70	3483.70	369.89	93.93
10	LHS	1+105	0.600	0.466	0.391	0.282	0.214	0.119	0.085	38.6	105	510	2967.00	110.90	93.10	3496.66	69.61	71.18
11	LHS	1+284	0.156	0.106	0.076	0.053	0.043	0.025	0.019	38.6	105	510	3000.00	491.40	120.00	3535.55	365.53	94.19
12	LHS	1+326	0.156	0.109	0.083	0.056	0.044	0.024	0.019	38.6	105	510	2975.80	499.60	119.90	3507.03	370.95	94.10
13	RHS	1+326	0.136	0.100	0.081	0.057	0.040	0.022	0.014	35.7	105	510	2945.00	493.70	119.90	3038.08	367.05	94.10
14	RHS	1+167	0.087	0.065	0.051	0.038	0.028	0.017	0.010	35.7	105	510	2960.40	500.00	119.80	3053.97	371.21	94.02
15	RHS	0+758	0.171	0.123	0.093	0.061	0.052	0.034	0.030	35.7	105	510	2997.80	493.40	119.70	3092.55	366.85	93.93
16	RHS	0+508	0.214	0.160	0.132	0.095	0.071	0.039	0.031	35.7	105	510	2872.40	496.90	119.90	2963.19	369.17	94.10
17	RHS	0+274	0.177	0.116	0.088	0.059	0.044	0.026	0.019	35.7	105	510	2861.40	496.90	120.00	2951.84	369.17	94.19
18	RHS	0+272	0.211	0.136	0.110	0.079	0.060	0.036	0.026	35.7	105	510	2854.80	500.00	119.90	2945.03	371.21	94.10
19	RHS	0+147	0.247	0.171	0.137	0.100	0.075	0.044	0.031	35.7	105	510	2980.20	499.20	119.60	3074.39	370.68	93.84
20	RHS	0+000	0.164	0.134	0.121	0.091	0.076	0.047	0.033	35.7	105	510	2909.80	498.00	120.00	3001.77	369.89	94.19
Corridor AL-03																		
1	LHS	0+000	0.420	0.245	0.189	0.125	0.097	0.056	0.029	38.6	120	510	2991.20	471.50	120.00	3525.18	352.20	94.19
2	LHS	0+149	0.151	0.088	0.056	0.046	0.026	0.022	0.010	38.6	120	510	2925.20	493.70	119.90	3447.40	367.05	94.10
3	LHS	0+253	0.454	0.361	0.307	0.223	0.163	0.086	0.054	38.6	120	510	2764.70	141.40	119.90	3258.25	96.53	94.10
4	LHS	0+350	0.383	0.218	0.149	0.147	0.102	0.052	0.033	38.6	120	510	2971.40	486.70	120.00	3501.85	362.40	94.19
5	LHS	0+427	0.126	0.089	0.071	0.052	0.035	0.019	0.014	38.6	120	510	2863.60	498.40	119.90	3374.80	370.16	94.10
6	RHS	0+420	0.243	0.186	0.150	0.105	0.075	0.038	0.020	35.7	120	510	2975.80	494.50	119.80	3070	368	94
7	RHS	0+351	0.307	0.221	0.183	0.146	0.105	0.075	0.025	35.7	120	510	2960.40	419.50	120.00	3054	316	94
8	RHS	0+251	0.362	0.255	0.173	0.126	0.060	0.037	0.025	35.7	120	510	2894.40	494.50	120.00	2986	368	94
9	RHS	0+107	0.355	0.284	0.256	0.189	0.147	0.075	0.049	35.7	120	510	2989.00	224.30	120.00	3083	167	94
10	RHS	0+000	0.112	0.085	0.069	0.068	0.049	0.043	0.010	35.7	120	510	2989.00	491.00	119.80	3083	365	94
Corridor AL-04																		
1	LHS	0+000	0.209	0.152	0.120	0.082	0.063	0.033	0.023	38.5	90	510	2995.60	497.70	120.00	3514	370	94
2	LHS	0+102	0.402	0.275	0.209	0.133	0.084	0.041	0.032	38.5	90	510	2993.40	494.90	120.00	3511	368	94
3	LHS	0+253	0.087	0.058	0.042	0.029	0.021	0.013	0.010	38.5	90	510	2997.80	499.60	120.00	3516	371	94
4	LHS	0+355	0.491	0.318	0.218	0.138	0.090	0.047	0.035	38.5	90	510	2940.60	374.50	120.00	3449	284	94
5	LHS	0+513	0.192	0.141	0.118	0.086	0.069	0.044	0.034	38.5	90	510	2945.00	495.70	119.90	3454	368	94
6	LHS	0+604	0.324	0.274	0.232	0.164	0.128	0.077	0.062	38.5	90	510	2951.60	369.80	120.00	3462	280	94
7	LHS	0+753	0.134	0.089	0.072	0.050	0.042	0.022	0.018	38.5	90	510	2901.00	499.60	120.00	3403	371	94
8	LHS	0+856	0.492	0.286	0.190	0.114	0.069	0.034	0.026	38.5	90	510	2967.00	487.50	120.00	3480	363	94
9	LHS	1+006	0.212	0.163	0.132	0.097	0.078	0.050	0.043	38.5	90	510	2874.60	498.80	119.80	3372	370	94
10	LHS	1+103	0.506	0.319	0.251	0.154	0.096	0.039	0.024	38.5	90	510	2984.60	279.10	120.00	3501	211	94
11	LHS	1+266	0.124	0.091	0.076	0.062	0.054	0.038	0.036	38.5	90	510	3000.00	498.80	119.90	3519	370	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
12	LHS	1+351	0.283	0.197	0.141	0.083	0.051	0.016	0.012	38.5	90	510	2980.20	489.80	120.00	3496	364	94
13	RHS	1+433	0.367	0.275	0.206	0.150	0.111	0.071	0.051	38.4	90	510	2936.20	389.00	120.00	3428	294	94
14	RHS	1+354	0.426	0.301	0.219	0.136	0.086	0.042	0.032	38.4	90	510	2980.20	466.80	120.00	3479	349	94
15	RHS	1+267	0.189	0.135	0.105	0.072	0.052	0.026	0.018	38.4	90	510	2971.40	489.80	120.00	3469	364	94
16	RHS	1+102	0.573	0.419	0.318	0.195	0.119	0.052	0.034	38.4	90	510	2945.00	385.80	120.00	3438	292	94
17	RHS	1+023	0.181	0.120	0.085	0.050	0.043	0.022	0.028	38.4	90	510	2989.00	493.70	119.80	3490	367	94
18	RHS	0+853	0.564	0.423	0.333	0.217	0.138	0.061	0.035	38.4	90	510	2907.60	396.80	120.00	3395	300	94
19	RHS	0+751	0.210	0.142	0.115	0.080	0.061	0.038	0.028	38.4	90	510	2918.60	497.30	120.00	3407	369	94
20	RHS	0+664	0.631	0.443	0.329	0.207	0.124	0.050	0.035	38.4	90	510	2243.40	412.80	120.00	2619	312	94
21	RHS	0+499	0.189	0.004	0.086	0.060	0.050	0.030	0.028	38.4	90	510	2890.00	499.20	119.90	3374	371	94
22	RHS	0+352	0.598	0.511	0.441	0.324	0.253	0.148	0.095	38.4	90	510	2971.40	387.40	74.10	3469	293	55
23	RHS	0+255	0.164	0.007	0.098	0.017	0.053	0.030	0.021	38.4	90	510	2993.40	498.40	119.60	3495	370	94
24	RHS	0+102	0.441	0.284	0.199	0.115	0.073	0.042	0.035	38.4	90	510	2997.80	494.50	119.90	3500	368	94
25	RHS	0+000	0.134	0.004	0.084	0.021	0.050	0.033	0.024	38.4	90	510	2989.00	499.60	119.50	3490	371	94
Corridor BP-01																		
1	LHS	0+000	0.249	0.157	0.136	0.101	0.082	0.057	0.039	36.1	70	450	2984.60	498.00	179.90	3134.68	369.89	100.00
2	LHS	0+125	0.509	0.381	0.290	0.185	0.113	0.051	0.041	36.1	70	450	2971.40	496.80	180.00	3120.82	369.10	100.00
3	LHS	0+250	0.268	0.166	0.120	0.105	0.072	0.056	0.024	36.1	70	450	2993.40	497.70	179.90	3143.92	369.70	100.00
4	LHS	0+421	0.385	0.269	0.210	0.127	0.078	0.031	0.024	36.1	70	450	2993.40	338.40	180.00	3143.92	256.98	100.00
5	LHS	0+539	0.246	0.160	0.128	0.070	0.045	0.035	0.026	36.1	70	450	2934.00	499.20	179.70	3081.54	370.68	100.00
6	LHS	0+754	0.467	0.298	0.205	0.117	0.063	0.025	0.015	36.1	70	450	2962.60	387.90	180.00	3111.57	293.63	100.00
7	LHS	0+905	0.586	0.438	0.348	0.226	0.147	0.066	0.047	36.1	70	450	2993.40	113.70	155.20	3143.92	72.10	100.00
8	LHS	1+014	0.228	0.176	0.121	0.084	0.059	0.037	0.030	36.1	70	450	2951.60	489.40	179.70	3100.02	364.20	100.00
9	LHS	1+100	0.439	0.344	0.245	0.221	0.140	0.108	0.027	36.1	70	450	2982.40	398.40	179.70	3132.37	301.22	100.00
10	LHS	1+305	0.457	0.333	0.265	0.215	0.142	0.100	0.032	36.1	70	450	2989.00	477.60	171.20	3139.30	356.31	100.00
11	LHS	1+466	0.135	0.093	0.076	0.059	0.048	0.032	0.026	36.1	70	450	2799.90	493.70	179.90	2940.69	367.05	100.00
12	RHS	1+466	0.126	0.110	0.095	0.076	0.063	0.042	0.031	36.8	70	450	2810.90	498.80	180.00	3047.35	370.42	100.00
13	RHS	1+352	0.463	0.390	0.348	0.263	0.218	0.142	0.092	36.8	70	450	2905.40	307.20	76.90	3149.80	233.12	57.32
14	RHS	1+271	0.101	0.073	0.060	0.046	0.037	0.025	0.022	36.8	70	450	2942.80	493.40	180.00	3190.34	366.85	100.00
15	RHS	1+102	0.401	0.278	0.199	0.156	0.090	0.072	0.031	36.8	70	450	2898.80	244.30	179.70	3142.64	183.24	100.00
16	RHS	0+854	0.195	0.135	0.095	0.083	0.057	0.050	0.014	36.8	70	450	2947.20	496.90	180.00	3195.11	369.17	100.00
17	RHS	0+751	0.314	0.218	0.165	0.107	0.075	0.048	0.037	36.8	70	450	2982.40	440.60	180.00	3233.27	331.04	100.00
18	RHS	0+625	0.369	0.256	0.199	0.140	0.095	0.050	0.033	36.8	70	450	2991.20	301.80	180.00	3242.81	228.93	100.00
19	RHS	0+501	0.423	0.308	0.233	0.145	0.084	0.033	0.026	36.8	70	450	2808.70	200.10	180.00	3044.96	146.77	100.00
20	RHS	0+102	0.251	0.175	0.134	0.087	0.063	0.040	0.032	36.8	70	450	2980.20	490.60	180.00	3230.89	365.00	100.00
Corridor BP-03																		
1	LHS	0+000	0.262	0.217	0.157	0.123	0.096	0.061	0.042	36.8	90	450	3000.00	439.40	178.40	3252	330	100.00
2	LHS	0+121	0.211	0.173	0.137	0.109	0.082	0.055	0.040	36.8	90	450	2982.40	493.00	179.60	3233	367	100.00
3	LHS	2+000	0.273	0.216	0.176	0.137	0.103	0.069	0.050	36.8	90	400	3000.00	487.90	161.80	3252	363	100.00
4	LHS	2+102	0.210	0.181	0.139	0.094	0.084	0.046	0.038	36.8	90	400	2989.00	498.40	179.70	3240	370	100.00
5	LHS	2+354	0.367	0.264	0.201	0.119	0.096	0.058	0.038	36.8	90	400	2742.70	268.10	180.00	2973	202	100.00
6	LHS	2+511	0.149	0.133	0.083	0.079	0.043	0.027	0.019	36.8	90	400	2993.40	497.70	180.00	3245	370	100.00
7	LHS	2+658	0.605	0.426	0.293	0.168	0.101	0.037	0.028	36.8	90	400	2987.80	496.20	180.00	3239	369	100.00
8	LHS	2+856	0.427	0.241	0.226	0.158	0.108	0.057	0.047	36.8	90	400	2980.20	217.70	179.70	3231	161	100.00
9	LHS	3+102	0.631	0.542	0.464	0.333	0.284	0.176	0.128	36.8	90	460	2956.00	157.10	61.50	3205	110	44
10	LHS	3+253	0.174	0.144	0.115	0.086	0.068	0.043	0.034	36.8	90	460	2978.00	497.70	119.70	3229	370	94
11	LHS	3+356	0.386	0.312	0.268	0.203	0.175	0.115	0.086	36.8	90	460	2997.80	347.90	91.90	3250	264	70
12	LHS	3+502	0.333	0.242	0.185	0.116	0.070	0.023	0.014	36.8	90	460	2960.40	468.70	120.00	3209	350	94
13	LHS	3+679	0.187	0.161	0.110	0.079	0.060	0.038	0.028	36.8	90	460	2722.90	500.00	120.00	2952	371	94
14	RHS	3+750	0.175	0.133	0.092	0.065	0.052	0.031	0.027	38.9	90	460	2914.20	498.00	119.90	3484	370	94
15	RHS	3+484	0.335	0.253	0.199	0.140	0.113	0.079	0.056	38.9	90	460	2953.80	491.80	120.00	3531	366	94
16	RHS	3+336	0.596	0.449	0.394	0.279	0.228	0.137	0.112	38.9	90	460	2879.00	178.60	75.00	3442	129	56
17	RHS	3+256	0.416	0.307	0.233	0.149	0.092	0.048	0.034	38.9	90	460	2907.60	409.30	120.00	3476	309	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
18	RHS	3+104	0.369	0.281	0.215	0.136	0.088	0.036	0.025	38.9	90	460	2964.80	485.50	120.00	3544	362	94
19	RHS	3+000	0.152	0.111	0.091	0.065	0.048	0.026	0.018	38.9	90	460	2984.60	490.60	119.70	3568	365	94
20	RHS	2+856	0.474	0.341	0.250	0.154	0.095	0.047	0.033	38.9	90	400	2969.20	154.00	180.00	3549	107	100
21	RHS	2+605	0.305	0.190	0.128	0.100	0.060	0.045	0.021	38.9	90	400	2958.20	491.80	180.00	3536	366	100
22	RHS	2+514	0.183	0.145	0.096	0.063	0.044	0.025	0.017	38.9	90	400	2817.40	494.50	180.00	3368	368	100
23	RHS	2+351	0.270	0.184	0.138	0.090	0.064	0.039	0.027	38.9	90	400	2898.80	498.80	180.00	3465	370	100
24	RHS	2+115	0.253	0.177	0.149	0.103	0.077	0.047	0.035	38.9	90	400	2901.00	497.70	180.00	3468	370	100
25	RHS	0+151	0.150	0.143	0.081	0.067	0.052	0.034	0.028	38.9	90	450	2978.00	499.60	179.70	3560	371	100
26	RHS	0+000	0.334	0.267	0.208	0.179	0.115	0.069	0.045	38.9	90	450	2962.60	284.90	157.80	3541	216	100
Corridor C-02																		
1	LHS	0+740	0.199	0.156	0.121	0.068	0.061	0.035	0.024	36.8	130	510	2848.20	499.60	120.00	3088	371	94
2	LHS	0+854	0.458	0.332	0.248	0.150	0.094	0.048	0.035	36.8	130	510	2978.00	307.20	120.00	3229	233	94
3	LHS	1+002	0.228	0.157	0.125	0.085	0.059	0.027	0.017	36.8	130	510	2964.80	498.00	119.80	3214	370	94
4	LHS	1+125	0.422	0.268	0.217	0.125	0.080	0.039	0.030	36.8	130	510	2859.20	476.10	120.00	3100	355	94
5	LHS	1+257	0.094	0.045	0.034	0.026	0.023	0.018	0.014	36.8	130	510	3000.00	500.00	119.70	3252	371	94
6	LHS	1+342	0.358	0.215	0.207	0.146	0.111	0.074	0.053	36.8	130	510	3000.00	460.50	120.00	3252	345	94
7	LHS	1+498	0.301	0.223	0.179	0.116	0.092	0.053	0.039	36.8	130	510	2951.60	494.90	119.90	3200	368	94
8	LHS	1+622	0.240	0.107	0.089	0.063	0.036	0.016	0.012	36.8	130	510	2940.60	498.00	119.90	3188	370	94
9	LHS	1+757	0.148	0.117	0.100	0.070	0.052	0.030	0.014	36.8	130	510	2962.60	493.40	119.80	3212	367	94
10	LHS	1+865	0.329	0.208	0.153	0.093	0.065	0.037	0.031	36.8	130	510	2936.20	498.40	119.90	3183	370	94
11	LHS	2+007	0.095	0.070	0.054	0.037	0.031	0.020	0.017	36.8	130	510	2940.60	492.60	120.00	3188	366	94
12	LHS	2+125	0.431	0.318	0.243	0.148	0.095	0.040	0.027	36.8	130	510	2989.00	318.20	120.00	3240	242	94
13	LHS	2+264	0.292	0.223	0.174	0.134	0.096	0.054	0.035	36.8	130	510	2995.60	475.80	120.00	3248	355	94
14	LHS	2+356	0.296	0.218	0.169	0.138	0.092	0.068	0.021	36.8	130	510	2949.40	472.60	120.00	3197	353	94
15	LHS	2+510	0.247	0.167	0.127	0.074	0.066	0.042	0.030	36.8	130	510	2918.60	495.70	119.80	3164	368	94
16	LHS	2+605	0.350	0.265	0.195	0.125	0.080	0.042	0.033	36.8	175	510	2887.80	489.10	120.00	3131	364	94
17	LHS	2+764	0.104	0.078	0.052	0.027	0.025	0.017	0.015	36.8	175	510	2947.20	497.70	119.90	3195	370	94
18	LHS	2+865	0.575	0.353	0.347	0.254	0.172	0.088	0.058	36.8	175	510	2982.40	143.40	119.60	3233	98	94
19	LHS	3+025	0.166	0.109	0.083	0.065	0.048	0.032	0.027	36.8	175	510	2995.60	500.00	119.70	3248	371	94
20	LHS	3+258	0.150	0.100	0.080	0.063	0.047	0.030	0.024	36.8	175	510	2967.00	498.80	120.00	3217	370	94
21	LHS	3+364	0.133	0.104	0.074	0.058	0.043	0.029	0.023	36.8	175	510	2986.80	483.20	120.00	3238	360	94
22	RHS	3+373	0.270	0.185	0.141	0.067	0.061	0.034	0.030	36.8	175	510	2997.80	498.00	120.00	3250	370	94
23	RHS	3+248	0.207	0.154	0.101	0.069	0.059	0.036	0.017	36.8	175	510	2953.80	487.10	119.80	3202	363	94
24	RHS	3+154	0.302	0.222	0.179	0.147	0.096	0.069	0.024	36.8	175	510	3000.00	401.90	120.00	3252	304	94
25	RHS	3+021	0.141	0.107	0.073	0.056	0.046	0.031	0.025	36.8	175	510	2872.40	495.70	119.40	3114	368	94
26	RHS	2+885	0.325	0.221	0.189	0.139	0.103	0.058	0.042	36.8	175	510	1946.50	467.50	120.00	2110	349	94
27	RHS	2+745	0.048	0.046	0.044	0.043	0.042	0.041	0.040	36.8	175	510	2993.40	500.00	119.90	3245	371	94
28	RHS	2+605	0.279	0.185	0.133	0.069	0.043	0.021	0.019	36.8	175	510	2698.70	499.60	119.90	2926	371	94
29	RHS	2+504	0.226	0.161	0.098	0.066	0.046	0.027	0.022	36.8	130	510	2982.40	495.30	120.00	3233	368	94
30	RHS	2+354	0.352	0.270	0.211	0.136	0.057	0.048	0.039	36.8	130	510	2991.20	500.00	119.90	3243	371	94
31	RHS	2+248	0.128	0.109	0.092	0.071	0.060	0.041	0.027	36.8	130	510	2991.20	496.90	119.60	3243	369	94
32	RHS	2+114	0.625	0.421	0.302	0.283	0.233	0.137	0.100	36.8	130	510	805.00	190.30	78.80	873	139	59
33	RHS	2+013	0.133	0.071	0.046	0.035	0.031	0.025	0.020	36.8	130	510	2953.80	496.90	119.80	3202	369	94
34	RHS	1+825	0.444	0.314	0.226	0.132	0.079	0.036	0.027	36.8	130	510	2903.20	485.50	120.00	3147	362	94
35	RHS	1+741	0.324	0.259	0.195	0.142	0.101	0.060	0.039	36.8	130	510	2973.60	419.10	120.00	3224	316	94
36	RHS	1+664	0.360	0.202	0.124	0.076	0.048	0.042	0.031	36.8	130	510	2841.60	497.70	120.00	3081	370	94
37	RHS	1+510	0.144	0.106	0.070	0.054	0.044	0.030	0.023	36.8	130	510	2960.40	498.80	119.90	3209	370	94
38	RHS	1+347	0.500	0.335	0.229	0.133	0.081	0.041	0.030	36.8	130	510	2920.80	496.10	120.00	3166	369	94
39	RHS	1+251	0.085	0.060	0.051	0.041	0.032	0.023	0.019	36.8	130	510	2951.60	500.00	119.40	3200	371	94
40	RHS	1+113	0.592	0.377	0.264	0.199	0.118	0.084	0.059	36.8	130	510	796.20	182.10	120.00	863	132	94
41	RHS	1+003	0.121	0.102	0.092	0.075	0.064	0.041	0.032	36.8	130	510	2958.20	494.90	120.00	3207	368	94
42	RHS	0+885	0.341	0.251	0.186	0.106	0.059	0.020	0.013	36.8	130	510	2975.80	486.70	119.90	3226	362	94
43	RHS	0+777	0.129	0.081	0.062	0.048	0.033	0.020	0.014	36.8	130	510	2956.00	500.00	119.90	3205	371	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor C-03A																		
1	LHS	0+780	0.102	0.075	0.048	0.029	0.026	0.022	0.014	36.5	30	510	2962.60	490.20	119.90	3168	365	94
2	LHS	0+884	0.223	0.165	0.126	0.069	0.058	0.031	0.024	36.5	30	510	2953.80	496.50	120.00	3159	369	94
3	LHS	1+007	0.186	0.123	0.091	0.049	0.047	0.031	0.023	36.5	30	510	2995.60	497.30	119.70	3204	369	94
4	RHS	1+032	0.201	0.145	0.115	0.066	0.060	0.036	0.023	35.9	30	510	2989.00	496.50	120.00	3111	369	94
5	RHS	0+911	0.290	0.190	0.126	0.066	0.054	0.027	0.022	35.9	30	510	2991.20	496.50	119.90	3114	369	94
6	RHS	0+808	0.094	0.058	0.047	0.029	0.024	0.016	0.013	35.9	30	510	2995.60	496.10	120.00	3118	369	94
Corridor C-03																		
1	LHS	0+460	0.135	0.098	0.074	0.054	0.033	0.026	0.020	36.8	30	510	2865.80	496.90	120.00	3107	369	94
2	LHS	0+654	0.369	0.281	0.215	0.136	0.088	0.036	0.025	36.8	30	510	2887.80	499.60	119.90	3131	371	94
3	LHS	0+750	0.357	0.254	0.207	0.134	0.096	0.052	0.035	36.8	30	510	2975.80	498.40	120.00	3226	370	94
4	LHS	0+845	0.474	0.341	0.250	0.154	0.095	0.047	0.033	36.8	30	510	2868.00	354.90	120.00	3109	269	94
5	LHS	1+002	0.271	0.220	0.169	0.118	0.090	0.052	0.045	36.8	30	510	2753.70	496.50	120.00	2985	369	94
6	LHS	1+505	0.234	0.156	0.080	0.045	0.033	0.018	0.018	36.8	130	510	2905.40	497.30	119.70	3150	369	94
7	LHS	1+735	0.444	0.314	0.226	0.132	0.079	0.036	0.027	36.8	130	510	2903.20	485.50	120.00	3147	362	94
8	LHS	1+865	0.360	0.202	0.124	0.076	0.048	0.042	0.031	36.8	130	510	2841.60	497.70	120.00	3081	370	94
9	LHS	2+016	0.500	0.335	0.229	0.133	0.081	0.041	0.030	36.8	130	510	2920.80	496.10	120.00	3166	369	94
10	LHS	2+246	0.341	0.251	0.186	0.106	0.059	0.020	0.013	36.8	130	510	2975.80	486.70	119.90	3226	362	94
11	LHS	2+312	0.458	0.332	0.248	0.150	0.094	0.048	0.035	36.8	130	510	2645.90	332.30	120.00	2868	252	94
12	LHS	2+523	0.422	0.268	0.217	0.125	0.080	0.039	0.030	36.8	130	510	2885.60	498.00	120.00	3128	370	94
13	LHS	2+611	0.358	0.215	0.207	0.146	0.111	0.074	0.053	36.8	130	510	2133.40	402.60	120.00	2313	304	94
14	LHS	2+750	0.240	0.107	0.089	0.063	0.036	0.016	0.012	36.8	130	510	2978.00	497.30	120.00	3229	369	94
15	LHS	2+765	0.175	0.148	0.113	0.089	0.074	0.052	0.039	38.9	130	510	2802.10	500.00	119.80	3350	371	94
16	LHS	3+002	0.120	0.113	0.068	0.048	0.042	0.025	0.021	41.3	130	510	2956.00	498.40	119.80	3974	370	94
17	LHS	3+335	0.131	0.097	0.074	0.052	0.040	0.024	0.018	40.2	130	510	2958.20	497.30	120.00	3765	369	94
18	RHS	3+335	0.186	0.114	0.081	0.051	0.040	0.034	0.027	38.2	130	510	2949.40	496.90	120.00	3411	369	94
19	RHS	3+236	0.315	0.259	0.205	0.144	0.108	0.065	0.046	38.2	130	510	2953.80	402.60	120.00	3416	304	94
20	RHS	3+102	0.416	0.307	0.233	0.149	0.092	0.048	0.034	38.2	130	510	3000.00	417.90	120.00	3470	315	94
21	RHS	3+003	0.115	0.069	0.054	0.048	0.036	0.016	0.006	38.2	130	510	2967.00	499.20	119.90	3431	371	94
22	RHS	2+839	0.146	0.094	0.053	0.038	0.026	0.021	0.017	38.2	130	510	2907.60	497.30	119.90	3363	369	94
23	RHS	2+750	0.212	0.151	0.111	0.080	0.051	0.032	0.028	37.1	130	510	2947.20	489.40	120.00	3239	364	94
24	RHS	2+611	0.329	0.208	0.153	0.093	0.065	0.037	0.031	37.1	130	510	2953.80	497.70	120.00	3246	370	94
25	RHS	2+523	0.317	0.241	0.167	0.129	0.092	0.055	0.047	37.1	130	510	2925.20	494.10	119.90	3215	367	94
26	RHS	2+312	0.431	0.318	0.243	0.148	0.095	0.040	0.027	37.1	130	510	2920.80	499.60	120.00	3210	371	94
27	RHS	2+246	0.251	0.181	0.142	0.104	0.070	0.040	0.033	37.1	130	510	2907.60	500.00	119.90	3196	371	94
28	RHS	2+108	0.296	0.218	0.169	0.138	0.092	0.068	0.021	37.1	130	510	2971.40	481.20	120.00	3266	359	94
29	RHS	2+016	0.195	0.156	0.125	0.097	0.070	0.041	0.027	37.1	130	510	2995.60	495.70	120.00	3292	368	94
30	RHS	1+865	0.350	0.265	0.195	0.125	0.080	0.042	0.033	37.1	130	510	2885.60	494.10	119.90	3172	367	94
31	RHS	1+735	0.226	0.175	0.125	0.095	0.066	0.044	0.036	37.1	130	510	2920.80	498.80	119.80	3210	370	94
32	RHS	1+622	0.575	0.353	0.347	0.254	0.172	0.088	0.058	37.1	130	510	2129.00	109.80	120.00	2340	69	94
33	RHS	1+505	0.267	0.132	0.105	0.068	0.053	0.037	0.028	37.1	130	510	2907.60	498.40	120.00	3196	370	94
34	RHS	1+257	0.174	0.138	0.103	0.069	0.054	0.034	0.021	37.1	130	510	2973.60	491.00	119.90	3268	365	94
35	RHS	1+112	0.596	0.449	0.394	0.279	0.228	0.137	0.112	37.1	130	510	1610.00	139.90	77.30	1770	95	58
36	RHS	1+045	0.191	0.139	0.089	0.056	0.045	0.030	0.025	37.1	130	510	2892.20	495.30	119.70	3179	368	94
37	RHS	1+045	0.192	0.141	0.091	0.055	0.046	0.031	0.025	37.8	30	510	2832.80	499.60	120.00	3216	371	94
38	RHS	0+852	0.302	0.222	0.179	0.147	0.096	0.069	0.024	37.8	30	510	2894.40	496.90	120.00	3286	369	94
39	RHS	0+750	0.220	0.183	0.148	0.122	0.095	0.063	0.042	37.8	30	510	2859.20	495.30	120.00	3246	368	94
40	RHS	0+652	0.325	0.221	0.189	0.139	0.103	0.058	0.042	37.8	30	510	2782.30	499.60	119.90	3158	371	94
41	RHS	0+514	0.177	0.118	0.093	0.049	0.045	0.025	0.022	37.8	30	510	2887.80	494.50	119.90	3278	368	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor C-04																		
1	LHS	0+760	0.279	0.224	0.131	0.062	0.052	0.031	0.025	37.8	90	450	2978.00	499.60	119.90	3381	371	94
2	LHS	0+856	0.369	0.256	0.199	0.140	0.095	0.050	0.033	37.8	90	450	2993.40	466.00	120.00	3398	348	94
3	LHS	1+006	0.231	0.196	0.146	0.110	0.083	0.051	0.046	37.8	90	450	2971.40	499.20	120.00	3373	371	94
4	LHS	1+109	0.423	0.308	0.233	0.145	0.084	0.033	0.026	37.8	90	450	3000.00	450.30	120.00	3406	338	94
5	LHS	1+265	0.426	0.301	0.219	0.136	0.086	0.042	0.032	37.8	90	450	2931.80	485.10	120.00	3328	361	94
6	LHS	1+355	0.573	0.419	0.318	0.195	0.119	0.052	0.034	37.8	90	450	2738.30	140.70	120.00	3108	96	94
7	LHS	1+580	0.178	0.136	0.111	0.079	0.067	0.046	0.032	37.8	90	450	2901.00	499.60	120.00	3293	371	94
8	LHS	5+330	0.159	0.140	0.103	0.080	0.061	0.041	0.028	37.8	90	450	2978.00	494.50	119.40	3381	368	94
9	LHS	5+520	0.564	0.423	0.333	0.217	0.138	0.061	0.035	37.8	90	450	2927.40	132.10	120.00	3323	88	94
10	LHS	5+365	0.631	0.443	0.329	0.207	0.124	0.050	0.035	37.8	90	450	2513.90	126.60	120.00	2854	84	94
11	LHS	5+761	0.135	0.098	0.078	0.040	0.040	0.027	0.023	37.8	90	450	2958.20	500.00	119.60	3358	371	94
12	LHS	5+856	0.598	0.511	0.441	0.324	0.253	0.148	0.095	37.8	90	450	2958.20	142.20	74.20	3358	97	55
13	LHS	6+000	0.093	0.074	0.063	0.052	0.047	0.038	0.028	37.8	90	450	2967.00	497.70	119.60	3368	370	94
14	LHS	6+600	0.119	0.087	0.070	0.051	0.040	0.029	0.023	37.8	90	450	2947.20	499.20	119.40	3346	371	94
15	LHS	6+734	0.441	0.284	0.199	0.115	0.073	0.042	0.035	37.8	90	450	2925.20	495.70	119.80	3321	368	94
16	LHS	6+854	0.402	0.275	0.209	0.133	0.084	0.041	0.032	37.8	90	450	2997.80	470.70	120.00	3403	352	94
17	LHS	7+003	0.211	0.187	0.128	0.094	0.076	0.049	0.042	37.8	90	450	3000.00	499.60	120.00	3406	371	94
18	LHS	7+780	0.123	0.100	0.078	0.061	0.047	0.037	0.023	37.8	90	450	2989.00	498.40	119.80	3393	370	94
19	LHS	7+865	0.491	0.318	0.218	0.138	0.090	0.047	0.035	37.8	90	450	2927.40	405.00	120.00	3323	306	94
20	LHS	8+090	0.147	0.112	0.072	0.050	0.036	0.023	0.016	37.8	90	450	2852.60	494.10	120.00	3238	367	94
21	RHS	8+090	0.066	0.050	0.041	0.029	0.028	0.019	0.017	37.5	90	450	2953.80	496.10	119.80	3307	369	94
22	RHS	7+865	0.324	0.274	0.232	0.164	0.128	0.077	0.062	37.5	90	450	2991.20	403.00	120.00	3349	305	94
23	RHS	7+780	0.177	0.148	0.105	0.061	0.054	0.032	0.022	37.5	90	450	2887.80	498.40	120.00	3233	370	94
24	RHS	7+020	0.135	0.116	0.087	0.068	0.056	0.040	0.030	37.5	90	450	2771.30	498.80	120.00	3102	370	94
25	RHS	6+885	0.492	0.286	0.190	0.114	0.069	0.034	0.026	37.5	90	450	2986.80	498.40	120.00	3344	370	94
26	RHS	6+788	0.310	0.215	0.150	0.068	0.066	0.043	0.034	37.5	90	450	2819.60	498.80	120.00	3157	370	94
27	RHS	6+600	0.148	0.117	0.072	0.056	0.048	0.034	0.025	37.5	90	450	2909.80	494.90	120.00	3258	368	94
28	RHS	6+000	0.189	0.157	0.137	0.110	0.092	0.057	0.038	37.5	90	450	2986.80	499.20	119.60	3344	371	94
29	RHS	5+821	0.506	0.319	0.251	0.154	0.096	0.039	0.024	37.5	90	450	2982.40	225.10	120.00	3339	168	94
30	RHS	5+741	0.158	0.123	0.115	0.083	0.070	0.045	0.036	37.5	90	450	2951.60	497.70	119.70	3304	370	94
31	RHS	5+490	0.221	0.188	0.109	0.078	0.055	0.034	0.028	37.5	90	450	2848.20	498.00	119.60	3189	370	94
32	RHS	5+330	0.193	0.158	0.118	0.075	0.072	0.048	0.032	37.5	90	450	2978.00	496.90	119.90	3334	369	94
33	RHS	1+580	0.226	0.165	0.129	0.066	0.064	0.048	0.038	37.5	90	450	2945.00	496.50	120.00	3297	369	94
34	RHS	1+366	0.283	0.197	0.141	0.083	0.051	0.016	0.012	37.5	90	450	2982.40	497.30	120.00	3339	369	94
35	RHS	1+265	0.644	0.531	0.436	0.335	0.252	0.148	0.106	37.5	90	450	2993.40	131.70	73.90	3351	88	55
36	RHS	1+125	0.362	0.248	0.185	0.120	0.083	0.047	0.031	37.5	90	450	2879.00	498.40	120.00	3223	370	94
37	RHS	1+047	0.408	0.263	0.189	0.101	0.098	0.070	0.055	37.5	90	450	2982.40	500.00	120.00	3339	371	94
38	RHS	0+852	0.465	0.269	0.238	0.137	0.085	0.031	0.025	37.5	90	450	2989.00	471.10	119.90	3346	352	94
39	RHS	0+760	0.338	0.289	0.150	0.128	0.081	0.060	0.051	37.5	90	450	2982.40	497.30	119.90	3339	369	94
Corridor C-05 (1.3 to 1.83)																		
1	LHS	1+300	0.294	0.186	0.170	0.118	0.088	0.058	0.045	37.6	80	510	2962.60	490.60	120.00	3332	365	94
2	LHS	1+562	0.266	0.180	0.140	0.087	0.066	0.033	0.024	37.6	80	510	2962.60	494.10	120.00	3332	367	94
3	LHS	1+668	0.600	0.466	0.391	0.282	0.214	0.119	0.085	37.6	80	510	2973.60	157.50	88.80	3344	111	67
4	LHS	1+765	0.533	0.367	0.278	0.175	0.105	0.048	0.036	37.6	80	510	2916.40	200.10	120.00	3280	147	94
5	LHS	1+830	0.187	0.155	0.119	0.094	0.075	0.052	0.042	37.6	80	510	2740.50	499.20	120.00	3082	371	94
6	RHS	1+830	0.198	0.169	0.133	0.108	0.092	0.068	0.053	37.5	80	510	2907.60	495.70	120.00	3255	368	94
7	RHS	1+745	0.520	0.349	0.253	0.153	0.089	0.042	0.031	37.5	80	510	2969.20	278.30	120.00	3324	210	94
8	RHS	1+652	0.257	0.178	0.124	0.096	0.058	0.046	0.018	37.5	80	510	2993.40	498.40	120.00	3351	370	94
9	RHS	1+502	0.465	0.325	0.228	0.147	0.096	0.043	0.030	37.5	80	510	2879.00	316.60	120.00	3223	240	94
10	RHS	1+233	0.148	0.126	0.077	0.059	0.053	0.039	0.036	37.5	80	510	2918.60	497.70	119.70	3267	370	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor C-05 Pattoor- Old Collector (1+100 to 1+961)																		
1	LHS	1+100	0.087	0.065	0.044	0.038	0.037	0.034	0.033	37.5	80	510	2942.80	499.20	120.00	3294	371	94
2	LHS	1+205	0.481	0.348	0.253	0.156	0.099	0.046	0.031	37.5	80	510	2973.60	264.20	120.00	3329	199	94
3	LHS	1+356	0.556	0.367	0.264	0.152	0.092	0.035	0.029	37.5	80	510	2975.80	272.80	120.00	3331	206	94
4	LHS	1+515	0.152	0.121	0.095	0.068	0.053	0.035	0.027	37.5	80	510	2931.80	498.00	120.00	3282	370	94
5	LHS	1+602	0.277	0.184	0.133	0.092	0.051	0.032	0.013	37.5	80	510	2929.60	495.70	119.90	3280	368	94
6	LHS	1+744	0.524	0.380	0.293	0.170	0.110	0.048	0.032	37.5	80	510	2995.60	190.70	120.00	3354	139	94
7	LHS	1+961	0.128	0.105	0.080	0.059	0.056	0.042	0.034	37.5	80	510	2947.20	495.70	119.80	3299	368	94
8	RHS	1+961	0.207	0.157	0.131	0.104	0.086	0.061	0.046	37.7	80	510	2898.80	497.70	120.00	3275	370	94
9	RHS	1+855	0.377	0.269	0.216	0.129	0.097	0.047	0.037	37.7	80	510	2945.00	480.80	120.00	3328	358	94
10	RHS	1+745	0.373	0.262	0.203	0.159	0.097	0.071	0.022	37.7	80	510	2984.60	350.60	120.00	3372	266	94
11	RHS	1+516	0.143	0.098	0.092	0.080	0.058	0.031	0.008	37.7	80	510	2984.60	497.30	120.00	3372	369	94
12	RHS	1+356	0.564	0.422	0.335	0.226	0.146	0.061	0.032	37.7	80	510	2971.40	137.90	120.00	3357	93	94
13	RHS	1+253	0.444	0.324	0.224	0.129	0.084	0.029	0.020	37.7	80	510	2995.60	480.10	120.00	3385	358	94
14	RHS	1+100	0.204	0.169	0.101	0.076	0.061	0.045	0.034	37.7	80	510	2978.00	492.20	119.80	3365	366	94
Corridor C-06																		
1	LHS	0+000	0.102	0.090	0.069	0.059	0.050	0.037	0.029	37.9	80	510	2980.20	498.40	119.20	3399	370	94
2	LHS	0+100	0.392	0.291	0.232	0.144	0.096	0.049	0.039	37.9	80	510	2865.80	410.50	120.00	3268	310	94
3	LHS	0+250	0.427	0.360	0.314	0.241	0.201	0.129	0.095	37.9	80	510	2982.40	196.20	82.90	3401	144	62
4	LHS	0+504	0.147	0.120	0.088	0.068	0.057	0.039	0.034	38	80	510	2830.60	498.60	120.00	3243	370	94
5	LHS	0+605	0.458	0.331	0.261	0.164	0.119	0.057	0.041	38	80	510	1807.90	218.90	120.00	2071	162	94
6	LHS	0+754	0.366	0.267	0.211	0.140	0.091	0.042	0.033	38	80	510	2978.00	482.00	120.00	3412	359	94
7	LHS	1+008	0.218	0.010	0.133	0.099	0.078	0.049	0.035	37.9	80	510	2989.00	496.50	119.60	3409	369	94
8	LHS	1+255	0.449	0.352	0.289	0.205	0.144	0.072	0.045	37.9	80	510	1906.90	160.60	120.00	2175	113	94
9	LHS	1+360	0.328	0.228	0.181	0.134	0.097	0.058	0.040	37.9	80	510	2980.20	492.60	120.00	3399	366	94
10	LHS	1+509	0.161	0.119	0.100	0.072	0.061	0.042	0.033	37.9	80	510	2964.80	498.40	120.00	3381	370	94
11	LHS	1+650	0.464	0.353	0.260	0.165	0.111	0.061	0.040	37.9	80	510	1506.60	223.60	120.00	1718	166	94
12	LHS	1+865	0.298	0.228	0.176	0.115	0.076	0.033	0.018	37.9	80	510	2978.00	478.50	120.00	3396	357	94
13	LHS	2+009	0.304	0.145	0.100	0.059	0.045	0.025	0.029	37.9	80	510	2986.80	496.10	496.10	3406	369	100
14	LHS	2+325	0.449	0.309	0.238	0.147	0.103	0.046	0.025	37.9	80	510	2971.40	297.10	120.00	3389	225	94
15	LHS	2+522	0.177	0.139	0.099	0.061	0.046	0.028	0.025	37.9	80	510	2762.50	498.80	119.90	3151	370	94
16	LHS	2+854	0.463	0.336	0.263	0.178	0.115	0.055	0.032	37.9	80	510	2157.60	198.10	120.00	2461	145	94
17	LHS	3+001	0.449	0.323	0.243	0.166	0.117	0.057	0.039	37.9	80	510	1500.00	253.70	120.00	1711	191	94
18	LHS	3+163	0.286	0.244	0.199	0.147	0.117	0.068	0.045	37.8	80	510	2938.40	421.80	120.00	3336	318	94
19	RHS	2+009	0.270	0.221	0.168	0.120	0.094	0.059	0.044	37.9	80	510	2982.40	494.90	119.90	3401	368	94
20	RHS	1+865	0.352	0.303	0.259	0.201	0.160	0.100	0.079	37.9	80	510	2993.40	231.00	105.60	3414	172	82
21	RHS	1+758	0.257	0.196	0.142	0.094	0.073	0.032	0.035	37.8	80	510	2967.00	500.00	119.90	3368	371	94
22	RHS	1+650	0.111	0.091	0.072	0.039	0.034	0.022	0.020	37.7	80	510	2923.00	496.90	120.00	3303	369	94
23	RHS	1+509	0.310	0.124	0.113	0.111	0.075	0.027	0.015	37.7	80	510	3000.00	500.00	120.00	3390	371	94
24	RHS	1+360	0.171	0.136	0.105	0.080	0.065	0.047	0.039	37.7	80	510	2887.80	497.30	120.00	3263	369	94
25	RHS	1+255	0.294	0.209	0.157	0.100	0.071	0.047	0.034	37.7	80	510	2994.40	494.90	119.90	3383	368	94
26	RHS	1+008	0.325	0.259	0.218	0.162	0.121	0.066	0.041	37.7	80	510	2995.60	323.30	120.00	3385	246	94
27	RHS	0+806	0.156	0.132	0.101	0.081	0.065	0.047	0.035	37.6	80	510	2938.40	500.00	119.60	3305	371	94
28	RHS	0+754	0.356	0.198	0.166	0.138	0.098	0.056	0.038	37.6	80	510	2970.10	485.10	120.00	3340	361	94
29	RHS	0+605	0.427	0.358	0.303	0.228	0.177	0.107	0.078	37.6	80	510	2993.40	155.10	103.50	3367	108	80
30	RHS	0+504	0.402	0.314	0.254	0.178	0.123	0.069	0.050	37.6	80	510	1882.70	233.30	120.00	2117	174	94
31	RHS	0+341	0.479	0.382	0.321	0.231	0.172	0.089	0.051	37.6	80	510	2540.30	245.80	119.90	2857	184	94
32	RHS	0+250	0.316	0.207	0.156	0.104	0.069	0.036	0.024	37.6	80	510	2905.40	498.00	120.00	3268	370	94
33	RHS	0+100	0.435	0.381	0.335	0.253	0.209	0.132	0.099	37.6	80	510	2951.60	182.10	80.90	3320	132	61
34	RHS	0+000	0.404	0.317	0.254	0.177	0.119	0.063	0.036	37.6	80	510	2272.00	230.20	120.00	2555	172	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor C-07																		
1	LHS	0+000	0.285	0.197	0.113	0.077	0.065	0.047	0.037	38.5	75	460	2997.80	496.90	120.00	3516	369	94
2	LHS	0+148	0.287	0.222	0.182	0.127	0.098	0.053	0.035	38.6	75	460	2931.80	495.70	120.00	3455	368	94
3	LHS	0+262	0.302	0.248	0.214	0.151	0.118	0.061	0.035	38.6	75	460	2951.60	484.00	120.00	3479	361	94
4	LHS	0+356	0.402	0.310	0.252	0.164	0.112	0.054	0.037	38.6	75	460	2929.60	299.00	119.90	3453	227	94
5	LHS	0+475	0.208	0.121	0.113	0.073	0.054	0.033	0.027	38.6	75	460	2993.40	493.40	119.80	3528	367	94
6	LHS	0+550	0.141	0.116	0.079	0.057	0.045	0.021	0.018	38.7	75	460	2934.00	499.20	119.60	3474	371	94
7	RHS	0+550	0.123	0.090	0.059	0.041	0.034	0.022	0.018	38.4	75	460	2991.20	495.70	119.70	3492	368	94
8	RHS	0+419	0.220	0.156	0.128	0.092	0.068	0.040	0.030	38.4	75	460	2995.60	496.50	120.00	3497	369	94
9	RHS	0+332	0.232	0.179	0.146	0.108	0.041	0.022	0.004	38.4	75	460	2894.40	118.40	120.00	3379	76	94
10	RHS	0+250	0.283	0.233	0.213	0.163	0.134	0.084	0.059	38.5	75	460	2986.80	496.10	119.80	3503	369	94
11	RHS	0+116	0.350	0.229	0.162	0.136	0.081	0.067	0.024	38.5	75	460	2929.60	493.00	119.90	3436	367	94
12	RHS	0+005	0.174	0.140	0.101	0.071	0.058	0.041	0.032	38.5	75	460	2749.30	499.20	119.80	3225	371	94
Corridor C-08																		
1	LHS	0+050	0.233	0.181	0.131	0.086	0.066	0.042	0.024	39.9	75	450	2894.40	488.30	179.90	3630	363	100.00
2	LHS	0+159	0.330	0.263	0.221	0.166	0.124	0.070	0.044	39.9	75	450	2982.40	316.60	157.00	3741	240	100.00
3	LHS	0+254	0.451	0.362	0.311	0.218	0.175	0.097	0.058	39.9	75	450	2989.00	215.70	116.30	3749	160	91.02
4	LHS	0+365	0.407	0.289	0.217	0.142	0.095	0.044	0.027	39.9	75	450	2813.00	218.50	180.00	3528	162	100.00
5	LHS	0+504	0.169	0.115	0.101	0.076	0.063	0.042	0.032	39.9	75	450	2903.20	497.30	179.90	3641	369	100.00
6	LHS	0+628	0.183	0.139	0.111	0.083	0.068	0.047	0.039	39.9	75	450	2839.40	498.40	179.70	3561	370	100.00
7	LHS	0+756	0.363	0.285	0.230	0.162	0.120	0.064	0.038	39.9	75	450	2982.40	246.20	174.60	3741	185	100.00
8	LHS	0+823	0.435	0.267	0.198	0.189	0.136	0.065	0.039	39.9	75	450	2984.60	234.90	170.40	3744	176	100.00
9	LHS	1+000	0.256	0.175	0.127	0.084	0.058	0.035	0.024	39.9	75	450	2969.20	491.80	180.00	3724	366	100.00
10	LHS	1+112	0.482	0.339	0.302	0.221	0.162	0.088	0.053	39.9	75	450	2997.80	191.50	128.50	3760	140	100.00
11	LHS	1+250	0.379	0.305	0.271	0.213	0.170	0.114	0.087	39.9	75	450	2929.60	418.30	92.20	3675	315	70.41
12	LHS	1+509	0.106	0.086	0.071	0.053	0.046	0.035	0.030	39.9	75	450	2969.20	499.20	180.00	3724	371	100.00
13	LHS	1+658	0.315	0.199	0.141	0.074	0.048	0.030	0.024	39.9	75	450	2775.70	498.40	180.00	3481	370	100.00
14	LHS	1+778	0.400	0.322	0.272	0.206	0.149	0.082	0.053	39.9	75	450	2973.60	250.50	133.00	3730	188	100.00
15	LHS	1+856	0.344	0.289	0.249	0.207	0.175	0.130	0.102	39.9	75	450	2936.20	498.80	85.20	3683	370	64.42
16	LHS	2+000	0.426	0.327	0.226	0.158	0.135	0.085	0.060	39.9	75	450	2901.00	267.40	133.00	3639	202	100.00
17	LHS	2+135	0.167	0.137	0.110	0.068	0.060	0.035	0.025	39.8	75	450	2991.20	499.20	179.70	3734	371	100.00
18	RHS	2+350	0.097	0.092	0.052	0.042	0.032	0.020	0.013	40.2	75	450	2830.60	496.50	179.70	3603	369	100.00
19	RHS	2+245	0.129	0.087	0.072	0.056	0.040	0.023	0.024	40.2	75	450	2997.80	498.80	179.10	3816	370	100.00
20	RHS	2+115	0.380	0.253	0.215	0.155	0.107	0.049	0.032	40.2	75	450	2962.60	272.80	179.90	3771	206	100.00
21	RHS	2+010	0.144	0.109	0.092	0.074	0.056	0.042	0.030	40.3	75	450	2991.20	500.00	179.20	3826	371	100.00
22	RHS	1+856	0.423	0.339	0.249	0.167	0.115	0.054	0.036	40.3	75	450	2991.20	183.70	178.30	3826	133	100.00
23	RHS	1+748	0.150	0.093	0.072	0.058	0.044	0.031	0.024	40.2	75	450	2931.80	494.50	179.70	3732	368	100.00
24	RHS	1+652	0.394	0.305	0.257	0.175	0.124	0.062	0.043	40.2	75	450	2993.40	211.40	170.80	3810	156	100.00
25	RHS	1+528	0.119	0.075	0.060	0.048	0.037	0.027	0.022	40.2	75	450	2978.00	488.30	180.00	3790	363	100.00
26	RHS	1+350	0.265	0.231	0.201	0.154	0.130	0.082	0.069	40.2	75	450	3000.00	499.60	129.20	3818	371	100.00
27	RHS	1+240	0.185	0.142	0.106	0.070	0.055	0.033	0.025	40.1	75	450	2819.60	497.70	179.90	3571	370	100.00
28	RHS	1+125	0.417	0.328	0.278	0.204	0.146	0.072	0.040	40.1	75	450	2995.60	205.20	156.00	3794	151	100.00
29	RHS	1+000	0.340	0.261	0.195	0.134	0.093	0.057	0.038	40.2	75	450	2993.40	302.90	179.60	3810	230	100.00
30	RHS	8+563	0.352	0.231	0.184	0.171	0.129	0.071	0.034	40.2	75	450	2978.00	307.20	177.50	3790	233	100.00
31	RHS	0+756	0.290	0.212	0.172	0.123	0.087	0.054	0.041	40.2	75	450	2989.00	444.10	179.90	3804	333	100.00
32	RHS	0+622	0.234	0.173	0.144	0.114	0.092	0.071	0.052	40.2	75	450	2975.80	498.80	177.40	3788	370	100.00
33	RHS	0+514	0.260	0.205	0.173	0.138	0.103	0.065	0.046	40.2	75	450	2971.40	499.20	168.00	3782	371	100.00
34	RHS	0+356	0.303	0.233	0.206	0.160	0.120	0.063	0.036	40.2	75	450	2962.60	346.30	178.90	3771	263	100.00
35	RHS	0+255	0.349	0.257	0.202	0.140	0.097	0.050	0.033	40.2	75	450	2927.40	308.00	179.70	3726	234	100.00
36	RHS	0+055	0.119	0.080	0.063	0.053	0.036	0.023	0.024	40.2	75	450	2874.60	495.30	179.60	3659	368	100.00

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
Corridor C-09																		
1	LHS	0+000	0.230	0.175	0.119	0.032	0.065	0.033	0.025	40.2	120	510	2892.20	494.90	119.90	3681	368	94
2	LHS	0+100	0.254	0.209	0.177	0.123	0.102	0.060	0.052	40.2	120	510	2973.60	499.60	120.00	3785	371	94
3	LHS	0+256	0.503	0.386	0.304	0.224	0.142	0.079	0.045	40.2	120	510	2234.60	136.80	119.90	2844	93	94
4	LHS	0+492	0.071	0.052	0.037	0.029	0.021	0.012	0.014	40.2	120	510	2824.00	491.40	120.00	3594	366	94
5	LHS	0+655	0.501	0.387	0.274	0.184	0.143	0.066	0.049	40.2	120	510	1436.20	173.10	120.00	1828	124	94
6	LHS	0+756	0.548	0.430	0.354	0.258	0.193	0.110	0.068	40.2	120	510	2905.40	103.10	108.60	3698	63	84
7	LHS	0+805	0.263	0.202	0.160	0.121	0.096	0.062	0.051	40.2	120	510	2925.20	494.10	120.00	3723	367	94
8	LHS	1+007	0.230	0.167	0.121	0.086	0.052	0.023	0.015	40.2	120	510	2903.20	489.10	120.00	3695	364	94
9	LHS	1+265	0.248	0.157	0.113	0.075	0.055	0.034	0.023	40.2	120	510	2901.00	500.00	119.90	3692	371	94
10	LHS	1+356	0.375	0.297	0.248	0.177	0.127	0.060	0.025	40.2	120	510	2984.60	193.10	120.00	3799	141	94
11	LHS	1+506	0.347	0.249	0.201	0.138	0.093	0.049	0.026	40.2	120	510	2914.20	446.80	120.00	3709	335	94
12	LHS	1+768	0.135	0.099	0.084	0.064	0.052	0.036	0.029	40.2	120	510	2975.80	499.60	119.80	3788	371	94
13	LHS	1+856	0.270	0.213	0.182	0.145	0.117	0.079	0.059	40.2	120	510	2964.80	496.90	119.80	3774	369	94
14	LHS	2+007	0.123	0.081	0.065	0.048	0.043	0.029	0.022	40.1	120	510	2982.40	496.50	120.00	3777	369	94
15	LHS	2+132	0.122	0.080	0.065	0.047	0.042	0.029	0.023	40.1	120	510	2978.00	496.50	119.90	3772	369	94
16	LHS	2+257	0.124	0.081	0.066	0.048	0.043	0.028	0.022	40.1	120	510	2964.80	499.60	119.50	3755	371	94
17	LHS	2+504	0.306	0.188	0.139	0.097	0.082	0.054	0.047	40.1	120	510	2978.00	489.10	119.90	3772	364	94
18	LHS	2+629	0.313	0.147	0.141	0.099	0.083	0.055	0.047	40.1	120	510	2964.80	497.70	120.00	3755	370	94
19	LHS	2+754	0.309	0.190	0.140	0.098	0.082	0.055	0.047	40.1	120	510	2841.60	497.70	120.00	3599	370	94
20	LHS	2+821	0.176	0.080	0.060	0.030	0.032	0.021	0.017	40.1	120	510	2938.40	498.80	120.00	3722	370	94
21	RHS	2+835	0.170	0.092	0.053	0.047	0.041	0.029	0.022	40.1	120	510	2934.00	498.40	120.00	3716	370	94
22	RHS	2+775	0.299	0.237	0.201	0.144	0.110	0.054	0.032	40.1	120	510	2984.60	446.80	120.00	3780	335	94
23	RHS	2+650	0.319	0.254	0.215	0.154	0.112	0.049	0.027	40.1	120	510	2967.00	381.10	119.90	3758	289	94
24	RHS	2+526	0.194	0.146	0.098	0.078	0.064	0.044	0.032	40.1	120	510	2813.00	498.80	120.00	3563	370	94
25	RHS	2+356	0.457	0.364	0.271	0.191	0.137	0.075	0.048	40.1	120	510	1935.50	178.20	119.90	2451	128	94
26	RHS	2+255	0.160	0.103	0.080	0.066	0.049	0.042	0.006	40.1	120	510	2984.60	476.90	120.00	3780	356	94
27	RHS	2+052	0.160	0.004	0.083	0.065	0.055	0.039	0.029	40.1	120	510	2975.80	493.40	119.70	3769	367	94
28	RHS	1+745	0.379	0.252	0.249	0.183	0.135	0.067	0.040	40.1	120	510	2826.20	256.40	119.90	3580	193	94
29	RHS	1+653	0.367	0.276	0.274	0.221	0.172	0.111	0.072	40.1	120	510	2971.40	272.80	97.00	3763	206	75
30	RHS	1+529	0.144	0.110	0.091	0.066	0.057	0.034	0.033	40	120	510	2997.80	495.30	119.90	3778	368	94
31	RHS	1+336	0.479	0.363	0.278	0.190	0.129	0.066	0.050	40	120	510	1785.90	180.50	120.00	2251	130	94
32	RHS	1+123	0.451	0.344	0.271	0.199	0.142	0.086	0.053	40	120	510	2340.20	174.30	120.00	2950	125	94
33	RHS	1+023	0.246	0.173	0.134	0.104	0.073	0.047	0.030	39.9	120	510	2793.30	497.30	119.80	3504	369	94
34	RHS	0+750	0.344	0.199	0.152	0.108	0.075	0.051	0.035	39.9	120	510	2978.00	499.20	119.90	3735	371	94
35	RHS	0+662	0.413	0.358	0.058	0.040	0.033	0.021	0.018	39.9	120	510	2984.60	401.80	119.80	3744	304	94
36	RHS	0+548	0.171	0.141	0.111	0.075	0.062	0.036	0.024	39.8	120	510	2916.40	498.40	119.90	3640	370	94
37	RHS	0+356	0.480	0.370	0.306	0.221	0.165	0.086	0.046	39.8	120	510	2764.70	135.60	119.80	3451	91	94
38	RHS	0+255	0.207	0.134	0.100	0.081	0.049	0.047	0.012	39.8	120	510	2903.20	495.70	119.90	3624	368	94
39	RHS	0+102	0.450	0.230	0.181	0.166	0.132	0.063	0.052	39.8	120	510	1321.80	403.00	120.00	1650	305	94
40	RHS	0+000	0.448	0.238	0.051	0.036	0.034	0.025	0.016	39.9	120	510	2975.80	500.00	119.50	3732	371	94
Corridor C-10																		
1	LHS	0+000	0.118	0.088	0.027	0.024	0.016	0.015	0.010	39.6	75	510	2967.00	499.60	119.80	3668	371	94
2	LHS	0+105	0.449	0.274	0.193	0.183	0.128	0.059	0.028	39.6	75	510	2872.40	323.30	119.90	3551	246	94
3	LHS	0+262	0.092	0.044	0.030	0.024	0.016	0.013	0.002	39.7	75	510	2912.00	493.00	119.90	3617	367	94
4	LHS	0+356	0.378	0.313	0.265	0.187	0.136	0.064	0.036	39.7	75	510	2967.00	306.10	120.00	3685	232	94
5	LHS	0+514	0.148	0.119	0.098	0.073	0.060	0.036	0.026	39.8	75	510	2964.80	494.50	119.70	3701	368	94
6	LHS	0+652	0.279	0.178	0.134	0.105	0.065	0.052	0.016	39.8	75	510	2802.10	496.50	120.00	3498	369	94
7	LHS	0+756	0.184	0.086	0.054	0.045	0.024	0.021	0.007	40	75	510	2762.50	495.70	120.00	3482	368	94
8	LHS	0+842	0.437	0.334	0.270	0.198	0.133	0.076	0.038	40	75	510	2848.20	239.60	120.00	3590	179	94
9	LHS	1+029	0.231	0.156	0.124	0.088	0.050	0.032	0.016	40.2	75	510	2989.00	496.10	120.00	3804	369	94
10	LHS	1+145	0.282	0.191	0.178	0.143	0.102	0.062	0.035	40.2	75	510	2967.00	494.10	120.00	3776	367	94
11	LHS	1+270	0.173	0.075	0.056	0.044	0.029	0.027	0.025	40.3	75	510	2852.60	500.00	119.90	3649	371	94

S. No.	Location of test point		Peak Normalised Deflection (mm) observed at a radial distance (mm) of							Temp (°C)	Thickness (mm)		Backcalculated Moduli (Mpa)			Corrected Backcalculated Moduli (Mpa)		
	Lane/ Side	Chainage (km)	0	200	300	450	600	900	1500	Pavement	Bituminous	Granular Surface	Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous Layer (Temp)	Granular Layer (Seasonal)	Subgrade Layer (Seasonal)
12	LHS	1+356	0.033	0.027	0.027	0.026	0.024	0.006	0.001	40.3	75	510	2991.20	387.80	120.00	3826	294	94
13	LHS	1+515	0.203	0.141	0.109	0.075	0.060	0.041	0.025	40.4	75	510	2945.00	492.20	119.90	3785	366	94
14	LHS	1+650	0.286	0.209	0.164	0.139	0.084	0.070	0.015	40.4	75	510	2907.60	440.20	120.00	3737	331	94
15	LHS	1+762	0.093	0.066	0.053	0.035	0.030	0.018	0.016	40.4	75	510	2720.70	498.00	120.00	3497	370	94
16	LHS	1+852	0.412	0.303	0.243	0.159	0.102	0.046	0.030	40.4	75	510	2964.80	333.80	120.00	3811	253	94
17	LHS	2+000	0.094	0.074	0.059	0.041	0.036	0.022	0.019	40.5	75	510	2951.60	497.70	119.60	3813	370	94
18	RHS	2+035	0.144	0.124	0.104	0.088	0.072	0.047	0.031	40.5	75	510	2901.00	499.20	199.80	3747	371	100
19	RHS	1+854	0.404	0.314	0.253	0.167	0.118	0.056	0.035	40.5	75	510	2927.40	295.10	120.00	3781	224	94
20	RHS	1+747	0.253	0.173	0.148	0.112	0.077	0.046	0.031	40.5	75	510	2997.80	493.00	119.90	3872	367	94
21	RHS	1+654	0.361	0.210	0.149	0.105	0.056	0.037	0.022	40.5	75	510	2839.40	496.50	119.80	3668	369	94
22	RHS	1+514	0.187	0.132	0.108	0.078	0.049	0.024	0.014	40.4	75	510	3000.00	494.10	119.90	3856	367	94
23	RHS	1+334	0.312	0.183	0.131	0.098	0.062	0.048	0.018	40.4	75	510	2815.20	498.40	120.00	3618	370	94
24	RHS	1+240	0.138	0.095	0.070	0.052	0.034	0.018	0.015	40.4	75	510	3000.00	500.00	119.90	3856	371	94
25	RHS	1+123	0.453	0.347	0.286	0.201	0.138	0.060	0.035	40.4	75	510	2956.00	207.90	120.00	3799	153	94
26	RHS	1+008	0.245	0.173	0.126	0.091	0.056	0.025	0.021	40.3	75	510	2901.00	499.60	120.00	3710	371	94
27	RHS	0+854	0.606	0.459	0.359	0.244	0.175	0.074	0.045	40.3	75	510	2982.40	116.80	120.00	3815	75	94
28	RHS	0+744	0.136	0.099	0.063	0.049	0.035	0.021	0.017	40.3	75	510	2837.20	498.00	119.60	3629	370	94
29	RHS	0+642	0.392	0.275	0.194	0.144	0.065	0.055	0.041	40.3	75	510	2890.00	489.80	120.00	3696	364	94
30	RHS	0+516	0.180	0.148	0.116	0.092	0.067	0.040	0.029	40.3	75	510	2969.20	496.10	120.00	3798	369	94
31	RHS	0+321	0.278	0.223	0.184	0.139	0.102	0.062	0.044	40.3	75	510	2973.60	492.60	120.00	3803	366	94
32	RHS	0+234	0.079	0.052	0.043	0.034	0.025	0.018	0.013	40.3	75	510	2986.80	497.70	120.00	3820	370	94
33	RHS	0+102	0.398	0.319	0.269	0.199	0.147	0.084	0.054	40.3	75	510	3000.00	279.10	119.90	3837	211	94
34	RHS	0+000	0.072	0.059	0.047	0.039	0.031	0.021	0.016	40.3	75	510	2991.20	499.20	119.40	3826	371	94

ANNEXURE-03

FWD OVERLAY DESIGN

S. No.	Chainage		Length	Lane/ Side	15th PerCentile Modulus			Thickness (mm)		IIT Pave Result		Rutting Life	Fatigue Life	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA)	Remaining life of Pavement in years
	From	To			Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous	Granular Surface	Crtitical Tensile Strain at Bottom BT	Crtitical Vertical Strain at top of Subgrade						
Corridor AL-01																	
1	0.00	244.00	244	LHS	3265.47	369.75	94.04	105.0	510.0	0.000175	0.000215	598195122	29275704	598.2	29.3	29	17
2	0.00	244.00	244	RHS	3487.07	367.71	93.95	105.0	510.0	0.000170	0.000214	610973239	30914483	611.0	30.9	31	18
Corridor AL-02																	
1	0.00	1326.00	1326	LHS	3433.66	253.78	85.97	105.0	510.0	0.000205	0.000259	257633501	15150773	257.6	15.2	15	10
2	0.00	1326.00	1326	RHS	2952.41	367.16	93.93	105.0	510.0	0.000184	0.000218	559439787	26028283	559.4	26.0	26	16
Corridor AL-03																	
1	0.00	445.00	445	LHS	3328.18	249.93	94.10	120.0	510.0	0.000187	0.000230	437151846	22250750	437.2	22.3	22	9
2	0.00	445.00	445	RHS	3026.73	256.51	94.02	120.0	510.0	0.000195	0.000232	423649049	20540760	423.6	20.5	21	8
Corridor AL-04																	
1	0.00	320.00	320	LHS	3511.94	368.40	94.19	90.0	510.0	0.000188	0.000229	448511276	20989267	448.5	21.0	21	9
2	320.00	900.00	580	LHS	3430.65	282.47	94.15	90.0	510.0	0.000218	0.000257	267324137	11871693	267.3	11.9	12	5
3	900.00	1433.00	533	LHS	3427.56	280.13	94.05	90.0	510.0	0.000219	0.000258	262655059	11671396	262.7	11.7	12	5
4	0.00	320.00	320	RHS	3491.08	368.35	93.78	90.0	510.0	0.000188	0.000230	443224245	20835783	443.2	20.8	21	9
5	320.00	900.00	580	RHS	3072.01	297.35	78.43	90.0	510.0	0.000224	0.000278	187796848	11800509	187.8	11.8	12	5
6	900.00	1433.00	533	RHS	3434.06	293.50	94.12	90.0	510.0	0.000214	0.000253	286016841	12816513	286.0	12.8	13	6
Corridor BP-01																	
1	0.00	400.00	400	LHS	3124.98	369.28	100.00	70.0	450.0	0.000223	0.000291	152369616	11731053	152.4	11.7	12	20
2	400.00	950.00	550	LHS	3095.05	155.30	100.00	70.0	450.0	0.000366	0.000398	36588116	1735239	36.6	1.7	2	4
3	950.00	1466.00	516	LHS	3012.39	326.01	100.00	70.0	450.0	0.000245	0.000308	117240248	8426452	117.2	8.4	8	16
4	0.00	1466.00	1466	RHS	3066.41	192.38	100.00	70.0	450.0	0.000329	0.000296	139956783	2638573	140.0	2.6	3	6
Corridor BP-03																	
1	0.00	1220.00	1220	LHS	3236.14	335.67	100.00	90.0	450.0	0.000206	0.000273	201570055	15608575	201.6	15.6	16	21
2	2000.00	2960.00	960	LHS	3166.52	192.16	100.00	90.0	400.0	0.000276	0.000376	47627917	5088902	47.6	5.1	5	14
3	2960.00	3760.00	800	LHS	3103.57	202.55	59.75	90.0	460.0	0.000273	0.000420	28795964	5448088	28.8	5.4	5	14
4	0.00	1220.00	1220	RHS	3544.23	238.99	100.00	90.0	450.0	0.000234	0.000306	120933727	8767680	120.9	8.8	9	13
5	2000.00	2960.00	960	RHS	3426.28	262.47	100.00	90.0	400.0	0.000229	0.000340	75195393	9815124	75.2	9.8	10	23
6	2960.00	3760.00	800	RHS	3467.18	263.92	84.37	90.0	460.0	0.000226	0.000316	104823327	10297789	104.8	10.3	10	22
Corridor C-02																	
1	740.00	2580.00	1840	LHS	3166.02	345.56	94.02	130.0	510.0	0.000155	0.000197	881056473	48574304	881.1	48.6	49	12
2	2580.00	3373.00	793	LHS	3179.01	294.62	93.91	175.0	510.0	0.000125	0.000168	1810722892	110990037	1810.7	111.0	111	9
3	740.00	2580.00	1840	RHS	3087.31	320.54	93.86	130.0	510.0	0.000162	0.000204	759012315	41079887	759.0	41.1	41	11
4	2580.00	3373.00	793	RHS	2844.16	344.92	93.98	175.0	510.0	0.000124	0.000164	2030401146	123977049	2030.4	124.0	124	10
Corridor C-03A																	
1	780.00	1032.00	252	LHS	3161.72	365.98	93.98	30.0	510.0	0.000194	0.000299	133301902	20270908	133.3	20.3	20	97
2	780.00	1032.00	252	RHS	3111.90	368.72	94.13	30.0	510.0	0.000192	0.000298	135545049	21221874	135.5	21.2	21	99
Corridor C-03																	
1	460.00	1032.00	572	LHS	3058.25	329.09	94.15	30.0	510.0	0.000217	0.000315	105276121	13284206	105.3	13.3	13	85
2	1032.00	2100.00	1068	LHS	3110.68	364.77	94.05	130.0	510.0	0.000152	0.000194	957730489	52539784	957.7	52.5	53	14
3	2100.00	3335.00	1235	LHS	2881.46	307.15	94.02	130.0	510.0	0.000172	0.000209	678625280	35082299	678.6	35.1	35	9
4	460.00	1032.00	572	RHS	3192.77	367.90	94.10	30.0	510.0	0.000193	0.000298	135545049	20511478	135.5	20.5	21	99
5	1032.00	2100.00	1068	RHS	2381.53	108.72	93.93	130.0	510.0	0.000291	0.000275	195659357	5325932	195.7	5.3	5	2
6	2100.00	3335.00	1235	RHS	3212.63	336.93	94.10	130.0	510.0	0.000153	0.000199	853274507	50080148	853.3	50.1	50	13
Corridor C-04																	
1	760.00	1580.00	820	LHS	3274.65	313.56	94.18	90.0	450.0	0.000213	0.000289	156721284	13692793	156.7	13.7	14	17
2	5330.00	6000.00	670	LHS	3205.74	87.17	84.01	90.0	450.0	0.000375	0.000425	27174769	1538434	27.2	1.5	2	2
3	6600.00	7020.00	420	LHS	3331.83	359.18	93.83	90.0	450.0	0.000196	0.000273	202240170	18513315	202.2	18.5	19	21
4	7780.00	8090.00	310	LHS	3263.65	324.36	94.07	90.0	450.0	0.000209	0.000285	165888955	14621403	165.9	14.6	15	18
5	760.00	1580.00	820	RHS	3289.54	325.54	90.17	90.0	450.0	0.000208	0.000291	152845787	14851896	152.8	14.9	15	18
6	5330.00	6000.00	670	RHS	3258.02	288.52	93.84	90.0	450.0	0.000223	0.000299	133706357	11479805	133.7	11.5	11	15
7	6600.00	7020.00	420	RHS	3126.81	368.89	94.19	90.0	450.0	0.000199	0.000271	208743839	18567993	208.7	18.6	19	21
8	7780.00	8090.00	310	RHS	3255.06	323.76	94.07	90.0	450.0	0.000210	0.000286	165100408	14545817	165.1	14.5	15	18

S. No.	Chainage		Length	Lane/ Side	15th PerCentile Modulus			Thickness (mm)		IIT Pave Result		Rutting Life	Fatigue Life	Rutting Life (MSA)	Fatigue Life (MSA)	Remaining life of Pavement (MSA)	Remaining life of Pavement in years
	From	To			Bituminous Layer	Granular Layer	Subgrade Layer	Bituminous	Granular Surface	Crtitical Tensile Strain at Bottom BT	Crtitical Vertical Strain at top of Subgrade						
Corridor C-05 (1.3 to 1.83)																	
1	1300.00	1830.00	530	LHS	3200.91	132.27	83.51	80.0	510.0	0.000352	0.000374	48617333	1953781	48.6	2.0	2	3
2	1300.00	1830.00	530	RHS	3242.25	228.42	94.08	80.0	510.0	0.000270	0.000295	142995503	5424380	143.0	5.4	5	8
Corridor C-05 Pattoor- Old Collector (1+100 to 1+961)																	
1	1100.00	1465.00	365	LHS	3304.81	201.34	94.19	80.0	510.0	0.000285	0.000307	118630829	4330909	118.6	4.3	4	3
2	1465.00	1961.00	496	LHS	3280.80	242.15	94.05	80.0	510.0	0.000261	0.000288	158205456	6172120	158.2	6.2	6	9
3	1100.00	1465.00	365	RHS	3359.66	172.83	94.07	80.0	510.0	0.000304	0.000322	96111706	3326868	96.1	3.3	3	3
4	1465.00	1961.00	496	RHS	3298.88	307.69	94.19	80.0	510.0	0.000229	0.000261	246649813	10259294	246.6	10.3	10	14
Corridor C-06																	
1	0.00	3163.00	3163	LHS	2128.27	154.63	93.99	80.0	510.0	0.000405	0.000349	66962916	1606573	67.0	1.6	2	3
2	0.00	605.00	605	RHS	2380.16	155.68	80.76	80.0	510.0	0.000382	0.000377	46887852	1834762	46.9	1.8	2	3
3	605.00	3163.00	2558	RHS	3303.76	208.95	87.86	80.0	510.0	0.000280	0.000315	105427582	4647204	105.4	4.6	5	7
Corridor C-07																	
1	0.00	550.00	550	LHS	3454.53	327.14	93.97	75.0	460.0	0.000224	0.000298	137205410	10582944	137.2	10.6	11	34
2	0.00	550.00	550	RHS	3340.53	294.01	93.99	75.0	460.0	0.000242	0.000312	110417892	8092703	110.4	8.1	8	29
Corridor C-08																	
1	55.00	2350.00	2295	LHS	3588.98	167.49	94.61	75.0	450.0	0.000313	0.000385	42881953	2810586	42.9	2.8	3	5
2	55.00	2350.00	2295	RHS	3705.76	191.16	100.00	75.0	450.0	0.000289	0.000357	59956430	3725252	60.0	3.7	4	7
Corridor C-09																	
1	0.00	2835.00	2835	LHS	3598.35	138.35	94.02	120.0	510.0	0.000224	0.000260	252728631	10345614	252.7	10.3	10	5
2	0.00	1050.00	1050	RHS	3453.52	303.71	94.02	120.0	510.0	0.000168	0.000215	603266851	32563838	603.3	32.6	33	13
3	1050.00	1450.00	400	RHS	2355.74	125.74	94.19	120.0	510.0	0.000300	0.000287	161225610	4737057	161.2	4.7	5	2
4	1450.00	2835.00	1385	RHS	3568.69	197.61	93.99	120.0	510.0	0.000197	0.000243	342118117	16981747	342.1	17.0	17	7
Corridor C-10																	
1	0.00	2035.00	2035	LHS	3518.85	248.70	94.05	75.0	510.0	0.000259	0.000291	151658749	6008582	151.7	6.0	6	6
2	0.00	2035.00	2035	RHS	3679.13	216.16	94.05	75.0	510.0	0.000272	0.000305	122196350	4745152	122.2	4.7	5	5

ANNEXURE-04

INSPECTION PLAN

TRDCL Inspection Plan			
Object	**Item**	**Daily**	**Remarks**
Riding Surface	Pavement	✓	Visual Inspection
	Expansion Joints	✓	Visual Inspection
Median	Kerb	✓	Visual Inspection
Side Slopes	Shape	✓	Visual Inspection
	Turfing		
	Retaining Wall		
Drainage	Side/Toe drain	✓	Visual Inspection during rainy season
	Catch pits	✓	Visual Inspection during rainy season
Bridge Inclusive of flyover and underpasses	Superstructure		
	Substructure		
	Painting		
	Hand rail		
Culverts/Underpasses			
Saftey Barrier		✓	Visual Inspection
Traffic Operation Facilities	Signs		
	Marking	✓	Visual Inspection
	Delineator/Stud	✓	Visual Inspection
	Lighting	✓	Visual Inspection
	Traffic Siganals	✓	Visual Inspection
Other Facilities	Vegetation/Landscaping	✓	Visual Inspection
	Bus bay	✓	Visual Inspection
Encroachments		✓	Visual Inspection

Object	Item	Monthly	Remarks
Riding Surface	Pavement	✓	Close Inspection
	Expansion Joints	✓	Close Inspection
Median	Kerb	✓	Close Inspection
Side Slopes	Shape		
	Turfing	✓	Visual Inspection
	Retaining Wall	✓	Close Inspection
Drainage	Side/Toe drain	✓	Close Inspection
	Catch pits	✓	Close Inspection
Bridge Inclusive of flyover and underpasses	Superstructure		
	Substructure		
	Painting		
	Hand rail	✓	Close Inspection
Culverts/Underpasses			
Saftey Barrier			
Traffic Operation Facilities	Signs	✓	Thorough Inspection
	Marking	✓	Close Inspection
	Delineator/Stud	✓	Close Inspection
	Lighting		
	Traffic Siganals		
Other Facilities	Vegetation/Landscaping	✓	Close Inspection
	Bus bay	✓	Close Inspection
Encroachments		✓	Thorough Inspection

Object	Item	Quarterly	Remarks
Riding Surface	Pavement		
	Expansion Joints		
Median	Kerb		
Side Slopes	Shape	✓	Close Inspection
	Turfing		
	Retaining Wall		
Drainage	Side/Toe drain		
	Catch pits		
Bridge Inclusive of flyover and underpasses	Superstructure	✓	Close Inspection
	Substructure	✓	Close Inspection
	Painting		
	Hand rail	✓	Thorough Inspection
Culverts/Underpasses			
Saftey Barrier		✓	Close Inspection
Traffic Operation Facilities	Signs	✓	Close Inspection
	Marking	✓	Thorough Inspection
	Delineator/Stud	✓	Thorough Inspection
	Lighting	✓	Close Inspection
	Traffic Siganals	✓	Close Inspection
Other Facilities	Vegetation/Landscaping	✓	Thorough Inspection
	Bus bay		
Encroachments			

Object	Item	Before and after rainy season	Remarks
Riding Surface	Roughness value (BBD test)		2 times in a year
	Pavement	✓	Thorough Inspection
	Expansion Joints	✓	Thorough Inspection
Median	Kerb	✓	Thorough Inspection
Side Slopes	Shape	✓	Thorough Inspection
	Turfing	✓	Thorough Inspection
	Retaining Wall	✓	Thorough Inspection
Drainage	Side/Toe drain		
	Catch pits		
Bridge Inclusive of flyover and underpasses	Superstructure	✓	Thorough Inspection
	Substructure	✓	Thorough Inspection
	Painting	✓	Thorough Inspection
	Hand rail		
Culverts/Underpasses		✓	Thorough Inspection
Saftey Barrier		✓	Thorough Inspection
Traffic Operation Facilities	Signs		
	Marking		
	Delineator/Stud		
	Lighting		
	Traffic Siganals		
Other Facilities	Vegetation/Landscaping		
	Bus bay		
Encroachments			

APPENDIX-01

ROAD INVENTORY

ROAD NAME

C-02 LMS – ATTAKULANGARA JN

Figure 1 Pavement Condition is Good at CH-0+800

Figure 2 Pavement Condition is Good at CH-0+800

Figure 3 Pavement Condition is Good at CH-0+900

Figure 4 Pavement Condition is Good at CH-0+950

Figure 5 Pavement Condition is Good at CH-1+030

Figure 6 Pavement Condition is Good at CH-1+100

Figure 7 Pavement Condition is Good at CH-1+200

Figure 8 Pavement Condition is Good at CH-1+250

Figure 9 Pavement Condition is Good at CH-1+300

Figure 10 Pavement Condition is Good at CH-1+350

Figure 11 Pavement Condition is Good at CH-1+400

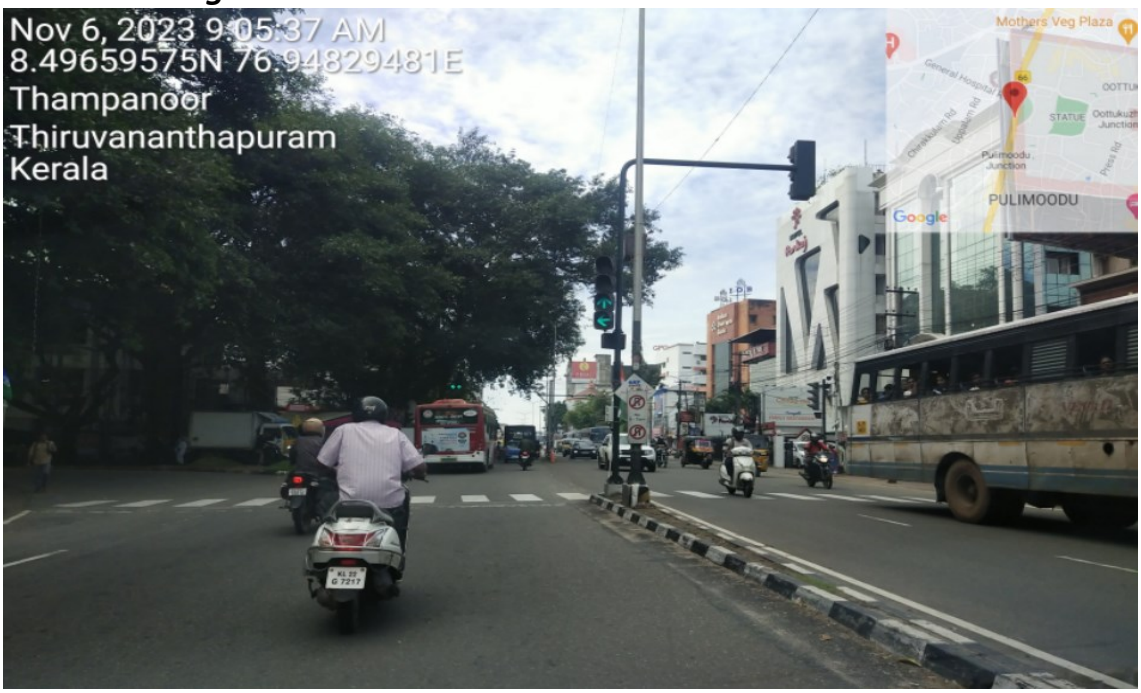

Figure 12 Pavement Condition is Good at CH-1+430

Figure 13 Pavement Condition is Good at CH-1+500

Figure 14 Pavement Condition is Good at CH-1+570

Figure 15 Pavement Condition is Good at CH-1+610

Figure 16 Pavement Condition is Good at CH-1+750

Figure 17 Pavement Condition is Good at CH-1+800

Figure 18 Pavement Condition is Good at CH-1+850

Figure 19 Pavement Condition is Good at CH-1+910

Figure 20 Pavement Condition is Good at CH-1+950

Figure 21 Pavement Condition is Good at CH-2+070

Figure 22 Pavement Condition is Good at CH-2+130

Figure 23 Pothole observed at CH-2+220

Figure 24 Pavement Condition is Good at CH-2+270

Figure 25 Pavement Condition is Good at CH-2+340

Figure 26 Pavement Condition is Good at CH-2+490

Figure 27 Pavement Condition is Good at CH-2+540

Figure 28 Pavement Condition is Fair at CH-2+710

Figure 29 Pavement Condition is Good at CH-2+740

Figure 30 Pavement Condition is Fair at CH-2+800

Figure 31 Pavement Condition is Fair at CH-2+800

Figure 32 Pavement Condition is Fair at CH-2+830

Figure 33 Pavement Condition is Good at CH-3+010

Figure 34 Pavement Condition is Good at CH-3+150

Figure 35 Pavement Condition is Good at CH-3+270

Figure 36 Pavement Condition is Good at CH-3+330

ROAD NAME

C-03 MUSEUM-NADAVANAM-RBI-PANAVILA-OVERBRIDGE

Figure 37 Pavement Condition is Fair at CH-0+470

Figure 38 Pavement Condition is Fair at CH-0+520

Figure 39 Pavement Condition is Fair at CH-0+600

Figure 40 Pavement Condition is Fair at CH-0+680

Figure 41 Patch work observed at CH-0+730

Figure 42 Pavement Condition is Poor at CH-0+780

Figure 43 Patch work observed at CH-0+850

Figure 44 Pavement Condition is Fair at CH-0+980

Figure 45 Pavement Condition is Fair at CH-1+070

Figure 46 Pavement Condition is Fair at CH-1+220

Figure 47 Pavement Condition is Good at CH-1+300

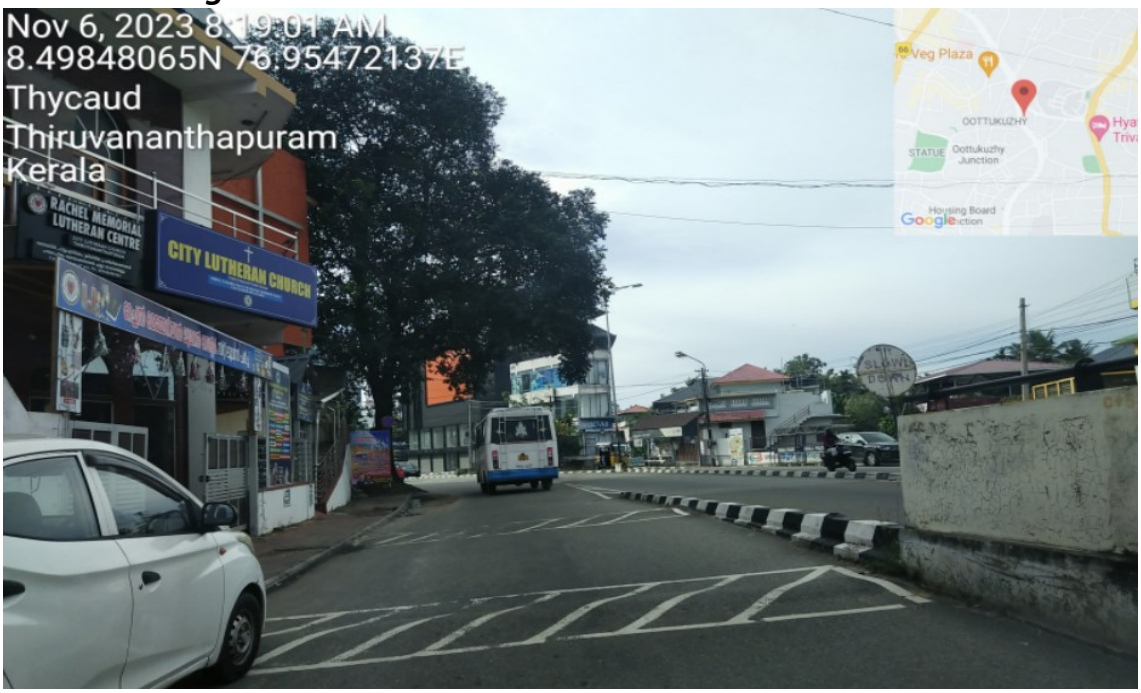

Figure 48 Pavement Condition is Good at CH-1+400

Figure 49 Pavement Condition is Fair at CH-1+450

Figure 50 Pavement Condition is Good at CH-1+520

Figure 51 Pavement Condition is Good at CH-1+560

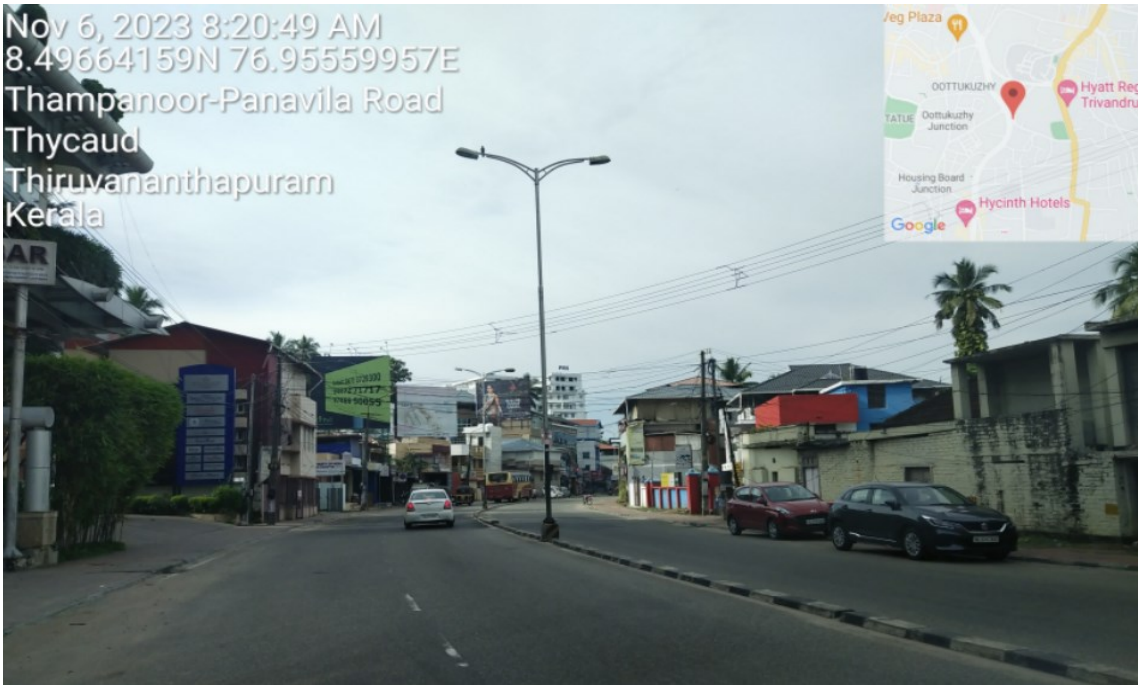

Figure 52 Pavement Condition is Good at CH-1+660

Figure 53 Pavement Condition is Fair at CH-1+710

Figure 54 Pavement Condition is Good at CH-1+760

Figure 55 Pavement Condition is Good at CH-1+850

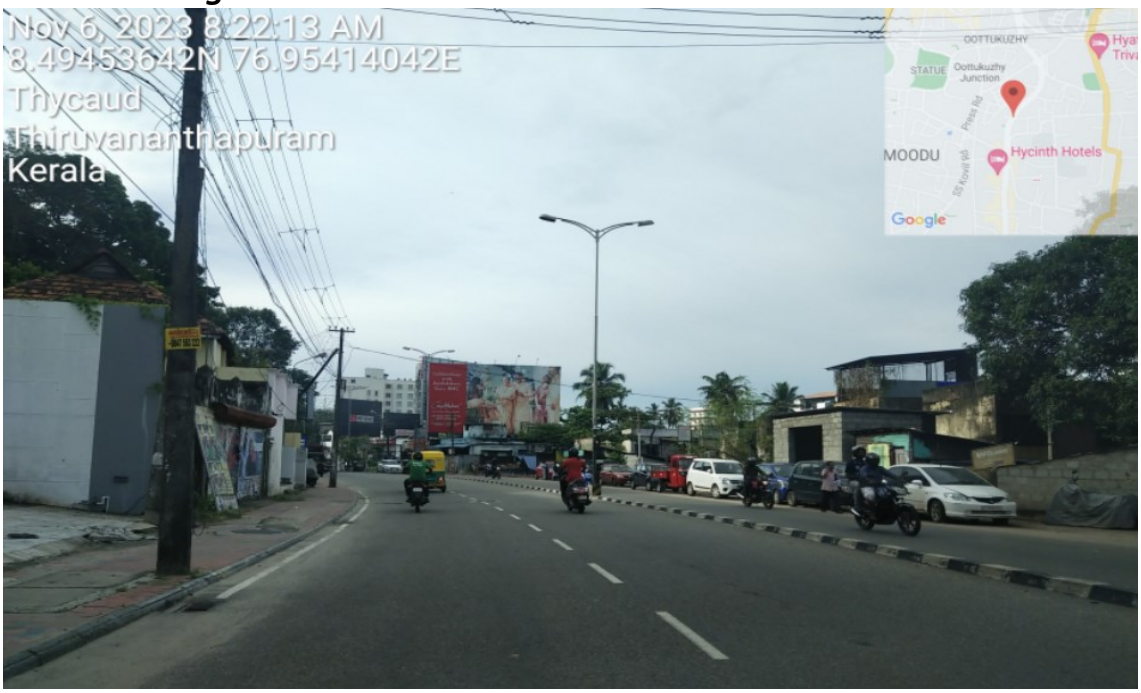

Figure 56 Pavement Condition is Good at CH-1+930

Figure 57 Pavement Condition is Fair at CH-2+030

Figure 58 Pavement Condition is Good at CH-2+200

Figure 59 Pavement Condition is Good at CH-2+300

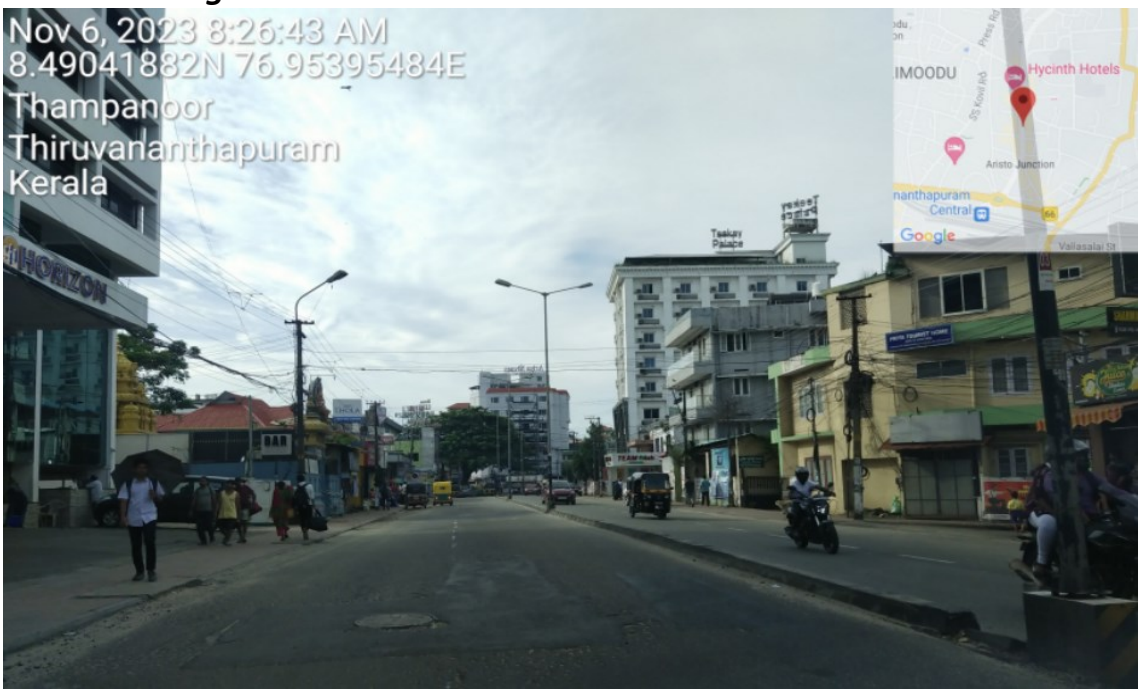

Figure 60 Patch work observed at CH-2+400

Figure 61 Pavement Condition is Fair at CH-2+470

Figure 62 Pavement Condition is Fair at CH-2+540

Figure 63 Pavement Condition is Fair at CH-2+600

Figure 64 Pavement Condition is Fair at CH-2+690

Figure 65 Pavement Condition is Fair at CH-2+790

Figure 66 Pavement Condition is Fair at CH-2+890

Figure 67 Pavement Condition is Good at CH-2+930

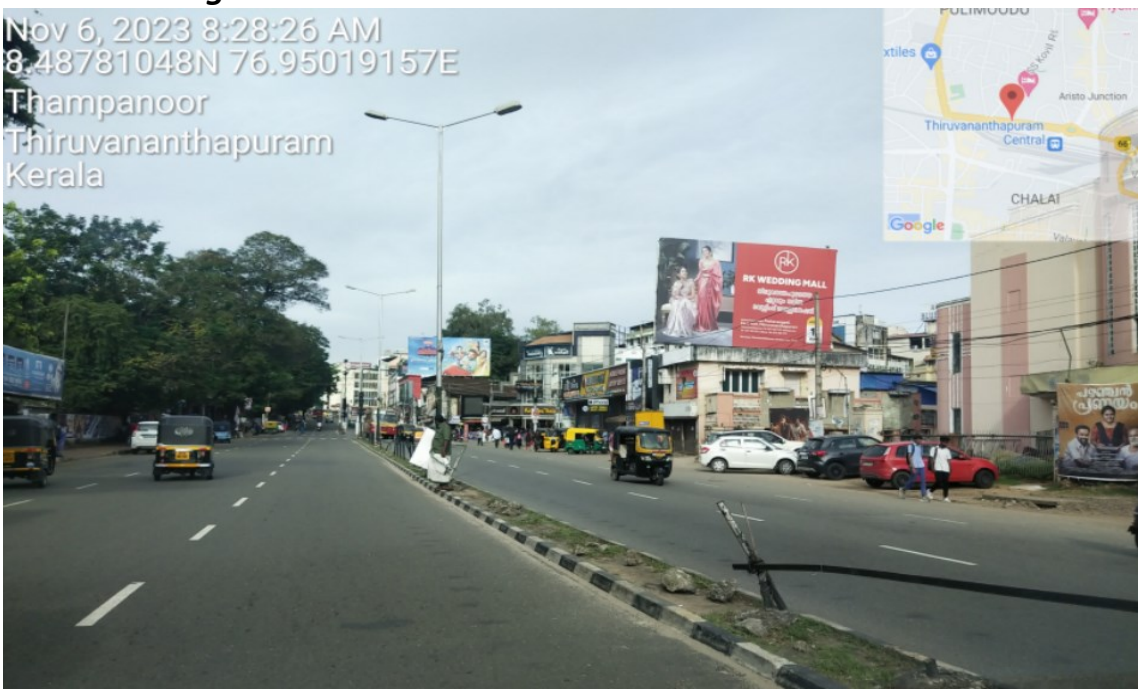

Figure 68 Pavement Condition is Good at CH-3+070

Figure 69 Pavement Condition is Good at CH-3+150

Figure 70 Pavement Condition is Good at CH-3+250

ROAD NAME

C-3A ASAN SQUARE – PALAYAM UNDER PASS – PANJAPURA – RBI

Figure 71 Pavement Condition is Good at CH-0+280

Figure 72 Pavement Condition is Good at CH-0+380

Figure 73 Pavement Condition is Good at CH-0+440

Figure 74 Pavement Condition is Good at CH-0+440

Figure 75 Pavement Condition is Good at CH-0+530

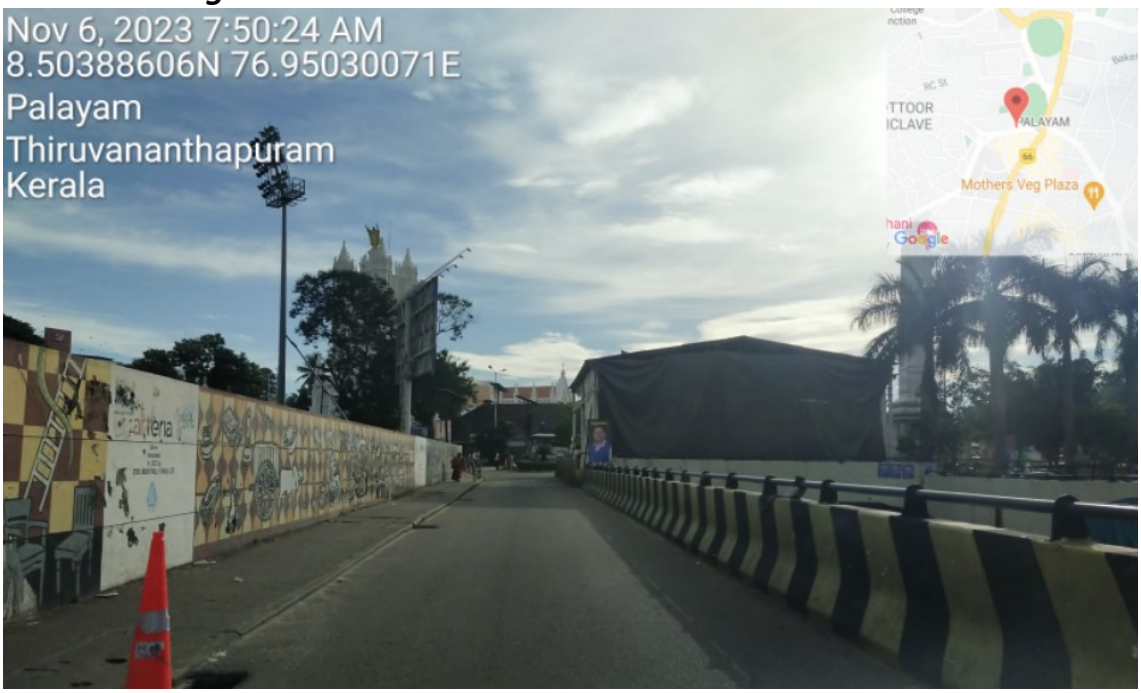

Figure 76 Pavement Condition is Good (SR) at CH-0+630

ROAD NAME

C-04 – DOMESTIC AIRPORT – SANGHUMUGHAM – CHACKAI – PETTAH – EYE HOSPITAL PALAYAM

Figure 77 Pavement Condition is Good at CH-0+760

Figure 78 Pavement Condition is Good at CH-1+040

Figure 79 Pavement Condition is Good at CH-1+130

Figure 80 Pavement Condition is Good at CH-1+240

Figure 81 Pavement Condition is Good at CH-1+310

Figure 82 Pavement Condition is Good at CH-1+480

Figure 83 Pavement Condition is Good at CH-1+550

Figure 84 Pavement Condition is Good at CH-5+300

Figure 85 Pavement Condition is Good at CH-5+430

Figure 86 Pavement Condition is Good at CH-5+510

Figure 87 Pavement Condition is Good at CH-5+580

Figure 88 Pavement Condition is Good at CH-5+660

Figure 89 Pavement Condition is Good at CH-5+760

Figure 90 Construction work in progress (RHS) at CH-5+850

Figure 91 Pavement condition is Poor at CH-5+850

Figure 92 Pavement condition is Fair at CH-6+000

Figure 93 Pavement Condition is Good at CH-6+130

Figure 94 Patch work & Pothole observed at CH-6+230

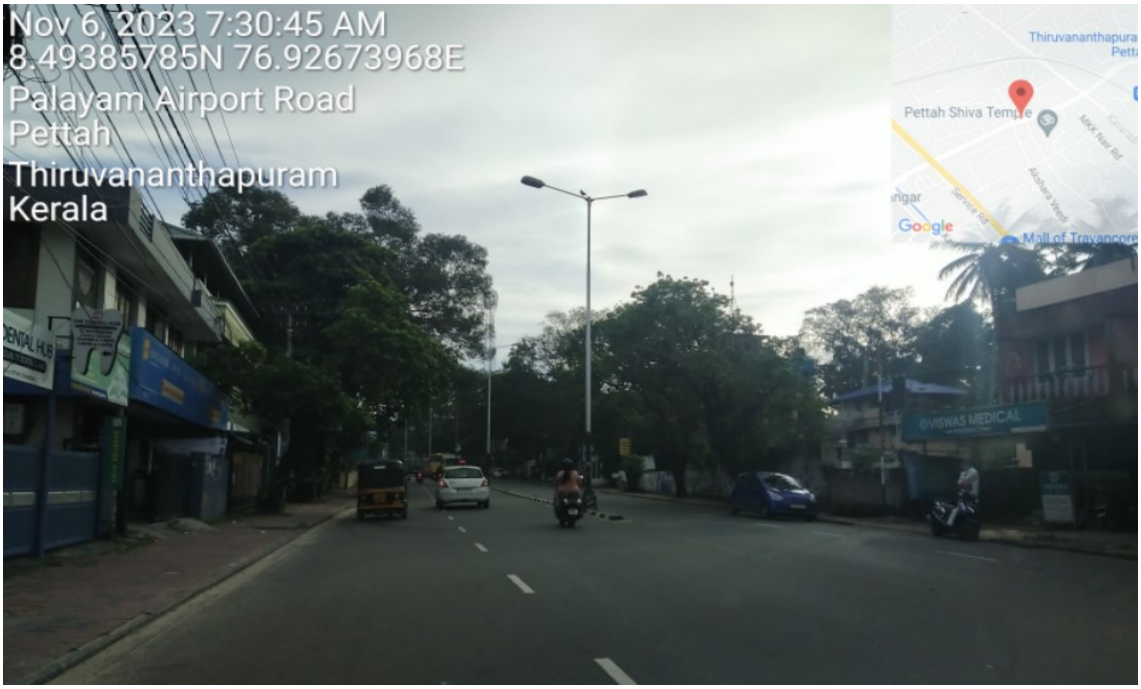

Figure 95 Pavement Condition is Good at CH-6+410

Figure 96 Patch work & Pothole observed at CH-6+500

Figure 97 Pavement Condition is Good at CH-6+520

Figure 98 Patch work observed at CH-6+680

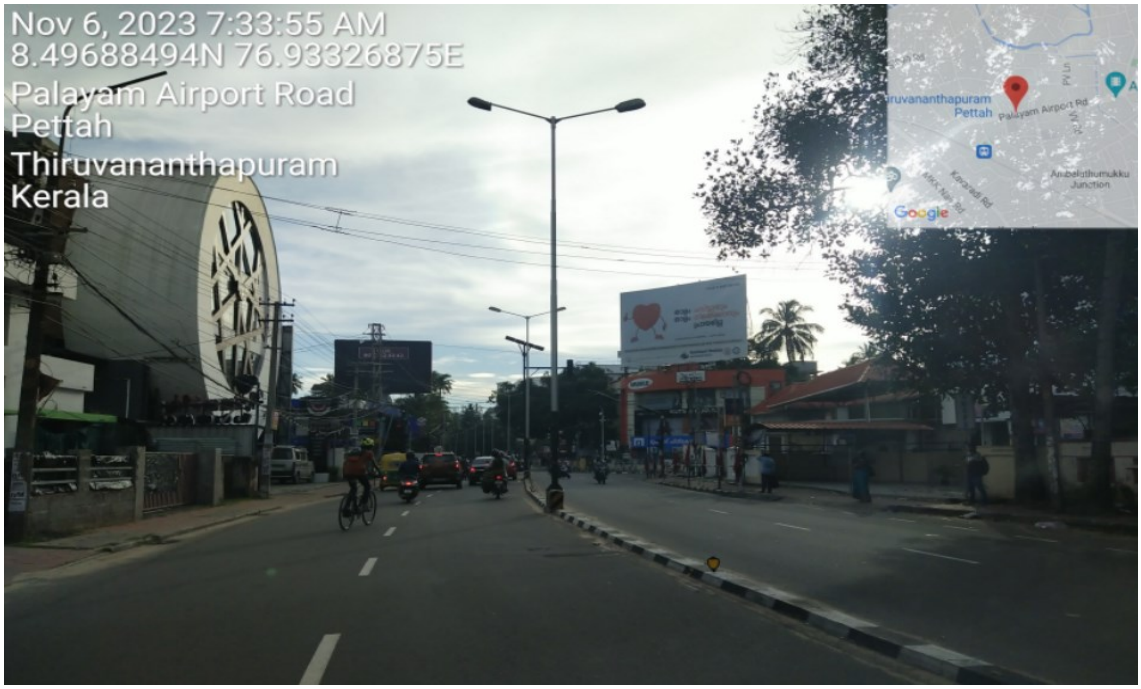

Figure 99 Pavement Condition is Good at CH-7+200

Figure 100 Pavement Condition is Good at CH-7+800

ROAD NAME

C-05 – VANCHIYOOR - OLD COLLECTORATE

PATTOOR - VANCHIYOOR

Figure 101 Pavement Condition is Good at CH-1+100

Figure 102 Pavement Condition is Good at CH-1+190

Figure 103 Pavement Condition is Good at CH-1+280

Figure 104 Pavement Condition is Good at CH-1+380

Figure 105 Pothole observed at CH-1+440

Figure 106 Pavement Condition is Good at CH-1+600

Figure 107 Pavement Condition is Good at CH-1+640

Figure 108 Pavement Condition is Good at CH-1+770

Figure 109 Pavement Condition is Good at CH-1+900

ROAD NAME

C-05 – UPPILAMOODU – KAITHAMUKKU - SREEKANDESWARAM

Figure 110 Pavement Condition is Good at CH-1+300

Figure 111 Pavement Condition is Good at CH-1+440

Figure 112 Pavement Condition is Good at CH-1+570

Figure 113 Pavement Condition is Good at CH-1+650

Figure 114 Pavement Condition is Good at CH-1+820

ROAD NAME

C-06 – NALUMUKKU – OLD COLLECTORATE – UPPILAMOODU – SREEKANDESWRAM – THAKQARAPARAMBU – CHOORAKATTUPALAYAL

Figure 115 Pothole observed at CH-0+020

Figure 116 Pavement Condition is Good at CH-0+170

Figure 117 Pavement Condition is Good at CH-0+210

Figure 118 Pavement Condition is Good at CH-0+330

Figure 119 Pavement Condition is Good at CH-0+470

Figure 120 Patchwork observed at CH-0+530

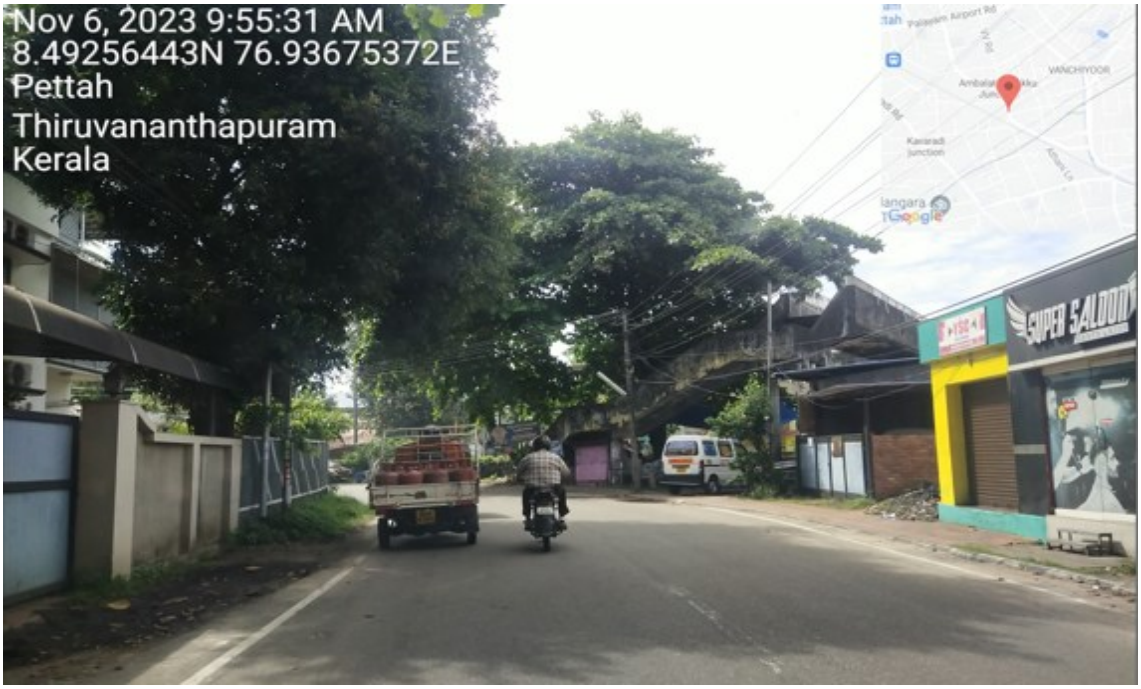

Figure 121 Pavement Condition is Good at CH-0+630

Figure 122 Pavement Condition is Good at CH-0+820

Figure 123 Pavement Condition is Good at CH-0+840

Figure 124 Pavement Condition is Fair at CH-0+940

Figure 125 Pothole observed at CH-1+010

Figure 126 Pavement Condition is Good at CH-1+190

Figure 127 Pavement Condition is Good at CH-1+290

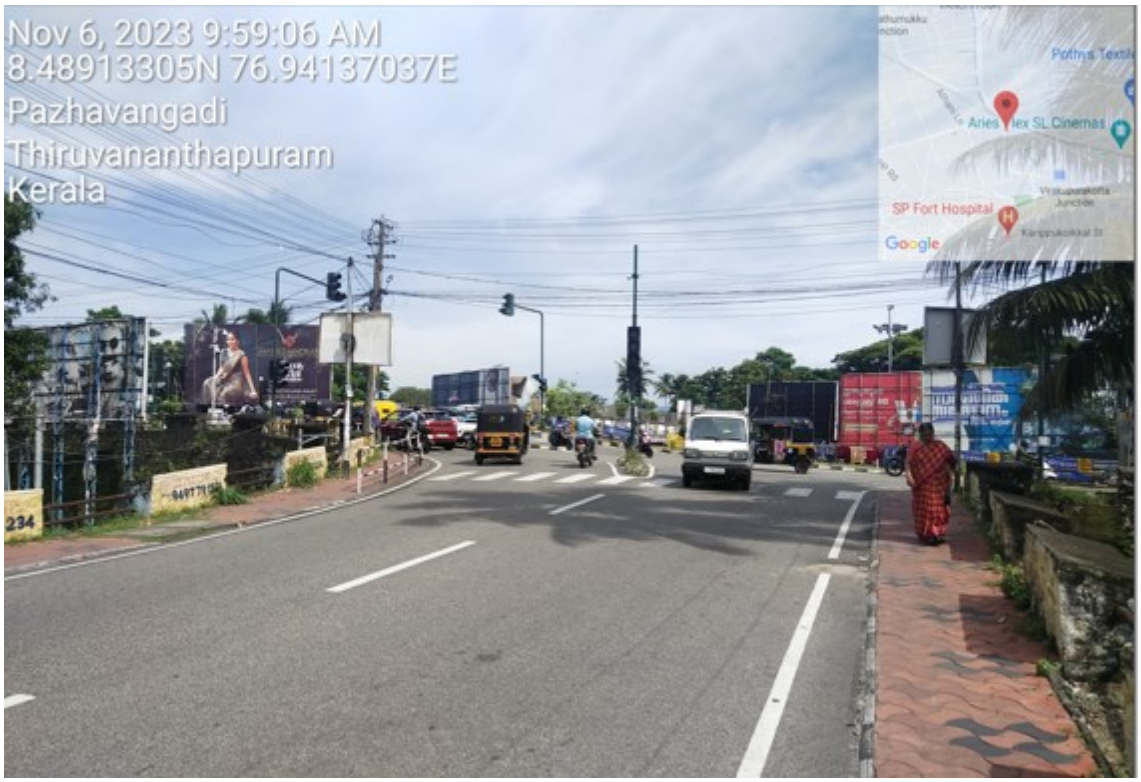

Figure 128 Pavement Condition is Good at CH-1+320

Figure 129 Pavement Condition is Good at CH-1+410

Figure 130 Pavement Condition is Good at CH-1+570

Figure 131 Pavement Condition is Good at CH-1+730

Figure 132 Pavement Condition is Good at CH-1+770

Figure 133 Pavement Condition is Good at CH-1+870

Figure 134 Pavement Condition is Good at CH-1+970

Figure 135 Pavement Condition is Good at CH-2+060

Figure 136 Pavement Condition is Good at CH-2+190

Figure 137 Pavement Condition is Good at CH-2+280

Figure 138 Pavement Condition is Good at CH-2+360

Figure 139 Pavement Condition is Good at CH-2+450

Figure 140 Pavement Condition is Good at CH-2+620

Figure 141 Pavement Condition is Good at CH-2+680

Figure 142 Pavement Condition is Good at CH-2+790

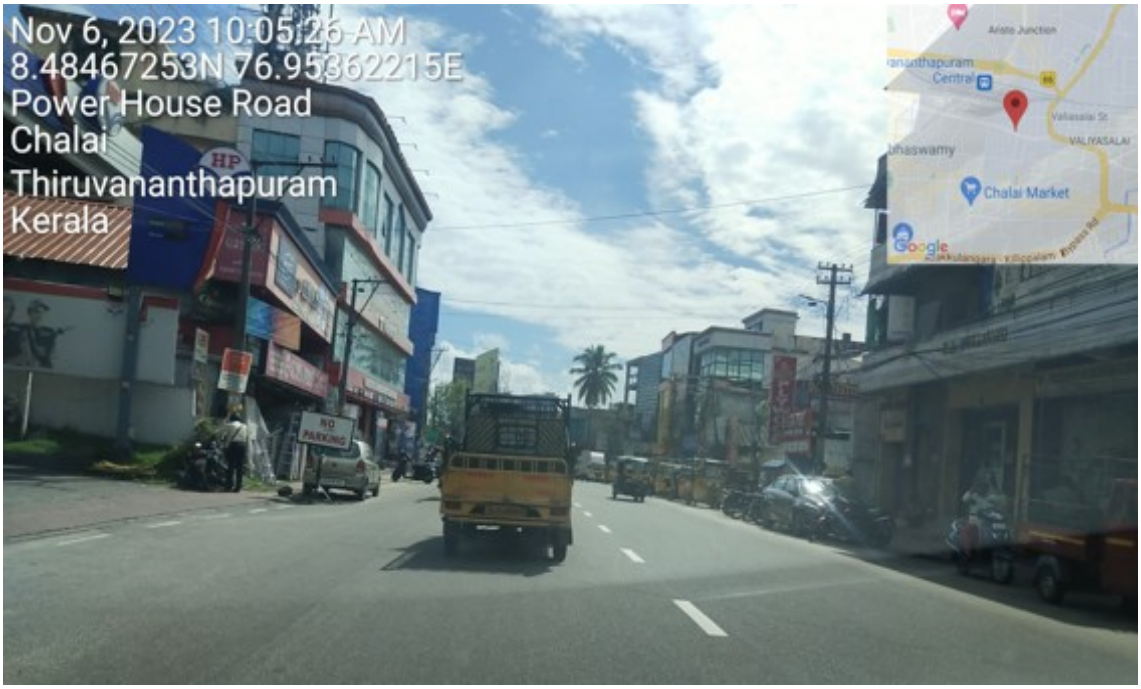

Figure 143 Pavement Condition is Good at CH-2+970

Figure 144 Pavement Condition is Good at CH-3+100

ROAD NAME

C-07 – VANROSS – PRESS CLUB

Figure 145 Pavement condition is Fair at CH-0+000

Figure 146 Pavement condition is poor at CH-0+150

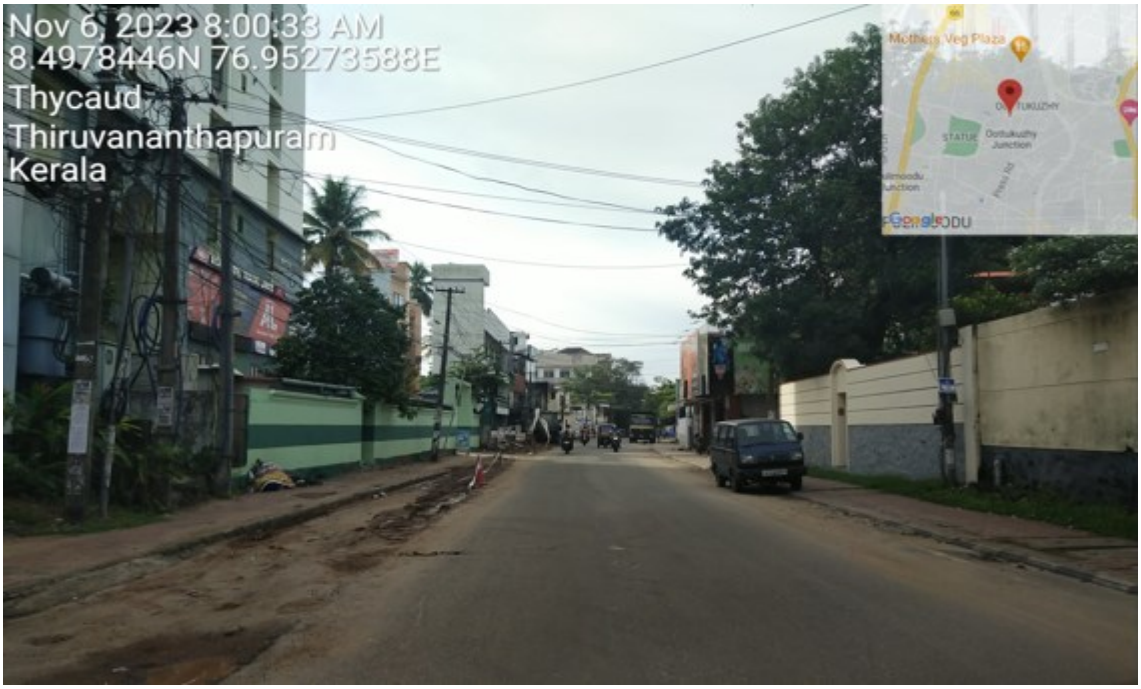

Figure 147 Pavement conditions Poor at CH-0+280

Figure 148 Pavement is damaged at CH-0+380

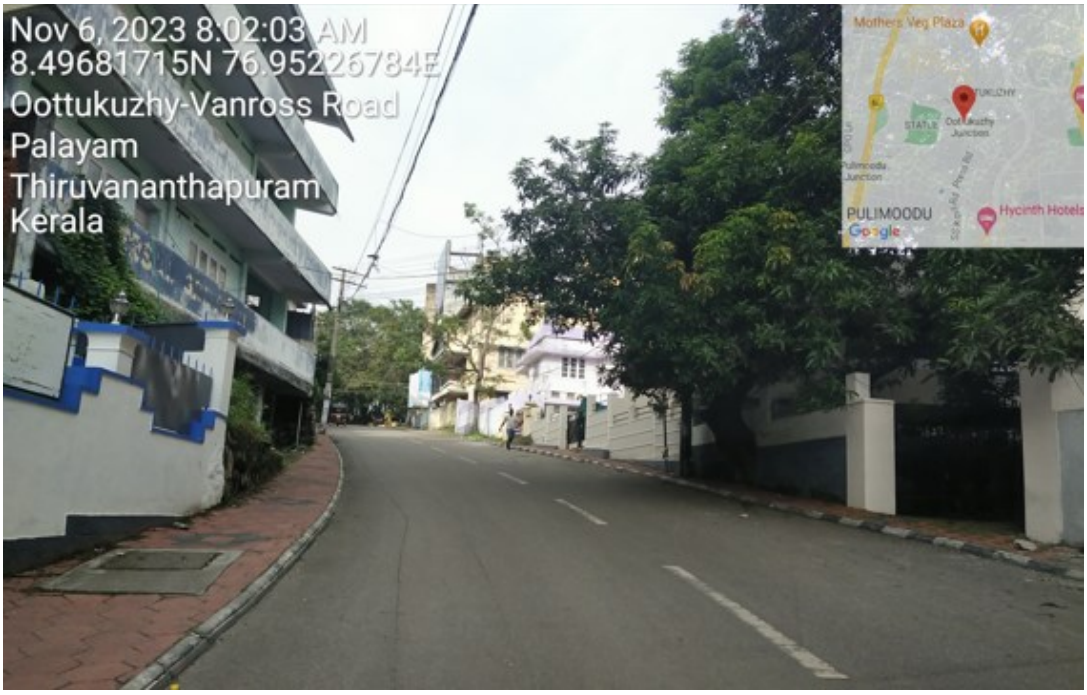

Figure 149 Pavement conditions is Good at CH-0+440

Figure 150 Pavement conditions Poor at CH-0+600

ROAD NAME

C- 08 - PATTOM - MARAPPALAM – KOWDIAR

Figure 151 Pavement condition is Good at CH-0+000

Figure 152 Patch Work Observed at CH-0+190

Figure 153 Pavement Condition is Good at CH-0+280

Figure 154 Pothole is Observed at CH-0+340

Figure 155 Patch work observed at CH-0+410

Figure 156 Pavement Condition is Fair at CH-0+510

Figure 157 Patch work Fair at CH-0+650

Figure 158 Patch work observed at CH-0+730

Figure 159 Pavement conditions is Good at CH-0+860

Figure 160 Pavement conditions is Good at CH-0+665

Figure 161 Patch Work is Observed at CH-1+020

Figure 162 Pavement conditions is Good at CH-01+150

Figure 163 Pavement conditions observed Poor at CH-1+230

Figure 164 Pavement conditions is Good at CH-1+380

Figure 165 Pavement Condition is Good at CH-1+500

Figure 166 Pavement Condition is Good at CH-1+570

Figure 167 Patch Work is Observed at CH-1+690

Figure 168 Pavement Condition is Good at CH-1+790

Figure 169 Pavement Condition is Good at CH-1+890

Figure 170 Pavement Condition is Good at CH-1+930

Figure 171 Pavement Condition is Good at CH-2+040

Figure 172 Pavement Condition is Good at CH-2+210

ROAD NAME

C- 09 - PATTOM – MEDICAL COLLEGE - ULLOOR

Figure 173 Pavement Condition is Good at CH-0+000

Figure 174 Pavement Condition is Good at CH-0+060

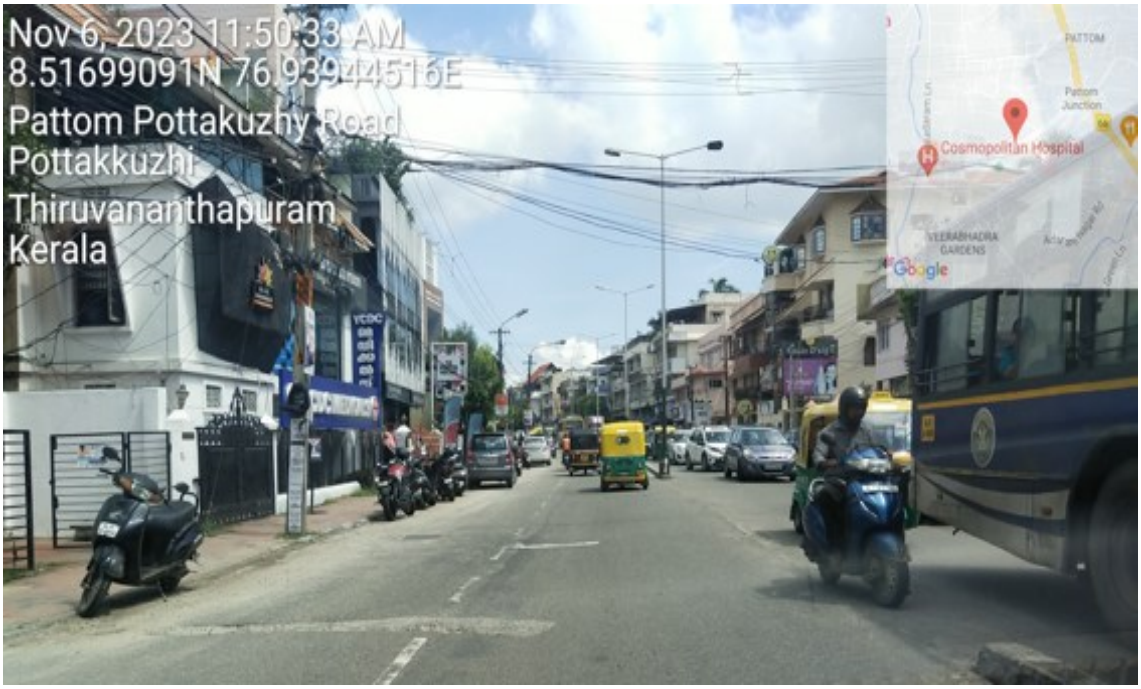

Figure 175 Patch Work is observed at CH-0+350

Figure 176 Pavement Condition is Good at CH-0+410

Figure 177 Pavement condition is Good at CH-0+510

Figure 178 Construction work in progress at CH-0+610

Figure 179 Pavement Condition is Fair at CH-0+850

Figure 180 Pavement conditions is Good at CH-0+910

Figure 181 Pavement conditions is Good at CH-1+020

Figure 182 Pavement conditions is Good at CH-1+210

Figure 183 Pavement Condition is Good at CH-1+270

Figure 184 Pavement Condition is Good at CH-1+420

Figure 185 Pavement Condition is Good at CH-1+580

Figure 186 Patch Work is observed at CH-1+650

Figure 187 Patch Work is observed at CH-1+690

Figure 188 Pavement Condition is Good at CH-1+890

Figure 189 Pavement Condition is Good at CH-1+920

Figure 190 Pavement Condition is Good at CH-2+040

Figure 191 Pavement Condition is Good at CH-2+150

Figure 192 Pavement Condition is Good at CH-2+260

Figure 193 Pavement Condition is Good at CH-2+320

Figure 194 Pavement Condition is Good at CH-2+460

Figure 195 Pavement Condition is Good at CH-2+570

Figure 196 Pavement Condition is Good at CH-2+660

Figure 197 Pavement Condition is Good at CH-2+800

ROAD NAME

C- 10 – KOWDIAR – AMBALAMUKKU - PEROORKADA

Figure 198 Pavement Condition is Good at CH-0+000

Figure 199 Pavement Condition is Good at CH-0+190

Figure 200 Pavement Condition is Good at CH-0+280

Figure 201 Pavement Condition is Good at CH-0+380

Figure 202 Pavement Condition is Good at CH-0+420

Figure 203 Pavement Condition is Good at CH-0+570

Figure 204 Patch Work is observed at CH-0+700

Figure 205 Pavement Condition is Good at CH-0+750

Figure 206 Pavement Condition is Good at CH-0+810

Figure 207 Pavement Condition is Good at CH-1+070

Figure 208 Pavement Condition is Good at CH-1+090

Figure 209 Pavement Condition is Good at CH-1+260

Figure 210 Pavement Condition is Good at CH-1+390

Figure 211 Pavement Condition is Good at CH-1+490

Figure 212 Pavement Condition is Good at CH-1+580

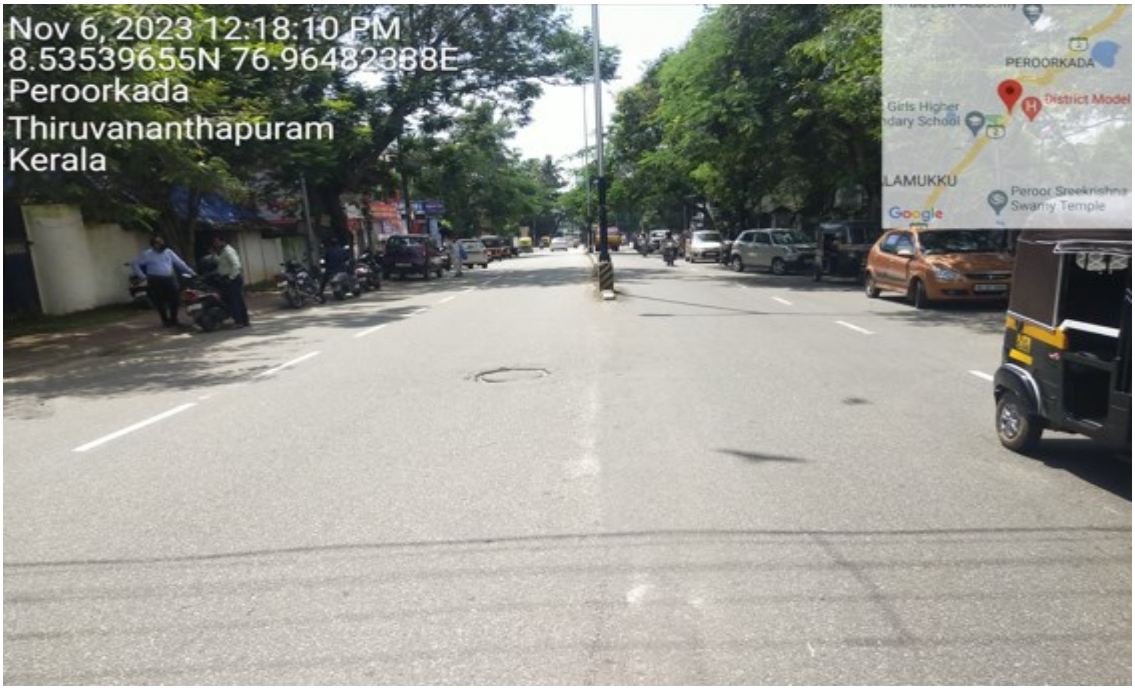

Figure 213 Pavement Condition is Good at CH-1+650

Figure 214 Pavement Condition is Good at CH-1+750

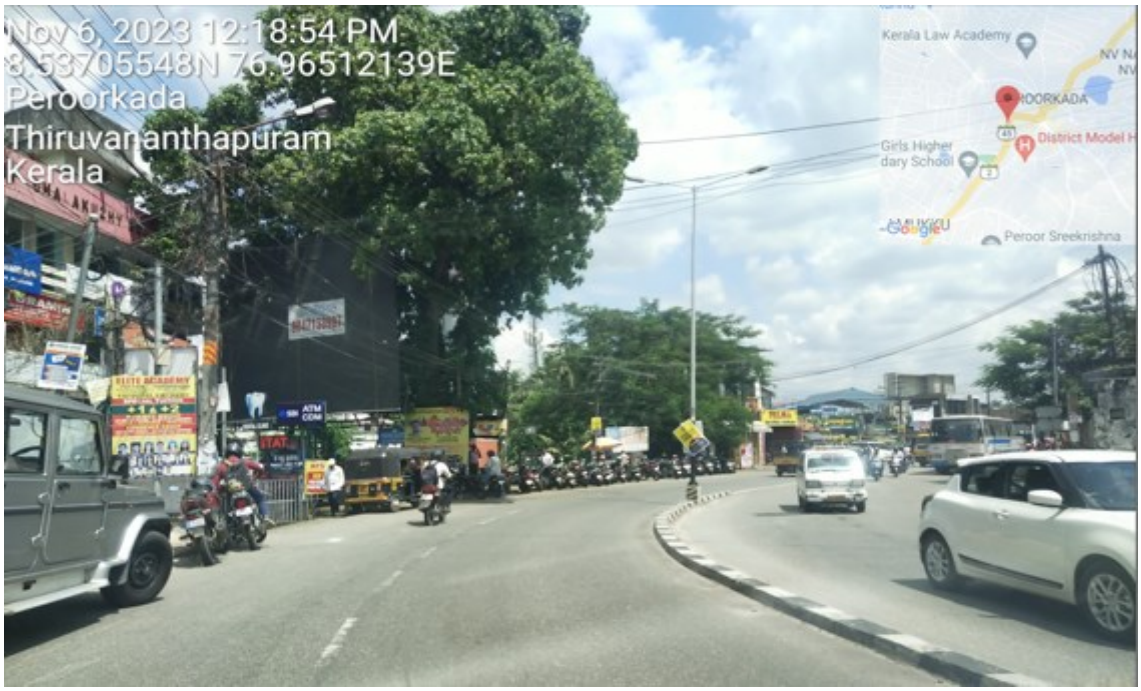

Figure 215 Pavement Condition is Good at CH-1+850

Figure 216 Pavement Condition is Good at CH-1+990

ROAD NAME

AL- 1 – LMS – STUDENT'S CENTRE ROAD

Figure 217 Pavement Condition is Good at CH-0+000

Figure 218 Pavement Condition is Good at CH-0+180

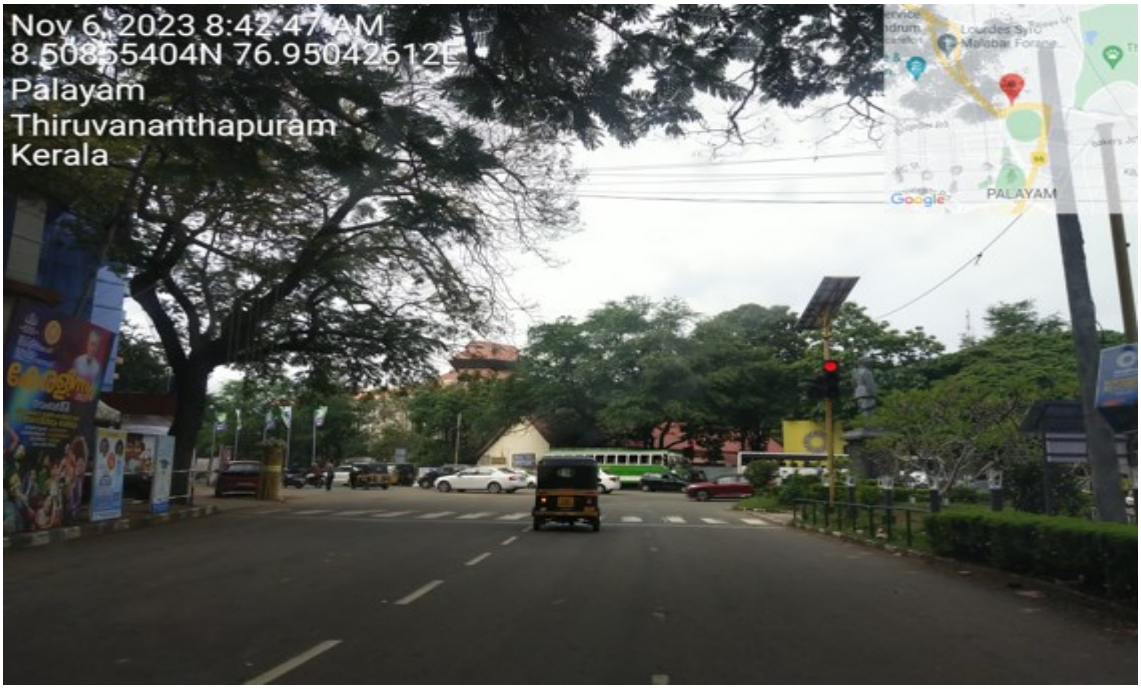

Figure 219 Pavement Condition is Good at CH-0+210

ROAD NAME

AL- 2 - VELLAYAMBALAM – SASTHAMANGALAM

Figure 220 Pavement Condition is Good at CH-0+000

Figure 221 Pavement Condition is Good at CH-0+200

Figure 222 Pavement Condition is Good at CH-0+400

Figure 223 Pavement Condition is Good at CH-0+480

Figure 224 Pavement Condition is Good at CH-0+520

Figure 225 Pavement Condition is Good at CH-0+700

Figure 226 Pavement Condition is Good at CH-0+730

Figure 227 Pavement Condition is Good at CH-0+900

Figure 228 Pavement Condition is Good at CH-0+770

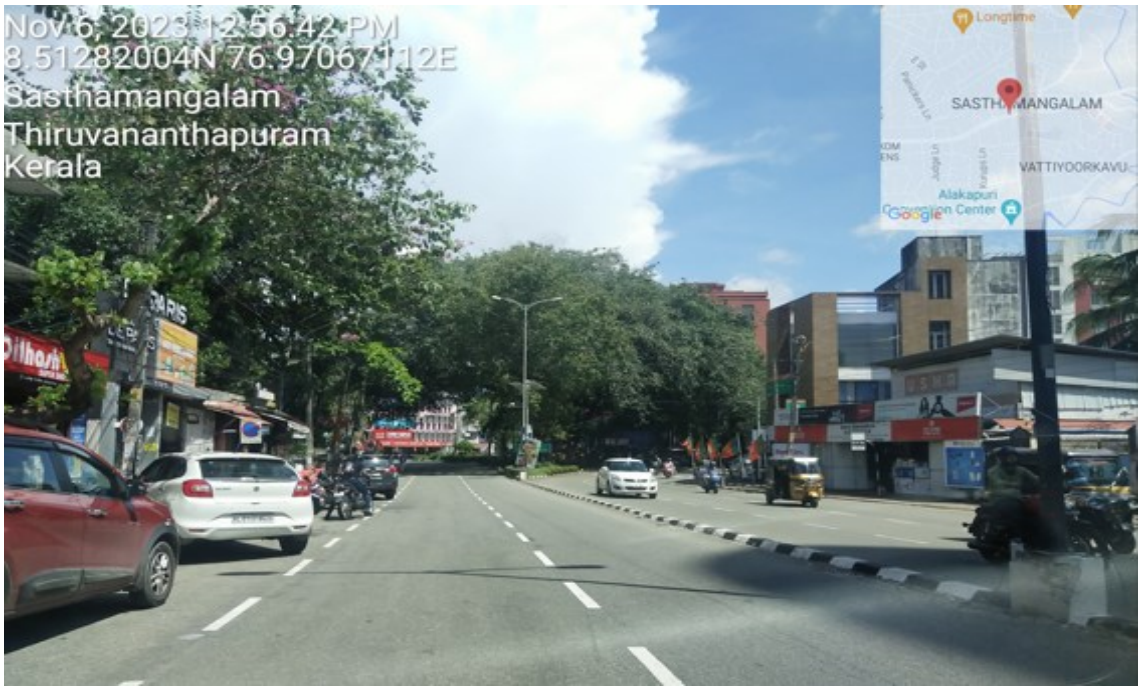

Figure 229 Pavement Condition is Good at CH-0+940

Figure 230 Pavement Condition is Good at CH-1+100

Figure 231 Pavement Condition is Good at CH-1+190

Figure 232 Pavement Condition is Good at CH-1+250

ROAD NAME

AL- 3 - ULLOOR – KOCHULLOOR ROAD

Figure 233 Pavement Condition is Fair at CH-0+000

Figure 234 Pavement Condition is Good at CH-0+200

Figure 235 Pavement Condition is Good at CH-0+220

Figure 236 Pavement Condition is Good at CH-0+410

Figure 237 Pavement Condition is Good at CH-0+430

ROAD NAME

AL- 04 - ULLOOR – PEROOKADA - VAZHAYILA

Figure 238 Pavement Condition is Good at CH-0+000

Figure 239 Pavement Condition is Good at CH-0+150

Figure 240 Pavement Condition is Good at CH-0+290

Figure 241 Pavement Condition is Good at CH-0+360

Figure 242 Pavement Condition is Good at CH-0+460

Figure 243 Pavement Condition is Good at CH-0+550

Figure 244 Pavement Condition is Good at CH-0+740

Figure 245 Pavement Condition is Good CH-0+850

Figure 246 Pavement Condition is Fair at CH-1+000

Figure 247 Pavement Condition is Good at CH-1+080

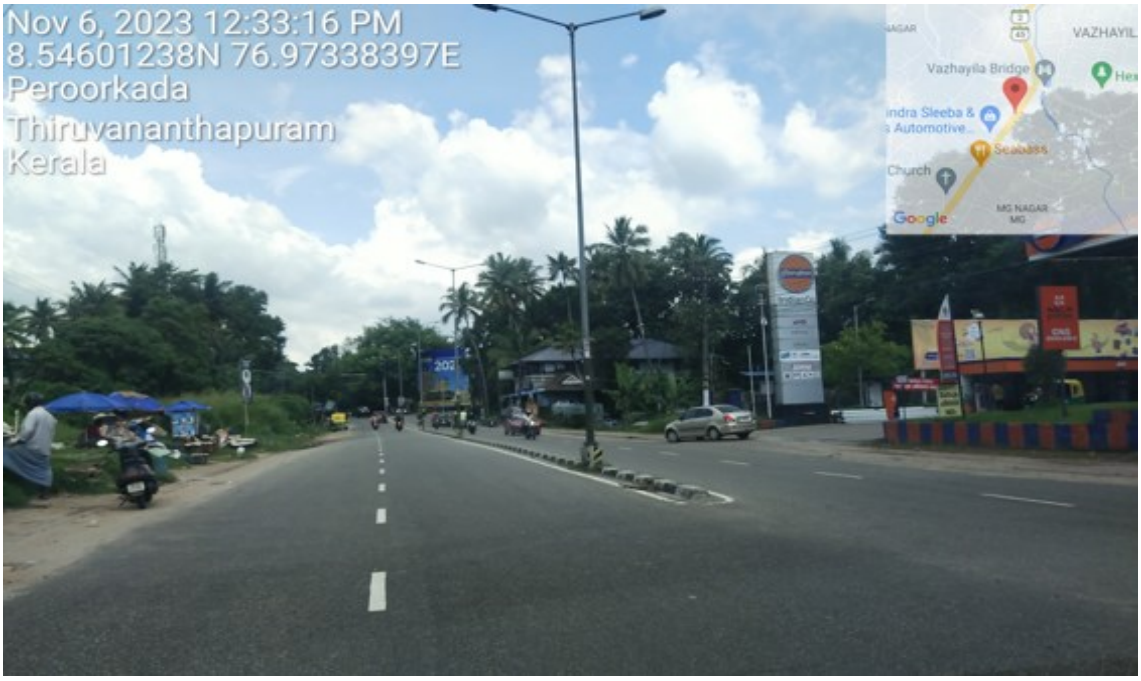

Figure 248 Pavement Condition is Good at CH-1+280

Figure 249 Pavement Condition is Good at CH-0+850

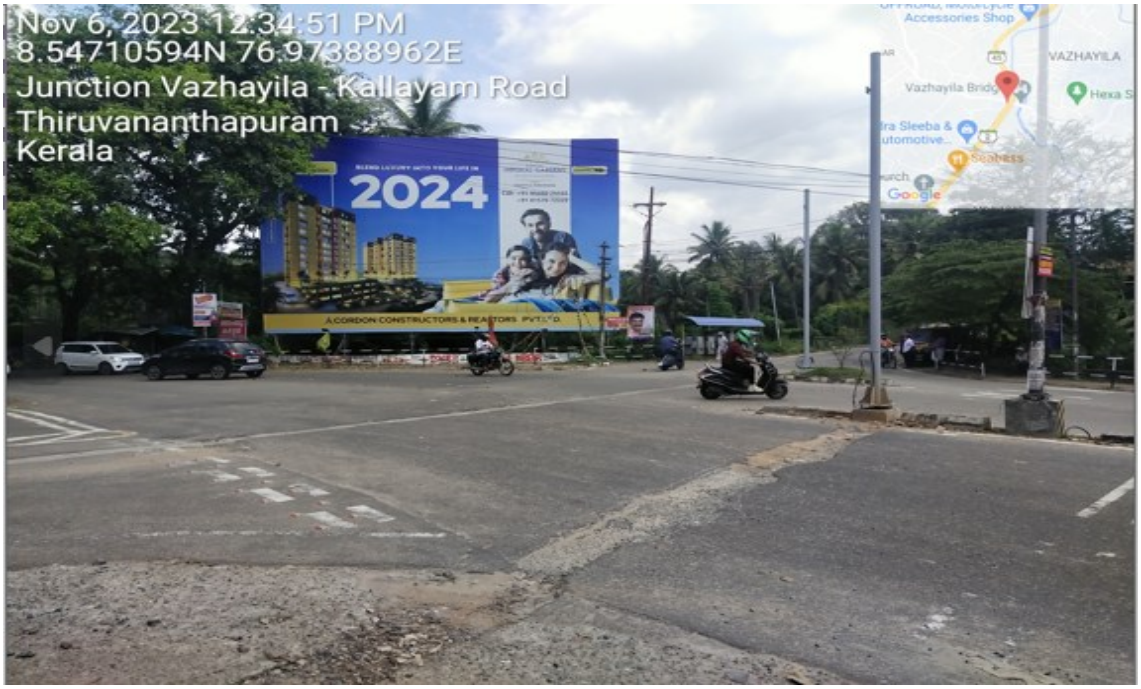

Figure 250 Pavement is damage at CH-1+420

ROAD NAME

BP - 01 - ENCHACKAL - SREEVARAHAM - ATTAKULANGARA ROAD

Figure 251 Pavement Condition is Good at CH-0+000

Figure 252 Pothole is observed at CH-0+250

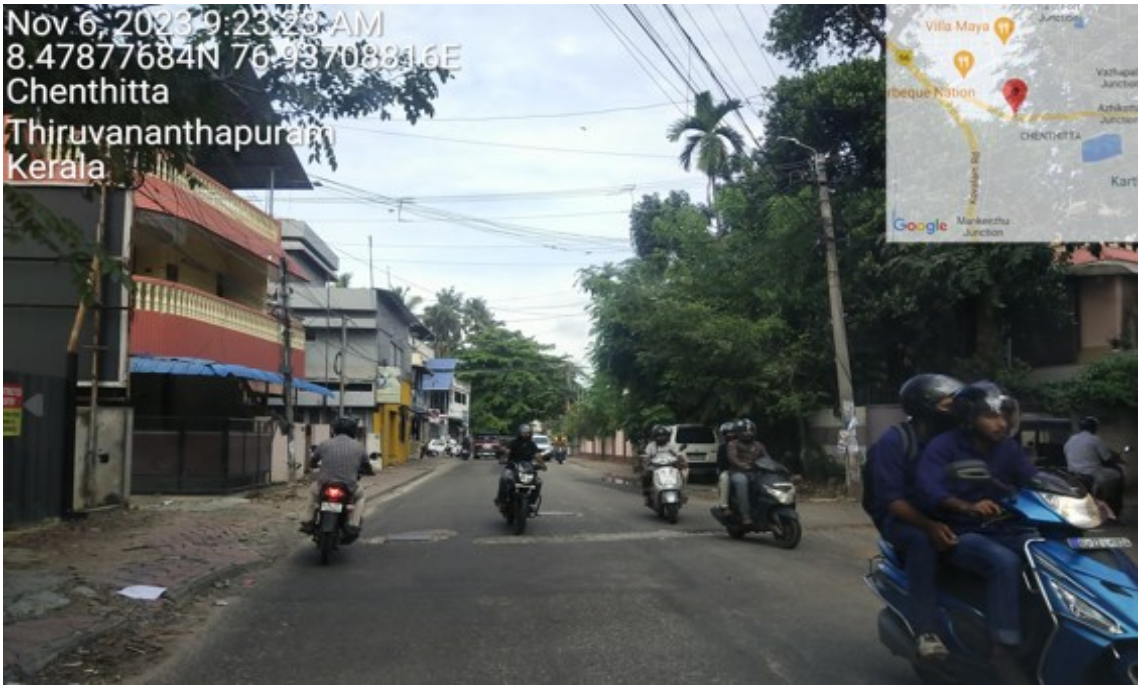

Figure 253 Patch Work is observed at CH-0+300

Figure 254 Pavement Condition is Good at CH-0+400

Figure 255 Pavement Condition is Good at CH-0+500

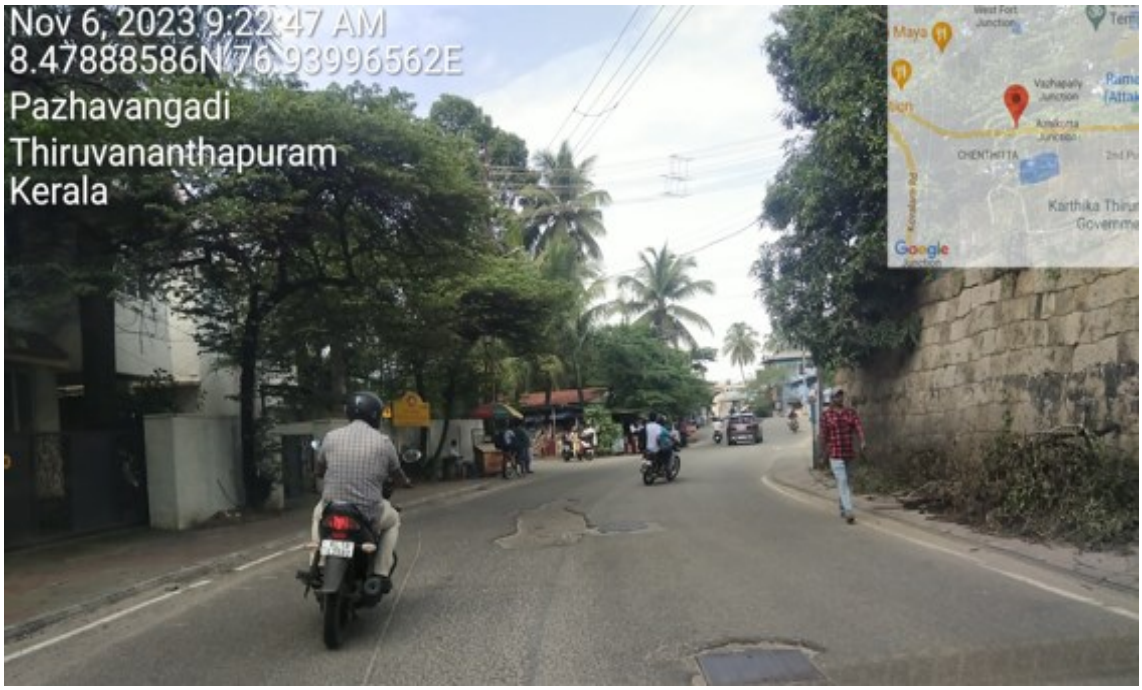

Figure 256 Patch Work is observed at CH-0+630

Figure 257 Pavement Condition is Fair at CH-0+740

Figure 258 Pavement Condition is Fair at CH-0+850

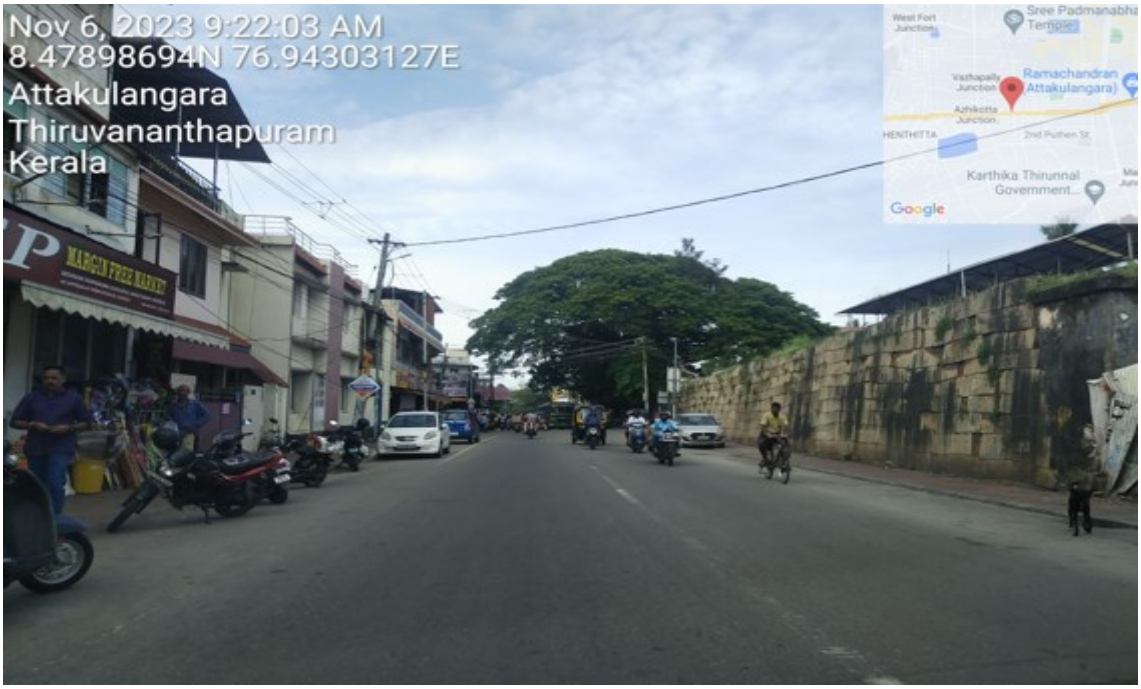

Figure 259 Pavement Condition is Good at CH-0+970

Figure 260 Pavement Condition is Good at CH-1+080

Figure 261 Pavement Condition is Good at CH-1+150

Figure 262 Pavement Condition is Good at CH-1+220

Figure 263 Pavement Condition is Good at CH-1+370

Figure 264 Pavement Condition is Fair at CH-1+43

ROAD NAME

BP - 03 – NH BYPASS – KIMS - KUMARAPURAM

Figure 265 Pavement Condition is Good at CH-0+000

Figure 266 Pavement Condition is Good at CH-0+140

Figure 267 Pavement Condition is Good at CH-0+220

Figure 268 Pavement Condition is Good at CH-0+330

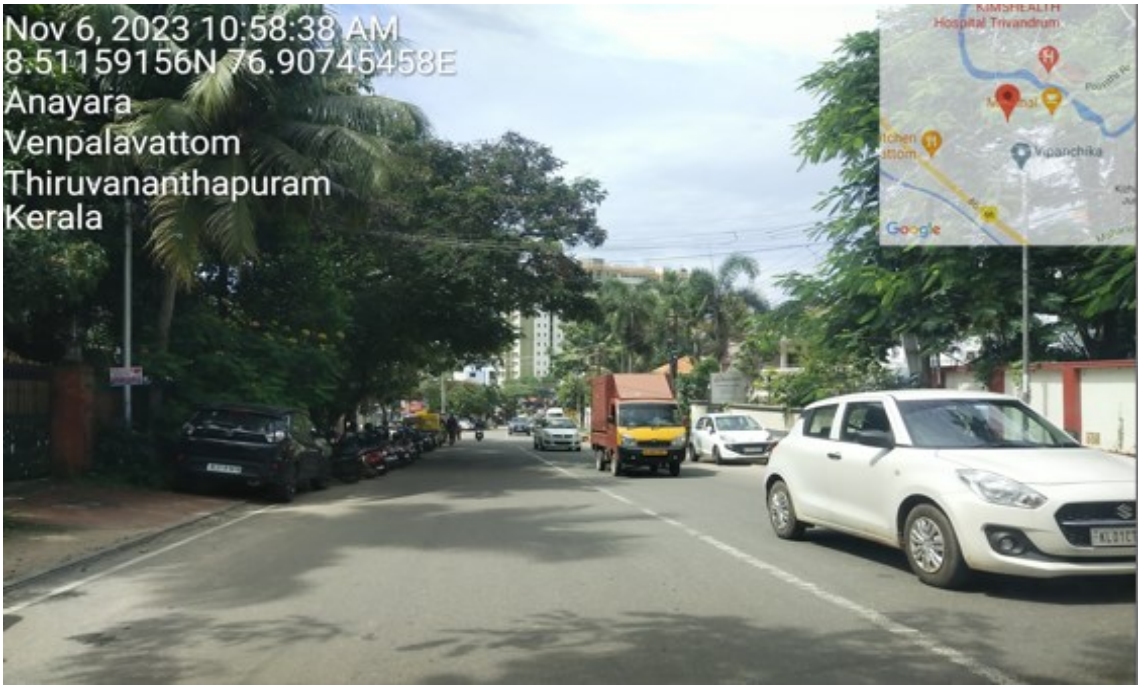

Figure 269 Pavement Condition is Good at CH-0+420

Figure 270 Pavement Condition is Good at CH-0+560

Figure 271 Pavement Condition is Good at CH-0+640

Figure 272 Pavement Condition is Good at CH-0+710

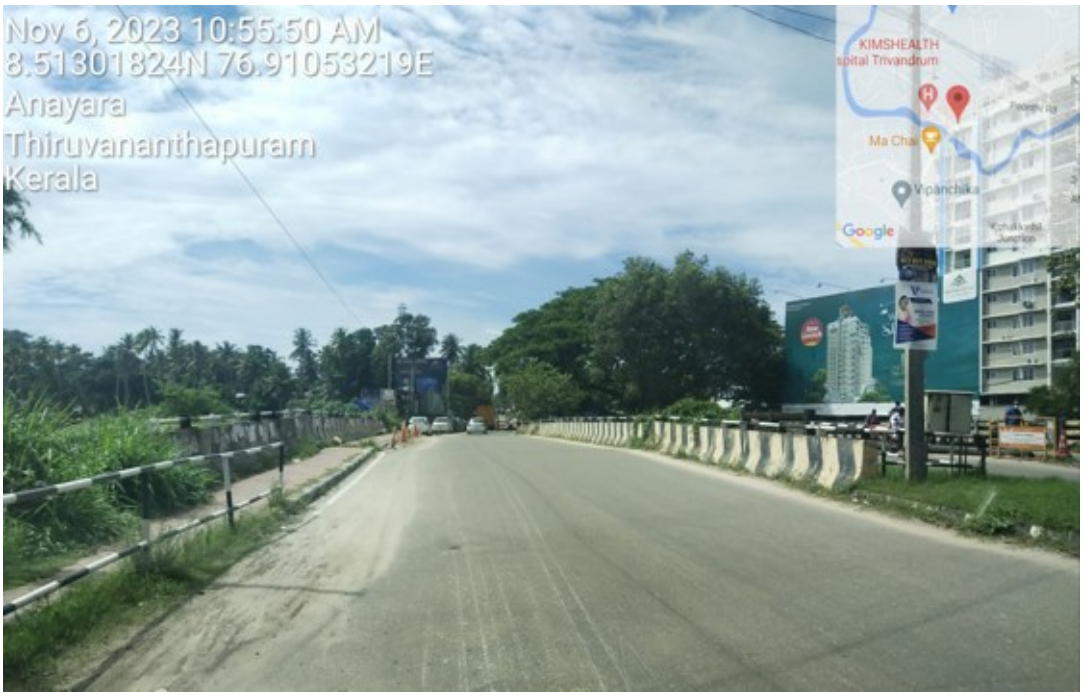

Figure 273 Pavement Condition is Fair at CH-0+910

Figure 274 Pavement is Fair at CH-1+100

Figure 275 Patch Work is observed at CH-1+020

Figure 276 Pavement Condition is Good at CH-1+170

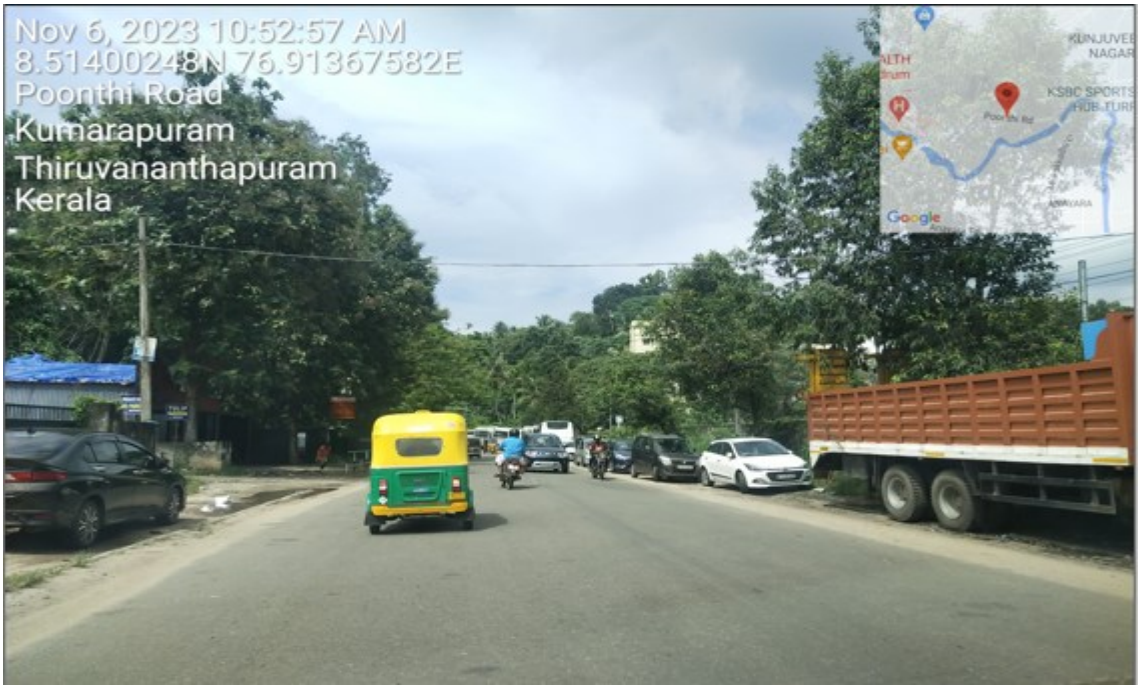

Figure 277 Pavement Condition is Good at CH-1+310

Figure 278 Pavement Condition is Fair at CH-1+420

Figure 279 Pavement Condition is Good at CH-1+460

Figure 280 Pavement Condition is Good at CH-1+580

Figure 281 Patch Work is observed at CH-1+650

Figure 282 Pavement Condition is Fair at CH-1+770

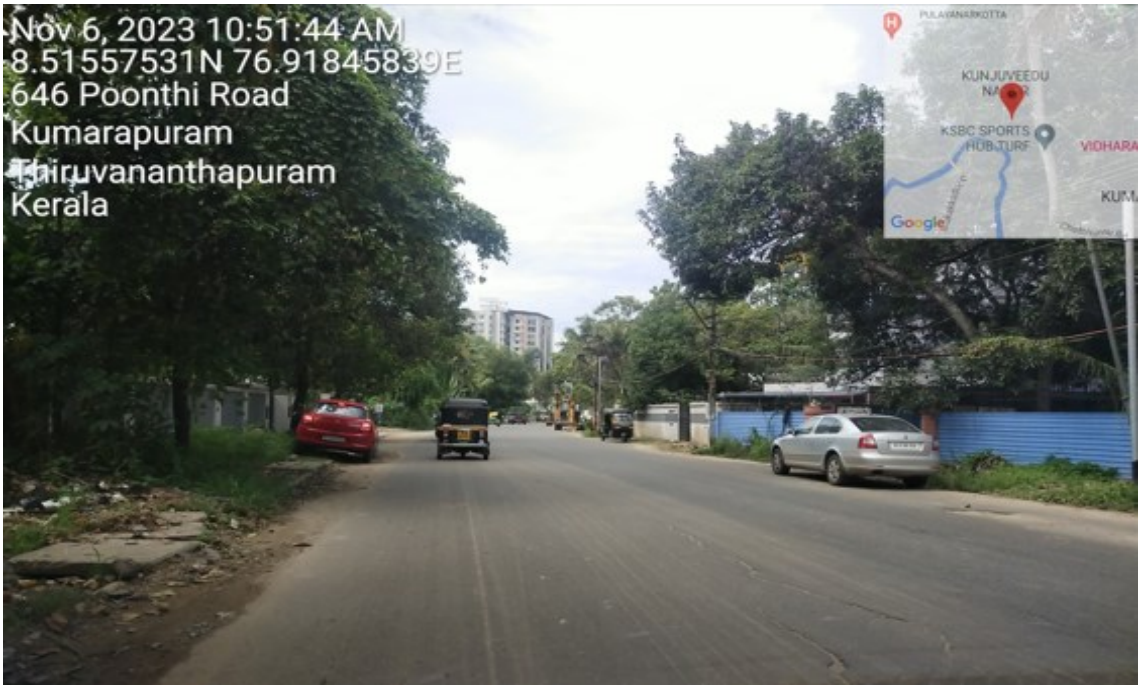

Figure 283 Pavement Condition is Fair at CH-1+900

Figure 284 Pavement Condition is Fair at CH-1+920

Figure 285 Pavement is damaged at CH-2+050

Figure 286 Construction work in progress at CH-2+180

Figure 287 Construction work in progress at CH-2+260

Figure 288 Construction work in progress at CH-2+310

Figure 289 Construction work in progress at CH-2+480

Figure 290 Construction work in progress at CH-2+610

Figure 291 Pavement Condition is Good CH-2+670

Figure 292 Pavement Condition is Good at CH-2+730

Figure 293 Pavement Condition is Good at CH-2+870

Figure 294 Construction work in progress at CH-2+890

Figure 295 Pavement Condition is Good at CH-3+050

Figure 296 Pavement Condition is Good at CH-3+170

Figure 297 Pavement Condition is Good at CH-3+270

Figure 298 Pavement Condition is Fair at CH-3+470

Figure 299 Pavement Condition is Good at CH-3+560

Figure 300 Pavement Condition is Good at CH-3+400

APPENDIX-02

FWD SURVEY

Figure 1 FWD Survey on project stretch

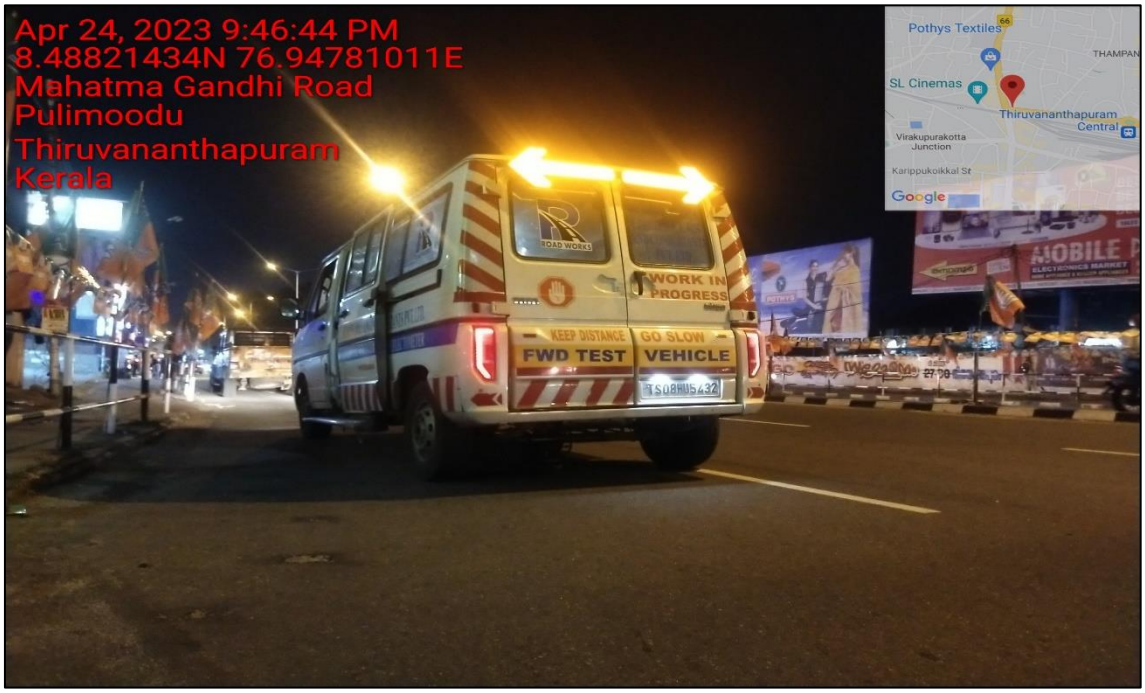

Figure 2 FWD Survey on project stretch

Figure 3 FWD Survey on project stretch

Figure 4 FWD Survey on project stretch

Figure 5 FWD Survey on project stretch

Figure 6 FWD Survey on project stretch

Figure 7 FWD Survey on project stretch

Figure 8 FWD Survey on project stretch

Figure 9 FWD Survey on project stretch

Figure 10 FWD Survey on project stretch

APPENDIX-03

TRIAL PIT SURVEY

Figure 1 - Trial pit at Road No – C - 04

Figure 2 - Trial pit at Road No – C - 07

Figure 3 - Trial pit at Road No – C - 09

Figure 4 - Trial pit at Road No – BP-03

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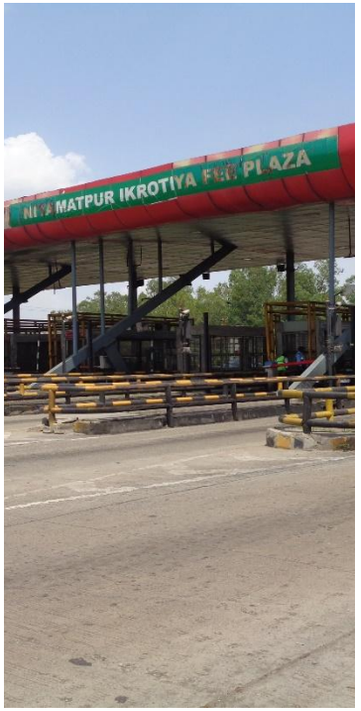
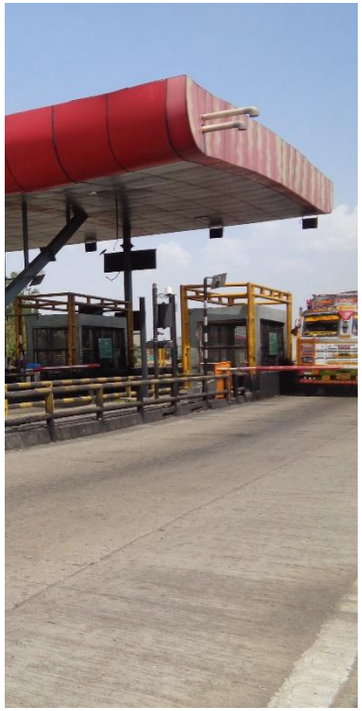
Assessment of O&M and major maintenance requirements – Moradabad Bareilly Expressway Limited





Final Report

Moradabad Bareilly Expressway Limited

Mumbai

December 2023

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Issue and revision records

Contract Reference: Nil		**Identification & Traceability:** TIC/312/FR/R0
Assignment Title: Assessment of O&M and major maintenance requirements – Moradabad Bareilly Expressway Limited		
Key Professionals: Karan Dave (Project Director), Dhyey Hirpara (Project Manager)		
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Issue & Revision Records

Date	Revision No.	Prepared By	Checked By	Approved By	Description
07.12.2023	R0	Ashish Kothari Akshay Dharmani Rutvik Dhameliya	Bhushan Vora Dhyey Hirpara	Karan Dave	Final Report

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List of Abbreviations

Abbreviation	Full form
AADT	Average Annual Daily Traffic
ATMS	Advanced Traffic Management System
BI	Bump Integrator
CA	Concession Agreement
COS	Change of Scope
COD	Commercial Operation Date
CuM	Cubic Meter
DBFOT	Design, Build, Finance, Operate and Transfer
EPC	Engineering, Procurement & Construction
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
FY	Financial Year
IL&FS	Infrastructure Leasing & Financial Services Limited
InvIT	Infrastructure Investment Trust
IR	Interim Report
LIE	Lenders Independent Engineer
LOA	Letter of Award
Km	Kilometre
MBIU	Mobile Bridge Inspection Unit

Abbreviation	Full form
MCW	Main Carriageway
MJB	Major Bridge
MNB	Minor Bridge
NCR	National Capital Region
NH	National Highway
NHAI	National Highway Authority of India
NHDP	National Highways Development Project
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
PCOD	Provisional Commercial Operation Date
PCS	Pavement Condition Survey
PUP	Passenger Underpass
ROB	Road Over Bridge
SqM	Square Meter
TICPL	Translink Infrastructure Consultants Private Limited
TP	Toll Plaza
VDF	Vehicle Damage Factor
VUP	Vehicle Underpass
WIM	Weigh-in-Motion

Content (1)

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Issue and revision records

Disclaimer

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Chapter 1: Introduction

- Assignment
- Scope of work
- Approach and methodology
- Data shared by the Client

Assignment and Scope of Work (1)

Moradabad Bareilly Expressway Limited (the "Client") is the first asset of the road portfolio of Roadstar Infra Investment Trust which is Infrastructure Investment Trust (InvIT) established by the Infrastructure Leasing & Financial Services Limited (IL&FS). The Client has commissioned Translink Infrastructure Consultants Private Limited (the "Consultant" or "TICPL") to carry out independent assessment of operating and maintenance requirements and major maintenance requirements.

The Client owns Design, Build, Finance, Operate and Transfer (DBFOT) Toll road asset of 121.8 km covering Moradabad - Bareilly section of NH24 in Uttar Pradesh (the "Asset"). Total project cost was INR 1,267 crore as per RFP.

The Consultant has submitted final report in May 2023. The client decided to get incremental due diligence in November 2023.

This document is revised final report incorporating effect on O&M and major maintenance requirements and its cost projections for balance concession period due to O&M work executed during June - September 2023 and reconnaissance survey exercised in November 2023..

Objective of the assignment

Reference discussion with the Client at proposal stage and during kick-off meeting, objective of the study is to evaluate O&M and major maintenance requirements and its cost projections for balance concession period for the Asset. Deliverables of this study is for internal consumption of the Client and no sharing of the deliverables with any third party for any other purpose is envisaged.

Scope of Work

The broad scope of the work of this assignment is as follows:

- **Operations phase:**
  - Detailed reconnaissance survey, field investigations and collection of first-hand information on present condition of the Asset to establish the requirements for rehabilitation and up-gradation;
  - Review of relevant records and documents;
  - Review of safety aspects;
  - Prepare maintenance schedule (routine and periodic) for balance concession period based on a technical analysis;
  - Study and highlight other relevant details like penalties, claims, petition, deviations etc. which may have impact on future maintenance.
- **Asset condition assessment:**
  - Assessment of highway components and structures, detailed inventory survey of asset and comparison between requirement and actual availability at site on sampling basis based on the insurance of asset;
  - Reviewing of test certificates and outcomes of past few years along with visual road condition;

Assignment and Scope of Work (2)

- Critical review of pavement condition survey and preparation of pavement inspection report to suggest probable rehabilitation treatment and rectification strategies;
- Existing pavement need to be categorized as Good, Average and Poor based on their estimated life span;
- Recommendations for any major repair, rehabilitation and strengthening based on the condition survey and design reports; Photographic report of the infrastructure assets and its condition to withstand till end of concession period;
- Suggestion and cost evaluation for any additional repair/rectification /modification required;
- Determine the appropriate level and frequency of routine and major maintenance activities required to keep the road assets in good condition and to meet the performance and O&M standards, specifications and requirements;
- Review of past accidents reports, identification of black spots, deficiency of safety and requirement if any and preparation of proposal to curb accidents and safety hazard to road users;
- Detailed routine and major maintenance cost forecast along with estimation of costs towards handover requirements.

Approach and Methodology (1)

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Approach

During the kick-off meeting, the Client preferred to have independent assessment by the Consultant before sharing their O&M strategy and O&M contracts in practice. Hence, the Consultant followed consultative and iterative approach from inception to address the need of the assignment.

Methodology

The Consultant reviewed documentation made available by the Client in piecemeal basis across the duration of the assignment, conducted reconnaissance survey of the Asset and undertaken field investigations to identify key aspects impacting asset quality, compliance to obligations of the Concession Agreement and adherence to safety standards.

To deliver the agreed scope of work and to meet the objective of the assignment, the study was divided into following four stages:

- **Stage 1: Review of documentation**
  - First tranche (pre-site visit) documentation i.e. Concession Agreement (CA) including schedules which define the requirements and obligations of Operation & Maintenance and limited monthly compliance reports of Independent Engineer, were studied to identify focus areas requiring site validation and detailed investigations in line with assignment objective.
  - Additionally, design and as-built drawings, COS and PCOD documentation from reports prepared by Lender's Independent Engineer / Authority's Independent Engineer, limited field investigations reports of recent past (BI Test, NSV Report, Structure Condition Report) made available by the client were analysed for comparison with field surveys.
- **Stage 2: Site visit, asset inventory and visual condition assessment**
  - As-built drawings, requirements of facilities and furniture as per CA Schedule B were studied and list of items required to be verified during inventory surveys were identified.

  Outputs of these activities mainly includes:
  - Gaps in as-built asset and design drawings
  - Present condition of the Asset as per progress/compliance reports of Lender's Independent Engineer / Authority's Independent Engineer
  - List of pending works in case of pending items, ongoing maintenance work in FY24
  - Defect Liability Period along with start-end point of Four laning of Rampur Bypass on EPC mode
  - Pending approvals and/or compliance comments from authority etc.

  Correlation of these two stages were considered to bring out critical areas for the subsequent stages of the review.

Approach and Methodology (2)

- **Stage 3: Field investigations**
  - Surveys and investigations were carried out to collect all the field data during April 2023.

List of field investigations conducted

Activity	Purpose	Output
Reconnaissance survey	Site appreciation	Asset characteristics
Inventory of roads, bridges and CD structures	Gap assessment against As Built	Inventory of the Asset
Visual inspection of Bridges without Mobile Bridge Inspection Unit (MBIU) and Visual Pavement Condition Survey (PCS)	Functional condition assessment	Probable rehabilitation measures and supporting role to conclusions derived from NDT, if any
Trial pits (every 15 km)	Identification of Crust thickness	Validation of Pavement Crust
Falling Weight Deflectometer (FWD) Test	Structural Condition of Pavement	Residual life of pavement

- **Stage4: Estimation of O&M, major maintenance requirement and OPEX projections**
  - Based on inputs from condition assessment and analysis of field investigation results, the Consultant arrived at one-time repair/rectification/modification requirement and associated cost as per obligations of CA in base year (FY24).
  - O&M / MM Requirement and OPEX estimate were based on the Consultant's independent analysis of pavement condition, structure condition and requirement for up-keep of road furniture, safety standards and requirement for hand-over stage (first-cut).
  - OPEX projections were determined during balance concession period based on rate analysis and in-house database of the Consultant.
  - First cut projections were optimized in line with the Client's O&M Strategy and cost optimization.

Input

- Identified gaps in context of Schedule B, C & D
- Defect liability period of ongoing work under EPC Contract if any
- Inferences from field investigation results
- Balance concession period as per CA
- Traffic projections provided by the Client
- Toll operations cost
- Rate analysis / Schedule of Rates
- Benchmarking exercise

Output

- **Major Maintenance Cycles for balance concession period**
- **Routine maintenance** (edge repair, crack sealing. patching, drainage)
- **Periodic and major maintenance** (preventive treatments, rehabilitation, pavement reconstruction)
- **Cost of operations** (toll, utility, manpower, incident management)

Data shared by the Client (1)

Particulars	Status
Signed concession Agreement – all volumes	Received
Monthly O&M Reports including compliance notes and observations of consultants (IE and LIE) from PCOD/COD	5 IE Reports received – Nov'22 to March'23 3 LIE Reports received – Dec'22 to Feb'23
Latest reports for roughness / NSV results / FWD (or BBD) / Pavement Condition Survey **Concession Agreement - Article 17.3: "Maintenance Manual" approved by authority/IE** **O&M Manual - Reference Clause 3.1.4: Inspection Report (Visual, Close and Thorough) as per prescribed frequency from PCOD/COD** **O&M Manual - Reference Clause 1.3.3: Roughness Test bi-annually (pre and post monsoon) from PCOD/COD** **In accordance with the above, details of maintenance (structural / functional) activities executed every year from PCOD/COD**	NSV Report (Feb'22) Received Structure Condition Report (March'23) BI Test Reports (April'22 and Oct'22) Contractor-wise Daily Progress Report for ongoing Major Maintenance & Repair Works as on 4th May 2023 (Rajinder Infrastructure Private Limited, Atcon India Limited, Jalakash)
As built and Design Drawings for project components	Received
Strip chart of LHS and RHS	Received
Road asset inventory reports	Spread-sheet of asset inventory received (Period of details compiled is not mentioned)
Copies of O&M Contracts / Agreements for routine and major maintenance for minimum last 5 years	Operations and Maintenance Agreement executed on 24th December 2021 among the Client, Elsamex Maintenance Services Limited and Roadstar Investment Managers Limited valid till end of Concession Period Annexure I – Payments & Reimbursables is missing in the document.
Year-wise historical expenditure and present year budget for routine and major maintenance	Month-wise Annual Maintenance Plan for 2023-24
Audited Financial Statements along with detailed notes (P&L, Cash flow and Balance Sheet) since PCOD/COD to understand historical Routine, Preventive and Major Maintenance	Single item received - Independent Audited Report for year ended 31st March 2022 O&M item-wise expense details not available
Audited Financial Statements along with detailed notes (Profit & Loss, Cash Flow and Balance Sheet) since PCOD/COD to understand historical Routine, Preventive and Major Maintenance	Single item received - Independent Audited Report for year ended 31st March 2022 O&M item-wise expense details not available

Data shared by the Client (2)

Particulars	Status
Details and Correspondence for Change of Scope (Construction and O&M Stage)	Received
EPC Agreement for 2 lane existing bypass of Rampur to be developed to 4 lane	Received
Future Traffic Projections / Traffic Due Diligence Report	FY 2023 AADT, VDF data, growth rates received
Client in-house rates for major maintenance activities	Received
Insurance Policy details	Received
Past Technical Due Diligence Reports	Technical Due Diligence Report (Revised Final Report October 2020) by Feedback Infra Private Limited
Manpower renumeration details	Received
Yearly accident reports along with data for minimum last 5 years	Accident data at Black Spots 2016, 2017 & 2018 Accident data in IE Reports - Nov'22 to March'23

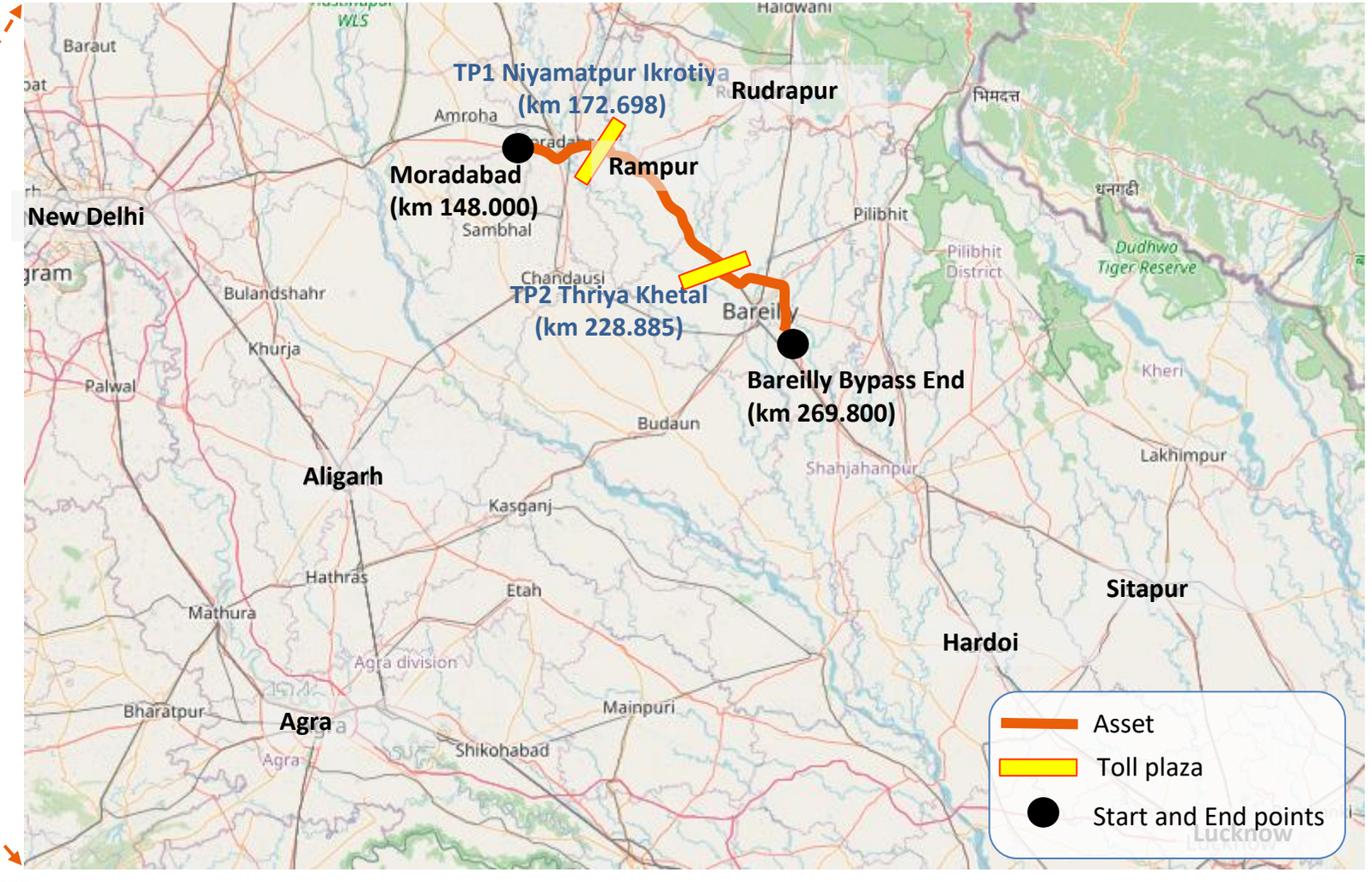
Chapter 2: Asset Profile

- Location and network
- Key details of the asset
- Concession timeline and key stakeholders
- Quantitative summary of physical features
- Present modality of O&M activities
- Key O&M related points of CA

Asset location and network

- The Asset starts at Moradabad (km 148.000) and ends at Bareilly (km 269.800) passing through districts of Moradabad, Rampur and Bareilly in Uttar Pradesh and having two ETC enabled toll plazas on the section of 121.8 km.
- It is a part of old NH24 (new NH9, NH530 and NH30) which mainly connects Delhi / NCR and north and north-eastern Uttar Pradesh and Uttarakhand in northern India. Both commercial and passenger traffic movement is being catered through the section.

Asset context map



Source: OpenStreetMap data and google maps

Key details of the Asset

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Start and End Chainage of Project Road

Start point (km 148.000)

End point (km 269.800)

Toll Plaza

TP1 Niyamatpur (km 172.689)

TP2 Thriyakhetal (km 228.885)

Construction work having impact on obligations of CA

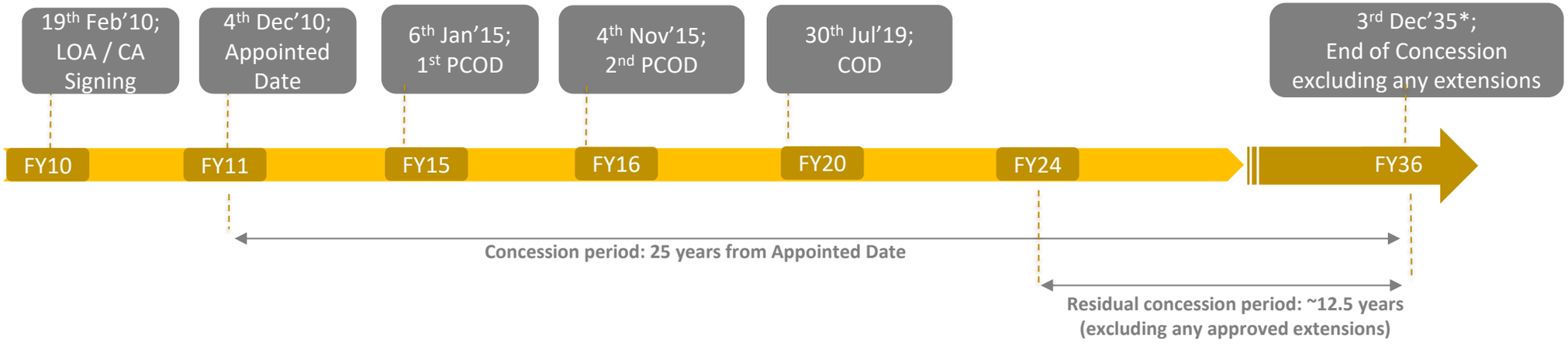
Rampur bypass (km 181.000)

- **Work:** 2 lane existing bypass of Rampur to be developed to 4 lane to be developed in Uttar Pradesh on EPC mode
- **Developer:** OSS Construction Private Limited – Sptesdorstroy LLC (JV)
- **Agreement executed:** September 2022
- **Defect Liability Period:** 5 years from the date of Completion Certificate

Source: Concession Agreement, IE / LIE Reports, TICPL site visit

Concession timeline and key stakeholders

Concession timeline and key participants



**However, concessionaire will get 3 months of extension due to covid pandemic*

Key stakeholders

- **Authority:** National Highways Authority of India (NHAI)
- **O&M and Maintenance Contractors till end of concession period:** Elsamex Maintenance Services Limited
- **Contractors for ongoing Major Maintenance & Repair Works:** Rajinder Infrastructure Private Limited, Atcon India Limited, Jalakash
- **PMC for ongoing Major Maintenance & Repair Works:** Segmental Consulting & Infrastructure Advisory Private Limited
- **Lead Lenders:** L&T Infra Credit Limited and L&T Finance Limited
- **Lenders Consortimu Members:** India Infra Debt Fund, Bank of Baroda, Bank of India
- **Independent Engineer:** LEA Associates South Asia Private Limited
- **Lender's Independent Engineer:** V R TECHNICHE Consultants Private Limited

Source: Concession Agreement, IE / LIE Reports, TICPL site visit

Quantitative summary of physical features (1)

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Quantitative summary of physical features (1)

Particulars	Details
Project Name	Four Laning of Moradabad-Bareilly Section of NH24 from km 148.000 to km 262.000 in the State of Uttar Pradesh under NHDP Phase III (Package No. NHDP – III/DL5/14) on DBFOT Basis
Length of the Asset	121.800 km
Service Road length	22.000 km
Lane Configuration	Four Lanes (except Rampur Bypass which is under construction for widening)
Length under O&M stage	118.820 km
Nos. of by passes and their total length	5 (Moradabad, Rampur, Milak, Fatehganj, Bareilly) Total 65.474 km
Nos. of ROBs	6 (at km 159.772, km 165.402, km 189.138, km 216.695, km 234.900, km 246.426)
Nos. of Major Bridges	7
Nos. of Minor Bridges	12

Quantitative summary of physical features (2)

Particulars	Details
Nos. of Culverts	170
Nos. of grade separator/fly over/interchanges	2 (at km 246.426, km 251.000)
Nos. of VUPs	11
Nos. of PUPs	22
Nos. of At-grade junction (major)	14
Nos. of Toll Plazas	TP1 Niyamatpur (km 172.689) TP2 Thriyakhetal (km 228.885)
Nos. of Truck lay-byes	3
Nos. of Bus Bays	20
Nos. of Traffic Aid Posts	2
Nos. of Medical Aid Posts	2
Nos. of Vehicular rescue posts	2
Nos. of Field Laboratory	1
Telecom system	1
Highway Nest Mini at Toll Plazas	2
Traffic Control and Management	Ambulance: 2 Tow away cranes: 2 Highway patrolling: 2 Motorcycle for Site Supervisor: 4
Diesel Generator set	2 at each toll plaza

continued....

Quantitative summary of physical features (2)

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Quantitative summary of physical features (3)

Particulars	Details
Length of CD Drain	11.337 Km on each side
Length of Unlined Drain	135.6 Km
Nos. of Road Signages	2,000
Median and Avenue Plantation	114600
Median Width	1.5m to 4m
W Beam Crash Barrier	35 Km on both side
Pavement Type	Flexible MCW Rigid for Toll Plaza, Truck Lay byes
ETC Lanes	1+1 Dedicated lanes 5+5 Hybrid lanes

List of manpower

Particulars	Details
Maintenance manager	1
Safety Officer	1
Toll Manager	2
Toll Assistant Manager	2
Site Engineer	3
Traffic Marshal	2
Route Patrol Officer	8
IT Manager	2
System Technician	8
Site Supervisors	4
Control Centre Officer	1
Shift In charge	8
Toll Collectors	88
Lane Assistant	29
Account Officer	8
Cashier	6
HR & Admin Officer	1
Documentation Executive	2
Ambulance Drivers	6
Medical Attendants	7
Route Patrol Helpers	10
Route Patrol Vehicle Drivers	2
Tow Crane Operators	2
Tow Crane Helpers	6
Electrician	8
Housekeeper	10
Peon, Office Boy, Cooks	22

Source: Client

Present modality for O&M activities

Particulars	Present modality
Routine Maintenance	Outsource
Preventive Maintenance	Outsource
Operation of Toll Plaza and Administration Building	In-house
Security of Toll Plaza and Cleaning	Outsource
Highway Lighting	In-house
Maintenance of ATMS / TMS	Outsource
Corridor Management	Outsource
Major Maintenance	Outsource

Source: Client and TICPL site visit

Key O&M related points of CA

Reference Article and Schedules of CA

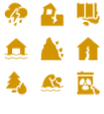
- Article 17 (Operation & Maintenance) and Schedule K (Maintenance Requirements) describe maintenance obligations of the concessionaire during O&M.
- Schedule K - Maintenance Requirements covers aspects like repair and rectification of defects and deficiencies, extension of time limit, emergency repairs/restoration, daily inspection by the concessionaire, divestment requirements and display of Schedule K at toll plazas.
- Further Article 18 to 23 adds specific obligations of the concessionaire during O&M, respectively Safety Requirements, Monitoring of O&M, Traffic Regulation, Emergency Medical Aid, Traffic Census and Sampling and Appointment of IE.

Operations

- **Regular Operations**
  - Smooth traffic flow
  - Functioning of toll system, lighting, patrolling, rescue & medical aid system, HTMS, O&M base camp, rest area, administrative building, truck lay byes, public toilet, portable water supply system, solid waste disposal system
  - Functioning of electric services at truck lay byes, bus bays and rest areas
- **Emergency Operations:** Accident/Incident Management

Maintenance

- **Regular Periodic Maintenance of Pavement:** Functional grade treatment to maintain roughness value of 2,500 mm/km
- **Routine Maintenance of Pavement** – Distress wise analysis with respect to performance criteria
- Routine and Periodic Maintenance of bridges and other structures, traffic signals, lighting, bus bays, control center, buildings, road furniture, landscaping



Special repair

- Damages occurring due to natural calamities like heavy floods, sand storms, hurricanes, cyclones, earthquakes to any element or system of the Asset

Chapter 3: Site visit and reconnaissance survey

- Main carriage way and service road
- Structures
- Toll plazas
- Other project facilities
- Field Investigations
- Site Visit Photographs during November 2023
- Observations on road safety

Main carriage way and service road

- Project road is four lane having paved width of 2 x 8.75 m along at grade section and 2 x 9 m at along built-up area. Approximately 40% of the pavement is in 'poor' condition based on visual observation during site visit. For these 40% poor locations, renewal work is in progress/completed. However, structural overlay has been proposed for these locations in MMR cycle of FY29 and FY30.
- 7 m width of service road was observed at built up area. 11.335 km of service road observed on each side. Pavement condition of service road is in fair to poor condition.

Main carriage way (km 158.000)

Bareilly bypass (km 237.100)

Service road (km 215.500)

Cracking (km 170.700)

Multiple distress (km 166.000)

Bleeding (km 245.900)

Source: TICPL site visit

Structures

- Pitching and Pier Protection work has been exercised for resistance against scouring for few of the major bridges.
- In general, drainage spout cover and elastomeric strip seals were found defective.

Major bridge (km 178.225)

ROB (km 189.200)

VUP (km 185.700)

Minor bridge (km 159.465)

Small vehicular under pass – under construction (km 185.000)

Source: TICPL site visit

Toll Plazas

- Toll plazas including administrative building, TMS are in order and complying project requirement.
- Rigid pavement at both toll plazas is in fair condition.

TP1 Niyamatpur (km 172.689)

Admin Building TP1 Niyamatpur

Toll collection equipment at TP1 Niyamatpur

TP2 Thriyakhetal (km 228.885)

Ambulance facility at Toll Plazas

Static weigh bridge at TP1 Niyamatpur

Source: TICPL site visit

Other project facilities

- Metal beam crash barrier observed along outer edge and RCC Crash barrier has provided over approach of GS Structure on top of RE Wall.
- Adequate road and safety signages are in place.

Road signages

Warning signages for accident zone

Hazard marking

Pedestrian guard rail (painting under execution)

Bus Bay

Crash barrier and safety measures during landscaping activities

Source: TICPL site visit

Field investigations

- Field investigations has been exercised with required safety measures and in due consultation with site officials.

Trial Pits

Pavement Condition Survey

FWD Survey

Source: TICPL site visit

Site Visit Photographs during November 2023 (1)

- Major maintenance work carried out from April 2023 to September 2023 was observed during site visit in November 2023.

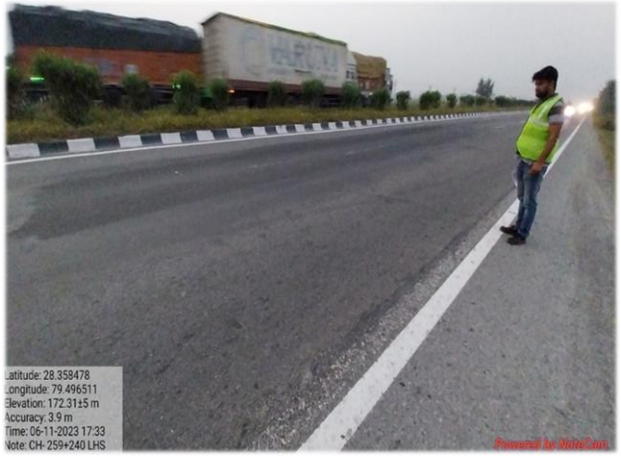
Main carriage way (km 155.100)

Main carriage way (km 193.800)

Main carriage way (km 197.800)

Main carriage way (km 252.300)

Main carriage way (km 259.240)



Main carriage way (End Point)

Source: TICPL site visit

Site Visit Photographs during November 2023 (2)

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TP3 Niyamatpur (km 172.689)

Median Plantation (km 149.800)

Road Marking (km 238.900)

Metal Beam Crash Barrier (km 239.400)

Pedestrian Guard Rail (km 169.900)

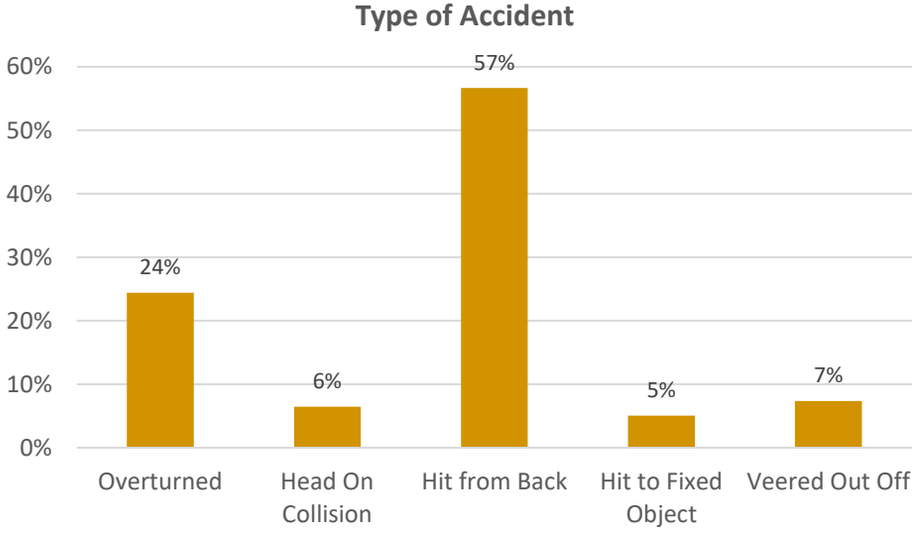
Hand Rail (km 245.400)

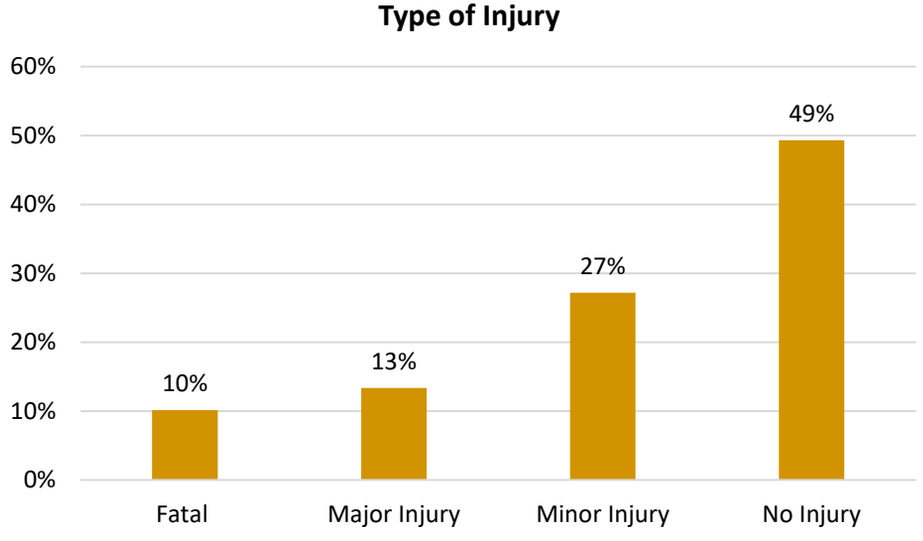
Source: TICPL site visit

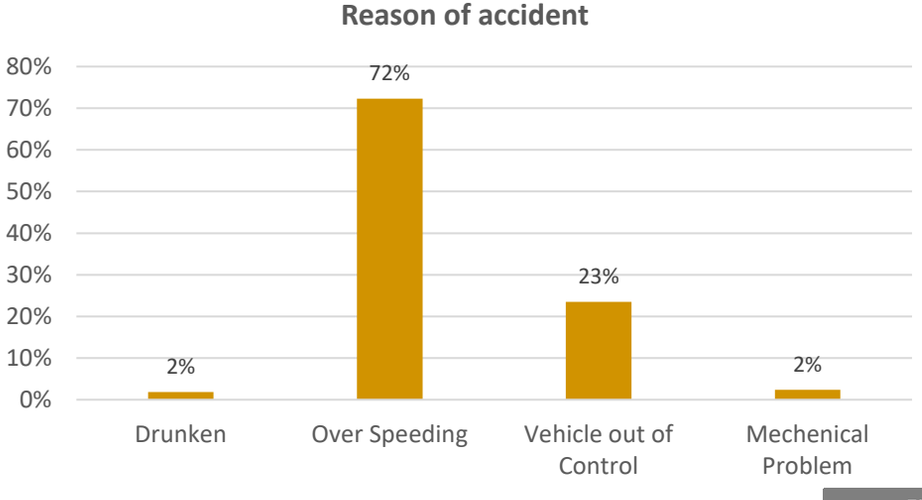
Observation on road safety (1)

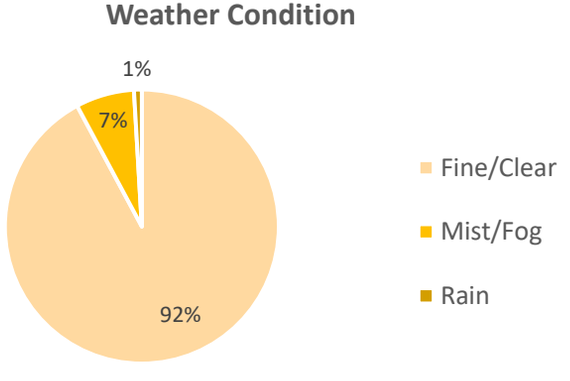
Historical accident data

- Based on reports made available for 5 months with respect to road safety, following facts are observed:
  - Nos. of accidents occurring during day time and night time are of equal proportions
  - Accidents occurring in rural areas are 2.7 times higher compared to urban area
  - 91% of accidents observed in straight section
  - 76% of accidents witnessed with victim age <40 years
  - In 87% of accidents were due to fault of driver









Observation on road safety (2)

Site observations

- 60% street lights were found non-operational
- Road marking and studs were not observed
- Reflectivity of signboards were found in order

Unauthorized access to MCW from SR (Nr. Fuel Station)

Unauthorized median break – Near 166 chainage

Moradabad City Junction identified as black spot

Source: TICPL site visit

Chapter 4: Condition assessment of structures

Condition assessment of structures

- All the major structures mentioned in the CA were found.
- Repair/Replacement of bearings, expansion joints, removal of vegetation, scour protection etc. activities are required at certain structures. Details of which are presented in this section..
- Visual inspections without MBIU includes:
  - Type of Structure, details of span, vent height etc.;
  - Conditions of substructure and super structure;
  - Conditions of expansion joints, bearings, drainage spouts etc.;
  - Type of protection work, if any.

- Most of the structures were found in sound condition and need only regular maintenance.
- However, a few structures requires attention as indicated in this chapter with select examples.

Select cases exhibiting condition of structure (1)

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Minor bridge (km 210+400)

- Construction joints are in fair condition
- Suitable repair to be considered

Minor bridge (km 268+220)

- Brick masonry wing wall and crash barrier (RHS)
- Suitable repair to be considered

Passenger Underpass (km 155+601)

- Raft requires repairing

Minor bridge (km 159+465)

- Wing wall (LHS) requires repairing

Source: TICPL site visit

Select cases exhibiting condition of structure (2)

- A few of the major bridges requires pitching and pier protection work for additional resistance against scouring.

Major bridge with pile exposed (km 157+712)

Major bridge (km 161+348)

Major bridge (161+348 RHS)

Source: TICPL site visit

Select cases exhibiting condition of structure (3)

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Major bridge (km 222+973 LHS)

Major bridge (222+973 RHS)

Major bridge (km 226+400 LHS)

Major bridge (226+400 RHS)

Source: TICPL site visit

Select cases exhibiting condition of structure (4)

- Side slope pitching is not in good condition. Suitable repair to be considered.

ROB (km 159+771)

ROB (km 165+400)

Source: TICPL site visit

Select cases exhibiting condition of structure (5)

- Cracks were observed in Portal of ROB Substructure.

ROB (km 234+729)

Source: TICPL site visit

Select cases exhibiting condition of structure (6)

Select cases of culverts

Source: TICPL site visit

Proposed rehabilitation measures (1)

- Replacement of bearings and expansion joints to be considered as capital expenditure
- For bearings and expansion joints, replacement cycle to be considered at 15 years from completion of construction year

Proposed rehabilitation measures – NH24 section

Chainage	Type of Structure	FY LHS	FY RHS	Replacement
157+712	MJB	2027-28	2027-28	Bearing & Expansion Joint
159+465	MNB	2028-29	2028-29	Bearing & Expansion Joint
159+771	ROB	2028-29	2028-29	Bearing & Expansion Joint
161+348	MJB	2028-29	2028-29	Bearing & Expansion Joint
165+400	ROB	2029-30	2029-30	Bearing (LHS) & Expansion Joint
165+400	ROB	2023-24	-	Expansion joint (LHS)
168+474	MJB	2023-24	2031-32	Bearing & Expansion Joint
178+235	MNB	2030-31	2030-31	Bearing & Expansion Joint
179+760	ROB	2027-28	2027-28	Bearing & Expansion Joint
180+740	MJB	2028-29	2023-24	Bearing & Expansion Joint
185+700	VUP	2028-29	2028-29	Bearing & Expansion Joint
189+100	ROB	2029-30	2029-30	Bearing & Expansion Joint
207+700	VUP	2030-31	2030-31	Bearing & Expansion Joint
216+685	ROB	2029-30	2029-30	Bearing & Expansion Joint
217+570	VUP	2028-29	2028-29	Bearing & Expansion Joint
222+973	MJB	2028-29	2023-24	Bearing & Expansion Joint
225+582	MNB	2023-24	2027-28	Bearing & Expansion Joint
226+400	MJB	2028-29	2023-24	Bearing & Expansion Joint

MJB – Major bridge, MNB – Minor bridge, ROB – Road over bridge, VUP – Vehicular Underpass

Continued….

Proposed rehabilitation measures (2)

Proposed rehabilitation measures – NH24 section (….continued)

Chainage	Type of Structure	FY LHS	FY RHS	Replacement
234+729	ROB	2029-30	2029-30	Bearing & Expansion Joint
236+338	MNB	2027-28	2027-28	Bearing (RHS) & Expansion Joint
245+255	MNB	2028-29	2028-29	Bearing & Expansion Joint
246+426	GS and ROB	2029-30	2029-30	Bearing & Expansion Joint
251+000	Flyover	2028-29	2028-29	Bearing & Expansion Joint
251+641	MJB	2029-30	2029-30	Bearing & Expansion Joint
262+587	VUP	2028-29	2028-29	Bearing & Expansion Joint

Source: TICPL recommendation

MJB – Major bridge, MNB – Minor bridge, ROB – Road over bridge, VUP – Vehicular Underpass

Proposed rehabilitation measures – Rampur city section

Chainage	Type of Structure	FY LHS	FY RHS	Replacement	Assumptions for construction year
182+200	ROB	2027-28	2027-28	Bearing & Expansion Joint	2011-2013
187+800	ROB	2027-28	2027-28	Bearing & Expansion Joint	2011-2013

Source: TICPL recommendation

ROB – Road over bridge

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Summary of condition assessment – major bridge

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	157.712								
RHS									
LHS	161.348								
RHS									
LHS	168.474								
RHS									
LHS	178.235								
RHS									
LHS	180.740								
RHS									
LHS	222.973								
RHS									
LHS	226.400								
RHS									
LHS	251.641								
RHS									

Source: TICPL analysis

Summary of condition assessment – minor bridge (1)

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Summary of condition assessment – minor bridge

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	159.465	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	208.000	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	208.400	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	210.400	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	225.582	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	228.004	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	228.400	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	231.400	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	233.627	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●

Source: TICPL analysis

Summary of condition assessment – minor bridge (2)

Summary of condition assessment – minor bridge

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	236.338	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	245.235	●	◐	●	●	●	●	●	●
RHS		●	◐	●	●	●	●	●	●
LHS	268.222	●	●	●	●	●	●	●	●
RHS		●	●	◐	●	●	●	●	●

Source: TICPL analysis

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Summary of condition assessment – road over bridge

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	159.771	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	165.400	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	179.360	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	189.100	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	216.685	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	234.726	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	246.426	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●

Source: TICPL analysis

Summary of condition assessment – vehicular underpass (1)

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Summary of condition assessment – VUP

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	169.225	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	175.200	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	185.700	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	189.325	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	190.393	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	192.057	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	194.100	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	207.700	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	217.570	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●

Continued....

Summary of condition assessment – vehicular underpass (2)

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Summary of condition assessment – VUP (…. continued)

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Condition of Existing Structure							
		Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	224.860	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	232.918	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	247.717	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	248.087	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	262.587	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●

Source: TICPL analysis

Chapter 5: Condition assessment of pavement

Pavement evaluation

Performance of pavement under prevailing as well as future traffic and environmental situations is critical aspect to achieve expected economic returns from highway project. Estimating exact future O&M and Major Maintenance requirement is complex activity due to involvement of large number of variables.

For predicting performance of the pavement structure, following parameters are essential to analyse:

- Design of pavement layer thicknesses and configurations
- Material characteristics;
- Traffic condition;
- Present physical condition of the pavement layers;
- Local environment and its impacts;
- Probable modes of failure of existing pavement and
- Technology available for reconstruction.

Further, it is also necessary to presume level of performance and pavement condition will be considered satisfactory by all stakeholders.

This chapter exhibits outcome of field investigations and analysis carried out to find out the present condition of pavement followed by future course of repair/rectification/modification requirements for desired performance of pavement for balance concession period.

Review of pavement design report

Pavement for the project road has been proposed as per IRC: 37 - 2012. As per the Pavement Design Report received, following pavement has been adopted for MCW of the Asset:

Existing pavement configuration

Pavement layer	Thickness (mm)	Design life	MSA	Subgrade CBR
Bituminous Concrete (BC)	50	19 years for BT layer 23 years for GR layer	100	10%
Dense Bituminous Macadam (DBM)	130			
Wet Mix Macadam (WMM)	250			
Granular Sub-base (GSB)	200			
Selected Subgrade (10% CBR)	500			

Source: Client

Design MSA

Design MSA

Homogeneous Section	Toll Plaza		LCV/Mini bus	Bus/Truck	3A	4 -6 Axle Truck MAV	OSV	Total	FY 23 – FY 27	FY 28 – FY 31	FY 32 – FY 36
Km 148-181	TP1 Niyamatpur Ikrotiya (km 172.698)	Traffic*	474	1689	550	1021	1	3736	4%	3.5%	3%
		VDF	0.84	2.77	5.81	7.54	7.54	-	FY24 9 MSA	FY29 34 MSA	FY36 78 MSA
Km 189-267	TP2 Thriya Khetal (km 228.885)	Traffic*	315	1265	510	1036	1	3127	4%	3.5%	3%
		VDF	0.84	2.77	5.81	7.54	7.54	-	FY24 8 MSA	FY29 31 MSA	FY36 71 MSA

Source: TICPL analysis **DDF of 50% assumed & provided VDF are maximum*

Functional assessment (1)

Functional Condition of Pavement – NSV

Final Rating Ranges	Rating Criteria		
Roughness	<2.55	2.55-3.30	>3.30
Rutting	<5	5-10	>10
Pavement Condition	Good	Fair	Poor

Final Rating Ranges	Rating Criteria				
Ravelling	0%	1-5%	6-10%	11-30%	>30%
Pot Holes	0	1	2	3-5	>5
Edge Break	0%	0-0.5%	0.5-1%	1-5%	>5%
Cracking	**<5%**	**5-10%**	**11-20%**	**21-30%**	**>30%**
Disintegration	<1%	1-10%	10-20%	20-50%	>50%
Depression	0%	0-1%	1-2%	3-5%	>5%
Bleeding	<1%	1-10%	10-20%	20-50%	>50%
Patching	<2%	2-5%	6-15%	16-30%	>30%
Pavement Condition	Very Good	Good	Fair	Poor	Very Poor

Distress Type	LHS (Inner) km			LHS (Outer) km		
	Good	Fair	Poor	Good	Fair	Poor
Roughness	50	35	36	19	36	66
Rutting	2	60	59	5	62	54
Cracking	66	26	29	62	29	30
% Length cumulative of all distresses	**33%**	**33%**	**34%**	**24%**	**35%**	**41%**

Distress Type	RHS (Inner) km			RHS (Outer) km		
	Good	Fair	Poor	Good	Fair	Poor
Roughness	20	35	66	19	35	67
Rutting	2	60	59	5	60	56
Cracking	66	26	29	62	29	30
% Length cumulative of all distresses	**24%**	**33%**	**42%**	**24%**	**34%**	**42%**

Source: *IE NSV Data February 2022 and* TICPL analysis

Based on major distresses such as Cracking, Rutting & Roughness, direction wise and lane wise pavement condition is summarized in table above.

Inferences:

- 35-40% of entire project road fall into poor condition*
- Except LHS inner, entire project road section has roughness higher than requirement of CA
- Entire project road has rutting greater than 5, this indicates weak sub base/subgrade. This can be further confirmed with NDT test results
- 50% of the project road section falls into good classification on account of cracking

**NSV data was of year 2022 and post that concessionaire has carried out rehabilitation activities in majority length of the project road. Hence, only structural analysis has been used to derive major maintenance strategy*.

Functional assessment (2)

Functional Condition of Pavement – Pavement Condition Survey (1)

Start Chainage	End Chainage	Condition (LHS)
148.000	150.000	Good to Fair
150.000	151.000	Poor
151.000	156.000	Good to Fair
156.000	157.000	Poor
157.000	158.000	Good to Fair
158.000	159.000	Poor
159.000	160.000	Good to Fair
160.000	161.000	Poor
161.000	162.000	Good to Fair
162.000	167.000	Poor
167.000	169.000	Good to Fair
169.000	170.000	Poor
170.000	237.000	Good to Fair
237.000	238.000	Poor
238.000	241.000	Good to Fair
241.000	242.000	Poor
242.000	247.000	Good to Fair
247.000	248.000	Poor
248.000	250.000	Good to Fair
250.000	251.000	Poor
251.000	261.000	Good to Fair
261.000	269.800	Poor

Functional Condition of Pavement – Pavement Condition Survey (2)

Start Chainage	End Chainage	Condition (RHS)
269.800	268.000	Poor
268.000	264.100	Good to Fair
264.100	262.000	Poor
262.000	260.000	Good to Fair
260.000	251.000	Poor
251.000	249.000	Good to Fair
249.000	248.000	Poor
248.000	165.000	Good to Fair
165.000	159.000	Poor
159.000	157.000	Good to Fair
157.000	154.000	Poor
154.000	149.000	Good to Fair
149.000	148.000	Poor

Source: TICPL site visit and analysis

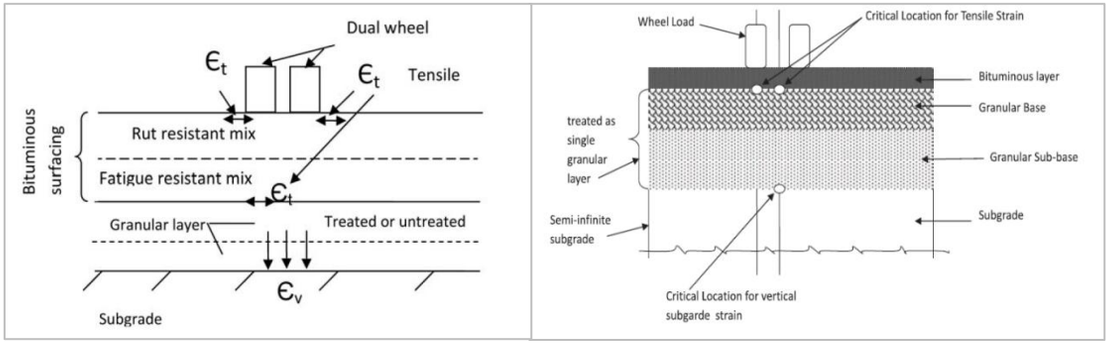
Based on major distresses such as Cracking, Rutting & Roughness, direction wise and lane wise pavement condition is summarized in table above.

Inferences:

- 14 km in LHS is in poor condition 32.7 km in RHS is in poor condition
- Cracking & Rutting were observed as major distress for both RHS & LHS

Structural assessment (1)

- FWD Deflection data was collected across the project road. Based on the deflection data and pavement crust thickness, Elastic modulus values of pavement layers were calculated and corrected for temperature and seasonality.
- Based on the homogeneity of these elastic modulus values of all pavement layers, entire project road was classified into several homogeneous sections. This was done to minutely isolate sections requiring specific rehabilitation treatments and to ensure that a particular section doesn't have any negative impact on entire homogeneous section because of 15th percentile design criteria
- For explanation purpose, approach is explained in table in next slide.
- Based on 15th percentile elastic modulus of these homogeneous section, using IITPAVE software, strains at critical locations i.e. bottom of BT & top of subgrade were calculated. With help of these strains Fatigue & Rutting residual lives of the homogeneous sections were calculated based on 90% reliability equations of IRC: 115 – 2014.
- If the residual life was less than design MSA, requirement of rehabilitation measure arise.



$N_f = 0.711 * 10^{-04} \times [1/\varepsilon_t]^{3.89} * [1/M_R]^{0.854}$ (90 per cent reliability)

$N = 1.41 \times 10^{-8} \times [1/\varepsilon_v]^{4.5337}$

Structural assessment (2)

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Homogeneous sections based on E-Modulus

Start	End	D1	D2	D3	D4	D5	D6	D7	Crust	E BT Mpa	E GR Mpa	E SG Mpa	15th Percentiles E BT Mpa	15th Percentiles E GR Mpa	15th Percentiles E SG Mpa
148.100	148.200	0.392	0.260	0.188	0.124	0.087	0.064	0.048		1231	67	77			
148.200	148.300	0.094	0.030	0.019	0.016	0.015	0.013	0.011		2800	368	77			
148.300	148.400	0.048	0.028	0.020	0.017	0.016	0.014	0.012		1405	367	77			
148.400	148.500	0.342	0.246	0.188	0.114	0.079	0.053	0.042		1192	102	77	1122	96	77
148.500	148.600	0.088	0.034	0.023	0.018	0.015	0.012	0.011		2744	367	77			
148.600	148.700	0.385	0.249	0.181	0.119	0.079	0.068	0.046		1089	94	77			
148.700	148.800	0.082	0.047	0.029	0.020	0.015	0.013	0.012		2766	370	77			
148.800	148.900	0.079	0.060	0.047	0.034	0.025	0.014	0.011		1399	365	77			
148.900	149.000	0.377	0.249	0.178	0.106	0.073	0.073	0.043		1105	112	77			
149.000	149.100	0.082	0.046	0.028	0.020	0.015	0.012	0.011		2739	365	77			
149.200	149.300	0.109	0.080	0.056	0.043	0.031	0.023	0.017	BT -300 mm, GR – 480 mm	2800	362	77			
149.300	149.400	0.078	0.055	0.039	0.030	0.024	0.020	0.078		1386	369	77			
149.500	149.600	0.067	0.038	0.024	0.017	0.013	0.011	0.011		2745	365	77			
149.700	149.800	0.087	0.055	0.037	0.028	0.022	0.019	0.015		2651	370	77			
149.800	149.900	0.06	0.043	0.031	0.024	0.021	0.020	0.060		2679	368	77			
150.000	150.100	0.135	0.089	0.062	0.045	0.033	0.025	0.020		1418	369	77	1390	365	77
150.200	150.300	0.076	0.047	0.035	0.024	0.019	0.017	0.014		2687	370	77			
150.300	150.400	0.056	0.042	0.032	0.026	0.021	0.017	0.056		2089	371	77			
150.500	150.600	0.109	0.068	0.046	0.033	0.025	0.018	0.016		1069	371	77			
150.700	150.800	0.142	0.093	0.067	0.051	0.039	0.030	0.025		2051	369	77			
150.800	150.900	0.104	0.080	0.057	0.045	0.037	0.031	0.104		2094	367	77			
150.900	151.000	0.119	0.073	0.048	0.034	0.026	0.020	0.015		1988	368	77			

Source: TICPL analysis

Structural assessment (3)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (LHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-1	148.000	149.000	1.00	300	480	66.03	1214.74	66.0	78
HS-2	149.000	151.200	2.20	300	480	613.31	4142.89	613.3	78
HS-3	151.200	151.900	0.70	340	480	1195.34	7305.53	1195.3	78
HS-4	151.900	152.200	0.30	340	480	642.87	9548.61	642.9	78
HS-5	152.200	154.000	1.80	340	480	1200.70	7332.34	1200.7	78
HS-6	154.000	156.300	2.30	260	480	314.41	2396.80	314.4	78
HS-7	156.300	156.600	0.30	260	480	15.56	313.11	15.6	78
HS-8	156.600	157.300	0.70	260	480	344.07	2629.31	344.1	78
HS-9	157.300	158.200	0.90	190	450	84.45	566.47	84.4	78
HS-10	158.200	159.000	0.80	260	480	242.13	1781.76	242.1	78
HS-11	159.000	160.700	1.70	300	480	120.99	926.98	121.0	78
HS-12	160.700	161.600	0.90	190	450	84.92	565.29	84.9	78
HS-13	161.600	162.100	0.50	190	450	113.53	753.97	113.5	78
HS-14	162.100	162.200	0.10	190	450	28.32	244.10	28.3	78
HS-15	162.200	165.900	3.70	300	480	499.41	3212.10	499.4	78
HS-16	165.900	166.200	0.30	460	380	8966.21	27079.00	8966.2	78
HS-17	166.200	166.600	0.40	190	440	28.59	232.22	28.6	78
HS-18	166.600	167.500	0.90	190	440	90.08	545.70	90.1	78
HS-19	167.500	167.700	0.20	190	380	8.74	69.18	8.7	78
HS-20	167.700	168.000	0.30	190	440	24.70	203.59	24.7	78
HS-21	168.000	169.500	1.50	190	380	3.23	37.82	3.2	78

Structural assessment (4)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (LHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-22	169.500	170.000	0.50	190	450	83.59	557.12	83.6	78
HS-23	170.000	170.100	0.10	190	450	16.01	186.57	16.0	78
HS-24	170.100	170.700	0.60	190	450	87.23	604.54	87.2	78
HS-25	170.700	170.800	0.10	190	450	41.91	359.20	41.91	78
HS-26	170.800	172.000	1.20	230	450	204.48	1282.87	204.48	78
HS-27	172.000	172.500	0.50	230	450	37.43	278.45	37.43	78
HS-28	172.500	174.500	2.00	230	450	208.08	1315.37	208.08	78
HS-29	174.500	175.000	0.50	230	535	9.18	277.46	9.18	78
HS-30	175.000	176.600	1.60	230	450	217.69	1376.45	217.69	78
HS-31	176.600	176.800	0.20	230	450	39.49	413.05	39.49	78
HS-32	176.800	178.000	1.20	230	450	216.81	1376.45	216.81	78
HS-33	178.000	180.900	2.90	50	450	0.11	3.49	0.11	78
HS-34	189.900	190.200	0.30	230	450	54.05	237.17	54.05	71
HS-35	190.200	195.200	5.00	230	400	159.00	8525.81	159.00	71
HS-36	195.200	195.300	0.10	230	450	11.43	110.10	11.43	71
HS-37	195.300	196.500	1.20	230	370	35.14	108.45	35.14	71
HS-38	196.500	196.800	0.30	230	370	3.01	26.91	3.01	71
HS-39	196.800	199.300	2.50	230	400	1103.55	1555.52	1103.55	71
HS-40	199.300	199.400	0.10	448	354	6666.72	5566.60	5566.60	71
HS-41	199.400	199.700	0.30	230	450	165.73	526.97	165.73	71
HS-42	199.700	199.800	0.10	448	354	16743.79	5566.60	5566.60	71

Structural assessment (5)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (LHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-43	199.800	202.000	2.20	230	450	136.66	450.47	136.66	71
HS-44	202.000	202.200	0.20	230	480	15.35	162.83	15.35	71
HS-45	202.200	202.500	0.30	230	480	188.52	730.69	188.52	71
HS-46	202.500	202.600	0.10	230	480	112.52	428.52	112.52	71
HS-47	202.600	203.300	0.70	230	380	178.45	315.65	178.45	71
HS-48	203.300	203.400	0.10	470	380	9410.76	8522.23	8522.23	71
HS-49	203.400	204.400	1.00	230	450	237.46	594.10	237.46	71
HS-50	204.400	205.400	1.00	230	250	47.52	56.43	47.52	71
HS-51	205.500	205.800	0.30	230	365	66.23	148.80	66.23	71
HS-52	205.800	207.500	1.70	230	365	11.84	82.87	11.84	71
HS-53	207.500	208.200	0.70	230	450	54.51	281.89	54.51	71
HS-54	208.200	210.300	2.10	230	450	4.17	59.31	4.17	71
HS-55	210.300	210.800	0.50	230	450	186.17	574.54	186.17	71
HS-56	210.800	212.000	1.20	230	450	18.33	174.99	18.33	71
HS-57	212.000	218.000	6.00	230	430	179.07	946.61	179.07	71
HS-58	218.000	218.200	0.20	230	450	47.64	428.65	47.64	71
HS-59	218.200	220.300	2.10	230	450	184.78	1182.34	184.78	71
HS-60	220.300	221.300	1.00	435	220	1894.05	1156.61	1156.61	71
HS-61	221.300	222.300	1.00	215	510	152.27	1720.92	152.27	71
HS-62	222.300	222.400	0.10	345	350	44.68	329.04	44.68	71
HS-63	222.400	223.300	0.90	345	230	955.79	940.01	940.01	71

Structural assessment (6)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (LHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-64	223.300	223.400	0.10	430	230	183.53	467.63	183.53	71
HS-65	223.400	224.500	1.10	230	450	42.10	417.09	42.10	71
HS-66	224.500	224.800	0.30	370	320	1736.15	3251.65	1736.15	71
HS-67	224.800	224.900	0.10	370	320	64.03	244.95	64.03	71
HS-68	224.900	225.200	0.30	370	320	1119.64	1730.11	1119.64	71
HS-69	225.200	227.900	2.70	230	450	195.90	1263.84	195.90	71
HS-70	227.900	229.200	1.30	315	400	940.37	3458.54	940.37	71
HS-71	229.200	230.700	1.50	490	250	8854.69	116201.19	8854.69	71
HS-72	230.700	233.800	3.10	230	450	198.21	1276.48	198.21	71
HS-73	233.800	233.900	0.10	230	450	21.14	235.42	21.14	71
HS-74	233.900	235.800	1.90	230	450	206.63	1302.25	206.63	71
HS-75	235.800	235.900	0.10	230	450	45.15	549.10	45.15	71
HS-76	235.900	237.100	1.20	230	450	218.94	1379.94	218.94	71
HS-77	237.100	249.600	12.50	180	450	2.49	45.83	2.49	71
HS-78	249.600	250.300	0.70	180	450	18.66	196.63	18.66	71
HS-79	250.300	252.600	2.30	180	450	2.55	47.17	2.55	71
HS-80	252.600	253.600	1.00	180	450	18.84	187.80	18.84	71
HS-81	253.600	267.900	14.30	180	450	2.09	40.11	2.09	71
HS-82	267.900	268.500	0.60	180	450	42.09	335.81	42.09	71
HS-83	268.500	268.600	0.10	180	450	2.48	44.54	2.48	71
HS-84	268.600	269.800	1.20	180	450	2.48	44.54	2.48	71

Source: TICPL analysis

Structural assessment (7)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (RHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-1	269.800	269.700	1.40	180	450	0.81	19.97	0.81	71
HS-2	268.400	268.300	0.30	180	450	23.29	213.34	23.29	71
HS-3	268.100	268.000	0.70	180	450	3.16	55.52	3.16	71
HS-4	267.400	267.300	0.60	180	450	16.55	178.58	16.55	71
HS-5	266.800	266.700	0.10	180	450	2.95	70.65	2.95	71
HS-6	266.600	266.500	2.10	180	450	12.84	162.50	12.84	71
HS-7	264.600	264.500	1.00	180	450	11.74	161.74	11.74	71
HS-8	263.600	263.500	5.40	180	450	3.70	68.55	3.70	71
HS-9	258.200	258.100	0.60	180	450	7.94	113.19	7.94	71
HS-10	257.600	257.500	1.40	180	450	10.73	132.90	10.73	71
HS-11	256.200	256.100	2.20	180	450	2.82	50.30	2.82	71
HS-12	254.000	253.900	0.50	180	450	10.79	132.90	10.79	71
HS-13	253.500	253.400	0.10	180	450	11.70	172.92	11.70	71
HS-14	253.400	253.300	0.70	180	450	16.06	166.15	16.06	71
HS-15	252.700	252.600	1.10	180	450	13.14	144.99	13.14	71
HS-16	251.600	251.500	0.40	180	450	3.99	80.32	3.99	71
HS-17	251.200	251.100	0.90	180	450	12.68	145.22	12.68	71
HS-18	250.300	250.200	0.10	180	450	3.53	72.54	3.53	71
HS-19	250.200	250.100	0.40	180	450	14.84	165.89	14.84	71
HS-20	249.800	249.700	0.70	180	450	2.00	39.65	2.00	71
HS-21	249.100	249.000	0.70	180	450	1.87	45.61	1.87	71

Structural assessment (8)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Residual Life (RHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-22	248.400	248.300	0.60	180	450	25.85	222.53	25.85	71
HS-23	247.800	247.700	1.90	180	450	2.29	45.13	2.29	71
HS-24	245.900	245.800	0.50	180	450	10.96	118.63	10.96	71
HS-25	245.400	245.300	0.80	180	450	1.26	27.94	1.26	71
HS-26	244.600	244.500	1.00	180	450	11.20	137.83	11.20	71
HS-27	243.600	243.500	0.60	180	450	6.92	119.51	6.92	71
HS-28	243.000	242.900	3.60	180	450	16.93	171.54	16.93	71
HS-29	239.400	239.300	0.80	180	450	3.21	61.03	3.21	71
HS-30	238.600	238.500	0.80	180	450	10.56	134.52	10.56	71
HS-31	237.800	237.700	0.10	180	450	2.47	46.33	2.47	71
HS-32	237.600	237.500	1.30	180	450	30.01	252.29	30.01	71
HS-33	236.400	236.300	2.20	230	450	190.70	1191.07	190.70	71
HS-34	234.000	233.900	0.80	230	450	12.79	259.45	12.79	71
HS-35	233.400	233.300	2.00	230	450	187.10	1176.56	187.10	71
HS-36	231.400	231.300	0.20	230	450	9.44	156.72	9.44	71
HS-37	231.000	230.900	0.60	505	250	1776.74	2146.40	1776.74	71
HS-38	230.600	230.500	2.70	230	450	175.93	1117.93	175.93	71
HS-39	227.900	227.800	1.00	250	370	160.94	522.63	160.94	71
HS-40	226.900	226.800	2.50	230	450	183.48	1153.79	183.48	71
HS-41	224.400	224.300	1.20	370	230	704.66	272.09	272.09	71
HS-42	223.000	222.900	11.80	230	430	105.59	634.82	105.59	71

Structural assessment (9)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Residual Life (RHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-43	211.400	211.300	1.40	230	450	15.70	219.91	15.70	71
HS-44	210.000	209.900	0.50	230	450	5.64	111.39	5.64	71
HS-45	209.500	209.400	0.50	230	450	84.37	665.54	84.37	71
HS-46	209.000	208.900	1.50	230	450	4.41	87.06	4.41	71
HS-47	207.500	207.400	0.10	230	450	33.04	564.11	33.04	71
HS-48	207.400	207.300	0.60	230	450	166.07	1088.64	166.07	71
HS-49	206.800	206.700	0.10	230	450	18.91	363.29	18.91	71
HS-50	206.600	206.500	0.90	230	450	168.88	1096.54	168.88	71
HS-51	205.800	205.700	0.10	230	450	12.12	200.24	12.12	71
HS-52	205.600	205.500	0.90	230	450	125.15	885.11	125.15	71
HS-53	204.800	204.700	0.40	230	450	6.34	132.10	6.34	71
HS-54	204.400	204.300	2.30	230	450	49.69	479.01	49.69	71
HS-55	202.100	202.000	0.70	230	450	9.72	173.20	9.72	71
HS-56	201.400	201.300	3.90	230	450	73.70	613.57	73.70	71
HS-57	197.500	197.400	0.60	230	450	6.43	146.34	6.43	71
HS-58	196.900	196.800	6.30	230	370	175.35	545.70	175.35	71
HS-59	190.600	190.500	0.80	215	450	3.25	63.26	3.25	71
HS-60	181.000	180.900	1.30	50	450	0.04	1.31	0.04	78
HS-61	179.400	179.300	1.70	230	450	210.26	1325.32	210.26	78
HS-62	178.000	177.900	0.60	230	450	5.61	103.63	5.61	78
HS-63	177.400	177.300	0.60	230	450	214.08	1355.71	214.08	78

Structural assessment (10)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Residual Life (RHS)

Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-64	176.800	176.700	0.10	230	450	5.61	105.28	5.61	78
HS-65	176.600	176.500	0.80	230	450	221.24	1408.28	221.24	78
HS-66	175.900	175.800	0.10	230	450	7.61	140.17	7.61	78
HS-67	175.800	175.700	0.70	230	450	41.86	405.12	41.86	78
HS-68	175.100	175.000	0.30	230	450	13.11	269.22	13.11	78
HS-69	174.800	174.700	1.90	230	450	206.51	1318.68	206.51	78
HS-70	172.900	172.800	0.50	230	450	4.64	88.39	4.64	78
HS-71	172.400	172.300	1.40	230	450	158.48	1080.82	158.48	78
HS-72	171.000	170.900	0.90	230	450	155.37	1042.71	155.37	78
HS-73	170.100	170.000	2.00	230	450	6.46	118.98	6.46	78
HS-74	168.100	168.000	1.20	230	450	195.17	1266.98	195.17	78
HS-75	166.900	166.800	1.60	190	450	2.24	46.44	2.24	78
HS-76	165.300	165.200	1.30	190	450	65.80	469.50	65.80	78
HS-77	164.000	163.900	1.00	190	450	58.69	429.49	58.69	78
HS-78	163.000	162.900	0.20	190	450	3.32	77.55	3.32	78
HS-79	162.800	162.700	1.70	190	450	80.36	549.10	80.36	78
HS-80	161.100	161.000	0.30	190	450	2.76	53.03	2.76	78
HS-81	160.800	160.700	1.00	190	450	38.28	314.83	38.28	78
HS-82	159.600	159.500	1.70	190	450	87.19	596.94	87.19	78
HS-83	158.100	158.000	0.50	190	450	6.87	136.79	6.87	78
HS-84	157.600	157.500	0.70	190	450	116.81	776.11	116.81	78

Structural assessment (11)

Residual Life (RHS)

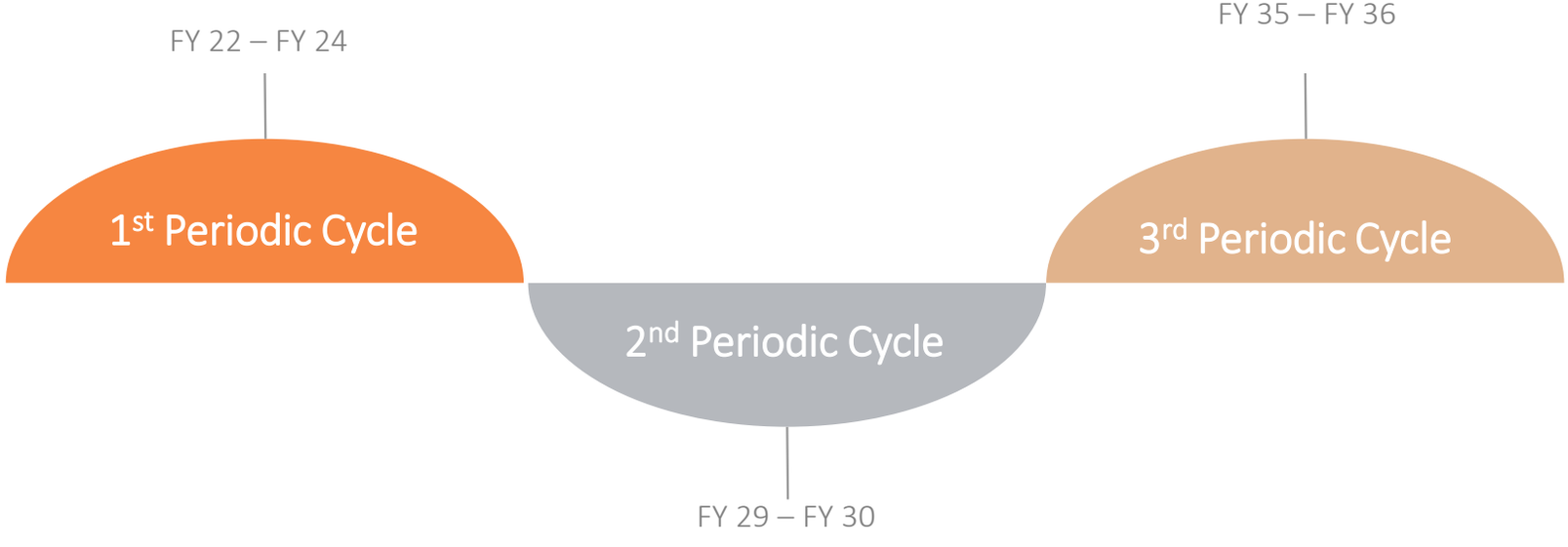
Homogeneous Section	Start Chainage	End Chainage	Length (km)	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA
HS-85	156.900	156.800	0.30	190	450	4.47	95.98	4.47	78
HS-86	156.600	156.500	2.60	190	450	83.83	571.21	83.83	78
HS-87	154.000	153.900	1.60	230	450	78.92	616.18	78.92	78
HS-88	152.400	152.300	1.50	230	450	6.74	150.48	6.74	78
HS-89	150.900	150.800	2.30	190	450	19.05	206.32	19.05	78
HS-90	148.600	148.500	0.30	190	450	2.65	44.75	20.20	78
HS-91	148.300	148.200	0.30	190	450	84.55	593.18	84.55	78

Source: TICPL analysis

Major maintenance cycles (1)

Rehabilitation Strategy MCW

- As per CA, periodic major maintenance or function overlay is to be carried out whenever roughness exceeds 2500mm/km
- As per NSV data analysis majority of the section had roughness values above the threshold. However, these data was of year 2022 and post that concessionaire has carried out rehabilitation activities in majority length of the project road. Hence, only structural analysis has been used to derive major maintenance strategy.
- Maintenance Cycles – Given the fact that since FY 22 concessionaire had carried out rehabilitation activities, the next cycle for major maintenance has been considered in FY 29 – FY 30 & FY 35 – FY 36



Source:- Consultant's PCS 2023

Major maintenance cycles (2)

Rehabilitation Strategy MCW – 2nd periodic cycle

- To meet the functional roughness requirement of CA, entire project road section has been proposed to be overlaid with 40 mm BC layer
- Several homogeneous sections, where structural residual life was severely low, additional layer of required thickness of DBM is proposed with or without milling the existing BT layer. Wherever 15th percentile e-modulus of BT layer is observed to be on lower end, milling is proposed.
- Wearing coarse of Mastic Asphalt is considered on structures in addition to 40 mm BC

Rehabilitation Strategy MCW – 3rd periodic cycle

- To meet the functional roughness requirement of CA, entire project road section has been proposed to be overlaid with 40 mm BC layer
- Wearing coarse of Mastic Asphalt is considered on structures in addition to 40 mm BC

Other items

- Edge Line Marking, Center Line Marking, Median kerb Removing, New Median kerb installment are considered in both 2nd & 3rd periodic cycle

Rehabilitation Strategy Service Road – 1st periodic cycle

- 30 mm layer of BC overlay has been proposed on service road given the structural and functional condition of service road.

Rehabilitation Strategy Service Road – 2nd & 3rd periodic cycle

- Micro-surfacing has been proposed for entire length of service road in both the periodic cycles to meet the functional requirement of CA.

Major maintenance BOQ (1)

Quantities of various items proposed in periodic maintenance cycles - LHS

Sr. No.	Particular	Qty.	FY25	FY29	FY30	FY35	FY36
1	**Major maintenance - Main Carriageway**						
1.1	Milling	SqM	-	3,09,190	-	-	-
1.2	DBM	CuM	-	30,302	-	-	-
1.3	BC	CuM	-	29,997	11,263	16,542	24,718
1.4	Tack Coat	SqM	-	13,55,955	2,81,564	4,13,541	6,17,942
1.5	Wearing course on structure (40mm BC)	CuM	-	1,361	-	1,361	-
1.6	Wearing course on structure (Mastic Asphalt)	SqM	-	34,036	-	34,036	-
1.7	Edge Line Marking	SqM	-	25,712	9,654	14,179	21,187
1.8	Centre Line Marking	SqM	-	12,856	4,827	7,089	10,593
1.9	Median Kerb Removing	RM	-	-	-	3,200	31,400
1.10	New Median Kerb Installment	RM		-	-	3,200	31,400
2	**Major maintenance - Service Road**						
2.1	BC Overlay	CuM	2,682	-	-	-	-
2.2	Tack Coat	SqM	89,390	-	-	-	-
2.3	Micro-surfacing	SqM	-	89,390	-	89,390	-
2.4	Edge Line Marking SR	SqM	3,407	3,407	-	3,407	-
2.5	Centre Line Marking SR	SqM	1,703	1,703		1,703	

Source: TICPL estimate

Major maintenance BOQ (2)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Quantities of various items proposed in periodic maintenance cycles - RHS

Sr. No.	Particular	Qty.	FY25	FY29	FY30	FY35	FY36
1	**Major maintenance - Main Carriageway**						
1.1	Milling	SqM	-	93,848	-	-	-
1.2	DBM	CuM	-	8,653	-	-	-
1.3	BC	CuM	-	17,510	24,182	16,795	24,897
1.4	Tack Coat	SqM	-	6,10,801	6,04,543	4,19,867	6,22,423
1.5	Wearing course on structure (40mm BC)	CuM	-	1,346	-	1,346	-
1.6	Wearing course on structure (Mastic Asphalt)	SqM	-	33,650	-	33,650	-
1.7	Edge Line Marking	SqM	-	15,008	20,727	14,395	21,340
1.8	Centre Line Marking	SqM	-	7,504	10,364	7,198	10,670
1.9	Median Kerb Removing	RM	-	-	13,900	7,700	20,100
1.10	New Median Kerb Installment	RM	-	-	13,900	7,700	20,100
2	**Major maintenance - Service Road**						
2.1	BC Overlay	CuM	2,682	-	-	-	-
2.2	Tack Coat	SqM	89,390	-	-	-	-
2.3	Micro-surfacing	SqM	-	89,390	-	89,390	-
2.4	Edge Line Marking SR	SqM	3,407	3,407	-	3,407	-
2.5	Centre Line Marking SR	SqM	1,703	1,703	-	1,703	-

Source: TICPL estimate

Chapter 6: Major maintenance cost estimate

Major maintenance cost estimate (1)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Base Year Rates

Sr. No.	Particular	Unit	Rate (INR) for FY 24
1	**Major maintenance - Main Carriageway**		
1.1	Milling	Rate/SqM	46
1.2	DBM	Rate/CuM	11,222
1.3	BC	Rate/CuM	13,000
1.4	Tack Coat	Rate/SqM	20
1.5	Wearing course on structure (40mm BC)	Rate/CuM	13,000
1.6	Wearing course on structure (Mastic Asphalt)	Rate/SqM	520
1.7	Edge Line Marking	Rate/SqM	448
1.8	Centre Line Marking	Rate/SqM	448
1.9	Median Kerb Removing	Rate/RM	15
1.10	New Median Kerb Installment	Rate/RM	300
2	**Major maintenance - Service Road**		
2.1	BC Overlay	Rate/CuM	13,000
2.2	Tack Coat	Rate/SqM	20
2.3	Micro-surfacing	Rate/SqM	210
2.4	Edge Line Marking SR	Rate/SqM	448
2.5	Centre Line Marking SR	Rate/SqM	448

Source: TICPL estimate

Major maintenance cost estimate (2)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Major maintenance cost estimate for balance concession period (INR Crore)

Sr. No.	Particular	FY24	FY25	FY27	FY28	FY29	FY30	FY31	FY32	FY35	FY36
1	**Major maintenance - Main Carriageway**										
1.1	Milling	-	-	-	-	2.4	-	-	-	-	-
1.2	DBM	-	-	-	-	52.3	-	-	-	-	-
1.3	BC	-	-	-	-	73.7	56.2	-	-	62.3	93.6
1.4	Tack Coat	-	-	-	-	4.7	2.2	-	-	2.4	3.6
1.5	Wearing course on structure (40mm BC)	-	-	-	-	4.1	-	-	-	4.9	-
1.6	Wearing course on structure (Mastic Asphalt)	-	-	-	-	4.1	-	-	-	4.9	-
1.7	Edge Line Marking	-	-	-	-	2.4	1.9	-	-	2.3	3.5
1.8	Centre Line Marking	-	-	-	-	1.2	0.9	-	-	1.1	1.7
1.9	Median Kerb Removing	-	-	-	-	-	0.0	-	-	0.0	0.1
1.10	New Median Kerb Installment	-	-	-	-	-	0.6	-	-	0.6	2.8
2	**Major maintenance - Service Road[$]**										
2.1	BC Overlay	-	11.2	-	-	-	-	-	-	-	-
2.2	Tack Coat	-	0.6	-	-	-	-	-	-	-	-
2.3	Micro-surfacing	-	-	-	-	7.3	-	-	-	8.7	-
2.4	Edge Line Marking SR	-	0.7	-	-	0.8	-	-	-	1.1	-
2.5	Centre Line Marking SR	-	0.3	-	-	0.4	-	-	-	0.5	-
3	**Major maintenance – Bus Bay**										
3.1	BC Overlay	-	1.0	-	-	-	-	-	-	-	-
3.2	Tack Coat	-	0.1	-	-	-	-	-	-	-	-
3.3	Micro-surfacing	-	-	-	-	0.6	-	-	-	0.7	-
4	**Major maintenance – Truck Lay Bye**										
4.1	BC Overlay	-	0.6	-	-	-	-	-	-	-	-
4.2	Tack Coat	-	0.03	-	-	-	-	-	-	-	-
4.3	Micro-surfacing	-	-	-	-	0.4	-	-	-	0.5	-

Source: TICPL estimate

Major maintenance cost estimate (3)

Major maintenance cost estimate for balance concession period (INR Crore)

Sr. No.	Particular	FY24	FY25	FY27	FY28	FY29	FY30	FY31	FY32	FY35	FY36
5	**Major maintenance - Underpass**										
5.1	BC Overlay	-	0.3	-	-	-	-	-	-	-	-
5.2	Tack Coat	-	0.01	-	-	-	-	-	-	-	-
5.3	Micro-surfacing	-	-	-	-	0.2	-	-	-	0.2	-
6	**Structure Specified Repairs**										
6.1	Immediate cost	-	3.8	-	-	-	-	-	-	-	-
6.2	Structure Specified Repairs	-	-	-	2.7	7.8	5.9	1.1	0.5	-	-
7	**Toll Hardware & Software**	-	-	1.5	-	-	-	-	-	-	-
8	**Replacement of HPSV lights with LEDs#**	-	3.0	-	-	-	-	-	-	-	-
9	**Costing as per budget FY 2023-24***	4.0	-	-	-	-	-	-	-	-	-
10	**Total**	**4.0**	**21.6**	**1.5**	**2.7**	**162.4**	**67.6**	**1.1**	**0.5**	**90.1**	**105.4**

Source: TICPL estimate

- *Client has already executed MMR activities worth 146.6 cr till September 2023. This costing includes 111 KM of overlay works in LHS and 119 Km of overlay works in RHS. 4cr of work of Bareilly bypass is pending. Hence, it has been considered in FY 24.
- $Client has already executed MMR work for service road worth INR 88 lakhs till September 2023. Total INR 84,59,781 is subtracted from BC overlay head for FY25. INR 375383 is subtracted from Tack coat head for FY25.
- # Costing of 3Cr has been considered for replacement of HPSV lights with LEDs from client's budget FY 25
- 5% escalation considered in rates of non-bituminous items & 3% for bituminous items
- Additional supervision fees of 2% of MMR cost shall be given to PMC

Chapter 7: O&M cost estimate

O&M cost estimate

O&M cost estimate for balance concession period (INR Crore)

Sr No	Particular	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
1	Routine Maintenance	3.4	7.1	7.4	7.8	8.2	8.6	9.0	9.5	10.0	10.5	11.0	11.5	8.2
2	Toll Plaza Operation	4.8	10.0	10.5	11.0	11.5	12.1	12.7	13.4	14.0	14.7	15.5	16.2	11.6
3	Corridor Control/Patrolling /Incident Management Expanses	1.2	2.5	2.7	2.8	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.1	2.9
A	**O&M and Toll operation excluding GST**	**9.3**	**19.6**	**20.6**	**21.6**	**22.7**	**23.8**	**25.0**	**26.3**	**27.6**	**28.9**	**30.4**	**31.9**	**22.7**
B	**O&M and Toll operation including GST**	**11.0**	**23.1**	**24.3**	**25.5**	**26.8**	**28.1**	**29.5**	**31.0**	**32.5**	**34.2**	**35.9**	**37.7**	**26.8**
4	Insurance Policy Charges including GST	0.8	2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.2	3.3	2.4
5	IE Fee	0.5	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.7	1.2
6	LIE Fee including of GST	0.6	0.0	0.0	0.0	0.0	1.4	1.5	0.0	0.0	0.0	0.0	1.9	1.4
7	Electricity Cost	0.7	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	1.7
C	**Total Other Cost**	**2.6**	**4.6**	**4.8**	**5.1**	**5.3**	**7.0**	**7.4**	**6.2**	**6.5**	**6.8**	**7.2**	**9.4**	**6.7**
B+C	**Grand Total Including GST**	**13.6**	**27.7**	**29.1**	**30.6**	**32.1**	**35.2**	**36.9**	**37.2**	**39.0**	**41.0**	**43.0**	**47.1**	**33.5**

Source: TICPL estimate

- O&M cost for FY24 is considered for half year (from Sep'23 - Mar'24) only.
- 5% of escalation has been considered every year till the end of concession period.
- Concession period ends on 4th December 2036. Hence, O&M cost of FY 36 has been considered for 8 months and 4 days. However, concessionaire will get 3 months of extension due to covid pandemic
- Client has submitted the request for Construction of 3 flyovers on Bareilly bypass having estimated cost of INR 1.29 Cr has been requested under change of scope. However, approval is pending.
- Work completed by client under change of scope and its outstanding amount :
  - Drone video recording Sep', Oct' and Nov' 2021 - INR 3,04,086
  - Construction of Civil and Electrical Works of Oxygen Generation Plant at Rampur Hospital – INR 19,16,257
  - Implementation of Hybrid ETC System in all lanes of both plazas - INR 1,06,69,352

Chapter 8: Summary of cost estimate

Summary of cost estimate

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

MM and O&M cost estimate for balance concession period (INR Crore)

Sr. No.	Particular	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
I	**Total MM Cost Including GST**	**4.0**	**21.6**	**0.0**	**1.5**	**2.7**	**162.4**	**67.6**	**1.1**	**0.5**	**0.0**	**0.0**	**90.1**	**105.4**
1	Routine Maintenance	3.4	7.1	7.4	7.8	8.2	8.6	9.0	9.5	10.0	10.5	11.0	11.5	8.2
2	Toll Plaza Operation	4.8	10.0	10.5	11.0	11.5	12.1	12.7	13.4	14.0	14.7	15.5	16.2	11.6
3	Corridor Control/Patrolling /Incident Management Expenses	1.2	2.5	2.7	2.8	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.1	2.9
A	**O&M and Toll operation excluding GST**	**9.3**	**19.6**	**20.6**	**21.6**	**22.7**	**23.8**	**25.0**	**26.3**	**27.6**	**28.9**	**30.4**	**31.9**	**22.7**
B	**O&M and Toll operation including GST**	**11.0**	**23.1**	**24.3**	**25.5**	**26.8**	**28.1**	**29.5**	**31.0**	**32.5**	**34.2**	**35.9**	**37.7**	**26.8**
4	Insurance Policy Charges including GST	0.8	2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.2	3.3	2.4
5	IE Fee	0.5	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.7	1.2
6	LIE Fee including of GST	0.6	0.0	0.0	0.0	0.0	1.4	1.5	0.0	0.0	0.0	0.0	1.9	1.4
7	Electricity Cost	0.7	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	1.7
C	**Total Other Cost**	**2.6**	**4.6**	**4.8**	**5.1**	**5.3**	**7.0**	**7.4**	**6.2**	**6.5**	**6.8**	**7.2**	**9.4**	**6.7**
II	**Total O&M Cost Including GST**	**13.6**	**27.7**	**29.1**	**30.6**	**32.1**	**35.2**	**36.9**	**37.2**	**39.0**	**41.0**	**43.0**	**47.1**	**33.5**
I+II	**Grand Total including GST**	**17.6**	**49.3**	**29.1**	**32.1**	**34.8**	**197.6**	**104.5**	**38.3**	**39.5**	**41.0**	**43.0**	**137.2**	**138.9**

Source: TICPL estimate

Annexures

1(a) Trial pit survey details
1(b) Laboratory test results of EGL soil sample
2 Pavement deflection data
3 Asset inventory and condition details
4 O&M cost estimate

Annexures 1: Trial pit and soil sample survey

1(a) Trial pit survey details

1(b) Laboratory test results of EGL soil sample

Annexure 1(a) : Trial Pit Survey

PROJECT NAME :- Assessment of O&M and major maintenance requirements – Moradabad Bareilly Expressway Limited

Sr No	Chainage (Km.)	Side (LCW/RCW)	Wearing Course (BC/BT/SDBC)		Base Course (WBM/WMM)		Sub Base Layer		Total Thickness (mm)
			Type	Thickness (mm)	Type	Thickness (mm)	Type	Thickness (mm)	
1	155+100	LHS	BT	350	WMM/WBM	0	GSB	270	620
2	159+600	RHS	BT	160	WMM/WBM	0	GSB	310	470
3	166+100	LHS	BT	120	WMM/WBM	0	GSB	320	440
4	170+500	RHS	BT	230	WMM/WBM	0	GSB	120	350
5	176+000	LHS	BT	210	WMM/WBM	0	GSB	480	690
6	181+500	RHS	BT	270	WMM/WBM	0	GSB	170	440
7	180+300	LHS	BT	100	WMM/WBM	0	GSB	410	510
8	190+100	RHS	BT	200	WMM/WBM	0	GSB	420	620
9	195+200	LHS	BT	260	WMM/WBM	0	GSB	460	720
10	200+100	RHS	BT	52	WMM/WBM	0	GSB	400	452
11	205+000	LHS	BT	84	WMM/WBM	0	GSB	440	524
12	210+500	RHS	BT	40	WMM/WBM	0	GSB	420	460
13	215+100	LHS	BT	120	WBM	60	GSB	410	590
14	220+100	RHS	BT	220	WMM/WBM	0	GSB	390	610
15	224+800	LHS	BT	250	WMM/WBM	0	GSB	400	650
16	229+000	RHS	BT	240	WMM/WBM	0	GSB	410	650
17	334+200	LHS	BT	230	WMM/WBM	0	GSB	420	650
18	340+100	RHS	BT	200	WMM/WBM	0	GSB	450	650
19	344+300	LHS	BT	180	WMM/WBM	0	GSB	400	580
20	349+000	RHS	BT	180	WMM/WBM	0	GSB	420	600

Annexure 1(b) : Laboratory Test Results of EGL Soil Sample

Project Name:Assessment of O&M and major maintenance requirements – Moradabad Bareilly Expressway Limited

Sr.	Existing Chainage	Sample Location	Gradation			Atterberg's Limit (%)			Soil Classification	Heavy Compaction Test (Modified Proctor)		4 Days Soaked CBR (%) at 97% MDD	Free Swell Index (%)
			Gravel (%)	Sand (%)	Silt/Clay (%)	Liquid Limit (L.L.)	Plastic Limit (P.L.)	Plasticity Index (P.I.)		Max Dry Density (gm/cc)	OMC (%)		
1	181.500	RHS	12	49	39	29	20	9	SC	1.86	7.80	11.40	0.00
2	340.100	RHS	10	53	37	31	21	10	SC	1.88	9.10	10.80	0.00

Annexures 2: Pavement deflection data

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date of the Observation:** 27/04/2023 to 30/04/2023

Section: LHS IN

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	LHS_IN	148.354	24.1	26.9	Average	40.00	0.048	0.028	0.020	0.017	0.016	0.014	0.012
2	LHS_IN	148.868	24.2	26.9	Average	40.00	0.079	0.060	0.047	0.034	0.025	0.014	0.011
3	LHS_IN	149.363	24.2	26.9	Average	40.00	0.078	0.055	0.039	0.030	0.024	0.020	0.015
4	LHS_IN	149.847	24.5	27.0	Average	40.00	0.060	0.043	0.031	0.024	0.021	0.020	0.015
5	LHS_IN	150.351	24.5	27.0	Average	40.00	0.056	0.042	0.032	0.026	0.021	0.017	0.015
6	LHS_IN	150.847	24.5	27.0	Average	40.00	0.104	0.080	0.057	0.045	0.037	0.031	0.023
7	LHS_IN	151.346	24.6	27.1	Average	40.00	0.048	0.033	0.024	0.020	0.017	0.015	0.011
8	LHS_IN	151.845	24.6	27.1	Average	40.00	0.049	0.037	0.030	0.026	0.023	0.018	0.016
9	LHS_IN	152.348	24.6	27.1	Average	40.00	0.049	0.031	0.021	0.020	0.015	0.014	0.013
10	LHS_IN	152.867	24.7	27.1	Average	40.00	0.120	0.083	0.055	0.039	0.030	0.027	0.017
11	LHS_IN	153.349	24.8	27.1	Average	40.00	0.068	0.047	0.031	0.021	0.017	0.015	0.013
12	LHS_IN	153.859	24.8	27.2	Average	40.00	0.114	0.089	0.060	0.044	0.034	0.028	0.020
13	LHS_IN	154.348	25.0	27.2	Average	40.00	0.215	0.120	0.075	0.050	0.036	0.030	0.020
14	LHS_IN	154.875	25.0	27.3	Average	40.00	0.206	0.143	0.091	0.061	0.045	0.038	0.023
15	LHS_IN	155.349	25.0	27.3	Average	40.00	0.218	0.155	0.100	0.070	0.050	0.040	0.025
16	LHS_IN	155.868	25.0	27.3	Average	40.00	0.081	0.063	0.049	0.040	0.031	0.026	0.021
17	LHS_IN	156.351	25.3	27.3	Average	40.00	0.054	0.032	0.027	0.024	0.021	0.019	0.015
18	LHS_IN	156.851	25.4	27.3	Average	40.00	0.290	0.201	0.121	0.079	0.056	0.045	0.030
19	LHS_IN	157.355	25.4	27.3	Average	40.00	0.134	0.086	0.050	0.033	0.024	0.016	0.011
20	LHS_IN	157.853	25.5	27.3	Average	40.00	0.184	0.133	0.076	0.053	0.034	0.026	0.024
21	LHS_IN	158.371	25.5	27.4	Average	40.00	0.189	0.117	0.075	0.056	0.044	0.037	0.029
22	LHS_IN	158.849	25.5	27.4	Average	40.00	0.204	0.130	0.086	0.062	0.046	0.033	0.028
23	LHS_IN	159.115	25.6	27.5	Average	40.00	0.319	0.208	0.126	0.079	0.064	0.049	0.038
24	LHS_IN	159.349	25.7	27.5	Average	40.00	0.361	0.242	0.139	0.104	0.077	0.054	0.044
25	LHS_IN	159.594	25.7	27.6	Average	40.00	0.355	0.204	0.129	0.090	0.062	0.048	0.039
26	LHS_IN	159.852	25.7	27.6	Average	40.00	0.342	0.243	0.132	0.081	0.054	0.036	0.031
27	LHS_IN	159.953	25.8	27.6	Average	40.00	0.348	0.251	0.151	0.088	0.064	0.046	0.038
28	LHS_IN	160.112	26.0	27.6	Average	40.00	0.314	0.213	0.128	0.077	0.059	0.044	0.034
29	LHS_IN	160.358	26.1	27.6	Average	40.00	0.088	0.058	0.039	0.030	0.024	0.017	0.015

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
30	LHS_IN	160.630	26.2	27.7	Average	40.00	0.282	0.197	0.123	0.076	0.057	0.044	0.031
31	LHS_IN	160.858	26.2	27.7	Average	40.00	0.070	0.042	0.030	0.024	0.021	0.015	0.015
32	LHS_IN	160.948	26.2	27.7	Average	40.00	0.285	0.193	0.113	0.069	0.053	0.041	0.030
33	LHS_IN	161.862	26.3	27.8	Average	40.00	0.080	0.052	0.038	0.032	0.027	0.024	0.020
34	LHS_IN	161.956	26.4	27.9	Average	40.00	0.343	0.217	0.143	0.091	0.069	0.051	0.039
35	LHS_IN	162.114	26.4	27.9	Average	40.00	0.304	0.205	0.122	0.069	0.049	0.034	0.026
36	LHS_IN	162.349	26.4	27.9	Average	40.00	0.088	0.061	0.042	0.033	0.028	0.022	0.020
37	LHS_IN	162.610	26.5	28.0	Average	40.00	0.300	0.187	0.093	0.049	0.035	0.027	0.021
38	LHS_IN	162.874	26.5	28.0	Average	40.00	0.096	0.073	0.053	0.040	0.032	0.022	0.020
39	LHS_IN	162.940	26.6	28.0	Average	40.00	0.273	0.156	0.077	0.043	0.032	0.024	0.019
40	LHS_IN	163.097	26.7	28.0	Average	40.00	0.285	0.195	0.122	0.077	0.056	0.041	0.033
41	LHS_IN	163.345	26.7	28.1	Average	40.00	0.097	0.066	0.047	0.035	0.029	0.023	0.018
42	LHS_IN	163.598	26.8	28.1	Average	40.00	0.334	0.237	0.136	0.079	0.059	0.043	0.033
43	LHS_IN	163.859	26.8	28.2	Average	40.00	0.173	0.114	0.074	0.054	0.041	0.039	0.023
44	LHS_IN	163.945	26.8	28.2	Average	40.00	0.319	0.205	0.123	0.075	0.056	0.044	0.030
45	LHS_IN	164.346	27.0	28.2	Average	40.00	0.157	0.118	0.081	0.060	0.043	0.031	0.026
46	LHS_IN	164.850	27.0	28.2	Average	40.00	0.207	0.126	0.081	0.060	0.045	0.035	0.028
47	LHS_IN	165.351	27.1	28.3	Average	40.00	0.137	0.098	0.068	0.052	0.041	0.030	0.028
48	LHS_IN	165.860	27.2	28.3	Average	40.00	0.098	0.075	0.053	0.040	0.034	0.027	0.024
49	LHS_IN	166.360	27.2	28.3	Average	40.00	0.243	0.168	0.100	0.064	0.043	0.039	0.029
50	LHS_IN	166.868	27.2	28.3	Average	40.00	0.107	0.082	0.063	0.042	0.031	0.023	0.020
51	LHS_IN	167.095	27.3	28.4	Average	40.00	0.277	0.193	0.119	0.068	0.049	0.032	0.023
52	LHS_IN	167.360	27.4	28.5	Average	40.00	0.153	0.124	0.090	0.068	0.053	0.043	0.033
53	LHS_IN	167.626	27.4	28.6	Average	40.00	0.307	0.203	0.123	0.070	0.046	0.029	0.019
54	LHS_IN	167.862	27.5	28.7	Average	40.00	0.193	0.134	0.085	0.060	0.044	0.030	0.024
55	LHS_IN	167.940	27.5	28.8	Average	40.00	0.276	0.181	0.105	0.062	0.047	0.033	0.025
56	LHS_IN	168.320	27.7	28.8	Average	40.00	0.380	0.278	0.177	0.109	0.081	0.057	0.040
57	LHS_IN	168.849	27.8	28.9	Average	40.00	0.436	0.280	0.163	0.109	0.078	0.059	0.056
58	LHS_IN	169.350	28.0	28.9	Average	40.00	0.393	0.262	0.155	0.115	0.092	0.071	0.054
59	LHS_IN	169.848	28.1	29.0	Average	40.00	0.248	0.194	0.133	0.097	0.074	0.047	0.043
60	LHS_IN	170.350	28.2	29.2	Average	40.00	0.166	0.142	0.105	0.080	0.062	0.047	0.037
61	LHS_IN	170.872	28.7	29.5	Average	40.00	0.160	0.130	0.094	0.070	0.054	0.040	0.032
62	LHS_IN	171.848	28.8	30.0	Average	40.00	0.165	0.129	0.086	0.060	0.044	0.033	0.027
63	LHS_IN	172.351	28.9	30.2	Average	40.00	0.269	0.234	0.180	0.145	0.119	0.093	0.074
64	LHS_IN	172.854	28.9	30.2	Average	40.00	0.177	0.141	0.092	0.066	0.051	0.036	0.030

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
65	LHS_IN	173.379	28.9	30.5	Average	40.00	0.290	0.206	0.130	0.088	0.063	0.043	0.036
66	LHS_IN	173.840	29.1	30.9	Average	40.00	0.256	0.186	0.105	0.066	0.047	0.034	0.029
67	LHS_IN	174.355	29.2	31.0	Average	40.00	0.173	0.110	0.060	0.037	0.027	0.021	0.017
68	LHS_IN	174.852	29.3	31.1	Average	40.00	0.311	0.258	0.194	0.149	0.108	0.093	0.064
69	LHS_IN	175.346	29.7	31.5	Average	40.00	0.188	0.135	0.084	0.055	0.038	0.027	0.022
70	LHS_IN	175.852	29.9	31.5	Average	40.00	0.243	0.177	0.110	0.071	0.049	0.034	0.029
71	LHS_IN	176.351	29.9	31.6	Average	40.00	0.146	0.117	0.086	0.065	0.047	0.034	0.027
72	LHS_IN	176.851	30.0	31.8	Average	40.00	0.221	0.165	0.107	0.071	0.048	0.031	0.024
73	LHS_IN	177.381	30.0	31.8	Average	40.00	0.256	0.182	0.105	0.061	0.036	0.022	0.017
74	LHS_IN	177.851	30.0	32.1	Average	40.00	0.200	0.152	0.098	0.064	0.042	0.038	0.022
75	LHS_IN	178.346	30.5	32.3	Average	40.00	0.330	0.253	0.159	0.106	0.072	0.051	0.046
76	LHS_IN	178.854	30.5	32.3	Average	40.00	0.170	0.118	0.078	0.054	0.040	0.028	0.021
77	LHS_IN	179.364	30.5	32.3	Average	40.00	0.180	0.142	0.094	0.067	0.051	0.038	0.032
78	LHS_IN	179.865	30.6	32.3	Average	40.00	0.196	0.156	0.106	0.072	0.048	0.032	0.025
79	LHS_IN	180.871	30.6	32.3	Average	40.00	0.273	0.207	0.127	0.081	0.055	0.044	0.030
80	LHS_IN	190.352	30.6	32.3	Average	40.00	0.157	0.102	0.068	0.044	0.034	0.027	0.021
81	LHS_IN	190.845	30.6	32.4	Average	40.00	0.180	0.150	0.113	0.087	0.067	0.050	0.038
82	LHS_IN	191.354	30.6	32.4	Average	40.00	0.192	0.127	0.088	0.058	0.046	0.035	0.026
83	LHS_IN	191.856	30.7	32.4	Average	40.00	0.237	0.155	0.097	0.059	0.044	0.034	0.030
84	LHS_IN	192.310	30.7	32.4	Average	40.00	0.142	0.078	0.049	0.033	0.029	0.024	0.020
85	LHS_IN	192.860	30.7	32.4	Average	40.00	0.225	0.136	0.076	0.044	0.035	0.026	0.021
86	LHS_IN	193.360	30.7	32.4	Average	40.00	0.213	0.171	0.118	0.083	0.058	0.039	0.029
87	LHS_IN	193.856	30.8	32.4	Average	40.00	0.300	0.233	0.160	0.116	0.087	0.067	0.058
88	LHS_IN	194.353	30.8	32.5	Average	40.00	0.284	0.217	0.142	0.100	0.073	0.053	0.042
89	LHS_IN	194.852	30.8	32.5	Average	40.00	0.231	0.179	0.125	0.089	0.066	0.050	0.040
90	LHS_IN	195.356	30.8	32.5	Average	40.00	0.287	0.202	0.125	0.078	0.050	0.031	0.023
91	LHS_IN	195.856	30.8	32.5	Average	40.00	0.254	0.202	0.134	0.090	0.060	0.041	0.034
92	LHS_IN	196.357	30.8	32.6	Average	40.00	0.177	0.130	0.081	0.053	0.037	0.026	0.022
93	LHS_IN	196.863	30.9	32.6	Average	40.00	0.165	0.130	0.091	0.068	0.052	0.038	0.031
94	LHS_IN	197.365	30.9	32.7	Average	40.00	0.193	0.152	0.101	0.070	0.050	0.037	0.028
95	LHS_IN	197.853	31.0	32.7	Average	40.00	0.237	0.171	0.108	0.074	0.052	0.044	0.027
96	LHS_IN	198.360	31.0	32.7	Average	40.00	0.247	0.185	0.124	0.088	0.062	0.045	0.035
97	LHS_IN	198.862	31.0	32.7	Average	40.00	0.239	0.178	0.116	0.082	0.059	0.050	0.033
98	LHS_IN	199.371	31.0	32.7	Average	40.00	0.175	0.126	0.082	0.060	0.047	0.037	0.031
99	LHS_IN	199.862	31.0	32.8	Average	40.00	0.244	0.177	0.114	0.080	0.060	0.045	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
100	LHS_IN	200.350	31.1	32.8	Average	40.00	0.193	0.139	0.085	0.059	0.044	0.033	0.027
101	LHS_IN	200.856	31.1	32.8	Average	40.00	0.259	0.200	0.131	0.091	0.067	0.050	0.041
102	LHS_IN	201.352	31.1	32.8	Average	40.00	0.139	0.110	0.079	0.059	0.046	0.034	0.027
103	LHS_IN	201.875	31.1	32.8	Average	40.00	0.145	0.103	0.064	0.043	0.032	0.023	0.020
104	LHS_IN	202.350	31.1	32.8	Average	40.00	0.213	0.157	0.097	0.065	0.048	0.036	0.031
105	LHS_IN	202.845	31.1	32.8	Average	40.00	0.198	0.164	0.121	0.091	0.068	0.050	0.039
106	LHS_IN	203.346	31.1	32.9	Average	40.00	0.210	0.165	0.112	0.077	0.055	0.036	0.028
107	LHS_IN	203.863	31.1	32.9	Average	40.00	0.209	0.161	0.110	0.075	0.057	0.040	0.031
108	LHS_IN	204.353	31.1	32.9	Average	40.00	0.256	0.182	0.111	0.074	0.055	0.040	0.034
109	LHS_IN	204.867	31.2	32.9	Average	40.00	0.285	0.220	0.140	0.091	0.063	0.044	0.034
110	LHS_IN	205.359	31.2	32.9	Average	40.00	0.294	0.223	0.149	0.101	0.069	0.045	0.034
111	LHS_IN	205.849	31.2	32.9	Average	40.00	0.349	0.275	0.183	0.126	0.095	0.078	0.056
112	LHS_IN	206.358	31.2	33.0	Average	40.00	0.330	0.249	0.163	0.115	0.084	0.061	0.051
113	LHS_IN	206.858	31.3	33.0	Average	40.00	0.316	0.243	0.153	0.099	0.067	0.038	0.037
114	LHS_IN	207.363	31.4	33.1	Average	40.00	0.420	0.273	0.152	0.095	0.064	0.046	0.034
115	LHS_IN	207.864	31.4	33.1	Average	40.00	0.278	0.200	0.126	0.084	0.059	0.041	0.020
116	LHS_IN	208.348	31.5	33.1	Average	40.00	0.457	0.311	0.175	0.104	0.069	0.045	0.036
117	LHS_IN	208.858	31.5	33.1	Average	40.00	0.415	0.276	0.159	0.101	0.069	0.047	0.038
118	LHS_IN	209.359	31.6	33.3	Average	40.00	0.443	0.312	0.186	0.118	0.079	0.054	0.042
119	LHS_IN	209.860	31.6	33.3	Average	40.00	0.397	0.279	0.170	0.110	0.076	0.047	0.042
120	LHS_IN	210.362	31.6	33.4	Average	40.00	0.254	0.181	0.106	0.068	0.050	0.040	0.030
121	LHS_IN	210.850	31.6	33.4	Average	40.00	0.368	0.280	0.185	0.129	0.088	0.052	0.048
122	LHS_IN	211.354	31.6	33.5	Average	40.00	0.365	0.272	0.167	0.109	0.075	0.056	0.040
123	LHS_IN	211.856	31.8	33.6	Average	40.00	0.271	0.213	0.151	0.108	0.077	0.063	0.041
124	LHS_IN	212.357	31.8	33.6	Average	40.00	0.253	0.193	0.122	0.079	0.054	0.033	0.030
125	LHS_IN	212.860	31.8	33.6	Average	40.00	0.196	0.156	0.108	0.076	0.056	0.040	0.033
126	LHS_IN	213.359	31.8	33.6	Average	40.00	0.191	0.141	0.108	0.088	0.074	0.059	0.049
127	LHS_IN	213.852	31.9	33.7	Average	40.00	0.202	0.146	0.095	0.066	0.049	0.032	0.028
128	LHS_IN	214.365	31.9	33.7	Average	40.00	0.235	0.131	0.070	0.047	0.033	0.024	0.019
129	LHS_IN	214.863	32.0	33.7	Average	40.00	0.248	0.174	0.107	0.070	0.053	0.035	0.029
130	LHS_IN	215.362	32.0	33.7	Average	40.00	0.306	0.232	0.152	0.106	0.078	0.053	0.043
131	LHS_IN	215.853	32.1	33.8	Average	40.00	0.193	0.161	0.125	0.100	0.078	0.060	0.047
132	LHS_IN	216.852	32.2	33.8	Average	40.00	0.229	0.180	0.129	0.096	0.073	0.053	0.042
133	LHS_IN	217.360	32.3	33.8	Average	40.00	0.240	0.180	0.127	0.094	0.072	0.051	0.042
134	LHS_IN	217.866	32.3	33.8	Average	40.00	0.223	0.168	0.111	0.076	0.055	0.045	0.030

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
135	LHS_IN	218.360	32.3	33.8	Average	40.00	0.177	0.116	0.073	0.050	0.041	0.032	0.025
136	LHS_IN	218.866	32.3	33.9	Average	40.00	0.162	0.127	0.086	0.060	0.046	0.032	0.027
137	LHS_IN	219.349	32.4	33.9	Average	40.00	0.186	0.144	0.099	0.069	0.050	0.034	0.027
138	LHS_IN	219.876	32.5	34.0	Average	40.00	0.238	0.171	0.112	0.077	0.058	0.038	0.035
139	LHS_IN	220.356	32.5	34.0	Average	40.00	0.178	0.132	0.085	0.055	0.037	0.023	0.020
140	LHS_IN	220.858	32.6	34.1	Average	40.00	0.171	0.128	0.087	0.061	0.045	0.037	0.026
141	LHS_IN	221.357	32.6	34.2	Average	40.00	0.219	0.154	0.100	0.069	0.049	0.036	0.028
142	LHS_IN	221.859	32.6	34.2	Average	40.00	0.152	0.116	0.085	0.066	0.053	0.042	0.035
143	LHS_IN	222.353	32.6	34.2	Average	40.00	0.412	0.282	0.176	0.114	0.076	0.067	0.038
144	LHS_IN	222.857	32.7	34.3	Average	40.00	0.156	0.117	0.079	0.053	0.038	0.033	0.022
145	LHS_IN	223.346	32.8	34.3	Average	40.00	0.414	0.319	0.206	0.135	0.097	0.078	0.050
146	LHS_IN	223.856	32.8	34.3	Average	40.00	0.298	0.208	0.139	0.095	0.068	0.038	0.037
147	LHS_IN	224.357	32.8	34.3	Average	40.00	0.205	0.134	0.087	0.059	0.043	0.031	0.025
148	LHS_IN	224.858	32.8	34.4	Average	40.00	0.452	0.355	0.248	0.178	0.132	0.096	0.074
149	LHS_IN	225.345	32.9	34.4	Average	40.00	0.268	0.196	0.125	0.082	0.057	0.039	0.031
150	LHS_IN	225.854	32.9	34.4	Average	40.00	0.251	0.183	0.125	0.086	0.061	0.042	0.034
151	LHS_IN	226.367	32.9	34.4	Average	40.00	0.278	0.220	0.150	0.108	0.078	0.056	0.045
152	LHS_IN	226.867	32.9	34.5	Average	40.00	0.142	0.109	0.075	0.053	0.039	0.028	0.023
153	LHS_IN	227.359	33.0	34.5	Average	40.00	0.199	0.159	0.115	0.087	0.069	0.052	0.044
154	LHS_IN	227.868	33.1	34.6	Average	40.00	0.188	0.108	0.080	0.066	0.057	0.046	0.040
155	LHS_IN	228.310	33.1	34.6	Average	40.00	0.155	0.070	0.045	0.026	0.019	0.017	0.014
156	LHS_IN	229.347	33.2	34.6	Average	40.00	0.147	0.109	0.074	0.051	0.037	0.032	0.022
157	LHS_IN	229.882	33.2	34.7	Average	40.00	0.168	0.119	0.080	0.060	0.046	0.036	0.032
158	LHS_IN	230.365	33.2	34.7	Average	40.00	0.148	0.110	0.073	0.051	0.040	0.032	0.027
159	LHS_IN	230.837	33.4	34.7	Average	40.00	0.270	0.205	0.139	0.096	0.069	0.048	0.038
160	LHS_IN	231.387	33.4	34.7	Average	40.00	0.218	0.168	0.112	0.078	0.057	0.042	0.035
161	LHS_IN	231.852	33.4	34.7	Average	40.00	0.263	0.181	0.115	0.076	0.051	0.035	0.025
162	LHS_IN	232.349	33.5	34.8	Average	40.00	0.198	0.136	0.083	0.054	0.039	0.026	0.018
163	LHS_IN	232.859	33.5	34.9	Average	40.00	0.246	0.149	0.090	0.062	0.043	0.030	0.024
164	LHS_IN	233.366	33.6	35.0	Average	40.00	0.422	0.321	0.222	0.163	0.128	0.097	0.077
165	LHS_IN	233.859	33.6	35.0	Average	40.00	0.215	0.160	0.103	0.071	0.053	0.039	0.032
166	LHS_IN	234.352	33.6	35.0	Average	40.00	0.227	0.147	0.093	0.063	0.046	0.032	0.026
167	LHS_IN	234.852	33.6	35.1	Average	40.00	0.174	0.116	0.073	0.047	0.033	0.023	0.018
168	LHS_IN	235.361	33.7	35.1	Average	40.00	0.321	0.239	0.164	0.116	0.084	0.062	0.045
169	LHS_IN	235.860	33.7	35.2	Average	40.00	0.244	0.145	0.085	0.056	0.040	0.032	0.025

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
170	LHS_IN	236.349	33.7	35.3	Average	40.00	0.089	0.062	0.046	0.037	0.032	0.028	0.022
171	LHS_IN	236.851	33.8	35.5	Average	40.00	0.276	0.184	0.104	0.064	0.046	0.036	0.030
172	LHS_IN	237.353	33.9	35.5	Average	40.00	0.356	0.274	0.169	0.108	0.070	0.046	0.037
173	LHS_IN	237.857	33.9	35.5	Average	40.00	0.489	0.351	0.205	0.124	0.083	0.059	0.040
174	LHS_IN	238.345	34.0	35.6	Average	40.00	0.399	0.261	0.148	0.087	0.054	0.036	0.026
175	LHS_IN	238.855	34.0	35.6	Average	40.00	0.414	0.319	0.201	0.125	0.080	0.052	0.038
176	LHS_IN	239.329	34.0	35.7	Average	40.00	0.581	0.406	0.244	0.154	0.103	0.067	0.052
177	LHS_IN	239.854	34.1	35.9	Average	40.00	0.570	0.359	0.186	0.100	0.062	0.055	0.032
178	LHS_IN	240.359	34.1	35.9	Average	40.00	0.553	0.344	0.193	0.122	0.085	0.058	0.046
179	LHS_IN	240.850	34.1	36.0	Average	40.00	0.321	0.245	0.152	0.095	0.062	0.037	0.030
180	LHS_IN	241.349	34.1	36.1	Average	40.00	0.511	0.311	0.143	0.072	0.042	0.035	0.022
181	LHS_IN	241.853	34.3	36.1	Average	40.00	0.384	0.273	0.159	0.097	0.061	0.043	0.037
182	LHS_IN	242.343	34.3	36.1	Average	40.00	0.506	0.356	0.195	0.104	0.061	0.044	0.033
183	LHS_IN	242.863	35.6	37.1	Average	40.00	0.228	0.158	0.096	0.059	0.040	0.038	0.022
184	LHS_IN	243.352	35.6	37.1	Average	40.00	0.396	0.267	0.161	0.104	0.067	0.042	0.029
185	LHS_IN	243.848	35.5	37.1	Average	40.00	0.336	0.246	0.148	0.090	0.063	0.046	0.033
186	LHS_IN	244.350	35.4	37.1	Average	40.00	0.421	0.299	0.178	0.110	0.073	0.045	0.037
187	LHS_IN	244.851	35.4	37.0	Average	40.00	0.490	0.299	0.153	0.085	0.055	0.047	0.021
188	LHS_IN	245.098	35.4	37.0	Average	40.00	0.326	0.209	0.112	0.061	0.045	0.034	0.026
189	LHS_IN	245.345	35.4	37.0	Average	40.00	0.419	0.291	0.163	0.099	0.065	0.044	0.034
190	LHS_IN	245.624	35.4	37.0	Average	40.00	0.303	0.178	0.092	0.053	0.041	0.031	0.022
191	LHS_IN	245.869	35.3	36.9	Average	40.00	0.529	0.316	0.152	0.080	0.048	0.030	0.021
192	LHS_IN	245.960	35.3	36.9	Average	40.00	0.338	0.203	0.142	0.080	0.054	0.037	0.028
193	LHS_IN	246.354	35.3	36.9	Average	40.00	0.371	0.262	0.164	0.112	0.073	0.042	0.039
194	LHS_IN	246.852	35.3	36.8	Average	40.00	0.450	0.300	0.165	0.097	0.059	0.036	0.030
195	LHS_IN	247.360	35.3	36.7	Average	40.00	0.365	0.231	0.113	0.058	0.034	0.021	0.020
196	LHS_IN	247.866	35.2	36.6	Average	40.00	0.261	0.193	0.121	0.078	0.052	0.034	0.028
197	LHS_IN	248.117	35.2	36.6	Average	40.00	0.282	0.162	0.093	0.054	0.040	0.032	0.025
198	LHS_IN	248.350	35.1	36.5	Average	40.00	0.272	0.195	0.117	0.074	0.049	0.034	0.025
199	LHS_IN	248.620	35.0	36.4	Average	40.00	0.388	0.241	0.174	0.093	0.054	0.038	0.027
200	LHS_IN	248.862	35.0	36.4	Average	40.00	0.326	0.227	0.126	0.071	0.041	0.027	0.024
201	LHS_IN	248.961	35.0	36.4	Average	40.00	0.458	0.313	0.166	0.082	0.050	0.034	0.024
202	LHS_IN	249.361	35.0	36.3	Average	40.00	0.386	0.249	0.135	0.074	0.045	0.030	0.027
203	LHS_IN	249.851	34.9	36.3	Average	40.00	0.323	0.219	0.120	0.075	0.045	0.034	0.025
204	LHS_IN	250.332	34.9	36.2	Average	40.00	0.405	0.262	0.143	0.083	0.053	0.035	0.030

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
205	LHS_IN	250.891	34.9	36.1	Average	40.00	0.363	0.274	0.179	0.121	0.086	0.080	0.050
206	LHS_IN	251.357	34.8	36.1	Average	40.00	0.383	0.244	0.125	0.070	0.043	0.028	0.024
207	LHS_IN	251.843	34.8	36.0	Average	40.00	0.343	0.222	0.128	0.079	0.051	0.033	0.024
208	LHS_IN	252.349	34.7	36.0	Average	40.00	0.355	0.218	0.124	0.081	0.053	0.038	0.029
209	LHS_IN	252.858	34.6	35.9	Average	40.00	0.221	0.157	0.094	0.060	0.042	0.034	0.027
210	LHS_IN	253.362	34.4	35.9	Average	40.00	0.338	0.236	0.144	0.093	0.065	0.046	0.038
211	LHS_IN	253.852	34.2	35.8	Average	40.00	0.352	0.222	0.124	0.078	0.050	0.036	0.029
212	LHS_IN	254.366	34.2	35.8	Average	40.00	0.459	0.264	0.138	0.080	0.051	0.034	0.031
213	LHS_IN	254.849	34.2	35.7	Average	40.00	0.561	0.318	0.151	0.085	0.056	0.037	0.033
214	LHS_IN	255.357	34.1	35.6	Average	40.00	0.367	0.261	0.157	0.095	0.060	0.039	0.029
215	LHS_IN	255.851	34.1	35.5	Average	40.00	0.279	0.193	0.114	0.074	0.050	0.040	0.031
216	LHS_IN	256.352	34.1	35.5	Average	40.00	0.400	0.276	0.154	0.090	0.059	0.040	0.030
217	LHS_IN	256.861	34.1	35.5	Average	40.00	0.451	0.336	0.206	0.125	0.078	0.046	0.034
218	LHS_IN	257.350	34.0	35.5	Average	40.00	0.354	0.248	0.144	0.085	0.055	0.035	0.028
219	LHS_IN	257.846	33.9	35.5	Average	40.00	0.427	0.281	0.161	0.095	0.059	0.046	0.031
220	LHS_IN	258.357	33.9	35.5	Average	40.00	0.360	0.249	0.141	0.082	0.050	0.032	0.026
221	LHS_IN	258.872	33.8	35.5	Average	40.00	0.281	0.200	0.118	0.073	0.048	0.034	0.025
222	LHS_IN	259.347	33.7	35.5	Average	40.00	0.529	0.334	0.184	0.113	0.070	0.042	0.034
223	LHS_IN	259.863	33.7	35.4	Average	40.00	0.308	0.214	0.126	0.079	0.050	0.037	0.028
224	LHS_IN	260.349	33.7	35.3	Average	40.00	0.394	0.264	0.139	0.078	0.049	0.031	0.027
225	LHS_IN	260.855	33.7	35.3	Average	40.00	0.372	0.241	0.126	0.072	0.047	0.029	0.025
226	LHS_IN	261.371	33.5	35.3	Average	40.00	0.522	0.338	0.169	0.096	0.060	0.039	0.031
227	LHS_IN	261.866	33.4	35.2	Average	40.00	0.327	0.218	0.128	0.080	0.050	0.033	0.024
228	LHS_IN	262.331	33.4	35.2	Average	40.00	0.212	0.163	0.119	0.086	0.062	0.046	0.036
229	LHS_IN	262.846	33.3	35.2	Average	40.00	0.444	0.299	0.169	0.094	0.060	0.037	0.031
230	LHS_IN	263.359	33.3	35.1	Average	40.00	0.377	0.203	0.105	0.059	0.036	0.024	0.020
231	LHS_IN	263.846	33.3	35.1	Average	40.00	0.362	0.200	0.098	0.058	0.039	0.026	0.024
232	LHS_IN	264.349	33.3	35.1	Average	40.00	0.485	0.325	0.175	0.100	0.062	0.038	0.027
233	LHS_IN	264.855	33.2	35.1	Average	40.00	0.189	0.144	0.093	0.063	0.044	0.027	0.025
234	LHS_IN	265.340	33.2	35.0	Average	40.00	0.453	0.299	0.175	0.111	0.074	0.043	0.036
235	LHS_IN	265.852	33.1	35.0	Average	40.00	0.442	0.319	0.198	0.124	0.080	0.046	0.034
236	LHS_IN	266.349	33.0	35.0	Average	40.00	0.499	0.332	0.195	0.121	0.075	0.039	0.029
237	LHS_IN	266.852	33.0	35.0	Average	40.00	0.490	0.307	0.148	0.081	0.053	0.034	0.032
238	LHS_IN	267.361	33.0	34.9	Average	40.00	0.425	0.268	0.143	0.082	0.053	0.037	0.029
239	LHS_IN	267.850	32.8	34.9	Average	40.00	0.264	0.199	0.127	0.081	0.056	0.041	0.014

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
240	LHS_IN	268.355	32.8	34.8	Average	40.00	0.192	0.130	0.073	0.045	0.031	0.023	0.020
241	LHS_IN	268.850	32.8	34.8	Average	40.00	0.238	0.167	0.098	0.064	0.045	0.033	0.026
242	LHS_IN	269.350	32.8	34.7	Average	40.00	0.238	0.085	0.034	0.025	0.020	0.017	0.015

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road:	**Moradabad to Bareilly**	**Date and Time of the Observation:**	**27/04/2023 to 30/04/2023**
Section: RHS IN		**Section: RHS IN**	
No of lanes: 4 Lane			

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	RHS-IN	269.350	31.4	33.6	Average	40.00	0.640	0.391	0.191	0.103	0.062	0.042	0.033
2	RHS-IN	268.850	31.4	33.6	Average	40.00	0.674	0.401	0.172	0.092	0.054	0.036	0.033
3	RHS-IN	268.353	31.4	33.6	Average	40.00	0.264	0.162	0.094	0.059	0.041	0.028	0.024
4	RHS-IN	267.830	31.4	33.5	Average	40.00	0.446	0.318	0.187	0.112	0.067	0.040	0.030
5	RHS-IN	267.354	31.3	33.5	Average	40.00	0.320	0.226	0.132	0.082	0.056	0.038	0.026
6	RHS-IN	266.948	31.3	33.5	Average	40.00	0.307	0.206	0.123	0.072	0.056	0.040	0.029
7	RHS-IN	266.861	31.3	33.5	Average	40.00	0.365	0.227	0.128	0.077	0.048	0.035	0.030
8	RHS-IN	266.593	31.2	33.5	Average	40.00	0.366	0.285	0.237	0.186	0.141	0.086	0.059
9	RHS-IN	266.355	31.2	33.5	Average	40.00	0.326	0.245	0.151	0.094	0.060	0.032	0.030
10	RHS-IN	266.099	31.2	33.5	Average	40.00	0.297	0.198	0.123	0.079	0.055	0.040	0.029
11	RHS-IN	265.945	31.2	33.5	Average	40.00	0.356	0.238	0.139	0.084	0.063	0.047	0.036
12	RHS-IN	265.847	31.2	33.5	Average	40.00	0.267	0.198	0.124	0.081	0.052	0.040	0.030
13	RHS-IN	265.596	31.1	33.5	Average	40.00	0.338	0.204	0.144	0.081	0.043	0.026	0.024
14	RHS-IN	265.334	31.1	33.5	Average	40.00	0.206	0.149	0.089	0.056	0.037	0.025	0.021
15	RHS-IN	265.103	31.1	33.5	Average	40.00	0.284	0.207	0.129	0.077	0.058	0.042	0.032
16	RHS-IN	264.953	31.1	33.4	Average	40.00	0.347	0.244	0.150	0.092	0.068	0.050	0.040
17	RHS-IN	264.849	31.0	33.4	Average	40.00	0.358	0.246	0.138	0.082	0.050	0.041	0.027
18	RHS-IN	264.594	31.0	33.4	Average	40.00	0.416	0.337	0.272	0.210	0.162	0.099	0.079
19	RHS-IN	264.353	31.0	33.4	Average	40.00	0.666	0.438	0.199	0.110	0.070	0.035	0.012
20	RHS-IN	264.108	31.0	33.4	Average	40.00	0.309	0.215	0.133	0.075	0.055	0.036	0.026
21	RHS-IN	263.942	30.9	33.3	Average	40.00	0.317	0.209	0.127	0.073	0.047	0.030	0.020

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
22	RHS-IN	263.849	30.9	33.3	Average	40.00	0.515	0.304	0.161	0.091	0.052	0.032	0.025
23	RHS-IN	263.591	30.9	33.3	Average	40.00	0.436	0.271	0.196	0.104	0.060	0.042	0.031
24	RHS-IN	263.349	30.9	33.3	Average	40.00	0.415	0.288	0.177	0.112	0.074	0.047	0.035
25	RHS-IN	263.089	30.9	33.3	Average	40.00	0.376	0.304	0.258	0.196	0.149	0.091	0.065
26	RHS-IN	262.948	30.9	33.3	Average	40.00	0.343	0.256	0.172	0.109	0.083	0.059	0.045
27	RHS-IN	262.826	30.9	33.3	Average	40.00	0.395	0.276	0.171	0.111	0.070	0.048	0.031
28	RHS-IN	262.599	30.8	33.1	Average	40.00	0.346	0.248	0.163	0.104	0.080	0.064	0.053
29	RHS-IN	262.343	30.8	33.0	Average	40.00	0.355	0.226	0.111	0.061	0.042	0.027	0.023
30	RHS-IN	262.101	30.8	33.0	Average	40.00	0.378	0.228	0.165	0.096	0.062	0.047	0.038
31	RHS-IN	261.947	30.8	33.0	Average	40.00	0.417	0.284	0.175	0.104	0.076	0.056	0.045
32	RHS-IN	261.854	30.8	33.0	Average	40.00	0.555	0.379	0.194	0.103	0.057	0.033	0.019
33	RHS-IN	261.587	30.8	32.9	Average	40.00	0.444	0.363	0.258	0.167	0.126	0.091	0.066
34	RHS-IN	261.356	30.8	32.9	Average	40.00	0.463	0.270	0.120	0.063	0.040	0.026	0.022
35	RHS-IN	261.100	30.8	32.9	Average	40.00	0.478	0.320	0.192	0.113	0.087	0.063	0.045
36	RHS-IN	260.948	30.7	32.9	Average	40.00	0.338	0.186	0.122	0.061	0.041	0.032	0.027
37	RHS-IN	260.836	30.7	32.9	Average	40.00	0.707	0.413	0.170	0.078	0.052	0.027	0.026
38	RHS-IN	260.610	30.7	32.8	Average	40.00	0.402	0.239	0.132	0.079	0.059	0.045	0.034
39	RHS-IN	260.363	30.7	32.8	Average	40.00	0.243	0.170	0.100	0.062	0.041	0.028	0.023
40	RHS-IN	260.089	30.6	32.8	Average	40.00	0.341	0.238	0.153	0.104	0.082	0.063	0.051
41	RHS-IN	259.946	30.6	32.7	Average	40.00	0.416	0.347	0.265	0.211	0.154	0.081	0.051
42	RHS-IN	259.856	30.6	32.7	Average	40.00	0.443	0.298	0.157	0.090	0.060	0.039	0.032
43	RHS-IN	259.622	30.5	32.7	Average	40.00	0.445	0.326	0.208	0.128	0.095	0.067	0.047
44	RHS-IN	259.323	30.5	32.7	Average	40.00	0.419	0.266	0.137	0.080	0.049	0.034	0.027
45	RHS-IN	259.086	30.5	32.7	Average	40.00	0.395	0.293	0.217	0.176	0.129	0.077	0.046
46	RHS-IN	258.956	30.5	32.6	Average	40.00	0.344	0.208	0.125	0.076	0.061	0.045	0.038
47	RHS-IN	258.841	30.5	32.6	Average	40.00	0.340	0.210	0.107	0.057	0.037	0.026	0.025

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
48	RHS-IN	258.600	30.4	32.6	Average	40.00	0.327	0.209	0.109	0.060	0.041	0.031	0.023
49	RHS-IN	258.356	30.3	32.6	Average	40.00	0.290	0.208	0.120	0.077	0.047	0.036	0.029
50	RHS-IN	258.100	30.3	32.6	Average	40.00	0.288	0.229	0.163	0.146	0.119	0.061	0.040
51	RHS-IN	257.942	30.3	32.6	Average	40.00	0.325	0.249	0.183	0.153	0.117	0.070	0.047
52	RHS-IN	257.856	30.3	32.6	Average	40.00	0.304	0.196	0.110	0.066	0.047	0.033	0.029
53	RHS-IN	257.591	30.2	32.5	Average	40.00	0.183	0.128	0.097	0.059	0.044	0.031	0.029
54	RHS-IN	257.353	30.2	32.5	Average	40.00	0.274	0.183	0.107	0.068	0.047	0.034	0.025
55	RHS-IN	257.109	30.1	32.5	Average	40.00	0.287	0.203	0.121	0.081	0.049	0.033	0.023
56	RHS-IN	256.957	30.1	32.4	Average	40.00	0.323	0.206	0.122	0.070	0.053	0.040	0.032
57	RHS-IN	256.861	30.1	32.4	Average	40.00	0.312	0.215	0.120	0.069	0.042	0.026	0.023
58	RHS-IN	256.599	30.0	32.4	Average	40.00	0.342	0.210	0.128	0.087	0.054	0.039	0.034
59	RHS-IN	256.351	30.0	32.4	Average	40.00	0.350	0.232	0.120	0.068	0.045	0.031	0.030
60	RHS-IN	256.086	30.0	32.4	Average	40.00	0.362	0.240	0.133	0.068	0.048	0.030	0.023
61	RHS-IN	255.939	30.0	32.3	Average	40.00	0.363	0.233	0.125	0.068	0.050	0.037	0.029
62	RHS-IN	255.840	30.0	32.3	Average	40.00	0.364	0.228	0.126	0.074	0.045	0.031	0.027
63	RHS-IN	255.630	30.0	32.3	Average	40.00	0.319	0.210	0.121	0.063	0.043	0.028	0.019
64	RHS-IN	255.352	29.9	32.3	Average	40.00	0.313	0.182	0.091	0.056	0.039	0.023	0.018
65	RHS-IN	255.110	29.9	32.3	Average	40.00	0.315	0.209	0.114	0.061	0.035	0.025	0.018
66	RHS-IN	254.916	29.8	32.3	Average	40.00	0.425	0.195	0.159	0.093	0.066	0.044	0.035
67	RHS-IN	254.850	29.8	32.2	Average	40.00	0.507	0.345	0.185	0.101	0.058	0.037	0.033
68	RHS-IN	254.599	29.8	32.1	Average	40.00	0.403	0.279	0.176	0.107	0.075	0.056	0.041
69	RHS-IN	254.347	29.7	32.1	Average	40.00	0.366	0.237	0.133	0.080	0.049	0.033	0.029
70	RHS-IN	254.124	29.7	32.1	Average	40.00	0.334	0.213	0.122	0.073	0.056	0.042	0.033
71	RHS-IN	253.961	29.6	32.1	Average	40.00	0.314	0.195	0.144	0.077	0.047	0.030	0.022
72	RHS-IN	253.842	29.6	32.1	Average	40.00	0.337	0.235	0.134	0.081	0.048	0.033	0.029
73	RHS-IN	253.617	29.6	32.0	Average	40.00	0.313	0.231	0.145	0.086	0.061	0.049	0.031

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
74	RHS-IN	253.351	29.6	32.0	Average	40.00	0.288	0.205	0.120	0.074	0.050	0.030	0.025
75	RHS-IN	253.107	29.5	32.0	Average	40.00	0.291	0.187	0.137	0.080	0.058	0.040	0.036
76	RHS-IN	252.948	29.5	32.0	Average	40.00	0.298	0.213	0.137	0.083	0.060	0.045	0.036
77	RHS-IN	252.860	29.5	31.9	Average	40.00	0.243	0.180	0.116	0.073	0.047	0.029	0.024
78	RHS-IN	252.593	29.5	31.9	Average	40.00	0.261	0.166	0.128	0.068	0.047	0.033	0.029
79	RHS-IN	252.355	29.4	31.9	Average	40.00	0.261	0.191	0.121	0.079	0.048	0.030	0.020
80	RHS-IN	252.099	29.4	31.8	Average	40.00	0.301	0.195	0.150	0.095	0.064	0.044	0.040
81	RHS-IN	251.947	29.4	31.7	Average	40.00	0.299	0.173	0.116	0.056	0.031	0.030	0.026
82	RHS-IN	251.838	29.4	31.7	Average	40.00	0.169	0.106	0.056	0.036	0.026	0.019	0.017
83	RHS-IN	251.622	29.4	31.5	Average	40.00	0.253	0.172	0.106	0.062	0.047	0.036	0.027
84	RHS-IN	251.340	29.3	31.5	Average	40.00	0.355	0.255	0.147	0.087	0.049	0.032	0.024
85	RHS-IN	251.077	29.3	31.5	Average	40.00	0.327	0.188	0.108	0.062	0.047	0.037	0.029
86	RHS-IN	250.956	29.3	31.5	Average	40.00	0.337	0.225	0.131	0.075	0.057	0.041	0.037
87	RHS-IN	250.841	29.3	31.5	Average	40.00	0.275	0.202	0.123	0.077	0.052	0.034	0.028
88	RHS-IN	250.600	29.3	31.4	Average	40.00	0.274	0.153	0.110	0.061	0.040	0.031	0.028
89	RHS-IN	250.347	29.2	31.4	Average	40.00	0.270	0.197	0.122	0.079	0.052	0.033	0.026
90	RHS-IN	250.169	29.2	31.4	Average	40.00	0.288	0.184	0.095	0.052	0.038	0.028	0.024
91	RHS-IN	249.958	29.2	31.3	Average	40.00	0.311	0.219	0.179	0.115	0.080	0.053	0.049
92	RHS-IN	249.845	29.2	31.3	Average	40.00	0.323	0.230	0.130	0.076	0.047	0.030	0.023
93	RHS-IN	249.596	29.1	31.3	Average	40.00	0.398	0.256	0.175	0.080	0.048	0.035	0.028
94	RHS-IN	249.352	29.1	31.3	Average	40.00	0.583	0.312	0.123	0.064	0.041	0.031	0.022
95	RHS-IN	249.132	29.1	31.2	Average	40.00	0.434	0.290	0.176	0.105	0.079	0.057	0.043
96	RHS-IN	248.850	24.2	27.8	Average	40.00	0.815	0.495	0.202	0.084	0.057	0.034	0.033
97	RHS-IN	248.321	24.2	27.8	Average	40.00	0.268	0.207	0.131	0.088	0.064	0.043	0.034
98	RHS-IN	247.857	24.2	27.8	Average	40.00	0.213	0.162	0.102	0.064	0.043	0.028	0.021
99	RHS-IN	247.347	24.2	27.8	Average	40.00	0.222	0.167	0.105	0.067	0.044	0.031	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
100	RHS-IN	246.850	24.2	27.8	Average	40.00	0.146	0.112	0.076	0.050	0.035	0.022	0.016
101	RHS-IN	246.355	24.3	27.8	Average	40.00	0.236	0.181	0.122	0.089	0.067	0.049	0.043
102	RHS-IN	245.845	24.3	27.9	Average	40.00	0.185	0.128	0.070	0.041	0.027	0.019	0.015
103	RHS-IN	245.343	24.3	27.9	Average	40.00	0.444	0.316	0.191	0.126	0.085	0.057	0.042
104	RHS-IN	244.850	24.3	27.9	Average	40.00	0.478	0.288	0.142	0.071	0.041	0.028	0.025
105	RHS-IN	244.342	24.3	27.9	Average	40.00	0.295	0.217	0.137	0.093	0.066	0.047	0.037
106	RHS-IN	243.848	24.3	27.9	Average	40.00	0.352	0.264	0.165	0.106	0.070	0.046	0.037
107	RHS-IN	243.356	24.3	27.9	Average	40.00	0.313	0.251	0.170	0.114	0.079	0.052	0.040
108	RHS-IN	242.941	24.3	27.9	Average	40.00	0.293	0.161	0.083	0.049	0.031	0.021	0.017
109	RHS-IN	242.853	24.3	27.9	Average	40.00	0.254	0.193	0.122	0.077	0.050	0.029	0.027
110	RHS-IN	242.853	24.3	27.9	Average	40.00	0.142	0.090	0.049	0.033	0.025	0.023	0.016
111	RHS-IN	242.610	24.3	28.0	Average	40.00	0.302	0.194	0.115	0.073	0.059	0.048	0.039
112	RHS-IN	242.373	24.3	28.0	Average	40.00	0.235	0.193	0.132	0.089	0.060	0.040	0.028
113	RHS-IN	242.097	24.3	28.0	Average	40.00	0.278	0.166	0.090	0.053	0.034	0.029	0.022
114	RHS-IN	241.956	24.4	28.0	Average	40.00	0.268	0.192	0.126	0.084	0.066	0.051	0.045
115	RHS-IN	241.844	24.4	28.0	Average	40.00	0.148	0.112	0.067	0.043	0.031	0.022	0.018
116	RHS-IN	241.579	24.4	28.0	Average	40.00	0.285	0.169	0.095	0.054	0.042	0.031	0.025
117	RHS-IN	241.353	24.4	28.0	Average	40.00	0.320	0.221	0.131	0.084	0.056	0.037	0.030
118	RHS-IN	241.089	24.4	28.0	Average	40.00	0.268	0.185	0.111	0.064	0.049	0.037	0.027
119	RHS-IN	240.942	24.4	28.0	Average	40.00	0.328	0.241	0.153	0.098	0.074	0.053	0.043
120	RHS-IN	240.839	24.4	28.0	Average	40.00	0.277	0.213	0.135	0.087	0.062	0.043	0.038
121	RHS-IN	240.623	24.4	28.0	Average	40.00	0.295	0.200	0.129	0.083	0.067	0.046	0.033
122	RHS-IN	240.350	24.5	28.0	Average	40.00	0.326	0.251	0.155	0.097	0.065	0.045	0.038
123	RHS-IN	240.089	24.5	28.0	Average	40.00	0.329	0.198	0.105	0.056	0.042	0.031	0.023
124	RHS-IN	239.947	24.5	28.0	Average	40.00	0.301	0.214	0.146	0.103	0.074	0.051	0.044
125	RHS-IN	239.855	24.5	28.1	Average	40.00	0.250	0.207	0.140	0.090	0.060	0.038	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
126	RHS-IN	239.641	24.5	28.1	Average	40.00	0.352	0.229	0.139	0.087	0.070	0.054	0.042
127	RHS-IN	239.356	24.5	28.1	Average	40.00	0.404	0.294	0.186	0.118	0.076	0.051	0.037
128	RHS-IN	239.110	24.5	28.1	Average	40.00	0.388	0.245	0.162	0.103	0.078	0.058	0.045
129	RHS-IN	238.944	24.5	28.1	Average	40.00	0.326	0.204	0.116	0.066	0.049	0.036	0.028
130	RHS-IN	238.859	24.5	28.1	Average	40.00	0.296	0.244	0.164	0.107	0.070	0.046	0.035
131	RHS-IN	238.597	24.6	28.1	Average	40.00	0.315	0.220	0.137	0.084	0.064	0.049	0.034
132	RHS-IN	238.347	24.6	28.1	Average	40.00	0.331	0.252	0.162	0.108	0.071	0.049	0.035
133	RHS-IN	238.092	24.6	28.1	Average	40.00	0.343	0.225	0.127	0.074	0.058	0.043	0.033
134	RHS-IN	237.956	24.6	28.1	Average	40.00	0.288	0.189	0.109	0.065	0.049	0.034	0.026
135	RHS-IN	237.841	24.6	28.1	Average	40.00	0.146	0.091	0.049	0.031	0.024	0.019	0.017
136	RHS-IN	237.589	24.6	28.1	Average	40.00	0.315	0.179	0.088	0.049	0.037	0.027	0.022
137	RHS-IN	237.338	24.6	28.1	Average	40.00	0.262	0.199	0.132	0.091	0.065	0.046	0.034
138	RHS-IN	237.113	24.6	28.1	Average	40.00	0.290	0.208	0.139	0.093	0.071	0.061	0.041
139	RHS-IN	236.836	24.6	28.1	Average	40.00	0.175	0.138	0.097	0.068	0.046	0.034	0.025
140	RHS-IN	236.331	24.6	28.2	Average	40.00	0.209	0.173	0.127	0.094	0.068	0.049	0.037
141	RHS-IN	235.855	24.6	28.2	Average	40.00	0.106	0.079	0.055	0.041	0.033	0.026	0.019
142	RHS-IN	235.346	24.6	28.2	Average	40.00	0.172	0.136	0.094	0.067	0.050	0.034	0.026
143	RHS-IN	234.852	24.6	28.2	Average	40.00	0.177	0.142	0.104	0.078	0.058	0.043	0.034
144	RHS-IN	234.354	24.6	28.2	Average	40.00	0.121	0.087	0.055	0.037	0.028	0.022	0.021
145	RHS-IN	233.844	24.7	28.2	Average	40.00	0.193	0.156	0.110	0.076	0.054	0.038	0.029
146	RHS-IN	233.350	24.7	28.2	Average	40.00	0.156	0.123	0.084	0.059	0.043	0.031	0.025
147	RHS-IN	232.824	24.7	28.2	Average	40.00	0.153	0.113	0.078	0.058	0.043	0.033	0.027
148	RHS-IN	232.359	24.7	28.2	Average	40.00	0.207	0.163	0.107	0.072	0.050	0.041	0.024
149	RHS-IN	231.832	24.7	28.2	Average	40.00	0.193	0.162	0.122	0.095	0.074	0.056	0.044
150	RHS-IN	231.306	24.7	28.3	Average	40.00	0.483	0.322	0.176	0.103	0.067	0.045	0.032
151	RHS-IN	230.840	24.7	28.3	Average	40.00	0.312	0.255	0.172	0.115	0.076	0.053	0.044

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
152	RHS-IN	230.337	24.7	28.3	Average	40.00	0.126	0.102	0.071	0.052	0.037	0.027	0.021
153	RHS-IN	229.851	24.7	28.3	Average	40.00	0.127	0.101	0.073	0.054	0.041	0.031	0.024
154	RHS-IN	229.348	24.7	28.3	Average	40.00	0.194	0.152	0.103	0.074	0.053	0.039	0.028
155	RHS-IN	228.351	24.8	28.3	Average	40.00	0.194	0.156	0.111	0.080	0.057	0.041	0.031
156	RHS-IN	227.846	24.8	28.3	Average	40.00	0.188	0.152	0.108	0.078	0.056	0.040	0.031
157	RHS-IN	227.340	24.8	28.3	Average	40.00	0.198	0.159	0.112	0.080	0.058	0.042	0.031
158	RHS-IN	226.844	24.8	28.3	Average	40.00	0.177	0.138	0.091	0.062	0.045	0.034	0.026
159	RHS-IN	226.337	24.8	28.3	Average	40.00	0.238	0.192	0.134	0.096	0.070	0.050	0.042
160	RHS-IN	225.844	24.8	28.3	Average	40.00	0.231	0.170	0.102	0.066	0.047	0.031	0.028
161	RHS-IN	225.351	24.9	28.3	Average	40.00	0.142	0.125	0.098	0.078	0.062	0.046	0.037
162	RHS-IN	224.835	24.9	28.3	Average	40.00	0.172	0.137	0.095	0.065	0.049	0.035	0.028
163	RHS-IN	224.354	24.9	28.3	Average	40.00	0.144	0.120	0.088	0.066	0.050	0.040	0.029
164	RHS-IN	223.847	24.9	28.3	Average	40.00	0.272	0.198	0.127	0.086	0.060	0.040	0.031
165	RHS-IN	223.350	24.9	28.4	Average	40.00	0.143	0.114	0.081	0.056	0.040	0.028	0.018
166	RHS-IN	222.849	24.9	28.4	Average	40.00	0.117	0.096	0.072	0.057	0.046	0.036	0.030
167	RHS-IN	222.323	24.9	28.4	Average	40.00	0.135	0.103	0.068	0.048	0.034	0.026	0.020
168	RHS-IN	221.850	24.9	28.4	Average	40.00	0.278	0.212	0.124	0.083	0.054	0.041	0.032
169	RHS-IN	221.348	24.9	28.4	Average	40.00	0.123	0.095	0.068	0.051	0.039	0.030	0.025
170	RHS-IN	220.817	24.9	28.4	Average	40.00	0.113	0.083	0.054	0.035	0.026	0.019	0.013
171	RHS-IN	220.338	24.9	28.4	Average	40.00	0.199	0.145	0.098	0.072	0.055	0.043	0.032
172	RHS-IN	219.844	24.9	28.4	Average	40.00	0.212	0.163	0.113	0.084	0.061	0.045	0.036
173	RHS-IN	219.343	25.0	28.4	Average	40.00	0.163	0.118	0.070	0.045	0.031	0.023	0.019
174	RHS-IN	218.857	25.0	28.4	Average	40.00	0.237	0.180	0.111	0.067	0.046	0.033	0.027
175	RHS-IN	218.347	25.0	28.4	Average	40.00	0.170	0.141	0.103	0.075	0.058	0.043	0.024
176	RHS-IN	217.839	25.0	28.4	Average	40.00	0.196	0.152	0.104	0.073	0.053	0.039	0.030
177	RHS-IN	217.348	25.0	28.4	Average	40.00	0.211	0.175	0.127	0.096	0.073	0.052	0.040

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
178	RHS-IN	216.838	25.0	28.4	Average	40.00	0.176	0.146	0.109	0.085	0.066	0.050	0.037
179	RHS-IN	215.844	25.2	28.5	Average	40.00	0.338	0.229	0.138	0.087	0.060	0.041	0.031
180	RHS-IN	215.328	25.2	28.5	Average	40.00	0.216	0.169	0.112	0.078	0.056	0.039	0.032
181	RHS-IN	214.840	25.3	28.7	Average	40.00	0.270	0.215	0.141	0.083	0.056	0.041	0.030
182	RHS-IN	214.355	25.4	28.7	Average	40.00	0.211	0.164	0.119	0.090	0.066	0.049	0.036
183	RHS-IN	213.862	25.5	28.8	Average	40.00	0.220	0.184	0.142	0.113	0.095	0.077	0.052
184	RHS-IN	213.349	25.5	28.9	Average	40.00	0.222	0.167	0.108	0.074	0.056	0.041	0.036
185	RHS-IN	212.849	25.5	28.9	Average	40.00	0.215	0.172	0.117	0.081	0.058	0.041	0.032
186	RHS-IN	212.333	25.6	28.9	Average	40.00	0.212	0.166	0.107	0.070	0.048	0.035	0.026
187	RHS-IN	211.797	25.6	29.1	Average	40.00	0.329	0.263	0.178	0.122	0.085	0.058	0.042
188	RHS-IN	211.326	25.8	29.1	Average	40.00	0.371	0.266	0.161	0.107	0.070	0.048	0.035
189	RHS-IN	210.840	25.8	29.1	Average	40.00	0.261	0.206	0.138	0.094	0.067	0.045	0.036
190	RHS-IN	210.358	25.8	29.2	Average	40.00	0.334	0.253	0.156	0.099	0.066	0.043	0.036
191	RHS-IN	209.839	25.8	29.5	Average	40.00	0.297	0.234	0.157	0.105	0.071	0.050	0.038
192	RHS-IN	209.339	25.9	29.5	Average	40.00	0.064	0.056	0.045	0.032	0.020	0.015	0.011
193	RHS-IN	208.858	26.1	29.5	Average	40.00	0.211	0.169	0.114	0.079	0.056	0.041	0.034
194	RHS-IN	208.358	26.1	29.5	Average	40.00	0.349	0.258	0.173	0.129	0.101	0.079	0.055
195	RHS-IN	207.846	26.2	29.7	Average	40.00	0.346	0.273	0.203	0.156	0.116	0.097	0.063
196	RHS-IN	207.344	26.3	29.7	Average	40.00	0.249	0.198	0.137	0.100	0.074	0.056	0.043
197	RHS-IN	206.841	26.4	29.8	Average	40.00	0.175	0.132	0.087	0.062	0.043	0.031	0.026
198	RHS-IN	206.342	26.7	29.8	Average	40.00	0.184	0.155	0.112	0.082	0.062	0.045	0.036
199	RHS-IN	205.849	26.7	29.9	Average	40.00	0.259	0.200	0.129	0.087	0.062	0.043	0.034
200	RHS-IN	205.353	26.9	30.0	Average	40.00	0.204	0.155	0.094	0.058	0.038	0.026	0.021
201	RHS-IN	204.848	26.9	30.2	Average	40.00	0.213	0.171	0.115	0.078	0.055	0.039	0.024
202	RHS-IN	204.342	26.9	30.3	Average	40.00	0.148	0.119	0.085	0.063	0.047	0.033	0.026
203	RHS-IN	203.829	26.9	30.4	Average	40.00	0.341	0.225	0.129	0.087	0.061	0.044	0.036

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
204	RHS-IN	203.318	27.0	30.4	Average	40.00	0.227	0.157	0.092	0.056	0.040	0.029	0.024
205	RHS-IN	202.867	27.1	30.4	Average	40.00	0.288	0.229	0.152	0.103	0.072	0.047	0.036
206	RHS-IN	202.345	27.2	30.4	Average	40.00	0.260	0.204	0.134	0.085	0.057	0.045	0.026
207	RHS-IN	201.854	27.2	30.4	Average	40.00	0.300	0.200	0.104	0.069	0.050	0.037	0.030
208	RHS-IN	201.341	27.3	30.4	Average	40.00	0.263	0.193	0.124	0.081	0.056	0.040	0.032
209	RHS-IN	200.850	27.3	30.6	Average	40.00	0.191	0.155	0.110	0.080	0.059	0.042	0.035
210	RHS-IN	200.336	27.4	30.6	Average	40.00	0.177	0.132	0.087	0.062	0.046	0.035	0.027
211	RHS-IN	199.841	27.6	30.7	Average	40.00	0.172	0.136	0.094	0.068	0.051	0.037	0.028
212	RHS-IN	199.367	27.9	30.7	Average	40.00	0.270	0.209	0.129	0.084	0.058	0.039	0.031
213	RHS-IN	198.853	28.0	30.8	Average	40.00	0.196	0.153	0.106	0.076	0.058	0.040	0.033
214	RHS-IN	198.343	28.2	30.8	Average	40.00	0.161	0.121	0.080	0.054	0.038	0.026	0.020
215	RHS-IN	197.854	28.3	30.8	Average	40.00	0.230	0.161	0.107	0.071	0.049	0.034	0.028
216	RHS-IN	197.358	28.3	30.8	Average	40.00	0.587	0.401	0.233	0.139	0.091	0.061	0.045
217	RHS-IN	196.849	28.4	30.8	Average	40.00	0.165	0.130	0.087	0.060	0.042	0.029	0.023
218	RHS-IN	196.363	28.7	30.9	Average	40.00	0.177	0.144	0.102	0.074	0.055	0.042	0.032
219	RHS-IN	195.849	28.9	30.9	Average	40.00	0.174	0.146	0.109	0.081	0.062	0.045	0.038
220	RHS-IN	195.335	28.9	30.9	Average	40.00	0.144	0.112	0.073	0.048	0.034	0.024	0.019
221	RHS-IN	194.847	28.9	31.0	Average	40.00	0.269	0.196	0.117	0.073	0.049	0.034	0.026
222	RHS-IN	194.356	29.0	31.0	Average	40.00	0.200	0.161	0.113	0.081	0.060	0.045	0.036
223	RHS-IN	193.860	29.1	31.0	Average	40.00	0.152	0.121	0.083	0.059	0.042	0.031	0.023
224	RHS-IN	193.356	29.1	31.0	Average	40.00	0.188	0.155	0.111	0.080	0.059	0.043	0.033
225	RHS-IN	192.854	29.2	31.1	Average	40.00	0.191	0.156	0.119	0.097	0.081	0.066	0.054
226	RHS-IN	192.348	29.2	31.1	Average	40.00	0.179	0.137	0.092	0.065	0.047	0.034	0.028
227	RHS-IN	191.840	29.2	31.1	Average	40.00	0.264	0.205	0.141	0.101	0.074	0.054	0.042
228	RHS-IN	191.357	29.2	31.1	Average	40.00	0.234	0.198	0.152	0.122	0.100	0.080	0.065
229	RHS-IN	190.848	29.4	31.1	Average	40.00	0.144	0.114	0.080	0.057	0.042	0.030	0.024

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
230	RHS-IN	190.354	29.4	31.1	Average	40.00	0.650	0.426	0.231	0.135	0.080	0.053	0.038
231	RHS-IN	189.851	29.4	31.2	Average	40.00	0.436	0.322	0.194	0.120	0.075	0.047	0.035
232	RHS-IN	180.872	29.5	31.3	Average	40.00	0.515	0.357	0.199	0.119	0.077	0.052	0.042
233	RHS-IN	180.351	29.5	31.3	Average	40.00	0.352	0.245	0.141	0.088	0.056	0.034	0.029
234	RHS-IN	179.355	29.5	31.3	Average	40.00	0.159	0.132	0.098	0.072	0.054	0.040	0.032
235	RHS-IN	178.843	29.5	31.3	Average	40.00	0.165	0.122	0.078	0.052	0.034	0.025	0.020
236	RHS-IN	178.354	29.6	31.3	Average	40.00	0.155	0.114	0.074	0.050	0.036	0.025	0.019
237	RHS-IN	177.838	29.6	31.3	Average	40.00	0.170	0.140	0.099	0.068	0.046	0.029	0.019
238	RHS-IN	177.338	29.7	31.4	Average	40.00	0.159	0.107	0.072	0.052	0.038	0.027	0.021
239	RHS-IN	176.847	29.7	31.5	Average	40.00	0.210	0.158	0.104	0.070	0.050	0.035	0.028
240	RHS-IN	176.353	29.7	31.7	Average	40.00	0.178	0.141	0.098	0.068	0.048	0.033	0.024
241	RHS-IN	175.842	29.8	31.9	Average	40.00	0.359	0.245	0.131	0.077	0.049	0.032	0.024
242	RHS-IN	175.353	29.8	32.0	Average	40.00	0.244	0.201	0.142	0.105	0.084	0.063	0.048
243	RHS-IN	174.837	29.9	32.0	Average	40.00	0.313	0.257	0.188	0.141	0.103	0.068	0.051
244	RHS-IN	174.331	29.9	32.1	Average	40.00	0.282	0.179	0.105	0.067	0.042	0.029	0.026
245	RHS-IN	173.849	29.9	32.1	Average	40.00	0.274	0.185	0.111	0.071	0.048	0.034	0.028
246	RHS-IN	173.349	30.0	32.2	Average	40.00	0.330	0.246	0.147	0.087	0.060	0.042	0.035
247	RHS-IN	172.850	30.0	32.3	Average	40.00	0.419	0.285	0.148	0.086	0.056	0.036	0.028
248	RHS-IN	172.343	30.1	32.3	Average	40.00	0.263	0.216	0.155	0.117	0.091	0.070	0.056
249	RHS-IN	171.901	30.1	32.3	Average	40.00	0.194	0.140	0.088	0.059	0.041	0.030	0.024
250	RHS-IN	170.854	30.1	32.3	Average	40.00	0.194	0.133	0.083	0.052	0.044	0.035	0.031
251	RHS-IN	170.347	30.3	32.4	Average	40.00	0.227	0.146	0.060	0.029	0.016	0.015	0.013
252	RHS-IN	169.847	30.3	32.4	Average	40.00	0.257	0.188	0.119	0.083	0.059	0.044	0.033
253	RHS-IN	169.348	30.3	32.5	Average	40.00	0.618	0.495	0.364	0.271	0.192	0.161	0.132
254	RHS-IN	168.825	30.5	32.7	Average	40.00	0.119	0.096	0.069	0.050	0.038	0.028	0.024
255	RHS-IN	168.358	30.5	32.8	Average	40.00	0.608	0.397	0.209	0.128	0.077	0.054	0.038

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
256	RHS-IN	167.848	30.5	32.8	Average	40.00	0.151	0.109	0.071	0.050	0.037	0.027	0.023
257	RHS-IN	167.333	30.5	32.9	Average	40.00	0.198	0.162	0.117	0.084	0.062	0.044	0.031
258	RHS-IN	166.839	30.6	33.1	Average	40.00	0.787	0.507	0.285	0.164	0.116	0.106	0.099
259	RHS-IN	166.357	30.6	33.1	Average	40.00	0.642	0.423	0.242	0.143	0.093	0.061	0.046
260	RHS-IN	165.836	30.6	33.2	Average	40.00	0.297	0.213	0.128	0.083	0.055	0.038	0.024
261	RHS-IN	165.345	30.6	33.3	Average	40.00	0.325	0.241	0.143	0.090	0.054	0.034	0.023
262	RHS-IN	164.845	30.6	33.3	Average	40.00	0.234	0.196	0.138	0.096	0.066	0.044	0.032
263	RHS-IN	164.352	30.6	33.3	Average	40.00	0.120	0.099	0.069	0.049	0.034	0.025	0.022
264	RHS-IN	163.953	30.7	33.5	Average	40.00	0.289	0.142	0.095	0.046	0.033	0.028	0.014
265	RHS-IN	163.851	30.7	33.5	Average	40.00	0.201	0.152	0.094	0.059	0.039	0.026	0.022
266	RHS-IN	163.615	30.7	33.5	Average	40.00	0.295	0.176	0.101	0.056	0.041	0.029	0.023
267	RHS-IN	163.324	30.7	33.6	Average	40.00	0.299	0.199	0.103	0.057	0.036	0.026	0.021
268	RHS-IN	163.100	30.8	33.7	Average	40.00	0.261	0.172	0.100	0.060	0.046	0.034	0.029
269	RHS-IN	162.956	30.8	33.8	Average	40.00	0.369	0.250	0.150	0.091	0.069	0.052	0.040
270	RHS-IN	162.855	30.8	33.8	Average	40.00	0.470	0.307	0.160	0.082	0.047	0.032	0.024
271	RHS-IN	162.611	30.9	33.8	Average	40.00	0.218	0.108	0.063	0.037	0.025	0.023	0.019
272	RHS-IN	162.360	30.9	33.8	Average	40.00	0.191	0.109	0.042	0.020	0.014	0.012	0.011
273	RHS-IN	162.121	30.9	33.9	Average	40.00	0.244	0.163	0.118	0.075	0.053	0.037	0.027
274	RHS-IN	161.855	31.0	33.9	Average	40.00	0.325	0.193	0.096	0.056	0.038	0.028	0.024
275	RHS-IN	160.855	31.1	33.9	Average	40.00	0.449	0.284	0.152	0.088	0.053	0.035	0.024
276	RHS-IN	160.336	31.1	34.0	Average	40.00	0.191	0.146	0.092	0.059	0.041	0.028	0.022
277	RHS-IN	159.848	31.1	34.0	Average	40.00	0.359	0.265	0.166	0.104	0.068	0.042	0.033
278	RHS-IN	159.355	31.1	34.0	Average	40.00	0.204	0.156	0.101	0.066	0.044	0.029	0.022
279	RHS-IN	158.851	31.3	34.1	Average	40.00	0.295	0.180	0.095	0.050	0.031	0.019	0.018
280	RHS-IN	158.354	31.4	34.2	Average	40.00	0.187	0.139	0.083	0.050	0.031	0.018	0.013
281	RHS-IN	157.857	31.4	34.5	Average	40.00	0.202	0.134	0.079	0.051	0.036	0.027	0.023

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
282	RHS-IN	157.348	31.4	34.5	Average	40.00	0.205	0.134	0.081	0.050	0.033	0.021	0.016
283	RHS-IN	156.844	31.5	34.5	Average	40.00	0.336	0.247	0.153	0.096	0.063	0.042	0.031
284	RHS-IN	156.353	31.6	34.5	Average	40.00	0.264	0.184	0.129	0.083	0.049	0.043	0.030
285	RHS-IN	155.862	31.6	34.6	Average	40.00	0.195	0.103	0.061	0.035	0.022	0.015	0.012
286	RHS-IN	155.340	31.6	34.7	Average	40.00	0.185	0.088	0.052	0.036	0.028	0.020	0.019
287	RHS-IN	154.851	31.7	34.8	Average	40.00	0.265	0.251	0.132	0.074	0.048	0.034	0.026
288	RHS-IN	154.348	31.7	34.8	Average	40.00	0.284	0.099	0.065	0.045	0.032	0.024	0.021
289	RHS-IN	153.844	31.7	34.8	Average	40.00	0.264	0.121	0.076	0.052	0.036	0.028	0.019
290	RHS-IN	153.346	31.7	34.9	Average	40.00	0.251	0.077	0.045	0.028	0.019	0.014	0.011
291	RHS-IN	152.844	31.8	35.0	Average	40.00	0.298	0.173	0.102	0.068	0.047	0.032	0.021
292	RHS-IN	152.351	31.8	35.0	Average	40.00	0.404	0.361	0.183	0.109	0.069	0.050	0.032
293	RHS-IN	151.819	31.8	35.1	Average	40.00	0.386	0.297	0.142	0.078	0.054	0.040	0.034
294	RHS-IN	151.340	31.8	35.3	Average	40.00	0.310	0.167	0.098	0.061	0.043	0.029	0.025
295	RHS-IN	150.838	31.9	35.3	Average	40.00	0.370	0.220	0.120	0.074	0.050	0.035	0.027
296	RHS-IN	150.354	31.9	35.4	Average	40.00	0.320	0.281	0.140	0.082	0.057	0.040	0.031
297	RHS-IN	149.849	32.0	35.4	Average	40.00	0.275	0.120	0.083	0.056	0.039	0.027	0.020
298	RHS-IN	149.353	32.0	35.5	Average	40.00	0.198	0.081	0.054	0.036	0.024	0.018	0.012
299	RHS-IN	148.854	32.0	35.6	Average	40.00	0.328	0.201	0.123	0.078	0.051	0.042	0.023
300	RHS-IN	148.356	32.1	35.7	Average	40.00	0.425	0.305	0.154	0.082	0.049	0.031	0.019

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: LHS OT

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	LHS-OT	148.000	38.0	42.1	Average	40.00	0.408	0.249	0.146	0.088	0.056	0.036	0.027
2	LHS-OT	148.154	38.0	42.1	Average	40.00	0.392	0.260	0.188	0.124	0.087	0.064	0.048
3	LHS-OT	148.259	38.0	42.1	Average	40.00	0.094	0.030	0.019	0.016	0.015	0.013	0.011
4	LHS-OT	148.405	38.0	42.1	Average	40.00	0.342	0.246	0.188	0.114	0.079	0.053	0.042
5	LHS-OT	148.508	38.0	42.1	Average	40.00	0.088	0.034	0.023	0.018	0.015	0.012	0.011
6	LHS-OT	148.657	38.0	42.1	Average	40.00	0.385	0.249	0.181	0.119	0.079	0.068	0.046
7	LHS-OT	148.743	38.0	42.1	Average	40.00	0.082	0.047	0.029	0.020	0.015	0.013	0.012
8	LHS-OT	148.912	38.0	42.1	Average	40.00	0.377	0.249	0.178	0.106	0.073	0.073	0.043
9	LHS-OT	149.000	38.0	42.1	Average	40.00	0.082	0.046	0.028	0.020	0.015	0.012	0.011
10	LHS-OT	149.253	38.0	42.1	Average	40.00	0.109	0.080	0.056	0.043	0.031	0.023	0.017
11	LHS-OT	149.510	38.0	42.1	Average	40.00	0.067	0.038	0.024	0.017	0.013	0.011	0.011
12	LHS-OT	149.751	38.0	42.1	Average	40.00	0.087	0.055	0.037	0.028	0.022	0.019	0.015
13	LHS-OT	150.007	38.0	42.1	Average	40.00	0.135	0.089	0.062	0.045	0.033	0.025	0.020
14	LHS-OT	150.251	38.0	42.1	Average	40.00	0.076	0.047	0.035	0.024	0.019	0.017	0.014
15	LHS-OT	150.501	38.0	42.1	Average	40.00	0.109	0.068	0.046	0.033	0.025	0.018	0.016
16	LHS-OT	150.756	38.0	42.1	Average	40.00	0.142	0.093	0.067	0.051	0.039	0.030	0.025
17	LHS-OT	150.998	38.0	42.1	Average	40.00	0.119	0.073	0.048	0.034	0.026	0.020	0.015
18	LHS-OT	151.265	38.0	42.1	Average	40.00	0.125	0.085	0.061	0.045	0.033	0.027	0.020
19	LHS-OT	151.512	38.0	42.1	Average	40.00	0.100	0.058	0.041	0.033	0.028	0.023	0.019
20	LHS-OT	151.754	38.0	42.1	Average	40.00	0.088	0.036	0.031	0.027	0.024	0.019	0.016
21	LHS-OT	151.998	38.0	42.1	Average	40.00	0.112	0.089	0.070	0.056	0.044	0.034	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
22	LHS-OT	152.254	38.0	42.1	Average	40.00	0.076	0.045	0.030	0.021	0.017	0.013	0.012
23	LHS-OT	152.494	38.0	42.1	Average	40.00	0.103	0.070	0.046	0.034	0.024	0.018	0.016
24	LHS-OT	152.756	38.0	42.1	Average	40.00	0.151	0.098	0.063	0.043	0.032	0.022	0.018
25	LHS-OT	153.002	38.0	42.1	Average	40.00	0.163	0.097	0.049	0.028	0.018	0.014	0.011
26	LHS-OT	153.260	38.0	42.1	Average	40.00	0.093	0.049	0.030	0.022	0.018	0.014	0.012
27	LHS-OT	153.507	38.0	42.1	Average	40.00	0.107	0.069	0.049	0.037	0.029	0.022	0.021
28	LHS-OT	153.755	38.0	42.1	Average	40.00	0.133	0.093	0.063	0.047	0.034	0.025	0.018
29	LHS-OT	154.021	38.0	42.1	Average	40.00	0.071	0.046	0.030	0.022	0.018	0.014	0.012
30	LHS-OT	154.266	38.0	42.1	Average	40.00	0.295	0.183	0.103	0.059	0.040	0.026	0.020
31	LHS-OT	154.517	38.0	42.1	Average	40.00	0.225	0.125	0.076	0.051	0.035	0.027	0.021
32	LHS-OT	154.754	38.0	42.1	Average	40.00	0.241	0.111	0.058	0.035	0.026	0.019	0.016
33	LHS-OT	154.992	38.0	42.1	Average	40.00	0.094	0.053	0.038	0.025	0.021	0.014	0.012
34	LHS-OT	155.267	38.0	42.1	Average	40.00	0.204	0.136	0.085	0.057	0.041	0.029	0.020
35	LHS-OT	155.508	38.0	42.1	Average	40.00	0.080	0.041	0.027	0.020	0.016	0.012	0.011
36	LHS-OT	155.765	38.0	42.1	Average	40.00	0.068	0.032	0.021	0.016	0.013	0.011	0.011
37	LHS-OT	156.007	38.0	42.1	Average	40.00	0.117	0.065	0.035	0.025	0.018	0.014	0.011
38	LHS-OT	156.250	37.2	40.7	Average	40.00	0.221	0.133	0.088	0.061	0.044	0.030	0.023
39	LHS-OT	156.504	37.2	40.7	Average	40.00	0.502	0.315	0.163	0.094	0.061	0.043	0.027
40	LHS-OT	156.752	37.2	40.7	Average	40.00	0.186	0.128	0.081	0.057	0.041	0.028	0.023
41	LHS-OT	156.999	37.2	40.7	Average	40.00	0.092	0.051	0.030	0.022	0.017	0.013	0.011

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
42	LHS-OT	157.277	37.2	40.7	Average	40.00	0.161	0.114	0.078	0.056	0.042	0.030	0.021
43	LHS-OT	157.508	37.2	40.7	Average	40.00	0.269	0.178	0.110	0.071	0.047	0.033	0.025
44	LHS-OT	157.754	37.2	40.7	Average	40.00	0.152	0.102	0.066	0.048	0.037	0.028	0.023
45	LHS-OT	157.998	37.2	40.7	Average	40.00	0.107	0.058	0.042	0.034	0.029	0.023	0.020
46	LHS-OT	158.250	37.2	40.7	Average	40.00	0.204	0.104	0.065	0.047	0.035	0.027	0.021
47	LHS-OT	158.500	37.2	40.7	Average	40.00	0.247	0.181	0.106	0.072	0.054	0.038	0.033
48	LHS-OT	158.754	37.2	40.7	Average	40.00	0.183	0.114	0.067	0.049	0.039	0.029	0.026
49	LHS-OT	159.026	37.2	40.7	Average	40.00	0.164	0.105	0.074	0.057	0.046	0.035	0.030
50	LHS-OT	159.252	37.2	40.7	Average	40.00	0.165	0.121	0.090	0.069	0.054	0.041	0.032
51	LHS-OT	159.512	37.2	40.7	Average	40.00	0.311	0.140	0.057	0.039	0.031	0.023	0.018
52	LHS-OT	160.018	37.2	40.7	Average	40.00	0.147	0.086	0.052	0.035	0.025	0.019	0.016
53	LHS-OT	160.268	37.2	40.7	Average	40.00	0.096	0.055	0.040	0.032	0.026	0.021	0.017
54	LHS-OT	160.543	37.2	40.7	Average	40.00	0.188	0.103	0.064	0.045	0.037	0.028	0.026
55	LHS-OT	160.750	37.2	40.7	Average	40.00	0.087	0.053	0.042	0.031	0.028	0.023	0.018
56	LHS-OT	161.000	37.2	40.7	Average	40.00	0.153	0.081	0.039	0.026	0.019	0.014	0.012
57	LHS-OT	161.752	37.2	40.7	Average	40.00	0.139	0.067	0.042	0.030	0.024	0.019	0.016
58	LHS-OT	161.995	37.2	40.7	Average	40.00	0.116	0.061	0.042	0.031	0.024	0.018	0.015
59	LHS-OT	162.260	37.2	40.7	Average	40.00	0.184	0.095	0.062	0.044	0.035	0.025	0.022
60	LHS-OT	162.519	37.2	40.7	Average	40.00	0.103	0.051	0.036	0.029	0.025	0.019	0.015
61	LHS-OT	162.748	37.2	40.7	Average	40.00	0.130	0.076	0.051	0.038	0.030	0.023	0.018
62	LHS-OT	162.991	37.2	40.7	Average	40.00	0.120	0.070	0.051	0.039	0.032	0.025	0.020
63	LHS-OT	163.264	37.2	40.7	Average	40.00	0.095	0.046	0.033	0.026	0.022	0.018	0.015
64	LHS-OT	163.510	37.2	40.7	Average	40.00	0.140	0.059	0.045	0.035	0.030	0.024	0.021

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
65	LHS-OT	163.748	37.2	40.7	Average	40.00	0.164	0.104	0.073	0.057	0.044	0.033	0.026
66	LHS-OT	163.994	37.2	40.7	Average	40.00	0.230	0.116	0.058	0.034	0.026	0.018	0.015
67	LHS-OT	164.245	37.2	40.7	Average	40.00	0.271	0.137	0.080	0.053	0.038	0.026	0.022
68	LHS-OT	164.491	37.2	40.7	Average	40.00	0.114	0.071	0.047	0.034	0.026	0.020	0.016
69	LHS-OT	164.754	37.2	40.7	Average	40.00	0.138	0.081	0.053	0.040	0.033	0.025	0.021
70	LHS-OT	164.999	37.2	40.7	Average	40.00	0.268	0.115	0.076	0.054	0.041	0.031	0.026
71	LHS-OT	165.262	37.2	40.7	Average	40.00	0.118	0.076	0.049	0.035	0.027	0.020	0.016
72	LHS-OT	165.513	37.2	40.7	Average	40.00	0.116	0.072	0.047	0.037	0.029	0.021	0.018
73	LHS-OT	165.760	37.2	40.7	Average	40.00	0.159	0.109	0.075	0.054	0.043	0.035	0.026
74	LHS-OT	166.000	37.2	40.7	Average	40.00	0.211	0.140	0.082	0.055	0.040	0.031	0.026
75	LHS-OT	166.250	37.2	40.7	Average	40.00	0.232	0.164	0.101	0.067	0.048	0.036	0.030
76	LHS-OT	166.501	37.2	40.7	Average	40.00	0.322	0.231	0.143	0.093	0.064	0.045	0.033
77	LHS-OT	166.756	37.2	40.7	Average	40.00	0.201	0.140	0.087	0.058	0.039	0.033	0.025
78	LHS-OT	167.016	37.2	40.7	Average	40.00	0.160	0.118	0.079	0.058	0.043	0.034	0.028
79	LHS-OT	167.260	36.1	38.0	Average	40.00	0.182	0.116	0.075	0.053	0.041	0.032	0.027
80	LHS-OT	167.509	36.1	38.0	Average	40.00	0.353	0.241	0.136	0.086	0.058	0.039	0.032
81	LHS-OT	167.749	36.1	38.0	Average	40.00	0.183	0.115	0.068	0.044	0.032	0.024	0.021
82	LHS-OT	168.015	36.1	38.0	Average	40.00	0.352	0.196	0.095	0.054	0.036	0.022	0.016
83	LHS-OT	168.507	36.1	38.0	Average	40.00	0.611	0.376	0.208	0.126	0.081	0.053	0.040
84	LHS-OT	168.759	34.3	35.8	Average	40.00	0.459	0.275	0.153	0.103	0.072	0.054	0.043
85	LHS-OT	169.024	34.3	35.8	Average	40.00	0.208	0.126	0.092	0.060	0.044	0.032	0.025
86	LHS-OT	169.256	34.3	35.8	Average	40.00	0.508	0.321	0.181	0.114	0.077	0.054	0.046
87	LHS-OT	169.508	34.3	35.8	Average	40.00	0.209	0.155	0.109	0.079	0.059	0.044	0.035
88	LHS-OT	169.744	34.3	35.8	Average	40.00	0.236	0.160	0.109	0.074	0.050	0.046	0.036
89	LHS-OT	170.003	34.3	35.8	Average	40.00	0.371	0.243	0.152	0.102	0.071	0.048	0.038

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
90	LHS-OT	170.257	34.3	35.8	Average	40.00	0.197	0.140	0.098	0.073	0.056	0.043	0.035
91	LHS-OT	170.499	34.3	35.8	Average	40.00	0.195	0.151	0.105	0.077	0.058	0.045	0.036
92	LHS-OT	170.753	34.3	35.8	Average	40.00	0.304	0.234	0.160	0.117	0.089	0.065	0.053
93	LHS-OT	171.022	34.3	35.8	Average	40.00	0.234	0.172	0.114	0.075	0.053	0.039	0.030
94	LHS-OT	171.739	34.3	35.8	Average	40.00	0.213	0.143	0.092	0.064	0.046	0.034	0.027
95	LHS-OT	172.006	34.3	35.8	Average	40.00	0.358	0.265	0.173	0.120	0.088	0.065	0.053
96	LHS-OT	172.257	34.3	35.8	Average	40.00	0.304	0.225	0.149	0.108	0.083	0.063	0.052
97	LHS-OT	172.504	34.3	35.8	Average	40.00	0.290	0.184	0.108	0.068	0.046	0.033	0.028
98	LHS-OT	172.741	34.3	35.8	Average	40.00	0.188	0.139	0.087	0.058	0.043	0.032	0.029
99	LHS-OT	173.010	34.3	35.8	Average	40.00	0.294	0.198	0.112	0.073	0.052	0.037	0.033
100	LHS-OT	173.248	34.3	35.8	Average	40.00	0.199	0.136	0.095	0.071	0.054	0.040	0.031
101	LHS-OT	173.516	34.3	35.8	Average	40.00	0.231	0.165	0.108	0.073	0.052	0.037	0.029
102	LHS-OT	173.761	34.3	35.8	Average	40.00	0.348	0.196	0.105	0.066	0.045	0.036	0.030
103	LHS-OT	174.007	34.3	35.8	Average	40.00	0.244	0.142	0.081	0.056	0.043	0.033	0.028
104	LHS-OT	174.257	34.3	35.8	Average	40.00	0.191	0.098	0.049	0.031	0.024	0.018	0.016
105	LHS-OT	174.511	34.3	35.8	Average	40.00	0.330	0.242	0.153	0.103	0.072	0.049	0.033
106	LHS-OT	174.762	34.3	35.8	Average	40.00	0.433	0.300	0.184	0.125	0.087	0.060	0.049
107	LHS-OT	175.029	34.3	35.8	Average	40.00	0.209	0.138	0.084	0.056	0.040	0.029	0.024
108	LHS-OT	175.257	34.3	35.8	Average	40.00	0.222	0.154	0.095	0.061	0.044	0.029	0.025
109	LHS-OT	175.505	34.3	35.8	Average	40.00	0.262	0.154	0.088	0.054	0.037	0.025	0.021
110	LHS-OT	175.753	34.3	35.8	Average	40.00	0.248	0.139	0.077	0.049	0.036	0.027	0.023
111	LHS-OT	176.012	34.3	35.8	Average	40.00	0.266	0.182	0.112	0.072	0.049	0.034	0.028
112	LHS-OT	176.256	34.3	35.8	Average	40.00	0.260	0.166	0.104	0.068	0.047	0.032	0.024
113	LHS-OT	176.497	34.3	35.8	Average	40.00	0.267	0.180	0.109	0.070	0.048	0.033	0.025
114	LHS-OT	176.747	34.3	35.8	Average	40.00	0.313	0.215	0.136	0.088	0.058	0.038	0.029

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
115	LHS-OT	177.001	34.3	35.8	Average	40.00	0.255	0.167	0.100	0.062	0.040	0.025	0.017
116	LHS-OT	177.255	34.3	35.8	Average	40.00	0.254	0.179	0.113	0.072	0.048	0.031	0.026
117	LHS-OT	177.511	34.3	35.8	Average	40.00	0.214	0.150	0.089	0.055	0.037	0.025	0.018
118	LHS-OT	177.762	34.3	35.8	Average	40.00	0.208	0.139	0.080	0.047	0.030	0.020	0.016
119	LHS-OT	178.022	34.3	35.8	Average	40.00	0.346	0.219	0.127	0.081	0.052	0.035	0.025
120	LHS-OT	178.247	34.3	35.8	Average	40.00	0.197	0.120	0.070	0.047	0.031	0.021	0.018
121	LHS-OT	178.506	34.3	35.8	Average	40.00	0.189	0.114	0.063	0.041	0.029	0.020	0.016
122	LHS-OT	178.764	34.3	35.8	Average	40.00	0.490	0.331	0.192	0.111	0.066	0.039	0.027
123	LHS-OT	179.010	34.3	35.8	Average	40.00	0.423	0.274	0.142	0.081	0.052	0.035	0.029
124	LHS-OT	179.273	34.3	35.8	Average	40.00	0.288	0.179	0.094	0.053	0.033	0.022	0.016
125	LHS-OT	179.757	34.3	35.8	Average	40.00	0.375	0.244	0.134	0.082	0.054	0.036	0.027
126	LHS-OT	180.007	34.3	35.8	Average	40.00	0.246	0.168	0.123	0.075	0.052	0.039	0.028
127	LHS-OT	180.754	34.3	35.8	Average	40.00	0.225	0.151	0.114	0.080	0.062	0.047	0.040
128	LHS-OT	190.000	30.2	33.8	Average	40.00	0.339	0.214	0.143	0.110	0.087	0.070	0.058
129	LHS-OT	190.262	30.2	33.8	Average	40.00	0.196	0.155	0.118	0.094	0.078	0.063	0.052
130	LHS-OT	190.514	30.2	33.8	Average	40.00	0.189	0.147	0.114	0.090	0.075	0.059	0.049
131	LHS-OT	190.769	30.2	33.8	Average	40.00	0.230	0.172	0.119	0.087	0.066	0.049	0.039
132	LHS-OT	191.003	30.2	33.8	Average	40.00	0.248	0.184	0.121	0.083	0.059	0.042	0.033
133	LHS-OT	191.255	30.2	33.8	Average	40.00	0.190	0.139	0.091	0.063	0.045	0.033	0.026
134	LHS-OT	191.508	30.2	33.8	Average	40.00	0.276	0.187	0.117	0.081	0.056	0.040	0.031
135	LHS-OT	191.764	30.2	33.8	Average	40.00	0.211	0.169	0.126	0.099	0.079	0.063	0.052
136	LHS-OT	192.015	30.2	33.8	Average	40.00	0.207	0.160	0.117	0.090	0.072	0.056	0.046
137	LHS-OT	192.271	30.2	33.8	Average	40.00	0.216	0.155	0.100	0.067	0.048	0.033	0.028
138	LHS-OT	192.507	30.2	33.8	Average	40.00	0.191	0.145	0.105	0.077	0.059	0.044	0.034
139	LHS-OT	192.750	30.2	33.8	Average	40.00	0.272	0.201	0.128	0.084	0.058	0.041	0.034

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
140	LHS-OT	193.020	30.2	33.8	Average	40.00	0.218	0.149	0.092	0.066	0.050	0.037	0.030
141	LHS-OT	193.228	24.0	27.0	Average	40.00	0.246	0.170	0.102	0.068	0.052	0.038	0.030
142	LHS-OT	193.507	24.0	27.0	Average	40.00	0.184	0.141	0.101	0.075	0.058	0.042	0.031
143	LHS-OT	193.774	24.0	27.0	Average	40.00	0.126	0.095	0.063	0.043	0.031	0.021	0.017
144	LHS-OT	194.000	24.0	27.0	Average	40.00	0.293	0.199	0.121	0.077	0.054	0.035	0.028
145	LHS-OT	194.248	24.0	27.0	Average	40.00	0.244	0.179	0.112	0.073	0.050	0.034	0.022
146	LHS-OT	194.505	24.0	27.0	Average	40.00	0.202	0.160	0.111	0.077	0.056	0.038	0.032
147	LHS-OT	194.763	24.0	27.0	Average	40.00	0.246	0.180	0.119	0.086	0.065	0.048	0.037
148	LHS-OT	194.996	24.0	27.0	Average	40.00	0.260	0.192	0.124	0.085	0.062	0.045	0.034
149	LHS-OT	195.255	24.0	27.0	Average	40.00	0.357	0.263	0.153	0.096	0.065	0.045	0.034
150	LHS-OT	195.520	24.0	27.0	Average	40.00	0.189	0.155	0.113	0.085	0.065	0.048	0.038
151	LHS-OT	195.755	24.0	27.0	Average	40.00	0.289	0.211	0.129	0.088	0.063	0.046	0.036
152	LHS-OT	195.992	24.0	27.0	Average	40.00	0.203	0.162	0.115	0.084	0.063	0.045	0.033
153	LHS-OT	196.252	24.0	27.0	Average	40.00	0.244	0.176	0.113	0.074	0.049	0.033	0.026
154	LHS-OT	196.501	24.0	27.0	Average	40.00	0.304	0.210	0.131	0.085	0.058	0.038	0.028
155	LHS-OT	196.746	24.0	27.0	Average	40.00	0.440	0.292	0.163	0.105	0.068	0.040	0.031
156	LHS-OT	197.009	24.0	27.0	Average	40.00	0.219	0.170	0.112	0.073	0.048	0.029	0.020
157	LHS-OT	197.263	24.0	27.0	Average	40.00	0.266	0.184	0.115	0.072	0.046	0.031	0.024
158	LHS-OT	197.497	24.0	27.0	Average	40.00	0.243	0.173	0.110	0.073	0.050	0.033	0.022
159	LHS-OT	197.761	24.0	27.0	Average	40.00	0.184	0.147	0.105	0.076	0.056	0.040	0.029
160	LHS-OT	198.000	24.0	27.0	Average	40.00	0.168	0.130	0.090	0.065	0.049	0.036	0.028
161	LHS-OT	198.252	24.0	27.0	Average	40.00	0.217	0.175	0.121	0.084	0.061	0.042	0.029
162	LHS-OT	198.507	24.0	27.0	Average	40.00	0.173	0.140	0.103	0.075	0.056	0.042	0.032
163	LHS-OT	198.762	24.0	27.0	Average	40.00	0.150	0.115	0.082	0.063	0.048	0.037	0.030
164	LHS-OT	199.004	24.0	27.0	Average	40.00	0.209	0.151	0.095	0.064	0.046	0.033	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
165	LHS-OT	199.251	24.0	27.0	Average	40.00	0.216	0.171	0.111	0.075	0.052	0.036	0.028
166	LHS-OT	199.491	24.0	27.0	Average	40.00	0.234	0.183	0.130	0.096	0.069	0.050	0.038
167	LHS-OT	199.754	24.0	27.0	Average	40.00	0.303	0.218	0.129	0.078	0.051	0.036	0.027
168	LHS-OT	200.007	24.0	27.0	Average	40.00	0.245	0.173	0.103	0.065	0.046	0.029	0.021
169	LHS-OT	200.250	24.0	27.0	Average	40.00	0.133	0.103	0.072	0.054	0.043	0.034	0.028
170	LHS-OT	200.509	24.0	27.0	Average	40.00	0.157	0.128	0.094	0.071	0.055	0.042	0.034
171	LHS-OT	200.755	24.0	27.0	Average	40.00	0.233	0.178	0.118	0.085	0.063	0.047	0.038
172	LHS-OT	201.009	24.0	27.0	Average	40.00	0.223	0.165	0.112	0.083	0.065	0.050	0.040
173	LHS-OT	201.254	24.0	27.0	Average	40.00	0.201	0.160	0.113	0.085	0.066	0.050	0.041
174	LHS-OT	201.523	24.0	27.0	Average	40.00	0.226	0.158	0.099	0.070	0.052	0.038	0.032
175	LHS-OT	201.766	24.0	27.0	Average	40.00	0.264	0.201	0.132	0.092	0.068	0.049	0.039
176	LHS-OT	202.006	24.0	27.0	Average	40.00	0.363	0.250	0.158	0.108	0.078	0.056	0.045
177	LHS-OT	202.252	24.0	27.0	Average	40.00	0.143	0.110	0.073	0.051	0.040	0.029	0.026
178	LHS-OT	202.507	24.0	27.0	Average	40.00	0.249	0.183	0.118	0.081	0.056	0.037	0.027
179	LHS-OT	202.751	28.7	29.0	Average	40.00	0.175	0.146	0.110	0.084	0.064	0.047	0.036
180	LHS-OT	203.002	28.7	29.0	Average	40.00	0.157	0.116	0.080	0.058	0.044	0.033	0.027
181	LHS-OT	203.252	28.7	29.0	Average	40.00	0.198	0.149	0.095	0.066	0.049	0.035	0.029
182	LHS-OT	203.511	28.7	29.0	Average	40.00	0.184	0.146	0.104	0.077	0.059	0.045	0.034
183	LHS-OT	203.758	28.7	29.0	Average	40.00	0.221	0.176	0.122	0.086	0.062	0.044	0.035
184	LHS-OT	203.997	28.7	29.0	Average	40.00	0.180	0.145	0.102	0.074	0.054	0.040	0.033
185	LHS-OT	204.248	28.7	29.0	Average	40.00	0.206	0.167	0.115	0.083	0.058	0.041	0.032
186	LHS-OT	204.492	28.7	29.0	Average	40.00	0.194	0.157	0.113	0.083	0.060	0.042	0.030
187	LHS-OT	204.755	28.7	29.0	Average	40.00	0.217	0.171	0.120	0.088	0.065	0.048	0.037
188	LHS-OT	205.002	28.7	29.0	Average	40.00	0.222	0.168	0.116	0.083	0.058	0.044	0.035
189	LHS-OT	205.259	28.7	29.0	Average	40.00	0.292	0.205	0.124	0.081	0.056	0.037	0.031

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
190	LHS-OT	205.514	28.7	29.0	Average	40.00	0.301	0.220	0.137	0.091	0.066	0.046	0.036
191	LHS-OT	205.764	28.7	29.0	Average	40.00	0.225	0.160	0.104	0.072	0.055	0.041	0.035
192	LHS-OT	206.002	28.7	29.0	Average	40.00	0.294	0.230	0.156	0.109	0.076	0.052	0.040
193	LHS-OT	206.250	28.7	29.0	Average	40.00	0.352	0.283	0.188	0.124	0.084	0.055	0.042
194	LHS-OT	206.520	28.7	29.0	Average	40.00	0.362	0.270	0.174	0.113	0.076	0.051	0.038
195	LHS-OT	206.753	28.7	29.0	Average	40.00	0.221	0.173	0.118	0.084	0.061	0.042	0.034
196	LHS-OT	207.016	28.7	29.0	Average	40.00	0.260	0.209	0.144	0.101	0.074	0.053	0.039
197	LHS-OT	207.257	28.7	29.0	Average	40.00	0.336	0.265	0.186	0.139	0.106	0.077	0.061
198	LHS-OT	207.508	28.7	29.0	Average	40.00	0.276	0.223	0.155	0.111	0.082	0.060	0.048
199	LHS-OT	207.754	28.7	29.0	Average	40.00	0.226	0.180	0.126	0.091	0.065	0.046	0.034
200	LHS-OT	208.024	28.7	29.0	Average	40.00	0.250	0.186	0.143	0.094	0.064	0.039	0.033
201	LHS-OT	208.251	28.7	29.0	Average	40.00	0.465	0.322	0.198	0.130	0.090	0.061	0.048
202	LHS-OT	208.504	28.7	29.0	Average	40.00	0.424	0.306	0.182	0.114	0.074	0.048	0.041
203	LHS-OT	208.751	28.7	29.0	Average	40.00	0.272	0.209	0.138	0.093	0.064	0.044	0.036
204	LHS-OT	209.001	28.7	29.0	Average	40.00	0.289	0.233	0.158	0.106	0.072	0.047	0.038
205	LHS-OT	209.276	28.7	29.0	Average	40.00	0.268	0.215	0.151	0.110	0.080	0.058	0.042
206	LHS-OT	209.509	28.7	29.0	Average	40.00	0.384	0.270	0.162	0.102	0.065	0.039	0.034
207	LHS-OT	209.763	28.7	29.0	Average	40.00	0.415	0.301	0.190	0.129	0.092	0.066	0.049
208	LHS-OT	210.004	28.7	29.0	Average	40.00	0.523	0.343	0.195	0.119	0.077	0.053	0.039
209	LHS-OT	210.252	28.7	29.0	Average	40.00	0.331	0.250	0.155	0.099	0.067	0.044	0.037
210	LHS-OT	210.530	28.7	29.0	Average	40.00	0.192	0.148	0.100	0.072	0.054	0.039	0.031
211	LHS-OT	210.753	28.7	29.0	Average	40.00	0.241	0.188	0.123	0.084	0.058	0.041	0.034
212	LHS-OT	211.003	28.7	29.0	Average	40.00	0.223	0.173	0.115	0.080	0.056	0.039	0.030
213	LHS-OT	211.249	28.7	29.0	Average	40.00	0.260	0.181	0.115	0.079	0.058	0.041	0.033
214	LHS-OT	211.508	28.7	29.0	Average	40.00	0.253	0.198	0.136	0.095	0.068	0.046	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
215	LHS-OT	211.762	28.7	29.0	Average	40.00	0.344	0.253	0.158	0.103	0.071	0.047	0.028
216	LHS-OT	212.012	28.7	29.0	Average	40.00	0.214	0.163	0.116	0.082	0.061	0.043	0.036
217	LHS-OT	212.254	28.7	29.0	Average	40.00	0.195	0.155	0.107	0.076	0.055	0.039	0.030
218	LHS-OT	212.514	28.7	29.0	Average	40.00	0.148	0.115	0.076	0.053	0.037	0.026	0.020
219	LHS-OT	212.768	28.7	29.0	Average	40.00	0.212	0.146	0.084	0.052	0.036	0.025	0.021
220	LHS-OT	213.019	28.7	29.0	Average	40.00	0.189	0.143	0.098	0.070	0.051	0.038	0.029
221	LHS-OT	213.262	28.7	29.0	Average	40.00	0.207	0.146	0.097	0.071	0.054	0.041	0.033
222	LHS-OT	213.502	28.7	29.0	Average	40.00	0.186	0.152	0.117	0.093	0.074	0.057	0.045
223	LHS-OT	213.749	28.7	29.0	Average	40.00	0.213	0.161	0.112	0.081	0.059	0.042	0.034
224	LHS-OT	214.001	28.7	29.0	Average	40.00	0.177	0.133	0.092	0.067	0.052	0.037	0.029
225	LHS-OT	214.247	28.7	29.0	Average	40.00	0.159	0.123	0.088	0.066	0.051	0.041	0.031
226	LHS-OT	214.495	28.7	29.0	Average	40.00	0.193	0.143	0.095	0.067	0.050	0.037	0.028
227	LHS-OT	214.745	28.7	29.0	Average	40.00	0.195	0.129	0.077	0.052	0.040	0.028	0.020
228	LHS-OT	215.013	28.7	29.0	Average	40.00	0.234	0.173	0.103	0.070	0.051	0.036	0.030
229	LHS-OT	215.248	28.8	29.8	Average	40.00	0.166	0.130	0.094	0.070	0.054	0.040	0.031
230	LHS-OT	215.508	28.8	29.8	Average	40.00	0.200	0.158	0.113	0.084	0.063	0.047	0.037
231	LHS-OT	215.756	28.8	29.8	Average	40.00	0.133	0.095	0.061	0.041	0.032	0.024	0.020
232	LHS-OT	216.001	28.8	29.8	Average	40.00	0.208	0.173	0.128	0.101	0.079	0.062	0.050
233	LHS-OT	216.494	28.8	29.8	Average	40.00	0.177	0.141	0.101	0.075	0.057	0.042	0.034
234	LHS-OT	216.757	28.8	29.8	Average	40.00	0.183	0.138	0.102	0.079	0.062	0.048	0.037
235	LHS-OT	217.005	28.8	29.8	Average	40.00	0.238	0.186	0.132	0.098	0.072	0.049	0.033
236	LHS-OT	217.263	28.8	29.8	Average	40.00	0.212	0.168	0.122	0.092	0.072	0.053	0.043
237	LHS-OT	217.505	28.8	29.8	Average	40.00	0.174	0.140	0.106	0.083	0.066	0.050	0.041
238	LHS-OT	217.757	28.8	29.8	Average	40.00	0.162	0.133	0.102	0.075	0.060	0.047	0.036
239	LHS-OT	218.008	28.8	29.8	Average	40.00	0.306	0.226	0.144	0.099	0.072	0.051	0.040

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
240	LHS-OT	218.250	28.8	29.8	Average	40.00	0.191	0.153	0.106	0.076	0.057	0.041	0.034
241	LHS-OT	218.506	28.8	29.8	Average	40.00	0.209	0.150	0.096	0.066	0.049	0.034	0.028
242	LHS-OT	218.757	28.8	29.8	Average	40.00	0.195	0.159	0.114	0.081	0.060	0.042	0.033
243	LHS-OT	218.997	28.8	29.8	Average	40.00	0.194	0.138	0.092	0.063	0.045	0.032	0.024
244	LHS-OT	219.260	28.8	29.8	Average	40.00	0.305	0.224	0.145	0.095	0.063	0.043	0.033
245	LHS-OT	219.496	28.8	29.8	Average	40.00	0.146	0.110	0.076	0.056	0.042	0.034	0.028
246	LHS-OT	219.760	28.8	29.8	Average	40.00	0.275	0.194	0.124	0.085	0.063	0.044	0.033
247	LHS-OT	220.008	28.8	29.8	Average	40.00	0.260	0.198	0.157	0.121	0.087	0.068	0.045
248	LHS-OT	220.257	28.8	29.8	Average	40.00	0.154	0.107	0.075	0.055	0.042	0.032	0.027
249	LHS-OT	220.509	28.8	29.8	Average	40.00	0.148	0.115	0.078	0.054	0.038	0.026	0.021
250	LHS-OT	220.758	28.8	29.8	Average	40.00	0.204	0.159	0.107	0.077	0.056	0.039	0.031
251	LHS-OT	221.013	28.8	29.8	Average	40.00	0.254	0.191	0.131	0.096	0.071	0.052	0.041
252	LHS-OT	221.265	28.8	29.8	Average	40.00	0.268	0.203	0.134	0.091	0.063	0.042	0.032
253	LHS-OT	221.502	28.8	29.8	Average	40.00	0.127	0.098	0.068	0.051	0.040	0.031	0.025
254	LHS-OT	221.759	28.8	29.8	Average	40.00	0.226	0.187	0.141	0.109	0.082	0.060	0.045
255	LHS-OT	222.004	28.8	29.8	Average	40.00	0.143	0.098	0.061	0.041	0.030	0.022	0.017
256	LHS-OT	222.240	28.8	29.8	Average	40.00	0.249	0.190	0.126	0.085	0.058	0.039	0.029
257	LHS-OT	222.751	28.8	29.8	Average	40.00	0.141	0.093	0.059	0.043	0.033	0.024	0.020
258	LHS-OT	223.001	28.8	29.8	Average	40.00	0.226	0.164	0.110	0.078	0.056	0.039	0.031
259	LHS-OT	223.248	28.8	29.8	Average	40.00	0.150	0.113	0.079	0.058	0.045	0.034	0.028
260	LHS-OT	223.508	28.8	29.8	Average	40.00	0.192	0.162	0.118	0.087	0.066	0.048	0.035
261	LHS-OT	223.756	28.8	29.8	Average	40.00	0.305	0.234	0.156	0.109	0.079	0.053	0.043
262	LHS-OT	224.012	28.8	29.8	Average	40.00	0.270	0.206	0.138	0.094	0.066	0.044	0.033
263	LHS-OT	224.258	28.8	29.8	Average	40.00	0.321	0.217	0.135	0.087	0.057	0.039	0.026
264	LHS-OT	224.517	28.8	29.8	Average	40.00	0.170	0.124	0.080	0.054	0.039	0.027	0.021

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
265	LHS-OT	224.749	28.8	29.8	Average	40.00	0.214	0.149	0.109	0.070	0.050	0.040	0.032
266	LHS-OT	225.021	28.8	29.8	Average	40.00	0.244	0.186	0.131	0.102	0.078	0.061	0.047
267	LHS-OT	225.253	30.1	32.2	Average	40.00	0.219	0.176	0.123	0.089	0.068	0.050	0.041
268	LHS-OT	225.495	30.1	32.2	Average	40.00	0.169	0.124	0.083	0.058	0.041	0.028	0.021
269	LHS-OT	225.750	30.1	32.2	Average	40.00	0.141	0.114	0.081	0.060	0.045	0.031	0.025
270	LHS-OT	226.258	30.1	32.2	Average	40.00	0.211	0.164	0.111	0.077	0.053	0.036	0.027
271	LHS-OT	226.500	30.1	32.2	Average	40.00	0.322	0.209	0.127	0.084	0.056	0.039	0.029
272	LHS-OT	226.758	30.1	32.2	Average	40.00	0.255	0.201	0.138	0.095	0.067	0.048	0.039
273	LHS-OT	227.021	30.1	32.2	Average	40.00	0.123	0.097	0.076	0.061	0.050	0.039	0.034
274	LHS-OT	227.250	30.1	32.2	Average	40.00	0.125	0.100	0.075	0.056	0.044	0.033	0.027
275	LHS-OT	227.512	30.1	32.2	Average	40.00	0.202	0.150	0.093	0.061	0.044	0.029	0.026
276	LHS-OT	227.758	30.1	32.2	Average	40.00	0.181	0.132	0.089	0.065	0.049	0.035	0.027
277	LHS-OT	227.999	30.1	32.2	Average	40.00	0.180	0.140	0.098	0.072	0.054	0.041	0.033
278	LHS-OT	228.255	30.1	32.2	Average	40.00	0.142	0.109	0.077	0.060	0.044	0.036	0.029
279	LHS-OT	228.495	30.1	32.2	Average	40.00	0.111	0.079	0.060	0.048	0.039	0.030	0.025
280	LHS-OT	229.258	30.1	32.2	Average	40.00	0.171	0.130	0.086	0.059	0.044	0.032	0.026
281	LHS-OT	229.508	30.1	32.2	Average	40.00	0.195	0.155	0.111	0.080	0.061	0.043	0.033
282	LHS-OT	229.748	30.1	32.2	Average	40.00	0.162	0.129	0.088	0.059	0.044	0.031	0.024
283	LHS-OT	230.021	30.1	32.2	Average	40.00	0.210	0.148	0.115	0.079	0.057	0.049	0.034
284	LHS-OT	230.272	30.1	32.2	Average	40.00	0.166	0.127	0.084	0.060	0.045	0.034	0.028
285	LHS-OT	230.498	30.1	32.2	Average	40.00	0.141	0.111	0.076	0.053	0.039	0.030	0.025
286	LHS-OT	230.753	30.1	32.2	Average	40.00	0.220	0.156	0.102	0.070	0.050	0.037	0.030
287	LHS-OT	231.021	30.1	32.2	Average	40.00	0.229	0.172	0.112	0.078	0.056	0.041	0.034
288	LHS-OT	231.251	30.1	32.2	Average	40.00	0.279	0.212	0.139	0.094	0.067	0.047	0.037
289	LHS-OT	231.503	30.1	32.2	Average	40.00	0.214	0.161	0.106	0.070	0.049	0.034	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
290	LHS-OT	231.756	30.1	32.2	Average	40.00	0.178	0.119	0.077	0.054	0.040	0.030	0.024
291	LHS-OT	232.015	30.1	32.2	Average	40.00	0.228	0.163	0.110	0.077	0.057	0.040	0.034
292	LHS-OT	232.254	30.1	32.2	Average	40.00	0.220	0.158	0.107	0.076	0.055	0.039	0.032
293	LHS-OT	232.508	30.1	32.2	Average	40.00	0.208	0.149	0.097	0.066	0.047	0.033	0.026
294	LHS-OT	232.746	30.1	32.2	Average	40.00	0.175	0.128	0.086	0.061	0.046	0.034	0.028
295	LHS-OT	233.011	30.1	32.2	Average	40.00	0.312	0.205	0.130	0.087	0.062	0.042	0.032
296	LHS-OT	233.266	30.1	32.2	Average	40.00	0.165	0.127	0.089	0.063	0.047	0.033	0.029
297	LHS-OT	233.512	30.1	32.2	Average	40.00	0.070	0.048	0.037	0.031	0.027	0.023	0.021
298	LHS-OT	233.746	30.1	32.2	Average	40.00	0.162	0.125	0.090	0.067	0.053	0.041	0.034
299	LHS-OT	234.001	30.1	32.2	Average	40.00	0.184	0.135	0.091	0.068	0.053	0.040	0.033
300	LHS-OT	234.249	30.1	32.2	Average	40.00	0.148	0.104	0.073	0.055	0.044	0.035	0.028
301	LHS-OT	234.503	30.1	32.2	Average	40.00	0.193	0.136	0.088	0.063	0.049	0.036	0.029
302	LHS-OT	234.755	30.1	32.2	Average	40.00	0.278	0.191	0.116	0.075	0.060	0.037	0.029
303	LHS-OT	235.005	30.1	32.2	Average	40.00	0.166	0.126	0.087	0.062	0.047	0.035	0.028
304	LHS-OT	235.255	30.1	32.2	Average	40.00	0.227	0.182	0.131	0.096	0.073	0.053	0.042
305	LHS-OT	235.502	30.1	32.2	Average	40.00	0.285	0.224	0.148	0.102	0.071	0.053	0.039
306	LHS-OT	235.750	30.1	32.2	Average	40.00	0.087	0.058	0.043	0.033	0.030	0.025	0.021
307	LHS-OT	236.007	30.1	32.2	Average	40.00	0.199	0.136	0.082	0.055	0.039	0.030	0.023
308	LHS-OT	236.254	30.1	32.2	Average	40.00	0.203	0.158	0.112	0.084	0.065	0.049	0.042
309	LHS-OT	236.507	30.1	32.2	Average	40.00	0.302	0.236	0.159	0.111	0.083	0.060	0.046
310	LHS-OT	236.756	33.2	35.9	Average	40.00	0.090	0.063	0.043	0.034	0.029	0.025	0.021
311	LHS-OT	237.008	33.2	35.9	Average	40.00	0.216	0.141	0.082	0.053	0.040	0.028	0.020
312	LHS-OT	237.158	33.2	35.9	Average	40.00	0.433	0.289	0.166	0.102	0.068	0.046	0.035
313	LHS-OT	237.255	33.2	35.9	Average	40.00	0.562	0.416	0.246	0.150	0.096	0.066	0.045
314	LHS-OT	237.393	33.2	35.9	Average	40.00	0.417	0.253	0.177	0.110	0.075	0.054	0.043

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
315	LHS-OT	237.495	33.2	35.9	Average	40.00	0.560	0.357	0.209	0.122	0.076	0.046	0.040
316	LHS-OT	237.659	33.2	35.9	Average	40.00	0.466	0.253	0.166	0.112	0.083	0.054	0.050
317	LHS-OT	237.759	33.2	35.9	Average	40.00	0.586	0.406	0.220	0.137	0.089	0.055	0.043
318	LHS-OT	237.913	33.2	35.9	Average	40.00	0.392	0.274	0.203	0.134	0.094	0.073	0.061
319	LHS-OT	238.011	33.2	35.9	Average	40.00	0.445	0.321	0.190	0.122	0.080	0.057	0.027
320	LHS-OT	238.275	33.2	35.9	Average	40.00	0.283	0.201	0.130	0.088	0.063	0.045	0.036
321	LHS-OT	238.496	33.2	35.9	Average	40.00	0.576	0.364	0.198	0.111	0.067	0.042	0.029
322	LHS-OT	238.748	33.2	35.9	Average	40.00	0.367	0.276	0.170	0.106	0.070	0.045	0.036
323	LHS-OT	239.011	33.2	35.9	Average	40.00	0.238	0.185	0.119	0.079	0.054	0.042	0.032
324	LHS-OT	239.254	33.2	35.9	Average	40.00	0.336	0.246	0.143	0.090	0.061	0.044	0.036
325	LHS-OT	239.503	33.2	35.9	Average	40.00	0.464	0.310	0.179	0.104	0.073	0.046	0.035
326	LHS-OT	239.754	33.2	35.9	Average	40.00	0.412	0.298	0.174	0.103	0.065	0.039	0.029
327	LHS-OT	240.007	33.2	35.9	Average	40.00	0.323	0.256	0.172	0.114	0.075	0.050	0.034
328	LHS-OT	240.258	33.2	35.9	Average	40.00	0.418	0.301	0.188	0.120	0.083	0.051	0.039
329	LHS-OT	240.496	33.2	35.9	Average	40.00	0.287	0.214	0.143	0.098	0.071	0.050	0.041
330	LHS-OT	240.749	33.2	35.9	Average	40.00	0.520	0.334	0.189	0.116	0.077	0.051	0.039
331	LHS-OT	241.006	33.2	35.9	Average	40.00	0.413	0.275	0.147	0.084	0.056	0.036	0.032
332	LHS-OT	241.249	33.2	35.9	Average	40.00	0.383	0.252	0.140	0.082	0.052	0.033	0.026
333	LHS-OT	241.505	33.2	35.9	Average	40.00	0.271	0.184	0.111	0.071	0.052	0.036	0.029
334	LHS-OT	241.760	33.2	35.9	Average	40.00	0.261	0.171	0.088	0.049	0.034	0.022	0.020
335	LHS-OT	242.006	33.2	35.9	Average	40.00	0.460	0.314	0.179	0.105	0.060	0.034	0.023
336	LHS-OT	242.251	33.2	35.9	Average	40.00	0.347	0.221	0.120	0.070	0.041	0.027	0.024
337	LHS-OT	242.507	33.2	35.9	Average	40.00	0.338	0.246	0.151	0.094	0.061	0.038	0.029
338	LHS-OT	242.752	33.2	35.9	Average	40.00	0.243	0.192	0.125	0.080	0.054	0.033	0.025
339	LHS-OT	242.990	33.2	35.9	Average	40.00	0.402	0.290	0.175	0.105	0.068	0.042	0.034

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
340	LHS-OT	243.253	33.2	35.9	Average	40.00	0.273	0.208	0.139	0.091	0.065	0.044	0.032
341	LHS-OT	243.510	33.2	35.9	Average	40.00	0.380	0.275	0.171	0.114	0.077	0.051	0.038
342	LHS-OT	243.763	33.2	35.9	Average	40.00	0.311	0.231	0.138	0.083	0.049	0.036	0.026
343	LHS-OT	244.009	33.2	35.9	Average	40.00	0.287	0.209	0.129	0.084	0.058	0.039	0.032
344	LHS-OT	244.254	33.2	35.9	Average	40.00	0.522	0.359	0.200	0.116	0.073	0.047	0.035
345	LHS-OT	244.504	33.2	35.9	Average	40.00	0.335	0.231	0.132	0.082	0.057	0.038	0.031
346	LHS-OT	244.756	33.2	35.9	Average	40.00	0.198	0.137	0.104	0.066	0.045	0.038	0.035
347	LHS-OT	245.003	33.2	35.9	Average	40.00	0.488	0.320	0.182	0.110	0.071	0.044	0.035
348	LHS-OT	245.249	33.2	35.9	Average	40.00	0.514	0.328	0.169	0.094	0.061	0.040	0.028
349	LHS-OT	245.519	33.2	35.9	Average	40.00	0.466	0.341	0.207	0.130	0.082	0.051	0.032
350	LHS-OT	245.771	33.2	35.9	Average	40.00	0.374	0.250	0.146	0.089	0.062	0.039	0.031
351	LHS-OT	246.021	33.2	35.9	Average	40.00	0.585	0.375	0.195	0.112	0.073	0.049	0.038
352	LHS-OT	246.508	33.2	35.9	Average	40.00	0.301	0.216	0.132	0.085	0.056	0.037	0.029
353	LHS-OT	246.752	33.2	35.9	Average	40.00	0.273	0.181	0.131	0.086	0.060	0.044	0.033
354	LHS-OT	247.014	33.2	35.9	Average	40.00	0.278	0.237	0.149	0.093	0.062	0.037	0.027
355	LHS-OT	247.256	33.3	37.5	Average	40.00	0.605	0.404	0.213	0.112	0.064	0.035	0.025
356	LHS-OT	247.510	33.3	37.5	Average	40.00	0.311	0.203	0.106	0.060	0.039	0.026	0.022
357	LHS-OT	247.759	33.3	37.5	Average	40.00	0.575	0.355	0.188	0.104	0.062	0.038	0.029
358	LHS-OT	248.004	33.3	37.5	Average	40.00	0.399	0.257	0.140	0.081	0.052	0.034	0.027
359	LHS-OT	248.246	33.3	37.5	Average	40.00	0.306	0.226	0.137	0.090	0.061	0.037	0.027
360	LHS-OT	248.502	33.3	37.5	Average	40.00	0.492	0.318	0.151	0.080	0.055	0.041	0.027
361	LHS-OT	248.750	33.3	37.5	Average	40.00	0.399	0.271	0.156	0.090	0.059	0.041	0.031
362	LHS-OT	249.001	33.3	37.5	Average	40.00	0.343	0.238	0.141	0.088	0.059	0.038	0.034
363	LHS-OT	249.242	33.3	37.5	Average	40.00	0.307	0.199	0.113	0.068	0.045	0.030	0.025
364	LHS-OT	249.501	33.3	37.5	Average	40.00	0.394	0.282	0.157	0.087	0.051	0.033	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
365	LHS-OT	249.752	33.3	37.5	Average	40.00	0.288	0.209	0.126	0.078	0.051	0.034	0.028
366	LHS-OT	249.994	33.3	37.5	Average	40.00	0.325	0.227	0.130	0.074	0.048	0.033	0.026
367	LHS-OT	250.253	33.3	37.5	Average	40.00	0.239	0.138	0.070	0.038	0.026	0.017	0.013
368	LHS-OT	250.504	33.3	37.5	Average	40.00	0.479	0.284	0.147	0.082	0.050	0.032	0.026
369	LHS-OT	250.751	33.3	37.5	Average	40.00	0.447	0.314	0.182	0.107	0.068	0.043	0.031
370	LHS-OT	251.004	33.3	37.5	Average	40.00	0.587	0.324	0.155	0.081	0.046	0.030	0.023
371	LHS-OT	251.253	33.3	37.5	Average	40.00	0.405	0.265	0.143	0.088	0.058	0.036	0.022
372	LHS-OT	251.516	33.3	37.5	Average	40.00	0.248	0.172	0.106	0.072	0.051	0.036	0.028
373	LHS-OT	251.755	33.3	37.5	Average	40.00	0.422	0.278	0.159	0.093	0.058	0.034	0.025
374	LHS-OT	252.010	33.3	37.5	Average	40.00	0.564	0.336	0.156	0.076	0.047	0.031	0.022
375	LHS-OT	252.244	33.3	37.5	Average	40.00	0.500	0.313	0.169	0.096	0.060	0.038	0.028
376	LHS-OT	252.516	33.3	37.5	Average	40.00	0.330	0.199	0.099	0.057	0.033	0.027	0.016
377	LHS-OT	252.751	33.3	37.5	Average	40.00	0.294	0.201	0.116	0.072	0.049	0.036	0.030
378	LHS-OT	253.001	33.3	37.5	Average	40.00	0.276	0.164	0.084	0.051	0.035	0.024	0.023
379	LHS-OT	253.259	33.3	37.5	Average	40.00	0.255	0.163	0.086	0.052	0.036	0.027	0.025

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
380	LHS-OT	253.497	33.3	37.5	Average	40.00	0.379	0.256	0.147	0.093	0.063	0.046	0.037
381	LHS-OT	253.748	33.3	37.5	Average	40.00	0.647	0.422	0.219	0.128	0.076	0.052	0.041
382	LHS-OT	254.019	33.3	37.5	Average	40.00	0.451	0.290	0.152	0.089	0.056	0.041	0.033
383	LHS-OT	254.257	33.3	37.5	Average	40.00	0.573	0.372	0.200	0.112	0.073	0.044	0.034
384	LHS-OT	254.504	33.3	37.5	Average	40.00	0.381	0.246	0.139	0.082	0.054	0.035	0.029
385	LHS-OT	254.750	33.3	37.5	Average	40.00	0.574	0.357	0.169	0.092	0.059	0.036	0.031
386	LHS-OT	254.999	33.3	37.5	Average	40.00	0.335	0.221	0.122	0.070	0.045	0.029	0.025
387	LHS-OT	255.255	33.3	37.5	Average	40.00	0.344	0.216	0.108	0.059	0.039	0.023	0.019
388	LHS-OT	255.499	33.3	37.5	Average	40.00	0.402	0.271	0.157	0.093	0.055	0.037	0.030
389	LHS-OT	255.757	33.3	37.5	Average	40.00	0.423	0.288	0.167	0.102	0.067	0.041	0.035
390	LHS-OT	255.999	33.3	37.5	Average	40.00	0.408	0.270	0.144	0.084	0.054	0.037	0.028
391	LHS-OT	256.245	33.3	37.5	Average	40.00	0.266	0.199	0.120	0.073	0.048	0.032	0.028
392	LHS-OT	256.503	33.3	37.5	Average	40.00	0.441	0.319	0.199	0.129	0.088	0.054	0.040
393	LHS-OT	256.757	33.3	37.5	Average	40.00	0.341	0.250	0.145	0.088	0.059	0.035	0.029
394	LHS-OT	256.996	33.4	36.1	Average	40.00	0.386	0.271	0.158	0.098	0.067	0.043	0.035
395	LHS-OT	257.259	33.4	36.1	Average	40.00	0.456	0.298	0.168	0.103	0.069	0.043	0.036
396	LHS-OT	257.503	33.4	36.1	Average	40.00	0.613	0.405	0.207	0.115	0.077	0.054	0.039
397	LHS-OT	257.752	33.4	36.1	Average	40.00	0.483	0.332	0.188	0.111	0.069	0.045	0.034
398	LHS-OT	257.990	33.4	36.1	Average	40.00	0.333	0.240	0.136	0.081	0.051	0.032	0.025
399	LHS-OT	258.251	33.4	36.1	Average	40.00	0.512	0.289	0.139	0.077	0.050	0.032	0.027
400	LHS-OT	258.511	33.4	36.1	Average	40.00	0.363	0.255	0.155	0.098	0.059	0.038	0.030
401	LHS-OT	258.753	33.4	36.1	Average	40.00	0.474	0.272	0.135	0.078	0.049	0.032	0.022
402	LHS-OT	259.000	33.4	36.1	Average	40.00	0.468	0.290	0.137	0.071	0.044	0.028	0.022
403	LHS-OT	259.247	33.4	36.1	Average	40.00	0.325	0.215	0.120	0.073	0.051	0.035	0.031
404	LHS-OT	259.504	33.4	36.1	Average	40.00	0.380	0.262	0.154	0.093	0.058	0.038	0.030

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
405	LHS-OT	259.752	33.4	36.1	Average	40.00	0.669	0.407	0.193	0.104	0.065	0.041	0.034
406	LHS-OT	260.004	33.4	36.1	Average	40.00	0.298	0.219	0.134	0.086	0.056	0.037	0.029
407	LHS-OT	260.256	33.4	36.1	Average	40.00	0.535	0.333	0.153	0.077	0.044	0.026	0.016
408	LHS-OT	260.509	33.4	36.1	Average	40.00	0.563	0.337	0.153	0.083	0.052	0.031	0.028
409	LHS-OT	260.759	32.3	35.4	Average	40.00	0.409	0.266	0.146	0.082	0.054	0.036	0.028
410	LHS-OT	261.014	32.3	35.4	Average	40.00	0.445	0.276	0.138	0.076	0.049	0.035	0.029
411	LHS-OT	261.249	32.3	35.4	Average	40.00	0.391	0.265	0.151	0.091	0.058	0.036	0.029
412	LHS-OT	261.500	32.3	35.4	Average	40.00	0.517	0.341	0.187	0.110	0.065	0.041	0.035
413	LHS-OT	261.760	32.3	35.4	Average	40.00	0.391	0.247	0.136	0.081	0.056	0.035	0.030
414	LHS-OT	262.004	32.3	35.4	Average	40.00	0.387	0.245	0.134	0.079	0.048	0.033	0.026
415	LHS-OT	262.250	32.3	35.4	Average	40.00	0.404	0.245	0.131	0.074	0.045	0.029	0.023
416	LHS-OT	262.509	32.3	35.4	Average	40.00	0.256	0.195	0.126	0.089	0.065	0.055	0.043
417	LHS-OT	262.760	32.3	35.4	Average	40.00	0.492	0.334	0.193	0.118	0.074	0.048	0.034
418	LHS-OT	263.004	32.3	35.4	Average	40.00	0.327	0.220	0.127	0.076	0.045	0.031	0.023
419	LHS-OT	263.245	32.3	35.4	Average	40.00	0.432	0.278	0.142	0.076	0.044	0.029	0.023
420	LHS-OT	263.507	32.3	35.4	Average	40.00	0.315	0.184	0.097	0.054	0.033	0.020	0.016
421	LHS-OT	263.751	32.3	35.4	Average	40.00	0.416	0.279	0.155	0.092	0.058	0.035	0.029
422	LHS-OT	264.008	32.3	35.4	Average	40.00	0.327	0.224	0.125	0.075	0.050	0.032	0.025
423	LHS-OT	264.250	32.3	35.4	Average	40.00	0.278	0.204	0.125	0.078	0.051	0.033	0.026
424	LHS-OT	264.514	32.3	35.4	Average	40.00	0.442	0.281	0.151	0.084	0.050	0.024	0.012
425	LHS-OT	264.752	32.3	35.4	Average	40.00	0.426	0.261	0.136	0.071	0.043	0.027	0.023
426	LHS-OT	265.005	32.3	35.4	Average	40.00	0.227	0.176	0.114	0.074	0.049	0.031	0.025
427	LHS-OT	265.250	32.3	35.4	Average	40.00	0.332	0.225	0.132	0.079	0.051	0.034	0.028
428	LHS-OT	265.498	32.3	35.4	Average	40.00	0.288	0.215	0.131	0.083	0.057	0.038	0.033
429	LHS-OT	265.762	32.3	35.4	Average	40.00	0.424	0.313	0.190	0.122	0.080	0.048	0.036

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
430	LHS-OT	266.001	32.3	35.4	Average	40.00	0.470	0.344	0.211	0.140	0.091	0.060	0.041
431	LHS-OT	266.248	32.3	35.4	Average	40.00	0.392	0.291	0.186	0.119	0.076	0.047	0.033
432	LHS-OT	266.498	32.3	35.4	Average	40.00	0.499	0.345	0.200	0.120	0.077	0.047	0.030
433	LHS-OT	266.755	32.3	35.4	Average	40.00	0.432	0.321	0.205	0.130	0.091	0.055	0.041
434	LHS-OT	267.011	32.3	35.4	Average	40.00	0.364	0.257	0.150	0.087	0.056	0.034	0.027
435	LHS-OT	267.244	32.3	35.4	Average	40.00	0.398	0.256	0.144	0.087	0.058	0.039	0.032
436	LHS-OT	267.505	32.3	35.4	Average	40.00	0.389	0.245	0.127	0.074	0.048	0.035	0.029
437	LHS-OT	267.764	32.3	35.4	Average	40.00	0.222	0.132	0.074	0.050	0.040	0.028	0.024
438	LHS-OT	268.011	32.3	35.4	Average	40.00	0.308	0.226	0.142	0.095	0.065	0.044	0.034
439	LHS-OT	268.259	32.3	35.4	Average	40.00	0.297	0.184	0.099	0.061	0.036	0.031	0.020
440	LHS-OT	268.509	32.3	35.4	Average	40.00	0.533	0.348	0.185	0.110	0.071	0.047	0.037
441	LHS-OT	268.751	32.3	35.4	Average	40.00	0.164	0.096	0.053	0.035	0.027	0.021	0.019
442	LHS-OT	269.006	32.3	35.4	Average	40.00	0.223	0.135	0.081	0.055	0.040	0.029	0.025
443	LHS-OT	269.248	32.3	35.4	Average	40.00	0.177	0.114	0.068	0.050	0.037	0.026	0.023
444	LHS-OT	269.505	32.3	35.4	Average	40.00	0.241	0.179	0.142	0.100	0.080	0.058	0.048
445	LHS-OT	269.759	32.3	35.4	Average	40.00	0.178	0.159	0.108	0.083	0.058	0.042	0.036

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: RHS OT

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	RHS-OT	269.799	32.4	35.8	Average	40.00	0.532	0.340	0.173	0.092	0.058	0.038	0.029
2	RHS-OT	269.508	32.4	35.8	Average	40.00	0.440	0.300	0.175	0.100	0.061	0.034	0.028
3	RHS-OT	269.251	32.4	35.8	Average	40.00	0.446	0.305	0.176	0.106	0.065	0.039	0.029
4	RHS-OT	269.000	32.4	35.8	Average	40.00	0.418	0.289	0.172	0.102	0.062	0.036	0.026
5	RHS-OT	268.735	32.4	35.8	Average	40.00	0.365	0.250	0.147	0.092	0.065	0.044	0.037
6	RHS-OT	268.505	32.4	35.7	Average	40.00	0.371	0.228	0.112	0.061	0.038	0.024	0.018
7	RHS-OT	268.240	32.4	35.7	Average	40.00	0.355	0.229	0.124	0.071	0.045	0.029	0.025
8	RHS-OT	268.013	32.4	35.7	Average	40.00	0.454	0.288	0.145	0.083	0.052	0.035	0.027
9	RHS-OT	267.747	32.3	35.7	Average	40.00	0.383	0.240	0.133	0.082	0.056	0.039	0.028
10	RHS-OT	267.500	32.3	35.7	Average	40.00	0.466	0.301	0.168	0.098	0.064	0.040	0.032
11	RHS-OT	267.257	32.3	35.7	Average	40.00	0.387	0.263	0.152	0.092	0.058	0.034	0.027
12	RHS-OT	266.995	32.3	35.6	Average	40.00	0.264	0.183	0.110	0.073	0.048	0.033	0.027
13	RHS-OT	266.747	32.3	35.6	Average	40.00	0.456	0.278	0.150	0.087	0.057	0.036	0.029
14	RHS-OT	266.502	32.3	35.6	Average	40.00	0.261	0.205	0.135	0.089	0.059	0.037	0.027
15	RHS-OT	266.250	32.3	35.6	Average	40.00	0.240	0.176	0.107	0.070	0.047	0.032	0.026
16	RHS-OT	266.009	32.3	35.6	Average	40.00	0.239	0.182	0.116	0.078	0.055	0.039	0.027
17	RHS-OT	265.910	32.3	35.6	Average	40.00	0.477	0.298	0.207	0.127	0.093	0.067	0.058
18	RHS-OT	265.754	32.3	35.6	Average	40.00	0.366	0.225	0.124	0.070	0.050	0.030	0.028
19	RHS-OT	265.655	32.3	35.6	Average	40.00	0.328	0.232	0.169	0.114	0.079	0.060	0.059
20	RHS-OT	265.503	32.3	35.5	Average	40.00	0.311	0.219	0.126	0.073	0.047	0.031	0.024
21	RHS-OT	265.407	32.3	35.5	Average	40.00	0.362	0.231	0.160	0.093	0.062	0.047	0.039
22	RHS-OT	265.243	32.2	35.5	Average	40.00	0.245	0.171	0.100	0.061	0.041	0.027	0.021

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
23	RHS-OT	265.145	32.2	35.5	Average	40.00	0.332	0.210	0.157	0.106	0.079	0.061	0.041
24	RHS-OT	265.006	32.2	35.5	Average	40.00	0.219	0.152	0.092	0.060	0.042	0.028	0.024
25	RHS-OT	264.904	32.2	35.5	Average	40.00	0.371	0.263	0.167	0.109	0.075	0.055	0.045
26	RHS-OT	264.747	32.2	35.4	Average	40.00	0.362	0.225	0.113	0.064	0.043	0.028	0.023
27	RHS-OT	264.647	32.2	35.4	Average	40.00	0.427	0.256	0.170	0.103	0.068	0.056	0.037
28	RHS-OT	264.517	32.2	35.4	Average	40.00	0.598	0.360	0.154	0.080	0.054	0.034	0.026
29	RHS-OT	264.398	32.2	35.4	Average	40.00	0.416	0.264	0.187	0.117	0.080	0.057	0.054
30	RHS-OT	264.251	32.2	35.4	Average	40.00	0.316	0.234	0.139	0.080	0.054	0.033	0.027
31	RHS-OT	264.152	32.1	35.4	Average	40.00	0.353	0.209	0.133	0.082	0.058	0.044	0.023
32	RHS-OT	263.993	32.1	35.4	Average	40.00	0.495	0.312	0.165	0.088	0.052	0.029	0.025
33	RHS-OT	263.896	32.1	35.4	Average	40.00	0.394	0.253	0.178	0.110	0.079	0.061	0.045
34	RHS-OT	263.745	32.1	35.4	Average	40.00	0.326	0.209	0.113	0.066	0.041	0.029	0.023
35	RHS-OT	263.653	32.1	35.4	Average	40.00	0.336	0.209	0.149	0.093	0.062	0.052	0.042
36	RHS-OT	263.511	32.1	35.4	Average	40.00	0.474	0.315	0.163	0.089	0.054	0.037	0.027
37	RHS-OT	263.410	32.1	35.4	Average	40.00	0.368	0.235	0.170	0.107	0.073	0.052	0.036
38	RHS-OT	263.243	32.1	35.4	Average	40.00	0.251	0.175	0.116	0.079	0.059	0.040	0.033
39	RHS-OT	263.149	32.1	35.3	Average	40.00	0.378	0.257	0.191	0.127	0.090	0.070	0.040
40	RHS-OT	263.003	32.1	35.3	Average	40.00	0.246	0.170	0.100	0.062	0.037	0.026	0.018
41	RHS-OT	262.902	32.1	35.3	Average	40.00	0.394	0.255	0.183	0.120	0.089	0.067	0.039
42	RHS-OT	262.745	32.1	35.3	Average	40.00	0.410	0.287	0.171	0.106	0.069	0.043	0.032
43	RHS-OT	262.653	32.1	35.3	Average	40.00	0.298	0.200	0.146	0.095	0.070	0.053	0.035
44	RHS-OT	262.507	32.0	35.3	Average	40.00	0.260	0.189	0.116	0.074	0.050	0.034	0.028
45	RHS-OT	262.389	32.0	35.2	Average	40.00	0.414	0.299	0.228	0.144	0.091	0.069	0.055
46	RHS-OT	262.243	32.0	35.2	Average	40.00	0.437	0.307	0.175	0.099	0.063	0.038	0.030
47	RHS-OT	262.155	32.0	35.2	Average	40.00	0.298	0.171	0.113	0.074	0.057	0.046	0.039
48	RHS-OT	261.995	32.0	35.2	Average	40.00	0.294	0.199	0.108	0.065	0.043	0.028	0.025

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
49	RHS-OT	261.740	32.0	35.2	Average	40.00	0.259	0.176	0.096	0.056	0.038	0.030	0.017
50	RHS-OT	261.508	32.0	35.2	Average	40.00	0.461	0.313	0.176	0.102	0.063	0.038	0.028
51	RHS-OT	261.249	32.0	35.2	Average	40.00	0.394	0.275	0.164	0.103	0.067	0.042	0.030
52	RHS-OT	260.996	32.0	35.1	Average	40.00	0.265	0.189	0.107	0.063	0.043	0.024	0.022
53	RHS-OT	260.895	32.0	35.1	Average	40.00	0.348	0.231	0.167	0.110	0.077	0.056	0.042
54	RHS-OT	260.744	32.0	35.1	Average	40.00	0.409	0.252	0.139	0.079	0.046	0.025	0.019
55	RHS-OT	260.644	32.0	35.1	Average	40.00	0.411	0.246	0.163	0.089	0.050	0.034	0.024
56	RHS-OT	260.510	31.9	35.1	Average	40.00	0.433	0.291	0.152	0.083	0.056	0.033	0.027
57	RHS-OT	260.402	31.9	35.1	Average	40.00	0.336	0.216	0.146	0.078	0.046	0.032	0.024
58	RHS-OT	260.244	31.9	35.0	Average	40.00	0.433	0.271	0.132	0.070	0.045	0.030	0.029
59	RHS-OT	260.149	31.9	35.0	Average	40.00	0.410	0.272	0.175	0.077	0.056	0.045	0.022
60	RHS-OT	260.008	31.9	35.0	Average	40.00	0.363	0.260	0.137	0.073	0.045	0.027	0.023
61	RHS-OT	259.907	31.9	35.0	Average	40.00	0.394	0.214	0.140	0.095	0.070	0.046	0.042
62	RHS-OT	259.755	31.9	35.0	Average	40.00	0.404	0.252	0.136	0.077	0.049	0.033	0.028
63	RHS-OT	259.654	31.9	35.0	Average	40.00	0.376	0.266	0.194	0.130	0.091	0.069	0.068
64	RHS-OT	259.492	31.9	35.0	Average	40.00	0.307	0.229	0.137	0.086	0.057	0.036	0.025
65	RHS-OT	259.398	31.9	35.0	Average	40.00	0.399	0.252	0.189	0.127	0.094	0.074	0.049
66	RHS-OT	259.255	31.9	35.0	Average	40.00	0.369	0.223	0.095	0.052	0.039	0.021	0.017
67	RHS-OT	259.158	31.9	35.0	Average	40.00	0.344	0.218	0.158	0.100	0.068	0.058	0.051
68	RHS-OT	258.998	31.8	35.0	Average	40.00	0.352	0.228	0.119	0.064	0.038	0.024	0.022
69	RHS-OT	258.900	31.8	34.9	Average	40.00	0.530	0.318	0.211	0.127	0.084	0.069	0.046
70	RHS-OT	258.760	31.8	34.9	Average	40.00	0.352	0.228	0.121	0.068	0.044	0.026	0.022
71	RHS-OT	258.657	31.8	34.9	Average	40.00	0.459	0.325	0.207	0.135	0.093	0.068	0.056
72	RHS-OT	258.509	31.8	34.9	Average	40.00	0.418	0.270	0.138	0.080	0.054	0.038	0.033
73	RHS-OT	258.422	31.8	34.9	Average	40.00	0.519	0.330	0.233	0.146	0.100	0.071	0.068
74	RHS-OT	258.249	31.8	34.8	Average	40.00	0.427	0.264	0.110	0.058	0.042	0.029	0.023

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
75	RHS-OT	258.142	31.8	34.3	Average	40.00	0.364	0.273	0.171	0.107	0.069	0.049	0.041
76	RHS-OT	258.005	31.8	33.8	Average	40.00	0.350	0.233	0.126	0.072	0.044	0.030	0.027
77	RHS-OT	257.899	31.7	33.6	Average	40.00	0.449	0.265	0.169	0.104	0.074	0.056	0.029
78	RHS-OT	257.765	31.7	33.9	Average	40.00	0.311	0.195	0.109	0.069	0.048	0.038	0.029
79	RHS-OT	257.655	31.7	34.6	Average	40.00	0.435	0.237	0.140	0.074	0.050	0.039	0.024
80	RHS-OT	257.503	31.7	34.3	Average	40.00	0.373	0.245	0.132	0.077	0.054	0.035	0.022
81	RHS-OT	257.412	31.7	34.4	Average	40.00	0.402	0.262	0.186	0.118	0.085	0.062	0.056
82	RHS-OT	257.247	31.7	34.5	Average	40.00	0.245	0.176	0.110	0.073	0.051	0.035	0.027
83	RHS-OT	257.156	31.7	34.3	Average	40.00	0.324	0.191	0.119	0.066	0.039	0.025	0.018
84	RHS-OT	257.005	31.6	33.5	Average	40.00	0.170	0.117	0.069	0.047	0.035	0.026	0.022
85	RHS-OT	256.911	31.6	34.1	Average	40.00	0.301	0.198	0.146	0.095	0.066	0.045	0.033
86	RHS-OT	256.746	31.6	33.5	Average	40.00	0.218	0.162	0.103	0.067	0.048	0.032	0.024
87	RHS-OT	256.648	31.6	34.4	Average	40.00	0.403	0.251	0.179	0.112	0.074	0.062	0.050
88	RHS-OT	256.508	31.6	34.2	Average	40.00	0.211	0.153	0.093	0.061	0.046	0.035	0.026
89	RHS-OT	256.411	31.6	34.3	Average	40.00	0.306	0.177	0.109	0.062	0.035	0.023	0.020
90	RHS-OT	256.245	31.6	34.9	Average	40.00	0.294	0.204	0.122	0.075	0.051	0.033	0.026
91	RHS-OT	256.166	31.6	33.8	Average	40.00	0.404	0.309	0.230	0.155	0.097	0.059	0.035
92	RHS-OT	256.008	31.6	34.2	Average	40.00	0.319	0.195	0.099	0.055	0.031	0.018	0.016
93	RHS-OT	255.909	31.6	34.2	Average	40.00	0.474	0.302	0.218	0.137	0.094	0.067	0.046
94	RHS-OT	255.749	31.6	34.2	Average	40.00	0.430	0.270	0.147	0.090	0.056	0.036	0.034
95	RHS-OT	255.652	31.6	34.5	Average	40.00	0.463	0.315	0.234	0.156	0.111	0.086	0.049
96	RHS-OT	255.505	31.6	34.2	Average	40.00	0.358	0.238	0.136	0.081	0.053	0.034	0.028
97	RHS-OT	255.406	31.5	34.3	Average	40.00	0.463	0.299	0.215	0.141	0.104	0.079	0.046
98	RHS-OT	255.237	31.5	34.8	Average	40.00	0.423	0.274	0.135	0.089	0.058	0.036	0.033
99	RHS-OT	255.169	31.5	33.9	Average	40.00	0.357	0.240	0.175	0.115	0.084	0.060	0.046
100	RHS-OT	255.001	31.5	34.4	Average	40.00	0.480	0.320	0.172	0.101	0.068	0.043	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
101	RHS-OT	254.899	31.5	34.5	Average	40.00	0.594	0.371	0.258	0.158	0.116	0.083	0.072
102	RHS-OT	254.751	31.5	34.4	Average	40.00	0.607	0.391	0.208	0.124	0.076	0.048	0.038
103	RHS-OT	254.647	31.5	34.0	Average	40.00	0.376	0.228	0.159	0.099	0.068	0.049	0.038
104	RHS-OT	254.503	31.5	34.5	Average	40.00	0.556	0.349	0.196	0.115	0.074	0.048	0.042
105	RHS-OT	254.406	31.5	34.7	Average	40.00	0.433	0.287	0.208	0.136	0.096	0.070	0.053
106	RHS-OT	254.248	31.5	34.2	Average	40.00	0.486	0.307	0.161	0.093	0.063	0.045	0.031
107	RHS-OT	254.150	31.5	34.2	Average	40.00	0.455	0.305	0.223	0.147	0.107	0.076	0.058
108	RHS-OT	254.013	31.4	34.1	Average	40.00	0.435	0.239	0.124	0.071	0.047	0.032	0.023
109	RHS-OT	253.900	31.4	33.6	Average	40.00	0.391	0.251	0.170	0.091	0.054	0.037	0.028
110	RHS-OT	253.751	31.4	34.8	Average	40.00	0.274	0.179	0.102	0.063	0.045	0.030	0.027
111	RHS-OT	253.649	31.4	34.4	Average	40.00	0.359	0.221	0.144	0.075	0.037	0.029	0.025
112	RHS-OT	253.515	31.4	34.2	Average	40.00	0.254	0.182	0.110	0.070	0.046	0.029	0.018
113	RHS-OT	253.400	31.4	33.9	Average	40.00	0.376	0.266	0.204	0.138	0.102	0.073	0.047
114	RHS-OT	253.246	31.4	33.6	Average	40.00	0.324	0.230	0.130	0.073	0.048	0.029	0.026
115	RHS-OT	253.150	31.4	34.1	Average	40.00	0.448	0.317	0.231	0.155	0.109	0.082	0.081
116	RHS-OT	252.996	31.4	34.6	Average	40.00	0.394	0.260	0.141	0.081	0.049	0.030	0.021
117	RHS-OT	252.897	31.4	34.3	Average	40.00	0.426	0.298	0.221	0.146	0.102	0.079	0.067
118	RHS-OT	252.751	31.4	33.9	Average	40.00	0.343	0.225	0.122	0.069	0.034	0.018	0.014
119	RHS-OT	252.644	31.4	33.6	Average	40.00	0.329	0.216	0.157	0.117	0.090	0.061	0.060
120	RHS-OT	252.497	31.4	34.8	Average	40.00	0.206	0.111	0.052	0.030	0.021	0.015	0.014
121	RHS-OT	252.398	31.4	33.7	Average	40.00	0.366	0.243	0.182	0.124	0.090	0.065	0.059
122	RHS-OT	252.234	31.4	34.5	Average	40.00	0.267	0.166	0.086	0.046	0.032	0.020	0.017
123	RHS-OT	252.157	31.4	33.6	Average	40.00	0.451	0.245	0.161	0.108	0.080	0.052	0.048
124	RHS-OT	251.992	31.3	34.6	Average	40.00	0.446	0.287	0.147	0.076	0.046	0.029	0.013
125	RHS-OT	251.912	31.3	33.9	Average	40.00	0.356	0.220	0.147	0.085	0.062	0.048	0.033
126	RHS-OT	251.740	31.3	33.8	Average	40.00	0.339	0.243	0.154	0.102	0.068	0.048	0.034

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
127	RHS-OT	251.657	31.3	34.8	Average	40.00	0.453	0.275	0.192	0.119	0.082	0.059	0.046
128	RHS-OT	251.508	31.3	34.6	Average	40.00	0.385	0.233	0.126	0.075	0.046	0.030	0.024
129	RHS-OT	251.401	31.3	33.7	Average	40.00	0.342	0.251	0.191	0.125	0.088	0.062	0.048
130	RHS-OT	251.244	31.3	34.3	Average	40.00	0.374	0.261	0.149	0.079	0.050	0.032	0.023
131	RHS-OT	251.156	31.3	33.7	Average	40.00	0.357	0.243	0.181	0.117	0.084	0.059	0.051
132	RHS-OT	251.007	31.3	34.4	Average	40.00	0.358	0.249	0.140	0.077	0.037	0.025	0.019
133	RHS-OT	250.908	31.3	34.7	Average	40.00	0.453	0.260	0.171	0.112	0.087	0.070	0.059
134	RHS-OT	250.752	31.3	34.2	Average	40.00	0.285	0.205	0.124	0.079	0.051	0.034	0.025
135	RHS-OT	250.654	31.2	34.1	Average	40.00	0.389	0.233	0.168	0.113	0.083	0.064	0.048
136	RHS-OT	250.504	31.2	34.1	Average	40.00	0.238	0.167	0.097	0.057	0.036	0.024	0.013
137	RHS-OT	250.409	31.2	34.9	Average	40.00	0.376	0.232	0.167	0.105	0.074	0.057	0.051
138	RHS-OT	250.254	31.2	34.5	Average	40.00	0.395	0.283	0.149	0.082	0.048	0.028	0.022
139	RHS-OT	250.166	31.2	33.7	Average	40.00	0.411	0.266	0.193	0.127	0.085	0.073	0.049
140	RHS-OT	250.000	31.2	34.8	Average	40.00	0.242	0.172	0.103	0.064	0.044	0.031	0.027
141	RHS-OT	249.911	31.2	33.7	Average	40.00	0.385	0.254	0.182	0.109	0.075	0.074	0.044
142	RHS-OT	249.745	31.2	33.7	Average	40.00	0.393	0.248	0.128	0.071	0.045	0.025	0.021
143	RHS-OT	249.657	31.2	33.5	Average	40.00	0.400	0.215	0.132	0.076	0.055	0.044	0.018
144	RHS-OT	249.490	24.3	27.8	Average	40.00	0.311	0.240	0.138	0.081	0.055	0.037	0.029
145	RHS-OT	249.405	24.4	27.8	Average	40.00	0.313	0.206	0.142	0.094	0.065	0.049	0.029
146	RHS-OT	249.246	24.5	27.9	Average	40.00	0.364	0.246	0.129	0.073	0.046	0.030	0.025
147	RHS-OT	249.162	24.6	27.9	Average	40.00	0.386	0.202	0.115	0.055	0.031	0.019	0.012
148	RHS-OT	249.025	24.6	27.9	Average	40.00	0.179	0.140	0.101	0.074	0.056	0.041	0.031
149	RHS-OT	248.749	24.6	27.9	Average	40.00	0.262	0.196	0.122	0.076	0.050	0.035	0.025
150	RHS-OT	248.517	24.6	28.0	Average	40.00	0.370	0.250	0.141	0.084	0.053	0.033	0.025
151	RHS-OT	248.240	24.9	28.1	Average	40.00	0.229	0.177	0.116	0.075	0.048	0.032	0.024
152	RHS-OT	248.003	25.1	28.1	Average	40.00	0.281	0.226	0.150	0.098	0.065	0.041	0.029

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
153	RHS-OT	247.746	25.1	28.1	Average	40.00	0.365	0.253	0.135	0.076	0.044	0.024	0.016
154	RHS-OT	247.519	25.5	28.1	Average	40.00	0.287	0.201	0.120	0.076	0.053	0.036	0.026
155	RHS-OT	247.248	25.6	28.1	Average	40.00	0.468	0.294	0.146	0.076	0.046	0.031	0.026
156	RHS-OT	247.012	25.6	28.2	Average	40.00	0.300	0.222	0.150	0.107	0.078	0.061	0.049
157	RHS-OT	246.743	25.6	28.3	Average	40.00	0.362	0.272	0.167	0.102	0.064	0.041	0.031
158	RHS-OT	246.499	25.6	28.3	Average	40.00	0.392	0.281	0.171	0.108	0.071	0.047	0.034
159	RHS-OT	246.010	25.6	28.3	Average	40.00	0.580	0.386	0.202	0.110	0.068	0.043	0.032
160	RHS-OT	245.755	25.8	28.3	Average	40.00	0.446	0.258	0.119	0.066	0.041	0.036	0.031
161	RHS-OT	245.508	25.8	28.4	Average	40.00	0.234	0.153	0.110	0.078	0.057	0.038	0.031
162	RHS-OT	245.247	25.9	28.4	Average	40.00	0.277	0.184	0.119	0.072	0.041	0.027	0.021
163	RHS-OT	244.991	25.9	28.4	Average	40.00	0.521	0.331	0.156	0.084	0.054	0.037	0.031
164	RHS-OT	244.752	26.0	28.4	Average	40.00	0.395	0.251	0.129	0.070	0.044	0.029	0.023
165	RHS-OT	244.513	26.0	28.4	Average	40.00	0.271	0.209	0.129	0.079	0.049	0.030	0.021
166	RHS-OT	244.231	26.1	28.6	Average	40.00	0.295	0.208	0.123	0.079	0.056	0.039	0.031
167	RHS-OT	243.995	26.1	28.6	Average	40.00	0.251	0.197	0.133	0.090	0.061	0.043	0.031
168	RHS-OT	243.751	26.1	28.6	Average	40.00	0.222	0.165	0.106	0.070	0.049	0.033	0.026
169	RHS-OT	243.543	26.1	28.6	Average	40.00	0.387	0.292	0.187	0.121	0.083	0.057	0.044
170	RHS-OT	243.253	26.3	28.7	Average	40.00	0.349	0.258	0.163	0.106	0.069	0.048	0.034
171	RHS-OT	243.007	26.4	28.8	Average	40.00	0.308	0.220	0.131	0.081	0.051	0.033	0.024
172	RHS-OT	242.757	26.4	28.8	Average	40.00	0.268	0.185	0.114	0.072	0.048	0.032	0.025
173	RHS-OT	242.513	26.6	28.8	Average	40.00	0.340	0.272	0.187	0.124	0.084	0.053	0.037
174	RHS-OT	242.248	26.6	29.0	Average	40.00	0.160	0.103	0.058	0.036	0.025	0.018	0.016
175	RHS-OT	242.007	26.7	29.0	Average	40.00	0.333	0.245	0.146	0.086	0.055	0.038	0.029
176	RHS-OT	241.749	26.8	29.0	Average	40.00	0.232	0.156	0.088	0.053	0.035	0.025	0.021
177	RHS-OT	241.503	26.8	29.2	Average	40.00	0.323	0.227	0.133	0.080	0.050	0.028	0.022
178	RHS-OT	241.246	26.9	29.2	Average	40.00	0.242	0.181	0.109	0.071	0.048	0.032	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
179	RHS-OT	241.011	26.9	29.3	Average	40.00	0.281	0.207	0.135	0.086	0.064	0.048	0.037
180	RHS-OT	240.749	27.0	29.3	Average	40.00	0.199	0.152	0.101	0.069	0.050	0.035	0.027
181	RHS-OT	240.502	27.0	29.3	Average	40.00	0.205	0.165	0.113	0.078	0.055	0.039	0.030
182	RHS-OT	240.244	27.1	29.3	Average	40.00	0.175	0.109	0.057	0.040	0.033	0.026	0.024
183	RHS-OT	239.998	27.3	29.3	Average	40.00	0.688	0.470	0.246	0.136	0.086	0.051	0.042
184	RHS-OT	239.746	27.3	29.4	Average	40.00	0.301	0.245	0.159	0.100	0.065	0.043	0.033
185	RHS-OT	239.504	27.3	29.4	Average	40.00	0.335	0.252	0.159	0.103	0.068	0.046	0.035
186	RHS-OT	239.244	27.4	29.5	Average	40.00	0.434	0.313	0.186	0.110	0.069	0.047	0.036
187	RHS-OT	239.003	27.4	29.5	Average	40.00	0.386	0.285	0.174	0.101	0.068	0.044	0.040
188	RHS-OT	238.762	27.4	29.5	Average	40.00	0.696	0.495	0.277	0.159	0.099	0.067	0.044
189	RHS-OT	238.506	27.4	29.5	Average	40.00	0.425	0.173	0.088	0.060	0.040	0.029	0.015
190	RHS-OT	238.252	27.4	29.5	Average	40.00	0.492	0.245	0.144	0.086	0.061	0.028	0.017
191	RHS-OT	238.009	27.4	29.5	Average	40.00	0.433	0.223	0.125	0.060	0.034	0.029	0.020
192	RHS-OT	237.750	27.5	29.5	Average	40.00	0.447	0.318	0.190	0.109	0.071	0.042	0.037
193	RHS-OT	237.518	27.5	29.5	Average	40.00	0.246	0.187	0.116	0.076	0.052	0.035	0.028
194	RHS-OT	237.252	27.5	29.5	Average	40.00	0.276	0.208	0.133	0.084	0.057	0.038	0.030
195	RHS-OT	237.003	27.5	29.6	Average	40.00	0.400	0.283	0.164	0.101	0.072	0.050	0.041
196	RHS-OT	236.745	27.5	29.6	Average	40.00	0.206	0.138	0.086	0.061	0.047	0.038	0.032
197	RHS-OT	236.517	27.5	29.6	Average	40.00	0.185	0.143	0.081	0.055	0.040	0.030	0.024
198	RHS-OT	236.255	27.5	29.6	Average	40.00	0.189	0.118	0.077	0.051	0.035	0.027	0.022
199	RHS-OT	236.002	27.5	29.6	Average	40.00	0.199	0.159	0.113	0.082	0.060	0.042	0.033
200	RHS-OT	235.741	27.5	29.6	Average	40.00	0.102	0.075	0.053	0.040	0.032	0.026	0.023
201	RHS-OT	235.503	27.5	29.6	Average	40.00	0.221	0.176	0.126	0.092	0.070	0.051	0.040
202	RHS-OT	235.237	27.6	29.6	Average	40.00	0.261	0.199	0.136	0.095	0.065	0.045	0.032
203	RHS-OT	235.011	27.6	29.6	Average	40.00	0.220	0.156	0.100	0.066	0.049	0.036	0.027
204	RHS-OT	234.757	27.6	29.6	Average	40.00	0.167	0.124	0.085	0.058	0.041	0.029	0.023

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
205	RHS-OT	234.504	27.6	29.7	Average	40.00	0.143	0.090	0.056	0.039	0.031	0.023	0.020
206	RHS-OT	234.238	27.6	29.7	Average	40.00	0.139	0.102	0.072	0.054	0.041	0.033	0.027
207	RHS-OT	233.998	27.6	29.7	Average	40.00	0.320	0.255	0.174	0.122	0.085	0.056	0.040
208	RHS-OT	233.748	27.6	29.7	Average	40.00	0.194	0.136	0.084	0.055	0.039	0.028	0.023
209	RHS-OT	233.504	27.6	29.7	Average	40.00	0.381	0.285	0.180	0.118	0.079	0.049	0.036
210	RHS-OT	233.253	27.7	29.7	Average	40.00	0.210	0.159	0.107	0.073	0.051	0.035	0.027
211	RHS-OT	232.975	27.7	29.7	Average	40.00	0.168	0.125	0.084	0.059	0.044	0.032	0.027
212	RHS-OT	232.750	27.7	29.7	Average	40.00	0.216	0.148	0.095	0.066	0.046	0.034	0.030
213	RHS-OT	232.505	27.7	29.8	Average	40.00	0.204	0.158	0.107	0.071	0.052	0.039	0.035
214	RHS-OT	232.240	27.7	29.8	Average	40.00	0.194	0.134	0.091	0.063	0.045	0.033	0.028
215	RHS-OT	232.016	27.8	29.8	Average	40.00	0.197	0.155	0.105	0.073	0.051	0.034	0.028
216	RHS-OT	231.756	27.8	29.8	Average	40.00	0.197	0.142	0.092	0.063	0.045	0.034	0.027
217	RHS-OT	231.502	27.8	29.8	Average	40.00	0.227	0.181	0.123	0.085	0.062	0.043	0.034
218	RHS-OT	231.242	27.8	29.8	Average	40.00	0.197	0.157	0.113	0.084	0.064	0.049	0.039
219	RHS-OT	230.999	27.8	29.8	Average	40.00	0.210	0.168	0.118	0.087	0.066	0.048	0.037
220	RHS-OT	230.766	27.8	29.8	Average	40.00	0.272	0.195	0.119	0.078	0.056	0.040	0.033
221	RHS-OT	230.512	27.8	29.9	Average	40.00	0.270	0.201	0.125	0.081	0.057	0.032	0.031
222	RHS-OT	230.246	27.9	29.9	Average	40.00	0.220	0.180	0.122	0.085	0.061	0.042	0.033
223	RHS-OT	230.009	27.9	29.9	Average	40.00	0.154	0.122	0.089	0.068	0.053	0.041	0.034
224	RHS-OT	229.751	27.9	29.9	Average	40.00	0.133	0.104	0.076	0.058	0.043	0.033	0.027
225	RHS-OT	229.500	27.9	29.9	Average	40.00	0.265	0.183	0.113	0.075	0.052	0.035	0.027
226	RHS-OT	229.249	27.9	29.9	Average	40.00	0.218	0.167	0.110	0.074	0.052	0.035	0.030
227	RHS-OT	228.748	27.9	29.9	Average	40.00	0.304	0.206	0.124	0.081	0.057	0.038	0.031
228	RHS-OT	228.502	27.9	29.9	Average	40.00	0.376	0.271	0.155	0.094	0.057	0.042	0.034
229	RHS-OT	228.239	28.0	29.9	Average	40.00	0.244	0.178	0.102	0.062	0.041	0.028	0.022
230	RHS-OT	228.008	28.0	29.9	Average	40.00	0.194	0.146	0.094	0.062	0.045	0.032	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
231	RHS-OT	227.755	28.0	30.0	Average	40.00	0.202	0.158	0.107	0.074	0.052	0.036	0.028
232	RHS-OT	227.496	28.0	30.0	Average	40.00	0.180	0.139	0.095	0.070	0.054	0.040	0.033
233	RHS-OT	227.246	28.0	30.0	Average	40.00	0.224	0.173	0.117	0.080	0.056	0.042	0.034
234	RHS-OT	227.010	28.0	30.0	Average	40.00	0.323	0.239	0.148	0.098	0.066	0.045	0.036
235	RHS-OT	226.756	28.0	30.0	Average	40.00	0.193	0.147	0.094	0.062	0.044	0.030	0.024
236	RHS-OT	226.507	28.0	30.0	Average	40.00	0.219	0.144	0.078	0.050	0.037	0.028	0.024
237	RHS-OT	226.246	28.0	30.0	Average	40.00	0.300	0.230	0.153	0.106	0.073	0.052	0.039
238	RHS-OT	225.752	28.1	30.1	Average	40.00	0.258	0.185	0.112	0.072	0.049	0.035	0.026
239	RHS-OT	225.494	28.1	30.1	Average	40.00	0.204	0.172	0.123	0.087	0.065	0.046	0.036
240	RHS-OT	225.247	28.1	30.1	Average	40.00	0.207	0.152	0.097	0.063	0.043	0.029	0.026
241	RHS-OT	224.991	28.1	30.1	Average	40.00	0.190	0.140	0.093	0.064	0.045	0.033	0.024
242	RHS-OT	224.755	28.1	30.1	Average	40.00	0.245	0.186	0.118	0.076	0.053	0.035	0.026
243	RHS-OT	224.511	28.1	30.1	Average	40.00	0.243	0.189	0.120	0.078	0.053	0.036	0.028
244	RHS-OT	224.244	28.1	30.2	Average	40.00	0.192	0.154	0.104	0.073	0.052	0.037	0.030
245	RHS-OT	223.996	28.2	30.3	Average	40.00	0.281	0.206	0.128	0.086	0.062	0.042	0.035
246	RHS-OT	223.732	28.2	30.3	Average	40.00	0.140	0.108	0.072	0.050	0.035	0.025	0.022
247	RHS-OT	223.496	28.2	30.3	Average	40.00	0.154	0.119	0.085	0.063	0.048	0.037	0.030
248	RHS-OT	222.989	28.2	30.3	Average	40.00	0.094	0.071	0.057	0.048	0.039	0.032	0.028
249	RHS-OT	222.751	28.2	30.4	Average	40.00	0.077	0.063	0.053	0.046	0.040	0.034	0.028
250	RHS-OT	222.246	28.3	30.4	Average	40.00	0.233	0.157	0.096	0.064	0.048	0.035	0.026
251	RHS-OT	221.998	28.3	30.4	Average	40.00	0.240	0.181	0.117	0.076	0.053	0.035	0.029
252	RHS-OT	221.754	28.3	30.5	Average	40.00	0.247	0.202	0.144	0.104	0.076	0.054	0.040
253	RHS-OT	221.502	28.3	30.5	Average	40.00	0.172	0.116	0.074	0.050	0.037	0.029	0.026
254	RHS-OT	221.247	28.4	30.5	Average	40.00	0.228	0.169	0.112	0.075	0.054	0.036	0.027
255	RHS-OT	221.007	28.5	30.5	Average	40.00	0.130	0.093	0.057	0.038	0.028	0.019	0.016
256	RHS-OT	220.755	28.5	30.6	Average	40.00	0.156	0.120	0.080	0.055	0.040	0.029	0.024

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
257	RHS-OT	220.514	28.5	30.6	Average	40.00	0.231	0.183	0.131	0.097	0.073	0.053	0.041
258	RHS-OT	220.247	28.6	30.7	Average	40.00	0.159	0.102	0.060	0.042	0.032	0.023	0.019
259	RHS-OT	220.004	28.6	30.7	Average	40.00	0.223	0.177	0.125	0.090	0.065	0.047	0.038
260	RHS-OT	219.750	28.6	30.7	Average	40.00	0.148	0.122	0.088	0.069	0.052	0.038	0.030
261	RHS-OT	219.502	28.6	30.8	Average	40.00	0.219	0.180	0.143	0.121	0.104	0.087	0.074
262	RHS-OT	219.245	28.6	30.9	Average	40.00	0.178	0.135	0.087	0.059	0.043	0.031	0.024
263	RHS-OT	219.010	28.7	30.9	Average	40.00	0.375	0.258	0.146	0.089	0.060	0.040	0.030
264	RHS-OT	218.766	28.7	30.9	Average	40.00	0.286	0.212	0.135	0.093	0.069	0.046	0.036
265	RHS-OT	218.492	28.7	30.9	Average	40.00	0.375	0.258	0.155	0.096	0.062	0.040	0.031
266	RHS-OT	218.255	28.7	31.0	Average	40.00	0.218	0.146	0.100	0.057	0.034	0.024	0.016
267	RHS-OT	218.012	28.7	31.0	Average	40.00	0.268	0.205	0.139	0.100	0.076	0.056	0.045
268	RHS-OT	217.758	28.7	31.1	Average	40.00	0.274	0.202	0.139	0.107	0.086	0.068	0.054
269	RHS-OT	217.479	28.8	31.1	Average	40.00	0.262	0.185	0.114	0.070	0.045	0.028	0.023
270	RHS-OT	217.250	28.8	31.1	Average	40.00	0.192	0.148	0.090	0.056	0.036	0.026	0.020
271	RHS-OT	216.978	28.8	31.1	Average	40.00	0.201	0.140	0.087	0.059	0.043	0.032	0.024
272	RHS-OT	216.756	28.8	31.1	Average	40.00	0.289	0.201	0.122	0.076	0.052	0.040	0.034
273	RHS-OT	216.520	28.8	31.1	Average	40.00	0.254	0.144	0.090	0.044	0.027	0.025	0.014
274	RHS-OT	215.975	28.9	31.1	Average	40.00	0.217	0.157	0.105	0.071	0.050	0.039	0.028
275	RHS-OT	215.758	28.9	31.1	Average	40.00	0.153	0.106	0.064	0.043	0.033	0.024	0.021
276	RHS-OT	215.491	28.9	31.2	Average	40.00	0.129	0.097	0.068	0.050	0.037	0.027	0.021
277	RHS-OT	215.239	29.0	31.2	Average	40.00	0.227	0.137	0.093	0.052	0.032	0.024	0.016
278	RHS-OT	215.005	29.0	31.2	Average	40.00	0.146	0.110	0.073	0.050	0.035	0.024	0.019
279	RHS-OT	214.756	29.0	31.3	Average	40.00	0.363	0.273	0.170	0.112	0.075	0.052	0.041
280	RHS-OT	214.509	29.1	31.3	Average	40.00	0.268	0.195	0.122	0.082	0.057	0.039	0.033
281	RHS-OT	214.253	29.4	31.4	Average	40.00	0.254	0.193	0.119	0.074	0.052	0.035	0.028
282	RHS-OT	213.992	29.4	31.5	Average	40.00	0.178	0.140	0.098	0.073	0.057	0.045	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
283	RHS-OT	213.744	29.4	31.5	Average	40.00	0.325	0.205	0.122	0.085	0.062	0.046	0.039
284	RHS-OT	213.506	29.4	31.6	Average	40.00	0.296	0.240	0.168	0.129	0.101	0.079	0.064
285	RHS-OT	213.249	29.5	31.7	Average	40.00	0.185	0.139	0.112	0.081	0.053	0.041	0.028
286	RHS-OT	212.993	29.6	31.8	Average	40.00	0.306	0.218	0.137	0.091	0.063	0.043	0.035
287	RHS-OT	212.757	29.6	31.8	Average	40.00	0.242	0.184	0.112	0.071	0.047	0.034	0.025
288	RHS-OT	212.511	29.7	31.9	Average	40.00	0.221	0.179	0.123	0.085	0.059	0.040	0.033
289	RHS-OT	212.245	29.8	32.0	Average	40.00	0.157	0.120	0.076	0.049	0.033	0.024	0.021
290	RHS-OT	211.994	30.0	32.0	Average	40.00	0.255	0.198	0.129	0.082	0.054	0.037	0.029
291	RHS-OT	211.755	30.0	32.0	Average	40.00	0.273	0.200	0.121	0.082	0.057	0.043	0.030
292	RHS-OT	211.511	30.1	32.1	Average	40.00	0.303	0.219	0.135	0.089	0.063	0.043	0.035
293	RHS-OT	211.257	30.2	32.2	Average	40.00	0.322	0.235	0.147	0.095	0.065	0.045	0.034
294	RHS-OT	211.012	30.2	32.2	Average	40.00	0.365	0.241	0.139	0.086	0.056	0.038	0.029
295	RHS-OT	210.767	30.2	32.3	Average	40.00	0.305	0.216	0.130	0.084	0.057	0.038	0.030
296	RHS-OT	210.527	30.3	32.3	Average	40.00	0.259	0.190	0.120	0.079	0.055	0.040	0.030
297	RHS-OT	210.252	30.5	32.4	Average	40.00	0.310	0.236	0.149	0.099	0.067	0.047	0.037
298	RHS-OT	209.999	30.5	32.7	Average	40.00	0.433	0.301	0.179	0.112	0.077	0.051	0.039
299	RHS-OT	209.751	30.5	32.8	Average	40.00	0.465	0.333	0.201	0.127	0.084	0.055	0.042
300	RHS-OT	209.494	30.6	32.8	Average	40.00	0.291	0.224	0.145	0.094	0.060	0.042	0.029
301	RHS-OT	209.249	30.8	32.9	Average	40.00	0.155	0.102	0.077	0.047	0.027	0.018	0.013
302	RHS-OT	208.992	30.8	33.1	Average	40.00	0.707	0.428	0.225	0.143	0.094	0.060	0.046
303	RHS-OT	208.756	30.9	33.2	Average	40.00	0.522	0.347	0.188	0.112	0.073	0.051	0.037
304	RHS-OT	208.489	30.9	33.3	Average	40.00	0.389	0.266	0.154	0.096	0.065	0.046	0.041
305	RHS-OT	208.252	31.0	33.4	Average	40.00	0.397	0.309	0.199	0.130	0.087	0.059	0.045
306	RHS-OT	207.749	31.0	33.4	Average	40.00	0.376	0.268	0.164	0.107	0.069	0.050	0.040
307	RHS-OT	207.498	31.2	33.5	Average	40.00	0.341	0.263	0.178	0.124	0.094	0.071	0.055
308	RHS-OT	207.253	31.3	33.8	Average	40.00	0.530	0.393	0.224	0.147	0.113	0.094	0.070

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
309	RHS-OT	207.011	31.5	33.8	Average	40.00	0.204	0.151	0.097	0.067	0.049	0.035	0.029
310	RHS-OT	206.747	31.5	33.8	Average	40.00	0.375	0.282	0.182	0.123	0.086	0.058	0.045
311	RHS-OT	206.504	31.7	34.0	Average	40.00	0.317	0.222	0.125	0.074	0.049	0.035	0.029
312	RHS-OT	206.254	31.7	34.1	Average	40.00	0.460	0.299	0.150	0.074	0.038	0.020	0.016
313	RHS-OT	206.010	31.7	34.2	Average	40.00	0.271	0.204	0.130	0.087	0.059	0.043	0.032
314	RHS-OT	205.755	31.8	34.3	Average	40.00	0.407	0.297	0.192	0.126	0.087	0.057	0.046
315	RHS-OT	205.514	31.8	34.3	Average	40.00	0.264	0.223	0.163	0.121	0.090	0.055	0.048
316	RHS-OT	205.252	31.8	34.3	Average	40.00	0.354	0.233	0.149	0.103	0.074	0.052	0.039
317	RHS-OT	205.025	31.8	34.4	Average	40.00	0.245	0.187	0.123	0.083	0.058	0.041	0.031
318	RHS-OT	204.758	31.8	34.4	Average	40.00	0.366	0.245	0.135	0.078	0.046	0.029	0.018
319	RHS-OT	204.505	31.8	34.4	Average	40.00	0.316	0.229	0.134	0.080	0.047	0.029	0.021
320	RHS-OT	204.247	31.8	34.4	Average	40.00	0.324	0.247	0.179	0.119	0.081	0.060	0.047
321	RHS-OT	204.006	31.9	34.4	Average	40.00	0.292	0.198	0.122	0.083	0.059	0.046	0.036
322	RHS-OT	203.747	31.9	34.4	Average	40.00	0.227	0.160	0.101	0.070	0.051	0.036	0.029
323	RHS-OT	203.512	31.9	34.4	Average	40.00	0.248	0.182	0.119	0.080	0.057	0.039	0.032
324	RHS-OT	203.250	31.9	34.4	Average	40.00	0.160	0.129	0.087	0.060	0.044	0.035	0.030
325	RHS-OT	203.012	31.9	34.5	Average	40.00	0.329	0.250	0.170	0.120	0.087	0.057	0.045
326	RHS-OT	202.756	31.9	34.5	Average	40.00	0.302	0.197	0.123	0.084	0.060	0.041	0.032
327	RHS-OT	202.515	31.9	34.5	Average	40.00	0.312	0.220	0.137	0.090	0.062	0.041	0.032
328	RHS-OT	202.247	32.0	34.5	Average	40.00	0.286	0.200	0.136	0.084	0.052	0.036	0.028
329	RHS-OT	202.011	32.0	34.5	Average	40.00	0.377	0.278	0.166	0.102	0.065	0.046	0.036
330	RHS-OT	201.740	32.0	34.5	Average	40.00	0.333	0.219	0.113	0.074	0.055	0.039	0.032
331	RHS-OT	201.516	32.0	34.5	Average	40.00	0.497	0.341	0.179	0.105	0.064	0.040	0.028
332	RHS-OT	201.249	32.0	34.5	Average	40.00	0.265	0.200	0.136	0.091	0.062	0.044	0.035
333	RHS-OT	200.999	32.0	34.6	Average	40.00	0.293	0.215	0.141	0.095	0.068	0.049	0.040
334	RHS-OT	200.760	32.0	34.6	Average	40.00	0.233	0.161	0.099	0.070	0.053	0.044	0.035

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
335	RHS-OT	200.485	32.0	34.6	Average	40.00	0.329	0.244	0.151	0.102	0.070	0.054	0.037
336	RHS-OT	200.251	32.0	34.6	Average	40.00	0.244	0.195	0.140	0.093	0.070	0.049	0.040
337	RHS-OT	200.014	32.0	34.6	Average	40.00	0.330	0.251	0.168	0.114	0.077	0.048	0.037
338	RHS-OT	199.755	32.1	34.6	Average	40.00	0.280	0.219	0.147	0.098	0.068	0.044	0.033
339	RHS-OT	199.490	32.1	34.6	Average	40.00	0.206	0.136	0.086	0.057	0.040	0.030	0.022
340	RHS-OT	199.242	32.1	34.6	Average	40.00	0.229	0.175	0.105	0.068	0.049	0.040	0.034
341	RHS-OT	199.018	32.1	34.6	Average	40.00	0.230	0.166	0.115	0.085	0.063	0.046	0.036
342	RHS-OT	198.766	32.1	34.7	Average	40.00	0.289	0.197	0.119	0.078	0.053	0.036	0.027
343	RHS-OT	198.512	32.1	34.7	Average	40.00	0.387	0.243	0.142	0.094	0.069	0.050	0.042
344	RHS-OT	198.250	32.1	34.7	Average	40.00	0.223	0.180	0.119	0.080	0.056	0.043	0.036
345	RHS-OT	197.997	32.1	34.7	Average	40.00	0.255	0.177	0.117	0.077	0.053	0.037	0.028
346	RHS-OT	197.756	32.1	34.7	Average	40.00	0.300	0.206	0.126	0.083	0.059	0.041	0.032
347	RHS-OT	197.500	32.2	34.7	Average	40.00	0.223	0.155	0.095	0.063	0.043	0.028	0.022
348	RHS-OT	197.246	32.2	34.8	Average	40.00	0.328	0.232	0.120	0.074	0.047	0.031	0.022
349	RHS-OT	197.006	32.2	34.8	Average	40.00	0.350	0.230	0.131	0.082	0.057	0.034	0.025
350	RHS-OT	196.755	32.2	34.8	Average	40.00	0.156	0.105	0.063	0.041	0.028	0.018	0.015
351	RHS-OT	196.513	32.2	34.8	Average	40.00	0.358	0.232	0.139	0.087	0.059	0.040	0.031
352	RHS-OT	196.253	32.3	34.8	Average	40.00	0.187	0.119	0.080	0.047	0.030	0.020	0.017
353	RHS-OT	196.018	32.4	34.8	Average	40.00	0.194	0.146	0.096	0.065	0.047	0.035	0.028
354	RHS-OT	195.770	32.5	34.8	Average	40.00	0.341	0.247	0.156	0.103	0.067	0.044	0.036
355	RHS-OT	195.508	32.6	34.9	Average	40.00	0.278	0.201	0.122	0.082	0.060	0.044	0.035
356	RHS-OT	195.240	32.7	34.9	Average	40.00	0.287	0.180	0.132	0.075	0.043	0.032	0.023
357	RHS-OT	195.013	32.7	35.1	Average	40.00	0.181	0.139	0.099	0.073	0.055	0.041	0.032
358	RHS-OT	194.759	32.8	35.1	Average	40.00	0.218	0.160	0.102	0.067	0.047	0.034	0.027
359	RHS-OT	194.501	32.9	35.1	Average	40.00	0.267	0.202	0.128	0.084	0.056	0.038	0.029
360	RHS-OT	194.249	32.9	35.2	Average	40.00	0.244	0.191	0.122	0.085	0.060	0.042	0.033

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
361	RHS-OT	193.990	33.0	35.3	Average	40.00	0.256	0.181	0.120	0.081	0.057	0.040	0.030
362	RHS-OT	193.751	33.0	35.3	Average	40.00	0.200	0.145	0.092	0.061	0.043	0.032	0.024
363	RHS-OT	193.510	33.0	35.4	Average	40.00	0.233	0.161	0.095	0.065	0.046	0.035	0.029
364	RHS-OT	193.254	33.1	35.5	Average	40.00	0.186	0.138	0.091	0.064	0.048	0.038	0.032
365	RHS-OT	192.987	33.1	35.5	Average	40.00	0.202	0.121	0.072	0.047	0.035	0.025	0.021
366	RHS-OT	192.761	33.3	35.5	Average	40.00	0.175	0.113	0.066	0.041	0.031	0.022	0.019
367	RHS-OT	192.505	33.3	35.6	Average	40.00	0.241	0.166	0.108	0.076	0.056	0.044	0.038
368	RHS-OT	192.239	33.4	35.7	Average	40.00	0.247	0.163	0.117	0.067	0.040	0.023	0.015
369	RHS-OT	192.011	33.5	35.7	Average	40.00	0.247	0.186	0.130	0.096	0.072	0.055	0.043
370	RHS-OT	191.758	33.5	35.7	Average	40.00	0.273	0.191	0.128	0.090	0.065	0.049	0.039
371	RHS-OT	191.507	33.5	35.7	Average	40.00	0.244	0.151	0.091	0.059	0.043	0.031	0.031
372	RHS-OT	191.249	33.6	35.7	Average	40.00	0.166	0.106	0.069	0.051	0.040	0.032	0.027
373	RHS-OT	191.015	33.6	35.7	Average	40.00	0.317	0.207	0.124	0.083	0.060	0.044	0.035
374	RHS-OT	190.758	33.7	35.7	Average	40.00	0.268	0.175	0.104	0.072	0.054	0.040	0.033
375	RHS-OT	190.503	33.7	35.7	Average	40.00	0.391	0.273	0.166	0.107	0.074	0.053	0.043
376	RHS-OT	190.251	33.8	35.9	Average	40.00	0.235	0.151	0.098	0.056	0.032	0.019	0.013
377	RHS-OT	190.012	33.8	35.9	Average	40.00	0.266	0.160	0.103	0.070	0.051	0.037	0.030
378	RHS-OT	180.998	34.6	36.4	Average	40.00	0.304	0.154	0.074	0.044	0.030	0.025	0.019
379	RHS-OT	180.759	34.7	36.4	Average	40.00	0.260	0.179	0.112	0.072	0.045	0.028	0.021
380	RHS-OT	179.998	34.7	36.4	Average	40.00	0.582	0.379	0.165	0.081	0.048	0.023	0.016
381	RHS-OT	179.750	34.7	36.4	Average	40.00	0.464	0.296	0.148	0.086	0.054	0.047	0.033
382	RHS-OT	179.254	34.8	36.5	Average	40.00	0.240	0.167	0.101	0.063	0.042	0.035	0.026
383	RHS-OT	179.000	34.8	36.5	Average	40.00	0.208	0.151	0.095	0.062	0.043	0.034	0.021
384	RHS-OT	178.751	34.8	36.5	Average	40.00	0.209	0.121	0.072	0.047	0.034	0.024	0.019
385	RHS-OT	178.503	34.8	36.5	Average	40.00	0.173	0.096	0.056	0.037	0.028	0.020	0.019
386	RHS-OT	178.247	34.9	36.5	Average	40.00	0.554	0.361	0.206	0.122	0.079	0.048	0.040

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
387	RHS-OT	177.983	34.9	36.6	Average	40.00	0.361	0.227	0.126	0.070	0.039	0.024	0.014
388	RHS-OT	177.749	34.9	36.6	Average	40.00	0.295	0.190	0.102	0.054	0.030	0.020	0.014
389	RHS-OT	177.500	34.9	36.6	Average	40.00	0.482	0.306	0.175	0.102	0.062	0.037	0.029
390	RHS-OT	177.235	34.9	36.7	Average	40.00	0.254	0.154	0.092	0.058	0.039	0.026	0.021
391	RHS-OT	177.003	35.0	36.7	Average	40.00	0.272	0.177	0.110	0.072	0.050	0.034	0.026
392	RHS-OT	176.754	35.0	36.7	Average	40.00	0.516	0.333	0.168	0.096	0.060	0.042	0.031
393	RHS-OT	176.510	35.0	36.7	Average	40.00	0.250	0.161	0.098	0.062	0.042	0.028	0.022
394	RHS-OT	176.248	35.0	36.8	Average	40.00	0.176	0.134	0.097	0.065	0.044	0.033	0.025
395	RHS-OT	176.003	35.0	36.8	Average	40.00	0.310	0.201	0.113	0.068	0.044	0.029	0.023
396	RHS-OT	175.750	35.0	36.9	Average	40.00	0.331	0.210	0.124	0.083	0.060	0.043	0.035
397	RHS-OT	175.503	35.0	36.9	Average	40.00	0.367	0.272	0.165	0.105	0.072	0.050	0.045
398	RHS-OT	175.243	35.0	37.1	Average	40.00	0.529	0.361	0.209	0.134	0.090	0.059	0.042
399	RHS-OT	175.007	35.1	37.1	Average	40.00	0.409	0.296	0.171	0.108	0.073	0.052	0.039
400	RHS-OT	174.747	35.1	37.3	Average	40.00	0.297	0.195	0.106	0.063	0.041	0.030	0.026
401	RHS-OT	174.510	35.1	37.3	Average	40.00	0.280	0.172	0.101	0.064	0.041	0.028	0.023
402	RHS-OT	174.242	35.1	37.3	Average	40.00	0.179	0.121	0.092	0.056	0.037	0.028	0.025
403	RHS-OT	174.001	36.3	38.2	Average	40.00	0.326	0.205	0.118	0.077	0.052	0.036	0.030
404	RHS-OT	173.749	36.3	38.2	Average	40.00	0.325	0.196	0.115	0.075	0.053	0.039	0.032
405	RHS-OT	173.505	36.3	38.2	Average	40.00	0.257	0.165	0.096	0.060	0.042	0.031	0.027
406	RHS-OT	173.249	36.3	38.1	Average	40.00	0.256	0.155	0.101	0.048	0.044	0.023	0.017
407	RHS-OT	172.997	36.3	38.1	Average	40.00	0.312	0.191	0.103	0.068	0.044	0.035	0.028
408	RHS-OT	172.745	36.3	38.0	Average	40.00	0.317	0.232	0.152	0.111	0.088	0.070	0.056
409	RHS-OT	172.508	36.3	37.9	Average	40.00	0.534	0.363	0.211	0.135	0.094	0.071	0.059
410	RHS-OT	172.239	36.3	37.9	Average	40.00	0.173	0.113	0.086	0.056	0.039	0.027	0.018
411	RHS-OT	172.009	36.3	37.9	Average	40.00	0.258	0.181	0.116	0.077	0.056	0.037	0.031
412	RHS-OT	171.758	36.3	37.9	Average	40.00	0.158	0.112	0.075	0.050	0.035	0.026	0.022

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
413	RHS-OT	170.988	36.2	37.9	Average	40.00	0.232	0.144	0.089	0.061	0.046	0.033	0.029
414	RHS-OT	170.749	36.2	37.9	Average	40.00	0.333	0.227	0.149	0.103	0.075	0.053	0.043
415	RHS-OT	170.514	36.2	37.8	Average	40.00	0.189	0.128	0.094	0.072	0.056	0.044	0.038
416	RHS-OT	170.242	36.2	37.7	Average	40.00	0.369	0.246	0.162	0.111	0.077	0.054	0.043
417	RHS-OT	170.003	36.2	37.7	Average	40.00	0.414	0.272	0.162	0.104	0.072	0.051	0.042
418	RHS-OT	169.761	36.2	37.7	Average	40.00	0.129	0.088	0.065	0.050	0.040	0.031	0.026
419	RHS-OT	169.508	36.2	37.7	Average	40.00	0.259	0.174	0.103	0.069	0.049	0.035	0.029
420	RHS-OT	169.239	36.2	37.6	Average	40.00	0.354	0.246	0.152	0.100	0.072	0.050	0.039
421	RHS-OT	169.019	36.2	37.6	Average	40.00	0.504	0.326	0.185	0.118	0.083	0.056	0.053
422	RHS-OT	168.749	36.2	37.6	Average	40.00	0.494	0.305	0.162	0.102	0.071	0.058	0.053
423	RHS-OT	168.506	36.2	37.6	Average	40.00	0.206	0.134	0.083	0.055	0.040	0.028	0.024
424	RHS-OT	168.009	36.2	37.6	Average	40.00	0.171	0.108	0.077	0.047	0.031	0.024	0.014
425	RHS-OT	167.760	36.2	37.6	Average	40.00	0.351	0.237	0.159	0.111	0.079	0.053	0.041
426	RHS-OT	167.533	36.2	37.5	Average	40.00	0.173	0.125	0.077	0.053	0.037	0.027	0.022
427	RHS-OT	167.247	36.2	37.4	Average	40.00	0.243	0.163	0.109	0.077	0.055	0.041	0.033
428	RHS-OT	167.020	36.2	37.4	Average	40.00	0.242	0.179	0.124	0.089	0.065	0.047	0.038
429	RHS-OT	166.753	36.2	37.4	Average	40.00	0.375	0.251	0.147	0.100	0.071	0.054	0.045
430	RHS-OT	166.498	36.2	37.4	Average	40.00	0.446	0.303	0.187	0.115	0.072	0.047	0.036
431	RHS-OT	166.247	36.2	37.3	Average	40.00	0.184	0.119	0.078	0.052	0.037	0.030	0.026
432	RHS-OT	166.016	36.1	37.3	Average	40.00	0.548	0.348	0.201	0.119	0.077	0.055	0.045
433	RHS-OT	165.754	36.1	37.3	Average	40.00	0.283	0.210	0.144	0.104	0.078	0.057	0.045
434	RHS-OT	165.514	36.1	37.3	Average	40.00	0.369	0.236	0.130	0.076	0.048	0.032	0.023
435	RHS-OT	165.250	36.1	37.3	Average	40.00	0.382	0.210	0.114	0.076	0.053	0.038	0.026
436	RHS-OT	165.002	36.1	37.3	Average	40.00	0.224	0.129	0.065	0.035	0.022	0.016	0.014
437	RHS-OT	164.755	36.1	37.3	Average	40.00	0.151	0.096	0.053	0.033	0.023	0.016	0.015
438	RHS-OT	164.506	36.1	37.3	Average	40.00	0.259	0.183	0.115	0.075	0.048	0.032	0.025

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
439	RHS-OT	164.253	36.1	37.2	Average	40.00	0.262	0.182	0.094	0.051	0.034	0.022	0.019
440	RHS-OT	164.007	36.0	37.1	Average	40.00	0.146	0.097	0.058	0.037	0.026	0.019	0.016
441	RHS-OT	163.741	35.9	37.1	Average	40.00	0.143	0.077	0.040	0.023	0.016	0.013	0.012
442	RHS-OT	163.532	35.5	37.1	Average	40.00	0.268	0.182	0.110	0.067	0.040	0.025	0.018
443	RHS-OT	163.245	35.4	37.0	Average	40.00	0.201	0.121	0.076	0.051	0.036	0.027	0.021
444	RHS-OT	163.021	35.4	36.9	Average	40.00	0.264	0.168	0.088	0.053	0.034	0.024	0.020
445	RHS-OT	162.761	35.3	36.9	Average	40.00	0.291	0.185	0.099	0.056	0.034	0.022	0.018
446	RHS-OT	162.494	35.0	36.9	Average	40.00	0.383	0.186	0.086	0.048	0.031	0.026	0.017
447	RHS-OT	162.243	34.5	36.7	Average	40.00	0.169	0.123	0.079	0.050	0.035	0.027	0.023
448	RHS-OT	161.989	34.4	36.6	Average	40.00	0.206	0.105	0.044	0.024	0.017	0.012	0.011
449	RHS-OT	161.761	34.2	36.5	Average	40.00	0.223	0.140	0.086	0.054	0.037	0.025	0.020
450	RHS-OT	161.002	33.7	36.5	Average	40.00	0.528	0.356	0.209	0.129	0.084	0.057	0.042
451	RHS-OT	160.746	33.7	36.5	Average	40.00	0.207	0.164	0.116	0.078	0.054	0.035	0.023
452	RHS-OT	160.506	33.7	36.4	Average	40.00	0.270	0.198	0.124	0.080	0.054	0.035	0.027
453	RHS-OT	160.247	33.6	36.4	Average	40.00	0.235	0.138	0.071	0.042	0.028	0.019	0.016
454	RHS-OT	159.993	33.6	36.4	Average	40.00	0.289	0.183	0.091	0.049	0.037	0.030	0.026
455	RHS-OT	159.520	33.3	36.3	Average	40.00	0.175	0.131	0.087	0.060	0.044	0.034	0.030
456	RHS-OT	159.255	33.2	36.3	Average	40.00	0.375	0.251	0.140	0.081	0.050	0.035	0.024
457	RHS-OT	159.013	33.1	36.3	Average	40.00	0.264	0.188	0.111	0.068	0.043	0.028	0.021
458	RHS-OT	158.756	33.1	36.2	Average	40.00	0.215	0.138	0.076	0.046	0.027	0.018	0.012
459	RHS-OT	158.518	33.1	36.1	Average	40.00	0.228	0.152	0.081	0.046	0.029	0.018	0.015
460	RHS-OT	158.270	33.1	36.0	Average	40.00	0.158	0.120	0.074	0.045	0.029	0.020	0.016
461	RHS-OT	158.025	32.9	35.8	Average	40.00	0.340	0.227	0.128	0.076	0.049	0.031	0.023
462	RHS-OT	157.759	32.8	35.8	Average	40.00	0.471	0.311	0.186	0.125	0.084	0.056	0.046
463	RHS-OT	157.522	32.8	35.8	Average	40.00	0.180	0.126	0.074	0.048	0.031	0.020	0.018
464	RHS-OT	157.243	32.6	35.7	Average	40.00	0.413	0.243	0.152	0.080	0.049	0.040	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
465	RHS-OT	157.001	32.6	35.6	Average	40.00	0.217	0.129	0.070	0.042	0.028	0.023	0.016
466	RHS-OT	156.756	32.5	35.4	Average	40.00	0.495	0.334	0.182	0.111	0.072	0.056	0.032
467	RHS-OT	156.512	32.4	35.4	Average	40.00	0.174	0.104	0.058	0.034	0.021	0.014	0.011
468	RHS-OT	156.245	32.1	35.4	Average	40.00	0.205	0.147	0.088	0.054	0.033	0.021	0.017
469	RHS-OT	156.001	32.1	35.3	Average	40.00	0.246	0.167	0.089	0.048	0.031	0.021	0.017
470	RHS-OT	155.746	32.0	35.3	Average	40.00	0.199	0.122	0.069	0.046	0.030	0.023	0.018
471	RHS-OT	155.510	32.0	35.2	Average	40.00	0.231	0.172	0.113	0.070	0.053	0.029	0.023
472	RHS-OT	155.253	31.9	35.2	Average	40.00	0.338	0.186	0.102	0.063	0.044	0.035	0.026
473	RHS-OT	154.994	31.9	35.2	Average	40.00	0.131	0.073	0.047	0.036	0.029	0.023	0.017
474	RHS-OT	154.753	31.9	35.2	Average	40.00	0.195	0.111	0.070	0.049	0.035	0.027	0.023
475	RHS-OT	154.521	31.8	35.1	Average	40.00	0.138	0.106	0.073	0.052	0.040	0.028	0.023
476	RHS-OT	154.245	31.8	35.1	Average	40.00	0.168	0.119	0.072	0.047	0.033	0.023	0.018
477	RHS-OT	153.975	31.8	35.0	Average	40.00	0.306	0.221	0.134	0.081	0.052	0.035	0.027
478	RHS-OT	153.746	31.8	35.0	Average	40.00	0.125	0.079	0.043	0.029	0.019	0.016	0.013
479	RHS-OT	153.510	31.8	34.9	Average	40.00	0.154	0.102	0.057	0.033	0.022	0.014	0.012
480	RHS-OT	153.231	31.8	34.8	Average	40.00	0.241	0.179	0.114	0.073	0.047	0.029	0.022
481	RHS-OT	153.004	31.7	34.8	Average	40.00	0.231	0.169	0.101	0.064	0.041	0.027	0.024
482	RHS-OT	152.746	31.7	34.8	Average	40.00	0.346	0.250	0.149	0.095	0.062	0.042	0.034
483	RHS-OT	152.517	31.7	34.7	Average	40.00	0.190	0.136	0.084	0.056	0.038	0.028	0.022
484	RHS-OT	152.250	31.6	34.7	Average	40.00	0.209	0.165	0.143	0.088	0.066	0.050	0.013
485	RHS-OT	152.015	31.6	34.7	Average	40.00	0.357	0.224	0.117	0.074	0.053	0.039	0.032
486	RHS-OT	151.745	31.6	34.7	Average	40.00	0.251	0.152	0.076	0.046	0.033	0.024	0.020
487	RHS-OT	151.500	31.6	34.7	Average	40.00	0.522	0.335	0.172	0.100	0.063	0.040	0.032
488	RHS-OT	151.256	31.5	34.6	Average	40.00	0.216	0.139	0.079	0.050	0.034	0.026	0.022
489	RHS-OT	151.013	31.5	34.6	Average	40.00	0.466	0.275	0.129	0.074	0.048	0.032	0.028
490	RHS-OT	150.743	31.5	34.6	Average	40.00	0.386	0.247	0.137	0.085	0.057	0.038	0.031

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
491	RHS-OT	150.511	31.5	34.6	Average	40.00	0.264	0.188	0.112	0.071	0.050	0.034	0.030
492	RHS-OT	150.247	30.5	34.1	Average	40.00	0.188	0.139	0.088	0.056	0.039	0.026	0.020
493	RHS-OT	149.998	30.4	34.0	Average	40.00	0.219	0.157	0.092	0.056	0.039	0.028	0.024
494	RHS-OT	149.727	30.4	34.0	Average	40.00	0.289	0.189	0.110	0.068	0.043	0.028	0.023
495	RHS-OT	149.520	30.3	33.9	Average	40.00	0.142	0.101	0.061	0.038	0.025	0.015	0.012
496	RHS-OT	149.255	30.3	33.8	Average	40.00	0.216	0.141	0.102	0.065	0.044	0.034	0.016
497	RHS-OT	149.028	30.3	33.8	Average	40.00	0.137	0.091	0.056	0.037	0.024	0.018	0.017
498	RHS-OT	148.766	30.3	33.8	Average	40.00	0.224	0.148	0.081	0.048	0.030	0.019	0.014
499	RHS-OT	148.509	30.2	33.7	Average	40.00	0.376	0.219	0.108	0.054	0.032	0.019	0.016
500	RHS-OT	148.253	30.1	33.4	Average	40.00	0.277	0.204	0.131	0.087	0.059	0.040	0.029
501	RHS-OT	148.000	30.1	33.4	Average	40.00	0.224	0.136	0.076	0.046	0.032	0.023	0.017

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: LHS SH

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	LHS-SH	148.772	38.0	42.1	Average	40.00	0.434	0.307	0.224	0.151	0.105	0.079	0.078
2	LHS-SH	149.767	38.0	42.1	Average	40.00	0.123	0.082	0.052	0.036	0.026	0.020	0.017
3	LHS-SH	150.767	38.0	42.1	Average	40.00	0.145	0.104	0.071	0.053	0.039	0.028	0.026
4	LHS-SH	151.767	38.0	42.1	Average	40.00	0.053	0.033	0.028	0.024	0.020	0.018	0.015
5	LHS-SH	152.771	38.0	42.1	Average	40.00	0.182	0.112	0.067	0.044	0.031	0.021	0.017
6	LHS-SH	153.764	38.0	42.1	Average	40.00	0.139	0.100	0.068	0.047	0.036	0.025	0.022
7	LHS-SH	154.765	38.0	42.1	Average	40.00	0.237	0.122	0.064	0.039	0.026	0.018	0.016
8	LHS-SH	155.770	38.0	42.1	Average	40.00	0.093	0.042	0.025	0.018	0.014	0.013	0.011
9	LHS-SH	156.764	37.2	40.7	Average	40.00	0.118	0.070	0.045	0.033	0.027	0.022	0.018
10	LHS-SH	157.766	37.2	40.7	Average	40.00	0.150	0.085	0.066	0.053	0.045	0.035	0.028
11	LHS-SH	158.764	37.2	40.7	Average	40.00	0.204	0.143	0.099	0.074	0.057	0.043	0.032
12	LHS-SH	160.761	37.2	40.7	Average	40.00	0.128	0.074	0.058	0.047	0.038	0.029	0.024
13	LHS-SH	161.764	37.2	40.7	Average	40.00	0.133	0.073	0.045	0.032	0.025	0.020	0.016
14	LHS-SH	162.759	37.2	40.7	Average	40.00	0.157	0.085	0.061	0.047	0.037	0.028	0.024
15	LHS-SH	163.758	37.2	40.7	Average	40.00	0.189	0.113	0.081	0.062	0.050	0.040	0.032
16	LHS-SH	164.774	37.2	40.7	Average	40.00	0.189	0.149	0.113	0.082	0.059	0.045	0.039
17	LHS-SH	165.766	37.2	40.7	Average	40.00	0.177	0.103	0.056	0.037	0.028	0.023	0.019
18	LHS-SH	166.767	37.2	40.7	Average	40.00	0.182	0.139	0.086	0.056	0.041	0.029	0.022
19	LHS-SH	167.759	37.2	40.7	Average	40.00	0.217	0.157	0.104	0.071	0.050	0.032	0.024
20	LHS-SH	168.767	36.0	38.0	Average	40.00	0.467	0.289	0.160	0.106	0.075	0.056	0.045
21	LHS-SH	169.752	36.0	38.0	Average	40.00	0.265	0.183	0.119	0.084	0.061	0.044	0.034
22	LHS-SH	170.767	36.0	38.0	Average	40.00	0.278	0.205	0.136	0.097	0.072	0.053	0.045

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
23	LHS-SH	171.758	36.0	38.0	Average	40.00	0.230	0.159	0.095	0.065	0.042	0.032	0.024
24	LHS-SH	172.771	36.0	38.0	Average	40.00	0.324	0.202	0.108	0.067	0.046	0.033	0.027
25	LHS-SH	173.767	36.0	38.0	Average	40.00	0.331	0.178	0.098	0.063	0.045	0.034	0.028
26	LHS-SH	174.769	36.0	38.0	Average	40.00	0.468	0.326	0.192	0.126	0.088	0.068	0.057
27	LHS-SH	175.766	36.0	38.0	Average	40.00	0.202	0.158	0.126	0.089	0.068	0.055	0.050
28	LHS-SH	176.754	36.0	38.0	Average	40.00	0.332	0.226	0.140	0.089	0.059	0.038	0.029
29	LHS-SH	177.773	36.0	38.0	Average	40.00	0.159	0.101	0.061	0.038	0.027	0.018	0.016
30	LHS-SH	178.774	36.0	38.0	Average	40.00	0.452	0.302	0.170	0.101	0.062	0.037	0.029
31	LHS-SH	179.761	36.0	38.0	Average	40.00	0.282	0.200	0.120	0.077	0.052	0.035	0.026
32	LHS-SH	180.772	30.0	33.8	Average	40.00	0.216	0.170	0.133	0.091	0.061	0.047	0.038
33	LHS-SH	190.772	28.4	32.5	Average	40.00	0.212	0.151	0.102	0.074	0.055	0.043	0.034
34	LHS-SH	191.775	28.4	32.5	Average	40.00	0.338	0.229	0.152	0.115	0.090	0.068	0.054
35	LHS-SH	192.759	28.4	32.5	Average	40.00	0.287	0.213	0.124	0.082	0.058	0.042	0.032
36	LHS-SH	193.789	24.0	27.0	Average	40.00	0.147	0.109	0.068	0.044	0.032	0.025	0.019
37	LHS-SH	194.771	25.4	28.2	Average	40.00	0.322	0.235	0.151	0.104	0.075	0.052	0.040
38	LHS-SH	195.763	25.4	28.2	Average	40.00	0.308	0.228	0.141	0.093	0.064	0.045	0.033
39	LHS-SH	196.776	25.4	28.2	Average	40.00	0.381	0.258	0.156	0.100	0.065	0.043	0.030
40	LHS-SH	197.766	25.4	28.2	Average	40.00	0.184	0.146	0.105	0.075	0.055	0.039	0.029
41	LHS-SH	198.769	25.4	28.2	Average	40.00	0.137	0.110	0.078	0.060	0.046	0.035	0.028
42	LHS-SH	199.765	25.4	28.2	Average	40.00	0.250	0.171	0.101	0.065	0.045	0.032	0.025
43	LHS-SH	200.762	25.4	28.2	Average	40.00	0.229	0.170	0.115	0.086	0.064	0.048	0.038
44	LHS-SH	201.783	25.4	28.2	Average	40.00	0.182	0.143	0.100	0.072	0.053	0.039	0.030
45	LHS-SH	202.761	28.7	29.0	Average	40.00	0.200	0.152	0.104	0.076	0.058	0.044	0.033
46	LHS-SH	203.777	28.7	29.0	Average	40.00	0.210	0.172	0.123	0.091	0.067	0.049	0.039
47	LHS-SH	204.765	28.7	29.0	Average	40.00	0.151	0.121	0.093	0.074	0.058	0.045	0.036
48	LHS-SH	205.770	28.7	29.0	Average	40.00	0.306	0.215	0.121	0.076	0.055	0.039	0.031

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
49	LHS-SH	206.762	28.7	29.0	Average	40.00	0.314	0.244	0.159	0.107	0.074	0.049	0.035
50	LHS-SH	207.761	28.7	29.0	Average	40.00	0.257	0.195	0.128	0.088	0.061	0.041	0.033
51	LHS-SH	208.758	28.7	29.0	Average	40.00	0.237	0.183	0.120	0.081	0.057	0.041	0.032
52	LHS-SH	209.772	28.7	29.0	Average	40.00	0.258	0.206	0.143	0.100	0.072	0.050	0.039
53	LHS-SH	210.769	28.7	29.0	Average	40.00	0.230	0.181	0.122	0.084	0.061	0.043	0.034
54	LHS-SH	211.771	28.7	29.0	Average	40.00	0.202	0.157	0.110	0.082	0.062	0.046	0.038
55	LHS-SH	212.776	28.7	29.0	Average	40.00	0.189	0.146	0.098	0.068	0.048	0.033	0.026
56	LHS-SH	213.761	28.7	29.0	Average	40.00	0.180	0.136	0.100	0.076	0.060	0.044	0.036
57	LHS-SH	214.761	28.7	29.0	Average	40.00	0.191	0.138	0.090	0.062	0.045	0.033	0.026
58	LHS-SH	215.767	28.8	29.8	Average	40.00	0.123	0.084	0.051	0.035	0.026	0.021	0.017
59	LHS-SH	216.784	28.8	29.8	Average	40.00	0.149	0.117	0.085	0.073	0.054	0.041	0.035
60	LHS-SH	217.770	28.8	29.8	Average	40.00	0.263	0.204	0.134	0.092	0.065	0.044	0.035
61	LHS-SH	218.769	28.8	29.8	Average	40.00	0.223	0.181	0.126	0.089	0.064	0.044	0.035
62	LHS-SH	219.794	28.8	29.8	Average	40.00	0.167	0.116	0.077	0.054	0.040	0.030	0.024
63	LHS-SH	220.773	28.8	29.8	Average	40.00	0.207	0.159	0.105	0.072	0.053	0.038	0.029
64	LHS-SH	221.775	28.8	29.8	Average	40.00	0.214	0.177	0.134	0.103	0.080	0.058	0.044
65	LHS-SH	222.763	28.8	29.8	Average	40.00	0.126	0.087	0.054	0.036	0.026	0.019	0.015
66	LHS-SH	223.769	28.8	29.8	Average	40.00	0.266	0.212	0.147	0.103	0.074	0.052	0.040
67	LHS-SH	224.768	28.8	29.8	Average	40.00	0.224	0.168	0.116	0.081	0.063	0.036	0.032
68	LHS-SH	225.764	30.1	32.2	Average	40.00	0.164	0.134	0.095	0.070	0.052	0.037	0.028
69	LHS-SH	226.774	30.1	32.2	Average	40.00	0.182	0.136	0.090	0.063	0.047	0.034	0.028
70	LHS-SH	227.772	30.1	32.2	Average	40.00	0.161	0.118	0.078	0.055	0.041	0.030	0.025
71	LHS-SH	229.767	30.1	32.2	Average	40.00	0.145	0.105	0.071	0.049	0.036	0.026	0.022
72	LHS-SH	230.766	30.1	32.2	Average	40.00	0.196	0.133	0.103	0.067	0.045	0.035	0.021
73	LHS-SH	231.779	30.1	32.2	Average	40.00	0.253	0.196	0.125	0.081	0.054	0.039	0.029
74	LHS-SH	232.760	30.1	32.2	Average	40.00	0.178	0.128	0.085	0.059	0.042	0.030	0.024

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
75	LHS-SH	233.761	30.1	32.2	Average	40.00	0.143	0.111	0.077	0.059	0.046	0.035	0.029
76	LHS-SH	234.769	30.1	32.2	Average	40.00	0.244	0.182	0.120	0.083	0.061	0.042	0.033
77	LHS-SH	235.768	30.1	32.2	Average	40.00	0.115	0.076	0.052	0.040	0.033	0.026	0.022
78	LHS-SH	236.773	33.2	35.9	Average	40.00	0.193	0.130	0.076	0.053	0.041	0.031	0.026
79	LHS-SH	237.778	33.2	35.9	Average	40.00	0.612	0.390	0.198	0.111	0.072	0.052	0.042
80	LHS-SH	238.765	33.2	35.9	Average	40.00	0.287	0.206	0.134	0.088	0.061	0.043	0.034
81	LHS-SH	239.768	33.2	35.9	Average	40.00	0.429	0.309	0.169	0.093	0.057	0.038	0.030
82	LHS-SH	240.776	33.2	35.9	Average	40.00	0.394	0.279	0.176	0.114	0.077	0.050	0.038
83	LHS-SH	241.773	33.2	35.9	Average	40.00	0.354	0.258	0.158	0.100	0.065	0.045	0.032
84	LHS-SH	242.763	33.2	35.9	Average	40.00	0.217	0.174	0.117	0.078	0.053	0.035	0.025
85	LHS-SH	243.775	33.2	35.9	Average	40.00	0.330	0.251	0.155	0.099	0.064	0.042	0.031
86	LHS-SH	244.782	33.2	35.9	Average	40.00	0.177	0.119	0.073	0.044	0.031	0.021	0.017
87	LHS-SH	245.800	33.2	35.9	Average	40.00	0.541	0.320	0.156	0.086	0.054	0.034	0.024
88	LHS-SH	246.762	33.2	35.9	Average	40.00	0.441	0.299	0.158	0.087	0.052	0.033	0.022
89	LHS-SH	247.773	33.3	37.5	Average	40.00	0.424	0.275	0.152	0.090	0.055	0.038	0.031
90	LHS-SH	248.770	33.3	37.5	Average	40.00	0.346	0.253	0.154	0.098	0.065	0.042	0.032
91	LHS-SH	249.770	33.3	37.5	Average	40.00	0.305	0.219	0.129	0.077	0.048	0.032	0.025
92	LHS-SH	250.765	33.3	37.5	Average	40.00	0.446	0.298	0.166	0.099	0.066	0.041	0.031
93	LHS-SH	251.770	33.3	37.5	Average	40.00	0.429	0.295	0.166	0.097	0.059	0.037	0.029
94	LHS-SH	252.765	33.3	37.5	Average	40.00	0.168	0.122	0.090	0.059	0.044	0.027	0.027
95	LHS-SH	253.771	33.3	37.5	Average	40.00	0.461	0.287	0.149	0.086	0.058	0.038	0.033
96	LHS-SH	254.769	33.3	37.5	Average	40.00	0.225	0.163	0.124	0.075	0.052	0.035	0.027
97	LHS-SH	255.780	33.3	37.5	Average	40.00	0.342	0.252	0.154	0.100	0.067	0.045	0.038
98	LHS-SH	256.771	33.4	36.1	Average	40.00	0.464	0.291	0.157	0.091	0.060	0.040	0.032
99	LHS-SH	257.769	33.4	36.1	Average	40.00	0.602	0.403	0.204	0.112	0.077	0.048	0.026
100	LHS-SH	258.762	33.4	36.1	Average	40.00	0.399	0.264	0.143	0.085	0.054	0.034	0.031

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
101	LHS-SH	259.769	33.4	36.1	Average	40.00	0.286	0.192	0.140	0.092	0.067	0.048	0.037
102	LHS-SH	260.768	32.3	35.4	Average	40.00	0.400	0.255	0.135	0.074	0.046	0.030	0.023
103	LHS-SH	261.771	32.3	35.4	Average	40.00	0.419	0.247	0.125	0.068	0.042	0.024	0.019
104	LHS-SH	262.769	32.3	35.4	Average	40.00	0.521	0.345	0.190	0.110	0.072	0.048	0.035
105	LHS-SH	263.767	32.3	35.4	Average	40.00	0.566	0.355	0.180	0.103	0.065	0.040	0.031
106	LHS-SH	264.766	32.3	35.4	Average	40.00	0.365	0.253	0.143	0.083	0.051	0.030	0.023
107	LHS-SH	265.770	32.3	35.4	Average	40.00	0.540	0.353	0.204	0.124	0.080	0.051	0.040
108	LHS-SH	266.768	32.3	35.4	Average	40.00	0.466	0.335	0.201	0.126	0.081	0.055	0.036
109	LHS-SH	267.772	32.3	35.4	Average	40.00	0.181	0.113	0.066	0.045	0.034	0.026	0.024
110	LHS-SH	268.763	32.3	35.4	Average	40.00	0.172	0.095	0.045	0.029	0.021	0.017	0.015
111	LHS-SH	269.800	32.3	35.4	Average	40.00	0.108	0.070	0.048	0.038	0.032	0.030	0.023

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: RHS SH

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	RHS-SH	269.260	32.4	35.8	Average	40.00	0.510	0.341	0.195	0.118	0.074	0.044	0.036
2	RHS-SH	268.251	32.4	35.7	Average	40.00	0.315	0.218	0.120	0.069	0.046	0.030	0.026
3	RHS-SH	267.272	32.3	35.7	Average	40.00	0.253	0.179	0.137	0.093	0.069	0.049	0.032
4	RHS-SH	266.259	32.3	35.6	Average	40.00	0.296	0.210	0.123	0.075	0.049	0.032	0.021
5	RHS-SH	265.259	32.3	35.5	Average	40.00	0.258	0.187	0.107	0.060	0.040	0.026	0.021
6	RHS-SH	264.258	32.2	35.4	Average	40.00	0.324	0.233	0.133	0.076	0.047	0.029	0.025
7	RHS-SH	263.254	32.1	35.4	Average	40.00	0.251	0.162	0.114	0.083	0.063	0.045	0.036
8	RHS-SH	262.253	32.0	35.2	Average	40.00	0.333	0.244	0.143	0.086	0.055	0.034	0.023
9	RHS-SH	261.260	32.0	35.2	Average	40.00	0.422	0.276	0.151	0.093	0.059	0.038	0.030
10	RHS-SH	260.256	31.9	35.1	Average	40.00	0.483	0.307	0.154	0.086	0.052	0.034	0.024
11	RHS-SH	259.269	31.9	35.0	Average	40.00	0.440	0.282	0.195	0.114	0.076	0.057	0.048
12	RHS-SH	258.260	31.8	34.9	Average	40.00	0.726	0.441	0.167	0.083	0.052	0.036	0.030
13	RHS-SH	257.259	31.7	34.4	Average	40.00	0.229	0.165	0.103	0.068	0.047	0.032	0.027
14	RHS-SH	256.254	31.6	34.6	Average	40.00	0.311	0.221	0.129	0.080	0.055	0.037	0.030
15	RHS-SH	255.258	31.5	33.8	Average	40.00	0.436	0.283	0.162	0.096	0.059	0.038	0.030
16	RHS-SH	254.258	31.5	33.5	Average	40.00	0.459	0.297	0.146	0.082	0.054	0.032	0.028
17	RHS-SH	253.260	31.4	34.1	Average	40.00	0.339	0.241	0.134	0.079	0.052	0.032	0.028
18	RHS-SH	252.242	31.4	33.9	Average	40.00	0.308	0.176	0.088	0.051	0.033	0.021	0.015
19	RHS-SH	251.253	31.3	34.8	Average	40.00	0.369	0.266	0.151	0.086	0.054	0.030	0.022
20	RHS-SH	250.265	31.2	34.1	Average	40.00	0.456	0.290	0.140	0.075	0.046	0.028	0.025
21	RHS-SH	249.255	24.5	27.9	Average	40.00	0.337	0.247	0.146	0.090	0.059	0.029	0.023
22	RHS-SH	248.251	24.9	28.0	Average	40.00	0.255	0.201	0.128	0.080	0.052	0.033	0.024

S. No.	Side	Chainage	Air Temperature ˚C	Pavement Temperature ˚C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
23	RHS-SH	247.256	25.5	28.1	Average	40.00	0.324	0.211	0.108	0.059	0.038	0.025	0.013
24	RHS-SH	245.266	25.8	28.4	Average	40.00	0.399	0.236	0.150	0.093	0.062	0.047	0.037
25	RHS-SH	244.253	26.0	28.5	Average	40.00	0.238	0.178	0.111	0.074	0.053	0.039	0.031
26	RHS-SH	243.263	26.2	28.7	Average	40.00	0.442	0.309	0.185	0.114	0.075	0.048	0.036
27	RHS-SH	242.258	26.6	28.9	Average	40.00	0.199	0.129	0.069	0.041	0.027	0.019	0.015
28	RHS-SH	241.272	26.8	29.2	Average	40.00	0.235	0.136	0.099	0.061	0.033	0.023	0.021
29	RHS-SH	240.267	27.0	29.3	Average	40.00	0.137	0.095	0.072	0.047	0.033	0.021	0.015
30	RHS-SH	239.255	27.4	29.5	Average	40.00	0.427	0.319	0.187	0.108	0.068	0.044	0.035
31	RHS-SH	238.259	27.4	29.5	Average	40.00	0.302	0.190	0.119	0.060	0.045	0.033	0.017
32	RHS-SH	237.265	27.5	29.5	Average	40.00	0.361	0.255	0.149	0.089	0.055	0.037	0.028
33	RHS-SH	236.273	27.5	29.6	Average	40.00	0.219	0.133	0.073	0.047	0.035	0.031	0.025
34	RHS-SH	235.267	27.6	29.6	Average	40.00	0.207	0.120	0.076	0.070	0.039	0.031	0.018
35	RHS-SH	234.251	27.6	29.7	Average	40.00	0.114	0.084	0.059	0.045	0.036	0.027	0.023
36	RHS-SH	233.267	27.7	29.7	Average	40.00	0.224	0.174	0.118	0.081	0.056	0.038	0.030
37	RHS-SH	232.259	27.7	29.8	Average	40.00	0.143	0.101	0.066	0.045	0.032	0.023	0.022
38	RHS-SH	231.256	27.8	29.8	Average	40.00	0.195	0.153	0.113	0.086	0.066	0.049	0.040
39	RHS-SH	230.270	27.8	29.9	Average	40.00	0.168	0.111	0.064	0.038	0.024	0.018	0.015
40	RHS-SH	229.260	27.9	29.9	Average	40.00	0.251	0.159	0.106	0.060	0.037	0.026	0.017
41	RHS-SH	228.251	27.9	29.9	Average	40.00	0.196	0.149	0.092	0.059	0.040	0.027	0.023

S. No.	Side	Chainage	Air Temperature ℃	Pavement Temperature ℃	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
42	RHS-SH	227.259	28.0	30.0	Average	40.00	0.212	0.165	0.108	0.072	0.053	0.038	0.027
43	RHS-SH	226.261	28.0	30.0	Average	40.00	0.265	0.207	0.139	0.095	0.071	0.048	0.039
44	RHS-SH	225.260	28.1	30.1	Average	40.00	0.187	0.140	0.091	0.062	0.043	0.029	0.021
45	RHS-SH	224.257	28.1	30.1	Average	40.00	0.235	0.190	0.134	0.098	0.075	0.054	0.044
46	RHS-SH	222.254	28.3	30.4	Average	40.00	0.221	0.163	0.104	0.071	0.052	0.037	0.031
47	RHS-SH	221.261	28.4	30.5	Average	40.00	0.211	0.159	0.104	0.071	0.049	0.034	0.025
48	RHS-SH	220.256	28.6	30.6	Average	40.00	0.164	0.120	0.078	0.053	0.039	0.027	0.022
49	RHS-SH	219.260	28.6	30.8	Average	40.00	0.242	0.149	0.085	0.053	0.036	0.023	0.023
50	RHS-SH	218.273	28.7	31.0	Average	40.00	0.230	0.136	0.101	0.053	0.036	0.031	0.020
51	RHS-SH	217.266	28.8	31.1	Average	40.00	0.149	0.103	0.082	0.061	0.054	0.032	0.029
52	RHS-SH	215.255	29.0	31.2	Average	40.00	0.173	0.127	0.084	0.059	0.042	0.030	0.024
53	RHS-SH	214.268	29.3	31.3	Average	40.00	0.276	0.209	0.129	0.078	0.051	0.035	0.028
54	RHS-SH	213.259	29.5	31.7	Average	40.00	0.223	0.175	0.128	0.100	0.075	0.057	0.044
55	RHS-SH	212.269	29.7	31.9	Average	40.00	0.382	0.279	0.176	0.112	0.072	0.048	0.031
56	RHS-SH	211.261	30.1	32.2	Average	40.00	0.337	0.246	0.153	0.098	0.070	0.046	0.034
57	RHS-SH	210.265	30.4	32.4	Average	40.00	0.199	0.127	0.070	0.038	0.024	0.017	0.016
58	RHS-SH	209.260	30.7	32.8	Average	40.00	0.325	0.235	0.144	0.090	0.059	0.041	0.034
59	RHS-SH	208.263	30.9	33.3	Average	40.00	0.247	0.137	0.078	0.040	0.022	0.015	0.014
60	RHS-SH	207.268	31.2	33.5	Average	40.00	0.244	0.134	0.079	0.039	0.024	0.016	0.012
61	RHS-SH	206.275	31.7	34.1	Average	40.00	0.163	0.112	0.068	0.043	0.030	0.022	0.019
62	RHS-SH	205.266	31.8	34.3	Average	40.00	0.269	0.160	0.106	0.057	0.030	0.025	0.016
63	RHS-SH	204.257	31.8	34.4	Average	40.00	0.400	0.256	0.137	0.077	0.048	0.029	0.024
64	RHS-SH	203.259	31.9	34.4	Average	40.00	0.225	0.169	0.121	0.089	0.067	0.047	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
65	RHS-SH	202.258	31.9	34.5	Average	40.00	0.275	0.212	0.138	0.094	0.065	0.056	0.035
66	RHS-SH	201.256	32.0	34.6	Average	40.00	0.314	0.239	0.155	0.109	0.080	0.057	0.043
67	RHS-SH	200.268	32.0	34.6	Average	40.00	0.272	0.192	0.113	0.077	0.055	0.040	0.031
68	RHS-SH	199.256	32.1	34.6	Average	40.00	0.391	0.260	0.141	0.079	0.051	0.036	0.023
69	RHS-SH	198.260	32.1	34.7	Average	40.00	0.276	0.208	0.132	0.087	0.060	0.042	0.029
70	RHS-SH	197.266	32.2	34.7	Average	40.00	0.275	0.194	0.129	0.087	0.060	0.046	0.039
71	RHS-SH	196.269	32.2	34.8	Average	40.00	0.335	0.220	0.119	0.074	0.048	0.034	0.023
72	RHS-SH	195.252	32.6	34.9	Average	40.00	0.203	0.148	0.096	0.067	0.050	0.037	0.029
73	RHS-SH	194.259	32.9	35.2	Average	40.00	0.192	0.126	0.090	0.053	0.031	0.018	0.012
74	RHS-SH	193.273	33.1	35.5	Average	40.00	0.343	0.234	0.143	0.094	0.065	0.044	0.033
75	RHS-SH	192.254	33.4	35.6	Average	40.00	0.225	0.173	0.123	0.091	0.069	0.049	0.041
76	RHS-SH	191.259	33.6	35.7	Average	40.00	0.179	0.106	0.064	0.047	0.037	0.029	0.026
77	RHS-SH	190.263	33.7	35.9	Average	40.00	0.435	0.286	0.169	0.105	0.071	0.052	0.043
78	RHS-SH	179.268	34.8	36.5	Average	40.00	0.180	0.124	0.073	0.043	0.026	0.018	0.013
79	RHS-SH	178.267	34.8	36.5	Average	40.00	0.251	0.172	0.116	0.067	0.045	0.032	0.030
80	RHS-SH	177.266	34.9	36.7	Average	40.00	0.233	0.171	0.114	0.076	0.052	0.038	0.030
81	RHS-SH	176.266	35.0	36.8	Average	40.00	0.321	0.210	0.126	0.078	0.054	0.038	0.032
82	RHS-SH	175.273	35.0	37.0	Average	40.00	0.240	0.176	0.117	0.078	0.054	0.040	0.031
83	RHS-SH	174.267	35.1	37.3	Average	40.00	0.299	0.171	0.096	0.060	0.042	0.029	0.026
84	RHS-SH	173.260	36.3	38.1	Average	40.00	0.346	0.235	0.131	0.081	0.057	0.039	0.032
85	RHS-SH	172.259	36.3	37.9	Average	40.00	0.338	0.250	0.159	0.104	0.071	0.048	0.038
86	RHS-SH	170.269	36.2	37.8	Average	40.00	0.186	0.128	0.089	0.056	0.038	0.029	0.024
87	RHS-SH	169.256	36.2	37.7	Average	40.00	0.205	0.139	0.112	0.076	0.059	0.039	0.023
88	RHS-SH	167.269	36.2	37.5	Average	40.00	0.167	0.116	0.074	0.048	0.034	0.026	0.022
89	RHS-SH	166.256	36.2	37.3	Average	40.00	0.231	0.168	0.110	0.077	0.056	0.040	0.031
90	RHS-SH	165.275	36.1	37.3	Average	40.00	0.570	0.383	0.209	0.122	0.076	0.050	0.037

S. No.	Side	Chainage	Air Temperature ˚C	Pavement Temperature ˚C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
91	RHS-SH	164.269	36.1	37.2	Average	40.00	0.160	0.108	0.087	0.054	0.042	0.028	0.022
92	RHS-SH	163.258	35.5	37.0	Average	40.00	0.198	0.122	0.066	0.038	0.026	0.020	0.016
93	RHS-SH	162.256	34.9	36.8	Average	40.00	0.146	0.086	0.043	0.022	0.018	0.016	0.012
94	RHS-SH	160.259	33.7	36.4	Average	40.00	0.191	0.138	0.084	0.052	0.035	0.026	0.023
95	RHS-SH	159.267	33.2	36.3	Average	40.00	0.199	0.162	0.122	0.084	0.057	0.042	0.033
96	RHS-SH	158.254	33.0	35.9	Average	40.00	0.216	0.158	0.094	0.056	0.034	0.030	0.016
97	RHS-SH	157.259	32.8	35.7	Average	40.00	0.209	0.129	0.065	0.035	0.022	0.015	0.012
98	RHS-SH	156.273	32.2	35.4	Average	40.00	0.287	0.169	0.111	0.057	0.027	0.020	0.014
99	RHS-SH	155.266	31.9	35.2	Average	40.00	0.208	0.122	0.075	0.037	0.033	0.019	0.014
100	RHS-SH	154.260	31.8	35.1	Average	40.00	0.257	0.184	0.143	0.095	0.068	0.054	0.030
101	RHS-SH	153.267	31.8	34.9	Average	40.00	0.231	0.150	0.086	0.054	0.035	0.027	0.024
102	RHS-SH	152.257	31.6	34.7	Average	40.00	0.255	0.182	0.112	0.075	0.052	0.037	0.029
103	RHS-SH	151.269	31.5	34.7	Average	40.00	0.226	0.162	0.121	0.081	0.058	0.040	0.031
104	RHS-SH	150.273	30.6	34.1	Average	40.00	0.247	0.162	0.119	0.076	0.034	0.031	0.023
105	RHS-SH	149.260	30.3	33.8	Average	40.00	0.208	0.147	0.084	0.054	0.031	0.020	0.014
106	RHS-SH	148.270	30.1	33.6	Average	40.00	0.257	0.188	0.144	0.096	0.060	0.045	0.030

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: LHS SR

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	LHS-SR	166.190	30.6	32.6	Average	40.00	0.470	0.461	0.219	0.127	0.087	0.049	0.046
2	LHS-SR	166.705	30.9	32.7	Average	40.00	0.483	0.469	0.233	0.127	0.081	0.057	0.053
3	LHS-SR	167.690	31.1	32.8	Average	40.00	0.494	0.487	0.205	0.123	0.085	0.060	0.059
4	LHS-SR	169.050	30.8	32.9	Average	40.00	0.505	0.291	0.171	0.106	0.075	0.046	0.042
5	LHS-SR	169.501	30.5	33.2	Average	40.00	0.472	0.287	0.153	0.103	0.072	0.051	0.050
6	LHS-SR	170.002	30.3	33.4	Average	40.00	0.373	0.210	0.098	0.061	0.046	0.032	0.029
7	LHS-SR	170.506	30.5	33.4	Average	40.00	0.433	0.217	0.103	0.063	0.050	0.037	0.031
8	LHS-SR	171.150	30.8	33.5	Average	40.00	0.394	0.213	0.097	0.062	0.047	0.033	0.022
9	LHS-SR	172.351	31.7	33.6	Average	40.00	0.580	0.488	0.197	0.091	0.064	0.048	0.041
10	LHS-SR	172.854	31.9	33.7	Average	40.00	0.481	0.222	0.123	0.082	0.060	0.044	0.040
11	LHS-SR	173.355	32.1	33.9	Average	40.00	0.505	0.289	0.151	0.092	0.063	0.045	0.034
12	LHS-SR	173.700	32.2	34.0	Average	40.00	0.516	0.309	0.142	0.078	0.053	0.029	0.027
13	LHS-SR	174.475	32.5	34.1	Average	40.00	0.414	0.340	0.157	0.080	0.052	0.038	0.027
14	LHS-SR	175.000	32.2	34.1	Average	40.00	0.421	0.337	0.153	0.082	0.051	0.034	0.033
15	LHS-SR	175.516	32.1	34.6	Average	40.00	0.416	0.368	0.145	0.076	0.053	0.035	0.034
16	LHS-SR	176.000	31.8	34.7	Average	40.00	0.449	0.360	0.145	0.077	0.052	0.048	0.047
17	LHS-SR	176.507	32.1	35.0	Average	40.00	0.515	0.336	0.140	0.072	0.048	0.024	0.023
18	LHS-SR	176.800	31.3	35.1	Average	40.00	0.565	0.337	0.144	0.073	0.049	0.041	0.037
19	LHS-SR	190.400	34.1	35.7	Average	40.00	0.665	0.599	0.306	0.162	0.104	0.053	0.051
20	LHS-SR	191.000	34.2	35.8	Average	40.00	0.668	0.604	0.267	0.125	0.076	0.043	0.039
21	LHS-SR	191.540	34.0	36.2	Average	40.00	0.565	0.421	0.206	0.118	0.076	0.046	0.043
22	LHS-SR	204.810	35.2	36.4	Average	40.00	0.300	0.223	0.133	0.086	0.062	0.037	0.035

23	LHS-SR	205.321	35.1	36.4	Average	40.00	0.300	0.224	0.133	0.088	0.062	0.039	0.037
24	LHS-SR	205.410	35.1	36.5	Average	40.00	0.286	0.213	0.133	0.088	0.065	0.049	0.041
25	LHS-SR	245.550	37.1	35.2	Average	40.00	0.316	0.205	0.106	0.061	0.040	0.027	0.025
26	LHS-SR	246.000	37.4	35.1	Average	40.00	0.195	0.162	0.090	0.069	0.050	0.028	0.025
27	LHS-SR	246.401	36.6	35.0	Average	40.00	0.173	0.140	0.111	0.074	0.060	0.032	0.029
28	LHS-SR	250.702	36.0	34.9	Average	40.00	0.551	0.329	0.291	0.149	0.100	0.037	0.036
29	LHS-SR	251.039	36.0	34.2	Average	40.00	0.541	0.358	0.194	0.114	0.071	0.045	0.034
30	LHS-SR	251.300	36.1	33.5	Average	40.00	0.703	0.424	0.176	0.087	0.055	0.037	0.025

Annexure 2 : Pavement Deflection Data

Project Name:- Independent assessment of operating and maintenance requirements and major maintenance requirement - Moradabad Bareilly Expressway Limited

Name of the Road: Moradabad to Bareilly **Date and Time of the Observation:** 27/04/2023 to 30/04/2023

Section: RHS SR

No of lanes: 4 Lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
1	RHS-SR	251.300	35.1	33.5	Average	40.00	0.331	0.154	0.057	0.038	0.031	0.022	0.019
2	RHS-SR	251.001	34.9	33.5	Average	40.00	0.538	0.305	0.138	0.078	0.057	0.038	0.030
3	RHS-SR	250.700	34.9	33.5	Average	40.00	0.673	0.497	0.221	0.113	0.076	0.050	0.039
4	RHS-SR	246.400	33.8	33.4	Average	40.00	0.406	0.250	0.115	0.068	0.051	0.029	0.028
5	RHS-SR	246.000	33.1	33.3	Average	40.00	0.640	0.408	0.190	0.099	0.062	0.039	0.029
6	RHS-SR	245.550	32.5	33.3	Average	40.00	0.570	0.334	0.155	0.088	0.057	0.034	0.028
7	RHS-SR	205.410	30.3	32.1	Average	40.00	0.661	0.401	0.294	0.161	0.106	0.055	0.051
8	RHS-SR	205.002	29.9	32.1	Average	40.00	0.679	0.475	0.300	0.158	0.107	0.039	0.035
9	RHS-SR	191.540	30.4	31.4	Average	40.00	0.505	0.356	0.212	0.125	0.098	0.048	0.047
10	RHS-SR	191.034	30.4	31.3	Average	40.00	0.754	0.503	0.249	0.141	0.100	0.053	0.048
11	RHS-SR	190.401	30.4	31.3	Average	40.00	0.166	0.125	0.086	0.061	0.046	0.033	0.028
12	RHS-SR	176.800	29.3	30.6	Average	40.00	0.426	0.245	0.120	0.077	0.057	0.040	0.038
13	RHS-SR	176.507	29.4	30.6	Average	40.00	0.572	0.358	0.131	0.074	0.055	0.035	0.035
14	RHS-SR	176.047	29.8	30.6	Average	40.00	0.265	0.194	0.118	0.077	0.055	0.041	0.035
15	RHS-SR	175.509	29.6	30.5	Average	40.00	0.252	0.163	0.085	0.051	0.037	0.028	0.025
16	RHS-SR	175.001	29.2	30.5	Average	40.00	0.436	0.271	0.140	0.080	0.053	0.039	0.032
17	RHS-SR	174.477	29.0	30.5	Average	40.00	0.487	0.293	0.132	0.071	0.048	0.035	0.026
18	RHS-SR	173.700	28.9	30.4	Average	40.00	0.480	0.330	0.177	0.103	0.070	0.049	0.043
19	RHS-SR	173.532	28.7	30.4	Average	40.00	0.449	0.392	0.179	0.093	0.059	0.033	0.031
20	RHS-SR	173.009	29.0	30.4	Average	40.00	0.517	0.425	0.186	0.098	0.060	0.034	0.032
21	RHS-SR	172.503	29.1	30.4	Average	40.00	0.435	0.382	0.164	0.085	0.060	0.033	0.032
22	RHS-SR	172.359	29.0	30.2	Average	40.00	0.315	0.177	0.079	0.050	0.042	0.031	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of						
							0	300	600	900	1200	1500	1800
23	RHS-SR	171.150	28.6	30.2	Average	40.00	0.670	0.482	0.237	0.137	0.092	0.056	0.054
24	RHS-SR	170.500	27.5	30.2	Average	40.00	0.587	0.388	0.202	0.135	0.101	0.071	0.066
25	RHS-SR	170.000	27.3	30.1	Average	40.00	0.359	0.227	0.114	0.067	0.049	0.037	0.030
26	RHS-SR	169.503	27.6	30.1	Average	40.00	0.681	0.506	0.311	0.184	0.110	0.064	0.044
27	RHS-SR	169.051	27.1	30.1	Average	40.00	0.584	0.415	0.233	0.139	0.088	0.055	0.039
28	RHS-SR	167.690	28.0	30.0	Average	40.00	0.642	0.453	0.225	0.123	0.081	0.057	0.046
29	RHS-SR	167.500	27.6	29.9	Average	40.00	0.589	0.407	0.375	0.172	0.095	0.055	0.035
30	RHS-SR	167.006	27.8	29.9	Average	40.00	0.481	0.365	0.285	0.158	0.103	0.052	0.050
31	RHS-SR	166.497	27.7	29.8	Average	40.00	0.557	0.471	0.378	0.165	0.097	0.041	0.032
32	RHS-SR	166.190	27.7	29.8	Average	40.00	0.559	0.386	0.170	0.104	0.075	0.039	0.036

Annexures 3: Asset inventory and condition details

Annexure 3(a) : Details of Sign Board

S.No	Chainage	Side	Signage
1	148.000	LHS	Merging Sign
2	148.000	LHS	Merging Sign
3	148.100	RHS	Two Way Hazard Marker
4	148.100	RHS	Two Way Hazard Marker
5	148.130	RHS	Speed Limit
6	148.130	RHS	Speed Limit
7	148.200	BS	Gantry Overhead Sign
8	148.210	LHS	Object Hazard Marker
9	148.210	LHS	Object Hazard Marker
10	148.310	RHS	Cantilever
11	148.780	LHS/Median	Object Hazard Marker
12	148.780	RHS	Object Hazard Marker
13	148.780	LHS/Median	Object Hazard Marker
14	148.780	RHS	Object Hazard Marker
15	148.900	RHS	Diverging Sign
16	148.900	RHS	Diverging Sign
17	149.320	Median	Helpline
18	149.670	RHS	Object Hazard Marker
19	149.670	RHS	Object Hazard Marker
20	149.680	LHS/Median	Object Hazard Marker
21	149.680	LHS/Median	Object Hazard Marker
22	150.000	RHS	Object Hazard Marker
23	150.000	RHS	Object Hazard Marker
24	150.380	LHS	Ah Rout Marker Sign
25	150.380	LHS	Ah Rout Marker Sign
26	150.410	RHS	Nh Rout Marker Sign
27	150.410	RHS	Nh Rout Marker Sign
28	150.420	Median	Gap In Median
29	150.420	Median	Gap In Median
30	150.430	LHS	Ginnor Deh Mafi
31	150.540	Median	Solar Based Beacons/Flashing Signals
32	150.545	Median	Keep Left With Hazzard Marker
33	150.545	Median	Keep Left With Hazzard Marker
34	150.575	Median	Keep Left With Hazzard Marker
35	150.575	Median	Keep Left With Hazzard Marker
36	150.580	Median	Solar Based Beacons/Flashing Signals
37	150.580	Median	Solar Based Beacons/Flashing Signals
38	150.685	Median	Gap In Median
39	150.685	Median	Gap In Median
40	150.820	Median	Cluster Of Red Reflector
41	150.820	Median	Cluster Of Red Reflector
42	150.860	RHS	Side Road Left
43	150.860	RHS	Side Road Left
44	150.940	LHS	Petrol Pump
45	150.940	RHS	Ginnor Deh Mafi
46	150.940	LHS	Petrol Pump
47	151.100	RHS	Side Road Left
48	151.100	RHS	Side Road Left
49	151.105	Median	Cluster Of Red Reflector
50	151.105	Median	Cluster Of Red Reflector
51	151.125	Median	Cluster Of Red Reflector
52	151.125	Median	Cluster Of Red Reflector
53	151.510	LHS	Petrol Pump
54	151.510	LHS	Petrol Pump
55	151.950	LHS	Right Hand Curve

S.No	Chainage	Side	Signage
56	151.950	LHS	Right Hand Curve
57	152.000	RHS	Gap In Median
58	152.000	RHS	Gap In Median
59	152.100	Median	Solar Based Beacons/Flashing Signals
60	152.100	Median	Solar Based Beacons/Flashing Signals
61	152.105	Median	Keep Left With Hazzard Marker
62	152.105	Median	Keep Left With Hazzard Marker
63	152.130	Median	Keep Left With Hazzard Marker
64	152.130	Median	Keep Left With Hazzard Marker
65	152.135	Median	Solar Based Beacons/Flashing Signals
66	152.135	Median	Solar Based Beacons/Flashing Signals
67	152.180		Chevron
68	152.180		Chevron
69	152.185	Median	Chevron
70	152.185	Median	Chevron
71	152.190	RHS	Nanakbari
72	152.230	RHS	Left Hand Curve
73	152.230	RHS	Left Hand Curve
74	152.250	Median	Gap In Median
75	152.250	RHS	Side Road Left
76	152.250	Median	Gap In Median
77	152.250	RHS	Side Road Left
78	152.804	RHS	Mahmoodpur
79	152.960	RHS	Side Road Left
80	152.960	RHS	Side Road Left
81	153.210	RHS	Object Hazard Marker
82	153.210	LHS/RHS	Object Hazard Marker
83	153.210	RHS	Object Hazard Marker
84	153.210	LHS/RHS	Object Hazard Marker
85	153.800	Median	Helpline
86	153.810	RHS	Object Hazard Marker
87	153.810	RHS	Object Hazard Marker
88	154.250	LHS	Object Hazard Marker
89	154.250	LHS	Object Hazard Marker
90	155.000	Median	Solar Based Beacons/Flashing Signals
91	155.000	Median	Solar Based Beacons/Flashing Signals
92	155.040	Median	Gap In Median
93	155.040	Median	Gap In Median
94	155.060	LHS	Y- Intersection Left
95	155.060	LHS	Y- Intersection Left
96	155.130	Median	Solar Based Beacons/Flashing Signals
97	155.130	Median	Solar Based Beacons/Flashing Signals
98	155.170	Median	Cluster Of Red Reflector
99	155.170	LHS	Sambhal Aligarh
100	155.170	Median	Cluster Of Red Reflector
101	155.200	Median	Keep Left With Hazzard Marker
102	155.200	Median	Keep Left With Hazzard Marker
103	155.210		Keep Left With Hazzard Marker
104	155.210		Keep Left With Hazzard Marker
105	155.280	RHS	Moradabad
106	155.340	Median	Gap In Median
107	155.340	Median	Gap In Median
108	155.480	RHS	Ah Rout Marker Sign
109	155.480	RHS	Ah Rout Marker Sign
110	155.510	LHS	Nh Rout Marker Sign
111	155.510	LHS	Nh Rout Marker Sign

S.No	Chainage	Side	Signage
112	155.590	LHS/RHS	Object Hazard Marker
113	155.590	LHS/RHS	Object Hazard Marker
114	155.600	LHS/Median	Object Hazard Marker
115	155.600	LHS/Median	Object Hazard Marker
116	155.620	LHS/RHS	Object Hazard Marker
117	155.620	LHS/RHS	Object Hazard Marker
118	156.250	LHS/ RHS	Object Hazard Marker
119	156.250	LHS/ RHS	Object Hazard Marker
120	156.485	LHS	Merging Sign
121	156.485	LHS	Merging Sign
122	156.490	RHS	Merging Sign
123	156.490	RHS	Merging Sign
124	156.720	RHS	Direction Sign, Aligarh Chandausi
125	156.770	RHS	Y- Intersection Left
126	156.770	RHS	Y- Intersection Left
127	157.070	LHS/RHS	Object Hazard Marker
128	157.070	LHS/RHS	Object Hazard Marker
129	157.080	Median	Object Hazard Marker
130	157.080	Median	Object Hazard Marker
131	157.300	LHS	Object Hazard Marker
132	157.300	LHS	Object Hazard Marker
133	157.380	RHS	Object Hazard Marker
134	157.380	RHS	Object Hazard Marker
135	157.640	LHS	Object Hazard Marker
136	157.640	LHS	Object Hazard Marker
137	157.760	RHS	Object Hazard Marker
138	157.760	RHS	Object Hazard Marker
139	158.400	LHS/RHS	Object Hazard Marker
140	158.400	LHS/RHS	Object Hazard Marker
141	158.600	Median	Helpline
142	158.905	Median	Cluster Of Red Reflector
143	158.905	Median	Cluster Of Red Reflector
144	158.950	Median	Solar Based Beacons/Flashing Signals
145	158.950	Median	Solar Based Beacons/Flashing Signals
146	159.080	Median	Gap In Median
147	159.080	Median	Gap In Median
148	159.190	Median	Keep Left With Hazzard Marker
149	159.190	Median	Keep Left With Hazzard Marker
150	159.215	Median	Keep Left With Hazzard Marker
151	159.215	Median	Keep Left With Hazzard Marker
152	159.310	Median	Solar Based Beacons/Flashing Signals
153	159.310	Median	Solar Based Beacons/Flashing Signals
154	159.320	Median	Gap In Median
155	159.320	Median	Gap In Median
156	159.440	LHS/RHS	Object Hazard Marker
157	159.440	LHS/RHS	Object Hazard Marker
158	159.460	Median	Object Hazard Marker
159	159.460	Median	Object Hazard Marker
160	159.500	LHS/RHS	Object Hazard Marker
161	159.500	RHS/ Median	Object Hazard Marker
162	159.500	LHS/RHS	Object Hazard Marker
163	159.500	RHS/ Median	Object Hazard Marker
164	159.660	LHS	Object Hazard Marker
165	159.660	LHS	Object Hazard Marker
166	159.720	LHS	Object Hazard Marker
167	159.720	LHS	Object Hazard Marker

S.No	Chainage	Side	Signage
168	159.730	Median	Object Hazard Marker
169	159.730	Median	Object Hazard Marker
170	159.740	RHS	Object Hazard Marker
171	159.740	RHS	Object Hazard Marker
172	159.800	RHS	Object Hazard Marker
173	159.800	RHS	Object Hazard Marker
174	159.820	Median	Object Hazard Marker
175	159.820	Median	Object Hazard Marker
176	160.250	RHS	Nh Rout Marker Sign
177	160.250	RHS	Nh Rout Marker Sign
178	160.500	LHS	Ah Rout Marker Sign
179	160.500	LHS	Ah Rout Marker Sign
180	160.520	LHS/RHS	Object Hazard Marker
181	160.520	LHS/RHS	Object Hazard Marker
182	160.560	Median	Object Hazard Marker
183	160.560	LHS	Object Hazard Marker
184	160.560	Median	Object Hazard Marker
185	160.560	LHS	Object Hazard Marker
186	160.580	Median	Object Hazard Marker
187	160.580	RHS	Object Hazard Marker
188	160.580	Median	Object Hazard Marker
189	160.580	RHS	Object Hazard Marker
190	161.015	LHS Median	Object Hazard Marker
191	161.015	LHS Median	Object Hazard Marker
192	161.020	LHS/RHS	Object Hazard Marker
193	161.020	LHS/RHS	Object Hazard Marker
194	161.660	RHS	Object Hazard Marker
195	161.660	RHS	Object Hazard Marker
196	161.670	RHS/Median	Object Hazard Marker
197	161.670	RHS/Median	Object Hazard Marker
198	161.680	Median	Object Hazard Marker
199	161.680	Median	Object Hazard Marker
200	162.820	LHS/RHS	Object Hazard Marker
201	162.820	LHS/RHS	Object Hazard Marker
202	163.030	Median	Gap In Median
203	163.030	Median	Gap In Median
204	163.160	Median	Solar Based Beacons/Flashing Signals
205	163.160	Median	Solar Based Beacons/Flashing Signals
206	163.185	Median	Keep Left With Hazzard Marker
207	163.185	Median	Keep Left With Hazzard Marker
208	163.190	Median	Cluster Of Red Reflector
209	163.190		Keep Left With Hazzard Marker
210	163.190	Median	Cluster Of Red Reflector
211	163.190		Keep Left With Hazzard Marker
212	163.195	Median	Solar Based Beacons/Flashing Signals
213	163.195	Median	Solar Based Beacons/Flashing Signals
214	163.370	Median	Gap In Median
215	163.370	Median	Gap In Median
216	163.950	Median	Helpline
217	164.020	LHS/Median	Object Hazard Marker
218	164.020	LHS/Median	Object Hazard Marker
219	164.080	RHS/Median	Object Hazard Marker
220	164.080	RHS/Median	Object Hazard Marker
221	164.950	RHS	Ah Rout Marker Sign
222	164.950	RHS	Ah Rout Marker Sign
223	165.000	LHS	Nh Rout Marker Sign

S.No	Chainage	Side	Signage
224	165.000	LHS	Nh Rout Marker Sign
225	165.350	LHS/Median	Object Hazard Marker
226	165.350	LHS/Median	Object Hazard Marker
227	165.470	RHS/Median	Object Hazard Marker
228	165.470	Median	Object Hazard Marker
229	165.470	RHS/Median	Object Hazard Marker
230	165.470	Median	Object Hazard Marker
231	165.500	LHS	Lucknow 340, Kashipur 58, Rampur20
232	165.610	LHS	Chevron
233	165.610	LHS	Chevron
234	165.650	LHS	Right Hand Curve
235	165.650	LHS	Right Hand Curve
236	165.770	Median	Solar Based Beacons/Flashing Signals
237	165.770	Median	Solar Based Beacons/Flashing Signals
238	165.810	Median	Gap In Median
239	165.810	Median	Gap In Median
240	165.860	LHS	Two Way Hazard Marker
241	165.860	LHS	Two Way Hazard Marker
242	165.865	Median	Keep Left With Hazzard Marker
243	165.865	Median	Keep Left With Hazzard Marker
244	165.880	LHS	Keep Left With Hazzard Marker
245	165.880	LHS	Keep Left With Hazzard Marker
246	165.890	LHS	Keep Left With Hazzard Marker
247	165.890	LHS	Keep Left With Hazzard Marker
248	165.900	LHS	Two Way Hazard Marker
249	165.900	LHS	Two Way Hazard Marker
250	165.905	Median	Keep Left With Hazzard Marker
251	165.905	Median	Keep Left With Hazzard Marker
252	165.940	LHS	Speed Limit
253	165.940	LHS	Speed Limit
254	165.980	LHS	Stop
255	165.980	LHS	Stop
256	166.000	Median	Solar Based Beacons/Flashing Signals
257	166.000	Median	Solar Based Beacons/Flashing Signals
258	166.010	LHS	Side Road Left
259	166.010	LHS	Side Road Left
260	166.025	Median	Gap In Median
261	166.025	Median	Gap In Median
262	166.070	Median	Chevron
263	166.070	Median	Chevron
264	166.080	LHS	Merging Sign
265	166.080	LHS	Merging Sign
266	166.120	RHS	Left Hand Curve
267	166.120	RHS	Left Hand Curve
268	166.140	LHS	Diverging Sign
269	166.140	LHS	Diverging Sign
270	166.150	LHS	Two Way Hazard Marker
271	166.150	LHS	Two Way Hazard Marker
272	166.200	LHS	Kakarghata
273	166.200	RHS	Laxmipur Katai
274	166.240	RHS	Delhi 167, Kashipur 58, Moradabad 09
275	166.300	RHS	Merging Sign
276	166.300	RHS	Merging Sign
277	166.350	LHS	Two Way Hazard Marker
278	166.350	LHS	Two Way Hazard Marker
279	166.390	RHS	Petrol Pump

S.No	Chainage	Side	Signage
280	166.390	RHS	Petrol Pump
281	166.400	Median	Keep Left With Hazzard Marker
282	166.400	LHS	Eating Place
283	166.400	Median	Keep Left With Hazzard Marker
284	166.400	LHS	Eating Place
285	166.401	Median	Cluster Of Red Reflector
286	166.401	Median	Cluster Of Red Reflector
287	166.510	LHS	Bus Stop
288	166.510	LHS	Bus Stop
289	166.540	LHS	Pedestrian Crossing
290	166.540	LHS	Pedestrian Crossing
291	166.650	RHS	Bus Stop
292	166.650	RHS	Bus Stop
293	166.700	RHS	Pedestrian Crossing
294	166.700	RHS	Pedestrian Crossing
295	166.920	RHS	Petrol Pump
296	166.920	RHS	Petrol Pump
297	166.960	RHS	Eating Place
298	166.960	RHS	Eating Place
299	167.600	LHS	Merging Sign
300	167.600	LHS	Merging Sign
301	167.690		Object Hazard Marker
302	167.690		Object Hazard Marker
303	167.850	RHS	Speed Limit
304	167.850	RHS	Speed Limit
305	167.890	RHS	Two Way Hazard Marker
306	167.890	RHS	Two Way Hazard Marker
307	167.910	Median	Gap In Median
308	167.910	Median	Gap In Median
309	167.959	RHS	Diverging Sign
310	167.959	RHS	Diverging Sign
311	168.000	LHS	Cross Road
312	168.000	LHS	Cross Road
313	168.025	Median	Solar Based Beacons/Flashing Signals
314	168.025	Median	Solar Based Beacons/Flashing Signals
315	168.030	Median	Keep Left With Hazzard Marker
316	168.030	Median	Keep Left With Hazzard Marker
317	168.050	Median	Cluster Of Red Reflector
318	168.050	Median	Cluster Of Red Reflector
319	168.060	Median	Keep Left With Hazzard Marker
320	168.060	Median	Keep Left With Hazzard Marker
321	168.065	Median	Solar Based Beacons/Flashing Signals
322	168.065	Median	Solar Based Beacons/Flashing Signals
323	168.080	LHS/RHS	Object Hazard Marker
324	168.080	LHS/RHS	Object Hazard Marker
325	168.120	RHS	Cross Road
326	168.120	RHS	Cross Road
327	168.180	LHS	School
328	168.180	RHS	Gap In Median
329	168.180	LHS	School
330	168.180	RHS	Gap In Median
331	168.350	RHS	Pedestrian Crossing
332	168.350	RHS	Pedestrian Crossing
333	168.400	LHS	School
334	168.400	LHS	School
335	168.410	RHS	School

S.No	Chainage	Side	Signage
336	168.410	LHS	Object Hazard Marker
337	168.410	RHS	School
338	168.410	LHS	Object Hazard Marker
339	168.520	RHS	Object Hazard Marker
340	168.520	RHS	Object Hazard Marker
341	168.680	LHS	Diverging Sign
342	168.680	LHS	Diverging Sign
343	168.720	LHS	Speed Limit
344	168.720	RHS	Speed Limit
345	168.720	LHS	Speed Limit
346	168.720	RHS	Speed Limit
347	168.750	LHS	Place Identification Sign Dalpatpur
348	169.000	LHS	Two Way Hazard Marker
349	169.000	LHS	Two Way Hazard Marker
350	169.020	RHS	Merging Sign
351	169.020	RHS	Merging Sign
352	169.080	LHS	Side Road Left
353	169.080	LHS	Side Road Left
354	169.100	RHS	School
355	169.100	RHS	School
356	169.130	LHS/RHS	Object Hazard Marker
357	169.130	LHS	Direction Sign Bajpur
358	169.130	LHS/RHS	Object Hazard Marker
359	169.390	LHS	Police Station
360	169.390	LHS	Police Station
361	169.640	LHS	Petrol Pump
362	169.640	LHS	Petrol Pump
363	169.790	LHS/RHS	Object Hazard Marker
364	169.790	LHS/RHS	Object Hazard Marker
365	169.880	LHS	Merging Sign
366	169.880	LHS	Merging Sign
367	169.890	LHS	Bus Stop
368	169.890	LHS	Bus Stop
369	169.920	RHS	Two Way Hazard Marker
370	169.920	RHS	Two Way Hazard Marker
371	169.930	LHS	Pedestrian Crossing
372	169.930	LHS	Pedestrian Crossing
373	170.030	RHS	Diverging Sign
374	170.030	RHS	Diverging Sign
375	170.090	RHS	Pedestrian Crossing
376	170.090	RHS	Pedestrian Crossing
377	170.130	RHS	Bus Stop
378	170.130	RHS	Bus Stop
379	170.180	RHS	Speed Limit
380	170.180	RHS	Speed Limit
381	170.420	LHS	Ah Rout Marker Sign
382	170.420	LHS	Ah Rout Marker Sign
383	170.440	RHS	Nh Rout Marker Sign
384	170.440	RHS	Nh Rout Marker Sign
385	170.510	LHS	Petrol Pump
386	170.510	LHS	Petrol Pump
387	170.660	RHS	Police Station
388	170.660	RHS	Police Station
389	170.820	Median	Helpline
390	171.040	LHS	Side Road Left
391	171.040	LHS	Side Road Left

S.No	Chainage	Side	Signage
392	171.090	LHS	Direction Sign Siraskhera
393	171.260	LHS/RHS	Object Hazard Marker
394	171.260	LHS/RHS	Object Hazard Marker
395	171.490	LHS/RHS	Object Hazard Marker
396	171.490	LHS/RHS	Object Hazard Marker
397	171.500	Median	Keep Left With Hazzard Marker
398	171.500	Median	Cluster Of Red Reflector
399	171.500	Median	Keep Left With Hazzard Marker
400	171.500	Median	Cluster Of Red Reflector
401	171.800	LHS	Speed Limit
402	171.800	LHS	Speed Limit
403	171.920	LHS	Diverging Sign
404	171.920	LHS	Diverging Sign
405	171.950	Median	Keep Left With Hazzard Marker
406	171.950	Median	Cluster Of Red Reflector
407	171.950	Median	Keep Left With Hazzard Marker
408	171.950	Median	Cluster Of Red Reflector
409	171.960	Median	Object Hazard Marker
410	171.960	LHS	Place Identification Sign Niyamatpur
411	171.960	Median	Object Hazard Marker
412	172.000	LHS	Two Way Hazard Marker
413	172.000	LHS	Two Way Hazard Marker
414	172.040	RHS	Merging Sign
415	172.040	RHS	Merging Sign
416	172.140	LHS/RHS	Object Hazard Marker
417	172.140	LHS/RHS	Object Hazard Marker
418	172.390	LHS	School
419	172.390	LHS	School
420	172.450	LHS/RHS	Object Hazard Marker
421	172.450	LHS/RHS	Object Hazard Marker
422	172.670	RHS	School
423	172.670	RHS	School
424	172.920	LHS	Bus Stop
425	172.920	LHS	Bus Stop
426	172.940	RHS	Merging Sign
427	172.940	RHS	Merging Sign
428	172.970	LHS/RHS	Two Way Hazard Marker
429	172.970	LHS	Pedestrian Crossing
430	172.970	LHS/RHS	Two Way Hazard Marker
431	172.970	LHS	Pedestrian Crossing
432	172.980	RHS	Petrol Pump
433	172.980	RHS	Petrol Pump
434	173.030	RHS	Pedestrian Crossing
435	173.030	RHS	Pedestrian Crossing
436	173.070	RHS	Bus Stop
437	173.070	RHS	Bus Stop
438	173.100	RHS	Place Identification Sign Niyamatpur
439	173.175	RHS	Diverging Sign
440	173.175	RHS	Diverging Sign
441	173.220	RHS	Speed Limit
442	173.220	RHS	Speed Limit
443	173.400	Median	Gap In Median
444	173.400	Median	Gap In Median
445	173.460	LHS	Side Road Left
446	173.460	LHS	Side Road Left
447	173.480	RHS	Side Road Left

S.No	Chainage	Side	Signage
448	173.480	RHS	Side Road Left
449	173.480	RHS	Direction Sign Deolari
450	173.500	Median	Solar Based Beacons/Flashing Signals
451	173.500	Median	Solar Based Beacons/Flashing Signals
452	173.505	Median	Keep Left With Hazzard Marker
453	173.505	Median	Cluster Of Red Reflector
454	173.505	LHS	Direction Sign Bhadasna
455	173.505	Median	Keep Left With Hazzard Marker
456	173.505	Median	Cluster Of Red Reflector
457	173.550	Median	Keep Left With Hazzard Marker
458	173.550	Median	Keep Left With Hazzard Marker
459	173.555	Median	Solar Based Beacons/Flashing Signals
460	173.555	Median	Solar Based Beacons/Flashing Signals
461	173.720	Median	Gap In Median
462	173.720	Median	Gap In Median
463	173.730	LHS	Speed Limit
464	173.730	LHS	Speed Limit
465	173.770	LHS	Place Identification Sign Mundhapande
466	173.820	LHS	Diverging Sign
467	173.820	LHS	Diverging Sign
468	173.880	LHS/RHS	Object Hazard Marker
469	173.880	LHS/RHS	Object Hazard Marker
470	173.920	LHS	Two Way Hazard Marker
471	173.920	LHS	Two Way Hazard Marker
472	173.940	LHS/RHS	Object Hazard Marker
473	173.940	LHS/RHS	Object Hazard Marker
474	174.260	S.R.R.H.S	Object Hazard Marker
475	174.260	S.R.R.H.S	Object Hazard Marker
476	174.300	RHS	Merging Sign
477	174.300	RHS	Merging Sign
478	174.580	LHS/RHS	Object Hazard Marker
479	174.580	LHS/RHS	Object Hazard Marker
480	175.000		Police Station
481	175.000		Police Station
482	175.020	LHS	Pedestrian Crossing
483	175.020	LHS	Pedestrian Crossing
484	175.050	LHS	School
485	175.050	LHS	School
486	175.200		Object Hazard Marker
487	175.200		Object Hazard Marker
488	175.350	RHS	School
489	175.350	RHS	School
490	175.370	RHS	Pedestrian Crossing
491	175.370	RHS	Pedestrian Crossing
492	175.540	LHS	Bus Stop
493	175.540	LHS	Bus Stop
494	175.560	RHS	Pedestrian Crossing
495	175.560	RHS	Pedestrian Crossing
496	175.730	RHS	Bus Stop
497	175.730	RHS	Bus Stop
498	175.740	Median	Helpline
499	175.820	RHS	Pedestrian Crossing
500	175.820	RHS	Pedestrian Crossing
501	175.900	RHS	Ah Rout Marker Sign
502	175.900	RHS	Ah Rout Marker Sign
503	175.920	LHS	Nh Rout Marker Sign

S.No	Chainage	Side	Signage
504	175.920	LHS	Nh Rout Marker Sign
505	176.140	LHS	Merging Sign
506	176.140	LHS	Merging Sign
507	176.185	LHS	Direction Sign Mankara
508	176.235	RHS	Side Road Left
509	176.235	RHS	Side Road Left
510	176.240	RHS	Two Way Hazard Marker
511	176.240	RHS	Two Way Hazard Marker
512	176.400	LHS	Petrol Pump
513	176.400	LHS	Petrol Pump
514	176.430	RHS	Place Identification Sign Mundhapande
515	176.490	RHS	Diverging Sign
516	176.490	RHS	Diverging Sign
517	176.580	LHS	Side Road Left
518	176.580	LHS	Side Road Left
519	176.610	LHS	Direction Sign Sihra Baje Ki Milak
520	176.635	RHS	Petrol Pump
521	176.635	RHS	Petrol Pump
522	176.670	LHS/RHS	Object Hazard Marker
523	176.670	LHS/RHS	Object Hazard Marker
524	177.500	LHS	Side Road Left
525	177.500	LHS	Side Road Left
526	177.520	Median	Gap In Median
527	177.520	Median	Gap In Median
528	177.650	Median	Solar Based Beacons/Flashing Signals
529	177.650	Median	Solar Based Beacons/Flashing Signals
530	177.665	Median	Object Hazard Marker
531	177.665		Keep Left With Hazzard Marker
532	177.665	Median	Object Hazard Marker
533	177.665		Keep Left With Hazzard Marker
534	177.670	Median	Cluster Of Red Reflector
535	177.670	Median	Cluster Of Red Reflector
536	177.700		Keep Left With Hazzard Marker
537	177.700	Median	Solar Based Beacons/Flashing Signals
538	177.700		Keep Left With Hazzard Marker
539	177.700	Median	Solar Based Beacons/Flashing Signals
540	177.730	LHS	Pedestrian Crossing
541	177.730	LHS	Pedestrian Crossing
542	177.760	LHS	Bus Stop
543	177.760	LHS	Bus Stop
544	177.840		Gap In Median
545	177.840		Gap In Median
546	177.850	LHS	Two Way Hazard Marker
547	177.850	LHS	Two Way Hazard Marker
548	177.870	RHS	Two Way Hazard Marker
549	177.870	RHS	Two Way Hazard Marker
550	177.900	LHS/RHS	Place Identification Sign Sihora Baje
551	177.970	RHS	Bus Stop
552	177.970	RHS	Bus Stop
553	177.990	RHS	Pedestrian Crossing
554	177.990	RHS	Pedestrian Crossing
555	178.200	LHS/RHS	Object Hazard Marker
556	178.200	LHS/RHS	Object Hazard Marker
557	178.860	Median	Gap In Median
558	178.860	Median	Gap In Median
559	178.880	LHS	Cross Road

S.No	Chainage	Side	Signage
560	178.880	LHS	Cross Road
561	178.970	Median	Solar Based Beacons/Flashing Signals
562	178.970	Median	Solar Based Beacons/Flashing Signals
563	178.975	Median	Keep Left With Hazzard Marker
564	178.975	Median	Keep Left With Hazzard Marker
565	179.010	Median	Cluster Of Red Reflector
566	179.010	Median	Cluster Of Red Reflector
567	179.020	Median	Keep Left With Hazzard Marker
568	179.020	Median	Keep Left With Hazzard Marker
569	179.025	Median	Solar Based Beacons/Flashing Signals
570	179.025	Median	Solar Based Beacons/Flashing Signals
571	179.120	RHS	Cross Road
572	179.120	RHS	Cross Road
573	179.150	median	Gap In Median
574	179.150	median	Gap In Median
575	180.200	LHS	Left Hand Curve
576	180.200	LHS	Left Hand Curve
577	180.220	LHS	Nainital 112, Bareilly 74, Rampur 06
578	180.260	RHS	Nh Rout Marker Sign
579	180.260	RHS	Nh Rout Marker Sign
580	180.305	LHS	Ah Rout Marker Sign
581	180.305	LHS	Ah Rout Marker Sign
582	180.530	Median	Chevron
583	180.530	Median	Chevron
584	180.535	RHS	Chevron
585	180.535	RHS	Chevron
586	180.570	RHS	Right Hand Curve
587	180.570	LHS	Object Hazard Marker
588	180.570	RHS	Right Hand Curve
589	180.570	LHS	Object Hazard Marker
590	180.830	RHS	Narrow Road Ahead
591	180.830	RHS	Narrow Road Ahead
592	180.960	LHS/Median	Object Hazard Marker
593	180.960	LHS/Median	Object Hazard Marker
594	180.970	LHS	Gap In Median
595	180.970	LHS	Gap In Median
596	181.000	Median	Keep Left With Hazzard Marker
597	181.000	Median	Keep Left With Hazzard Marker
598	181.010	Median	Solar Based Beacons/Flashing Signals
599	181.010	Median	Solar Based Beacons/Flashing Signals
600	181.040	LHS	Keep Left With Hazzard Marker
601	181.040	LHS	Two Way Hazard Marker
602	181.040	Median	Solar Based Beacons/Flashing Signals
603	181.040	LHS	Keep Left With Hazzard Marker
604	181.040	LHS	Two Way Hazard Marker
605	181.040	Median	Solar Based Beacons/Flashing Signals
606	181.060		Helpline
607	181.100	Median	Cluster Of Red Reflector
608	181.100	Median	Keep Left With Hazzard Marker
609	181.100	LHS	Two Way Hazard Marker
610	181.100	Median	Cluster Of Red Reflector
611	181.100	Median	Keep Left With Hazzard Marker
612	181.100	LHS	Two Way Hazard Marker
613	181.120	LHS	Two Way Hazard Marker
614	181.120	LHS	Two Way Hazard Marker
615	181.140	LHS	Stop

S.No	Chainage	Side	Signage
616	181.140	LHS	Stop
617	181.280	RHS	Gap In Median
618	181.280	RHS	Gap In Median
619	181.310	RHS	Pedestrian Crossing
620	181.310	RHS	Pedestrian Crossing
621	181.360	RHS	Road Widens Ahead
622	181.360	RHS	Road Widens Ahead
623	181.470	RHS	Nainital 110, Moradabad 23, Rampur 05
624	182.110	LHS	Cross Road
625	182.110	LHS	Cross Road
626	182.230	LHS/RHS	Object Hazard Marker
627	182.230	LHS/RHS	Object Hazard Marker
628	182.300	RHS	Direction Sign,Agapur , Kosi Nadi Ghat
629	182.300	LHS	Direction Sign, Kosi Nadi Ghat Agapur ,
630	182.390	LHS	Cross Road
631	182.390	LHS	Cross Road
632	182.410	RHS	Cross Road
633	182.410	RHS	Cross Road
634	182.490	LHS/RHS	Object Hazard Marker
635	182.490	LHS/RHS	Object Hazard Marker
636	182.545	RHS	Dhaturra Meghanagla , Agapur
637	182.545	LHS	Agapur, Dhaturra Meghanagla
638	182.690	RHS	Cross Road
639	182.690	RHS	Cross Road
640	183.420	LHS/RHS	Object Hazard Marker
641	183.420	LHS/RHS	Object Hazard Marker
642	183.710	LHS/RHS	Object Hazard Marker
643	183.710	LHS/RHS	Object Hazard Marker
644	184.410	LHS	Cross Road
645	184.410	LHS	Cross Road
646	184.470	LHS	Direction Sign
647	184.553	RHS	Direction Sign,Agapur, Tikatganj
648	184.553	LHS	Direction Sign,Tikatganj , Agapur
649	184.710	RHS	Cross Road
650	184.710	RHS	Cross Road
651	184.750	LHS/RHS	Object Hazard Marker
652	184.750	LHS/RHS	Object Hazard Marker
653	184.860	LHS	Road Widens Ahead
654	184.860	LHS	Road Widens Ahead
655	185.010	LHS	Cross Road
656	185.010	LHS	Cross Road
657	185.060	LHS	Direction Sign
658	185.162	RHS	Pasiyapur Januvi , Punjabnagar
659	185.162	LHS	Punjabnagar,Pasiyapur Januvi
660	185.260	RHS	Narrow Road Ahead
661	185.260	RHS	Narrow Road Ahead
662	185.290	RHS	Cross Road
663	185.290	RHS	Cross Road
664	185.330	RHS	Direction Sign
665	185.560	LHS	Cross Road
666	185.560	LHS	Cross Road
667	185.590	LHS	Direction Sign
668	185.690	LHS	Object Hazard Marker
669	185.690	LHS	Object Hazard Marker
670	185.716	RHS	Rampur , Shahbad
671	185.716	LHS	Shahbad, Rampur

S.No	Chainage	Side	Signage
672	185.720	LHS	Object Hazard Marker
673	185.720	LHS	Object Hazard Marker
674	185.750	RHS	Object Hazard Marker
675	185.750	RHS	Object Hazard Marker
676	185.770	RHS	Object Hazard Marker
677	185.770	RHS	Object Hazard Marker
678	185.860	RHS	Cross Road
679	185.860	RHS	Cross Road
680	186.150	LHS	Narrow Road Ahead
681	186.150	LHS	Narrow Road Ahead
682	186.630	RHS	Road Widens Ahead
683	186.630	RHS	Road Widens Ahead
684	186.670	LHS/RHS	Object Hazard Marker
685	186.670	LHS/RHS	Object Hazard Marker
686	187.130	LHS/RHS	Object Hazard Marker
687	187.130	LHS/RHS	Object Hazard Marker
688	188.032	RHS	Alinagar Janoobi, Madaaiyan Ballu
689	188.032	LHS	Madaaiyan Ballu, Alinagar Janoobi
690	188.032	RHS	Alinagar Janoobi, Madaaiyan Ballu
691	188.032	LHS	Madaaiyan Ballu, Alinagar Janoobi
692	188.170	LHS/RHS	Object Hazard Marker
693	188.170	LHS/RHS	Object Hazard Marker
694	188.250	median	Chevron
695	188.250	median	Chevron
696	188.610	LHS/RHS	Object Hazard Marker
697	188.610	LHS/RHS	Object Hazard Marker
698	188.770		Nainital 110, Bareilly 64, Rampur 05
699	188.940	RHS	Road Widens Ahead
700	188.940	RHS	Road Widens Ahead
701	189.010	LHS	Right Hand Curve
702	189.010	LHS	Right Hand Curve
703	189.010	LHS	Right Hand Curve
704	189.010	LHS	Right Hand Curve
705	189.040	RHS	Narrow Road Ahead
706	189.040	RHS	Narrow Road Ahead
707	189.040	RHS	Narrow Road Ahead
708	189.040	RHS	Narrow Road Ahead
709	189.060	LHS	Gantary Overhead Sign
710	189.100		Rampur City
711	189.110	LHS	Object Hazard Marker
712	189.110	LHS	Object Hazard Marker
713	189.120	LHS/RHS	Object Hazard Marker
714	189.120	LHS/RHS	Object Hazard Marker
715	189.150	RHS	Object Hazard Marker
716	189.150	RHS	Object Hazard Marker
717	189.230	LHS	Compulsory Turn Left
718	189.230	LHS	Compulsory Turn Left
719	189.310	LHS/RHS	Object Hazard Marker
720	189.310	LHS/RHS	Object Hazard Marker
721	189.480	LHS/RHS	Object Hazard Marker
722	189.480	LHS/RHS	Object Hazard Marker
723	189.490	RHS	Left Hand Curve
724	189.490	RHS	Object Hazard Marker
725	189.490	LHS/RHS	Left Hand Curve
726	189.490	RHS	Left Hand Curve
727	189.490	RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
728	189.490	LHS/RHS	Left Hand Curve
729	189.500	SRLHS	Two Way Hazard Marker
730	189.500	SRLHS	Two Way Hazard Marker
731	189.540	RHS	Left Hand Curve
732	189.540	RHS	Left Hand Curve
733	189.540	RHS	Left Hand Curve
734	189.540	RHS	Left Hand Curve
735	189.600	LHS	Object Hazard Marker
736	189.600	LHS	Object Hazard Marker
737	189.610	LHS/RHS	Object Hazard Marker
738	189.610	LHS/RHS	Object Hazard Marker
739	189.750	LHS	Nh Rout Marker Sign
740	189.750	LHS	Nh Rout Marker Sign
741	189.780	RHS	Ah Rout Marker Sign
742	189.780	RHS	Ah Rout Marker Sign
743	189.790	LHS	Speed Limit
744	189.790	LHS	Speed Limit
745	189.810	Median	Helpline
746	189.820	LHS	Shajadnagar
747	189.822	LHS	Diverging Sign
748	189.822	LHS	Diverging Sign
749	189.870	LHS	Place Identification Sign Shajadnagar
750	190.000	LHS	Two Way Hazard Marker
751	190.000	LHS	Two Way Hazard Marker
752	190.060	RHS	Merging Sign
753	190.060	RHS	Merging Sign
754	190.080	RHS	Direction Sign, Jhutiya ,Shahjadnagar
755	190.135		Nainital, Moradabad, Rampur
756	190.295	LHS	Side Road Left
757	190.295	LHS	Side Road Left
758	190.320	RHS	Side Road Left
759	190.320	RHS	Side Road Left
760	190.360	LHS	Police Station
761	190.360	LHS	Police Station
762	190.375	RHS	Petrol Pump
763	190.375	RHS	Petrol Pump
764	190.405	LHS/RHS	Object Hazard Marker
765	190.405	RHS	Object Hazard Marker
766	190.405	LHS/RHS	Object Hazard Marker
767	190.405	RHS	Object Hazard Marker
768	190.540	RHS	Police Station
769	190.540	RHS	Police Station
770	190.630	RHS	Side Road Left
771	190.630	RHS	Side Road Left
772	190.730	RHS	Kakravva
773	190.760	LHS	Petrol Pump
774	190.760	LHS	Petrol Pump
775	190.810	LHS	Direction Sign,Shahjadnagar , Jhutiya
776	190.850	LHS	Pedestrian Crossing
777	190.850	LHS	Pedestrian Crossing
778	190.880	LHS	Bus Stop
779	190.880	LHS	Bus Stop
780	190.940	RHS	Petrol Pump
781	190.940	RHS	Petrol Pump
782	191.075	LHS	Merging Sign
783	191.075	LHS	Merging Sign

S.No	Chainage	Side	Signage
784	191.130	RHS	Bus Stop
785	191.130	RHS	Bus Stop
786	191.138	RHS	Two Way Hazard Marker
787	191.138	RHS	Two Way Hazard Marker
788	191.150	RHS	Pedestrian Crossing
789	191.150	RHS	Pedestrian Crossing
790	191.218	RHS	Shajadnagar Railway Station
791	191.270	RHS	Side Road Left
792	191.270	RHS	Side Road Left
793	191.275	RHS	Diverging Sign
794	191.275	RHS	Diverging Sign
795	191.360	LHS	Speed Limit
796	191.360	LHS	Speed Limit
797	191.440	LHS	Two Way Hazard Marker
798	191.440	LHS	Two Way Hazard Marker
799	191.450	LHS	Diverging Sign
800	191.450	LHS	Diverging Sign
801	191.660	RHS	Merging Sign
802	191.660	RHS	Merging Sign
803	191.900	LHS / RHS	Side Road Left
804	191.900	LHS / RHS	Side Road Left
805	191.960	LHS	School
806	191.960	LHS	School
807	191.980	LHS	Petrol Pump
808	191.980	LHS	Petrol Pump
809	192.070	LHS	Bus Stop
810	192.070	LHS	Bus Stop
811	192.130	RHS	Pedestrian Crossing
812	192.130	RHS	Pedestrian Crossing
813	192.200	RHS	Petrol Pump
814	192.200	RHS	Petrol Pump
815	192.240	RHS	School
816	192.240	RHS	School
817	192.280	RHS	Bus Stop
818	192.280	RHS	Bus Stop
819	192.350	RHS	Pedestrian Crossing
820	192.350	RHS	Pedestrian Crossing
821	192.440	LHS	Merging Sign
822	192.440	LHS	Merging Sign
823	192.450	RHS	Object Hazard Marker
824	192.450	RHS	Object Hazard Marker
825	192.500	RHS	Two Way Hazard Marker
826	192.500	RHS	Two Way Hazard Marker
827	192.620	RHS	Speed Limit
828	192.620	RHS	Speed Limit
829	192.665	RHS	Diverging Sign
830	192.665	RHS	Diverging Sign
831	192.680	RHS	Object Hazard Marker
832	192.680	RHS	Object Hazard Marker
833	192.690	LHS	Bus Stop
834	192.690	LHS	Bus Stop
835	192.740	LHS	Pedestrian Crossing
836	192.740	LHS	Pedestrian Crossing
837	192.820	RHS	Two Way Hazard Marker
838	192.820	RHS	Two Way Hazard Marker
839	192.870	LHS	Two Way Hazard Marker

S.No	Chainage	Side	Signage
840	192.870	LHS	Two Way Hazard Marker
841	192.922	LHS	Mandayain Udairaj
842	192.950	LHS	Truck Lay Bye
843	192.960	RHS	Bus Stop
844	192.960	RHS	Bus Stop
845	193.010	LHS/RHS	Object Hazard Marker
846	193.010	LHS/RHS	Object Hazard Marker
847	193.040	RHS	Pedestrian Crossing
848	193.040	RHS	Pedestrian Crossing
849	193.070	LHS	Two Way Hazard Marker
850	193.070	LHS	Two Way Hazard Marker
851	193.270	RHS	Two Way Hazard Marker
852	193.270	RHS	Two Way Hazard Marker
853	193.510	RHS	Truck Lay Bye
854	193.720	Median	Gap In Median
855	193.720	Median	Gap In Median
856	193.870	Median	Solar Based Beacons/Flashing Signals
857	193.870	Median	Solar Based Beacons/Flashing Signals
858	193.875	Median	Keep Left With Hazzard Marker
859	193.875	Median	Keep Left With Hazzard Marker
860	193.880	LHS	Cluster Of Red Reflector
861	193.880	LHS	Cluster Of Red Reflector
862	193.907	Median	Keep Left With Hazzard Marker
863	193.907	Median	Keep Left With Hazzard Marker
864	193.912	Median	Solar Based Beacons/Flashing Signals
865	193.912	Median	Solar Based Beacons/Flashing Signals
866	194.065	Median	Gap In Median
867	194.065	Median	Gap In Median
868	194.140	LHS	School
869	194.140	LHS	School
870	194.290	LHS	Object Hazard Marker
871	194.290	LHS	Object Hazard Marker
872	194.295	RHS	Object Hazard Marker
873	194.295	RHS	Object Hazard Marker
874	194.380	RHS	Side Road Left
875	194.380	RHS	Side Road Left
876	194.390	LHS	Shankarpur
877	194.420	RHS	School
878	194.420	RHS	School
879	194.440	LHS	Pedestrian Crossing
880	194.440	LHS	Pedestrian Crossing
881	194.470	LHS	Bus Stop
882	194.470	LHS	Bus Stop
883	194.540	RHS	Pedestrian Crossing
884	194.540	RHS	Pedestrian Crossing
885	194.675	RHS	School
886	194.675	RHS	School
887	194.710	RHS	Bus Stop
888	194.710	RHS	Bus Stop
889	194.920	LHS/RHS	Object Hazard Marker
890	194.920	LHS/RHS	Object Hazard Marker
891	194.945	LHS	Side Road Left
892	194.945	LHS	Side Road Left
893	194.985	LHS	Meghanagla
894	195.110	RHS	Nh Rout Marker Sign
895	195.110	RHS	Nh Rout Marker Sign

S.No	Chainage	Side	Signage
896	195.120	LHS	Ah Rout Marker Sign
897	195.120	LHS	Ah Rout Marker Sign
898	195.140	Median	Helpline
899	196.210	LHS	Speed Limit
900	196.210	LHS	Speed Limit
901	196.210	RHS	Atainagar , Jhunaiya
902	196.255	LHS	Diverging Sign
903	196.255	LHS	Diverging Sign
904	196.285	LHS	Side Road Left
905	196.285	LHS	Side Road Left
906	196.400	LHS	Place Identification Sign, Ahmadabad
907	196.430	LHS/RHS	Object Hazard Marker
908	196.430	LHS/RHS	Object Hazard Marker
909	196.440	LHS	Two Way Hazard Marker
910	196.440	LHS	Two Way Hazard Marker
911	196.500	RHS	Merging Sign
912	196.500	RHS	Merging Sign
913	196.550	LHS	Right Hand Curve
914	196.550	LHS	Right Hand Curve
915	196.680	RHS	Place Identification Sign, Ahmadabad
916	196.960	LHS	Side Road Left
917	196.960	LHS	Side Road Left
918	197.030	RHS	Atainagar , Jhunaiya
919	197.105	LHS/RHS	Object Hazard Marker
920	197.105	LHS/RHS	Object Hazard Marker
921	197.130	LHS/RHS	Object Hazard Marker
922	197.130	LHS/RHS	Object Hazard Marker
923	197.390	LHS	Shahjahanpur, Bareilly, Dhamora
924	197.410	LHS	Object Hazard Marker
925	197.410	LHS	Object Hazard Marker
926	197.480	LHS	Merging Sign
927	197.480	LHS	Merging Sign
928	197.510	LHS	Object Hazard Marker
929	197.510	LHS	Object Hazard Marker
930	197.540	RHS	Two Way Hazard Marker
931	197.540	RHS	Two Way Hazard Marker
932	197.580	RHS	Speed Limit
933	197.580	RHS	Speed Limit
934	197.600	LHS	Chevron
935	197.600	LHS	Chevron
936	197.620	RHS	Diverging Sign
937	197.620	RHS	Diverging Sign
938	197.660	Median	Gap In Median
939	197.660	Median	Gap In Median
940	197.740	LHS	Two Way Hazard Marker
941	197.740	LHS	Two Way Hazard Marker
942	197.750	LHS	Solar Based Beacons/Flashing Signals
943	197.750	LHS	Solar Based Beacons/Flashing Signals
944	197.760	LHS	Keep Left With Hazzard Marker
945	197.760	LHS	Keep Left With Hazzard Marker
946	197.773	RHS	Keep Left With Hazzard Marker
947	197.773	RHS	Keep Left With Hazzard Marker
948	197.780	RHS	Solar Based Beacons/Flashing Signals
949	197.780	RHS	Solar Based Beacons/Flashing Signals
950	197.790	LHS	Stop
951	197.790	LHS	Two Way Hazard Marker

S.No	Chainage	Side	Signage
952	197.790	LHS	Stop
953	197.790	LHS	Two Way Hazard Marker
954	197.805	LHS/Median	Chevron
955	197.805	LHS/Median	Chevron
956	197.840	LHS	Left Hand Curve
957	197.840	LHS	Left Hand Curve
958	197.890	RHS	Left Hand Curve
959	197.890	RHS	Left Hand Curve
960	197.900	median	Cluster Of Red Reflector
961	197.900	median	Cluster Of Red Reflector
962	197.920	Median	Gap In Median
963	197.920	RHS / LHS	Object Hazard Marker
964	197.920	Median	Gap In Median
965	197.920	RHS / LHS	Object Hazard Marker
966	198.000	RHS	Moradabad 40, Rampur 13, Dhamora 01
967	198.180	RHS Median	Chevron
968	198.180	RHS Median	Chevron
969	198.185	Median	Chevron
970	198.185	Median	Chevron
971	198.200	RHS	Chevron
972	198.200	RHS	Chevron
973	198.320	LHS	Two Way Hazard Marker
974	198.320	LHS	Two Way Hazard Marker
975	198.450	RHS	Pedestrian Crossing
976	198.450	RHS	Pedestrian Crossing
977	198.480	RHS	Bus Stop
978	198.480	RHS	Bus Stop
979	198.500	LHS	Object Hazard Marker
980	198.500	LHS	Object Hazard Marker
981	198.550	RHS	School
982	198.550	RHS	School
983	198.580	RHS	Cross Road
984	198.580	RHS	Cross Road
985	198.584	Median RHS	Chevron
986	198.584	Median RHS	Chevron
987	198.700	LHS	Lucknow 306, Bareilly 52, Dhamora 01
988	198.880	Median	Gap In Median
989	198.880	Median	Gap In Median
990	198.890	RHS	Object Hazard Marker
991	198.890	RHS	Object Hazard Marker
992	198.900	RHS	Right Hand Curve
993	198.900	RHS	Right Hand Curve
994	198.930	LHS	Two Way Hazard Marker
995	198.930	LHS	Two Way Hazard Marker
996	198.950	LHS	Right Hand Curve
997	198.950	LHS	Right Hand Curve
998	198.970	LHS	Petrol Pump
999	198.970	LHS	Petrol Pump
1000	198.979	Median	Solar Based Beacons/Flashing Signals
1001	198.979	Median	Solar Based Beacons/Flashing Signals
1002	198.980	RHS	Cluster Of Red Reflector
1003	198.980	RHS	Cluster Of Red Reflector
1004	198.984	Median	Keep Left With Hazzard Marker
1005	198.984	Median	Keep Left With Hazzard Marker
1006	199.010	LHS	Stop
1007	199.010	LHS	Stop

S.No	Chainage	Side	Signage
1008	199.016	Median	Keep Left With Hazzard Marker
1009	199.016	Median	Keep Left With Hazzard Marker
1010	199.021	Median	Solar Based Beacons/Flashing Signals
1011	199.021	Median	Solar Based Beacons/Flashing Signals
1012	199.050	LHS	School
1013	199.050	LHS	Two Way Hazard Marker
1014	199.050	LHS	School
1015	199.050	LHS	Two Way Hazard Marker
1016	199.100	LHS	Dhamora
1017	199.160	Median	Gap In Median
1018	199.160	Median	Gap In Median
1019	199.175	LHS	Chevron
1020	199.175	LHS	Chevron
1021	199.200	LHS	Kamora
1022	199.240	RHS Medain	Chevron
1023	199.240	RHS Medain	Chevron
1024	199.260	RHS	Left Hand Curve
1025	199.260	RHS	Left Hand Curve
1026	199.350	RHS	Moradabad 42, Rampur 15, Dhamora 01
1027	199.550	LHS	School
1028	199.550	LHS	School
1029	199.740	RHS	School
1030	199.740	RHS	School
1031	199.840	RHS	Ah Rout Marker Sign
1032	199.840	RHS	Ah Rout Marker Sign
1033	199.850	LHS	Nh Rout Marker Sign
1034	199.850	LHS	Nh Rout Marker Sign
1035	199.860	Median	Helpline
1036	200.425	LHS/RHS	Object Hazard Marker
1037	200.425	LHS/RHS	Object Hazard Marker
1038	200.470	RHS	Side Road Left
1039	200.470	RHS	Side Road Left
1040	201.100	LHS	Petrol Pump
1041	201.100	LHS	Petrol Pump
1042	201.660	LHS	Side Road Left
1043	201.660	LHS	Side Road Left
1044	201.800	RHS	Side Road Left
1045	201.800	RHS	Side Road Left
1046	202.155	Median	Gap In Median
1047	202.155	Median	Gap In Median
1048	202.280	Median	Solar Based Beacons/Flashing Signals
1049	202.280	LHS	Cluster Of Red Reflector
1050	202.280	Median	Solar Based Beacons/Flashing Signals
1051	202.280	LHS	Cluster Of Red Reflector
1052	202.285	Median	Keep Left With Hazzard Marker
1053	202.285	Median	Keep Left With Hazzard Marker
1054	202.315	Median	Keep Left With Hazzard Marker
1055	202.315	Median	Keep Left With Hazzard Marker
1056	202.320	Median	Solar Based Beacons/Flashing Signals
1057	202.320	Median	Solar Based Beacons/Flashing Signals
1058	202.340	LHS	Cross Road
1059	202.340	LHS	Cross Road
1060	202.410	LHS	Petrol Pump
1061	202.410	LHS	Petrol Pump
1062	202.455	RHS	Gap In Median
1063	202.455	RHS	Gap In Median

S.No	Chainage	Side	Signage
1064	202.550	RHS	Two Way Hazard Marker
1065	202.550	RHS	Two Way Hazard Marker
1066	202.650	LHS	School
1067	202.650	LHS	School
1068	202.685	LHS	Truck Lay Bye
1069	202.730	RHS	Cross Road
1070	202.730	RHS	Cross Road
1071	202.760	LHS	Two Way Hazard Marker
1072	202.760	LHS	Two Way Hazard Marker
1073	202.835	RHS	Truck Lay Bye
1074	202.960	RHS	School
1075	202.960	RHS	School
1076	203.650	LHS	Speed Limit
1077	203.650	LHS	Speed Limit
1078	203.715	LHS	Diverging Sign
1079	203.715	LHS	Diverging Sign
1080	203.760	LHS	Side Road Left
1081	203.760	LHS	Side Road Left
1082	203.790	LHS	Lohapatti
1083	203.840	LHS	Two Way Hazard Marker
1084	203.840	LHS	Two Way Hazard Marker
1085	203.920	RHS	Merging Sign
1086	203.920	RHS	Merging Sign
1087	204.250	LHS	School
1088	204.250	LHS	School
1089	204.310	LHS	Bus Stop
1090	204.310	LHS	Bus Stop
1091	204.362	RHS	Side Road Left
1092	204.362	RHS	Side Road Left
1093	204.420	LHS	Ah Rout Marker Sign
1094	204.420	LHS	Ah Rout Marker Sign
1095	204.520	RHS	Lohapatti
1096	204.540	RHS	Bus Stop
1097	204.540	RHS	Bus Stop
1098	204.570	RHS	School
1099	204.570	RHS	School
1100	204.610	RHS	Pedestrian Crossing
1101	204.610	RHS	Pedestrian Crossing
1102	205.350	LHS	Merging Sign
1103	205.350	LHS	Merging Sign
1104	205.400	RHS	Object Hazard Marker
1105	205.400	RHS	Object Hazard Marker
1106	205.408	RHS	Two Way Hazard Marker
1107	205.408	RHS	Two Way Hazard Marker
1108	205.440	Median	Helpline
1109	205.460	RHS	Nh Rout Marker Sign
1110	205.460	RHS	Nh Rout Marker Sign
1111	205.540	RHS	Diverging Sign
1112	205.540	RHS	Diverging Sign
1113	205.570	Median	Gap In Median
1114	205.570	Median	Gap In Median
1115	205.635	LHS	Cross Road
1116	205.635	LHS	Cross Road
1117	205.640	RHS	Speed Limit
1118	205.640	RHS	Speed Limit
1119	205.695	Median	Solar Based Beacons/Flashing Signals

S.No	Chainage	Side	Signage
1120	205.695	Median	Solar Based Beacons/Flashing Signals
1121	205.700	Median	Keep Left With Hazzard Marker
1122	205.700	Median	Keep Left With Hazzard Marker
1123	205.710	LHS	Cluster Of Red Reflector
1124	205.710	LHS	Cluster Of Red Reflector
1125	205.738	Median	Solar Based Beacons/Flashing Signals
1126	205.738	Median	Solar Based Beacons/Flashing Signals
1127	205.740	Median	Keep Left With Hazzard Marker
1128	205.740	Median	Keep Left With Hazzard Marker
1129	205.790	RHS	Cross Road
1130	205.790	RHS	Cross Road
1131	205.860	Median	Gap In Median
1132	205.860	Median	Gap In Median
1133	205.865	LHS/RHS	Object Hazard Marker
1134	205.865	LHS/RHS	Object Hazard Marker
1135	206.295	RHS	School
1136	206.295	RHS	School
1137	212.180	LHS	Pedestrian Crossing
1138	212.180	LHS	Pedestrian Crossing
1139	212.210	LHS	Bus Stop
1140	212.210	LHS	Bus Stop
1141	212.310	LHS	Two Way Hazard Marker
1142	212.310	LHS	Two Way Hazard Marker
1143	212.390	RHS	Kyorar
1144	212.490	RHS	Two Way Hazard Marker
1145	212.490	RHS	Two Way Hazard Marker
1146	212.590	RHS	Bus Stop
1147	212.590	RHS	Bus Stop
1148	212.620	RHS	Pedestrian Crossing
1149	212.620	RHS	Pedestrian Crossing
1150	212.990	RHS	Side Road Left
1151	212.990	RHS	Side Road Left
1152	213.060	LHS	Diverging Sign
1153	213.060	LHS	Diverging Sign
1154	213.120	LHS	Speed Limit
1155	213.120	LHS	Speed Limit
1156	213.280	LHS	Two Way Hazard Marker
1157	213.280	LHS	Two Way Hazard Marker
1158	213.290	RHS	Direction Sign Kyorar
1159	213.335	RHS	Merging Sign
1160	213.335	RHS	Merging Sign
1161	213.360	RHS	Direction Sign, Jatpura
1162	213.540	LHS	Side Road Left
1163	213.540	LHS	Side Road Left
1164	213.560	RHS	Side Road Left
1165	213.560	RHS	Side Road Left
1166	213.600	LHS	Direction Sign, Bhaisodi
1167	213.765	Median	Object Hazard Marker
1168	213.765	Median	Object Hazard Marker
1169	213.835	SRRHS	Direction Sign, Gangapur
1170	213.890	RHS	Diverging Sign
1171	213.890	RHS	Diverging Sign
1172	213.900	RHS	Side Road Left
1173	213.900	RHS	Side Road Left
1174	214.220	LHS	Merging Sign
1175	214.220	LHS	Merging Sign

S.No	Chainage	Side	Signage
1176	214.280	RHS	Two Way Hazard Marker
1177	214.280	RHS	Two Way Hazard Marker
1178	214.410	RHS	Speed Limit
1179	214.410	RHS	Speed Limit
1180	214.445	LHS/RHS	Object Hazard Marker
1181	214.445	LHS/RHS	Object Hazard Marker
1182	214.465	RHS	Object Hazard Marker
1183	214.465	RHS	Object Hazard Marker
1184	214.640	RHS	Labhari
1185	214.970	RHS	Direction Sign, Mankari
1186	215.030	RHS	Side Road Left
1187	215.030	RHS	Side Road Left
1188	215.070	LHS	Ah Rout Marker Sign
1189	215.070	LHS	Ah Rout Marker Sign
1190	215.080	RHS	Nh Rout Marker Sign
1191	215.080	RHS	Nh Rout Marker Sign
1192	215.090	Median	Helpline
1193	215.100	LHS/RHS	School
1194	215.100	LHS/RHS	School
1195	215.450	Median	Gap In Median
1196	215.450	Median	Gap In Median
1197	215.540	LHS	Petrol Pump
1198	215.540	LHS	Petrol Pump
1199	215.543	Median	Keep Left With Hazzard Marker
1200	215.543	Median	Keep Left With Hazzard Marker
1201	215.580	Median	Solar Based Beacons/Flashing Signals
1202	215.580	Median	Solar Based Beacons/Flashing Signals
1203	215.585	Median	Keep Left With Hazzard Marker
1204	215.585	Median	Keep Left With Hazzard Marker
1205	215.590	Median	Cluster Of Red Reflector
1206	215.590	Median	Cluster Of Red Reflector
1207	215.648	Median	Solar Based Beacons/Flashing Signals
1208	215.648	Median	Solar Based Beacons/Flashing Signals
1209	215.700	RHS	Petrol Pump
1210	215.700	RHS	Petrol Pump
1211	215.720	LHS	Side Road Left
1212	215.720	LHS	Side Road Left
1213	215.745	Median	Gap In Median
1214	215.745	Median	Gap In Median
1215	216.000	LHS	Object Hazard Marker
1216	216.000	LHS	Object Hazard Marker
1217	216.020	LHS	Place Identification Sign, Meerganj
1218	216.445	RHS	Nausna
1219	216.600	median	Object Hazard Marker
1220	216.600	median	Object Hazard Marker
1221	217.040	RHS	Side Road Left
1222	217.040	RHS	Side Road Left
1223	217.110	LHS	Pedestrian Crossing
1224	217.110	LHS	Pedestrian Crossing
1225	217.140	LHS	School
1226	217.140	LHS	School
1227	217.500	median	Object Hazard Marker
1228	217.500	median	Object Hazard Marker
1229	217.571	RHS	Direction Sign,Nagariya Sadat , Churai Dalpatpur
1230	217.571	LHS	Direction Sign,Churai Dalpatpur, Nagariya Sadat
1231	217.720	RHS	Cross Road

S.No	Chainage	Side	Signage
1232	217.720	RHS	Cross Road
1233	218.090	LHS	Merging Sign
1234	218.090	LHS	Merging Sign
1235	218.150	RHS	Two Way Hazard Marker
1236	218.150	RHS	Two Way Hazard Marker
1237	218.320	RHS	Diverging Sign
1238	218.320	RHS	Diverging Sign
1239	218.400	LHS	Cross Road
1240	218.400	LHS	Cross Road
1241	218.405	Median	Gap In Median
1242	218.405	Median	Gap In Median
1243	218.430	RHS	Speed Limit
1244	218.430	RHS	Speed Limit
1245	218.560	Median	Solar Based Beacons/Flashing Signals
1246	218.560	Median	Solar Based Beacons/Flashing Signals
1247	218.563	Median	Keep Left With Hazzard Marker
1248	218.563	Median	Keep Left With Hazzard Marker
1249	218.595	Median	Keep Left With Hazzard Marker
1250	218.595	Median	Cluster Of Red Reflector
1251	218.595	Median	Keep Left With Hazzard Marker
1252	218.595	Median	Cluster Of Red Reflector
1253	218.600	Median	Solar Based Beacons/Flashing Signals
1254	218.600	Median	Solar Based Beacons/Flashing Signals
1255	218.755	Median	Gap In Median
1256	218.755	Median	Gap In Median
1257	218.770	RHS	Cross Road
1258	218.770	RHS	Cross Road
1259	218.850	RHS	Place Identification Sign, Meerganj
1260	219.310	LHS/RHS	Object Hazard Marker
1261	219.310	LHS/RHS	Object Hazard Marker
1262	219.400	RHS	Ah Rout Marker Sign
1263	219.400	RHS	Ah Rout Marker Sign
1264	219.410	LHS	Nh Rout Marker Sign
1265	219.410	LHS	Nh Rout Marker Sign
1266	219.420	Median	Helpline
1267	219.480	LHS	Direction Sign, Sanjarpur , Parora
1268	219.545	Median	Gap In Median
1269	219.545	Median	Gap In Median
1270	219.570	LHS/RHS	Object Hazard Marker
1271	219.570	LHS/RHS	Object Hazard Marker
1272	219.695	Median	Solar Based Beacons/Flashing Signals
1273	219.695	Median	Solar Based Beacons/Flashing Signals
1274	219.697	Median	Keep Left With Hazzard Marker
1275	219.697	Median	Keep Left With Hazzard Marker
1276	219.710	LHS	Cluster Of Red Reflector
1277	219.710	LHS	Cluster Of Red Reflector
1278	219.732	Median	Keep Left With Hazzard Marker
1279	219.732	Median	Keep Left With Hazzard Marker
1280	219.735	Median	Solar Based Beacons/Flashing Signals
1281	219.735	Median	Solar Based Beacons/Flashing Signals
1282	219.845	RHS	Petrol Pump
1283	219.845	RHS	Petrol Pump
1284	219.860	LHS/RHS	Object Hazard Marker
1285	219.860	LHS/RHS	Object Hazard Marker
1286	219.885	Median	Gap In Median
1287	219.885	Median	Gap In Median

S.No	Chainage	Side	Signage
1288	220.100	RHS	Direction Sign, Parora , Sanjarpur
1289	220.160	RHS	Side Road Left
1290	220.160	RHS	Side Road Left
1291	220.205	RHS	School
1292	220.205	RHS	School
1293	220.610	LHS	Side Road Left
1294	220.610	LHS	Side Road Left
1295	220.658	LHS	Direction Sign, Jonaier
1296	221.600	RHS	Object Hazard Marker
1297	221.600	RHS	Object Hazard Marker
1298	221.601	RHS	Object Hazard Marker
1299	221.601	RHS	Object Hazard Marker
1300	221.700	LHS	Two Way Hazard Marker
1301	221.700	LHS	Two Way Hazard Marker
1302	221.730	Median	Gap In Median
1303	221.730	Median	Gap In Median
1304	221.750	LHS	Direction Sign, Paiganagari , Goola
1305	221.880	Median	Solar Based Beacons/Flashing Signals
1306	221.880	LHS	Cluster Of Red Reflector
1307	221.880	RHS	Two Way Hazard Marker
1308	221.880	Median	Solar Based Beacons/Flashing Signals
1309	221.880	LHS	Cluster Of Red Reflector
1310	221.880	RHS	Two Way Hazard Marker
1311	221.885	Median	Keep Left With Hazzard Marker
1312	221.885	Median	Keep Left With Hazzard Marker
1313	221.916	Median	Keep Left With Hazzard Marker
1314	221.916	Median	Keep Left With Hazzard Marker
1315	221.921	Median	Solar Based Beacons/Flashing Signals
1316	221.921	Median	Solar Based Beacons/Flashing Signals
1317	221.950	RHS	Pedestrian Crossing
1318	221.950	RHS	Pedestrian Crossing
1319	221.960	LHS	Bus Stop
1320	221.960	LHS	Bus Stop
1321	221.980	LHS	Side Road Left
1322	221.980	LHS	Side Road Left
1323	222.000	RHS	Bus Stop
1324	222.000	RHS	Bus Stop
1325	222.010	LHS	Pedestrian Crossing
1326	222.010	LHS	Pedestrian Crossing
1327	222.060	Median	Chevron
1328	222.060	Median	Chevron
1329	222.075	Median	Chevron
1330	222.075	Median	Chevron
1331	222.080	Median	Gap In Median
1332	222.080	Median	Gap In Median
1333	222.090	LHS	Two Way Hazard Marker
1334	222.090	LHS	Two Way Hazard Marker
1335	222.270	RHS	Side Road Left
1336	222.270	RHS	Side Road Left
1337	222.305	RHS	Direction Sign, Goola , Paiganagari
1338	222.740	RHS Median	Chevron
1339	222.740	RHS Median	Chevron
1340	222.810	RHS	Right Hand Curve
1341	222.810	RHS	Right Hand Curve
1342	222.920	LHS/RHS	Object Hazard Marker
1343	222.920	LHS/RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
1344	223.000	RHS / LHS	Object Hazard Marker
1345	223.000	RHS / LHS	Object Hazard Marker
1346	223.240	Median	Object Hazard Marker
1347	223.240	Median	Object Hazard Marker
1348	223.370	median	Chevron
1349	223.370	median	Chevron
1350	223.460	RHS	Narrow Road Ahead
1351	223.460	LHS	Bus Stop
1352	223.460	RHS	Narrow Road Ahead
1353	223.460	LHS	Bus Stop
1354	223.480	RHS	Object Hazard Marker
1355	223.480	RHS	Object Hazard Marker
1356	223.500	LHS	Pedestrian Crossing
1357	223.500	LHS	Pedestrian Crossing
1358	223.560	LHS	Two Way Hazard Marker
1359	223.560	LHS	Two Way Hazard Marker
1360	223.690	RHS	Two Way Hazard Marker
1361	223.690	RHS	Two Way Hazard Marker
1362	223.720	Median	Gap In Median
1363	223.720	Median	Gap In Median
1364	223.760	RHS	Pedestrian Crossing
1365	223.760	RHS	Pedestrian Crossing
1366	223.790	LHS	Side Road Left
1367	223.790	Median	Solar Based Beacons/Flashing Signals
1368	223.790	LHS	Side Road Left
1369	223.790	Median	Solar Based Beacons/Flashing Signals
1370	223.800	RHS	Bus Stop
1371	223.800	RHS	Bus Stop
1372	223.840	Median	Solar Based Beacons/Flashing Signals
1373	223.840	Median	Solar Based Beacons/Flashing Signals
1374	223.855	Median	Keep Left With Hazzard Marker
1375	223.855	Median	Keep Left With Hazzard Marker
1376	223.870	LHS	Cluster Of Red Reflector
1377	223.870	LHS	Cluster Of Red Reflector
1378	223.900	Median	Keep Left With Hazzard Marker
1379	223.900	Median	Keep Left With Hazzard Marker
1380	224.020	LHS	Diverging Sign
1381	224.020	LHS	Diverging Sign
1382	224.030	Median	Gap In Median
1383	224.030	Median	Gap In Median
1384	224.090	LHS	Speed Limit
1385	224.090	LHS	Speed Limit
1386	224.100	Median	Chevron
1387	224.100	Median	Chevron
1388	224.162	LHS	Two Way Hazard Marker
1389	224.162	LHS	Two Way Hazard Marker
1390	224.240	RHS	Merging Sign
1391	224.240	RHS	Merging Sign
1392	224.300	LHS	Chevron
1393	224.300	Median	Chevron
1394	224.300	LHS	Chevron
1395	224.300	Median	Chevron
1396	224.470	LHS	Chevron
1397	224.470	LHS	Chevron
1398	224.680	LHS	Left Hand Curve
1399	224.680	LHS	Left Hand Curve

S.No	Chainage	Side	Signage
1400	224.825	LHS/RHS	Object Hazard Marker
1401	224.825	LHS/RHS	Object Hazard Marker
1402	225.000	RHS / LHS	Object Hazard Marker
1403	225.000	RHS / LHS	Object Hazard Marker
1404	225.025	LHS Median	Chevron
1405	225.025	LHS Median	Chevron
1406	225.040	RHS	Chevron
1407	225.040	RHS	Chevron
1408	225.305	RHS	Two Way Hazard Marker
1409	225.305	RHS	Two Way Hazard Marker
1410	225.310	Median	Helpline
1411	225.320	RHS	Direction Sign, Pipariya
1412	225.330	LHS	Ah Rout Marker Sign
1413	225.330	LHS	Ah Rout Marker Sign
1414	225.340	RHS	Nh Rout Marker Sign
1415	225.340	RHS	Nh Rout Marker Sign
1416	225.360	LHS	Merging Sign
1417	225.360	LHS	Merging Sign
1418	225.380	RHS	Side Road Left
1419	225.380	RHS	Side Road Left
1420	225.430	RHS	Diverging Sign
1421	225.430	RHS	Diverging Sign
1422	225.460	LHS/Median	Object Hazard Marker
1423	225.460	LHS/Median	Object Hazard Marker
1424	225.520	RHS/Median	Object Hazard Marker
1425	225.520	RHS/Median	Object Hazard Marker
1426	225.540	RHS	Speed Limit
1427	225.540	RHS	Speed Limit
1428	225.640	RHS/Median	Chevron
1429	225.640	RHS/Median	Chevron
1430	225.785	RHS	Chevron
1431	225.785	RHS	Chevron
1432	225.865	RHS	Chevron
1433	225.865	RHS	Chevron
1434	226.000	RHS / LHS	Object Hazard Marker
1435	226.000	RHS / LHS	Object Hazard Marker
1436	226.190	RHS	Right Hand Curve
1437	226.190	RHS	Right Hand Curve
1438	226.192	RHS/Median	Chevron
1439	226.192	RHS/Median	Chevron
1440	226.201	RHS	Chevron
1441	226.201	RHS	Chevron
1442	226.575	RHS/ Median	Object Hazard Marker
1443	226.575	RHS/ Median	Object Hazard Marker
1444	226.960	RHS	Narrow Road Ahead
1445	226.960	RHS	Narrow Road Ahead
1446	226.980	LHS	Two Way Hazard Marker
1447	226.980	LHS	Truck Lay Bye
1448	226.980	LHS	Two Way Hazard Marker
1449	227.270	RHS	Two Way Hazard Marker
1450	227.270	RHS	Two Way Hazard Marker
1451	227.430	LHS	Side Road Left
1452	227.430	RHS Median	Chevron
1453	227.430	LHS	Side Road Left
1454	227.430	RHS Median	Chevron
1455	227.450	RHS	Truck Lay Bye

S.No	Chainage	Side	Signage
1456	227.460	LHS	Direction Sign, Oundh
1457	227.540	LHS Median	Chevron
1458	227.540	LHS Median	Chevron
1459	227.550	Median	Gap In Median
1460	227.550	Median	Gap In Median
1461	227.700	Median	Keep Left With Hazzard Marker
1462	227.700		Cluster Of Red Reflector
1463	227.700	Median	Keep Left With Hazzard Marker
1464	227.700		Cluster Of Red Reflector
1465	227.730	Median	Keep Left With Hazzard Marker
1466	227.730	Median	Keep Left With Hazzard Marker
1467	227.735	Median	Solar Based Beacons/Flashing Signals
1468	227.735	Median	Solar Based Beacons/Flashing Signals
1469	227.800	LHS	Object Hazard Marker
1470	227.800	LHS	Object Hazard Marker
1471	227.800	LHS	Object Hazard Marker
1472	227.800	LHS	Object Hazard Marker
1473	227.833	RHS	Sathuiya Patti
1474	227.850	Median	Keep Left With Hazzard Marker
1475	227.850	Median	Cluster Of Red Reflector
1476	227.850	Median	Keep Left With Hazzard Marker
1477	227.850	Median	Cluster Of Red Reflector
1478	227.880	Median	Gap In Median
1479	227.880	Median	Gap In Median
1480	227.890	RHS	Petrol Pump
1481	227.890	RHS	Petrol Pump
1482	227.925	RHS	Side Road Left
1483	227.925	RHS	Side Road Left
1484	227.970	RHS	Left Hand Curve
1485	227.970	RHS	Left Hand Curve
1486	227.995	Median	Solar Based Beacons/Flashing Signals
1487	227.995	Median	Solar Based Beacons/Flashing Signals
1488	228.000	LHS/RHS	Object Hazard Marker
1489	228.000	LHS/RHS	Object Hazard Marker
1490	228.390	LHS/RHS	Object Hazard Marker
1491	228.390	LHS/RHS	Object Hazard Marker
1492	228.660	LHS	Petrol Pump
1493	228.660	LHS	Petrol Pump
1494	229.510	LHS	Left Hand Curve
1495	229.510	LHS	Left Hand Curve
1496	229.750	Median	Chevron
1497	229.750	Median	Chevron
1498	229.752	Median/ RHS	Chevron
1499	229.752	Median/ RHS	Chevron
1500	229.825	RHS	Chevron
1501	229.825	RHS	Chevron
1502	230.160	LHS	Cross Road
1503	230.160	LHS	Cross Road
1504	230.200	LHS	Direction Signsathuiya Khas , Mankari
1505	230.250	Median	Gap In Median
1506	230.250	Median	Gap In Median
1507	230.305	Median	Solar Based Beacons/Flashing Signals
1508	230.305	Median	Solar Based Beacons/Flashing Signals
1509	230.310	Median	Keep Left With Hazzard Marker
1510	230.310	Median	Keep Left With Hazzard Marker
1511	230.315	LHS	Cluster Of Red Reflector

S.No	Chainage	Side	Signage
1512	230.315	LHS	Cluster Of Red Reflector
1513	230.340	Median	Keep Left With Hazzard Marker
1514	230.340	Median	Keep Left With Hazzard Marker
1515	230.345	Median	Solar Based Beacons/Flashing Signals
1516	230.345	Median	Solar Based Beacons/Flashing Signals
1517	230.400	RHS	Right Hand Curve
1518	230.400	RHS	Direction Signmankari , Sathuiya Khas
1519	230.400	RHS	Right Hand Curve
1520	230.420	Median	Helpline
1521	230.440	RHS	Cross Road
1522	230.440	RHS	Cross Road
1523	230.445	Median	Gap In Median
1524	230.445	Median	Gap In Median
1525	230.460	LHS	Nh Rout Marker Sign
1526	230.460	LHS	Nh Rout Marker Sign
1527	230.470	RHS	Ah Rout Marker Sign
1528	230.470	RHS	Ah Rout Marker Sign
1529	230.660	LHS	Bus Stop
1530	230.660	LHS	Bus Stop
1531	230.700	LHS	Pedestrian Crossing
1532	230.700	LHS	Pedestrian Crossing
1533	230.710	LHS	Two Way Hazard Marker
1534	230.710	LHS	Two Way Hazard Marker
1535	230.745	RHS	Side Road Left
1536	230.745	RHS	Side Road Left
1537	230.750	LHS	Shahjahanpur 116, Bareilly 22, Fatehganj 02
1538	230.890	RHS	Two Way Hazard Marker
1539	230.890	RHS	Two Way Hazard Marker
1540	230.910	RHS	Pedestrian Crossing
1541	230.910	RHS	Pedestrian Crossing
1542	230.940	RHS	Bus Stop
1543	230.940	RHS	Bus Stop
1544	230.960	Median	Chevron
1545	230.960	Median	Chevron
1546	231.030	RHS	Right Hand Curve
1547	231.030	RHS	Right Hand Curve
1548	231.040	Median	Gap In Median
1549	231.040	Median	Gap In Median
1550	231.060	RHS	Place Identification Sign,Theriya Khatal
1551	231.105	RHS	Chevron
1552	231.105	RHS	Chevron
1553	231.135	Median	Solar Based Beacons/Flashing Signals
1554	231.135	Median	Solar Based Beacons/Flashing Signals
1555	231.140	Median	Keep Left With Hazzard Marker
1556	231.140	Median	Keep Left With Hazzard Marker
1557	231.160	Median	Cluster Of Red Reflector
1558	231.160	Median	Cluster Of Red Reflector
1559	231.180	Median	Keep Left With Hazzard Marker
1560	231.180	LHS	Stop
1561	231.180	LHS	Two Way Hazard Marker
1562	231.180	Median	Keep Left With Hazzard Marker
1563	231.180	LHS	Stop
1564	231.180	LHS	Two Way Hazard Marker
1565	231.185	Median	Solar Based Beacons/Flashing Signals
1566	231.185	Median	Solar Based Beacons/Flashing Signals
1567	231.190	LHS	Two Way Hazard Marker

S.No	Chainage	Side	Signage
1568	231.190	LHS	Two Way Hazard Marker
1569	231.250	LHS/RHS	Object Hazard Marker
1570	231.250	LHS/RHS	Object Hazard Marker
1571	231.300	Median	Gap In Median
1572	231.300	Median	Gap In Median
1573	231.340	RHS	Left Hand Curve
1574	231.340	RHS	Left Hand Curve
1575	231.450	LHS/RHS	Object Hazard Marker
1576	231.450	LHS/RHS	Object Hazard Marker
1577	231.530	RHS	Moradabad 74, Rampur 47, Fatehganj 02
1578	231.620	LHS/RHS	Object Hazard Marker
1579	231.620	LHS/RHS	Object Hazard Marker
1580	231.670	Median	Side Road Left
1581	231.670	Median	Side Road Left
1582	231.750	RHS	Object Hazard Marker
1583	231.750	RHS	Object Hazard Marker
1584	231.750	LHS	Fatehganj , Mankari
1585	231.810	LHS	Speed Limit
1586	231.810	LHS	Speed Limit
1587	231.860	LHS	Diverging Sign
1588	231.860	LHS	Diverging Sign
1589	231.945	LHS SR Median	Two Way Hazard Marker
1590	231.945	LHS SR Median	Two Way Hazard Marker
1591	231.950	RHS	Mankari , Fatehganj
1592	231.980	LHS	Left Hand Curve
1593	231.980	LHS	Left Hand Curve
1594	231.990	LHS	Side Road Left
1595	231.990	LHS	Side Road Left
1596	232.000	SRRHS	Merging Sign
1597	232.000	SRRHS	Merging Sign
1598	232.060	RHS Median	Chevron
1599	232.060	RHS Median	Chevron
1600	232.210	LHS	Direction Sign, Fatehganj , Chitauli
1601	232.300	LHS/ Median	Object Hazard Marker
1602	232.300	LHS/ Median	Object Hazard Marker
1603	232.325	RHS/Median	Object Hazard Marker
1604	232.325	RHS/Median	Object Hazard Marker
1605	232.380	RHS/Median	Chevron
1606	232.380	RHS/Median	Chevron
1607	232.410	RHS	Direction Sign, Chitauli , Fatehganj
1608	232.480	RHS	School
1609	232.480	RHS	School
1610	232.800	LHS	Object Hazard Marker
1611	232.800	LHS	Object Hazard Marker
1612	232.905	LHS/RHS	Object Hazard Marker
1613	232.905	LHS/RHS	Object Hazard Marker
1614	232.930	LHS/RHS	Object Hazard Marker
1615	232.930	LHS/RHS	Object Hazard Marker
1616	233.000	LHS/RHS	Object Hazard Marker
1617	233.000	LHS/RHS	Object Hazard Marker
1618	233.150	LHS	Lucknow 272, Bareilly 19, Fatehganj 02
1619	233.320	LHS	Merging Sign
1620	233.320	LHS	Merging Sign
1621	233.360	RHS SR Median	Two Way Hazard Marker
1622	233.360	RHS SR Median	Two Way Hazard Marker
1623	233.420	RHS	Diverging Sign

S.No	Chainage	Side	Signage
1624	233.420	RHS	Diverging Sign
1625	233.430	Median	Gap In Median
1626	233.430	Median	Gap In Median
1627	233.470	RHS	Speed Limit
1628	233.470	RHS	Speed Limit
1629	233.475	Median	Chevron
1630	233.475	Median	Chevron
1631	233.540	Median	Keep Left With Hazzard Marker
1632	233.540	LHS	Two Way Hazard Marker
1633	233.540	Median	Keep Left With Hazzard Marker
1634	233.540	LHS	Two Way Hazard Marker
1635	233.550	Median	Cluster Of Red Reflector
1636	233.550	Median	Cluster Of Red Reflector
1637	233.555	Median	Solar Based Beacons/Flashing Signals
1638	233.555	Median	Solar Based Beacons/Flashing Signals
1639	233.560	LHS	Stop
1640	233.560	LHS	Stop
1641	233.580	Median	Keep Left With Hazzard Marker
1642	233.580	Median	Keep Left With Hazzard Marker
1643	233.585	Median	Solar Based Beacons/Flashing Signals
1644	233.585	Median	Solar Based Beacons/Flashing Signals
1645	233.610	RHS	Chevron
1646	233.610	RHS	Chevron
1647	233.630	Median	Gap In Median
1648	233.630	Median	Gap In Median
1649	233.640	RHS	Right Hand Curve
1650	233.640	RHS	Right Hand Curve
1651	233.700	LHS/RHS	Object Hazard Marker
1652	233.700	LHS/RHS	Object Hazard Marker
1653	233.770	RHS	Left Hand Curve
1654	233.770	RHS	Left Hand Curve
1655	233.800	LHS	Thana Fatehganj
1656	234.000	LHS	Object Hazard Marker
1657	234.000	LHS	Object Hazard Marker
1658	234.050	RHS	Moradabad 77, Rampur 50, Fatehganj 02
1659	234.160	RHS	Side Road Left
1660	234.160	RHS	Side Road Left
1661	234.500	LHS	Left Hand Curve
1662	234.500	LHS	Left Hand Curve
1663	234.580	RHS Median	Chevron
1664	234.580	RHS Median	Chevron
1665	234.600	MEDIAN	Two Way Hazard Marker
1666	234.600	LHS	Speed Limit
1667	234.600	LHS	Diverging Sign
1668	234.600	RHS	Merging Sign
1669	234.600	MEDIAN	Two Way Hazard Marker
1670	234.600	LHS	Speed Limit
1671	234.600	LHS	Diverging Sign
1672	234.600	RHS	Merging Sign
1673	234.790	RHS	Object Hazard Marker
1674	234.790	RHS	Object Hazard Marker
1675	234.800	RHS Median	Chevron
1676	234.800	RHS Median	Chevron
1677	234.870	RHS	Right Hand Curve
1678	234.870	RHS	Right Hand Curve
1679	235.020	LHS	Right Hand Curve

S.No	Chainage	Side	Signage
1680	235.020	LHS	Right Hand Curve
1681	235.350	LHS /Median	Chevron
1682	235.350	LHS /Median	Chevron
1683	235.460	Median / RHS	Chevron
1684	235.460	Median / RHS	Chevron
1685	235.500	RHS	Object Hazard Marker
1686	235.500	RHS	Object Hazard Marker
1687	235.520	RHS	Nh Rout Marker Sign
1688	235.520	RHS	Nh Rout Marker Sign
1689	235.540	Median	Helpline
1690	235.560	LHS	Ah Rout Marker Sign
1691	235.560	LHS	Ah Rout Marker Sign
1692	235.580	RHS	Left Hand Curve
1693	235.580	RHS	Left Hand Curve
1694	235.680	LHS	Pedestrian Crossing
1695	235.680	LHS	Pedestrian Crossing
1696	235.700	RHS	Object Hazard Marker
1697	235.700	RHS	Object Hazard Marker
1698	235.710	LHS	Bus Stop
1699	235.710	LHS	Bus Stop
1700	235.810	LHS	Two Way Hazard Marker
1701	235.810	LHS	Two Way Hazard Marker
1702	235.990	RHS	Two Way Hazard Marker
1703	235.990	RHS	Two Way Hazard Marker
1704	236.090	RHS	Bus Stop
1705	236.090	RHS	Bus Stop
1706	236.100	Median	Solar Based Beacons/Flashing Signals
1707	236.100	Median	Solar Based Beacons/Flashing Signals
1708	236.120	RHS	Pedestrian Crossing
1709	236.120	RHS	Pedestrian Crossing
1710	236.185	Median	Gap In Median
1711	236.185	Median	Gap In Median
1712	236.275		Chevron
1713	236.275		Chevron
1714	236.285	Median	Solar Based Beacons/Flashing Signals
1715	236.285	Median	Solar Based Beacons/Flashing Signals
1716	236.290	Median	Keep Left With Hazzard Marker
1717	236.290	Median	Keep Left With Hazzard Marker
1718	236.300	LHS	Right Hand Curve
1719	236.300	LHS	Right Hand Curve
1720	236.330	RHS	Chevron
1721	236.330	Median	Cluster Of Red Reflector
1722	236.330	Median	Keep Left With Hazzard Marker
1723	236.330	RHS	Chevron
1724	236.330	Median	Cluster Of Red Reflector
1725	236.330	Median	Keep Left With Hazzard Marker
1726	236.350	LHS/RHS	Object Hazard Marker
1727	236.350	LHS/RHS	Object Hazard Marker
1728	236.435	Median	Gap In Median
1729	236.435	Median	Gap In Median
1730	236.710	LHS/RHS	Object Hazard Marker
1731	236.710	LHS/RHS	Object Hazard Marker
1732	236.940	LHS	Direction Sign, Bareiily & Bareilly Bypass
1733	236.960	LHS	Side Road Left
1734	236.960	LHS	Side Road Left
1735	237.010	LHS	Direction Sign, Dhantiya

S.No	Chainage	Side	Signage
1736	237.130	LHS	Lucknow 268, Badaun 60, Bareilly 15
1737	237.150	median	Chevron
1738	237.150	median	Chevron
1739	237.250	Median	Gap In Median
1740	237.250	Median	Gap In Median
1741	237.290	LHS/RHS	Object Hazard Marker
1742	237.290	LHS	Left Hand Curve
1743	237.290	LHS	Direction Sign, Bareiily & Bareilly Bypass
1744	237.290	LHS/RHS	Object Hazard Marker
1745	237.290	LHS	Left Hand Curve
1746	237.380	Median	Solar Based Beacons/Flashing Signals
1747	237.380	Median	Cluster Of Red Reflector
1748	237.380	RHS	Two Way Hazard Marker
1749	237.380	RHS	Stop
1750	237.380	Median	Solar Based Beacons/Flashing Signals
1751	237.380	Median	Cluster Of Red Reflector
1752	237.380	RHS	Two Way Hazard Marker
1753	237.380	RHS	Stop
1754	237.385	Median	Keep Left With Hazzard Marker
1755	237.385	Median	Keep Left With Hazzard Marker
1756	237.411	Median	Keep Left With Hazzard Marker
1757	237.411	Median	Keep Left With Hazzard Marker
1758	237.416	RHS	Solar Based Beacons/Flashing Signals
1759	237.416	RHS	Solar Based Beacons/Flashing Signals
1760	237.510	Median	Gap In Median
1761	237.510	Median	Gap In Median
1762	237.550		Chevron
1763	237.550		Chevron
1764	237.625	RHS	Right Hand Curve
1765	237.625	RHS	Right Hand Curve
1766	237.630	RHS	Moradabad 82, Badaun 60, Bareilly 15
1767	237.990	LHS/RHS	Object Hazard Marker
1768	237.990	LHS/RHS	Object Hazard Marker
1769	238.190	LHS	Speed Limit
1770	238.190	LHS	Speed Limit
1771	238.240	LHS	Diverging Sign
1772	238.240	LHS	Diverging Sign
1773	238.340	RHS	Merging Sign
1774	238.340	RHS	Merging Sign
1775	238.460	LHS	Side Road Left
1776	238.460	LHS	Side Road Left
1777	238.505	LHS	Direction Sign Tiyuliaya
1778	238.545	LHS/RHS	Object Hazard Marker
1779	238.545	LHS/RHS	Object Hazard Marker
1780	238.560	LHS/RHS	Object Hazard Marker
1781	238.560	LHS/RHS	Object Hazard Marker
1782	238.760	LHS	Merging Sign
1783	238.760	LHS	Merging Sign
1784	238.800	RHS	Diverging Sign
1785	238.800	RHS	Diverging Sign
1786	239.060	RHS	Speed Limit
1787	239.060	RHS	Speed Limit
1788	239.220	Median	Gap In Median
1789	239.220	Median	Gap In Median
1790	239.250	LHS/RHS	Object Hazard Marker
1791	239.250	LHS/RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
1792	239.290	Median	Cluster Of Red Reflector
1793	239.290	Median	Cluster Of Red Reflector
1794	239.320	Median	Solar Based Beacons/Flashing Signals
1795	239.320	Median	Solar Based Beacons/Flashing Signals
1796	239.325	Median	Keep Left With Hazzard Marker
1797	239.325	Median	Cluster Of Red Reflector
1798	239.325	Median	Keep Left With Hazzard Marker
1799	239.325	Median	Cluster Of Red Reflector
1800	239.345	Median	Keep Left With Hazzard Marker
1801	239.345	Median	Keep Left With Hazzard Marker
1802	239.350	LHS/RHS	Object Hazard Marker
1803	239.350	Median	Solar Based Beacons/Flashing Signals
1804	239.350	LHS/RHS	Object Hazard Marker
1805	239.350	Median	Solar Based Beacons/Flashing Signals
1806	239.470	Median	Gap In Median
1807	239.470	Median	Gap In Median
1808	240.030	LHS	Nh Rout Marker Sign
1809	240.030	LHS	Nh Rout Marker Sign
1810	240.040	RHS	Ah Rout Marker Sign
1811	240.040	RHS	Ah Rout Marker Sign
1812	240.500	Median	Helpline
1813	240.960	LHS	Side Road Left
1814	240.960	LHS	Side Road Left
1815	241.220	LHS	Side Road Left
1816	241.220	LHS	Side Road Left
1817	241.230	Median	Gap In Median
1818	241.230	Median	Gap In Median
1819	241.260	LHS	Direction Sign, Pardhauli , Birpur
1820	241.375	Median	Solar Based Beacons/Flashing Signals
1821	241.375	Median	Solar Based Beacons/Flashing Signals
1822	241.380	Median	Keep Left With Hazzard Marker
1823	241.380	Median	Cluster Of Red Reflector
1824	241.380	Median	Keep Left With Hazzard Marker
1825	241.380	Median	Cluster Of Red Reflector
1826	241.400	Median	Keep Left With Hazzard Marker
1827	241.400	Median	Keep Left With Hazzard Marker
1828	241.410	Median	Solar Based Beacons/Flashing Signals
1829	241.410	Median	Solar Based Beacons/Flashing Signals
1830	241.470	RHS	Direction Sign, Pardhauli , Birpur
1831	241.720	Median	Gap In Median
1832	241.720	LHS	Chevron
1833	241.720	Median	Chevron
1834	241.720	Median	Gap In Median
1835	241.720	LHS	Chevron
1836	241.720	Median	Chevron
1837	241.800	LHS	Right Hand Curve
1838	241.800	LHS	Right Hand Curve
1839	241.850	LHS/RHS	Object Hazard Marker
1840	241.850	LHS/RHS	Object Hazard Marker
1841	242.020	LHS Median	Chevron
1842	242.020	LHS Median	Chevron
1843	242.200	RHS	Left Hand Curve
1844	242.200	RHS	Left Hand Curve
1845	242.230	Median	Gap In Median
1846	242.230	Median	Gap In Median
1847	242.455	Median	Solar Based Beacons/Flashing Signals

S.No	Chainage	Side	Signage
1848	242.455	Median	Solar Based Beacons/Flashing Signals
1849	242.460	Median	Keep Left With Hazzard Marker
1850	242.460	Median	Cluster Of Red Reflector
1851	242.460	Median	Keep Left With Hazzard Marker
1852	242.460	Median	Cluster Of Red Reflector
1853	242.490	Median	Keep Left With Hazzard Marker
1854	242.490	Median	Keep Left With Hazzard Marker
1855	242.495	Median	Solar Based Beacons/Flashing Signals
1856	242.495	Median	Solar Based Beacons/Flashing Signals
1857	242.640	Median	Gap In Median
1858	242.640	Median	Gap In Median
1859	243.150	LHS/RHS	Object Hazard Marker
1860	243.150	LHS/RHS	Object Hazard Marker
1861	243.670	LHS/RHS	Object Hazard Marker
1862	243.670	LHS/RHS	Object Hazard Marker
1863	243.760	Median	Gap In Median
1864	243.760	Median	Gap In Median
1865	243.770	LHS	Cross Road
1866	243.770	LHS	Cross Road
1867	243.810	LHS	Direction Sign, Ata Kaysthan , Vivyapur Choudhary
1868	243.870	Median	Solar Based Beacons/Flashing Signals
1869	243.870	Median	Solar Based Beacons/Flashing Signals
1870	243.875	Median	Cluster Of Red Reflector
1871	243.875	Median	Keep Left With Hazzard Marker
1872	243.875	Median	Cluster Of Red Reflector
1873	243.875	Median	Keep Left With Hazzard Marker
1874	243.900	Median	Keep Left With Hazzard Marker
1875	243.900	Median	Cluster Of Red Reflector
1876	243.900	Median	Keep Left With Hazzard Marker
1877	243.900	Median	Cluster Of Red Reflector
1878	243.905	Median	Solar Based Beacons/Flashing Signals
1879	243.905	Median	Solar Based Beacons/Flashing Signals
1880	243.980	RHS	Direction Sign, Ata Kaysthan , Vivyapur Choudhary
1881	244.020	Median	Gap In Median
1882	244.020	Median	Gap In Median
1883	244.030	RHS	Cross Road
1884	244.030	RHS	Cross Road
1885	244.265	LHS/RHS	Object Hazard Marker
1886	244.265	LHS/RHS	Object Hazard Marker
1887	244.780	Median	Gap In Median
1888	244.780	Median	Gap In Median
1889	244.810	LHS	Side Road Left
1890	244.810	LHS	Side Road Left
1891	244.860	LHS	Direction Sign, Bilwa
1892	244.935	Median	Solar Based Beacons/Flashing Signals
1893	244.935	Median	Solar Based Beacons/Flashing Signals
1894	244.940	Median	Keep Left With Hazzard Marker
1895	244.940	Median	Keep Left With Hazzard Marker
1896	244.970	Median	Cluster Of Red Reflector
1897	244.970	Median	Keep Left With Hazzard Marker
1898	244.970	Median	Cluster Of Red Reflector
1899	244.970	Median	Keep Left With Hazzard Marker
1900	244.975	Median	Solar Based Beacons/Flashing Signals
1901	244.975	Median	Solar Based Beacons/Flashing Signals
1902	245.115	Median	Gap In Median
1903	245.115	Median	Gap In Median

S.No	Chainage	Side	Signage
1904	245.180	RHS	Nh Rout Marker Sign
1905	245.180	LHS	Diverging Sign
1906	245.180	RHS	Nh Rout Marker Sign
1907	245.180	LHS	Diverging Sign
1908	245.220	LHS	Ah Rout Marker Sign
1909	245.220	LHS	Ah Rout Marker Sign
1910	245.220	Median	Helpline
1911	245.320	RHS/ median	Object Hazard Marker
1912	245.320	RHS/ median	Object Hazard Marker
1913	245.440	Median	Gap In Median
1914	245.440	Median	Gap In Median
1915	245.580	Median	Solar Based Beacons/Flashing Signals
1916	245.580	Median	Solar Based Beacons/Flashing Signals
1917	245.585	Median	Keep Left With Hazzard Marker
1918	245.585	Median	Cluster Of Red Reflector
1919	245.585	Median	Keep Left With Hazzard Marker
1920	245.585	Median	Cluster Of Red Reflector
1921	245.620	Median	Keep Left With Hazzard Marker
1922	245.620	Median	Solar Based Beacons/Flashing Signals
1923	245.620	Median	Keep Left With Hazzard Marker
1924	245.620	Median	Solar Based Beacons/Flashing Signals
1925	245.715	LHS	Direction Sign, Nainital Bareilly
1926	245.740	Median	Gap In Median
1927	245.740	Median	Gap In Median
1928	245.850	LHS	Object Hazard Marker
1929	245.850	LHS	Object Hazard Marker
1930	245.870	Median	Object Hazard Marker
1931	245.870	Median	Object Hazard Marker
1932	245.890	LHS	Speed Limit
1933	245.890	LHS	Speed Limit
1934	245.905	RHS	Object Hazard Marker
1935	245.905	Median	Object Hazard Marker
1936	245.905	RHS	Object Hazard Marker
1937	245.905	Median	Object Hazard Marker
1938	246.060	LHS	Two Way Hazard Marker
1939	246.060	LHS	Two Way Hazard Marker
1940	246.140	RHS	Merging Sign
1941	246.140	RHS	Merging Sign
1942	246.330	LHS /Median	Object Hazard Marker
1943	246.330	LHS /Median	Object Hazard Marker
1944	246.540	RHS / median	Object Hazard Marker
1945	246.540	RHS / median	Object Hazard Marker
1946	246.800	RHS	Object Hazard Marker
1947	246.800	RHS	Object Hazard Marker
1948	246.820	Median	Direction Sign, Anti U Turn Nainital Bareilly
1949	247.030	LHS	Pedestrian Crossing
1950	247.030	LHS	Pedestrian Crossing
1951	247.050	LHS	Bus Stop
1952	247.050	LHS	Bus Stop
1953	247.150	LHS	Two Way Hazard Marker
1954	247.150	LHS	Two Way Hazard Marker
1955	247.320	LHS	Diverging Sign
1956	247.320	LHS	Diverging Sign
1957	247.450	RHS	Bus Stop
1958	247.450	RHS	Bus Stop
1959	247.480	RHS	Pedestrian Crossing

S.No	Chainage	Side	Signage
1960	247.480	RHS	Pedestrian Crossing
1961	247.540	LHS	Speed Limit
1962	247.540	LHS	Speed Limit
1963	247.580	LHS	Two Way Hazard Marker
1964	247.580	LHS	Two Way Hazard Marker
1965	247.690	RHS	Two Way Hazard Marker
1966	247.690	RHS	Two Way Hazard Marker
1967	247.700	RHS	Merging Sign
1968	247.700	RHS	Merging Sign
1969	248.080	LHS/RHS	Object Hazard Marker
1970	248.080	LHS/RHS	Object Hazard Marker
1971	248.365	LHS	Merging Sign
1972	248.365	LHS	Merging Sign
1973	248.440	RHS	Two Way Hazard Marker
1974	248.440	RHS	Two Way Hazard Marker
1975	248.560	RHS	Direction Sign, Shahadpur , Bhuda
1976	248.580	LHS	Direction Sign, Shahadpur , Bhuda
1977	248.650	RHS	Speed Limit
1978	248.650	RHS	Speed Limit
1979	248.770	RHS	Diverging Sign
1980	248.770	RHS	Diverging Sign
1981	248.780	LHS	Cross Road
1982	248.780	LHS	Cross Road
1983	249.080	RHS	Cross Road
1984	249.080	RHS	Cross Road
1985	249.820	Median	Gap In Median
1986	249.820	Median	Gap In Median
1987	249.960	Median	Solar Based Beacons/Flashing Signals
1988	249.960	Median	Solar Based Beacons/Flashing Signals
1989	249.965	Median	Keep Left With Hazzard Marker
1990	249.965	Median	Keep Left With Hazzard Marker
1991	250.000	Median	Cluster Of Red Reflector
1992	250.000	Median	Keep Left With Hazzard Marker
1993	250.000	Median	Cluster Of Red Reflector
1994	250.000	Median	Keep Left With Hazzard Marker
1995	250.050	Median	Solar Based Beacons/Flashing Signals
1996	250.050	Median	Solar Based Beacons/Flashing Signals
1997	250.080	LHS	Nh Rout Marker Sign
1998	250.080	LHS	Nh Rout Marker Sign
1999	250.100	Median	Helpline
2000	250.115	Median	Gap In Median
2001	250.115	Median	Gap In Median
2002	250.120	RHS	Ah Rout Marker Sign
2003	250.120	RHS	Ah Rout Marker Sign
2004	250.820	LHS/RHS	Object Hazard Marker
2005	250.820	LHS/RHS	Object Hazard Marker
2006	251.430	LHS/RHS	Object Hazard Marker
2007	251.430	LHS/RHS	Object Hazard Marker
2008	251.680	LHS+Median	Object Hazard Marker
2009	251.680	LHS+Median	Object Hazard Marker
2010	251.700	LHS	Diverging Sign
2011	251.700	LHS	Direction Sign, Pilibhit Bareilly
2012	251.700	LHS	Diverging Sign
2013	251.750	RHS+Median	Object Hazard Marker
2014	251.750	RHS+Median	Object Hazard Marker
2015	251.760	LHS	Speed Limit

S.No	Chainage	Side	Signage
2016	251.760	LHS	Speed Limit
2017	251.770	LHS	Bus Stop
2018	251.770	LHS	Bus Stop
2019	251.820	LHS	Pedestrian Crossing
2020	251.820	LHS	Pedestrian Crossing
2021	251.880	LHS	Two Way Hazard Marker
2022	251.880	LHS	Two Way Hazard Marker
2023	251.930	LHS	Cross Road
2024	251.930	LHS	Cross Road
2025	251.970	Median	Gap In Median
2026	251.970	Median	Gap In Median
2027	251.990	LHS	Speed Breaker
2028	251.990	LHS	Merging Sign
2029	251.990	LHS	Speed Breaker
2030	251.990	LHS	Merging Sign
2031	252.010	RHS	Two Way Hazard Marker
2032	252.010	RHS	Two Way Hazard Marker
2033	252.030	LHS	Cross Road
2034	252.030	LHS	Cross Road
2035	252.060	RHS	Speed Breaker
2036	252.060	RHS	Merging Sign
2037	252.060	RHS	Speed Breaker
2038	252.060	RHS	Merging Sign
2039	252.080	LHS	Direction Sign, Kumhra, Rithora
2040	252.095	RHS	Pedestrian Crossing
2041	252.095	RHS	Pedestrian Crossing
2042	252.120	RHS	Cross Road
2043	252.120	RHS	Cross Road
2044	252.140	RHS	Bus Stop
2045	252.140	Median	Solar Based Beacons/Flashing Signals
2046	252.140	RHS	Bus Stop
2047	252.140	Median	Solar Based Beacons/Flashing Signals
2048	252.145	Median	Keep Left With Hazzard Marker
2049	252.145	Median	Keep Left With Hazzard Marker
2050	252.190	RHS	Speed Limit
2051	252.190	RHS	Speed Limit
2052	252.200	Median	Cluster Of Red Reflector
2053	252.200	Median	Keep Left With Hazzard Marker
2054	252.200	Median	Cluster Of Red Reflector
2055	252.200	Median	Keep Left With Hazzard Marker
2056	252.205	Median	Solar Based Beacons/Flashing Signals
2057	252.205	Median	Solar Based Beacons/Flashing Signals
2058	252.250	RHS	Diverging Sign
2059	252.250	RHS	Direction Sign, Pilibhit Bareilly
2060	252.250	RHS	Diverging Sign
2061	252.250	RHS	Direction Sign, Kumhra, Rithora
2062	252.260	RHS	Cross Road
2063	252.260	RHS	Cross Road
2064	252.320	Median	Gap In Median
2065	252.320	Median	Gap In Median
2066	252.390	LHS/RHS	Object Hazard Marker
2067	252.390	LHS/RHS	Object Hazard Marker
2068	252.615	LHS/RHS	Object Hazard Marker
2069	252.615	LHS/RHS	Object Hazard Marker
2070	253.350	LHS/RHS	Object Hazard Marker
2071	253.350	LHS/RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
2072	253.485	Median	Gap In Median
2073	253.485	Median	Gap In Median
2074	253.555	LHS	Direction Sign, Mohraniya , Ahladpur
2075	253.580	LHS	Cross Road
2076	253.580	LHS	Cross Road
2077	253.630	Median	Solar Based Beacons/Flashing Signals
2078	253.630	Median	Solar Based Beacons/Flashing Signals
2079	253.635		Keep Left With Hazzard Marker
2080	253.635	LHS	Cluster Of Red Reflector
2081	253.635		Keep Left With Hazzard Marker
2082	253.635	LHS	Cluster Of Red Reflector
2083	253.666		Keep Left With Hazzard Marker
2084	253.666		Keep Left With Hazzard Marker
2085	253.680	Median	Solar Based Beacons/Flashing Signals
2086	253.680	Median	Solar Based Beacons/Flashing Signals
2087	253.740	RHS	Cross Road
2088	253.740	RHS	Cross Road
2089	253.800	Median	Gap In Median
2090	253.800	Median	Gap In Median
2091	254.505	LHS/RHS	Object Hazard Marker
2092	254.505	LHS/RHS	Object Hazard Marker
2093	254.505	LHS/RHS	Object Hazard Marker
2094	254.505	LHS/RHS	Object Hazard Marker
2095	254.550	Median	Gap In Median
2096	254.550	Median	Gap In Median
2097	254.600	LHS	Cross Road
2098	254.600	LHS	Cross Road
2099	254.655	Median	Keep Left With Hazzard Marker
2100	254.655	Median	Keep Left With Hazzard Marker
2101	254.679	Median	Cluster Of Red Reflector
2102	254.679	Median	Cluster Of Red Reflector
2103	254.680	Median	Keep Left With Hazzard Marker
2104	254.680	Median	Keep Left With Hazzard Marker
2105	254.695	Median	Solar Based Beacons/Flashing Signals
2106	254.695	Median	Solar Based Beacons/Flashing Signals
2107	254.740	Median	Solar Based Beacons/Flashing Signals
2108	254.740	RHS	Cross Road
2109	254.740	Median	Solar Based Beacons/Flashing Signals
2110	254.740	RHS	Cross Road
2111	254.830	Median	Gap In Median
2112	254.830	Median	Gap In Median
2113	255.000	Median	Cluster Of Red Reflector
2114	255.000	Median	Cluster Of Red Reflector
2115	255.060	LHS	Ah Rout Marker Sign
2116	255.060	LHS	Ah Rout Marker Sign
2117	255.070	RHS	Helpline
2118	255.080	RHS	Nh Rout Marker Sign
2119	255.080	RHS	Nh Rout Marker Sign
2120	255.120	Median	Gap In Median
2121	255.120	Median	Gap In Median
2122	255.255	Median	Solar Based Beacons/Flashing Signals
2123	255.255	Median	Solar Based Beacons/Flashing Signals
2124	255.260	Median	Keep Left With Hazzard Marker
2125	255.260	Median	Keep Left With Hazzard Marker
2126	255.300	Median	Keep Left With Hazzard Marker
2127	255.300	Median	Keep Left With Hazzard Marker

S.No	Chainage	Side	Signage
2128	255.305	Median	Solar Based Beacons/Flashing Signals
2129	255.305	Median	Solar Based Beacons/Flashing Signals
2130	255.420	Median	Gap In Median
2131	255.420	Median	Gap In Median
2132	255.500	LHS/RHS	Object Hazard Marker
2133	255.500	LHS/RHS	Object Hazard Marker
2134	256.475	Median	Gap In Median
2135	256.475	Median	Gap In Median
2136	256.512	LHS	Cross Road
2137	256.512	LHS	Cross Road
2138	256.545	LHS	Direction Sign, Kesarpur , Lalpur
2139	256.600	LHS/RHS	Object Hazard Marker
2140	256.600	LHS/RHS	Object Hazard Marker
2141	256.620	Median	Cluster Of Red Reflector
2142	256.620	Median	Cluster Of Red Reflector
2143	256.625	Median	Keep Left With Hazzard Marker
2144	256.625	Median	Solar Based Beacons/Flashing Signals
2145	256.625	Median	Keep Left With Hazzard Marker
2146	256.625	Median	Solar Based Beacons/Flashing Signals
2147	256.650	Median	Keep Left With Hazzard Marker
2148	256.650	Median	Keep Left With Hazzard Marker
2149	256.660	Median	Solar Based Beacons/Flashing Signals
2150	256.660	Median	Solar Based Beacons/Flashing Signals
2151	256.690	RHS	Direction Sign, Lalpur , Kasampur
2152	256.690	RHS	Direction Sign, Lalpur , Kasampur
2153	256.770	RHS	Cross Road
2154	256.770	RHS	Cross Road
2155	256.800	Median	Gap In Median
2156	256.800	Median	Gap In Median
2157	257.560	LHS/RHS	Object Hazard Marker
2158	257.560	LHS/RHS	Object Hazard Marker
2159	258.600	Median	Gap In Median
2160	258.600	Median	Gap In Median
2161	258.700	LHS/RHS	Object Hazard Marker
2162	258.700	LHS/RHS	Object Hazard Marker
2163	258.748	Median	Solar Based Beacons/Flashing Signals
2164	258.748	Median	Solar Based Beacons/Flashing Signals
2165	258.750	Median	Keep Left With Hazzard Marker
2166	258.750	Median	Cluster Of Red Reflector
2167	258.750	Median	Keep Left With Hazzard Marker
2168	258.750	Median	Cluster Of Red Reflector
2169	258.785	Median	Keep Left With Hazzard Marker
2170	258.785	Median	Keep Left With Hazzard Marker
2171	258.790	Median	Solar Based Beacons/Flashing Signals
2172	258.790	Median	Solar Based Beacons/Flashing Signals
2173	258.920	Median	Gap In Median
2174	258.920	Median	Gap In Median
2175	259.010	Median	Gap In Median
2176	259.010	Median	Gap In Median
2177	259.090	Median	Object Hazard Marker
2178	259.090	LHS/RHS	Object Hazard Marker
2179	259.090	Median	Object Hazard Marker
2180	259.090	LHS/RHS	Object Hazard Marker
2181	259.100	Median	Solar Based Beacons/Flashing Signals
2182	259.100	Median	Cluster Of Red Reflector
2183	259.100	Median	Solar Based Beacons/Flashing Signals

S.No	Chainage	Side	Signage
2184	259.100	Median	Cluster Of Red Reflector
2185	259.105	Median	Keep Left With Hazzard Marker
2186	259.105	Median	Keep Left With Hazzard Marker
2187	259.135	Median	Keep Left With Hazzard Marker
2188	259.135	Median	Keep Left With Hazzard Marker
2189	259.140	Median	Solar Based Beacons/Flashing Signals
2190	259.140	Median	Solar Based Beacons/Flashing Signals
2191	259.250	Median	Gap In Median
2192	259.250	Median	Gap In Median
2193	260.045	LHS	Nh Rout Marker Sign
2194	260.045	LHS	Nh Rout Marker Sign
2195	260.055	Median	Helpline
2196	260.055	Median	Helpline
2197	260.070	RHS	Ah Rout Marker Sign
2198	260.070	RHS	Ah Rout Marker Sign
2199	260.100	LHS	Cross Road
2200	260.100	LHS	Cross Road
2201	260.160	LHS	Pedestrian Crossing
2202	260.160	LHS	Direction Signbisalpur , Bareilly
2203	260.160	LHS	Pedestrian Crossing
2204	260.160	LHS	Direction Signbisalpur , Bareilly
2205	260.180	Median	Gap In Median
2206	260.180	Median	Gap In Median
2207	260.200	LHS	Bus Stop
2208	260.200	LHS	Bus Stop
2209	260.320	Median	Solar Based Beacons/Flashing Signals
2210	260.320	Median	Solar Based Beacons/Flashing Signals
2211	260.335	Median	Keep Left With Hazzard Marker
2212	260.335	LHS	Cluster Of Red Reflector
2213	260.335	Median	Keep Left With Hazzard Marker
2214	260.335	LHS	Cluster Of Red Reflector
2215	260.355	LHS/RHS	Speed Breaker
2216	260.355	LHS/RHS	Two Way Hazard Marker
2217	260.355	LHS/RHS	Cluster Of Red Reflector
2218	260.355	LHS/RHS	Stop
2219	260.355	LHS/RHS	Speed Breaker
2220	260.355	LHS/RHS	Two Way Hazard Marker
2221	260.355	LHS/RHS	Cluster Of Red Reflector
2222	260.355	LHS/RHS	Stop
2223	260.366	Median	Keep Left With Hazzard Marker
2224	260.366	Median	Keep Left With Hazzard Marker
2225	260.375	Median	Solar Based Beacons/Flashing Signals
2226	260.375	Median	Solar Based Beacons/Flashing Signals
2227	260.410	LHS	Two Way Hazard Marker
2228	260.410	LHS	Two Way Hazard Marker
2229	260.480	RHS	Cross Road
2230	260.480	RHS	Cross Road
2231	260.510	Median	Gap In Median
2232	260.510	Median	Gap In Median
2233	260.585	RHS	Direction Sign, Bareilly ,Bisalpur
2234	260.585	RHS	Direction Sign, Bareilly ,Bisalpur
2235	260.590	RHS	Two Way Hazard Marker
2236	260.590	RHS	Two Way Hazard Marker
2237	260.690	RHS	Bus Stop
2238	260.690	RHS	Bus Stop
2239	260.730	RHS	Pedestrian Crossing

S.No	Chainage	Side	Signage
2240	260.730	RHS	Pedestrian Crossing
2241	260.750	LHS/RHS	Object Hazard Marker
2242	260.750	LHS/RHS	Object Hazard Marker
2243	261.000	LHS/RHS	Object Hazard Marker
2244	261.000	LHS/RHS	Object Hazard Marker
2245	261.950	LHS	Diverging Sign
2246	261.950	LHS	Diverging Sign
2247	262.220	LHS	Speed Limit
2248	262.220	LHS	Speed Limit
2249	262.260	LHS	Two Way Hazard Marker
2250	262.260	LHS	Two Way Hazard Marker
2251	262.305	RHS	Merging Sign
2252	262.305	RHS	Merging Sign
2253	262.520	SRLHS	Cross Road
2254	262.520	SRLHS	Cross Road
2255	262.580	SRLHS	Speed Breaker
2256	262.580	SRLHS	Speed Breaker
2257	262.690	LHS/RHS	Object Hazard Marker
2258	262.690	LHS/RHS	Object Hazard Marker
2259	262.860	SRLHS	Speed Breaker
2260	262.860	SRLHS	Speed Breaker
2261	262.980	SRLHS	Cross Road
2262	262.980	SRLHS	Cross Road
2263	263.100	LHS	Merging Sign
2264	263.100	LHS	Merging Sign
2265	263.120	RHS	Two Way Hazard Marker
2266	263.120	RHS	Two Way Hazard Marker
2267	263.140	LHS/RHS	Cross Road
2268	263.140	LHS/RHS	Cross Road
2269	263.190	Median	Gap In Median
2270	263.190	Median	Gap In Median
2271	263.220	RHS	Speed Limit
2272	263.220	RHS	Speed Limit
2273	263.245	LHS	Direction Sign, Alampur, Udlajagir
2274	263.245	LHS	Direction Sign, Alampur, Udlajagir
2275	263.325	Median	Solar Based Beacons/Flashing Signals
2276	263.325	Median	Solar Based Beacons/Flashing Signals
2277	263.330	Median	Keep Left With Hazzard Marker
2278	263.330	Median	Keep Left With Hazzard Marker
2279	263.365	Median	Keep Left With Hazzard Marker
2280	263.365	Median	Cluster Of Red Reflector
2281	263.365	Median	Keep Left With Hazzard Marker
2282	263.365	Median	Cluster Of Red Reflector
2283	263.370		Solar Based Beacons/Flashing Signals
2284	263.370		Solar Based Beacons/Flashing Signals
2285	263.410	RHS	Cross Road
2286	263.410	RHS	Cross Road
2287	263.430	RHS	Direction Sign, Udlajagir, Alampur
2288	263.430	RHS	Direction Sign, Udlajagir, Alampur
2289	263.480	RHS	Object Hazard Marker
2290	263.480	RHS	Object Hazard Marker
2291	263.515	Median	Gap In Median
2292	263.515	Median	Gap In Median
2293	263.540	RHS	Diverging Sign
2294	263.540	RHS	Diverging Sign
2295	263.620	LHS	Cross Road

S.No	Chainage	Side	Signage
2296	263.620	LHS	Cross Road
2297	263.710	Median	Gap In Median
2298	263.710	Median	Gap In Median
2299	263.750	median / RHS	Chevron
2300	263.750	median / RHS	Chevron
2301	263.810	Median	Solar Based Beacons/Flashing Signals
2302	263.810	Median	Solar Based Beacons/Flashing Signals
2303	263.815	Median	Keep Left With Hazzard Marker
2304	263.815	Median	Keep Left With Hazzard Marker
2305	263.850	Median	Keep Left With Hazzard Marker
2306	263.850	Median	Keep Left With Hazzard Marker
2307	263.855	Median	Solar Based Beacons/Flashing Signals
2308	263.855	Median	Solar Based Beacons/Flashing Signals
2309	263.920	RHS	Cross Road
2310	263.920	RHS	Cross Road
2311	263.960	Median	Cluster Of Red Reflector
2312	263.960	Median	Gap In Median
2313	263.960	Median	Cluster Of Red Reflector
2314	263.960	Median	Gap In Median
2315	264.000	Median/LHS	Chevron
2316	264.000	Median/LHS	Chevron
2317	264.530	LHS	Cross Road
2318	264.530	LHS	Cross Road
2319	264.550	Median	Gap In Median
2320	264.550	Median	Gap In Median
2321	264.650	LHS	Direction Sign, Tah, Gotia
2322	264.650	LHS	Direction Sign, Tah, Gotia
2323	264.735	Median	Solar Based Beacons/Flashing Signals
2324	264.735	Median	Solar Based Beacons/Flashing Signals
2325	264.740	Median	Keep Left With Hazzard Marker
2326	264.740	Median	Keep Left With Hazzard Marker
2327	264.741	Median	Cluster Of Red Reflector
2328	264.741	Median	Cluster Of Red Reflector
2329	264.770	Median	Solar Based Beacons/Flashing Signals
2330	264.770	Median	Solar Based Beacons/Flashing Signals
2331	264.780	Median	Keep Left With Hazzard Marker
2332	264.780	Median	Keep Left With Hazzard Marker
2333	264.820	RHS	Direction Sign, Tah, Gotia
2334	264.820	RHS	Direction Sign, Tah, Gotia
2335	264.880	RHS	Cross Road
2336	264.880	RHS	Cross Road
2337	264.930	Median	Gap In Median
2338	264.930	Median	Gap In Median
2339	265.000	LHS	Ah Rout Marker Sign
2340	265.000	Median	Helpline
2341	265.000	Median	Helpline
2342	265.000	LHS	Ah Rout Marker Sign
2343	265.020	RHS	Nh Rout Marker Sign
2344	265.020	RHS	Nh Rout Marker Sign
2345	265.700	LHS/RHS	Object Hazard Marker
2346	265.700	LHS/RHS	Object Hazard Marker
2347	266.650	LHS	Right Hand Curve
2348	266.650	LHS	Right Hand Curve
2349	267.000	LHS /Median	Chevron
2350	267.000	LHS /Median	Chevron
2351	267.035	LHS /Median	Chevron

S.No	Chainage	Side	Signage
2352	267.035	LHS /Median	Chevron
2353	267.080	LHS	Lucknow 238, Shahjahanpur 83, Bareilly 09
2354	267.080	LHS	Lucknow 238, Shahjahanpur 83, Bareilly 09
2355	267.100	RHS	Left Hand Curve
2356	267.100	RHS	Left Hand Curve
2357	267.315	RHS	Object Hazard Marker
2358	267.315	LHS	Left Hand Curve
2359	267.315	RHS	Object Hazard Marker
2360	267.315	LHS	Left Hand Curve
2361	267.370	Median/RHS	Chevron
2362	267.370	Median/RHS	Chevron
2363	267.390	Median	Gap In Median
2364	267.390	Median	Gap In Median
2365	267.490	RHS	Stop
2366	267.490	RHS	Stop
2367	267.515	Median	Solar Based Beacons/Flashing Signals
2368	267.515	Median	Solar Based Beacons/Flashing Signals
2369	267.520	Median	Keep Left With Hazzard Marker
2370	267.520	Median	Cluster Of Red Reflector
2371	267.520	Median	Keep Left With Hazzard Marker
2372	267.520	Median	Cluster Of Red Reflector
2373	267.550	LHS	Two Way Hazard Marker
2374	267.550	LHS	Two Way Hazard Marker
2375	267.555	Median	Solar Based Beacons/Flashing Signals
2376	267.555	Median	Solar Based Beacons/Flashing Signals
2377	267.560	Median	Keep Left With Hazzard Marker
2378	267.560	Median	Keep Left With Hazzard Marker
2379	267.610	RHS	Two Way Hazard Marker
2380	267.610	Median	Gap In Median
2381	267.610	RHS	Two Way Hazard Marker
2382	267.610	Median	Gap In Median
2383	267.770	RHS	Right Hand Curve
2384	267.770	RHS	Right Hand Curve
2385	267.900	LHS	Side Road Left
2386	267.900	Median	Gap In Median
2387	267.900	LHS	Side Road Left
2388	267.900	Median	Gap In Median
2389	267.990	LHS	Bahadurpur
2390	267.990	LHS	Bahadurpur
2391	268.000	Median	Keep Left With Hazzard Marker
2392	268.000	Median	Keep Left With Hazzard Marker
2393	268.030	Median	Keep Left With Hazzard Marker
2394	268.030	Median	Keep Left With Hazzard Marker
2395	268.210	LHS/RHS	Object Hazard Marker
2396	268.210	LHS/RHS	Object Hazard Marker
2397	268.330	LHS	Pedestrian Crossing
2398	268.330	LHS	Pedestrian Crossing
2399	268.350	LHS	Bus Stop
2400	268.350	LHS	Bus Stop
2401	268.610	Median	Gap In Median
2402	268.610	Median	Gap In Median
2403	268.620	Median	Gap In Median
2404	268.620	Median	Solar Based Beacons/Flashing Signals
2405	268.620	Median	Gap In Median
2406	268.620	Median	Solar Based Beacons/Flashing Signals
2407	268.650	RHS	Two Way Hazard Marker

S.No	Chainage	Side	Signage
2408	268.650	RHS	Two Way Hazard Marker
2409	268.670	LHS	Police Station
2410	268.670	LHS	Police Station
2411	268.720	LHS	Side Road Left
2412	268.720	RHS	Bus Stop
2413	268.720	LHS	Side Road Left
2414	268.720	RHS	Bus Stop
2415	268.725	Median	Solar Based Beacons/Flashing Signals
2416	268.725	Median	Solar Based Beacons/Flashing Signals
2417	268.730	Median	Cluster Of Red Reflector
2418	268.730	Median	Keep Left With Hazzard Marker
2419	268.730	LHS	Cluster Of Red Reflector
2420	268.730	Median	Cluster Of Red Reflector
2421	268.730	Median	Keep Left With Hazzard Marker
2422	268.730	LHS	Cluster Of Red Reflector
2423	268.790	LHS	Direction Sign Raja Paraspur
2424	268.790	LHS	Direction Sign Raja Paraspur
2425	268.800	RHS	Pedestrian Crossing
2426	268.800	RHS	Pedestrian Crossing
2427	268.830	RHS	Side Road Right
2428	268.830	RHS	Side Road Right
2429	268.840	RHS	Delhi, Moradabad, Bareilly
2430	268.840	RHS	Delhi, Moradabad, Bareilly
2431	268.880	Median	Keep Left With Hazzard Marker
2432	268.880	Median	Keep Left With Hazzard Marker
2433	268.885	Median	Solar Based Beacons/Flashing Signals
2434	268.885	Median	Solar Based Beacons/Flashing Signals
2435	268.885	Median	Solar Based Beacons/Flashing Signals
2436	268.885	Median	Solar Based Beacons/Flashing Signals
2437	268.890	Median	Gap In Median
2438	268.890	Median	Gap In Median
2439	269.020	RHS	Side Road Left
2440	269.020	RHS	Side Road Left
2441	269.080	RHS	Direction Sign, Satharpur
2442	269.080	RHS	Direction Sign, Satharpur
2443	269.380	RHS	Gantary Overhead Sign
2444	269.380	RHS	Gantary Overhead Sign
2445	273.570	Median	Chevron
2446	273.570	Median	Chevron
2447	280.880	RHS	Two Way Hazard Marker
2448	280.880	RHS	Two Way Hazard Marker
Condition of majority of the signages ranges from good to fair			

Annexure 3(b) : Details for Blinker

Sr. No.	Location
1	150.550
2	150.600
3	152.100
4	152.150
5	165.850
6	165.890
7	165.900
8	168.050
9	168.100
10	173.650
11	173.700
12	176.070
13	176.100
14	177.660
15	177.700
16	178.930
17	178.970
18	181.200
19	181.300
20	181.300
21	197.850
22	197.880
23	199.000
24	199.030
25	205.400
26	205.430
27	206.680
28	212.030
29	212.060
30	218.510
31	218.540
32	224.000
33	224.030
34	230.070
35	230.100
36	231.140
37	231.170
38	233.500
39	233.530
40	237.380
41	237.410
42	242.500
43	244.000
44	254.700
45	256.620
46	260.340
47	260.370
48	264.740
49	264.770
50	267.520
51	267.550
52	267.600 @ SR
53	267.600 Towards Bareilly
54	268.760
55	268.790
56	269.150
Total Blinkers	**56**

Condition of majority of the blinker is from good to fair

Annexures 4: O&M cost estimate

Routine Maintenance

Item No	Item Head	Description	Frequency	Unit	Qty	Rate	Amount per year, INR	Remarks
1	**ROADS**	**33.9%**						
1.1		Roughness Value (BI Test)	2 X Annually	Km	121.8	6000	7,30,800	BI test twice a year | Rs 3000/- per km
1.2		Pothole / Patchwork						
		Main Carriage way	Upon Occurrence	Sqm	21315	332	70,76,580	1% Per Km Per Year | 1 Km Area = 17500 M² | Rs 332/- Per Sqm
		Service Road	Upon Occurrence	Sqm	3247	332	10,78,104	1% Per Km Per Year | 1 Km Area = 7000 M² | Rs 332/- Per Sqm
1.3		Cracks Sealing						
		Main Carriage way	Upon Occurrence	Sqm	42630	47	20,03,610	2.0% Per Km Per Year | 1 Km Area = 17500 M² | Rs 47/- Per Sqm
		Service Road	Upon Occurrence	Sqm	4871	47	2,28,935	1.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 47/- Per Sqm
1.4		Other Defacts (Rutting, Bleeding / Skidding, Ravelling / Stripping, Pavement Edge Repairs)						
		Main Carriage way	Upon Occurrence	Sqm	31973	85	27,17,663	1.5% Per Km Per Year | 1 Km Area = 17500 M² | Rs 85/- Per Sqm
		Service Road	Upon Occurrence	Sqm	4871	85	4,14,031	1.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 85/- Per Sqm
1.5		Road Sweeping /Cleaning (MCW /SR)						
		Urban	Daily	Km-month	136	10588	14,40,212	Total 11.335 Km of urban section. Rental and operating cost of 2 broomer is considered. Broomer works with efficiency of 10 km/hr for 6 hr.
		Rural	Daily	Km-month	1326	5419	71,82,946	Total 20 labours for cleaning work of MCW of rural section | Labour wages - Rs 550/-
					Total Cost for Roads		**2,28,72,879**	
2	**ROADSIDE**	**1.7%**						
2.1		Blading/grading the unpaved shoulder and slopes using motor grader at the required camber /Repairing Hard/Earthen Shoulders/Side Slopes (Edge Drops)	2-3X Annually	Sqm	2262	186	4,20,197	1% Per Km Per Year | 1 Km Area = 17500 M² | Rs 120/- Per Sqm
2.2		Rain Cuts / Gullies in Slopes	2-3X Annually	Km	122	1355	1,65,000	10 labours maintaining rain cuts and gullies for 15 days pre/post monsoon | Labour wages - Rs 550/-
2.3		Foothpath / Sidewalk repairs	Upon Occurrence	Sqm	1624	332	5,39,052	0.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 332/- Per Sqm
					Total Cost for Roadside		**11,24,249**	
3	**TRAFFIC SERVICES (Road Signs &**	**38.9%**						
3.1		Traffic Signs -(Informatory / Direction/Hazard Marker/ Gantries)						
		Routine Maintenance	Monthly	No-month	6000	330	19,80,000	Total 10 labours for cleaning work of sign boards | Labour wages - Rs 550/-
		Replacement	Upon Occurrence	No.	500	4900	24,50,000	Replacement of total 500 TS per year with cost of Rs. 4900
3.2		Pedestrain Guardrail Repair						
		Cleaning, clearing of dirt, routine maintenance	Monthly	Km-month	272	10919	29,70,437	Total 15 labours for cleaning work of PGR| Labour wages - Rs 550/-
		Replacement	Upon Occurrence	RM	500	2200	11,00,000	Replacement 500m pedestrian guard rail annually | Rs 2200/- per RM
3.3		MBCB Inspection and Service						

Routine Maintenance

Item No	Item Head	Description	Frequency	Unit	Qty	Rate	Amount per year, INR	Remarks
		Cleaning, clearing of dirt, routine maintenance	Daily	No-month	420	4714	19,80,000	Total 10 labours for cleaning work of MBCB | Labour wages - Rs 550/-
		Replacement	Upon Occurrence	RM	950	2950	28,02,500	Replacement of 950 m of MBCB | Rs 2950/- Per RM
3.4		Pavement Marking - Reflectivity / Fading	1X Year	Sqm	21924	415	90,98,460	New pavement marking for entire section for FY 26, 28 & 33 | Rs 415/- per Sqm
3.5		Kerb Painting	1X Year	Sqm	12000	100	12,00,000	Kerb painting for entire stretch in FY 26, FY 28 & FY 33 | Rs. 100/- per Sqm
		Kerb Painting (Enamel paint) 100 Km length						
3.6		Road Studs Replacement	1X Year	No.	7167	280	20,06,667	Capex cost of stud installation after MMR 2nd and 3rd cycle is considered. Replacement of 43000 nos. of Road studs twice | RS 280/- per nos.
3.7		Delineators - Maintenance		No.	20	1200	24,000	Maintenance/Replacement of 20 delineators per year
3.8		Solar Blinkers		No.	60	11000	6,60,000	Maintenance of 60 solar blinkers per year
					Total Cost for Traffic Services		**2,62,72,063**	
4	**DRAINAGE**	**1.38%**						
4.1		Clean Drainage Structures	2 x Annually	RM	46390	6	2,70,114	2 teams of 3 person cleaning 22 km pf drain twice in a year pre/post monsoon with 550 of daily wages
4.2		Weep Hole Cleaning	2 x Annually	No.	25	2640	66,000	2 teams of 2 person cleaning weep holes at every structure locations twice in a year pre/post monsoon with 550 of daily wages
4.3		Replacement of drain cover		RM	283.375	2100	5,95,088	Replacement of drain cover for 15% of total drain length of 22.67 Km (combine of LHS and RHS) | Annually
					Total Cost for Traffic Services		**9,31,201**	
5	**VEGETATION AND AESTHETICS (Median & Avenue Plantation)**	**8%**						
5.1		Replacement of dead plants	Annually	No.	200	140	28,000	Replacement of 200 plants per year
5.2		Maintenance of existing plant		Km-month	1326	3467	45,96,000	
		Watering of plant						Total 5 labours for watering of plant | Labour wages - Rs 550/-
		Application of Fungiside/pestiside/Fertilizer						
		Training and pruning of plants						
5.3		Unwanted grass removal (median & road side)		Km-month	1326	448	5,94,000	Total 5 labours for removal of unwanted grass | Labour wages - Rs 550/-
					Total Cost for Vegetation and Asthetics		**52,18,000**	
6	**BRIDGE/STRUCTURES**	**1%**						
6.1		Routine maintenance of structures						
		Cleaning, clearing slab/ box type culverts and pipe culverts including clearing, cleaning and reshapping of upstream and down stream faces of these culverts with in rights of way. The job includes disposal of excess material recovered from site.		Nos	206	550	2,26,600	

Routine Maintenance

Item No	Item Head	Description	Frequency	Unit	Qty	Rate	Amount per year, INR	Remarks
		Cleaning, clearing of bridges reshapping of upstream and down stream faces , Cleaning debris vegitation ,clogging drainange spout etc /Including cleaning of expansion joint and Bearing when applicable The job includes disposal of excess material recovered from site.		Nos	52	2200	2,28,800	
		Providing & laying 300 mm thick stone pitching covering the slopes of guide bunds or other location to MOST Specification Clause No. 2504 complete in all respect as directed by the Engineer.		Cum	894	2792		Str. Rehabilirtation works should be consideered under MM
		Protection work for Pier against scouring.		Cum	900	2500		Str. Rehabilirtation works should be consideered under MM
		Drainange spout Replacement		nos	12	1600		Str. Rehabilirtation works should be consideered under MM
		Crash Barrier		Rm	50	17000		Str. Rehabilirtation works should be consideered under MM
		Patch work for Structure		sqm	100	200		Str. Rehabilirtation works should be consideered under MM
		Cement Grouting for crack sealing and spalling of concrete.		Kg	100	400		Str. Rehabilirtation works should be consideered under MM Rs. 22434171
						Total Cost for Structures	**4,55,400**	
7	**REST AREA / Toll Plaza,**	**8%**						
7.1		Toilet Inspections and repairs	Monthly	No	7	6000	42,000	6% of the capital cost
7.2		Defects of Sanitary /Electrical /Water installations	Monthly					
7.3		Toll Collection System / Lighting	Monthly	Lumsum	1	405000	4,05,000	6% of the capital cost
7.4		Toll Plaza & Admin Building Painting	Monthly					
7.5		Damage to Toll Plaza, Canopy	Monthly					
7.6		Toll Plaza Maintenace i.e. WIM, SWB, Canopy	Monthly	Lane-month	288	15000	43,20,000	
7.7		Damage/Deterioration of Busbays/Truck Layby/Traffic Aid Posts/Medical Aid Posts etc	Monthly	Lumsum	-	246000	2,46,000	6% of the capital cost
7.8		Control Centre Maintenenace	Monthly	No-month	24	5000	1,20,000	
						Total Cost for RA/TP/Ancillary	**51,33,000**	
8	**MISCELLANEOUS**	**0.15%**						
8.1		Structure Inspections	Pre / Post Monsoon	Km	122	304	37,000	Structure inspection for 2 times a year
8.2		Structure Stability Test (Including RE/RET Wall)	Every 2 Years					Considered 10% of structure needs non-destructive testing every year |Rs 10000/- Per structure
8.3		Sign Inspections (Reflectivity Test)	Every 2 Years	Km	121.8	500	60,900	
						Total Cost Miscellanious	**97,900**	
9	**ELECTRIFICATION**	**7.9%**						
9.1		Maintenance of street lighting	Monthly	No-month	16800	305	51,24,000	Considered replacement of 5% sodium lamp, 5% Ignitor and 2% choke
9.2		Maintenance of High Mast Lamp	Monthly	No-month	144	1650	2,37,600	Considered replacement of 5% sodium lamp, 5% Ignitor and 2% choke
						Total Cost for Electrification	**53,61,600**	
						Routine Maintenance Cost per Year	**6,74,66,293**	

MBEL-Tolling Operation Expenses (For 2 toll plazas of 6+6 Lane)

Item No	Description	Unit (per month)	Quantity	Rate	Amount, INR
1	**Toll Plaza Staff**				
1.01	Toll Plaza Sr Manager	Nos	1	150000	1,50,000
1.02	Toll Plaza Manager	Nos	1	60000	60,000
1.03	Toll Plaza Deputy/Assist Manager	Nos	2	70000	1,40,000
1.04	Shift In charge	Nos	8	35000	2,80,000
1.05	Cashier	Nos	6	27100	1,62,600
1.06	MIS/Documentation	Nos	2	27100	54,200
1.07	Toll Collector	Nos	88	23400	20,59,200
1.08	Lane Assistant	Nos	29	24570	7,12,530
1.09	Traffic Marshal	Nos	2	24242	48,485
1.10	IT - Manager	Nos	2	70000	1,40,000
1.11	IT - System Technician	Nos	8	40000	3,20,000
1.12	Validator / Account Officer	Nos	8	27100	2,16,800
1.13	HR & Admin Officer (General Shift)	Nos	1	45000	45,000
1.14	Electrician	Nos	8	35000	2,80,000
1.15	Clerk for POS (General Shift)	Nos	0	27100	-
1.16	F&A	Nos	1	45000	45,000
1.17	Housekeeping	Nos	10	21000	2,10,000
1.18	Peon/ Office Boy	Nos	6	22050	1,32,300
1.19	Cooks	Nos	6	28455	1,70,730
	Total Toll Plaza Staff Cost		**189**		**52,26,845**
2	**Security Staff**				
2.01	Security Guards	Nos	40	24242	9,69,696
2.02	Armed Guards (Security Gunman)	Nos	7	28076	1,96,529
	Total Security Cost		**47**		**11,66,225**
3	**Maintenance of Toll collection equipment**				
	12% of the cost of TCE per year including the AMC	Nos	2	2520000	**4,20,000**
	cost of TCE= 7* 15 lacs (*2 TP)				
4	**Cash Handling Charges**	Nos	2	25000	**50,000**
	Lumpsum				
6	**Expendables and other misc. stores**	Nos	2	400000	**8,00,000**
	Tickets, printer ribbons, stationery etc				
	Lumpsum				
7	**Plaza Adm Vehicles**				
	1 Vehicles per Plaza Manager with driver	Nos	4	63399	**2,53,597**
				Cost for 2 Toll Plaza per month, INR	**79,16,667**
				Cost for 2 Toll Plaza per Year, INR	**9,50,00,000**

Corridor Petrol & Incident Management Cost

Item No	Description	Unit (per month)	Quantity	Rate	Amount INR	Remarks
1	**Patrolling Cost**					
1.01	Maintenance manager	Nos	1	100000	1,00,000	
1.02	Safety officer	Nos	1	60000	60,000	
1.03	Site Engineer	Nos	3	50000	1,50,000	
1.04	Site Supervisor	Nos	4	30000	1,20,000	
1.05	Route Patrol officer	Nos	8	25000	2,00,000	
	Route Patrol helpers	Nos	10	20000	2,00,000	
				Total Patrolling Cost	**8,30,000**	
2	**Vehicle Cost**					
2.01	Route Patrol Vehicle (01 nos of each Toll Plaza)	Nos	2	115000	2,30,000	Hiring cost including fuel
2.02	Motorcycle for Site Supervisor	Nos	4	15000	60,000	
2.03	Mobile Telephone for Control Centre, Vehicle Patrolling, Cranes and Ambulances etc.)	Nos	2	4000	8,000	
				Total Vehicle Cost	**2,98,000**	
	Emergency Services					
3	**ATMS / Control Centre**					
3.01	Pay and allowances for Control Centre Officer	Nos	1	50000	50,000	
3.02	Pay and allowances for Asstt. Control Centre Officer	Nos	1	20000	20,000	
4	**Ambulance**					
4.01	Operation cost of Ambulance (01 each Toll Plaza)	Nos	2	62500	1,25,000	Hiring cost including fuel and Tools
4.02	Ambulance driver (03 each Toll Plaza)	Nos	6	25000	1,50,000	
4.03	Ambulance Paramedics (total 7 for 2 Toll Plaza)	Nos	7	30000	2,10,000	
5	**Crane & Hydra**					
5.01	Operation cost of Crane (01 each Toll Plaza)	Nos	2	80000	1,60,000	Hiring cost including fuel + Operator with Helpers
5.03	Cranes Helper	Nos	6	20000	1,20,000	
				Emergency Services Cost	**8,35,000**	
6	**CDs, Photographs, etc. Cost**					
6.01	Supply of colour photographs in three copies and two CDs		121.8	40	4,872	
6.02	Supply of Vedio Cassette (CD) in three copies including videography of complete stretch at three stages in O&M period complete		2	5000	10,000	
				CDs, Photographs, etc. Cost	**14,872**	
7	**Tests/ Survey**					
7.01	Traffic Sampling	Nos			1,20,000	As per NHAI letter
7.02	Road Inventory & Pavement Condition (NSV)	lane km	487.2	1160	2,82,637	50% Cost by SPV
				Test/Survey Cost	**33,553**	
		Total Monthly Corridor Petrol & Incident Management Cost			**20,11,425**	
		Total Annual Corridor Petrol & Incident Management Cost			**2,41,37,101**	

Insurance premium

Item No	Description	Unit (per annum)	Quantity	Rate	Amount INR
1	IAR Policy	Annual	1	15762767	1,57,62,767
2	Road and Toll plaza Building including terrorism co	Annual	1	50012	50,012
3	Road Furniture including terrorism cover and Burgl	Annual	1	557861	5,57,861
4	EEI Policy	Annual	1	68	68
5	Money Policy	Annual	1	35	35
6	Special Contingency Policy	Annual	1	58824	58,824
7	Terrorism Cover SPV Office	Annual	1	27778	27,778
8	Comprehensive General Liability	Annual	1	16667	16,667
				Total Monthly Insurance Cost	**13,72,834**
				Total Annual Insurance Cost	**1,64,74,012**

Rates excluding GST

Electricity Charges

Item No	Description	Unit (per month)	Quantity	Rate	Amount INR
1	Electricity Charges Tariff for Office, operation & Maintenance cost of stand by Genset (Lump sum cost)	per toll lane per month	24	20517	5,92,398
2	Electricity Charges Tariff for Corridor Highway Lighting (Lump sum cost)	per km per month	121.8	4074.60	5,96,286
				Total AMC, Cash, Expandables, Electricity Cost	**11,88,684**

IE Fees

Item No	Description	Unit (per month)	Quantity	Rate	Amount INR
1	Independent Engineers Fees	Monthly	1	850000	8,50,000
2	Audit Charges	Monthly	0	200000	-
3	Legal & Professional Fee	Monthly	0	400000	-
			Total monthly IE, Audit Charges & Legal & Professional Fees		**8,50,000**
			Total Annual IE, Audit Charges & Legal & Professional Fees		**1,02,00,000**

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Assessment of O&M and major maintenance requirements – Sikar Bikaner Highway Limited

Final Report

Sikar Bikaner Highway Limited

Mumbai

April 2024

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Issue and revision records

Contract Reference: Nil	**Identification & Traceability:** TIC/312/DR/R0
Assignment Title: Incremental Technical Due Diligence including Independent assessment of O&M and major maintenance requirements – Sikar Bikaner Highway Limited	
Key Professionals: Karan Dave (Project Director), Dhyey Hirpara (Project Manager)	
Client:	**Sikar Bikaner Highway Limited** The IL&FS Financial Center, Plot C-22, G Block, Bandra Kurla Complex, Mumbai 400051
Consultant:	**Translink Infrastructure Consultants Private Limited** 1103, I Square Corporate Park Science City Road, Ahmedabad 380060

Issue & Revision Records

Date	Revision No.	Originator	Checker	Approver	Description
20.04.2024	R0	Ashish Kothari Akshay Dharmani Rutvik Dhameliya	Bhushan Vora Dhyey Hirpara	Karan Dave	Final Report

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List of abbreviations

Abbreviations	Full Form
AADT	Average Annual Daily Traffic
ATMS	Advanced Traffic Management System
BI	Bump Integrator
CA	Concession Agreement
COS	Change of Scope
COD	Commercial Operation Date
CuM	Cubic Meter
DBFOT	Design, Build, Finance, Operate and Transfer
EPC	Engineering, Procurement & Construction
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
FY	Financial Year
IL&FS	Infrastructure Leasing & Financial Services Limited
InvIT	Infrastructure Investment Trust
IR	Interim Report
LIE	Lenders Independent Engineer
LOA	Letter of Award
Km	Kilometre
MBIU	Mobile Bridge Inspection Unit

Abbreviations	Full Form
MCW	Main Carriageway
MJB	Major Bridge
MMR	Major Maintenance and Repair
MNB	Minor Bridge
NCR	National Capital Region
NH	National Highway
NHAI	National Highway Authority of India
NHDP	National Highways Development Project
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
PCOD	Provisional Commercial Operation Date
PCS	Pavement Condition Survey
PUP	Passenger Underpass
ROB	Road Over Bridge
SqM	Square Meter
TICPL	Translink Infrastructure Consultants Private Limited
TP	Toll Plaza
VDF	Vehicle Damage Factor
VUP	Vehicle Underpass
WIM	Weigh-in-Motion

Content (1)

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Issue and revision records

Disclaimer

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3 Asset inventory and condition details

4 O&M cost estimate

Chapter 1: Introduction

- Assignment
- Scope of Work
- Approach and Methodology
- Data shared by the Client

Assignment and Scope of Work (1)

Sikar Bikaner Highway Limited (the "Client") is one of the road asset of Roadstar Infra Investment Trust which is Infrastructure Investment Trust (InvIT) established by the Infrastructure Leasing & Financial Services Limited (IL&FS). The Client has commissioned Translink Infrastructure Consultants Private Limited (the "Consultant" or "TICPL") to carry out independent assessment of operating and maintenance requirements and major maintenance requirements.

The Client owns Design, Build, Finance, Operate and Transfer (DBFOT) Toll road asset of 237.578 km covering Sikar – Bikaner section of NH11 in Rajasthan (the "Asset"). Total project cost was INR 650.84 crore.

The Consultant has submitted final report in May 2023. The client decided to get incremental due diligence in November 2023. Consultant has submitted final report of incremental due diligence in December 2023.

The client has again decided to get incremental due diligence in April 2024 to incorporate actual expenses of MMR work carried out in FY24 and rescheduling of balance MMR activities.

The revised final report includes the actual major maintenance costs incurred during FY24, the rescheduling of major maintenance activities initially budgeted for FY24 & FY25 to FY25, and major maintenance activities suggested by us for FY26.

Assignment and Scope of Work (2)

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Objective of the assignment

Reference discussion with the Client at proposal stage and during kick-off meeting, objective of the study is to incorporate actual expenses incurred during FY24 for major maintenance activities. Deliverables of this study is for internal consumption of the Client and no sharing of the deliverables with any third party for any other purpose is envisaged.

Scope of Work*

The broad scope of the work of this assignment is as follows:

- Review of the previously submitted technical due diligence report and RA bills of subcontractors provided by the client;
- Updating the technical due diligence report to reflect the actual expenses incurred during FY24 for major maintenance activities, as well as rescheduling the remaining major maintenance work and its associated costs to the next financial year.

*This assignment of incremental due diligence study expressly excludes any field surveys, site visits, or reconnaissance surveys. All findings and assessments are based solely on available data and documentation.

Approach and Methodology (1)

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Approach

During the kick-off meeting, the Client preferred to have independent assessment by the Consultant before sharing their O&M strategy and O&M contracts in practice. Hence, the Consultant followed consultative and iterative approach from inception to address the need of the assignment.

Methodology

The Consultant reviewed documentation made available by the Client in piecemeal basis across the duration of the assignment, conducted reconnaissance survey of the Asset and undertaken field investigations to identify key aspects impacting asset quality, compliance to obligations of the Concession Agreement and adherence to safety standards.

To deliver the agreed scope of work and to meet the objective of the assignment, the study was divided into following four stages:

- **Stage 1: Review of documentation**
  - First tranche (pre-site visit) documentation i.e. Concession Agreement (CA) including schedules which define the requirements and obligations of Operation & Maintenance and limited monthly compliance reports of Independent Engineer, were studied to identify focus areas requiring site validation and detailed investigations in line with assignment objective.
  - Additionally, design and as-built drawings, CoS and PCOD documentation from reports prepared by Lender's Independent Engineer / Authority's Independent Engineer, limited field investigations reports of recent past (BI Test, NSV Report, Structure Condition Report) made available by the client were analysed for comparison with field surveys.
- **Stage 2: Site visit, asset inventory and visual condition assessment**
  - As-built drawings, requirements of facilities and furniture as per CA Schedule B were studied and list of items required to be verified during inventory surveys were identified.

  Outputs of these activities mainly includes:
    - Gaps in as-built asset and design drawings
    - Present condition of the Asset as per progress/compliance reports of Lender's Independent Engineer / Authority's Independent Engineer
    - List of pending works in case of pending items, ongoing maintenance work in FY24
    - Pending approvals and/or compliance comments from authority etc.

  Correlation of these two stages were considered to bring out critical areas for the subsequent stages of the review.

Approach and Methodology (2)

- **Stage 3: Field investigations**
  - Surveys and investigations were carried out to collect all the field data during April 2023.

List of field investigations conducted

Activity	Purpose	Output
Reconnaissance survey	Site appreciation	Asset characteristics
Inventory of roads, bridges and CD structures	Gap assessment against As Built	Inventory of the Asset
Visual inspection of Bridges without Mobile Bridge Inspection Unit (MBIU) and Visual Pavement Condition Survey (PCS)	Functional condition assessment	Probable rehabilitation measures and supporting role to conclusions derived from NDT, if any
Trial pits (every 15 km)	Identification of Crust thickness	Validation of Pavement Crust
Falling Weight Deflectometer (FWD) Test	Structural Condition of Pavement	Residual life of pavement

- **Stage4: Estimation of O&M, major maintenance requirement and OPEX projections**
  - Based on inputs from condition assessment and analysis of field investigation results, the Consultant arrived at one-time repair/rectification/modification requirement and associated cost as per obligations of CA in base year (FY24).
  - O&M / MM Requirement and OPEX estimate were based on the Consultant's independent analysis of pavement condition, structure condition and requirement for up-keep of road furniture, safety standards and requirement for hand-over stage (first-cut).
  - OPEX projections were determined during balance concession period based on rate analysis and in-house database of the Consultant.
  - First cut projections were optimized in line with the Client's O&M Strategy and cost optimization.

Input

- Identified gaps in context of Schedule B, C & D
- Defect liability period of ongoing work under EPC Contract if any
- Inferences from field investigation results
- Balance concession period as per CA
- Traffic projections provided by the Client
- Toll operations cost
- Rate analysis / Schedule of Rates
- Benchmarking exercise

Output

- **Major Maintenance Cycles for balance concession period**
- **Routine maintenance** (edge repair, crack sealing. patching, drainage)
- **Periodic and major maintenance** (preventive treatments, rehabilitation, pavement reconstruction)
- **Cost of operations** (toll, utility, manpower, incident management)

Data shared by the Client (1)

Sr. No.	Particulars
1	Signed concession Agreement and schedules
2	Monthly O&M Reports including compliance notes and observations of consultants (IE and LIE) from PCOD/COD • 4 Concessionaire Reports received – Oct'22 to Mar'23 • 5 IE Reports received – Nov'22 to Feb'23 • 3 O&M Reports by Elsamex received – Oct'22, Dec'22 and Feb'23
3	2 BI Test Reports (Aug'22 and Feb'23)
4	Contractor-wise Daily Progress Report for Major Maintenance & Repair Works in Nov-Dec'22 and Jan –March'23
5	Structure Safety Audit Report – March'23
6	As built and Design Drawings for project components
7	Strip chart of LHS and RHS
8	Annual Maintenance Plan – FY 2023 - 24
9	Operations and Maintenance Agreement executed on 24th December 2021 among the Client, Elsamex Maintenance Services Limited and Roadstar Investment Managers Limited valid till end of Concession Period
10	Pavement Design Report
11	Independent Auditor's Report for year ended 31st March 2022
12	FY 2023 AADT, VDF data, Traffic Homogeneous sections
13	Concession Period extension request letter
14	Independent engineer's final completion report – Dec'2018
15	COS of secondary lease line
16	Client in-house rates for major maintenance activities
17	Insurance Policy details
18	Manpower renumeration details

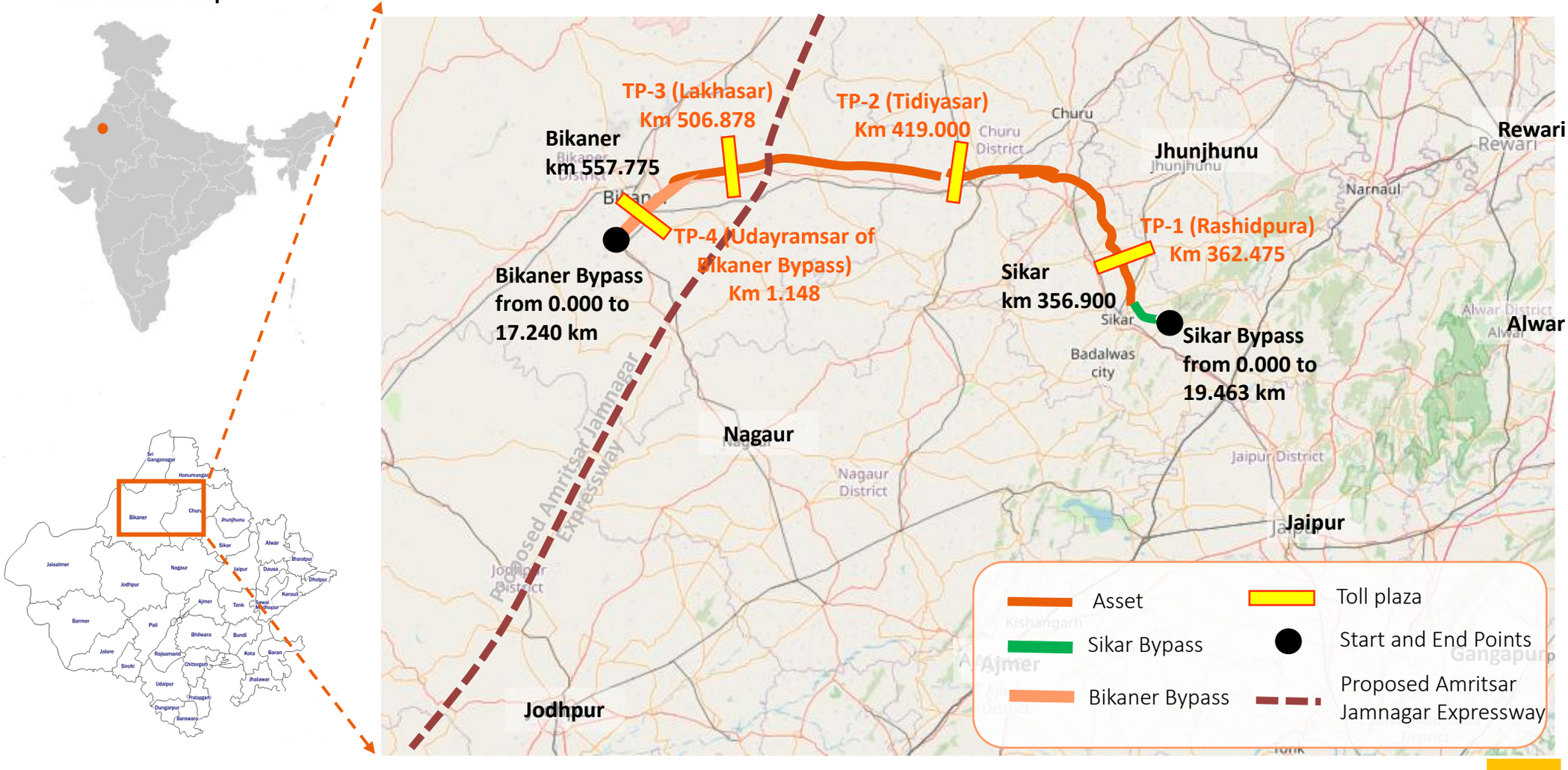
Chapter 2: Asset profile

- Location and network
- Key details of the Asset
- Concession timeline and key stakeholders
- Quantitative summary of physical features
- Present modality for O&M activities
- Key O&M related points of CA

Asset location and network

- The Asset starts at Sikar bypass (km 0.000 to km 19.463), NH11 & NH52 km 356.900 to km 557.775 and ends at Bikaner bypass (km 0.000 to km 17.240) and having four ETC enabled toll plazas. It is a part of NH11 and NH 52 which connects Jaipur and western part of Rajasthan.
- It passes through districts of Sikar, Churu and Bikaner and links Laxmangarh, Fatehpur, Ratangarh, Sri Dungargarh towns in Rajasthan.
- Sikar and Bikaner bypasses are two-laned with paved shoulder. Sikar-Bikaner section of NH11 has 168.585 km of two-laned with paved shoulder and 32.29 km of four-laned configuration.

Asset context map



Source: OpenStreetMap data and google maps

Key details of the Asset

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Start and End Chainage of Project Road

Start point: (Sikar Bypass km 0.000)

End point: (Bikaner Bypass km 017.240)

Toll Plaza

TP1 Rasidpur (km 362.475)

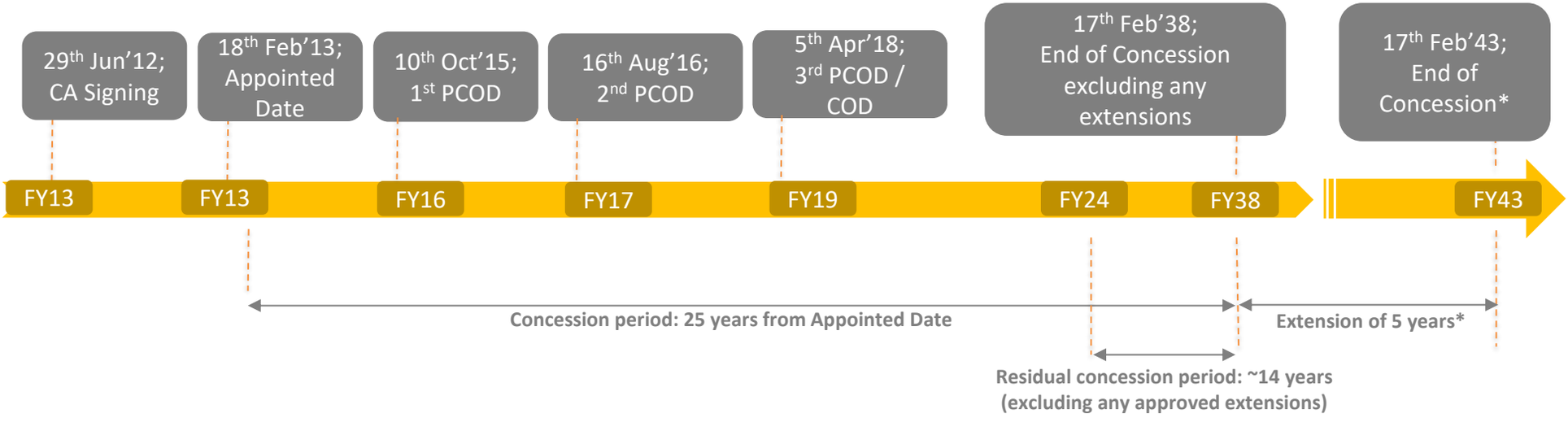
TP2 Tidiyasar (km 419.000)

TP3 Lakasar (km 506.787)

TP4 Udairamsar (Bikaner bypass km 01.248)

Source: Concession Agreement, IE / LIE Reports, TICPL site visit

Concession timeline and key stakeholders



** Extension of concession period is requested based on Article 29 - clause no. 29.11 by concessionaire vide letter 3069 dated 26.04.2022. Awaiting approval from the authority. Extension of concession period is subjected to target traffic criteria. Maximum 5 years of extension can be granted as per target traffic criteria.*

Key stakeholders

- **Authority:** Government of Rajasthan, Public Works Department (on behalf of Ministry of Road Transport & Highways Government of India)
- **O&M Contractors:** Elsamex Maintenance Services
- **Lenders:** Central Bank of India, Allahabad Bank, Oriental Bank of Commerce, Punjab & Sind Bank
- **Independent Engineer:** Dhruv Consultancy Service Ltd in association with G-Square Infra Projects Pvt Ltd

Source: Concession Agreement, IE/ LIE Reports, TICPL site visit

Quantitative summary of physical features (1)

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Quantitative summary of physical features (1)

Particulars	Details
Project Name	Development and Operation of Sikar-Bikaner Section of NH-11 from Km 340.188 of NH-11 to Km 557.775 of NH-11 via Sikar Bypass and Bikaner Bypass from Km 553.869 of NH-11 to Km 267.325 of NH-89 by Two Laning with paved shoulder in the State of Rajasthan through Public-Private-Partnership on Design, Build, Finance, Operate and Transfer (DBFOT) basis
Length of the Asset	237.578 km
Service Road length	1.133 km
Lane Configuration	2 Lane/ 4 Lane
Length under O&M stage	237.578 km
Nos. of by passes and their total length	2 (Sikar and Bikaner) Total 36.703 km
Nos. of ROBs	4 (at km 432.057, km 440.685, km 9.955, km 10.983)
Nos. of Culverts	94
Nos. of CUPs	2
Nos. of VUPs	2
Nos. of PUPs	1

Quantitative summary of physical features (2)

Particulars	Details
Nos. of At-grade junction (major)	14
Nos. of Toll Plazas	TP1 Rashidpura (km 362.475) TP2 Tidiyasar (km 419.000) TP3 Lakhasar (km 506.878) TP4 Udairamsar (km 1.148)
Nos. of Truck lay-byes	5
Nos. of Bus Bays	8
Nos. of Traffic Aid Posts	4
Nos. of Medical Aid Posts	4
Traffic Control and Management	Ambulance: 4 Tow away cranes: 4 Highway patrolling: 4
Length of Cover Drain	19.064 Km on each side
Median Openings	16
Toll lanes	TP1 – 3+1 on each side TP2 – 2+1 on each side TP3 – 3+1 on each side TP4 – 2+1 on each side

Source: CA and IE Monthly Progress Report March 2023

Quantitative summary of physical features (2)

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List of manpower

Particulars	Details
Project Head	1
Corridor Manager	1
Toll Manager	4
Site Engineer	2
Route Patrol Officer	12
System Technician	10
Toll/Site Supervisors	3
Medical Attendant	10
Toll Collectors	80
Control Room Officer	1
HR & Admin Officer	1
Ambulance Drivers	4
Route Patrol Vehicle Drivers	3
Tow Crane Operators	6
Route Patrol Vehicle Helper	10

Particulars	Details
Electrician	9
IT Manager	1
Office Boy	4
Document Controller	1
Lane Assistant/ Lane Attendant	28
POS Executive	-
MIS	3
Validator	6
Cashier	6
Shift In charge/ Office-Toll	16
Housekeeping	8
Cook	10

Source: Client

Present modality for O&M activities

Sr. No.	Particulars	Present modality
1	Routine Maintenance	O&M and toll operation activity contract is given to Elasmex Maintenance Services Ltd.
2	Preventive Maintenance	
3	Operation of Toll Plaza and Administration Building	
4	Security of Toll Plaza and Cleaning	
5	Highway Lighting	
6	Maintenance of ATMS / TMS	
7	Corridor Management	
8	Major Maintenance	

Source: Client and TICPL site visit

Key O&M related points of CA

Reference Article and Schedules of CA

- Article 17 (Operation & Maintenance) and Schedule K (Maintenance Requirements) describe maintenance obligations of the concessionaire during O&M.
- Schedule K - Maintenance Requirements covers aspects like repair and rectification of defects and deficiencies, extension of time limit, emergency repairs/restoration, daily inspection by the concessionaire, divestment requirements and display of Schedule K at toll plazas.
- Further Article 18 to 23 adds specific obligations of the concessionaire during O&M, respectively Safety Requirements, Monitoring of O&M, Traffic Regulation, Emergency Medical Aid, Traffic Census and Sampling and Appointment of IE.

Operations

- **Regular Operations**
  - Smooth traffic flow
  - Functioning of toll system, lighting, patrolling, rescue & medical aid system, HTMS, O&M base camp, rest area, administrative building, truck lay byes, public toilet, portable water supply system, solid waste disposal system
  - Functioning of electric services at truck lay byes, bus bays and rest areas
- **Emergency Operations:** Accident/Incident Management

Maintenance

- **Regular Periodic Maintenance of Pavement:** Functional grade treatment to maintain roughness value of 2,500 mm/km
- **Routine Maintenance of Pavement** – Distress wise analysis with respect to performance criteria
- Routine and Periodic Maintenance of bridges and other structures, traffic signals, lighting, bus bays, control center, buildings, road furniture, landscaping

Special repair

- Damages occurring due to natural calamities like heavy floods, sand storms, hurricanes, cyclones, earthquakes to any element or system of the Asset

Chapter 3: Site visit and reconnaissance survey

- Main carriage way and service road
- Structures
- Toll plazas
- Other project facilities
- Field Investigations
- Site Visit Photographs during November 2023
- Observations on road safety

Main carriage way and service road

- Project road is two/four lane having paved width of 10 m in two lane section and 2 x 9 m in four lane section. Approximately 95% of the pavement is in 'Fair to Good' condition based on visual observation during site visit.
- 7 m width of service 1.133 km of service road observed on each side. Pavement condition of service road is in fair to poor condition.

Main carriage way (km 523.000)

Bikaner Bypass (Km 17.240)

Service road (km 522.900)

Patch Work (km 541.300)

Rutting and Cracking (km 358.100)

Median Break (km 433.200)

Source: TICPL site visit

Structures

ROB on Bikaner Bypass (km 10.983)

VUP on Bikaner Bypass (km 10.740)

Pipe Culvert (km 551.000)

ROB (km 432.057)

ROB (km 440.685)

Source: TICPL site visit

Toll plazas

- Toll plazas including administrative building, TMS, crane are in order and complying project requirement.
- Rigid pavement at all toll plazas is in fair condition.

Admin Building TP1 Rashidpura

Towing & Ambulance facility at TP

Admin Building TP4 Udairamsar

Hydraulic Crane facility at TP

Ambulance facility at TP

WIM at TP4 Udairamsar

Source: TICPL site visit

Other project facilities

- Road markings were found to be in “Fair” condition and in sections where recent rehabilitation treatments were given, road marking work was pending
- Adequate road safety signages are in place.
- Road side furniture including signage, crash barriers, pedestrian guard rails, street lights are in order and complying project requirement

Road signages

Lined Drain & Service Road

Road marking

Median Plantation

Bus Bay

Crash barrier

Source: TICPL site visit

Field investigations

- Field investigations has been exercised with required safety measures and in due consultation with site officials.
- Trial pits has been taken at every 15 km interval in staggered manner. Average 120 mm BT crust found in LHS and RHS, Average 200 mm and 215 mm crust in base course and sub base course in RHS. In LHS, average 200 mm and 225 mm base and sub base course found. Total average crust composition 530 mm.
- FWD survey was conducted as per IRC: 115 – 2014. Based on pavement condition, deflection data was collected. In 2 Lane section, for "Good" pavement condition, 4 points in a one kilometer section collected. In 4 Lane section, for "Good" condition, 12 points were collected.
- Day and night safety audit were conducted as per IRC: SP: 88 – 2019.

Trial Pits

Night Audit

FWD Survey

Source: TICPL site visit

Site Visit Photographs during November 2023 (1)

- Major maintenance work carried out from April 2023 to September 2023 was observed during site visit in November 2023.

Main carriage way (km 394.550-km 395.470)

Main carriage way (km 399.600-km 399.750)

Main carriage way (km 108.000)

Main carriage way (km 110.000)

Main carriage way (km 440.000)

Main carriage way (km 431.400)

Source: TICPL site visit

Site Visit Photographs during November 2023 (2)

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Metal beam crash barrier (km 440.500)

Drain

TP3 Lakhasar (km 506.787)

Towing & Hydraulic Crane facility at TP

Ambulance facility at TP

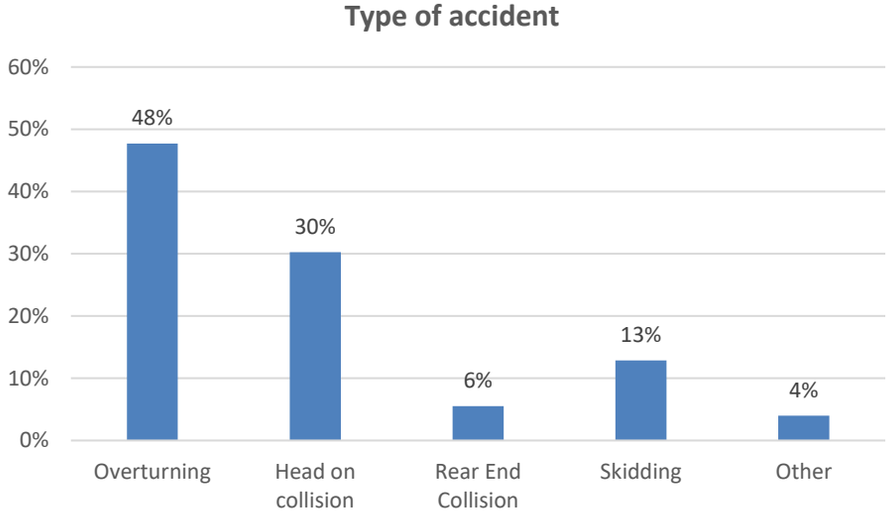
Pedestrian Guard Rail (km 471.800)

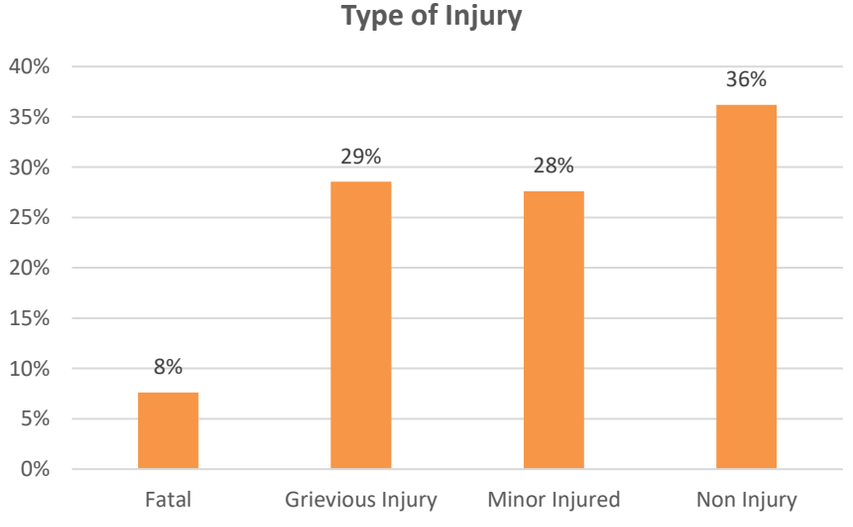
Source: TICPL site visit

Observation on road safety (1)

Historical accident data

- Based on reports made available for 4 months with respect to road safety, following facts are observed:
  - Nos. of accidents observed during day time and night time are of equal proportions
  - 80% of accidents witnessed due to over speeding
  - 98% of accidents witnessed in the straight section





Source: TICPL analysis

Observation on road safety (2)

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Site observations

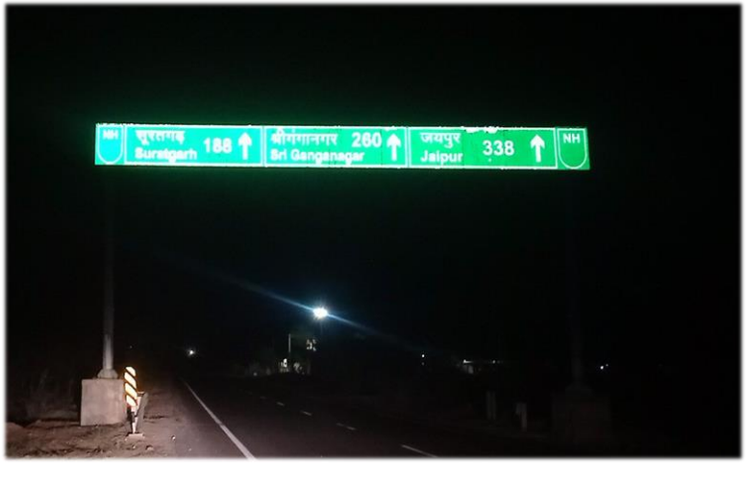
- Reflectivity of signboards were found in order
- High mast lights were working at all locations

Unauthorized Median Break

No Pavement markings

High mast light at Bikaner Bypass end

Reflectivity of Sign Boards



Source: TICPL site visit

Chapter 4: Condition assessment of structures

Condition assessment of structures

- All the major structures mentioned in the CA were found.
- Repair/Replacement of bearings, expansion joints, removal of vegetation, scour protection etc. activities are required at certain structures. Details of which are presented in this section..
- Visual inspections without SBIU includes:
  - Type of Structure, details of span, vent height etc.;
  - Conditions of substructure and super structure;
  - Conditions of expansion joints, bearings, drainage spouts etc.;
  - Type of protection work, if any.

Select cases exhibiting condition of structure (1)

- All the structures were in sound condition and need only regular maintenance.

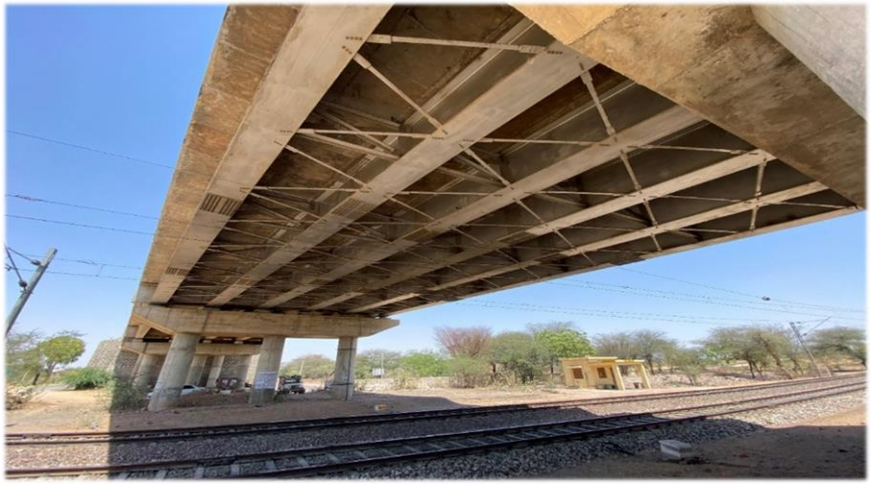
Vehicular Under Pass (Km.10+740)

Road Over Bridge (Km.10+983)

Source: TICPL site visit

Select cases exhibiting condition of structure (2)

Road Over Bridge (Km.432+057)



Source: TICPL site visit

Select cases exhibiting condition of structure (3)

Road Over Bridge (Km.440+685)

Source: TICPL site visit

Select cases exhibiting condition of structure (4)

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Select cases of culverts

Source: TICPL site visit

Proposed rehabilitation measures (1)

- Replacement of bearings and expansion joints to be considered as capital expenditure.
- For bearings and expansion joints, replacement cycle to be considered at 15 years from completion of construction year.

Chainage (km)	Type of structure	FY LHS	FY RHS	Replacement	Assumption for construction year
9+955	ROB	2029-30	2029-30	Bearing & Expansion Joint	2013-2015
10+983	ROB	2029-30	2029-30		
432+057	ROB	2029-30	2029-30		
440+685	ROB	2029-30	2029-30		
375+175	VUP	2033-34	2033-34	Bearing & Expansion Joint	2015-2017

Source: TICPL recommendation

ROB – Road over bridge, VUP – Vehicular Underpass

Summary of condition assessment – Road Over Bridge

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Summary of condition assessment – Road over bridge

- No immediate Repair / Maintenance Works Required
- Minor Repair Works Required
- Major Repair Works or Replacement of components Required

Carriageway	Existing Chainage	Foundation	Sub-structure	Super-structure	Bearings	Expansion Joints	Protection Works	Drainage Spout	Overall Condition
LHS	169.225	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	175.200	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	185.700	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●
LHS	189.325	●	●	●	●	●	●	●	●
RHS		●	●	●	●	●	●	●	●

Source: TICPL analysis

Chapter 5: Condition assessment of pavement

Base Year AADT (FY25)

Performance of pavement under prevailing as well as future traffic and environmental situations is critical aspect to achieve expected economic returns from highway project. Estimating exact future O&M and Major Maintenance requirement is complex activity due to involvement of large number of variables.

For predicting performance of the pavement structure, following parameters are essential to analyse:

- Design of pavement layer thicknesses and configurations
- Material characteristics;
- Traffic condition;
- Present physical condition of the pavement layers;
- Local environment and its impacts;
- Probable modes of failure of existing pavement and
- Technology available for reconstruction.

Further, it is also necessary to presume level of performance and pavement condition will be considered satisfactory by all stakeholders.

This chapter exhibits outcome of field investigations and analysis carried out to find out the present condition of pavement followed by future course of repair/rectification/modification requirements for desired performance of pavement for balance concession period.

Review of pavement design report

Pavement for the project road has been proposed as per IRC: 37 - 2012. As per the Pavement Design Report received, following pavement has been adopted for MCW of the Asset:

Existing pavement configuration

Pavement layer	Thickness (mm)	Design life	MSA	Subgrade CBR
Bituminous Concrete (BC)	40,45	23 years for BT layer 23 years for GR layer	39-73	15%
Dense Bituminous Macadam (DBM)	65 / 70 / 75			
Wet Mix Macadam (WMM)	250			
Granular Sub-base (GSB)	200			
Selected Subgrade (10% CBR)	500			

Source: Client

Design MSA

Homogeneous Section	Toll Plaza		LCV/Mini bus	Bus/Truck	3A	4-6 Axle Truck MAV	OSV	Total	FY 23 – FY 29	FY 30 – FY 35	FY 36 – FY 42
Km 0-19 & Km 358-411	Rashidpura (km 362.475)	Traffic*	138	520	123	263	1	1045	4%	3.5%	3%
		VDF	1.52	3.89	6.01	6.99#	6.99#	-	FY24 7 MSA	FY31 32 MSA	FY38 58 MSA
Km 0-19 & Km 358-411 (4 Lane Section)	Rashidpura (km 362.475)	Traffic*	138	520	123	263	1	1045	4%	3.5%	3%
		VDF	1.52	3.89	6.01	6.99#	6.99#	-	FY24 3 MSA	FY31 16 MSA	FY38 31 MSA
Km 411-484	Tidiyasar (km 419.000)	Traffic*	75	295	108	240	0	718	4%	3.5%	3%
		VDF	1.70	4.69	7.86	9.48#	9.48#	-	FY24 4 MSA	FY31 20 MSA	FY38 37 MSA
Km 411-484 (4 Lane Section)	Tidiyasar (km 419.000)	Traffic*	75	295	108	240	0	718	4%	3.5%	3%
		VDF	1.70	4.69	7.86	9.48#	9.48#	-	FY24 3 MSA	FY31 15 MSA	FY38 28 MSA
Km 484-557	Lakhasar (km 506.878)	Traffic*	84	284	127	275	0	771	4%	3.5%	3%
		VDF	1.70	4.69	7.86	9.48#	9.48#	-	FY24 5 MSA	FY31 22 MSA	FY38 40 MSA
Km 484-557 (4 Lane Section)	Lakhasar (km 506.878)	Traffic*	84	284	127	275	0	771	4%	3.5%	3%
		VDF	1.70	4.69	7.86	9.48#	9.48#	-	FY24 3 MSA	FY31 16 MSA	FY38 30 MSA
Km 0-17	Udayramsar of Bikaner Bypass) (km 1.148)	Traffic*	42	150	174	545	1	912	4%	3.5%	3%
		VDF	1.70	4.69	7.86	9.48#	9.48#	-	FY24 7 MSA	FY31 32 MSA	FY38 58 MSA

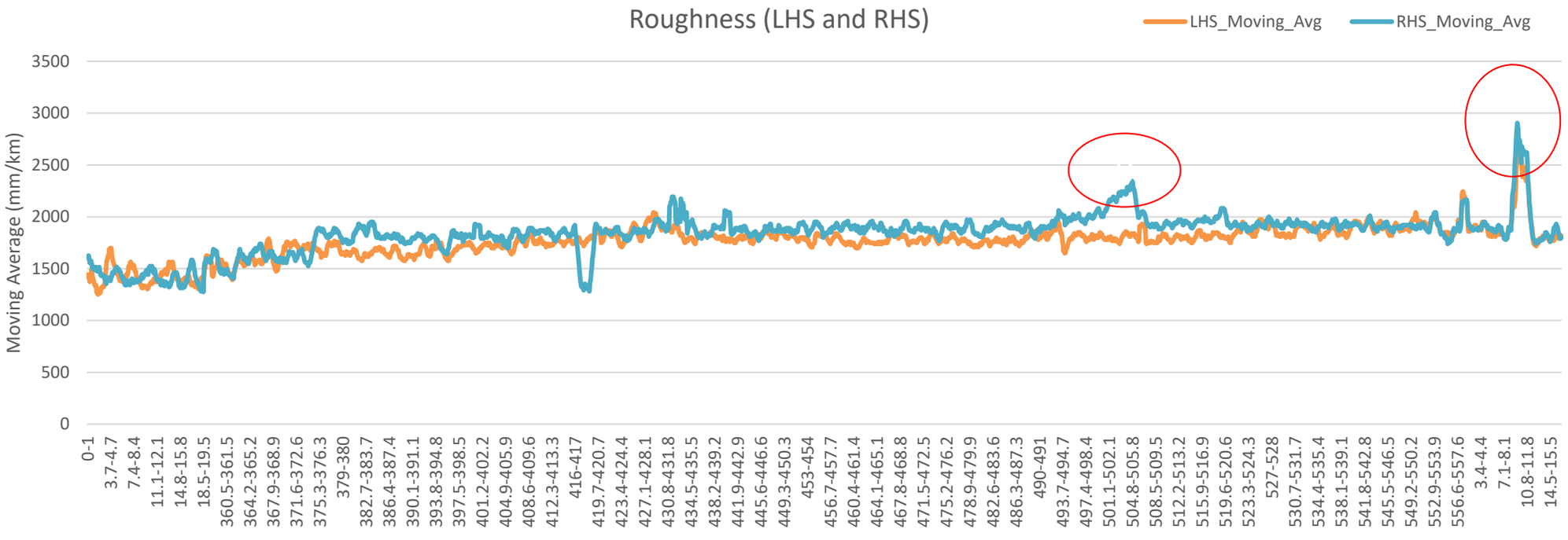
Source: TICPL analysis

**DDF of 50% assumed & provided VDF are maximum # Minimum 6.99 VDF was taken for MAV and OSV*

Functional assessment (1)

Functional condition of pavement

As per the roughness survey data of February 2023, 230 km in LHS side and 215 km in RHS side had roughness less than 2000mm/km



Source: *IE NSV Data February 2022 and* TICPL analysis

Functional assessment (2)

Functional condition of pavement

LHS

Visual Condition	No. of 100mt. section
Fair to Good	1,134
Fair	1,135
Fair to Poor	14
Poor	36

RHS

Visual Condition	No. of 100mt. section
Fair to Good	1,121
Fair	1,157
Fair to Poor	28
Poor	24

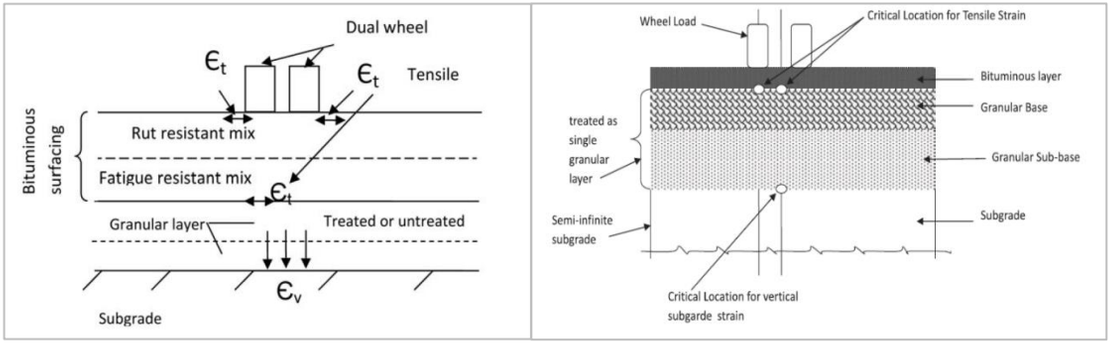
Source: TICPL site visit and PCS

- Sikar Bypass section was observed in Fair to Good condition in both direction apart from few exceptions. These sections had Alligator cracks as major distress.
- 356.000 km – 374.700 km, 4 Lane sections had considerable sections under rutting and severe cracking on both directions. Patchwork and Micro-surfacing work was observed in some sections during PCS.
- 9.000 km – 17.000 km, part of Bikaner Bypass section was in distress condition including several sections of severe cracks and minor ruts and patch work. Condition of pavement near ROB location was in poor condition.

Structural assessment (1)

Structural Condition of Pavement

- FWD Deflection data collected was collected across the project road. Based on the deflection data and pavement crust thickness, elastic modulus values of pavement layers were calculated and corrected for temperature and seasonality.
- Based on the homogeneity of these elastic modulus values of all pavement layers, entire project road was classified into several homogeneous sections. This was done to minutely isolate sections requiring specific rehabilitation treatments and to ensure that a particular section doesn't have any negative impact on entire homogeneous section because of 15th percentile design criteria
- Based on 15th percentile elastic modulus of these homogeneous section, using IITPAVE software, strains at critical locations i.e. bottom of BT & top of subgrade were calculated. With help of these strains Fatigue & Rutting residual lives of the homogeneous sections were calculated based on 90% reliability equations of IRC: 115 – 2014.
- If the residual life was less than design MSA, requirement of rehabilitation measure arise.



$N_f = 0.711 * 10^{-04} \times [1/\varepsilon_t]^{3.89} * [1/M_R]^{0.854}$ (90 per cent reliability)

$N = 1.41 \times 10^{-8} \times [1/\varepsilon_v]^{4.5337}$

Structural assessment (2)

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Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-1	0.000	0.200	0.2	215	267	11.28	21.66	11.28	22	42
HS-2	0.200	1.200	1	215	267	41.85	75.00	41.85	22	42
HS-3	1.200	1.700	0.5	225	267	8.12	34.11	8.12	22	42
HS-4	1.700	2.200	0.5	175	267	59.01	59.73	59.01	22	42
HS-5	2.200	2.500	0.3	175	267	2.76	9.30	2.76	22	42
HS-6	2.500	3.200	0.7	175	267	18.76	29.36	18.76	22	42
HS-7	3.200	3.700	0.5	225	267	3.71	13.92	3.71	22	42
HS-8	3.700	5.000	1.3	225	267	11.05	51.49	11.05	22	42
HS-9	5.000	6.000	1	195	267	17.81	50.36	17.81	22	42
HS-10	6.000	6.500	0.5	120	267	11.44	12.28	11.44	22	42
HS-11	6.500	7.500	1	195	267	21.04	48.09	21.04	22	42
HS-12	7.500	8.000	0.5	195	267	11.81	50.18	11.81	22	42
HS-13	8.000	9.000	1	145	267	9.35	15.88	9.35	22	42
HS-14	9.000	10.000	1	205	267	14.93	36.42	14.93	22	42
HS-15	10.000	11.000	1	185	267	9.82	30.64	9.82	22	42
HS-16	11.000	12.000	1	185	267	6.90	29.43	6.90	22	42
HS-17	12.000	13.000	1	195	267	11.25	40.87	11.25	22	42
HS-18	13.000	14.000	1	195	267	16.18	55.80	16.18	22	42
HS-19	14.000	15.700	1.7	165	267	22.49	33.81	22.49	22	42
HS-20	15.700	17.700	2	175	267	7.89	24.18	7.89	22	42
HS-21	17.700	19.400	1.7	185	267	39.41	54.03	39.41	22	42
HS-22	374.700	375.500	0.8	120	267	23.25	22.22	22.22	22	42
HS-23	375.500	376.700	1.2	185	267	35.65	58.38	35.65	22	42
HS-24	376.700	377.200	0.5	245	267	8.22	37.35	8.22	22	42

Structural assessment (3)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-25	377.200	377.500	0.3	245	267	103.66	542.33	11.28	22	42
HS-26	377.500	378.500	1	120	267	2.80	7.88	41.85	22	42
HS-27	378.500	379.500	1	235	267	25.24	85.87	8.12	22	42
HS-28	379.500	380.000	0.5	175	267	41.28	115.36	59.01	22	42
HS-29	380.000	381.700	1.7	175	267	2.41	17.99	2.76	22	42
HS-30	381.700	382.000	0.3	215	267	4.71	17.99	18.76	22	42
HS-31	382.000	382.200	0.2	215	267	202.82	296.50	3.71	22	42
HS-32	382.200	383.500	1.3	215	267	4.61	20.64	11.05	22	42
HS-33	383.500	384.700	1.2	285	267	478.97	781.33	17.81	22	42
HS-34	384.700	385.700	1	285	267	19.70	88.76	11.44	22	42
HS-35	385.700	386.200	0.5	325	267	375.21	554.81	21.04	22	42
HS-36	386.200	387.500	1.3	325	267	36.61	149.55	11.81	22	42
HS-37	387.500	389.500	2	315	267	253.76	276.48	9.35	22	42
HS-38	389.500	390.500	1	190	267	142.90	188.72	14.93	22	42
HS-39	390.500	391.500	1	345	267	2684.89	43581.78	9.82	22	42
HS-40	391.500	392.000	0.5	120	267	30.32	27.94	6.90	22	42
HS-41	392.000	392.500	0.5	270	267	727.48	1276.48	11.25	22	42
HS-42	392.500	393.500	1	120	267	14.16	16.26	16.18	22	42
HS-43	393.500	394.600	1.1	165	267	3.57	12.65	22.49	22	42
HS-44	398.500	399.200	0.7	260	267	232.99	361.92	7.89	22	42
HS-45	399.200	399.500	0.3	260	267	14.19	56.79	39.41	22	42
HS-46	399.500	400.500	1	245	267	163.38	304.66	22.22	22	42
HS-47	400.500	403.500	3	105	267	6.42	8.31	35.65	22	42
HS-48	403.500	404.000	0.5	255	267	15.20	61.19	8.22	22	42

Structural assessment (4)

TRANSLINK® Infrastructure Consultants Pvt Ltd *Smart Consulting*

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-49	404.000	405.700	1.7	220	267	274.20	422.00	274.20	22	42
HS-50	405.700	405.900	0.2	220	267	20.36	66.62	20.36	22	42
HS-51	408.000	409.200	1.2	220	267	50.59	97.75	50.59	22	42
HS-52	409.200	409.500	0.3	235	267	7.79	30.70	7.79	22	42
HS-53	409.500	413.500	4	105	267	8.39	7.96	7.96	22	42
HS-54	413.500	414.500	1	185	267	58.04	86.10	58.04	20	37
HS-55	414.500	415.500	1	200	267	49.28	79.02	49.28	20	37
HS-56	415.500	416.000	0.5	190	267	7.76	27.41	7.76	20	37
HS-57	416.000	416.500	0.5	190	267	39.20	61.35	39.20	20	37
HS-58	416.500	417.000	0.5	220	267	10.75	45.02	10.75	20	37
HS-59	417.000	417.500	0.5	220	267	92.75	195.34	92.75	20	37
HS-60	417.500	419.200	1.7	115	267	0.51	1.69	0.51	20	37
HS-61	419.200	419.500	0.3	220	267	279.60	421.17	279.60	20	37
HS-62	419.500	423.500	4	200	267	2.39	8.98	2.39	20	37
HS-63	423.500	424.500	1	175	267	3.20	10.93	3.20	20	37
HS-64	424.500	425.500	1	200	267	107.82	128.56	107.82	20	37
HS-65	425.500	426.000	0.5	225	267	17.88	51.55	17.88	20	37
HS-66	426.000	427.500	1.5	225	267	150.95	183.86	150.95	20	37
HS-67	427.500	428.500	1	195	267	81.17	99.57	81.17	20	37
HS-68	428.500	429.200	0.7	160	267	54.88	55.73	54.88	20	37
HS-69	429.200	429.500	0.3	160	267	7.82	15.08	7.82	20	37
HS-70	429.500	430.500	1	200	267	38.69	51.74	38.69	20	37
HS-71	430.500	430.700	0.2	205	267	1.73	6.48	1.73	20	37
HS-72	430.700	431.500	0.8	205	267	82.75	109.46	82.75	20	37

Structural assessment (5)

TRANSLINK® Infrastructure Consultants Pvt Ltd *Smart Consulting*

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-73	431.500	431.700	0.2	205	267	1.79	6.68	1.79	20	37
HS-74	431.700	432.500	0.8	105	267	14.56	12.59	12.59	20	37
HS-75	434.100	437.500	3.4	105	267	4.00	5.33	4.00	20	37
HS-76	437.500	438.200	0.7	225	267	209.67	282.46	209.67	20	37
HS-77	438.200	444.700	6.5	105	267	1.09	2.68	1.09	20	37
HS-78	444.700	445.200	0.5	160	267	3.18	10.11	3.18	20	37
HS-79	445.200	446.700	1.5	160	267	49.37	54.29	49.37	20	37
HS-80	447.700	448.700	1	240	267	65.91	102.45	65.91	20	37
HS-81	448.700	451.200	2.5	170	267	65.08	71.78	65.08	20	37
HS-82	451.200	451.500	0.3	180	267	6.80	22.29	6.80	20	37
HS-83	451.500	452.700	1.2	180	267	63.77	82.75	63.77	20	37
HS-84	452.700	454.700	2	190	267	1.61	5.96	1.61	20	37
HS-85	454.700	455.000	0.3	210	267	172.23	229.06	172.23	20	37
HS-86	455.000	455.500	0.5	210	267	3.19	13.09	3.19	20	37
HS-87	455.500	456.200	0.7	160	267	61.94	67.31	61.94	20	37
HS-88	456.200	456.700	0.5	160	267	4.76	18.87	4.76	20	37
HS-89	456.700	457.000	0.3	160	267	57.17	62.06	57.17	20	37
HS-90	457.000	457.200	0.2	160	267	3.28	11.62	3.28	20	37
HS-91	457.200	459.500	2.3	160	267	58.75	61.74	58.75	20	37
HS-92	459.500	460.500	1	200	267	34.61	57.36	34.61	20	37
HS-93	460.500	461.200	0.7	200	267	2.78	12.25	2.78	20	37
HS-94	461.200	462.000	0.8	200	267	168.62	192.15	168.62	20	37
HS-95	462.000	462.700	0.7	210	267	4.80	17.46	4.80	20	37
HS-96	462.700	463.200	0.5	210	267	189.42	258.99	189.42	20	37

Structural assessment (6)

TRANSLINK® Infrastructure Consultants Pvt Ltd *Smart Consulting*

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-97	463.200	463.500	0.3	210	267	16.57	53.69	16.57	20	37
HS-98	463.500	463.700	0.2	210	267	193.37	264.05	193.37	20	37
HS-99	463.700	464.700	1	120	267	21.32	20.66	20.66	20	37
HS-100	464.700	465.700	1	230	267	288.14	430.34	288.14	20	37
HS-101	465.700	467.700	2	170	267	17.68	28.18	17.68	20	37
HS-102	467.700	468.700	1	200	267	5.19	18.99	5.19	20	37
HS-103	468.700	469.000	0.3	180	267	111.82	137.62	111.82	20	37
HS-104	469.000	470.200	1.2	170	267	4.01	14.14	4.01	20	37
HS-105	470.200	470.500	0.3	170	267	92.64	108.36	92.64	20	37
HS-106	470.500	470.700	0.2	170	267	6.01	24.71	6.01	20	37
HS-107	470.700	471.200	0.5	105	267	5.83	7.13	5.83	20	37
HS-108	472.300	473.700	1.4	180	267	82.40	108.20	82.40	20	37
HS-109	473.700	474.200	0.5	260	267	563.88	933.47	563.88	20	37
HS-110	474.200	475.000	0.8	240	267	7.68	31.98	7.68	20	37
HS-111	475.000	475.500	0.5	240	267	307.47	449.40	307.47	20	37
HS-112	475.500	475.700	0.2	240	267	13.81	50.55	13.81	20	37
HS-113	475.700	477.000	1.3	230	267	110.40	169.90	110.40	20	37
HS-114	477.000	477.700	0.7	240	267	8.14	35.44	8.14	20	37
HS-115	477.700	478.700	1	200	267	163.24	219.91	163.24	20	37
HS-116	478.700	479.200	0.5	230	267	37.17	71.59	37.17	20	37
HS-117	479.200	479.700	0.5	230	267	330.26	509.99	330.26	20	37
HS-118	479.700	480.200	0.5	220	267	11.27	50.24	11.27	20	37
HS-119	480.200	481.500	1.3	220	267	148.29	234.62	148.29	20	37
HS-120	481.500	482.200	0.7	210	267	16.66	73.12	16.66	20	37

Structural assessment (7)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-121	482.200	485.000	2.8	210	267	90.16	122.93	90.16	20	37
HS-122	485.000	485.200	0.2	245	267	9.26	38.43	9.26	22	40
HS-123	485.200	485.500	0.3	245	267	496.80	819.11	496.80	22	40
HS-124	485.500	486.500	1	200	267	3.21	12.36	3.21	22	40
HS-125	486.500	487.700	1.2	185	267	70.78	106.34	70.78	22	40
HS-126	487.700	488.200	0.5	250	267	72.04	151.42	72.04	22	40
HS-127	488.200	488.500	0.3	250	267	11.18	46.27	11.18	22	40
HS-128	488.500	488.700	0.2	250	267	558.60	942.20	558.60	22	40
HS-129	488.700	489.500	0.8	215	267	11.34	48.21	11.34	22	40
HS-130	489.500	489.700	0.2	215	267	265.22	391.30	265.22	22	40
HS-131	489.700	490.900	1.2	280	267	17.72	68.73	17.72	22	40
HS-132	494.900	495.500	0.6	310	267	35.38	139.74	35.38	22	40
HS-133	495.500	496.000	0.5	310	267	371.43	533.47	371.43	22	40
HS-134	496.000	496.700	0.7	160	267	50.57	70.38	50.57	22	40
HS-135	496.700	497.500	0.8	160	267	5.30	17.16	5.30	22	40
HS-136	497.500	498.000	0.5	260	267	366.18	516.26	366.18	22	40
HS-137	498.000	498.500	0.5	200	267	8.94	26.29	8.94	22	40
HS-138	498.500	498.700	0.2	200	267	229.02	330.87	229.02	22	40
HS-139	498.700	501.000	2.3	170	267	7.62	31.08	7.62	22	40
HS-140	501.000	501.700	0.7	250	267	15.02	70.84	15.02	22	40
HS-141	501.700	503.000	1.3	250	267	546.05	935.64	546.05	22	40
HS-142	503.000	504.000	1	210	267	85.72	152.85	85.72	22	40
HS-143	504.000	504.200	0.2	250	267	656.27	1165.11	656.27	22	40
HS-144	504.200	504.500	0.3	250	267	14.13	64.83	14.13	22	40

Structural assessment (8)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-145	504.500	505.000	0.5	250	267	80.28	158.21	80.28	22	40
HS-146	505.000	505.500	0.5	180	267	23.63	51.23	23.63	22	40
HS-147	505.500	506.000	0.5	180	267	152.48	203.93	152.48	22	40
HS-148	506.000	506.500	0.5	200	267	30.83	75.60	30.83	22	40
HS-149	506.500	506.700	0.2	200	267	227.58	335.81	227.58	22	40
HS-150	506.700	507.000	0.3	200	267	7.51	26.32	7.51	22	40
HS-151	507.000	507.200	0.2	200	267	39.34	93.45	39.34	22	40
HS-152	507.200	507.700	0.5	200	267	240.13	353.84	240.13	22	40
HS-153	507.700	508.000	0.3	200	267	5.69	20.72	5.69	22	40
HS-154	508.000	508.200	0.2	250	267	23.13	81.52	23.13	22	40
HS-155	508.200	508.700	0.5	250	267	671.33	1208.77	671.33	22	40
HS-156	508.700	509.000	0.3	250	267	14.86	63.59	14.86	22	40
HS-157	509.000	510.200	1.2	200	267	176.08	264.05	176.08	22	40
HS-158	510.200	511.000	0.8	200	267	12.14	47.06	12.14	22	40
HS-159	511.000	512.000	1	260	267	17.21	68.29	17.21	22	40
HS-160	512.000	512.500	0.5	220	267	18.24	81.52	18.24	22	40
HS-161	512.500	513.000	0.5	220	267	397.17	654.16	397.17	22	40
HS-162	513.000	513.500	0.5	190	267	204.69	291.20	204.69	22	40
HS-163	513.500	514.000	0.5	190	267	42.12	110.42	42.12	22	40
HS-164	514.000	515.000	1	210	267	53.66	139.10	53.66	22	40
HS-165	515.000	516.000	1	220	267	144.80	267.32	144.80	22	40
HS-166	516.000	516.200	0.2	210	267	6.88	27.09	6.88	22	40
HS-167	516.200	516.500	0.3	210	267	286.24	443.22	286.24	22	40
HS-168	516.500	516.700	0.2	210	267	5.89	22.68	5.89	22	40

Structural assessment (9)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-169	516.700	518.000	1.3	210	267	274.52	418.72	274.52	22	40
HS-170	518.000	518.500	0.5	160	267	94.56	111.22	94.56	22	40
HS-171	518.500	519.000	0.5	160	267	3.78	14.78	3.78	22	40
HS-172	519.000	519.500	0.5	220	267	7.68	30.27	7.68	22	40
HS-173	519.500	520.000	0.5	220	267	285.87	430.34	285.87	22	40
HS-174	520.000	521.000	1	160	267	2.26	7.69	2.26	22	40
HS-175	521.000	521.900	0.9	170	267	6.65	27.82	6.65	22	40
HS-176	523.000	526.000	3	210	267	91.66	160.97	91.66	22	40
HS-177	526.000	527.200	1.2	190	267	6.70	26.66	6.70	22	40
HS-178	527.200	528.000	0.8	190	267	70.98	114.35	70.98	22	40
HS-179	528.000	530.700	2.7	215	267	177.39	240.33	177.39	22	40
HS-180	530.700	531.200	0.5	185	267	2.60	11.73	2.60	22	40
HS-181	531.200	531.400	0.2	185	267	118.59	149.09	118.59	22	40
HS-182	531.400	531.700	0.3	185	267	1.87	6.61	1.87	22	40
HS-183	531.700	532.900	1.2	185	267	99.89	122.74	99.89	22	40
HS-184	532.900	533.900	1	215	267	5.24	20.76	5.24	22	40
HS-185	533.900	534.200	0.3	255	267	7.68	28.70	7.68	22	40
HS-186	534.200	534.700	0.5	255	267	479.09	767.50	479.09	22	40
HS-187	534.700	534.900	0.2	255	267	11.02	50.73	11.02	22	40
HS-188	534.900	535.400	0.5	195	267	149.75	198.59	149.75	22	40
HS-189	535.400	535.700	0.3	195	267	11.83	45.07	11.83	22	40
HS-190	535.700	535.900	0.2	195	267	153.42	200.90	153.42	22	40
HS-191	535.900	536.900	1	235	267	90.09	152.85	90.09	22	40
HS-192	536.900	537.200	0.3	190	267	5.97	20.15	5.97	22	40

Structural assessment (10)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-193	537.200	538.200	1	190	267	120.00	150.95	120.00	22	40
HS-194	538.200	538.700	0.5	190	267	4.66	17.24	4.66	22	40
HS-195	538.700	539.200	0.5	190	267	132.27	168.82	132.27	22	40
HS-196	539.200	539.900	0.7	240	267	357.18	564.11	357.18	22	40
HS-197	539.900	541.900	2	195	267	26.17	47.17	26.17	22	40
HS-198	541.900	542.900	1	185	267	1.62	7.56	1.62	22	40
HS-199	542.900	543.200	0.3	165	267	81.80	93.45	81.80	22	40
HS-200	543.200	543.400	0.2	165	267	4.41	17.01	4.41	22	40
HS-201	543.400	544.400	1	165	267	43.24	57.51	43.24	22	40
HS-202	544.400	544.900	0.5	195	267	2.58	9.26	2.58	22	40
HS-203	544.900	545.900	1	160	267	19.83	36.30	19.83	22	40
HS-204	545.900	546.400	0.5	165	267	73.48	83.66	73.48	22	40
HS-205	546.400	546.900	0.5	165	267	4.80	19.33	4.80	22	40
HS-206	546.900	547.900	1	200	267	166.59	228.28	166.59	22	40
HS-207	547.900	549.900	2	150	267	28.21	37.95	28.21	22	40
HS-208	549.900	550.900	1	210	267	206.99	298.11	206.99	22	40
HS-209	550.900	552.900	2	160	267	61.88	69.82	61.88	22	40
HS-210	552.900	553.900	1	120	267	21.18	21.25	21.18	22	40
HS-211	553.900	554.900	1	220	267	309.53	355.17	309.53	22	40
HS-212	554.900	556.900	2	260	267	50.59	106.34	50.59	22	40
HS-213	556.900	557.200	0.3	260	267	12.86	55.39	12.86	22	40
HS-214	557.200	557.800	0.6	260	267	172.18	247.94	172.18	22	40
HS-215	0.000	0.500	0.5	225	267	39.41	88.15	39.41	32	59
HS-216	0.500	1.000	0.5	225	267	6.59	21.06	6.59	32	59

Structural assessment (11)

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

Homogeneous Sections (2 Lane)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-217	1.000	1.500	0.5	225	267	10.89	44.64	10.89	32	59
HS-218	1.500	2.000	0.5	225	267	69.16	129.92	69.16	32	59
HS-219	2.000	2.500	0.5	205	267	11.25	44.43	11.25	32	59
HS-220	2.500	3.700	1.2	165	267	88.52	104.52	88.52	32	59
HS-221	3.700	4.000	0.3	165	267	6.18	12.84	6.18	32	59
HS-222	4.000	5.000	1	155	267	72.97	80.42	72.97	32	59
HS-223	5.000	5.200	0.2	135	267	1.79	5.36	1.79	32	59
HS-224	5.200	6.000	0.8	135	267	46.13	46.11	46.11	32	59
HS-225	6.000	6.200	0.2	185	267	2.75	14.04	2.75	32	59
HS-226	6.200	6.500	0.3	185	267	140.23	259.45	140.23	32	59
HS-227	6.500	7.000	0.5	185	267	4.00	16.53	4.00	32	59
HS-228	7.000	8.000	1	185	267	141.66	187.80	141.66	32	59
HS-229	8.000	8.200	0.2	165	267	1.46	4.98	1.46	32	59
HS-230	8.200	10.200	2	165	267	11.95	10.70	10.70	32	59
HS-231	10.200	10.500	0.3	110	267	3.65	5.02	3.65	32	59
HS-232	10.500	11.000	0.5	165	267	45.77	45.18	45.18	32	59
HS-233	11.000	11.500	0.5	110	267	3.94	5.19	3.94	32	59
HS-234	11.500	13.000	1.5	135	267	26.81	24.53	24.53	32	59
HS-235	13.000	15.000	2	165	267	94.00	113.19	94.00	32	59
HS-236	15.000	16.000	1	175	267	57.07	59.96	57.07	32	59
HS-237	16.000	16.200	0.2	165	267	6.61	23.71	6.61	32	59
HS-238	16.200	17.300	1.1	165	267	36.11	41.30	36.11	32	59

Structural assessment (12)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Homogeneous Sections (4 Lane LHS)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-1	356.900	358.000	1.1	110	267	16.89	14.63	14.63	15	34
HS-2	358.000	358.700	0.7	195	267	52.48	73.61	52.48	15	34
HS-3	358.700	359.000	0.3	195	267	8.65	29.81	8.65	15	34
HS-4	359.000	360.000	1	155	267	1.50	5.06	1.50	15	34
HS-5	360.000	361.000	1	110	267	11.53	10.30	10.30	15	34
HS-6	361.000	362.000	1	160	267	12.79	23.63	12.79	15	34
HS-7	362.000	362.200	0.2	110	267	4.47	6.16	4.47	15	34
HS-8	362.200	362.500	0.3	140	267	2.90	8.00	2.90	15	34
HS-9	362.500	363.000	0.5	140	267	22.25	24.87	22.25	15	34
HS-10	363.000	363.200	0.2	140	267	4.53	13.64	4.53	15	34
HS-11	363.200	364.000	0.8	150	267	3.54	12.72	3.54	15	34
HS-12	364.000	364.500	0.5	150	267	44.60	44.22	44.22	15	34
HS-13	364.500	365.000	0.5	165	267	8.80	18.71	8.80	15	34
HS-14	365.000	365.700	0.7	215	267	2.43	8.99	2.43	15	34
HS-15	365.700	366.000	0.3	110	267	16.12	14.38	14.38	15	34
HS-16	366.000	366.200	0.2	215	267	2.85	10.84	2.85	15	34
HS-17	366.200	366.700	0.5	205	267	138.14	174.31	138.14	15	34
HS-18	366.700	367.000	0.3	205	267	22.32	90.12	22.32	15	34
HS-19	367.000	367.200	0.2	205	267	142.32	180.61	142.32	15	34
HS-20	367.200	367.500	0.3	110	267	17.04	15.13	15.13	15	34
HS-21	367.500	367.700	0.2	185	267	86.33	97.34	86.33	15	34
HS-22	367.700	368.000	0.3	185	267	2.79	9.81	2.79	15	34
HS-23	368.000	368.500	0.5	110	267	18.45	16.05	16.05	15	34
HS-24	368.500	369.200	0.7	185	267	6.42	25.72	6.42	15	34

Structural assessment (13)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Homogeneous Sections (4 Lane LHS)

Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-25	369.200	369.500	0.3	185	267	99.24	118.28	99.24	15	34
HS-26	369.500	369.700	0.2	215	267	6.99	29.52	6.99	15	34
HS-27	369.700	370.000	0.3	215	267	40.06	58.90	40.06	15	34
HS-28	370.000	370.700	0.7	215	267	2.69	9.83	2.69	15	34
HS-29	370.700	371.200	0.5	255	267	128.55	185.66	128.55	15	34
HS-30	371.200	374.700	3.5	110	267	8.91	9.53	8.91	15	34
HS-31	394.500	395.000	0.5	110	267	2.51	5.45	2.51	15	34
HS-32	395.000	395.200	0.2	110	267	9.40	11.09	9.40	15	34
HS-33	395.200	395.500	0.3	110	267	2.35	5.28	2.35	15	34
HS-34	395.500	397.000	1.5	110	267	24.14	21.55	21.55	15	34
HS-35	397.000	398.500	1.5	110	267	5.97	9.12	5.97	15	34
HS-36	406.000	408.000	2	105	267	16.11	14.84	14.84	15	34
HS-37	432.500	433.000	0.5	105	267	1.65	3.70	1.65	15	32
HS-38	433.000	434.000	1	105	267	8.37	8.48	8.37	15	32
HS-39	446.600	447.700	1.1	105	267	5.17	6.31	5.17	15	32
HS-40	471.000	472.300	1.3	105	267	7.44	8.34	7.44	15	32
HS-41	490.900	495.000	4.1	105	267	8.00	9.14	8.00	18	37
HS-42	521.900	522.900	1	105	267	21.72	18.84	18.84	18	37

Structural assessment (14)

TRANSLINK® Infrastructure Consultants Pvt Ltd *Smart Consulting*

Homogeneous Sections (4 Lane RHS)

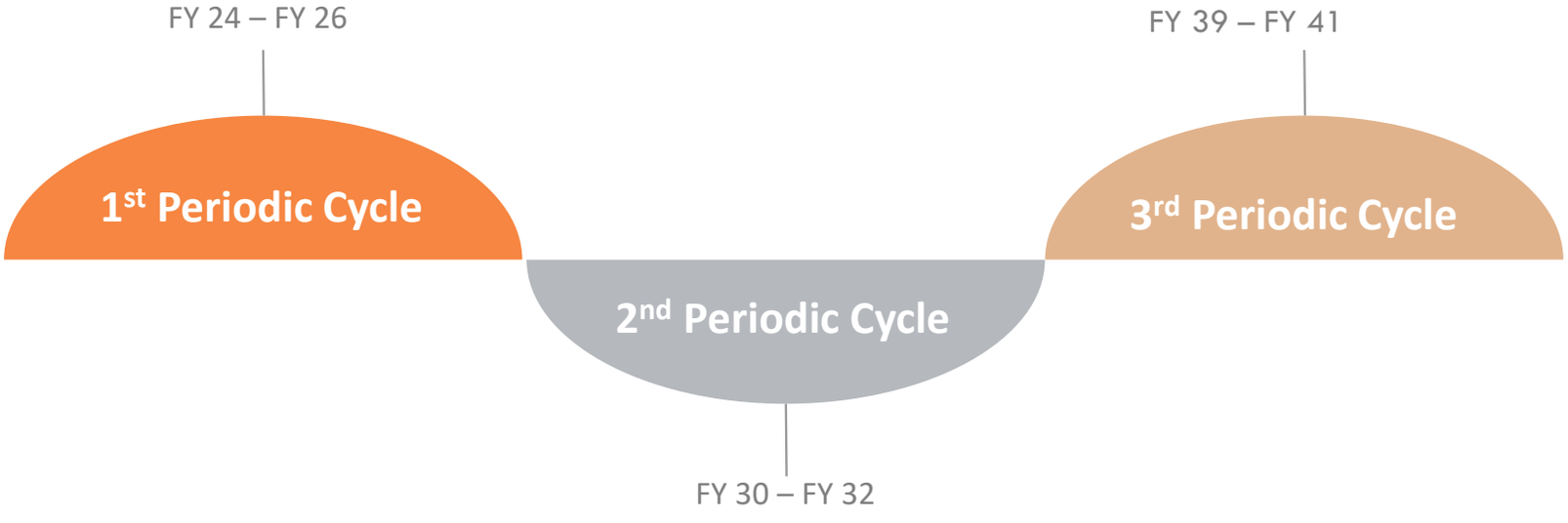
Homogeneous section	Start Chainage	End Chainage	Length of HS	BT (mm)	Granular (mm)	Remaining Fatigue Life (MSA)	Remaining Rutting Life (MSA)	Minimum Remaining MSA	Design MSA Translink (FY31)	Design MSA Translink (FY38)
HS-1	356.900	362.200	5.3	110	267	3.53	4.48	3.53	15	31
HS-2	362.200	362.300	0.1	110	267	1.46	3.29	1.46	15	31
HS-3	362.300	364.000	1.7	110	267	6.08	7.58	6.08	15	31
HS-4	364.000	364.700	0.7	110	267	2.35	5.50	2.35	15	31
HS-5	364.700	365.200	0.5	110	267	12.29	12.23	12.23	15	31
HS-6	365.200	365.700	0.5	110	267	2.04	5.49	2.04	15	31
HS-7	365.700	366.500	0.8	110	267	8.16	9.16	8.16	15	31
HS-8	366.500	367.000	0.5	110	267	2.56	5.62	2.56	15	31
HS-9	367.000	367.500	0.5	110	267	13.11	12.70	12.70	15	31
HS-10	367.500	367.700	0.2	110	267	2.34	5.61	2.34	15	31
HS-11	367.700	369.700	2	110	267	10.05	10.63	10.05	15	31
HS-12	369.700	370.000	0.3	110	267	1.49	3.47	1.49	15	31
HS-13	370.000	374.700	4.7	110	267	9.03	9.84	9.03	15	31
HS-14	394.500	395.000	0.5	110	267	19.18	18.27	18.27	15	31
HS-15	395.000	395.700	0.7	110	267	4.09	9.02	4.09	15	31
HS-16	395.700	398.500	2.8	110	267	14.02	14.47	14.02	15	31
HS-17	406.000	408.000	2	105	267	17.80	15.95	15.95	15	31
HS-18	432.500	434.000	1.5	105	267	3.61	5.01	3.61	15	32
HS-19	446.600	447.700	1.1	105	267	17.05	14.40	14.40	15	32
HS-20	471.000	472.300	1.3	105	267	4.29	6.23	4.29	15	32
HS-21	490.900	492.700	1.8	105	267	4.86	7.09	4.86	18	37
HS-22	492.700	494.900	2.2	105	267	2.74	7.29	2.74	18	37
HS-23	521.800	522.900	1.1	105	267	11.22	11.42	11.22	18	37

Chapter 6: Major maintenance cost estimate

Major maintenance cycles (1)

Rehabilitation Strategy MCW

- As per CA, periodic major maintenance or function overlay is to be carried out whenever roughness exceeds 2000mm/km
- As per roughness data and PCS observation, majority of the section has roughness values below the threshold. Hence, only structural analysis has been used to derive major maintenance strategy.
- Maintenance Cycles – Given the fact that since FY 22 concessionaire had carried out rehabilitation activities, the next cycle for major maintenance has been considered in FY 24 – FY 26 , FY 30 – FY 32 & FY 39 – FY 41



Source: - Consultant's PCS 2023

Major maintenance cycles (2)

Rehabilitation Strategy MCW

- Homogeneous sections where residual life of the pavement was not sufficient enough in comparison to design MSA of next periodic maintenance cycle, rehabilitation measure such as overlay by BC or BC & DBM both as per the requirement assessed. In sections where elastic modulus of BT was very low, milling treatment is provided before carrying out rehabilitation measure.
- Homogeneous sections where residual life of the pavement was sufficient enough for full design MSA, micro surfacing treatment is proposed in each cycle with/without 40 mm BC functional overlay in last cycle as per requirement

Rehabilitation Strategy Service Road

- Wearing coarse of Mastic Asphalt is considered on structures in addition to 40 mm BC
- Edge Line Marking, Center Line Marking, Median Kerb Removing, New Median Kerb installment are considered in each periodic cycle

- 30 mm layer of BC overlay has been proposed on service road given the structural and functional condition of service road, both in 2nd & 3rd periodic cycle.

Year	Type of treatment	Length Covered in Kms					
		4 lane				2 lane	%
		LHS	%	RHS	%		
FY25	Executed/ To be executed MMR/BC Work	23.10	70%	27.30	83%	94.65	39%
FY26	Milling + BC + DBM	0.60	2%	0.00	0%	2.30	1%
	BC Overlay	5.40	16%	0.00	0%	35.85	9%
	Micro-surfacing	3.70	11%	5.50	17%	72.20	42%
			100%		**100%**		**100%**
FY30	Milling + BC + DBM	1.50	5%	0.30	1%	5.70	3%
	BC Overlay	6.20	19%	15.59	48%	33.02	16%
	Micro-surfacing	16.10	49%	7.90	24%	13.30	6%
FY31	Milling + BC + DBM	-	-	1.20	4%	5.00	2%
	BC Overlay	1.90	6%	2.8	9%	28.45	14%
	Micro-surfacing	2.10	6%	-	-	34.20	17%
FY32	Milling + BC + DBM	-	-	1.70	5%	5.50	3%
	BC Overlay	0.90	3%	2.40	7%	31.09	15%
	Micro-surfacing	4.10	13%	0.90	3%	48.40	24%
			100%		**100%**		**100%**
FY39	Milling + BC + DBM	0.50	2%	-	-	1.90	1%
	BC Overlay	23.30	71%	23.80	73%	50.12	24%
FY40	Milling + BC + DBM	-	-	-	-	1.70	1%
	BC Overlay	4.00	12%	4.00	12%	65.94	32%
FY41	Milling + BC + DBM	-	-	0.90	3%	1.80	1%
	BC Overlay	5.00	15%	4.10	13%	83.19	41%
			100%		**100%**		**100%**

Source: TICPL analysis

Major maintenance BOQ

Sr. No.	Particular	Qty.	FY25	FY26	FY30	FY31	FY32	FY39	FY40	FY41
1	**Major maintenance - Main Carriageway**									
1.1	Milling	SqM	-	28,400	73,200	60,800	70,300	23,500	17,000	26,100
1.2	DBM	CuM	-	1,420	3,660	3,040	3,515	1,175	850	1,305
1.3	BC	CuM	-	18,253	23,986	15,502	16,437	37,946	29,936	37,600
1.4	Tack Coat	SqM	-	555,860	7,29,856	4,98,350	5,24,230	9,86,156	7,82,400	9,84,106
1.5	Micro-surfacing	SqM	-	804,800	3,49,000	3,60,850	5,29,076	-	-	-
1.6	Wearing course on structure (40mm BC)	CuM	-	154	160	-	-	-	-	160
1.7	Wearing course on structure (Mastic Asphalt)	SqM	-	3,839	3,993	-	-	-	-	3,993
1.8	Edge Line Marking	SqM	-	15,404	18,698	11,803	12,478	29,888	22,692	28,500
1.9	Center Line Marking	SqM	-	7,702	9,349	5,902	6,239	14,944	11,346	14,250
1.10	Median Kerb Removing	RM	-	-	-	-	-	12,000	4,700	4,100
1.11	New Median Kerb Installment	RM	-	-	-	-	-	12,000	4,700	4,100
2	**Major maintenance - Service Road**									
2.1	BC Overlay	CuM	-	-	476	-	-	-	-	476
2.2	Tack Coat	SqM	-	-	15,862	-	-	-	-	15,862
2.3	Edge Line Marking SR	SqM	-	-	680	-	-	-	-	680
2.4	Center Line Marking SR	SqM	-	-	340	-	-	-	-	340

Source: - Consultant's PCS 2023

Major maintenance cost estimate (1)

TRANSLINK® Infrastructure Consultants Pvt Ltd Smart Consulting

Base Year Rates

Sr. No.	Particular	Unit	Rate (INR) for FY 24
1	**Major maintenance - Main Carriageway**		
1.1	Milling	Rate/SqM	88
1.2	DBM	Rate/CuM	10700
1.3	BC	Rate/CuM	12470
1.4	Tack Coat	Rate/SqM	18
1.5	Micro-surfacing	Rate/SqM	210
1.6	Wearing course on structure (40mm BC)	Rate/CuM	12470
1.7	Wearing course on structure (Mastic Asphalt)	Rate/SqM	520
1.8	Edge Line Marking	Rate/SqM	483
1.9	Center Line Marking	Rate/SqM	483
1.10	Median Kerb Removing	Rate/RM	15
1.11	New Median Kerb Installment	Rate/RM	300
2	**Major maintenance - Service Road**		
2.1	BC Overlay	Rate/CuM	12,470
2.2	Tack Coat	Rate/SqM	18
2.3	Edge Line Marking_SR	Rate/SqM	483
2.4	Center Line Marking_SR	Rate/SqM	483

Source: TICPL estimate

Major maintenance cost estimate (2)

TRANSLINK® Infrastructure Consultants Pvt Ltd *Smart Consulting*

Major maintenance cost estimate for balance concession period (INR Crore)

Sr. No.	Particular	FY25	FY26	FY27	FY30	FY31	FY32	FY35	FY39	FY40	FY41
1	**Major maintenance - Main Carriageway**										
1.1	Milling	-	0.3	-	0.9	0.8	0.9	-	0.4	0.3	0.5
1.2	DBM	-	1.6	-	4.7	4.0	4.8	-	2.0	1.5	2.3
1.3	BC	-	24.1	-	35.7	23.8	26.0	-	73.7	59.9	77.5
1.4	Tack Coat	-	1.1	-	1.6	1.1	1.2	-	2.8	2.3	2.9
1.5	Micro-surfacing	-	17.9	-	8.8	9.3	14.1	-	-	-	-
1.6	Wearing course on structure (40mm BC)	-	0.2	-	0.2	-	-	-	-	-	0.3
1.7	Wearing course on structure (Mastic Asphalt)	-	0.2	-	0.2	-	-	-	-	-	0.3
1.8	Edge Line Marking	-	0.8	-	1.2	0.8	0.9	-	3.0	2.4	3.2
1.9	Center Line Marking	-	0.4	-	0.6	0.4	0.4	-	1.5	1.2	1.6
1.10	Median Kerb Removing	-	-	-	-	-	-	-	-	-	-
1.11	New Median Kerb Installment	-	-	-	-	-	-	-	0.7	0.3	0.3
2	**Major maintenance** - Service Road										
2.1	BC Overlay	-	-	-	0.7	-	-	-	-	-	1.0
2.2	Tack Coat	-	-	-	0.0	-	-	-	-	-	0.0
2.3	Edge Line Marking SR	-	-	-	0.0	-	-	-	-	-	0.1
2.4	Center Line Marking SR	-	-	-	0.0	-	-	-	-	-	0.0
3	Structure Specified Repairs										
3.1	Immediate cost	-	-	-	-	-	-	-	-	-	-
3.2	Structure Specified Repairs	-	-	-	-	-	-	3.2	-	-	-
4	Toll Hardware & Software	-	-	3.0	-	-	-	-	-	-	-
5	Major Maintenance work Executed	-	-	-	-	-	-	-	-	-	-
6	Major Maintenance Work to be awarded/awarded*	67.2	-	-	-	-	-	-	-	-	-
	Total	**67.2**	**46.7**	**3.0**	**54.7**	**40.2**	**48.2**	**3.2**	**84.2**	**67.9**	**90.1**

Source: TICPL estimate

- 5% escalation considered in rates of non-bituminous items & 3% for bituminous items
- Client has already floated/shall float the tender for some major maintenance work from budget INR 60.6 Cr which is to be executed in FY 25.
- Based on actual data, MMR work started in FY23 & only 3 crore worth of work was executed in FY24. The MMR work proposed by the consultant for FY24-25 has been deferred to FY26. The client will proceed with executing the major maintenance work outlined in the FY24-25 budget.

Chapter 7: O&M cost estimate

O&M cost estimate

To derive Operation and maintenance cost, it has been sub headed into Routine Maintenance, Toll Plaza operation, Corridor Control/Patrolling /Incident Management Expanses, Insurance Policy charges and IE Fees.

Routine Maintenance

- Routine maintenance can be further divided into various components like roads, roadside, traffic services, drainage, plantation, bridges and structures, toll plaza/Rest area, electrification.
- Routine Maintenance includes pavement repair works for various defects like pothole, cracks, rutting, bleeding, skidding, raveling, stripping, pavement edge drops, etc., cleaning of main carriageway and service road, repairing of hard shoulders, footpath repairs, cleaning and maintenance of road furniture, drainage, plantation, bridges and other CD structures, maintenance of street lighting, etc.
- Costing related to all above mentioned activities shall be considered in this head.

Toll Plaza Operation

- It includes toll plaza staff salaries, maintenance of toll collection system, toll plaza and corridor electricity charges, cash handling charges and other misc. items i.e. printing, stationary, etc.

Corridor Patrol & Incident Management

- It includes operation and management cost of personnel and vehicles involved in route patrolling and management of road accidents, breakdowns and other emergencies.

Insurance

- It includes premium of covers under IAR, insurance of road and toll plaza building, road furniture, premium of EEI and money policy, terrorism cover of SPV offices, comprehensive general liability

IE Fees

- Independent Engineer's fees

O&M cost estimate

O&M cost estimate for balance concession period (INR Crore)

Bill No	Particular	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43
1	**Operation and Maintenance**																			
1.1	Routine Maintenance	3.6	3.7	3.9	4.1	4.3	4.6	4.8	5.0	5.3	5.5	5.8	6.1	6.4	6.7	7.1	7.4	7.8	8.2	8.6
1.2	Toll Plaza Operation	8.9	9.4	9.9	10.4	10.9	11.4	12.0	12.6	13.2	13.9	14.6	15.3	16.1	16.9	17.7	18.6	19.5	20.5	21.5
1.3	Corridor Control/Patrolling /Incident Management Expanses	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.9	4.1	4.3	4.5	4.7	5.0	5.2	5.5	5.8	6.1	6.4
	O&M and Tolling Excluding GST	**15.2**	**15.9**	**16.7**	**17.5**	**18.4**	**19.3**	**20.3**	**21.3**	**22.4**	**23.5**	**24.7**	**25.9**	**27.2**	**28.6**	**30.0**	**31.5**	**33.1**	**34.7**	**36.5**
	O&M and Tolling Including GST	**17.9**	**18.8**	**19.7**	**20.7**	**21.7**	**22.8**	**24.0**	**25.2**	**26.4**	**27.7**	**29.1**	**30.6**	**32.1**	**33.7**	**35.4**	**37.2**	**39.0**	**41.0**	**43.0**
1.4	Insurance Policy Charges including GST	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3
1.5	IE Fee including GST	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.2
1.6	Electric Cost	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7
	Grand Total Excluding GST	**2.6**	**2.7**	**2.8**	**3.0**	**3.1**	**3.3**	**3.4**	**3.6**	**3.8**	**4.0**	**4.2**	**4.4**	**4.6**	**4.8**	**5.1**	**5.3**	**5.6**	**5.9**	**6.2**
	Grand Total Including GST	**20.5**	**21.5**	**22.5**	**23.7**	**24.9**	**26.1**	**27.4**	**28.8**	**30.2**	**31.7**	**33.3**	**35.0**	**36.7**	**38.6**	**40.5**	**42.5**	**44.6**	**46.9**	**49.2**

Source: TICPL estimate

- 5% of escalation has been considered every year till the end of concession period Base year for the calculation of O&M cost is considered FY24.
- 2% supervision fees shall be added during FY of Major maintenance cycle.
- Concession end date may vary depends on target traffic criteria however provided the estimates till FY 2043.

Chapter 8: MM and O&M cost estimate

MM and O&M cost estimate

TRANSLINK® Infrastructure Consultants Pvt Ltd
Smart Consulting

MM and O&M cost estimate for balance concession period (INR Crore)

Bill No	Particular	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43
I	**Major Maintenance**	**67.2**	**46.7**	**3.0**	**0.0**	**0.0**	**54.7**	**40.2**	**48.2**	**0.0**	**0.0**	**3.2**	**0.0**	**0.0**	**0.0**	**84.2**	**67.9**	**90.1**	**0.0**	**0.0**
1	**Operation and Maintenance**																			
1.1	Routine Maintenance	3.6	3.7	3.9	4.1	4.3	4.6	4.8	5.0	5.3	5.5	5.8	6.1	6.4	6.7	7.1	7.4	7.8	8.2	8.6
1.2	Toll Plaza Operation	8.9	9.4	9.9	10.4	10.9	11.4	12.0	12.6	13.2	13.9	14.6	15.3	16.1	16.9	17.7	18.6	19.5	20.5	21.5
1.3	Corridor Control/Patrolling /Incident Management Expanses	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.9	4.1	4.3	4.5	4.7	5.0	5.2	5.5	5.8	6.1	6.4
	O&M and Tolling Excluding GST	**15.2**	**15.9**	**16.7**	**17.5**	**18.4**	**19.3**	**20.3**	**21.3**	**22.4**	**23.5**	**24.7**	**25.9**	**27.2**	**28.6**	**30.0**	**31.5**	**33.1**	**34.7**	**36.5**
	O&M and Tolling Including GST	**17.9**	**18.8**	**19.7**	**20.7**	**21.7**	**22.8**	**24.0**	**25.2**	**26.4**	**27.7**	**29.1**	**30.6**	**32.1**	**33.7**	**35.4**	**37.2**	**39.0**	**41.0**	**43.0**
1.4	Insurance Policy Charges including GST	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3
1.5	IE Fee including GST	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.2
1.6	Electric Cost	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7
	Total O&M Excluding GST	**2.6**	**2.7**	**2.8**	**3.0**	**3.1**	**3.3**	**3.4**	**3.6**	**3.8**	**4.0**	**4.2**	**4.4**	**4.6**	**4.8**	**5.1**	**5.3**	**5.6**	**5.9**	**6.2**
	Total O&M Including GST (II)	**20.5**	**21.5**	**22.5**	**23.7**	**24.9**	**26.1**	**27.4**	**28.8**	**30.2**	**31.7**	**33.3**	**35.0**	**36.7**	**38.6**	**40.5**	**42.5**	**44.6**	**46.9**	**49.2**
Grand Total of MM and O&M (I+II)		**87.7**	**68.2**	**25.5**	**23.7**	**24.9**	**80.8**	**67.6**	**77**	**30.2**	**31.7**	**36.5**	**35**	**36.7**	**38.6**	**124.7**	**110.4**	**134.7**	**46.9**	**49.2**

Source: TICPL estimate

Annexures

1(a) Trial pit survey details
1(b) Laboratory test results of EGL soil sample
2 Pavement deflection data
3 Asset inventory and condition details
4 O&M cost estimate

Annexures 1: Trial pit and soil sample survey

1(a) Trial pit survey details

1(b) Laboratory test results of EGL soil sample

Annexure 1 (a) : Trial Pit Survey

PROJECT NAME :- Assessment of O&M and major maintenance requirements – Sikar Bikaner Highways Limited

Sr No	Chainage (Km.)	Side (LCW/RCW)	Wearing Course (BC/BT/SDBC)		Base Course (WBM/WMM)		Sub Base Layer		Total Thickness (mm)
			Type	Thickness (mm)	Type	Thickness (mm)	Type	Thickness (mm)	
1	17+240	RHS	BT	120	WMM	200	GSB	225	545
2	00+000	LHS	BT	65	WMM	200	GSB	225	490
3	542+750	RHS	BT	140	WBM	210	GSB	180	530
4	527+750	LHS	BT	110	WBM	190	GSB	290	590
5	512+600	RHS	BT	90	WBM	210	GSB	220	520
6	497+700	LHS	BT	90	WBM	190	GSB	225	505
7	482+500	RHS	BT	120	WBM	160	GSB	210	490
8	469+500	LHS	BT	105	WBM	160	GSB	260	525
9	456+500	RHS	BT	65	WBM	160	GSB	270	495
10	444+500	LHS	BT	150	WBM	200	GSB	210	560
11	432+500	RHS	BT	120	WBM	200	GSB	220	540
12	422+500	LHS	BT	120	WBM	210	GSB	225	555
13	412+500	RHS	BT	125	WBM	120	GSB	170	415
14	397+500	LHS	BT	130	WBM	220	GSB	220	570
15	382+500	RHS	BT	110	WBM	220	GSB	210	540
16	367+500	LHS	BT	160	WBM	200	GSB	210	570
17	364+800	RHS	BT	140	WBM	230	GSB	250	620
18	19+300	RHS	BT	120	WBM	210	GSB	230	560
19	13+300	LHS	BT	120	WBM	220	GSB	160	500
20	07+800	RHS	BT	110	WBM	210	GSB	175	495

Annexure 1 (b) : Laboratory Test Results of EGL Soil Sample

Project Name:Assessment of O&M and major maintenance requirements – Sikar Bikaner Highways Limited

Sr.	Existing Chainage	Sample Location	Gradation			Atterberg's Limit (%)			Soil Classification	Heavy Compaction Test (Modified Proctor)		4 Days Soaked CBR (%) at 97% MDD	Free Swell Index (%)
			Gravel (%)	Sand (%)	Silt/Clay (%)	Liquid Limit (L.L.)	Plastic Limit (P.L.)	Plasticity Index (P.I.)		Max Dry Density (gm/cc)	OMC (%)		
1	512.600	RHS	12	69	20	29	NP	NP	SM	1.85	6.30	12.30	0.00
2	367.500	LHS	17	61	23	21	NP	NP	SM	1.85	8.40	12.20	0.00

Annexures 2: Pavement deflection data

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date and Time of the Observation:** 23/04/2023 to 25/04/2023

Section: LHS | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	LHS-OT	0	0	36.9	Average	40.00	0.267	0.180	0.131	0.095	0.049	0.031
2	LHS-OT	500	0.0	36.9	Average	40.00	0.580	0.382	0.286	0.125	0.086	0.058
3	LHS-OT	1000	0.0	36.9	Average	40.00	0.332	0.215	0.138	0.091	0.043	0.028
4	LHS-OT	1500	0.0	37.3	Average	40.00	0.325	0.231	0.159	0.117	0.064	0.043
5	LHS-OT	2000	0.0	37.3	Average	40.00	0.415	0.266	0.180	0.130	0.066	0.042
6	LHS-OT	2500	0.0	37.3	Average	40.00	0.171	0.125	0.090	0.063	0.033	0.022
7	LHS-OT	3000	0.0	37.3	Average	40.00	0.234	0.146	0.102	0.072	0.038	0.026
8	LHS-OT	3500	0.0	37.3	Average	40.00	0.197	0.147	0.119	0.098	0.061	0.043
9	LHS-OT	4000	0.0	37.5	Average	40.00	0.165	0.122	0.093	0.073	0.045	0.030
10	LHS-OT	4500	0.0	37.5	Average	40.00	0.134	0.109	0.083	0.068	0.047	0.033
11	LHS-OT	5000	0.0	37.5	Average	40.00	0.604	0.327	0.179	0.108	0.057	0.036
12	LHS-OT	5500	0.0	37.5	Average	40.00	0.149	0.109	0.078	0.059	0.034	0.020
13	LHS-OT	6000	0.0	37.5	Average	40.00	0.572	0.363	0.234	0.159	0.080	0.049
14	LHS-OT	6500	0.0	37.5	Average	40.00	0.488	0.280	0.183	0.118	0.057	0.043
15	LHS-OT	7000	0.0	37.9	Average	40.00	0.177	0.121	0.093	0.073	0.045	0.029
16	LHS-OT	7500	0.0	37.9	Average	40.00	0.124	0.106	0.081	0.065	0.043	0.028
17	LHS-OT	8000	0.0	37.9	Average	40.00	0.570	0.320	0.176	0.109	0.056	0.036
18	LHS-OT	8500	0.0	37.9	Average	40.00	0.159	0.108	0.078	0.059	0.033	0.021
19	LHS-OT	9000	0.0	37.9	Average	40.00	0.305	0.208	0.154	0.115	0.063	0.048
20	LHS-OT	9500	0.0	38.1	Average	40.00	0.086	0.067	0.055	0.044	0.029	0.019

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	LHS-OT	10000	0.0	38.1	Average	40.00	0.228	0.148	0.104	0.073	0.034	0.023
22	LHS-OT	10500	0.0	38.1	Average	40.00	0.256	0.154	0.100	0.065	0.032	0.025
23	LHS-OT	11000	0.0	38.1	Average	40.00	0.221	0.152	0.109	0.078	0.040	0.024
24	LHS-OT	11500	0.0	38.1	Average	40.00	0.090	0.077	0.065	0.054	0.037	0.027
25	LHS-OT	12000	0.0	38.4	Average	40.00	0.163	0.123	0.094	0.072	0.044	0.029
26	LHS-OT	12500	0.0	38.4	Average	40.00	0.279	0.181	0.135	0.103	0.056	0.036
27	LHS-OT	13000	0.0	38.4	Average	40.00	0.159	0.115	0.089	0.067	0.042	0.029
28	LHS-OT	13500	0.0	38.4	Average	40.00	0.128	0.092	0.074	0.059	0.038	0.027
29	LHS-OT	14000	0.0	38.4	Average	40.00	0.165	0.115	0.085	0.064	0.035	0.023
30	LHS-OT	14500	0.0	38.9	Average	40.00	0.237	0.166	0.122	0.089	0.046	0.028
31	LHS-OT	15000	0.0	38.9	Average	40.00	0.283	0.164	0.113	0.077	0.040	0.029
32	LHS-OT	15500	0.0	38.9	Average	40.00	0.129	0.083	0.062	0.046	0.027	0.020
33	LHS-OT	16000	0.0	39.5	Average	40.00	0.400	0.333	0.253	0.169	0.075	0.051
34	LHS-OT	16500	0.0	39.5	Average	40.00	0.120	0.092	0.069	0.055	0.035	0.025
35	LHS-OT	17000	0.0	39.5	Average	40.00	0.153	0.094	0.079	0.066	0.046	0.034

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date and Time of the Observation:** 23/04/2023 to 25/04/2023

Section: RHS | **Season of Test:** Summer

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	RHS-OT	250	0	36.9	Average	40.00	0.342	0.236	0.163	0.112	0.061	0.037
2	RHS-OT	750	0.0	36.9	Average	40.00	0.371	0.219	0.140	0.091	0.040	0.022
3	RHS-OT	1250	0.0	36.9	Average	40.00	0.429	0.270	0.183	0.128	0.068	0.047
4	RHS-OT	1750	0.0	37.3	Average	40.00	0.189	0.124	0.092	0.069	0.038	0.025
5	RHS-OT	2250	0.0	37.3	Average	40.00	0.345	0.280	0.218	0.159	0.083	0.051
6	RHS-OT	2750	0.0	37.3	Average	40.00	0.136	0.092	0.072	0.056	0.036	0.027
7	RHS-OT	3250	0.0	37.3	Average	40.00	0.150	0.090	0.070	0.056	0.040	0.026
8	RHS-OT	3750	0.0	37.3	Average	40.00	0.435	0.241	0.128	0.078	0.050	0.037
9	RHS-OT	4250	0.0	37.5	Average	40.00	0.153	0.111	0.084	0.067	0.046	0.035
10	RHS-OT	4750	0.0	37.5	Average	40.00	0.148	0.111	0.084	0.064	0.043	0.032
11	RHS-OT	5250	0.0	37.5	Average	40.00	0.228	0.170	0.121	0.086	0.044	0.027
12	RHS-OT	5750	0.0	37.5	Average	40.00	0.294	0.204	0.149	0.107	0.060	0.039
13	RHS-OT	6250	0.0	37.5	Average	40.00	0.180	0.161	0.116	0.082	0.041	0.022
14	RHS-OT	6750	0.0	37.9	Average	40.00	0.420	0.236	0.125	0.076	0.051	0.039
15	RHS-OT	7250	0.0	37.9	Average	40.00	0.139	0.110	0.084	0.067	0.045	0.034
16	RHS-OT	7750	0.0	37.9	Average	40.00	0.150	0.111	0.083	0.065	0.043	0.032
17	RHS-OT	8250	0.0	37.9	Average	40.00	0.255	0.167	0.118	0.085	0.043	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
18	RHS-OT	8750	0.0	37.9	Average	40.00	0.302	0.202	0.149	0.107	0.061	0.040
19	RHS-OT	9250	0.0	37.9	Average	40.00	0.113	0.073	0.062	0.051	0.034	0.025
20	RHS-OT	9750	0.0	38.1	Average	40.00	0.222	0.159	0.129	0.102	0.059	0.038
21	RHS-OT	10250	0.0	38.1	Average	40.00	0.470	0.319	0.213	0.148	0.077	0.050
22	RHS-OT	10750	0.0	38.1	Average	40.00	0.228	0.140	0.103	0.071	0.036	0.023
23	RHS-OT	11250	0.0	38.1	Average	40.00	0.340	0.264	0.171	0.111	0.045	0.023
24	RHS-OT	11750	0.0	38.4	Average	40.00	0.257	0.180	0.127	0.085	0.044	0.027
25	RHS-OT	12250	0.0	38.4	Average	40.00	0.125	0.089	0.067	0.052	0.033	0.022
26	RHS-OT	12750	0.0	38.4	Average	40.00	0.201	0.161	0.128	0.104	0.061	0.044
27	RHS-OT	13250	0.0	38.4	Average	40.00	0.170	0.126	0.100	0.078	0.048	0.033
28	RHS-OT	13750	0.0	38.4	Average	40.00	0.244	0.158	0.115	0.083	0.046	0.032
29	RHS-OT	14250	0.0	38.9	Average	40.00	0.249	0.161	0.110	0.072	0.034	0.025
30	RHS-OT	14750	0.0	38.9	Average	40.00	0.256	0.153	0.105	0.070	0.037	0.028
31	RHS-OT	15250	0.0	38.9	Average	40.00	0.226	0.140	0.095	0.063	0.029	0.021
32	RHS-OT	15750	0.0	39.5	Average	40.00	0.204	0.132	0.097	0.068	0.037	0.025
33	RHS-OT	16250	0.0	39.5	Average	40.00	0.290	0.180	0.120	0.081	0.038	0.027
34	RHS-OT	16750	0.0	39.5	Average	40.00	0.178	0.130	0.101	0.079	0.047	0.032
35	RHS-OT	17250	0.0	39.5	Average	40.00	0.116	0.103	0.079	0.063	0.039	0.030

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date of the Observation:** 23/04/2023 to 25/04/2023

Section: LHS IN | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	LHS_IN	357000	0	27.3	Average	40.00	0.233	0.174	0.138	0.112	0.068	0.046
2	LHS_IN	357500	0.0	27.3	Average	40.00	0.215	0.202	0.137	0.086	0.039	0.027
3	LHS_IN	358000	0.0	27.3	Average	40.00	0.090	0.064	0.048	0.037	0.023	0.018
4	LHS_IN	358500	0.0	27.5	Average	40.00	0.255	0.185	0.128	0.084	0.042	0.026
5	LHS_IN	359000	0.0	27.5	Average	40.00	0.355	0.231	0.157	0.110	0.053	0.035
6	LHS_IN	359500	0.0	27.5	Average	40.00	0.390	0.271	0.197	0.147	0.073	0.044
7	LHS_IN	360000	0.0	27.5	Average	40.00	0.217	0.145	0.102	0.071	0.037	0.022
8	LHS_IN	360500	0.0	27.6	Average	40.00	0.294	0.194	0.129	0.092	0.046	0.029
9	LHS_IN	361000	0.0	27.6	Average	40.00	0.280	0.199	0.142	0.102	0.050	0.031
10	LHS_IN	361500	0.0	27.9	Average	40.00	0.361	0.257	0.176	0.121	0.060	0.040
11	LHS_IN	362000	0.0	28.5	Average	40.00	0.433	0.276	0.191	0.137	0.073	0.048
12	LHS_IN	362500	0.0	28.5	Average	40.00	0.212	0.188	0.143	0.108	0.055	0.034
13	LHS_IN	363000	0.0	28.5	Average	40.00	0.372	0.240	0.162	0.112	0.051	0.033
14	LHS_IN	363500	0.0	28.5	Average	40.00	0.265	0.140	0.107	0.082	0.051	0.038
15	LHS_IN	364000	0.0	28.5	Average	40.00	0.448	0.312	0.214	0.152	0.064	0.028
16	LHS_IN	364500	0.0	28.5	Average	40.00	0.259	0.216	0.152	0.109	0.060	0.040
17	LHS_IN	365000	0.0	28.8	Average	40.00	0.362	0.216	0.146	0.099	0.047	0.028
18	LHS_IN	365500	0.0	28.8	Average	40.00	0.723	0.483	0.316	0.212	0.090	0.047
19	LHS_IN	366000	0.0	28.8	Average	40.00	0.487	0.307	0.207	0.144	0.067	0.041
20	LHS_IN	366500	0.0	28.8	Average	40.00	0.189	0.167	0.124	0.092	0.045	0.030

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	LHS_IN	367000	0.0	28.8	Average	40.00	0.212	0.147	0.115	0.080	0.042	0.024
22	LHS_IN	367500	0.0	29.0	Average	40.00	0.250	0.162	0.090	0.053	0.029	0.026
23	LHS_IN	368000	0.0	29.0	Average	40.00	0.269	0.158	0.113	0.083	0.047	0.032
24	LHS_IN	368500	0.0	29.0	Average	40.00	0.351	0.258	0.198	0.147	0.081	0.058
25	LHS_IN	369000	0.0	29.4	Average	40.00	0.400	0.285	0.204	0.139	0.054	0.039
26	LHS_IN	369500	0.0	29.4	Average	40.00	0.398	0.268	0.194	0.142	0.074	0.042
27	LHS_IN	370000	0.0	29.4	Average	40.00	0.418	0.281	0.177	0.118	0.056	0.038
28	LHS_IN	370500	0.0	29.6	Average	40.00	0.492	0.333	0.241	0.149	0.079	0.053
29	LHS_IN	371000	0.0	29.6	Average	40.00	0.286	0.211	0.152	0.109	0.055	0.039
30	LHS_IN	371500	0.0	29.6	Average	40.00	0.184	0.177	0.126	0.080	0.037	0.025
31	LHS_IN	372000	0.0	29.6	Average	40.00	0.354	0.200	0.134	0.092	0.049	0.038
32	LHS_IN	372500	0.0	30.2	Average	40.00	0.256	0.224	0.161	0.117	0.063	0.038
33	LHS_IN	373000	0.0	30.2	Average	40.00	0.428	0.303	0.215	0.154	0.088	0.053
34	LHS_IN	373500	0.0	30.2	Average	40.00	0.214	0.162	0.096	0.066	0.031	0.020
35	LHS_IN	374000	0.0	30.2	Average	40.00	0.244	0.158	0.114	0.081	0.043	0.032
36	LHS_IN	374500	0.0	30.5	Average	40.00	0.220	0.140	0.107	0.083	0.051	0.035
37	LHS_IN	395000	0.0	38.2	Average	40.00	0.314	0.281	0.169	0.110	0.045	0.037
38	LHS_IN	395500	0.0	38.2	Average	40.00	0.298	0.211	0.158	0.122	0.069	0.045
39	LHS_IN	396000	0.0	38.4	Average	40.00	0.294	0.234	0.165	0.119	0.064	0.043
40	LHS_IN	396500	0.0	38.4	Average	40.00	0.182	0.117	0.084	0.061	0.032	0.020
41	LHS_IN	397000	0.0	38.4	Average	40.00	0.322	0.191	0.131	0.091	0.044	0.028
42	LHS_IN	397500	0.0	38.9	Average	40.00	0.429	0.293	0.208	0.153	0.076	0.047
43	LHS_IN	398000	0.0	38.9	Average	40.00	0.425	0.323	0.219	0.157	0.080	0.055
44	LHS_IN	406000	0.0	38.1	Average	40.00	0.380	0.313	0.262	0.223	0.046	0.039

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
45	LHS_IN	406500	0.0	38.1	Average	40.00	0.327	0.231	0.160	0.115	0.062	0.042
46	LHS_IN	407000	0.0	38.1	Average	40.00	0.118	0.077	0.062	0.051	0.035	0.025
47	LHS_IN	407500	0.0	38.0	Average	40.00	0.291	0.161	0.115	0.081	0.050	0.040
48	LHS_IN	432500	0.0	28.3	Average	40.00	0.373	0.236	0.153	0.099	0.042	0.025
49	LHS_IN	433000	0.0	28.3	Average	40.00	0.244	0.200	0.153	0.117	0.067	0.046
50	LHS_IN	433500	0.0	28.3	Average	40.00	0.114	0.102	0.086	0.073	0.053	0.044
51	LHS_IN	434000	0.0	28.3	Average	40.00	0.209	0.153	0.100	0.067	0.038	0.030
52	LHS_IN	447000	0.0	29.9	Average	40.00	0.338	0.231	0.160	0.078	0.049	0.036
53	LHS_IN	471500	0.0	34.8	Average	40.00	0.411	0.304	0.220	0.156	0.077	0.047
54	LHS_IN	472000	0.0	34.8	Average	40.00	0.353	0.250	0.178	0.127	0.063	0.034
55	LHS_IN	491000	0.0	37.7	Average	40.00	0.391	0.254	0.176	0.123	0.060	0.037
56	LHS_IN	491500	0.0	37.7	Average	40.00	0.153	0.148	0.120	0.096	0.059	0.039
57	LHS_IN	492000	0.0	37.7	Average	40.00	0.256	0.230	0.173	0.128	0.073	0.045
58	LHS_IN	492500	0.0	37.7	Average	40.00	0.245	0.175	0.125	0.086	0.046	0.027
59	LHS_IN	493000	0.0	37.9	Average	40.00	0.296	0.204	0.141	0.100	0.050	0.032
60	LHS_IN	493500	0.0	37.9	Average	40.00	0.337	0.233	0.166	0.121	0.062	0.036
61	LHS_IN	494000	0.0	37.9	Average	40.00	0.307	0.198	0.142	0.102	0.053	0.033
62	LHS_IN	494500	0.0	37.9	Average	40.00	0.347	0.231	0.156	0.110	0.055	0.034
63	LHS_IN	522000	0.0	38.4	Average	40.00	0.332	0.180	0.119	0.077	0.040	0.026
64	LHS_IN	522500	0.0	38.4	Average	40.00	0.300	0.226	0.165	0.119	0.060	0.036

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date of the Observation:** 23/04/2023 to 25/04/2023

Section: LHS OT | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	LHS-OT	357250	0	27.3	Average	40.00	0.227	0.179	0.142	0.114	0.071	0.051
2	LHS-OT	357750	0.0	27.3	Average	40.00	0.270	0.247	0.183	0.128	0.061	0.040
3	LHS-OT	358250	0.0	27.3	Average	40.00	0.209	0.174	0.125	0.088	0.044	0.027
4	LHS-OT	358750	0.0	27.5	Average	40.00	0.385	0.267	0.184	0.135	0.072	0.050
5	LHS-OT	359250	0.0	27.5	Average	40.00	0.455	0.288	0.178	0.119	0.055	0.036
6	LHS-OT	359750	0.0	27.5	Average	40.00	0.511	0.336	0.241	0.150	0.078	0.052
7	LHS-OT	360250	0.0	27.6	Average	40.00	0.298	0.214	0.153	0.109	0.054	0.039
8	LHS-OT	360750	0.0	27.6	Average	40.00	0.193	0.177	0.123	0.080	0.037	0.025
9	LHS-OT	361250	0.0	27.9	Average	40.00	0.296	0.202	0.135	0.093	0.049	0.036
10	LHS-OT	361750	0.0	27.9	Average	40.00	0.264	0.221	0.157	0.113	0.062	0.039
11	LHS-OT	362250	0.0	28.5	Average	40.00	0.522	0.307	0.217	0.156	0.084	0.052
12	LHS-OT	362750	0.0	28.5	Average	40.00	0.221	0.166	0.098	0.067	0.031	0.022
13	LHS-OT	363250	0.0	28.5	Average	40.00	0.245	0.159	0.114	0.080	0.042	0.029
14	LHS-OT	363750	0.0	28.5	Average	40.00	0.372	0.228	0.161	0.122	0.067	0.044
15	LHS-OT	364250	0.0	28.5	Average	40.00	0.338	0.255	0.193	0.144	0.071	0.040
16	LHS-OT	364750	0.0	28.5	Average	40.00	0.187	0.161	0.121	0.088	0.044	0.030
17	LHS-OT	365250	0.0	28.8	Average	40.00	0.256	0.177	0.130	0.095	0.048	0.028
18	LHS-OT	365750	0.0	28.8	Average	40.00	0.238	0.192	0.133	0.092	0.042	0.025
19	LHS-OT	366250	0.0	28.8	Average	40.00	0.218	0.147	0.104	0.072	0.040	0.022
20	LHS-OT	366750	0.0	28.8	Average	40.00	0.298	0.265	0.196	0.147	0.079	0.047
21	LHS-OT	367250	0.0	29.0	Average	40.00	0.238	0.188	0.134	0.096	0.045	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
22	LHS-OT	367750	0.0	29.0	Average	40.00	0.446	0.308	0.213	0.152	0.066	0.031
23	LHS-OT	368250	0.0	29.0	Average	40.00	0.223	0.175	0.140	0.113	0.068	0.048
24	LHS-OT	368750	0.0	29.0	Average	40.00	0.257	0.200	0.135	0.088	0.039	0.025
25	LHS-OT	369250	0.0	29.4	Average	40.00	0.102	0.063	0.047	0.036	0.022	0.017
26	LHS-OT	369750	0.0	29.4	Average	40.00	0.272	0.185	0.126	0.084	0.042	0.026
27	LHS-OT	370250	0.0	29.4	Average	40.00	0.551	0.371	0.263	0.184	0.095	0.062
28	LHS-OT	370750	0.0	29.6	Average	40.00	0.119	0.093	0.072	0.057	0.035	0.023
29	LHS-OT	371250	0.0	29.6	Average	40.00	0.220	0.177	0.135	0.104	0.063	0.042
30	LHS-OT	371750	0.0	29.6	Average	40.00	0.258	0.189	0.127	0.084	0.039	0.025
31	LHS-OT	372250	0.0	29.6	Average	40.00	0.322	0.246	0.178	0.129	0.068	0.045
32	LHS-OT	372750	0.0	30.2	Average	40.00	0.182	0.168	0.119	0.084	0.039	0.022
33	LHS-OT	373250	0.0	30.2	Average	40.00	0.354	0.253	0.187	0.138	0.073	0.042
34	LHS-OT	373750	0.0	30.2	Average	40.00	0.255	0.231	0.176	0.130	0.070	0.046
35	LHS-OT	374250	0.0	30.5	Average	40.00	0.459	0.336	0.245	0.180	0.100	0.061
36	LHS-OT	394750	0.0	38.2	Average	40.00	0.428	0.264	0.125	0.066	0.029	0.016
37	LHS-OT	395250	0.0	38.2	Average	40.00	0.383	0.275	0.163	0.091	0.030	0.019
38	LHS-OT	395750	0.0	38.2	Average	40.00	0.316	0.271	0.200	0.144	0.078	0.049
39	LHS-OT	396250	0.0	38.4	Average	40.00	0.193	0.162	0.120	0.089	0.049	0.031
40	LHS-OT	396750	0.0	38.4	Average	40.00	0.151	0.135	0.085	0.058	0.029	0.019
41	LHS-OT	397250	0.0	38.4	Average	40.00	0.381	0.287	0.200	0.146	0.073	0.048
42	LHS-OT	397750	0.0	38.9	Average	40.00	0.418	0.283	0.189	0.128	0.057	0.033
43	LHS-OT	398250	0.0	38.9	Average	40.00	0.370	0.285	0.212	0.160	0.090	0.053
44	LHS-OT	406250	0.0	38.1	Average	40.00	0.338	0.230	0.175	0.132	0.075	0.050
45	LHS-OT	406750	0.0	38.1	Average	40.00	0.209	0.161	0.119	0.089	0.050	0.032
46	LHS-OT	407250	0.0	38.0	Average	40.00	0.268	0.171	0.122	0.085	0.042	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
47	LHS-OT	407750	0.0	38.0	Average	40.00	0.325	0.231	0.159	0.117	0.064	0.043
48	LHS-OT	432750	0.0	28.3	Average	40.00	0.395	0.255	0.166	0.107	0.048	0.029
49	LHS-OT	433250	0.0	28.3	Average	40.00	0.372	0.251	0.174	0.122	0.064	0.039
50	LHS-OT	433750	0.0	28.3	Average	40.00	0.318	0.209	0.137	0.093	0.048	0.031
51	LHS-OT	446750	0.0	29.9	Average	40.00	0.326	0.224	0.152	0.065	0.036	0.029
52	LHS-OT	447250	0.0	29.9	Average	40.00	0.264	0.191	0.136	0.066	0.039	0.032
53	LHS-OT	471250	0.0	34.8	Average	40.00	0.307	0.221	0.122	0.081	0.063	0.040
54	LHS-OT	471750	0.0	34.8	Average	40.00	0.283	0.226	0.170	0.124	0.069	0.040
55	LHS-OT	472240	0.0	34.8	Average	40.00	0.293	0.204	0.144	0.100	0.047	0.028
56	LHS-OT	491250	0.0	37.7	Average	40.00	0.128	0.105	0.086	0.072	0.048	0.034
57	LHS-OT	491750	0.0	37.7	Average	40.00	0.399	0.254	0.189	0.138	0.074	0.049
58	LHS-OT	492250	0.0	37.7	Average	40.00	0.261	0.184	0.136	0.097	0.053	0.034
59	LHS-OT	492750	0.0	37.7	Average	40.00	0.409	0.258	0.181	0.133	0.064	0.043
60	LHS-OT	493250	0.0	37.9	Average	40.00	0.320	0.221	0.163	0.122	0.068	0.044
61	LHS-OT	493750	0.0	37.9	Average	40.00	0.329	0.211	0.145	0.100	0.051	0.034
62	LHS-OT	494250	0.0	37.9	Average	40.00	0.315	0.167	0.106	0.064	0.030	0.023
63	LHS-OT	522000	0.0	38.4	Average	40.00	0.275	0.145	0.105	0.076	0.041	0.026
64	LHS-OT	522500	0.0	38.4	Average	40.00	0.312	0.287	0.207	0.149	0.075	0.045

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date of the Observation:** 23/04/2023 to 25/04/2023

Section: RHS IN | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	RHS-IN	357000	0	30.6	Average	40.00	0.289	0.223	0.154	0.110	0.053	0.035
2	RHS-IN	357500	0.0	30.6	Average	40.00	0.359	0.281	0.191	0.130	0.059	0.032
3	RHS-IN	358000	0.0	30.6	Average	40.00	0.285	0.185	0.132	0.095	0.049	0.031
4	RHS-IN	358500	0.0	30.6	Average	40.00	0.291	0.241	0.172	0.126	0.064	0.040
5	RHS-IN	359000	0.0	30.8	Average	40.00	0.188	0.153	0.108	0.075	0.037	0.023
6	RHS-IN	359500	0.0	30.8	Average	40.00	0.538	0.328	0.223	0.157	0.081	0.052
7	RHS-IN	360000	0.0	30.8	Average	40.00	0.283	0.216	0.159	0.120	0.068	0.044
8	RHS-IN	360500	0.0	30.8	Average	40.00	0.310	0.228	0.159	0.108	0.052	0.032
9	RHS-IN	361000	0.0	30.8	Average	40.00	0.083	0.067	0.053	0.043	0.026	0.019
10	RHS-IN	361500	0.0	31.2	Average	40.00	0.182	0.117	0.080	0.057	0.030	0.018
11	RHS-IN	362000	0.0	31.2	Average	40.00	0.333	0.235	0.152	0.104	0.048	0.033
12	RHS-IN	362500	0.0	31.2	Average	40.00	0.296	0.244	0.182	0.132	0.069	0.042
13	RHS-IN	363000	0.0	31.2	Average	40.00	0.306	0.193	0.132	0.092	0.044	0.030
14	RHS-IN	363500	0.0	31.3	Average	40.00	0.341	0.249	0.171	0.119	0.054	0.035
15	RHS-IN	364000	0.0	31.3	Average	40.00	0.433	0.286	0.189	0.129	0.056	0.034
16	RHS-IN	364500	0.0	31.3	Average	40.00	0.470	0.328	0.221	0.158	0.081	0.053
17	RHS-IN	365000	0.0	31.5	Average	40.00	0.349	0.252	0.183	0.134	0.072	0.047
18	RHS-IN	365500	0.0	31.5	Average	40.00	0.486	0.315	0.213	0.151	0.071	0.045
19	RHS-IN	366000	0.0	31.5	Average	40.00	0.377	0.252	0.179	0.130	0.065	0.041
20	RHS-IN	366500	0.0	31.5	Average	40.00	0.484	0.328	0.230	0.159	0.079	0.044

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	RHS-IN	367000	0.0	31.5	Average	40.00	0.350	0.253	0.190	0.144	0.078	0.050
22	RHS-IN	367500	0.0	31.8	Average	40.00	0.443	0.351	0.247	0.178	0.072	0.046
23	RHS-IN	368000	0.0	31.8	Average	40.00	0.317	0.257	0.193	0.146	0.081	0.050
24	RHS-IN	368500	0.0	31.8	Average	40.00	0.302	0.196	0.129	0.084	0.042	0.028
25	RHS-IN	369000	0.0	31.8	Average	40.00	0.265	0.218	0.147	0.103	0.050	0.029
26	RHS-IN	369500	0.0	32.1	Average	40.00	0.256	0.195	0.142	0.103	0.054	0.034
27	RHS-IN	370000	0.0	32.1	Average	40.00	0.361	0.277	0.207	0.157	0.089	0.052
28	RHS-IN	370500	0.0	32.1	Average	40.00	0.368	0.273	0.196	0.147	0.081	0.046
29	RHS-IN	371000	0.0	32.1	Average	40.00	0.187	0.131	0.099	0.075	0.043	0.027
30	RHS-IN	371500	0.0	32.3	Average	40.00	0.275	0.223	0.173	0.133	0.080	0.054
31	RHS-IN	372000	0.0	32.3	Average	40.00	0.361	0.284	0.205	0.154	0.079	0.049
32	RHS-IN	372500	0.0	32.3	Average	40.00	0.346	0.256	0.183	0.134	0.065	0.037
33	RHS-IN	373000	0.0	32.7	Average	40.00	0.227	0.159	0.112	0.083	0.046	0.030
34	RHS-IN	373500	0.0	32.7	Average	40.00	0.220	0.178	0.144	0.115	0.071	0.054
35	RHS-IN	374000	0.0	32.7	Average	40.00	0.293	0.203	0.139	0.089	0.038	0.026
36	RHS-IN	374500	0.0	32.7	Average	40.00	0.423	0.286	0.203	0.139	0.054	0.039
37	RHS-IN	395000	0.0	39.4	Average	40.00	0.416	0.295	0.196	0.119	0.056	0.037
38	RHS-IN	395500	0.0	39.4	Average	40.00	0.480	0.313	0.213	0.152	0.073	0.044
39	RHS-IN	396000	0.0	39.4	Average	40.00	0.374	0.250	0.178	0.131	0.066	0.040
40	RHS-IN	396500	0.0	39.7	Average	40.00	0.320	0.264	0.199	0.146	0.078	0.053
41	RHS-IN	397000	0.0	39.7	Average	40.00	0.352	0.258	0.195	0.136	0.073	0.047
42	RHS-IN	397500	0.0	39.7	Average	40.00	0.341	0.261	0.194	0.138	0.072	0.046
43	RHS-IN	398000	0.0	39.7	Average	40.00	0.425	0.286	0.205	0.153	0.084	0.053
44	RHS-IN	406500	0.0	37.8	Average	40.00	0.325	0.231	0.159	0.117	0.064	0.043

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
45	RHS-IN	407000	0.0	37.8	Average	40.00	0.209	0.161	0.119	0.089	0.050	0.032
46	RHS-IN	407500	0.0	37.7	Average	40.00	0.268	0.171	0.122	0.085	0.042	0.027
47	RHS-IN	432500	0.0	28.8	Average	40.00	0.350	0.223	0.144	0.099	0.052	0.034
48	RHS-IN	433000	0.0	28.8	Average	40.00	0.394	0.250	0.170	0.115	0.057	0.037
49	RHS-IN	433500	0.0	28.8	Average	40.00	0.409	0.225	0.141	0.089	0.041	0.022
50	RHS-IN	434000	0.0	28.8	Average	40.00	0.252	0.143	0.104	0.074	0.035	0.020
51	RHS-IN	447000	0.0	30.3	Average	40.00	0.285	0.205	0.156	0.124	0.075	0.046
52	RHS-IN	471500	0.0	35.1	Average	40.00	0.431	0.304	0.220	0.156	0.077	0.047
53	RHS-IN	472000	0.0	35.1	Average	40.00	0.437	0.275	0.188	0.128	0.059	0.032
54	RHS-IN	491000	0.0	38.2	Average	40.00	0.324	0.198	0.129	0.085	0.043	0.028
55	RHS-IN	491500	0.0	38.2	Average	40.00	0.258	0.173	0.129	0.091	0.048	0.033
56	RHS-IN	492000	0.0	38.2	Average	40.00	0.315	0.210	0.136	0.091	0.043	0.023
57	RHS-IN	492500	0.0	38.4	Average	40.00	0.393	0.266	0.182	0.128	0.070	0.047
58	RHS-IN	493000	0.0	38.4	Average	40.00	0.359	0.217	0.146	0.098	0.047	0.027
59	RHS-IN	493500	0.0	38.4	Average	40.00	0.114	0.069	0.058	0.049	0.035	0.027
60	RHS-IN	494000	0.0	38.5	Average	40.00	0.073	0.066	0.055	0.047	0.033	0.025
61	RHS-IN	494500	0.0	38.5	Average	40.00	0.323	0.203	0.138	0.097	0.048	0.032
62	RHS-IN	522000	0.0	37.9	Average	40.00	0.211	0.136	0.097	0.066	0.033	0.022
63	RHS-IN	522500	0.0	37.9	Average	40.00	0.228	0.140	0.103	0.071	0.036	0.023
64	RHS-IN	522913	0.0	37.9	Average	40.00	0.340	0.264	0.171	0.111	0.045	0.023

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date of the Observation:** 23/04/2023 to 25/04/2023

Section: RHS OT | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	RHS-OT	357250	0	30.6	Average	40.00	0.262	0.215	0.151	0.111	0.055	0.034
2	RHS-OT	357750	0.0	30.6	Average	40.00	0.243	0.198	0.138	0.096	0.043	0.027
3	RHS-OT	358250	0.0	30.6	Average	40.00	0.256	0.164	0.111	0.075	0.035	0.021
4	RHS-OT	358750	0.0	30.6	Average	40.00	0.438	0.271	0.183	0.122	0.056	0.031
5	RHS-OT	359250	0.0	30.8	Average	40.00	0.302	0.247	0.178	0.131	0.067	0.042
6	RHS-OT	359750	0.0	30.8	Average	40.00	0.327	0.269	0.194	0.142	0.074	0.047
7	RHS-OT	360250	0.0	30.8	Average	40.00	0.237	0.210	0.156	0.115	0.064	0.042
8	RHS-OT	360750	0.0	30.8	Average	40.00	0.174	0.119	0.090	0.070	0.043	0.029
9	RHS-OT	361250	0.0	31.2	Average	40.00	0.136	0.102	0.074	0.059	0.034	0.022
10	RHS-OT	361750	0.0	31.2	Average	40.00	0.296	0.230	0.150	0.100	0.045	0.027
11	RHS-OT	362250	0.0	31.2	Average	40.00	0.629	0.366	0.251	0.177	0.085	0.051
12	RHS-OT	362750	0.0	31.2	Average	40.00	0.262	0.221	0.157	0.112	0.058	0.041
13	RHS-OT	363250	0.0	31.3	Average	40.00	0.383	0.283	0.198	0.144	0.073	0.046
14	RHS-OT	363750	0.0	31.3	Average	40.00	0.409	0.290	0.206	0.153	0.076	0.048
15	RHS-OT	364250	0.0	31.3	Average	40.00	0.469	0.330	0.234	0.167	0.082	0.051
16	RHS-OT	364750	0.0	31.3	Average	40.00	0.330	0.283	0.212	0.160	0.089	0.056
17	RHS-OT	365250	0.0	31.5	Average	40.00	0.423	0.289	0.194	0.119	0.056	0.038
18	RHS-OT	365750	0.0	31.5	Average	40.00	0.339	0.262	0.198	0.146	0.079	0.050
19	RHS-OT	366250	0.0	31.5	Average	40.00	0.353	0.256	0.192	0.135	0.071	0.045
20	RHS-OT	366750	0.0	31.5	Average	40.00	0.433	0.292	0.211	0.158	0.086	0.058

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	RHS-OT	367250	0.0	31.5	Average	40.00	0.300	0.218	0.157	0.118	0.066	0.045
22	RHS-OT	367750	0.0	31.8	Average	40.00	0.302	0.277	0.208	0.160	0.092	0.058
23	RHS-OT	368250	0.0	31.8	Average	40.00	0.264	0.215	0.137	0.096	0.047	0.030
24	RHS-OT	368750	0.0	31.8	Average	40.00	0.264	0.231	0.159	0.113	0.058	0.038
25	RHS-OT	369250	0.0	32.1	Average	40.00	0.457	0.289	0.196	0.138	0.072	0.044
26	RHS-OT	369750	0.0	32.1	Average	40.00	0.513	0.348	0.231	0.150	0.067	0.040
27	RHS-OT	370250	0.0	32.1	Average	40.00	0.292	0.265	0.183	0.134	0.069	0.045
28	RHS-OT	370750	0.0	32.1	Average	40.00	0.296	0.257	0.201	0.158	0.091	0.057
29	RHS-OT	371250	0.0	32.3	Average	40.00	0.353	0.253	0.186	0.142	0.081	0.054
30	RHS-OT	371750	0.0	32.3	Average	40.00	0.272	0.232	0.165	0.121	0.066	0.047
31	RHS-OT	372250	0.0	32.3	Average	40.00	0.345	0.254	0.191	0.148	0.086	0.057
32	RHS-OT	372750	0.0	32.3	Average	40.00	0.329	0.253	0.181	0.132	0.065	0.038
33	RHS-OT	373250	0.0	32.7	Average	40.00	0.224	0.176	0.142	0.111	0.071	0.046
34	RHS-OT	373750	0.0	32.7	Average	40.00	0.348	0.256	0.195	0.145	0.079	0.056
35	RHS-OT	374250	0.0	32.7	Average	40.00	0.296	0.246	0.184	0.128	0.062	0.040
36	RHS-OT	394750	0.0	39.4	Average	40.00	0.344	0.251	0.183	0.136	0.074	0.046
37	RHS-OT	395250	0.0	39.4	Average	40.00	0.427	0.293	0.196	0.120	0.057	0.040
38	RHS-OT	395750	0.0	39.4	Average	40.00	0.327	0.266	0.200	0.147	0.077	0.050
39	RHS-OT	396250	0.0	39.4	Average	40.00	0.470	0.313	0.215	0.153	0.073	0.044
40	RHS-OT	396750	0.0	39.7	Average	40.00	0.343	0.248	0.175	0.129	0.065	0.040
41	RHS-OT	397250	0.0	39.7	Average	40.00	0.470	0.328	0.232	0.162	0.081	0.047
42	RHS-OT	397750	0.0	39.7	Average	40.00	0.464	0.326	0.233	0.161	0.081	0.046
43	RHS-OT	398250	0.0	39.7	Average	40.00	0.389	0.292	0.208	0.155	0.084	0.051
44	RHS-OT	406250	0.0	37.8	Average	40.00	0.338	0.230	0.175	0.132	0.075	0.050

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
45	RHS-OT	406750	0.0	37.8	Average	40.00	0.118	0.077	0.062	0.051	0.035	0.025
46	RHS-OT	407250	0.0	37.7	Average	40.00	0.327	0.231	0.160	0.115	0.062	0.042
47	RHS-OT	407750	0.0	37.7	Average	40.00	0.291	0.161	0.115	0.081	0.050	0.040
48	RHS-OT	432750	0.0	28.8	Average	40.00	0.416	0.231	0.147	0.100	0.055	0.036
49	RHS-OT	433250	0.0	28.8	Average	40.00	0.323	0.215	0.118	0.089	0.049	0.034
50	RHS-OT	433750	0.0	28.8	Average	40.00	0.245	0.188	0.131	0.093	0.045	0.025
51	RHS-OT	446750	0.0	30.3	Average	40.00	0.250	0.180	0.142	0.116	0.078	0.054
52	RHS-OT	447250	0.0	30.3	Average	40.00	0.255	0.172	0.121	0.092	0.055	0.037
53	RHS-OT	471250	0.0	35.1	Average	40.00	0.293	0.204	0.144	0.100	0.047	0.028
54	RHS-OT	471750	0.0	35.1	Average	40.00	0.283	0.226	0.170	0.124	0.069	0.040
55	RHS-OT	472240	0.0	35.1	Average	40.00	0.353	0.250	0.178	0.127	0.063	0.034
56	RHS-OT	491250	0.0	38.2	Average	40.00	0.408	0.252	0.167	0.109	0.055	0.029
57	RHS-OT	491750	0.0	38.2	Average	40.00	0.571	0.373	0.281	0.123	0.083	0.058
58	RHS-OT	492250	0.0	38.2	Average	40.00	0.352	0.212	0.137	0.091	0.043	0.029
59	RHS-OT	492750	0.0	38.4	Average	40.00	0.570	0.322	0.238	0.171	0.080	0.047
60	RHS-OT	493250	0.0	38.4	Average	40.00	0.345	0.226	0.163	0.117	0.060	0.039
61	RHS-OT	493750	0.0	38.5	Average	40.00	0.294	0.166	0.133	0.105	0.062	0.039
62	RHS-OT	494250	0.0	38.5	Average	40.00	0.211	0.182	0.140	0.106	0.058	0.037
63	RHS-OT	494750	0.0	38.5	Average	40.00	0.268	0.164	0.111	0.077	0.038	0.022
64	RHS-OT	522250	0.0	37.9	Average	40.00	0.272	0.163	0.112	0.078	0.038	0.026
65	RHS-OT	522750	0.0	37.9	Average	40.00	0.221	0.152	0.109	0.078	0.040	0.024

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date of the Observation:** 23/04/2023 to 25/04/2023

Section: LHS | **Season of Test:** Summer

No of lanes : 2 lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	LHS-OT	375000	0	33	Average	40.00	0.325	0.218	0.161	0.116	0.062	0.042
2	LHS-OT	375500	0.0	33.0	Average	40.00	0.248	0.192	0.140	0.104	0.058	0.030
3	LHS-OT	376000	0.0	33.0	Average	40.00	0.353	0.216	0.146	0.100	0.049	0.032
4	LHS-OT	376500	0.0	33.2	Average	40.00	0.214	0.165	0.109	0.073	0.041	0.027
5	LHS-OT	377000	0.0	33.2	Average	40.00	0.300	0.199	0.139	0.098	0.046	0.028
6	LHS-OT	377500	0.0	33.2	Average	40.00	0.480	0.311	0.212	0.148	0.070	0.044
7	LHS-OT	378000	0.0	33.5	Average	40.00	0.234	0.206	0.143	0.105	0.054	0.036
8	LHS-OT	378500	0.0	33.5	Average	40.00	0.318	0.267	0.199	0.150	0.081	0.049
9	LHS-OT	379000	0.0	33.5	Average	40.00	0.190	0.140	0.114	0.078	0.041	0.024
10	LHS-OT	379500	0.0	33.7	Average	40.00	0.222	0.157	0.105	0.072	0.037	0.027
11	LHS-OT	380000	0.0	33.7	Average	40.00	0.360	0.267	0.182	0.124	0.056	0.031
12	LHS-OT	380500	0.0	33.7	Average	40.00	0.253	0.184	0.133	0.097	0.051	0.031
13	LHS-OT	381000	0.0	33.7	Average	40.00	0.286	0.231	0.167	0.122	0.063	0.039
14	LHS-OT	381500	0.0	34.1	Average	40.00	0.266	0.217	0.153	0.111	0.056	0.033
15	LHS-OT	382000	0.0	34.1	Average	40.00	0.196	0.148	0.103	0.072	0.032	0.019
16	LHS-OT	382500	0.0	34.1	Average	40.00	0.510	0.326	0.222	0.157	0.080	0.049
17	LHS-OT	383000	0.0	34.1	Average	40.00	0.258	0.219	0.161	0.123	0.072	0.048
18	LHS-OT	383500	0.0	34.3	Average	40.00	0.177	0.122	0.093	0.072	0.043	0.031
19	LHS-OT	384000	0.0	34.3	Average	40.00	0.083	0.067	0.053	0.043	0.026	0.020

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
20	LHS-OT	384500	0.0	34.7	Average	40.00	0.214	0.113	0.079	0.055	0.027	0.015
21	LHS-OT	385000	0.0	34.7	Average	40.00	0.356	0.234	0.154	0.105	0.049	0.033
22	LHS-OT	385500	0.0	34.7	Average	40.00	0.294	0.248	0.184	0.135	0.071	0.045
23	LHS-OT	386000	0.0	35.4	Average	40.00	0.224	0.108	0.082	0.063	0.035	0.022
24	LHS-OT	386500	0.0	35.4	Average	40.00	0.651	0.182	0.120	0.071	0.034	0.024
25	LHS-OT	387000	0.0	35.4	Average	40.00	0.691	0.236	0.162	0.113	0.061	0.044
26	LHS-OT	387500	0.0	35.4	Average	40.00	0.356	0.110	0.084	0.064	0.036	0.022
27	LHS-OT	388000	0.0	35.7	Average	40.00	0.213	0.180	0.102	0.069	0.043	0.028
28	LHS-OT	388500	0.0	35.7	Average	40.00	0.444	0.280	0.116	0.085	0.062	0.046
29	LHS-OT	389000	0.0	35.9	Average	40.00	0.118	0.069	0.042	0.037	0.027	0.020
30	LHS-OT	389500	0.0	35.9	Average	40.00	0.194	0.106	0.077	0.041	0.030	0.021
31	LHS-OT	390000	0.0	35.9	Average	40.00	0.175	0.113	0.071	0.043	0.028	0.022
32	LHS-OT	390500	0.0	36.2	Average	40.00	0.231	0.125	0.075	0.063	0.041	0.030
33	LHS-OT	391000	0.0	36.2	Average	40.00	0.178	0.094	0.066	0.041	0.025	0.022
34	LHS-OT	391500	0.0	36.2	Average	40.00	0.102	0.062	0.047	0.038	0.025	0.019
35	LHS-OT	392000	0.0	36.4	Average	40.00	0.143	0.091	0.066	0.052	0.030	0.023
36	LHS-OT	392500	0.0	36.4	Average	40.00	0.292	0.188	0.143	0.109	0.060	0.037
37	LHS-OT	393000	0.0	36.4	Average	40.00	0.133	0.109	0.074	0.048	0.022	0.013
38	LHS-OT	393500	0.0	36.8	Average	40.00	0.487	0.262	0.113	0.077	0.041	0.032
39	LHS-OT	394000	0.0	36.8	Average	40.00	0.353	0.293	0.202	0.142	0.072	0.045
40	LHS-OT	394500	0.0	36.9	Average	40.00	0.446	0.280	0.186	0.131	0.072	0.048
41	LHS-OT	398500	0.0	39.1	Average	40.00	0.228	0.170	0.121	0.086	0.044	0.027
42	LHS-OT	399000	0.0	39.1	Average	40.00	0.294	0.204	0.149	0.107	0.060	0.039

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
43	LHS-OT	399500	0.0	39.1	Average	40.00	0.234	0.146	0.102	0.072	0.038	0.026
44	LHS-OT	400000	0.0	39.1	Average	40.00	0.247	0.202	0.167	0.139	0.090	0.060
45	LHS-OT	400500	0.0	38.7	Average	40.00	0.222	0.153	0.118	0.090	0.051	0.035
46	LHS-OT	401000	0.0	38.7	Average	40.00	0.347	0.209	0.136	0.089	0.042	0.027
47	LHS-OT	401500	0.0	38.7	Average	40.00	0.267	0.180	0.131	0.095	0.049	0.031
48	LHS-OT	402000	0.0	38.7	Average	40.00	0.580	0.382	0.286	0.125	0.086	0.058
49	LHS-OT	402500	0.0	38.5	Average	40.00	0.332	0.215	0.138	0.091	0.043	0.028
50	LHS-OT	403000	0.0	38.5	Average	40.00	0.325	0.231	0.159	0.117	0.064	0.043
51	LHS-OT	403500	0.0	38.5	Average	40.00	0.415	0.266	0.180	0.130	0.066	0.042
52	LHS-OT	404000	0.0	38.3	Average	40.00	0.171	0.125	0.090	0.063	0.033	0.022
53	LHS-OT	404500	0.0	38.3	Average	40.00	0.234	0.146	0.102	0.072	0.038	0.026
54	LHS-OT	405000	0.0	38.3	Average	40.00	0.247	0.202	0.167	0.139	0.090	0.060
55	LHS-OT	405750	0.0	38.3	Average	40.00	0.386	0.252	0.177	0.122	0.064	0.043
56	LHS-OT	408000	0.0	37.5	Average	40.00	0.269	0.192	0.134	0.096	0.049	0.029
57	LHS-OT	408500	0.0	37.5	Average	40.00	0.244	0.144	0.097	0.066	0.034	0.024
58	LHS-OT	409000	0.0	37.5	Average	40.00	0.148	0.111	0.084	0.064	0.043	0.032
59	LHS-OT	409500	0.0	37.5	Average	40.00	0.228	0.170	0.121	0.086	0.044	0.027
60	LHS-OT	410000	0.0	37.3	Average	40.00	0.294	0.204	0.149	0.107	0.060	0.039
61	LHS-OT	410500	0.0	37.3	Average	40.00	0.180	0.161	0.116	0.082	0.041	0.022
62	LHS-OT	411000	0.0	37.3	Average	40.00	0.197	0.147	0.119	0.098	0.061	0.043
63	LHS-OT	411500	0.0	37.1	Average	40.00	0.165	0.122	0.093	0.073	0.045	0.030
64	LHS-OT	412000	0.0	37.1	Average	40.00	0.488	0.280	0.183	0.118	0.057	0.043
65	LHS-OT	412500	0.0	37.1	Average	40.00	0.310	0.205	0.156	0.119	0.071	0.045

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
66	LHS-OT	413000	0.0	36.8	Average	40.00	0.126	0.102	0.086	0.073	0.052	0.041
67	LHS-OT	413500	0.0	36.8	Average	40.00	0.226	0.163	0.102	0.068	0.039	0.031
68	LHS-OT	414000	0.0	36.8	Average	40.00	0.109	0.100	0.075	0.059	0.037	0.025
69	LHS-OT	414500	0.0	36.6	Average	40.00	0.241	0.144	0.104	0.074	0.035	0.020
70	LHS-OT	415000	0.0	36.6	Average	40.00	0.349	0.229	0.150	0.100	0.050	0.034
71	LHS-OT	415500	0.0	36.6	Average	40.00	0.404	0.235	0.145	0.099	0.052	0.034
72	LHS-OT	416000	0.0	36.5	Average	40.00	0.320	0.218	0.117	0.088	0.048	0.033
73	LHS-OT	416500	0.0	36.5	Average	40.00	0.297	0.227	0.172	0.131	0.071	0.045
74	LHS-OT	417000	0.0	36.5	Average	40.00	0.316	0.210	0.154	0.115	0.064	0.046
75	LHS-OT	417500	0.0	36.3	Average	40.00	0.310	0.229	0.174	0.134	0.074	0.045
76	LHS-OT	418000	0.0	36.3	Average	40.00	0.433	0.261	0.179	0.124	0.059	0.039
77	LHS-OT	418500	0.0	36.3	Average	40.00	0.397	0.224	0.139	0.090	0.039	0.021
78	LHS-OT	419000	0.0	36.3	Average	40.00	0.395	0.255	0.166	0.107	0.048	0.029
79	LHS-OT	419500	0.0	36.3	Average	40.00	0.357	0.238	0.150	0.099	0.041	0.025
80	LHS-OT	420000	0.0	36.3	Average	40.00	0.398	0.256	0.167	0.106	0.047	0.029
81	LHS-OT	420500	0.0	27.1	Average	40.00	0.319	0.219	0.160	0.118	0.060	0.037
82	LHS-OT	421000	0.0	27.1	Average	40.00	0.448	0.278	0.188	0.128	0.060	0.032
83	LHS-OT	421500	0.0	27.1	Average	40.00	0.453	0.319	0.240	0.177	0.094	0.057
84	LHS-OT	422000	0.0	27.4	Average	40.00	0.377	0.233	0.162	0.115	0.054	0.031
85	LHS-OT	422500	0.0	27.4	Average	40.00	0.341	0.206	0.133	0.086	0.040	0.024
86	LHS-OT	423000	0.0	27.4	Average	40.00	0.267	0.180	0.131	0.095	0.049	0.031
87	LHS-OT	423500	0.0	27.5	Average	40.00	0.450	0.322	0.239	0.177	0.094	0.056
88	LHS-OT	424000	0.0	27.5	Average	40.00	0.337	0.212	0.136	0.090	0.044	0.029

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
89	LHS-OT	424500	0.0	27.5	Average	40.00	0.253	0.193	0.155	0.123	0.077	0.047
90	LHS-OT	425000	0.0	27.5	Average	40.00	0.114	0.077	0.062	0.051	0.035	0.025
91	LHS-OT	425500	0.0	27.6	Average	40.00	0.350	0.243	0.159	0.134	0.089	0.060
92	LHS-OT	426000	0.0	27.6	Average	40.00	0.253	0.193	0.155	0.123	0.077	0.047
93	LHS-OT	426500	0.0	27.8	Average	40.00	0.100	0.074	0.057	0.045	0.029	0.021
94	LHS-OT	427000	0.0	27.8	Average	40.00	0.285	0.140	0.078	0.046	0.025	0.021
95	LHS-OT	427500	0.0	27.8	Average	40.00	0.236	0.170	0.121	0.084	0.045	0.029
96	LHS-OT	428000	0.0	27.8	Average	40.00	0.253	0.174	0.123	0.084	0.041	0.027
97	LHS-OT	428500	0.0	27.9	Average	40.00	0.134	0.083	0.065	0.052	0.031	0.022
98	LHS-OT	429000	0.0	27.9	Average	40.00	0.238	0.142	0.096	0.066	0.034	0.024
99	LHS-OT	429500	0.0	28.0	Average	40.00	0.207	0.147	0.122	0.097	0.060	0.043
100	LHS-OT	430000	0.0	28.0	Average	40.00	0.177	0.121	0.093	0.073	0.045	0.029
101	LHS-OT	430500	0.0	28.0	Average	40.00	0.570	0.320	0.176	0.109	0.056	0.036
102	LHS-OT	431000	0.0	28.0	Average	40.00	0.150	0.111	0.083	0.065	0.043	0.032
103	LHS-OT	431500	0.0	28.1	Average	40.00	0.558	0.364	0.237	0.162	0.082	0.049
104	LHS-OT	432000	0.0	28.1	Average	40.00	0.208	0.159	0.117	0.081	0.040	0.022
105	LHS-OT	434500	0.0	29.1	Average	40.00	0.140	0.101	0.076	0.060	0.038	0.026
106	LHS-OT	435000	0.0	29.1	Average	40.00	0.283	0.169	0.109	0.073	0.037	0.026
107	LHS-OT	435500	0.0	29.1	Average	40.00	0.416	0.231	0.147	0.100	0.055	0.036
108	LHS-OT	436000	0.0	29.1	Average	40.00	0.323	0.215	0.118	0.089	0.049	0.034
109	LHS-OT	436500	0.0	29.1	Average	40.00	0.280	0.225	0.171	0.131	0.075	0.047
110	LHS-OT	437000	0.0	29.2	Average	40.00	0.305	0.208	0.154	0.115	0.063	0.048
111	LHS-OT	437500	0.0	29.2	Average	40.00	0.086	0.067	0.055	0.044	0.029	0.019

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
112	LHS-OT	438000	0.0	29.2	Average	40.00	0.228	0.148	0.104	0.073	0.034	0.023
113	LHS-OT	438500	0.0	29.2	Average	40.00	0.413	0.272	0.193	0.137	0.070	0.041
114	LHS-OT	439000	0.0	29.2	Average	40.00	0.476	0.332	0.243	0.173	0.088	0.051
115	LHS-OT	439500	0.0	29.2	Average	40.00	0.686	0.379	0.196	0.125	0.057	0.044
116	LHS-OT	440000	0.0	29.2	Average	40.00	0.488	0.311	0.214	0.142	0.067	0.039
117	LHS-OT	440500	0.0	29.2	Average	40.00	0.441	0.275	0.182	0.122	0.060	0.042
118	LHS-OT	441000	0.0	29.2	Average	40.00	0.335	0.233	0.172	0.131	0.071	0.046
119	LHS-OT	441500	0.0	29.2	Average	40.00	0.523	0.341	0.229	0.151	0.077	0.050
120	LHS-OT	442000	0.0	29.2	Average	40.00	0.525	0.300	0.213	0.150	0.074	0.058
121	LHS-OT	442500	0.0	29.2	Average	40.00	0.232	0.168	0.126	0.091	0.047	0.028
122	LHS-OT	443000	0.0	29.5	Average	40.00	0.246	0.161	0.110	0.076	0.034	0.022
123	LHS-OT	443500	0.0	29.5	Average	40.00	0.211	0.136	0.097	0.066	0.033	0.022
124	LHS-OT	444000	0.0	29.5	Average	40.00	0.256	0.154	0.100	0.065	0.032	0.025
125	LHS-OT	444500	0.0	29.5	Average	40.00	0.221	0.152	0.109	0.078	0.040	0.024
126	LHS-OT	445250	0.0	29.5	Average	40.00	0.090	0.077	0.065	0.054	0.037	0.027
127	LHS-OT	445750	0.0	29.7	Average	40.00	0.163	0.123	0.094	0.072	0.044	0.029
128	LHS-OT	446250	0.0	29.7	Average	40.00	0.279	0.181	0.135	0.103	0.056	0.036
129	LHS-OT	447500	0.0	30.5	Average	40.00	0.209	0.153	0.100	0.067	0.038	0.030
130	LHS-OT	448000	0.0	30.5	Average	40.00	0.389	0.218	0.142	0.097	0.047	0.034
131	LHS-OT	448500	0.0	30.8	Average	40.00	0.170	0.126	0.100	0.078	0.048	0.033
132	LHS-OT	449000	0.0	30.8	Average	40.00	0.244	0.158	0.115	0.083	0.046	0.032
133	LHS-OT	449500	0.0	30.8	Average	40.00	0.249	0.161	0.110	0.072	0.034	0.025
134	LHS-OT	450000	0.0	30.8	Average	40.00	0.256	0.153	0.105	0.070	0.037	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
135	LHS-OT	450500	0.0	31.4	Average	40.00	0.226	0.140	0.095	0.063	0.029	0.021
136	LHS-OT	451000	0.0	31.4	Average	40.00	0.204	0.132	0.097	0.068	0.037	0.025
137	LHS-OT	451500	0.0	31.4	Average	40.00	0.290	0.180	0.120	0.081	0.038	0.027
138	LHS-OT	452000	0.0	31.4	Average	40.00	0.178	0.130	0.101	0.079	0.047	0.032
139	LHS-OT	452500	0.0	31.7	Average	40.00	0.116	0.103	0.079	0.063	0.039	0.030
140	LHS-OT	453000	0.0	31.7	Average	40.00	0.569	0.291	0.159	0.107	0.049	0.031
141	LHS-OT	453500	0.0	31.7	Average	40.00	0.486	0.272	0.174	0.112	0.047	0.029
142	LHS-OT	454000	0.0	31.7	Average	40.00	0.465	0.283	0.181	0.115	0.058	0.040
143	LHS-OT	454500	0.0	31.7	Average	40.00	0.539	0.304	0.185	0.114	0.059	0.036
144	LHS-OT	455000	0.0	32.1	Average	40.00	0.385	0.233	0.159	0.110	0.051	0.028
145	LHS-OT	455500	0.0	32.1	Average	40.00	0.227	0.146	0.102	0.070	0.033	0.022
146	LHS-OT	456000	0.0	32.1	Average	40.00	0.115	0.080	0.065	0.055	0.038	0.026
147	LHS-OT	456500	0.0	32.1	Average	40.00	0.477	0.285	0.194	0.131	0.054	0.034
148	LHS-OT	457000	0.0	32.1	Average	40.00	0.443	0.261	0.165	0.106	0.049	0.031
149	LHS-OT	457500	0.0	32.5	Average	40.00	0.083	0.064	0.053	0.045	0.030	0.023
150	LHS-OT	458000	0.0	32.5	Average	40.00	0.091	0.068	0.053	0.043	0.025	0.020
151	LHS-OT	458500	0.0	32.5	Average	40.00	0.102	0.075	0.060	0.049	0.032	0.022
152	LHS-OT	459000	0.0	32.5	Average	40.00	0.136	0.100	0.075	0.058	0.035	0.025
153	LHS-OT	459500	0.0	32.5	Average	40.00	0.307	0.189	0.117	0.071	0.034	0.025
154	LHS-OT	460000	0.0	32.8	Average	40.00	0.228	0.163	0.126	0.099	0.058	0.038
155	LHS-OT	460500	0.0	32.8	Average	40.00	0.397	0.216	0.101	0.059	0.026	0.024
156	LHS-OT	461000	0.0	32.8	Average	40.00	0.456	0.257	0.155	0.093	0.040	0.029
157	LHS-OT	461500	0.0	32.8	Average	40.00	0.189	0.147	0.114	0.090	0.053	0.036

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
158	LHS-OT	462000	0.0	33.2	Average	40.00	0.383	0.354	0.218	0.144	0.073	0.045
159	LHS-OT	462500	0.0	33.2	Average	40.00	0.419	0.253	0.171	0.117	0.061	0.041
160	LHS-OT	463000	0.0	33.2	Average	40.00	0.174	0.133	0.107	0.084	0.052	0.036
161	LHS-OT	463500	0.0	33.2	Average	40.00	0.117	0.108	0.091	0.077	0.055	0.040
162	LHS-OT	464000	0.0	33.7	Average	40.00	0.150	0.114	0.085	0.065	0.035	0.028
163	LHS-OT	464500	0.0	33.7	Average	40.00	0.322	0.204	0.143	0.102	0.053	0.035
164	LHS-OT	465000	0.0	33.7	Average	40.00	0.114	0.095	0.080	0.068	0.046	0.032
165	LHS-OT	465500	0.0	33.7	Average	40.00	0.069	0.057	0.048	0.041	0.029	0.023
166	LHS-OT	466000	0.0	33.9	Average	40.00	0.151	0.128	0.100	0.078	0.049	0.033
167	LHS-OT	466500	0.0	33.9	Average	40.00	0.142	0.102	0.081	0.065	0.043	0.030
168	LHS-OT	467000	0.0	33.9	Average	40.00	0.375	0.244	0.166	0.114	0.059	0.036
169	LHS-OT	467500	0.0	34.2	Average	40.00	0.308	0.195	0.155	0.120	0.077	0.046
170	LHS-OT	468000	0.0	34.2	Average	40.00	0.096	0.075	0.064	0.053	0.038	0.028
171	LHS-OT	468500	0.0	34.2	Average	40.00	0.387	0.261	0.179	0.124	0.067	0.041
172	LHS-OT	469000	0.0	34.2	Average	40.00	0.325	0.239	0.174	0.122	0.052	0.032
173	LHS-OT	469500	0.0	34.6	Average	40.00	0.321	0.211	0.143	0.099	0.045	0.026
174	LHS-OT	470000	0.0	34.6	Average	40.00	0.464	0.297	0.206	0.146	0.074	0.043
175	LHS-OT	470500	0.0	34.6	Average	40.00	0.404	0.251	0.176	0.120	0.058	0.033
176	LHS-OT	471000	0.0	34.6	Average	40.00	0.368	0.253	0.184	0.130	0.059	0.038
177	LHS-OT	472500	0.0	35.3	Average	40.00	0.293	0.187	0.127	0.089	0.045	0.029
178	LHS-OT	473000	0.0	35.3	Average	40.00	0.249	0.151	0.108	0.079	0.044	0.026
179	LHS-OT	473500	0.0	35.5	Average	40.00	0.149	0.121	0.095	0.075	0.046	0.032
180	LHS-OT	474000	0.0	35.5	Average	40.00	0.230	0.101	0.084	0.071	0.048	0.034

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
181	LHS-OT	474500	0.0	35.5	Average	40.00	0.396	0.255	0.183	0.134	0.071	0.043
182	LHS-OT	475000	0.0	35.5	Average	40.00	0.274	0.171	0.109	0.070	0.034	0.023
183	LHS-OT	475500	0.0	35.8	Average	40.00	0.312	0.227	0.154	0.102	0.043	0.027
184	LHS-OT	476000	0.0	35.8	Average	40.00	0.098	0.072	0.058	0.047	0.029	0.023
185	LHS-OT	476500	0.0	35.8	Average	40.00	0.275	0.193	0.139	0.100	0.055	0.036
186	LHS-OT	477000	0.0	35.8	Average	40.00	0.570	0.322	0.238	0.171	0.080	0.047
187	LHS-OT	477500	0.0	35.8	Average	40.00	0.345	0.226	0.163	0.117	0.060	0.039
188	LHS-OT	478000	0.0	35.8	Average	40.00	0.294	0.166	0.133	0.105	0.062	0.039
189	LHS-OT	478500	0.0	36.2	Average	40.00	0.211	0.182	0.140	0.106	0.058	0.037
190	LHS-OT	479000	0.0	36.2	Average	40.00	0.313	0.203	0.140	0.102	0.052	0.031
191	LHS-OT	479500	0.0	36.2	Average	40.00	0.121	0.089	0.069	0.056	0.036	0.025
192	LHS-OT	480000	0.0	36.2	Average	40.00	0.431	0.278	0.201	0.149	0.079	0.049
193	LHS-OT	480500	0.0	36.4	Average	40.00	0.226	0.167	0.127	0.095	0.054	0.033
194	LHS-OT	481000	0.0	36.4	Average	40.00	0.321	0.213	0.157	0.116	0.063	0.039
195	LHS-OT	481500	0.0	36.4	Average	40.00	0.295	0.215	0.155	0.110	0.056	0.034
196	LHS-OT	482000	0.0	36.4	Average	40.00	0.306	0.236	0.175	0.127	0.056	0.025
197	LHS-OT	482500	0.0	36.4	Average	40.00	0.255	0.187	0.145	0.064	0.039	0.027
198	LHS-OT	483000	0.0	36.8	Average	40.00	0.116	0.073	0.055	0.043	0.026	0.019
199	LHS-OT	483500	0.0	36.8	Average	40.00	0.337	0.214	0.145	0.099	0.053	0.035
200	LHS-OT	484000	0.0	36.8	Average	40.00	0.172	0.142	0.102	0.073	0.039	0.025
201	LHS-OT	484500	0.0	36.8	Average	40.00	0.321	0.189	0.129	0.094	0.049	0.033
202	LHS-OT	485000	0.0	37.1	Average	40.00	0.411	0.286	0.199	0.138	0.065	0.036
203	LHS-OT	485500	0.0	37.1	Average	40.00	0.355	0.252	0.166	0.110	0.049	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
204	LHS-OT	486000	0.0	37.1	Average	40.00	0.467	0.280	0.184	0.128	0.063	0.042
205	LHS-OT	486500	0.0	37.1	Average	40.00	0.068	0.036	0.031	0.028	0.019	0.016
206	LHS-OT	487000	0.0	37.4	Average	40.00	0.054	0.048	0.041	0.035	0.026	0.018
207	LHS-OT	487500	0.0	37.4	Average	40.00	0.345	0.225	0.167	0.118	0.057	0.035
208	LHS-OT	488000	0.0	37.4	Average	40.00	0.222	0.164	0.123	0.089	0.046	0.023
209	LHS-OT	488500	0.0	37.4	Average	40.00	0.301	0.171	0.109	0.075	0.044	0.031
210	LHS-OT	489000	0.0	37.6	Average	40.00	0.365	0.234	0.160	0.114	0.060	0.039
211	LHS-OT	489500	0.0	37.6	Average	40.00	0.144	0.107	0.088	0.071	0.048	0.033
212	LHS-OT	490000	0.0	37.6	Average	40.00	0.433	0.273	0.186	0.130	0.062	0.036
213	LHS-OT	490500	0.0	37.6	Average	40.00	0.283	0.250	0.176	0.125	0.060	0.035
214	LHS-OT	495000	0.0	38.7	Average	40.00	0.470	0.320	0.227	0.152	0.056	0.036
215	LHS-OT	495500	0.0	38.7	Average	40.00	0.307	0.201	0.148	0.109	0.058	0.039
216	LHS-OT	496000	0.0	38.7	Average	40.00	0.174	0.124	0.102	0.084	0.054	0.037
217	LHS-OT	496500	0.0	39.1	Average	40.00	0.320	0.229	0.169	0.126	0.070	0.044
218	LHS-OT	497000	0.0	39.1	Average	40.00	0.461	0.248	0.154	0.101	0.043	0.028
219	LHS-OT	497500	0.0	39.1	Average	40.00	0.301	0.179	0.123	0.084	0.045	0.030
220	LHS-OT	498000	0.0	39.5	Average	40.00	0.426	0.208	0.120	0.077	0.035	0.025
221	LHS-OT	498500	0.0	39.5	Average	40.00	0.049	0.041	0.035	0.030	0.023	0.017
222	LHS-OT	499000	0.0	39.5	Average	40.00	0.339	0.252	0.196	0.151	0.086	0.051
223	LHS-OT	499500	0.0	39.5	Average	40.00	0.359	0.256	0.191	0.143	0.076	0.049
224	LHS-OT	500000	0.0	39.5	Average	40.00	0.194	0.131	0.092	0.063	0.031	0.022
225	LHS-OT	500500	0.0	40.1	Average	40.00	0.248	0.166	0.102	0.062	0.024	0.017
226	LHS-OT	501000	0.0	40.1	Average	40.00	0.309	0.211	0.136	0.098	0.053	0.032

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
227	LHS-OT	501500	0.0	40.1	Average	40.00	0.452	0.179	0.105	0.059	0.027	0.021
228	LHS-OT	502000	0.0	40.1	Average	40.00	0.198	0.147	0.106	0.066	0.031	0.019
229	LHS-OT	502500	0.0	40.1	Average	40.00	0.241	0.154	0.101	0.066	0.028	0.018
230	LHS-OT	503000	0.0	40.1	Average	40.00	0.176	0.096	0.078	0.057	0.046	0.033
231	LHS-OT	503500	0.0	40.1	Average	40.00	0.191	0.125	0.090	0.063	0.031	0.017
232	LHS-OT	504000	0.0	40.1	Average	40.00	0.090	0.064	0.052	0.043	0.028	0.019
233	LHS-OT	504500	0.0	40.3	Average	40.00	0.333	0.194	0.130	0.089	0.046	0.028
234	LHS-OT	505000	0.0	40.3	Average	40.00	0.287	0.212	0.151	0.106	0.052	0.031
235	LHS-OT	505500	0.0	40.3	Average	40.00	0.104	0.073	0.056	0.044	0.027	0.020
236	LHS-OT	506000	0.0	40.3	Average	40.00	0.288	0.174	0.117	0.081	0.035	0.022
237	LHS-OT	506500	0.0	40.3	Average	40.00	0.222	0.140	0.104	0.075	0.040	0.024
238	LHS-OT	507000	0.0	40.3	Average	40.00	0.310	0.217	0.155	0.109	0.054	0.033
239	LHS-OT	507500	0.0	40.7	Average	40.00	0.195	0.126	0.090	0.066	0.041	0.032
240	LHS-OT	508000	0.0	40.7	Average	40.00	0.375	0.220	0.145	0.096	0.047	0.031
241	LHS-OT	508500	0.0	40.7	Average	40.00	0.061	0.059	0.047	0.036	0.023	0.018
242	LHS-OT	509000	0.0	40.7	Average	40.00	0.138	0.090	0.064	0.047	0.029	0.020
243	LHS-OT	509500	0.0	41.4	Average	40.00	0.292	0.153	0.099	0.064	0.032	0.023
244	LHS-OT	510000	0.0	41.4	Average	40.00	0.259	0.174	0.123	0.089	0.048	0.032
245	LHS-OT	510500	0.0	41.4	Average	40.00	0.166	0.111	0.089	0.070	0.047	0.035
246	LHS-OT	511000	0.0	41.4	Average	40.00	0.470	0.270	0.123	0.091	0.054	0.039
247	LHS-OT	511500	0.0	41.7	Average	40.00	0.312	0.191	0.132	0.091	0.048	0.031
248	LHS-OT	512000	0.0	41.7	Average	40.00	0.314	0.234	0.164	0.118	0.058	0.036
249	LHS-OT	512500	0.0	41.7	Average	40.00	0.143	0.103	0.079	0.060	0.038	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
250	LHS-OT	513000	0.0	41.7	Average	40.00	0.123	0.093	0.071	0.057	0.032	0.023
251	LHS-OT	513500	0.0	41.7	Average	40.00	0.296	0.214	0.159	0.120	0.067	0.042
252	LHS-OT	514000	0.0	40.9	Average	40.00	0.284	0.206	0.150	0.112	0.062	0.042
253	LHS-OT	514500	0.0	40.9	Average	40.00	0.139	0.109	0.081	0.063	0.038	0.026
254	LHS-OT	515000	0.0	40.9	Average	40.00	0.300	0.226	0.165	0.119	0.060	0.036
255	LHS-OT	515500	0.0	40.9	Average	40.00	0.090	0.055	0.046	0.038	0.026	0.019
256	LHS-OT	516000	0.0	40.9	Average	40.00	0.538	0.301	0.170	0.099	0.049	0.035
257	LHS-OT	516500	0.0	40.2	Average	40.00	0.487	0.318	0.228	0.129	0.076	0.048
258	LHS-OT	517000	0.0	40.2	Average	40.00	0.229	0.159	0.109	0.077	0.039	0.028
259	LHS-OT	517500	0.0	40.2	Average	40.00	0.126	0.056	0.046	0.038	0.028	0.019
260	LHS-OT	518000	0.0	40.2	Average	40.00	0.182	0.147	0.101	0.070	0.035	0.022
261	LHS-OT	518500	0.0	40.2	Average	40.00	0.595	0.372	0.203	0.135	0.069	0.048
262	LHS-OT	519000	0.0	39.6	Average	40.00	0.453	0.285	0.178	0.121	0.057	0.033
263	LHS-OT	519500	0.0	39.6	Average	40.00	0.278	0.167	0.127	0.099	0.060	0.039
264	LHS-OT	520000	0.0	39.6	Average	40.00	0.383	0.222	0.146	0.094	0.043	0.026
265	LHS-OT	520500	0.0	38.9	Average	40.00	0.468	0.285	0.192	0.125	0.029	0.019
266	LHS-OT	521000	0.0	38.9	Average	40.00	0.208	0.149	0.111	0.082	0.046	0.027
267	LHS-OT	521500	0.0	38.9	Average	40.00	0.348	0.225	0.152	0.101	0.048	0.028
268	LHS-OT	523000	0.0	37.7	Average	40.00	0.280	0.212	0.158	0.116	0.062	0.043
269	LHS-OT	523500	0.0	37.7	Average	40.00	0.110	0.078	0.061	0.050	0.031	0.022
270	LHS-OT	524000	0.0	37.7	Average	40.00	0.118	0.085	0.068	0.054	0.033	0.023
271	LHS-OT	524500	0.0	37.5	Average	40.00	0.300	0.215	0.165	0.125	0.068	0.042
272	LHS-OT	525000	0.0	37.5	Average	40.00	0.104	0.075	0.060	0.049	0.031	0.022

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
273	LHS-OT	525500	0.0	37.5	Average	40.00	0.167	0.122	0.092	0.067	0.041	0.028
274	LHS-OT	526000	0.0	37.5	Average	40.00	0.146	0.121	0.096	0.079	0.049	0.032
275	LHS-OT	526500	0.0	37.1	Average	40.00	0.331	0.225	0.146	0.102	0.055	0.036
276	LHS-OT	527000	0.0	37.1	Average	40.00	0.449	0.312	0.227	0.162	0.076	0.045
277	LHS-OT	527500	0.0	37.1	Average	40.00	0.265	0.182	0.129	0.090	0.044	0.025
278	LHS-OT	528000	0.0	37.1	Average	40.00	0.165	0.150	0.126	0.105	0.068	0.042
279	LHS-OT	528500	0.0	37.1	Average	40.00	0.264	0.168	0.114	0.076	0.039	0.025
280	LHS-OT	529250	0.0	33.9	Average	40.00	0.327	0.191	0.138	0.099	0.051	0.037
281	LHS-OT	529750	0.0	33.9	Average	40.00	0.182	0.123	0.083	0.063	0.036	0.024
282	LHS-OT	530250	0.0	33.9	Average	40.00	0.161	0.108	0.077	0.055	0.027	0.016
283	LHS-OT	530750	0.0	33.9	Average	40.00	0.422	0.239	0.140	0.082	0.046	0.031
284	LHS-OT	531250	0.0	33.9	Average	40.00	0.107	0.072	0.053	0.042	0.023	0.015
285	LHS-OT	531750	0.0	33.9	Average	40.00	0.288	0.126	0.093	0.061	0.044	0.033
286	LHS-OT	532250	0.0	33.9	Average	40.00	0.205	0.141	0.097	0.065	0.033	0.021
287	LHS-OT	532750	0.0	34.0	Average	40.00	0.240	0.178	0.125	0.089	0.042	0.027
288	LHS-OT	533250	0.0	34.0	Average	40.00	0.364	0.221	0.145	0.095	0.041	0.026
289	LHS-OT	533750	0.0	34.0	Average	40.00	0.292	0.190	0.127	0.085	0.038	0.024
290	LHS-OT	534250	0.0	34.0	Average	40.00	0.146	0.097	0.072	0.052	0.040	0.035
291	LHS-OT	534750	0.0	34.2	Average	40.00	0.453	0.262	0.131	0.089	0.038	0.025
292	LHS-OT	535250	0.0	34.2	Average	40.00	0.292	0.171	0.103	0.078	0.053	0.042
293	LHS-OT	535750	0.0	34.2	Average	40.00	0.116	0.094	0.073	0.057	0.037	0.024
294	LHS-OT	536250	0.0	34.2	Average	40.00	0.232	0.146	0.102	0.071	0.037	0.024
295	LHS-OT	536750	0.0	34.2	Average	40.00	0.379	0.241	0.172	0.120	0.059	0.041

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
296	LHS-OT	537250	0.0	34.2	Average	40.00	0.106	0.088	0.066	0.053	0.032	0.023
297	LHS-OT	537750	0.0	34.2	Average	40.00	0.152	0.111	0.079	0.055	0.030	0.022
298	LHS-OT	538250	0.0	34.4	Average	40.00	0.450	0.283	0.189	0.125	0.072	0.040
299	LHS-OT	538750	0.0	34.4	Average	40.00	0.111	0.072	0.058	0.049	0.031	0.025
300	LHS-OT	539250	0.0	34.4	Average	40.00	0.121	0.075	0.054	0.039	0.021	0.015
301	LHS-OT	539750	0.0	34.4	Average	40.00	0.140	0.121	0.096	0.079	0.049	0.032
302	LHS-OT	540250	0.0	34.4	Average	40.00	0.120	0.060	0.049	0.041	0.028	0.022
303	LHS-OT	540750	0.0	34.4	Average	40.00	0.185	0.117	0.088	0.049	0.029	0.020
304	LHS-OT	541250	0.0	34.6	Average	40.00	0.207	0.137	0.094	0.065	0.034	0.022
305	LHS-OT	541750	0.0	34.6	Average	40.00	0.325	0.225	0.146	0.102	0.055	0.036
306	LHS-OT	542250	0.0	34.6	Average	40.00	0.179	0.105	0.085	0.062	0.041	0.033
307	LHS-OT	542750	0.0	34.6	Average	40.00	0.242	0.162	0.104	0.066	0.026	0.016
308	LHS-OT	543250	0.0	34.6	Average	40.00	0.352	0.229	0.130	0.084	0.032	0.027
309	LHS-OT	543750	0.0	35.0	Average	40.00	0.265	0.182	0.129	0.090	0.044	0.025
310	LHS-OT	544250	0.0	35.0	Average	40.00	0.165	0.150	0.126	0.105	0.068	0.042
311	LHS-OT	544750	0.0	35.0	Average	40.00	0.462	0.292	0.172	0.113	0.057	0.033
312	LHS-OT	545250	0.0	35.0	Average	40.00	0.289	0.191	0.134	0.099	0.054	0.032
313	LHS-OT	545750	0.0	35.0	Average	40.00	0.324	0.234	0.152	0.101	0.053	0.034
314	LHS-OT	546250	0.0	35.3	Average	40.00	0.209	0.147	0.097	0.066	0.036	0.026
315	LHS-OT	546750	0.0	35.3	Average	40.00	0.194	0.140	0.100	0.069	0.028	0.016
316	LHS-OT	547250	0.0	35.3	Average	40.00	0.150	0.106	0.080	0.059	0.035	0.024
317	LHS-OT	547750	0.0	35.3	Average	40.00	0.254	0.188	0.134	0.099	0.052	0.035
318	LHS-OT	548250	0.0	35.5	Average	40.00	0.268	0.157	0.104	0.067	0.032	0.023

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
319	LHS-OT	548750	0.0	35.5	Average	40.00	0.207	0.123	0.080	0.053	0.028	0.021
320	LHS-OT	549250	0.0	35.5	Average	40.00	0.378	0.218	0.124	0.078	0.042	0.033
321	LHS-OT	549750	0.0	35.9	Average	40.00	0.162	0.108	0.091	0.073	0.055	0.043
322	LHS-OT	550250	0.0	35.9	Average	40.00	0.235	0.168	0.104	0.074	0.037	0.031
323	LHS-OT	550750	0.0	35.9	Average	40.00	0.227	0.138	0.100	0.064	0.039	0.027
324	LHS-OT	551250	0.0	35.9	Average	40.00	0.251	0.158	0.099	0.069	0.054	0.042
325	LHS-OT	551750	0.0	35.9	Average	40.00	0.366	0.232	0.166	0.119	0.066	0.041
326	LHS-OT	552250	0.0	36.1	Average	40.00	0.180	0.120	0.081	0.058	0.032	0.023
327	LHS-OT	552750	0.0	36.1	Average	40.00	0.289	0.191	0.134	0.099	0.054	0.032
328	LHS-OT	553250	0.0	36.1	Average	40.00	0.209	0.147	0.097	0.066	0.036	0.026
329	LHS-OT	553750	0.0	36.1	Average	40.00	0.172	0.119	0.089	0.060	0.046	0.038
330	LHS-OT	554250	0.0	36.4	Average	40.00	0.186	0.112	0.081	0.057	0.041	0.030
331	LHS-OT	554750	0.0	36.4	Average	40.00	0.197	0.131	0.096	0.067	0.035	0.022
332	LHS-OT	555250	0.0	36.4	Average	40.00	0.321	0.204	0.141	0.096	0.047	0.030
333	LHS-OT	555750	0.0	36.4	Average	40.00	0.362	0.237	0.158	0.113	0.056	0.037
334	LHS-OT	556250	0.0	36.4	Average	40.00	0.221	0.138	0.096	0.064	0.032	0.020
335	LHS-OT	556750	0.0	36.7	Average	40.00	0.122	0.103	0.057	0.043	0.025	0.020
336	LHS-OT	557250	0.0	36.7	Average	40.00	0.127	0.076	0.061	0.048	0.034	0.024
337	LHS-OT	557750	0.0	36.7	Average	40.00	0.267	0.149	0.098	0.066	0.036	0.025

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner **Date of the Observation:** **23/04/2023 to 25/04/2023**

Section: RHS **Season of Test: Summer**

No of lanes : 2 lane

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	RHS-OT	375250	0	33	Average	40.00	0.183	0.161	0.121	0.088	0.046	0.032
2	RHS-OT	375750	0.0	33.0	Average	40.00	0.230	0.210	0.149	0.108	0.058	0.039
3	RHS-OT	376250	0.0	33.0	Average	40.00	0.193	0.171	0.124	0.091	0.046	0.028
4	RHS-OT	376750	0.0	33.2	Average	40.00	0.671	0.473	0.314	0.212	0.091	0.048
5	RHS-OT	377250	0.0	33.2	Average	40.00	0.204	0.179	0.130	0.092	0.049	0.032
6	RHS-OT	377750	0.0	33.2	Average	40.00	0.221	0.144	0.101	0.071	0.039	0.024
7	RHS-OT	378250	0.0	33.5	Average	40.00	0.239	0.174	0.129	0.097	0.049	0.030
8	RHS-OT	378750	0.0	33.5	Average	40.00	0.295	0.234	0.166	0.120	0.057	0.033
9	RHS-OT	379250	0.0	33.5	Average	40.00	0.283	0.190	0.136	0.097	0.045	0.027
10	RHS-OT	379750	0.0	33.7	Average	40.00	0.258	0.220	0.152	0.110	0.053	0.034
11	RHS-OT	380250	0.0	33.7	Average	40.00	0.220	0.196	0.136	0.093	0.042	0.025
12	RHS-OT	380750	0.0	33.7	Average	40.00	0.235	0.165	0.111	0.073	0.033	0.020
13	RHS-OT	381250	0.0	33.7	Average	40.00	0.253	0.160	0.088	0.052	0.027	0.025
14	RHS-OT	381750	0.0	34.1	Average	40.00	0.414	0.267	0.179	0.121	0.054	0.032
15	RHS-OT	382250	0.0	34.1	Average	40.00	0.317	0.255	0.183	0.136	0.074	0.044
16	RHS-OT	382750	0.0	34.1	Average	40.00	0.368	0.279	0.201	0.147	0.075	0.045
17	RHS-OT	383250	0.0	34.1	Average	40.00	0.301	0.231	0.162	0.114	0.054	0.035
18	RHS-OT	383750	0.0	34.3	Average	40.00	0.292	0.218	0.159	0.119	0.065	0.043
19	RHS-OT	384250	0.0	34.3	Average	40.00	0.163	0.104	0.077	0.061	0.034	0.024
20	RHS-OT	384750	0.0	34.7	Average	40.00	0.321	0.231	0.150	0.099	0.045	0.027

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	RHS-OT	385250	0.0	34.7	Average	40.00	0.632	0.369	0.252	0.178	0.084	0.051
22	RHS-OT	385750	0.0	34.7	Average	40.00	0.283	0.220	0.155	0.111	0.056	0.038
23	RHS-OT	386250	0.0	35.4	Average	40.00	0.690	0.281	0.193	0.131	0.054	0.036
24	RHS-OT	386750	0.0	35.4	Average	40.00	0.521	0.147	0.107	0.077	0.045	0.032
25	RHS-OT	387250	0.0	35.4	Average	40.00	0.483	0.155	0.108	0.076	0.040	0.026
26	RHS-OT	387750	0.0	35.7	Average	40.00	0.299	0.163	0.094	0.046	0.033	0.024
27	RHS-OT	388250	0.0	35.7	Average	40.00	0.263	0.167	0.095	0.074	0.058	0.045
28	RHS-OT	388750	0.0	35.7	Average	40.00	0.505	0.201	0.135	0.089	0.043	0.025
29	RHS-OT	389250	0.0	35.9	Average	40.00	0.281	0.103	0.078	0.061	0.036	0.021
30	RHS-OT	389750	0.0	35.9	Average	40.00	0.265	0.128	0.103	0.082	0.048	0.032
31	RHS-OT	390250	0.0	35.9	Average	40.00	0.103	0.086	0.071	0.058	0.037	0.028
32	RHS-OT	390750	0.0	36.2	Average	40.00	0.349	0.142	0.096	0.064	0.031	0.024
33	RHS-OT	391250	0.0	36.2	Average	40.00	0.198	0.171	0.128	0.098	0.056	0.033
34	RHS-OT	391750	0.0	36.2	Average	40.00	0.129	0.085	0.065	0.052	0.029	0.022
35	RHS-OT	392250	0.0	36.4	Average	40.00	0.149	0.123	0.090	0.063	0.029	0.013
36	RHS-OT	392750	0.0	36.4	Average	40.00	0.109	0.070	0.056	0.042	0.026	0.021
37	RHS-OT	393250	0.0	36.8	Average	40.00	0.408	0.166	0.131	0.083	0.038	0.020
38	RHS-OT	393750	0.0	36.8	Average	40.00	0.412	0.272	0.183	0.135	0.076	0.054
39	RHS-OT	394250	0.0	36.8	Average	40.00	0.481	0.321	0.212	0.148	0.083	0.059
40	RHS-OT	398750	0.0	39.1	Average	40.00	0.198	0.109	0.078	0.059	0.034	0.020
41	RHS-OT	399250	0.0	39.1	Average	40.00	0.572	0.363	0.234	0.159	0.080	0.049
42	RHS-OT	399750	0.0	39.1	Average	40.00	0.150	0.090	0.070	0.056	0.040	0.026
43	RHS-OT	400250	0.0	39.1	Average	40.00	0.320	0.218	0.117	0.088	0.048	0.033
44	RHS-OT	400750	0.0	38.7	Average	40.00	0.297	0.227	0.172	0.131	0.071	0.045

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
45	RHS-OT	401250	0.0	38.7	Average	40.00	0.416	0.255	0.167	0.109	0.057	0.036
46	RHS-OT	401750	0.0	38.7	Average	40.00	0.342	0.236	0.163	0.112	0.061	0.037
47	RHS-OT	402250	0.0	38.5	Average	40.00	0.371	0.219	0.140	0.091	0.040	0.022
48	RHS-OT	402750	0.0	38.5	Average	40.00	0.429	0.270	0.183	0.128	0.068	0.047
49	RHS-OT	403250	0.0	38.5	Average	40.00	0.189	0.124	0.092	0.069	0.038	0.025
50	RHS-OT	403750	0.0	38.3	Average	40.00	0.345	0.280	0.218	0.159	0.083	0.051
51	RHS-OT	404250	0.0	38.3	Average	40.00	0.136	0.092	0.072	0.056	0.036	0.027
52	RHS-OT	404750	0.0	38.3	Average	40.00	0.150	0.090	0.070	0.056	0.040	0.026
53	RHS-OT	405250	0.0	38.3	Average	40.00	0.114	0.089	0.078	0.067	0.049	0.033
54	RHS-OT	408250	0.0	37.5	Average	40.00	0.137	0.050	0.044	0.039	0.029	0.020
55	RHS-OT	408750	0.0	37.5	Average	40.00	0.325	0.205	0.126	0.084	0.041	0.028
56	RHS-OT	409250	0.0	37.5	Average	40.00	0.604	0.327	0.179	0.108	0.057	0.036
57	RHS-OT	409750	0.0	37.3	Average	40.00	0.187	0.109	0.078	0.059	0.034	0.020
58	RHS-OT	410250	0.0	37.3	Average	40.00	0.572	0.363	0.234	0.159	0.080	0.049
59	RHS-OT	410750	0.0	37.3	Average	40.00	0.134	0.109	0.083	0.068	0.047	0.033
60	RHS-OT	411250	0.0	37.3	Average	40.00	0.435	0.241	0.128	0.078	0.050	0.037
61	RHS-OT	411750	0.0	37.1	Average	40.00	0.153	0.111	0.084	0.067	0.046	0.035
62	RHS-OT	412250	0.0	37.1	Average	40.00	0.694	0.346	0.212	0.124	0.065	0.044
63	RHS-OT	412750	0.0	36.8	Average	40.00	0.369	0.256	0.178	0.124	0.065	0.039
64	RHS-OT	413250	0.0	36.8	Average	40.00	0.347	0.211	0.136	0.092	0.049	0.032
65	RHS-OT	413750	0.0	36.8	Average	40.00	0.340	0.191	0.123	0.083	0.044	0.030
66	RHS-OT	414250	0.0	36.6	Average	40.00	0.132	0.083	0.063	0.049	0.030	0.021
67	RHS-OT	414750	0.0	36.6	Average	40.00	0.287	0.172	0.110	0.072	0.037	0.028
68	RHS-OT	415250	0.0	36.6	Average	40.00	0.252	0.143	0.104	0.074	0.035	0.020

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
69	RHS-OT	415750	0.0	36.5	Average	40.00	0.380	0.251	0.170	0.115	0.056	0.037
70	RHS-OT	416250	0.0	36.5	Average	40.00	0.222	0.153	0.118	0.090	0.051	0.035
71	RHS-OT	416750	0.0	36.5	Average	40.00	0.470	0.313	0.161	0.121	0.066	0.037
72	RHS-OT	417250	0.0	36.5	Average	40.00	0.224	0.148	0.102	0.069	0.034	0.019
73	RHS-OT	417750	0.0	36.3	Average	40.00	0.332	0.214	0.138	0.091	0.044	0.031
74	RHS-OT	418250	0.0	36.3	Average	40.00	0.373	0.236	0.153	0.099	0.042	0.025
75	RHS-OT	418750	0.0	36.3	Average	40.00	0.285	0.189	0.132	0.093	0.044	0.024
76	RHS-OT	419250	0.0	36.3	Average	40.00	0.193	0.147	0.100	0.068	0.033	0.019
77	RHS-OT	419750	0.0	36.3	Average	40.00	0.310	0.217	0.159	0.117	0.060	0.036
78	RHS-OT	420250	0.0	27.1	Average	40.00	0.403	0.270	0.177	0.118	0.059	0.041
79	RHS-OT	420750	0.0	27.1	Average	40.00	0.353	0.227	0.158	0.112	0.055	0.030
80	RHS-OT	421250	0.0	27.1	Average	40.00	0.398	0.270	0.175	0.116	0.057	0.038
81	RHS-OT	421750	0.0	27.4	Average	40.00	0.437	0.275	0.188	0.128	0.059	0.032
82	RHS-OT	422250	0.0	27.4	Average	40.00	0.470	0.308	0.226	0.160	0.082	0.050
83	RHS-OT	422750	0.0	27.4	Average	40.00	0.416	0.255	0.167	0.109	0.057	0.036
84	RHS-OT	423250	0.0	27.5	Average	40.00	0.367	0.211	0.137	0.090	0.043	0.024
85	RHS-OT	423750	0.0	27.5	Average	40.00	0.474	0.314	0.232	0.162	0.083	0.050
86	RHS-OT	424250	0.0	27.5	Average	40.00	0.408	0.266	0.181	0.126	0.070	0.047
87	RHS-OT	424750	0.0	27.5	Average	40.00	0.197	0.158	0.118	0.088	0.049	0.031
88	RHS-OT	425250	0.0	27.6	Average	40.00	0.266	0.172	0.124	0.088	0.043	0.028
89	RHS-OT	425750	0.0	27.6	Average	40.00	0.311	0.188	0.124	0.082	0.041	0.026
90	RHS-OT	426250	0.0	27.8	Average	40.00	0.263	0.175	0.115	0.077	0.035	0.024
91	RHS-OT	426750	0.0	27.8	Average	40.00	0.215	0.158	0.112	0.075	0.036	0.023
92	RHS-OT	427250	0.0	27.8	Average	40.00	0.153	0.111	0.093	0.084	0.060	0.044

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
93	RHS-OT	427750	0.0	27.8	Average	40.00	0.222	0.189	0.141	0.108	0.057	0.040
94	RHS-OT	428250	0.0	27.9	Average	40.00	0.267	0.189	0.135	0.096	0.049	0.033
95	RHS-OT	428750	0.0	27.9	Average	40.00	0.244	0.172	0.122	0.085	0.045	0.029
96	RHS-OT	429250	0.0	27.9	Average	40.00	0.351	0.203	0.127	0.084	0.043	0.031
97	RHS-OT	429750	0.0	28.0	Average	40.00	0.420	0.236	0.125	0.076	0.051	0.039
98	RHS-OT	430250	0.0	28.0	Average	40.00	0.139	0.110	0.084	0.067	0.045	0.034
99	RHS-OT	430750	0.0	28.0	Average	40.00	0.255	0.167	0.118	0.085	0.043	0.028
100	RHS-OT	431250	0.0	28.1	Average	40.00	0.302	0.202	0.149	0.107	0.061	0.040
101	RHS-OT	431750	0.0	28.1	Average	40.00	0.159	0.108	0.078	0.059	0.033	0.021
102	RHS-OT	432250	0.0	28.1	Average	40.00	0.124	0.106	0.081	0.065	0.043	0.028
103	RHS-OT	434250	0.0	29.1	Average	40.00	0.323	0.190	0.122	0.083	0.044	0.032
104	RHS-OT	434750	0.0	29.1	Average	40.00	0.129	0.082	0.062	0.049	0.029	0.020
105	RHS-OT	435250	0.0	29.1	Average	40.00	0.350	0.223	0.144	0.099	0.052	0.034
106	RHS-OT	435750	0.0	29.1	Average	40.00	0.394	0.250	0.170	0.115	0.057	0.037
107	RHS-OT	436250	0.0	29.1	Average	40.00	0.219	0.153	0.119	0.090	0.052	0.034
108	RHS-OT	436750	0.0	29.1	Average	40.00	0.424	0.307	0.160	0.120	0.063	0.037
109	RHS-OT	437250	0.0	29.2	Average	40.00	0.113	0.073	0.062	0.051	0.034	0.025
110	RHS-OT	437750	0.0	29.2	Average	40.00	0.222	0.159	0.129	0.102	0.059	0.038
111	RHS-OT	438250	0.0	29.2	Average	40.00	0.470	0.319	0.213	0.148	0.077	0.050
112	RHS-OT	438750	0.0	29.2	Average	40.00	0.552	0.349	0.240	0.164	0.085	0.050
113	RHS-OT	439250	0.0	29.2	Average	40.00	0.408	0.316	0.231	0.169	0.081	0.049
114	RHS-OT	439750	0.0	29.2	Average	40.00	0.561	0.360	0.217	0.129	0.073	0.040
115	RHS-OT	440250	0.0	29.2	Average	40.00	0.431	0.288	0.211	0.152	0.077	0.052
116	RHS-OT	440750	0.0	29.2	Average	40.00	0.356	0.246	0.179	0.130	0.068	0.044

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
117	RHS-OT	441250	0.0	29.2	Average	40.00	0.355	0.211	0.145	0.099	0.053	0.033
118	RHS-OT	441750	0.0	29.2	Average	40.00	0.554	0.348	0.231	0.152	0.073	0.047
119	RHS-OT	442250	0.0	29.2	Average	40.00	0.212	0.135	0.095	0.065	0.032	0.025
120	RHS-OT	442750	0.0	29.2	Average	40.00	0.167	0.151	0.112	0.081	0.043	0.025
121	RHS-OT	443250	0.0	29.5	Average	40.00	0.065	0.046	0.040	0.035	0.029	0.023
122	RHS-OT	443750	0.0	29.5	Average	40.00	0.272	0.163	0.112	0.078	0.038	0.026
123	RHS-OT	444250	0.0	29.5	Average	40.00	0.228	0.140	0.103	0.071	0.036	0.023
124	RHS-OT	444750	0.0	29.5	Average	40.00	0.340	0.264	0.171	0.111	0.045	0.023
125	RHS-OT	445500	0.0	29.5	Average	40.00	0.257	0.180	0.127	0.085	0.044	0.027
126	RHS-OT	446000	0.0	29.7	Average	40.00	0.125	0.089	0.067	0.052	0.033	0.022
127	RHS-OT	446500	0.0	29.7	Average	40.00	0.201	0.161	0.128	0.104	0.061	0.044
128	RHS-OT	447750	0.0	30.5	Average	40.00	0.244	0.167	0.118	0.083	0.042	0.029
129	RHS-OT	448250	0.0	30.5	Average	40.00	0.159	0.115	0.089	0.067	0.042	0.029
130	RHS-OT	448750	0.0	30.8	Average	40.00	0.128	0.092	0.074	0.059	0.038	0.027
131	RHS-OT	449250	0.0	30.8	Average	40.00	0.165	0.115	0.085	0.064	0.035	0.023
132	RHS-OT	449750	0.0	30.8	Average	40.00	0.237	0.166	0.122	0.089	0.046	0.028
133	RHS-OT	450250	0.0	31.4	Average	40.00	0.283	0.164	0.113	0.077	0.040	0.029
134	RHS-OT	450750	0.0	31.4	Average	40.00	0.129	0.083	0.062	0.046	0.027	0.020
135	RHS-OT	451250	0.0	31.4	Average	40.00	0.400	0.333	0.253	0.169	0.075	0.051
136	RHS-OT	451750	0.0	31.4	Average	40.00	0.120	0.092	0.069	0.055	0.035	0.025
137	RHS-OT	452250	0.0	31.7	Average	40.00	0.153	0.094	0.079	0.066	0.046	0.034
138	RHS-OT	452750	0.0	31.7	Average	40.00	0.523	0.269	0.131	0.085	0.042	0.031
139	RHS-OT	453250	0.0	31.7	Average	40.00	0.418	0.248	0.157	0.097	0.040	0.027
140	RHS-OT	453750	0.0	31.7	Average	40.00	0.524	0.301	0.206	0.141	0.060	0.037

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
141	RHS-OT	454250	0.0	31.7	Average	40.00	0.591	0.335	0.196	0.121	0.051	0.030
142	RHS-OT	454750	0.0	32.1	Average	40.00	0.233	0.138	0.099	0.067	0.031	0.023
143	RHS-OT	455250	0.0	32.1	Average	40.00	0.421	0.203	0.117	0.067	0.032	0.025
144	RHS-OT	455750	0.0	32.1	Average	40.00	0.204	0.197	0.164	0.071	0.045	0.031
145	RHS-OT	456250	0.0	32.1	Average	40.00	0.289	0.209	0.145	0.104	0.052	0.030
146	RHS-OT	456750	0.0	32.1	Average	40.00	0.233	0.138	0.099	0.067	0.031	0.023
147	RHS-OT	457250	0.0	32.5	Average	40.00	0.213	0.100	0.076	0.062	0.037	0.027
148	RHS-OT	457750	0.0	32.5	Average	40.00	0.160	0.106	0.078	0.060	0.036	0.027
149	RHS-OT	458250	0.0	32.5	Average	40.00	0.075	0.074	0.059	0.048	0.032	0.024
150	RHS-OT	458750	0.0	32.5	Average	40.00	0.126	0.086	0.068	0.054	0.035	0.028
151	RHS-OT	459250	0.0	32.5	Average	40.00	0.239	0.144	0.094	0.062	0.028	0.020
152	RHS-OT	459750	0.0	32.8	Average	40.00	0.083	0.064	0.053	0.045	0.028	0.021
153	RHS-OT	460250	0.0	32.8	Average	40.00	0.243	0.226	0.150	0.103	0.051	0.034
154	RHS-OT	460750	0.0	32.8	Average	40.00	0.306	0.218	0.155	0.111	0.056	0.033
155	RHS-OT	461250	0.0	32.8	Average	40.00	0.193	0.113	0.094	0.076	0.049	0.034
156	RHS-OT	461750	0.0	33.2	Average	40.00	0.070	0.054	0.047	0.041	0.029	0.024
157	RHS-OT	462250	0.0	33.2	Average	40.00	0.464	0.288	0.196	0.139	0.072	0.050
158	RHS-OT	462750	0.0	33.2	Average	40.00	0.136	0.111	0.094	0.080	0.053	0.039
159	RHS-OT	463250	0.0	33.2	Average	40.00	0.370	0.249	0.173	0.129	0.068	0.041
160	RHS-OT	463750	0.0	33.7	Average	40.00	0.074	0.055	0.047	0.040	0.028	0.026
161	RHS-OT	464250	0.0	33.7	Average	40.00	0.067	0.043	0.037	0.031	0.022	0.016
162	RHS-OT	464750	0.0	33.7	Average	40.00	0.199	0.127	0.091	0.064	0.033	0.024
163	RHS-OT	465250	0.0	33.7	Average	40.00	0.062	0.058	0.048	0.040	0.025	0.020
164	RHS-OT	465750	0.0	33.9	Average	40.00	0.118	0.085	0.061	0.045	0.026	0.018

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
165	RHS-OT	466250	0.0	33.9	Average	40.00	0.282	0.208	0.158	0.122	0.069	0.047
166	RHS-OT	466750	0.0	33.9	Average	40.00	0.428	0.220	0.157	0.115	0.064	0.042
167	RHS-OT	467250	0.0	33.9	Average	40.00	0.258	0.171	0.110	0.072	0.034	0.023
168	RHS-OT	467750	0.0	34.2	Average	40.00	0.440	0.296	0.209	0.152	0.079	0.041
169	RHS-OT	468250	0.0	34.2	Average	40.00	0.453	0.263	0.156	0.114	0.065	0.050
170	RHS-OT	468750	0.0	34.2	Average	40.00	0.156	0.143	0.102	0.071	0.039	0.026
171	RHS-OT	469250	0.0	34.6	Average	40.00	0.392	0.216	0.129	0.079	0.035	0.023
172	RHS-OT	469750	0.0	34.6	Average	40.00	0.426	0.273	0.189	0.130	0.061	0.040
173	RHS-OT	470250	0.0	34.6	Average	40.00	0.168	0.135	0.108	0.085	0.054	0.041
174	RHS-OT	470750	0.0	34.6	Average	40.00	0.411	0.243	0.172	0.122	0.065	0.045
175	RHS-OT	472750	0.0	35.3	Average	40.00	0.170	0.146	0.119	0.098	0.064	0.044
176	RHS-OT	473250	0.0	35.3	Average	40.00	0.188	0.149	0.122	0.099	0.063	0.041
177	RHS-OT	473750	0.0	35.5	Average	40.00	0.174	0.136	0.110	0.090	0.057	0.040
178	RHS-OT	474250	0.0	35.5	Average	40.00	0.371	0.257	0.183	0.129	0.069	0.046
179	RHS-OT	474750	0.0	35.5	Average	40.00	0.570	0.322	0.238	0.171	0.080	0.047
180	RHS-OT	475250	0.0	35.5	Average	40.00	0.156	0.123	0.100	0.081	0.052	0.035
181	RHS-OT	475750	0.0	35.8	Average	40.00	0.098	0.050	0.043	0.037	0.027	0.019
182	RHS-OT	476250	0.0	35.8	Average	40.00	0.356	0.212	0.142	0.098	0.051	0.038
183	RHS-OT	476750	0.0	35.8	Average	40.00	0.255	0.182	0.137	0.105	0.059	0.040
184	RHS-OT	477250	0.0	35.8	Average	40.00	0.359	0.217	0.146	0.098	0.047	0.027
185	RHS-OT	477750	0.0	35.8	Average	40.00	0.114	0.069	0.058	0.049	0.035	0.027
186	RHS-OT	478250	0.0	35.8	Average	40.00	0.073	0.066	0.055	0.047	0.033	0.025
187	RHS-OT	478750	0.0	36.2	Average	40.00	0.323	0.203	0.138	0.097	0.048	0.032
188	RHS-OT	479250	0.0	36.2	Average	40.00	0.154	0.107	0.080	0.063	0.035	0.026

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
189	RHS-OT	479750	0.0	36.2	Average	40.00	0.370	0.259	0.173	0.117	0.060	0.039
190	RHS-OT	480250	0.0	36.4	Average	40.00	0.204	0.143	0.104	0.076	0.043	0.027
191	RHS-OT	480750	0.0	36.4	Average	40.00	0.248	0.157	0.118	0.091	0.054	0.035
192	RHS-OT	481250	0.0	36.4	Average	40.00	0.121	0.089	0.069	0.055	0.034	0.024
193	RHS-OT	481750	0.0	36.4	Average	40.00	0.292	0.224	0.144	0.097	0.046	0.030
194	RHS-OT	482250	0.0	36.4	Average	40.00	0.128	0.083	0.070	0.056	0.038	0.026
195	RHS-OT	482750	0.0	36.4	Average	40.00	0.154	0.072	0.054	0.041	0.025	0.022
196	RHS-OT	483250	0.0	36.8	Average	40.00	0.094	0.079	0.066	0.058	0.042	0.031
197	RHS-OT	483750	0.0	36.8	Average	40.00	0.194	0.135	0.096	0.068	0.036	0.024
198	RHS-OT	484250	0.0	36.8	Average	40.00	0.256	0.176	0.126	0.093	0.050	0.033
199	RHS-OT	484750	0.0	37.1	Average	40.00	0.249	0.186	0.131	0.091	0.046	0.031
200	RHS-OT	485250	0.0	37.1	Average	40.00	0.083	0.064	0.055	0.047	0.034	0.024
201	RHS-OT	485750	0.0	37.1	Average	40.00	0.450	0.264	0.166	0.108	0.047	0.029
202	RHS-OT	486250	0.0	37.1	Average	40.00	0.522	0.253	0.167	0.108	0.048	0.032
203	RHS-OT	486750	0.0	37.4	Average	40.00	0.167	0.095	0.075	0.058	0.046	0.018
204	RHS-OT	487250	0.0	37.4	Average	40.00	0.091	0.065	0.039	0.033	0.027	0.019
205	RHS-OT	487750	0.0	37.4	Average	40.00	0.290	0.208	0.152	0.109	0.053	0.031
206	RHS-OT	488250	0.0	37.4	Average	40.00	0.527	0.305	0.172	0.122	0.062	0.043
207	RHS-OT	488750	0.0	37.4	Average	40.00	0.411	0.292	0.182	0.121	0.054	0.039
208	RHS-OT	489250	0.0	37.6	Average	40.00	0.320	0.210	0.148	0.101	0.047	0.032
209	RHS-OT	489750	0.0	37.6	Average	40.00	0.377	0.248	0.177	0.124	0.053	0.028
210	RHS-OT	490250	0.0	37.6	Average	40.00	0.351	0.250	0.176	0.127	0.061	0.039
211	RHS-OT	490750	0.0	37.6	Average	40.00	0.444	0.279	0.190	0.129	0.060	0.038
212	RHS-OT	495250	0.0	38.7	Average	40.00	0.484	0.313	0.221	0.155	0.075	0.042

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
213	RHS-OT	495750	0.0	38.7	Average	40.00	0.200	0.137	0.096	0.065	0.031	0.018
214	RHS-OT	496250	0.0	38.7	Average	40.00	0.123	0.093	0.078	0.068	0.048	0.035
215	RHS-OT	496750	0.0	39.1	Average	40.00	0.332	0.182	0.109	0.069	0.028	0.017
216	RHS-OT	497250	0.0	39.1	Average	40.00	0.411	0.283	0.190	0.132	0.060	0.037
217	RHS-OT	497750	0.0	39.1	Average	40.00	0.233	0.164	0.110	0.067	0.023	0.020
218	RHS-OT	498250	0.0	39.5	Average	40.00	0.322	0.210	0.157	0.113	0.059	0.030
219	RHS-OT	498750	0.0	39.5	Average	40.00	0.362	0.233	0.161	0.116	0.056	0.037
220	RHS-OT	499250	0.0	39.5	Average	40.00	0.398	0.280	0.202	0.144	0.075	0.042
221	RHS-OT	499750	0.0	39.5	Average	40.00	0.268	0.164	0.111	0.077	0.038	0.022
222	RHS-OT	500250	0.0	39.5	Average	40.00	0.460	0.251	0.169	0.117	0.044	0.028
223	RHS-OT	500750	0.0	40.1	Average	40.00	0.164	0.126	0.097	0.074	0.044	0.028
224	RHS-OT	501250	0.0	40.1	Average	40.00	0.381	0.242	0.170	0.118	0.055	0.029
225	RHS-OT	501750	0.0	40.1	Average	40.00	0.181	0.128	0.093	0.064	0.034	0.019
226	RHS-OT	502250	0.0	40.1	Average	40.00	0.176	0.113	0.073	0.049	0.021	0.018
227	RHS-OT	502750	0.0	40.1	Average	40.00	0.156	0.102	0.083	0.068	0.051	0.043
228	RHS-OT	503250	0.0	40.1	Average	40.00	0.261	0.159	0.110	0.073	0.029	0.019
229	RHS-OT	503750	0.0	40.1	Average	40.00	0.098	0.052	0.042	0.036	0.026	0.022
230	RHS-OT	504250	0.0	40.3	Average	40.00	0.569	0.258	0.173	0.116	0.054	0.029
231	RHS-OT	504750	0.0	40.3	Average	40.00	0.136	0.132	0.097	0.068	0.037	0.025
232	RHS-OT	505250	0.0	40.3	Average	40.00	0.233	0.164	0.110	0.067	0.023	0.020
233	RHS-OT	505750	0.0	40.3	Average	40.00	0.185	0.139	0.098	0.069	0.038	0.027
234	RHS-OT	506250	0.0	40.3	Average	40.00	0.326	0.211	0.154	0.113	0.056	0.032
235	RHS-OT	506750	0.0	40.3	Average	40.00	0.420	0.267	0.183	0.126	0.056	0.030
236	RHS-OT	507250	0.0	40.7	Average	40.00	0.080	0.046	0.039	0.034	0.024	0.020

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
237	RHS-OT	507750	0.0	40.7	Average	40.00	0.589	0.293	0.205	0.139	0.058	0.041
238	RHS-OT	508250	0.0	40.7	Average	40.00	0.192	0.142	0.103	0.071	0.036	0.024
239	RHS-OT	508750	0.0	40.7	Average	40.00	0.477	0.292	0.199	0.139	0.069	0.041
240	RHS-OT	509250	0.0	41.4	Average	40.00	0.222	0.140	0.104	0.075	0.040	0.024
241	RHS-OT	509750	0.0	41.4	Average	40.00	0.274	0.196	0.136	0.098	0.051	0.034
242	RHS-OT	510250	0.0	41.4	Average	40.00	0.391	0.259	0.178	0.129	0.062	0.031
243	RHS-OT	510750	0.0	41.4	Average	40.00	0.422	0.286	0.205	0.148	0.075	0.042
244	RHS-OT	511250	0.0	41.7	Average	40.00	0.546	0.354	0.248	0.144	0.082	0.051
245	RHS-OT	511750	0.0	41.7	Average	40.00	0.473	0.266	0.168	0.096	0.047	0.029
246	RHS-OT	512250	0.0	41.7	Average	40.00	0.389	0.266	0.184	0.126	0.058	0.037
247	RHS-OT	512750	0.0	41.7	Average	40.00	0.166	0.111	0.089	0.070	0.047	0.035
248	RHS-OT	513250	0.0	41.7	Average	40.00	0.130	0.085	0.070	0.055	0.034	0.022
249	RHS-OT	513750	0.0	40.9	Average	40.00	0.368	0.247	0.181	0.131	0.071	0.045
250	RHS-OT	514250	0.0	40.9	Average	40.00	0.281	0.210	0.151	0.110	0.057	0.032
251	RHS-OT	514750	0.0	40.9	Average	40.00	0.320	0.233	0.176	0.123	0.066	0.038
252	RHS-OT	515250	0.0	40.9	Average	40.00	0.168	0.094	0.073	0.055	0.044	0.031
253	RHS-OT	515750	0.0	40.9	Average	40.00	0.203	0.140	0.101	0.070	0.036	0.024
254	RHS-OT	516250	0.0	40.9	Average	40.00	0.188	0.153	0.113	0.081	0.043	0.027
255	RHS-OT	516750	0.0	40.2	Average	40.00	0.110	0.072	0.054	0.043	0.027	0.021
256	RHS-OT	517250	0.0	40.2	Average	40.00	0.129	0.082	0.068	0.056	0.039	0.030
257	RHS-OT	517750	0.0	40.2	Average	40.00	0.206	0.138	0.094	0.067	0.035	0.027
258	RHS-OT	518250	0.0	40.2	Average	40.00	0.078	0.059	0.047	0.039	0.027	0.019
259	RHS-OT	518750	0.0	39.6	Average	40.00	0.367	0.241	0.166	0.119	0.062	0.041
260	RHS-OT	519250	0.0	39.6	Average	40.00	0.399	0.251	0.168	0.113	0.051	0.033

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
261	RHS-OT	519750	0.0	39.6	Average	40.00	0.085	0.070	0.057	0.048	0.033	0.027
262	RHS-OT	520250	0.0	39.6	Average	40.00	0.427	0.242	0.156	0.095	0.037	0.018
263	RHS-OT	520750	0.0	38.9	Average	40.00	0.480	0.391	0.160	0.070	0.051	0.033
264	RHS-OT	521250	0.0	38.9	Average	40.00	0.368	0.224	0.145	0.091	0.036	0.020
265	RHS-OT	521750	0.0	38.9	Average	40.00	0.228	0.136	0.090	0.058	0.027	0.019
266	RHS-OT	522750	0.0	37.7	Average	40.00	0.221	0.152	0.109	0.078	0.040	0.024
267	RHS-OT	523250	0.0	37.7	Average	40.00	0.301	0.215	0.166	0.125	0.067	0.042
268	RHS-OT	523750	0.0	37.7	Average	40.00	0.149	0.114	0.083	0.064	0.038	0.025
269	RHS-OT	524250	0.0	37.7	Average	40.00	0.112	0.088	0.069	0.055	0.034	0.024
270	RHS-OT	524750	0.0	37.5	Average	40.00	0.154	0.114	0.083	0.064	0.037	0.025
271	RHS-OT	525250	0.0	37.5	Average	40.00	0.100	0.066	0.055	0.044	0.031	0.025
272	RHS-OT	525750	0.0	37.5	Average	40.00	0.213	0.145	0.117	0.096	0.060	0.041
273	RHS-OT	526250	0.0	37.1	Average	40.00	0.330	0.187	0.121	0.081	0.039	0.024
274	RHS-OT	526750	0.0	37.1	Average	40.00	0.443	0.283	0.189	0.125	0.072	0.040
275	RHS-OT	527250	0.0	37.1	Average	40.00	0.108	0.072	0.058	0.049	0.031	0.025
276	RHS-OT	527750	0.0	37.1	Average	40.00	0.302	0.165	0.114	0.079	0.044	0.029
277	RHS-OT	528250	0.0	37.1	Average	40.00	0.151	0.068	0.055	0.045	0.030	0.022
278	RHS-OT	529000	0.0	33.9	Average	40.00	0.197	0.079	0.064	0.054	0.035	0.022
279	RHS-OT	529500	0.0	33.9	Average	40.00	0.171	0.112	0.089	0.061	0.044	0.028
280	RHS-OT	530000	0.0	33.9	Average	40.00	0.180	0.131	0.090	0.062	0.034	0.023
281	RHS-OT	530500	0.0	33.9	Average	40.00	0.252	0.172	0.113	0.076	0.037	0.023
282	RHS-OT	531000	0.0	33.9	Average	40.00	0.386	0.242	0.142	0.094	0.044	0.027
283	RHS-OT	531500	0.0	33.9	Average	40.00	0.461	0.240	0.160	0.099	0.039	0.020
284	RHS-OT	532000	0.0	33.9	Average	40.00	0.102	0.074	0.055	0.045	0.027	0.020

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
285	RHS-OT	532500	0.0	33.9	Average	40.00	0.173	0.130	0.095	0.066	0.034	0.023
286	RHS-OT	533000	0.0	34.0	Average	40.00	0.433	0.256	0.171	0.115	0.040	0.014
287	RHS-OT	533500	0.0	34.0	Average	40.00	0.264	0.168	0.114	0.076	0.039	0.025
288	RHS-OT	534000	0.0	34.0	Average	40.00	0.494	0.328	0.222	0.153	0.070	0.041
289	RHS-OT	534500	0.0	34.0	Average	40.00	0.123	0.089	0.068	0.052	0.030	0.023
290	RHS-OT	535000	0.0	34.2	Average	40.00	0.104	0.074	0.059	0.047	0.030	0.024
291	RHS-OT	535500	0.0	34.2	Average	40.00	0.406	0.289	0.207	0.154	0.080	0.049
292	RHS-OT	536000	0.0	34.2	Average	40.00	0.161	0.108	0.077	0.055	0.027	0.016
293	RHS-OT	536500	0.0	34.2	Average	40.00	0.105	0.073	0.057	0.044	0.031	0.020
294	RHS-OT	537000	0.0	34.2	Average	40.00	0.321	0.175	0.114	0.077	0.035	0.019
295	RHS-OT	537500	0.0	34.2	Average	40.00	0.232	0.161	0.107	0.071	0.033	0.024
296	RHS-OT	538000	0.0	34.4	Average	40.00	0.114	0.090	0.069	0.054	0.033	0.022
297	RHS-OT	538500	0.0	34.4	Average	40.00	0.439	0.312	0.227	0.162	0.076	0.045
298	RHS-OT	539000	0.0	34.4	Average	40.00	0.291	0.160	0.109	0.078	0.057	0.039
299	RHS-OT	539500	0.0	34.4	Average	40.00	0.203	0.145	0.117	0.096	0.060	0.041
300	RHS-OT	540000	0.0	34.4	Average	40.00	0.324	0.187	0.121	0.081	0.039	0.024
301	RHS-OT	540500	0.0	34.4	Average	40.00	0.272	0.158	0.096	0.069	0.048	0.034
302	RHS-OT	541000	0.0	34.6	Average	40.00	0.110	0.083	0.068	0.055	0.037	0.025
303	RHS-OT	541500	0.0	34.6	Average	40.00	0.164	0.130	0.088	0.061	0.029	0.021
304	RHS-OT	542000	0.0	34.6	Average	40.00	0.514	0.256	0.145	0.089	0.041	0.027
305	RHS-OT	542500	0.0	34.6	Average	40.00	0.240	0.159	0.103	0.065	0.026	0.016
306	RHS-OT	543000	0.0	34.6	Average	40.00	0.157	0.117	0.081	0.057	0.031	0.018
307	RHS-OT	543500	0.0	34.6	Average	40.00	0.171	0.130	0.093	0.068	0.037	0.023
308	RHS-OT	544000	0.0	35.0	Average	40.00	0.302	0.165	0.114	0.079	0.044	0.029

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
309	RHS-OT	544500	0.0	35.0	Average	40.00	0.477	0.281	0.180	0.119	0.057	0.035
310	RHS-OT	545000	0.0	35.0	Average	40.00	0.337	0.226	0.164	0.117	0.063	0.041
311	RHS-OT	545500	0.0	35.0	Average	40.00	0.165	0.123	0.103	0.082	0.054	0.038
312	RHS-OT	546000	0.0	35.0	Average	40.00	0.304	0.191	0.139	0.105	0.062	0.041
313	RHS-OT	546500	0.0	35.3	Average	40.00	0.452	0.289	0.196	0.124	0.052	0.033
314	RHS-OT	547000	0.0	35.3	Average	40.00	0.180	0.125	0.074	0.045	0.031	0.023
315	RHS-OT	547500	0.0	35.3	Average	40.00	0.191	0.093	0.072	0.056	0.036	0.025
316	RHS-OT	548000	0.0	35.5	Average	40.00	0.251	0.193	0.144	0.107	0.058	0.034
317	RHS-OT	548500	0.0	35.5	Average	40.00	0.250	0.170	0.113	0.076	0.039	0.024
318	RHS-OT	549000	0.0	35.5	Average	40.00	0.228	0.156	0.107	0.069	0.033	0.021
319	RHS-OT	549500	0.0	35.5	Average	40.00	0.194	0.120	0.070	0.050	0.035	0.026
320	RHS-OT	550000	0.0	35.9	Average	40.00	0.243	0.160	0.110	0.078	0.041	0.028
321	RHS-OT	550500	0.0	35.9	Average	40.00	0.136	0.102	0.078	0.063	0.040	0.028
322	RHS-OT	551000	0.0	35.9	Average	40.00	0.183	0.114	0.083	0.057	0.043	0.033
323	RHS-OT	551500	0.0	35.9	Average	40.00	0.265	0.182	0.129	0.090	0.044	0.025
324	RHS-OT	552000	0.0	35.9	Average	40.00	0.246	0.179	0.124	0.088	0.042	0.026
325	RHS-OT	552500	0.0	36.1	Average	40.00	0.324	0.234	0.152	0.101	0.053	0.034
326	RHS-OT	553000	0.0	36.1	Average	40.00	0.345	0.204	0.140	0.094	0.052	0.033
327	RHS-OT	553500	0.0	36.1	Average	40.00	0.292	0.166	0.104	0.084	0.069	0.054
328	RHS-OT	554000	0.0	36.1	Average	40.00	0.263	0.157	0.097	0.068	0.046	0.028
329	RHS-OT	554500	0.0	36.4	Average	40.00	0.214	0.143	0.098	0.067	0.034	0.022
330	RHS-OT	555000	0.0	36.4	Average	40.00	0.246	0.179	0.124	0.088	0.042	0.026
331	RHS-OT	555500	0.0	36.4	Average	40.00	0.177	0.166	0.112	0.072	0.034	0.024
332	RHS-OT	556000	0.0	36.4	Average	40.00	0.216	0.117	0.080	0.057	0.034	0.024

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
333	RHS-OT	556500	0.0	36.7	Average	40.00	0.307	0.172	0.104	0.063	0.032	0.023
334	RHS-OT	557000	0.0	36.7	Average	40.00	0.488	0.259	0.145	0.095	0.042	0.030
335	RHS-OT	557500	0.0	36.7	Average	40.00	0.428	0.234	0.127	0.090	0.074	0.053

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date and Time of the Observation:** 23/04/2023 to 25/04/2023

Section: LHS | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	LHS-OT	0	0	25.3	Average	40.00	0.328	0.218	0.138	0.096	0.047	0.029
2	LHS-OT	500	0.0	25.3	Average	40.00	0.265	0.234	0.161	0.113	0.056	0.035
3	LHS-OT	1000	0.0	25.3	Average	40.00	0.249	0.209	0.141	0.098	0.048	0.030
4	LHS-OT	1500	0.0	25.3	Average	40.00	0.339	0.290	0.195	0.138	0.070	0.044
5	LHS-OT	2000	0.0	25.3	Average	40.00	0.238	0.197	0.146	0.110	0.067	0.045
6	LHS-OT	2500	0.0	25.3	Average	40.00	0.263	0.214	0.135	0.094	0.046	0.031
7	LHS-OT	3000	0.0	25.3	Average	40.00	0.258	0.231	0.160	0.112	0.058	0.038
8	LHS-OT	3500	0.0	25.5	Average	40.00	0.363	0.277	0.206	0.158	0.089	0.054
9	LHS-OT	4000	0.0	25.5	Average	40.00	0.307	0.262	0.188	0.141	0.079	0.057
10	LHS-OT	4500	0.0	25.5	Average	40.00	0.263	0.259	0.203	0.160	0.094	0.059
11	LHS-OT	5000	0.0	25.5	Average	40.00	0.209	0.129	0.097	0.073	0.041	0.026
12	LHS-OT	5500	0.0	25.5	Average	40.00	0.303	0.244	0.209	0.163	0.096	0.057
13	LHS-OT	6000	0.0	25.5	Average	40.00	0.346	0.256	0.188	0.140	0.076	0.050
14	LHS-OT	6500	0.0	25.5	Average	40.00	0.303	0.239	0.170	0.124	0.068	0.046
15	LHS-OT	7000	0.0	25.9	Average	40.00	0.295	0.221	0.169	0.133	0.081	0.055
16	LHS-OT	7500	0.0	25.9	Average	40.00	0.345	0.283	0.205	0.154	0.080	0.052
17	LHS-OT	8000	0.0	25.9	Average	40.00	0.220	0.140	0.107	0.083	0.051	0.035
18	LHS-OT	8500	0.0	25.9	Average	40.00	0.341	0.261	0.196	0.152	0.090	0.059
19	LHS-OT	9000	0.0	26.3	Average	40.00	0.324	0.251	0.183	0.141	0.074	0.048
20	LHS-OT	9500	0.0	26.3	Average	40.00	0.314	0.231	0.165	0.121	0.063	0.044

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	LHS-OT	10000	0.0	26.3	Average	40.00	0.274	0.231	0.159	0.113	0.058	0.038
22	LHS-OT	10500	0.0	26.3	Average	40.00	0.346	0.256	0.183	0.134	0.065	0.037
23	LHS-OT	11000	0.0	26.3	Average	40.00	0.356	0.289	0.196	0.138	0.072	0.044
24	LHS-OT	11500	0.0	26.6	Average	40.00	0.412	0.348	0.231	0.150	0.067	0.040
25	LHS-OT	12000	0.0	26.6	Average	40.00	0.292	0.265	0.183	0.134	0.069	0.045
26	LHS-OT	12500	0.0	26.6	Average	40.00	0.296	0.257	0.201	0.158	0.091	0.057
27	LHS-OT	13000	0.0	26.6	Average	40.00	0.353	0.253	0.186	0.142	0.081	0.054
28	LHS-OT	13500	0.0	26.7	Average	40.00	0.272	0.232	0.165	0.121	0.066	0.047
29	LHS-OT	14000	0.0	26.7	Average	40.00	0.365	0.254	0.191	0.148	0.086	0.057
30	LHS-OT	14500	0.0	26.7	Average	40.00	0.204	0.176	0.142	0.111	0.071	0.046
31	LHS-OT	15000	0.0	26.7	Average	40.00	0.300	0.184	0.104	0.089	0.064	0.049
32	LHS-OT	15500	0.0	26.7	Average	40.00	0.206	0.174	0.123	0.088	0.043	0.025
33	LHS-OT	16000	0.0	26.9	Average	40.00	0.329	0.253	0.181	0.132	0.065	0.038
34	LHS-OT	16500	0.0	26.9	Average	40.00	0.360	0.273	0.189	0.139	0.075	0.051
35	LHS-OT	17000	0.0	26.9	Average	40.00	0.350	0.271	0.162	0.104	0.084	0.062
36	LHS-OT	17500	0.0	26.9	Average	40.00	0.391	0.297	0.241	0.149	0.079	0.053
37	LHS-OT	18000	0.0	27.0	Average	40.00	0.186	0.139	0.109	0.069	0.035	0.022
38	LHS-OT	18500	0.0	27.0	Average	40.00	0.220	0.177	0.135	0.104	0.063	0.042
39	LHS-OT	19000	0.0	27.0	Average	40.00	0.184	0.177	0.126	0.080	0.037	0.025

Annexure 2 : Pavement Deflection Data

Project Name:- Consultancy Services for independent assessment of operating and maintenance requirements and major maintenance requirement - Sikar Bikaner Highways Limited

Name of the Road: Sikar to Bikaner | **Date and Time of the Observation:** 23/04/2023 to 25/04/2023

Section: RHS | **Season of Test: Summer**

No of lanes :

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
1	RHS-OT	250	0	25.3	Average	40.00	0.232	0.194	0.128	0.084	0.042	0.028
2	RHS-OT	750	0.0	25.3	Average	40.00	0.240	0.209	0.141	0.098	0.048	0.030
3	RHS-OT	1250	0.0	25.3	Average	40.00	0.319	0.303	0.204	0.144	0.075	0.048
4	RHS-OT	1750	0.0	25.3	Average	40.00	0.271	0.186	0.135	0.098	0.051	0.034
5	RHS-OT	2250	0.0	25.3	Average	40.00	0.432	0.352	0.233	0.152	0.068	0.040
6	RHS-OT	2750	0.0	25.3	Average	40.00	0.278	0.194	0.128	0.084	0.043	0.028
7	RHS-OT	3250	0.0	25.5	Average	40.00	0.489	0.352	0.233	0.153	0.071	0.042
8	RHS-OT	3750	0.0	25.5	Average	40.00	0.298	0.270	0.186	0.134	0.071	0.044
9	RHS-OT	4250	0.0	25.5	Average	40.00	0.360	0.276	0.205	0.158	0.089	0.052
10	RHS-OT	4750	0.0	25.5	Average	40.00	0.318	0.265	0.184	0.133	0.069	0.044
11	RHS-OT	5250	0.0	25.5	Average	40.00	0.323	0.261	0.188	0.141	0.078	0.052
12	RHS-OT	5750	0.0	25.5	Average	40.00	0.259	0.132	0.099	0.075	0.041	0.030
13	RHS-OT	6250	0.0	25.5	Average	40.00	0.292	0.224	0.172	0.134	0.082	0.055
14	RHS-OT	6750	0.0	25.5	Average	40.00	0.326	0.248	0.182	0.138	0.077	0.050
15	RHS-OT	7250	0.0	25.9	Average	40.00	0.313	0.234	0.167	0.123	0.065	0.043
16	RHS-OT	7750	0.0	25.9	Average	40.00	0.326	0.256	0.192	0.149	0.088	0.057
17	RHS-OT	8250	0.0	25.9	Average	40.00	0.355	0.282	0.205	0.153	0.081	0.050
18	RHS-OT	8750	0.0	25.9	Average	40.00	0.280	0.231	0.164	0.125	0.071	0.049
19	RHS-OT	9250	0.0	26.3	Average	40.00	0.264	0.215	0.137	0.096	0.047	0.030
20	RHS-OT	9750	0.0	26.3	Average	40.00	0.302	0.196	0.129	0.084	0.042	0.028

S. No.	Side	Chainage	Air Temperature °C	Pavement Temperature °C	Load Drop No.	Peak Load Applied (KN)	Peak Deflection (mm) observed at a distance (mm) of					
							0	200	300	450	600	900
21	RHS-OT	10250	0.0	26.3	Average	40.00	0.317	0.257	0.193	0.146	0.081	0.050
22	RHS-OT	10750	0.0	26.3	Average	40.00	0.265	0.218	0.147	0.103	0.050	0.029
23	RHS-OT	11250	0.0	26.6	Average	40.00	0.256	0.195	0.142	0.103	0.054	0.034
24	RHS-OT	11750	0.0	26.6	Average	40.00	0.361	0.277	0.207	0.157	0.089	0.052
25	RHS-OT	12250	0.0	26.6	Average	40.00	0.368	0.273	0.196	0.147	0.081	0.046
26	RHS-OT	12750	0.0	26.6	Average	40.00	0.187	0.131	0.099	0.075	0.043	0.027
27	RHS-OT	13250	0.0	26.6	Average	40.00	0.275	0.223	0.173	0.133	0.080	0.054
28	RHS-OT	13750	0.0	26.7	Average	40.00	0.361	0.284	0.205	0.154	0.079	0.049
29	RHS-OT	14250	0.0	26.7	Average	40.00	0.227	0.159	0.112	0.083	0.046	0.030
30	RHS-OT	14750	0.0	26.7	Average	40.00	0.271	0.246	0.183	0.128	0.062	0.041
31	RHS-OT	15250	0.0	26.7	Average	40.00	0.102	0.063	0.047	0.036	0.022	0.017
32	RHS-OT	15750	0.0	26.9	Average	40.00	0.368	0.268	0.194	0.142	0.074	0.042
33	RHS-OT	16250	0.0	26.9	Average	40.00	0.272	0.185	0.126	0.084	0.042	0.026
34	RHS-OT	16750	0.0	26.9	Average	40.00	0.318	0.281	0.177	0.118	0.056	0.038
35	RHS-OT	17250	0.0	26.9	Average	40.00	0.311	0.246	0.176	0.140	0.076	0.052
36	RHS-OT	17750	0.0	26.9	Average	40.00	0.119	0.093	0.072	0.057	0.035	0.023
37	RHS-OT	18250	0.0	27.0	Average	40.00	0.286	0.211	0.152	0.109	0.055	0.039
38	RHS-OT	18750	0.0	27.0	Average	40.00	0.216	0.194	0.132	0.094	0.046	0.031
39	RHS-OT	19250	0.0	27.0	Average	40.00	0.258	0.189	0.127	0.084	0.039	0.025

FWD Standard Methodology

- **General**

Consultant has undertaken FWD survey for preparing pavement design for project road. The proper improvement measures for existing pavement and better performance of project road up to design life depends upon precisely done structural evaluation.

Falling weight Deflectometer survey for structural evaluation of the existing in-service pavement.

- **Falling Weight Deflectometer Survey**

Consultant conducted Falling Weight Deflectometer (FWD) survey throughout the project road to evaluate the in-service performance of the existing pavement. This was required to carry out structural evaluation of in-service pavements in order to determine the thickness of strengthening layers on existing payment as per procedures described in IRC: 115-2014 and it is one of the key objective of study.

Falling weight Deflectometer (FWDs) have been in use since the 1980s. These devices are used to measure pavement deflections in response to a stationary dynamic load, similar to a passing wheel load. The data obtained are used to evaluate the structural capacity of pavements for research, design, rehabilitation, and pavement management purposes. The interpretation of FWD data is a key method for estimating the in situ moduli of pavement layer materials.

Falling Weight Deflectometer is an impulse-generating device with a guide system. This device allows a variable weight to be dropped from a variable height. The apparatus has a loading plate which is used for uniform force distribution on the test layer. When the weight affects this plate, this loading plate ensures that the resulting force is applied perpendicularly to the test layer's surface. It also has a load cell for measuring the actual applied impulse. It also has one or more deflection sensors. (Note: Deflection basin tests require at least seven sensors.) It also has a system for collecting, processing, and storing deflection data.

The basic working principle of the impulse loading equipment is to drop a mass on the pavement to produce an impulse load and measure the surface deflections. The mass is dropped on a spring system, which in turn transmits the load to the pavement through a loading plate. The resulting deflection bowl characteristics are observed and used in the Back calculation of pavement material properties. The principle for FWD is illustrated in below figure:

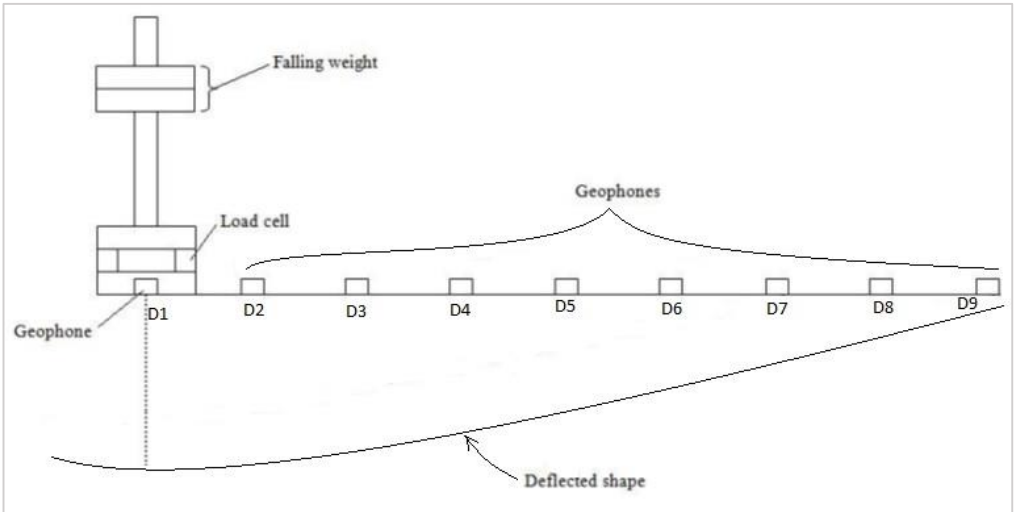


Figure: Working Principle of FWD

Falling Weight Deflectometer (FWD) is extensively used world-wide because it simulates, to a large extent, the actual loading conditions of the pavement. When a moving wheel loads passes over the pavement it produces load pulses. Normal stresses (vertical as well as horizontal) at a location in the pavement will increase in magnitude from zero to a peak value as the moving wheel load approaches the location. The time taken for the stress pulse to vary from zero to peak value is termed as 'rise time of the pulse'. As the wheel moves away from the location, magnitude of stress reduces from peak value to zero. The time period during which the magnitude of stress pulse varies from 'zero-to-peak-to-zero' is the pulse duration. Peak load and the corresponding pavement responses are of interest for pavement evaluation. The resulting load-deflection data can be interpreted through appropriate analytical techniques, such as back calculation technique, to estimate the elastic moduli of the pavement layers. The computed moduli are, in turn, used for (i) the strength evaluation of different layers of in-service pavements (ii) the estimation of the remaining life of in-service pavement(iii) determination of strengthening requirement, if any and (iv) evaluation of different rehabilitation alternatives (overlay, recycling, partial reconstruction, etc.).

Dynatest Heavy Weight Deflectometer (HWD) Test Model 8082 was used to generate the requisite NDT load-deflection data that is analysed in this report. Fundamentally, the HWD generates a transient, impulse-type load of 25-30 msec duration, at any desired (peak) load level between 30 and 240 KN, thereby approximating the effect of a moving wheel load. A more complete description of the HWD Test System used for this project is given below.

- **Main Component of Dynatest Model 8082 HWD**

The main components of the Dynatest Model 8082 HWD system are described in the following paragraphs.

Vehicle

A vehicle was suitably modified to incorporate operating requirements of FWD system including hydraulic and electronic circuits. Modifications were made in the vehicle to accommodate necessary furniture for personal computer, electronic circuits and for working personnel. An alternator was used to draw power from the engine of the vehicle for charging the batteries. Sine wave inverter was used to supply power to the computer and the electronic circuit. The vehicle is equipped with flashing lights to caution the road users during the test.

Load Cell

Load cell is mounted directly on the top of the loading plate measures the load applied to the pavement surface. Load cell accuracy is $\pm$ 1 %.

Loading Plate Assembly

A universal joint is fixed at the bottom of top plate of the assembly to provide flexibility and to ensure that the loading plate rests evenly on the pavement surface. A casing was made to hold the central geophone. The loading plate assembly consists of a bottom plate of 300 mm dia with a rubber sole fixed to its bottom for uniform distribution of load.

Load Pulse

A single-mass falling weight/buffer subassembly system is furnished which directly transfers the full energy of the single falling mass to the loading plate through the proper configuration of buffers to achieve a loading time of 25 to 30 msec, for any falling mass and drop height. This loading system is hydraulically operated and designed so, that at least, four different configurations of mass and rubber buffers may be employed. All mass configurations produce a transient load pulse approximately half sine wave formed and 25 to 30 msec in duration, with a rise time of 10 to 15 msec for any falling height (for all loads). If load pulse duration of 20-50 msec is required, this can be obtained by using specific weight buffer configuration.

This arrangement best simulates the on field creation of load pulse and hence the deflection bowl.

Geophone Arrangement

Nine geophones are arranged in a geophone frame at radial distances of 0, 200, 300,450, 600, 900, 1200, 1500 and 1800 mm from the centre of the loading plate to measure the pavement surface deflections. The geophones measure the velocity of the pavement during deflection and the deflections are obtained by integration of the recorded signals.

Time Histories

- Time histories are collected for the load signal and all 15 deflection channels in a time window ranging from 40 to 200 msec
- The system is capable of storing histories for up to 400 msec when the data is required for special research needs and for undertaking dynamic analysis.
- Sampling circuit can scan each of the channels in 0.05 msec intervals independent of the number of channels in use.

Accuracy

Equipment accuracy remains stable and verification is not required on a frequent basis (regardless of type of test sites, changes in deflector distances, etc.) On-going user verification of original guaranteed deflection specifications is provided in the form of a relative/dynamic field calibration verification procedure in which a minimum of nine (9) of the deflectors are placed into a mechanical columnar device to obtain comparative relative calibration verification of the deflectors at any distance from the load up to a distance of at least 2.5 meters (8 ft) to ensure that all deflectors give the same data output within specification tolerances, at large as well as small deflection levels, and both close to and far from the loading plate under actual HWD loading conditions.

Figure: Falling Weight Deflectometer (FWD) Machine

Moreover, this particular instrument mostly exceeds and matches all the criteria given in the IRC: 115 - 2014. Following Table summarizes the technical specifications of the instrument.

Table: Comparison between Dynatest HWD 8082 and IRC Specifications

Sr. No.	FWD Components	IRC Recommended Specification for FWD	Dynatest HWD 8082 Specification	Remarks
1	Plate Diameter	300/450mm	300 mm	In IRC:115-2014, 300 mm dia plate is recommended
2	Mass System	Single Mass	Single Mass	Matched
3	Falling Weight Mass	50 to 700 Kg		To produce standard axle wheel load of 40 KN , falling weight mass and height of fall will be adjusted automatically
4	Height of fall	100 to 600 mm	Variable	Matched
5	Target Peak Load	40 KN	40 KN	Matched
6	Load Pulse Time	15 – 50 ms	20 -50 ms	Matched
7	Pulse Rise Duration	Nil	10- 15 ms	No information is given in IRC on pulse rise duration
8	Load Cell Accuracy	± 2 %	± 1 %	Matched
9	Number of Deflection Transducers	6 to 9	9	Matched
10	Deflection Sensor Types	Geophones	Geophones	Matched
11	Reading Resolution of Deflection Transducers	Min 1 um	1 Micron	Matched
12	Deflection Transducers Accuracy	± 2 %	± 1 %	Matched

- **Calibration Requirements**

Static calibration of Load Cell

The load cell(s) used in the FWD are calibrated in a standard laboratory and the readings of the load cell(s) matched to those of the reference load cell. The readings of the FWD load cell were accurate to 2 percent of the reference load cell readings. Dismounted deflection transducers were also calibrated in a laboratory setup following any approved procedure and the deflection transducers were also accurate to 2 percent of reference deflections.

Repeatability Test

In order to study the consistency and accuracy of the test results obtained by FWD, load repeatability test was done before using the FWD. In this test, deflection and load data were measured for selected load is dropped from desirable height and which was carried out on a level bituminous pavement surface, which did not have any cracks. The range of load applied was taken in such a way that it generated peak central deflections in the range of 250 µm to 600 µm. The test was repeated for a minimum of twelve times. The standard deviation of the peak load in the load repeatability test estimated was less than 5 percent of the mean value of peak load which was achieved in the load repeatability test. Deflection repeatability check was also conducted using the data collected in load repeatability test. The standard deviation of the normalized deflections, were also less than 5% of the mean value of reading. Results of repeatability tests conducted on project site before start of surveys are shown in below table.

Table: Load Repeatability Test Results

Drop No.	1	2	3	4	5	6	7	8	9	10	11	12
Test Load (KN)	42.79	42.48	42.08	42.41	42.36	42.29	42.20	42.16	42.41	42.36	43.12	42.54
Mean	42.43											
SD	0.29											
Coefficient of Variation CV (%)	0.674											

Table: Deflection Repeatability Test Results

Drop No	Deflections (µm) at different Radial Distances									Test load (KN)
	0	200	300	450	600	900	1200	1500	1800	
1	419.070	322.131	260.902	193.129	143.865	91.610	64.968	49.638	39.822	40
2	407.721	316.478	257.815	192.561	144.162	91.902	65.160	49.623	39.831	40
3	404.278	314.449	257.224	192.966	144.582	92.015	65.209	49.905	39.734	40
4	403.773	315.020	258.147	194.294	146.003	93.374	66.777	51.309	41.217	40
5	401.794	314.164	257.602	193.862	145.703	93.012	66.383	50.803	40.888	40
6	400.757	313.076	256.987	193.237	144.999	92.410	65.642	50.319	40.104	40
7	399.905	312.796	256.682	193.175	145.024	92.417	65.687	50.427	40.095	40
8	399.146	312.524	256.641	192.884	144.877	92.410	65.655	50.095	40.038	40
9	398.114	312.473	257.015	193.445	145.343	92.714	66.022	50.554	40.179	40
10	398.300	311.992	256.563	193.296	145.137	92.635	65.722	50.425	39.943	40
11	396.011	312.152	256.586	193.599	145.455	92.764	66.048	50.371	40.353	40
12	397.273	312.083	256.794	193.700	145.463	92.807	65.820	50.306	40.150	40
Mean	**402.178**	**314.112**	**257.413**	**193.346**	**145.051**	**92.506**	**65.758**	**50.314**	**40.196**	**40**
SD	**6.275**	**2.881**	**1.214**	**0.470**	**0.619**	**0.492**	**0.513**	**0.473**	**0.441**	-
Coefficient of Variation CV (%)	**1.560**	**0.917**	**0.471**	**0.243**	**0.426**	**0.532**	**0.781**	**0.941**	**1.098**	-

- **Deflection Test Scheme**

Deflection measurement scheme adopted for the section of 4 & 6 lane carriageway is given in below Table**.**

Table: Deflection Measurement Scheme (IRC: 115-2014)

Type of Carriageway	Recommended Measurement Scheme	Maximum Spacing for Test points along selected wheel path for pavements of different classification		
		Poor	Fair	Good
Four-lane Dual (divided) carriageway (Measurement scheme given for each carriageway)	Measure along outer wheel path of Outer lane	30	65	250
	Measure along outer wheel path of Inner lane	60	130	500
	Measure along the centre line of the paved shoulder (in case of widening projects)	120	260	500
Dual carriageways with 3 or More lanes in each direction (Measurement scheme given for each carriageway)	Measure along outer wheel path of Outermost lane	30	65	250
	Measure along outer wheel path of more distressed Inner lane	60	130	500
	Measure along the centre line of the paved shoulder (in case of widening projects)	120	260	500

Based on the pavement condition survey analysis and classification of pavement condition spacing between test points was finalized according to the above given Table and as per the latest guidelines of IRC: 115-2014. In all the project road, Pavement condition is assumed as fair and deflection data were taken at every 250 m for two lane road.

- **Deflection Data Collection**

The following steps were followed for measuring deflections at each test point.

(i) Equipment is positioned over the test location in such a way that the loading plate is positioned directly above the identified location and there was no standing water (surface texture completely filled with water) on the pavement surface.
(ii) Geophone frame was straightened and brought down to the pavement surface so that the probes of the geophones touch the ground. The loading plate was pressed against the pavement until the wheels of the vehicle get lifted up slightly from the ground.
(iii) The mass of the FWD was raised to the desired height and the loading plate assembly was lowered to the ground.
(iv) The mass was dropped.
(v) The mass was raised, held in position and dropped again. This process was repeated three times to ensure conditioning of the test location.
(vi) The data acquisition software was initialized with appropriate configuration.
(vii) The mass was dropped and the signals from load cell and geophones were recorded in the laptop.
(viii) The data was processed to determine the magnitude of the applied load and the surface deflections at different radial distances.
(ix) The height was adjusted in such a way that the amplitude of the impulse load is closet 40 KN.
(x) At each location, the load was dropped three times and data was recorded.

Checks performed on the Deflection Data

- Deflections should decrease with increasing distance from the loading plate.
- Deflection values should not be more than the capacity of the sensors.

Asphalt temperature at 40 mm depth from the surface of pavement was measured at an interval of every 30 minutes by digital thermometer. Figure shows the deflection data collection activity on project road.

Figure: FWD Data Collection on field

Raw deflection data are normalized at 40 KN for the overlay analysis purpose.

- **KGPBACK Computer Program & Back Calculations of E Moduli**

This section describes the salient features of the GA based program - KGPBACK developed for back calculation of layer moduli of each pavement layer from measured deflection basins. The flow chart for this algorithm is presented in below Figure

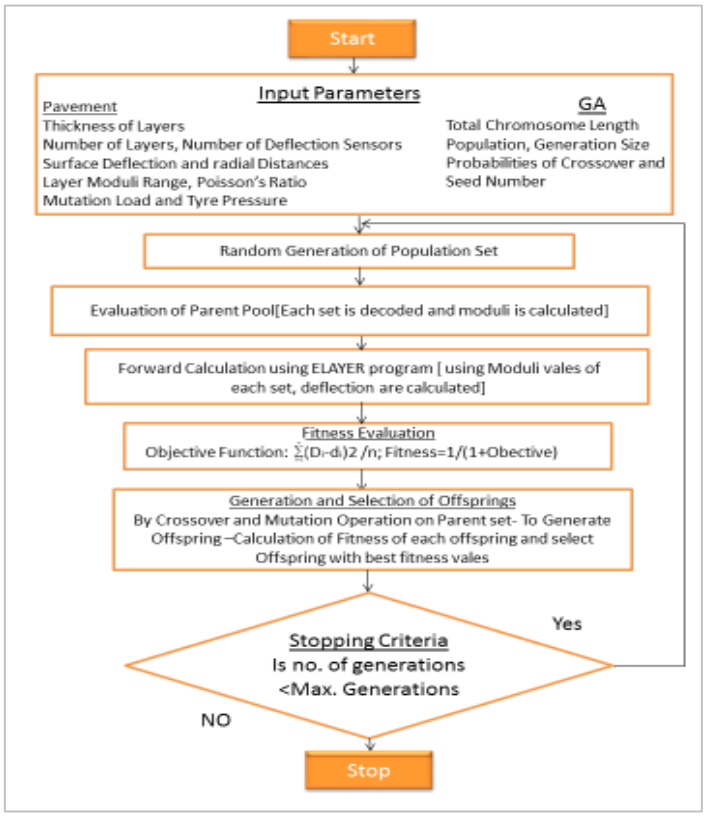


Figure: Flowchart for KGPBACK

KGPBACK program has been developed keeping in view the general features of the FWD developed in the investigation. The program does not back calculate Poisson's ratio and thicknesses. Normally typical values of Poisson ratio values are selected for the analysis as Poisson ratio values, when chosen within practical range; do not have significant influence on the deflections. Similarly, thicknesses of different layers are also assumed to be known. The typical objective function normally used in the case of back calculation analysis is the minimization of the sum of the squared differences of calculated and measured deflections. Ranges of different layer moduli are to be given as input to KGPBACK for back calculation. The following ranges of moduli are taken for different layers for carrying out back calculation using KGPBACK.

Bituminous Layer Moduli Ranges as per IRC:115-2014

By the detailed pavement condition survey, if Pavement condition is good, **Adopted Lower Range: - 750 Mpa** and **Upper Range: 3000 Mpa** and if Pavement condition are fair to poor, **Adopted Lower Range: - 400 Mpa** and **Upper Range: 1500 Mpa.**

Granular Layer as per IRC:115-2014
Adopted Lower Range: - 100 Mpa
Adopted Upper Range: - 500 Mpa
The subgrade moduli range is chosen based on the below method
$E_{Subgrade}$ = (1-μ^2)*P/ (3.14*r*w) (IRC: 115-2014 Equation no. III.2)

Where,
E_subgrade = backcalculated modulus of subgrade (Mpa)

DCP = Dynamic Cone Penetrometer value (mm/blow)

Consultant has adopted worst case subgrade E ranges based on above equation due to higher ranges of subgrade with Eqn. (III.2) and other methods of IRC: 115-2014.

Crust composition mentioned in above section was also an input parameter for KGPBACK. However, it was observed that sand was part of Granular layer at certain instances. For safe and conservative design, thickness of sand has been eliminated while considering the crust thickness as input for KGPBACK. The input values including E moduli range and layer thickness of KGPBACK input screen which was shown in below Figure.

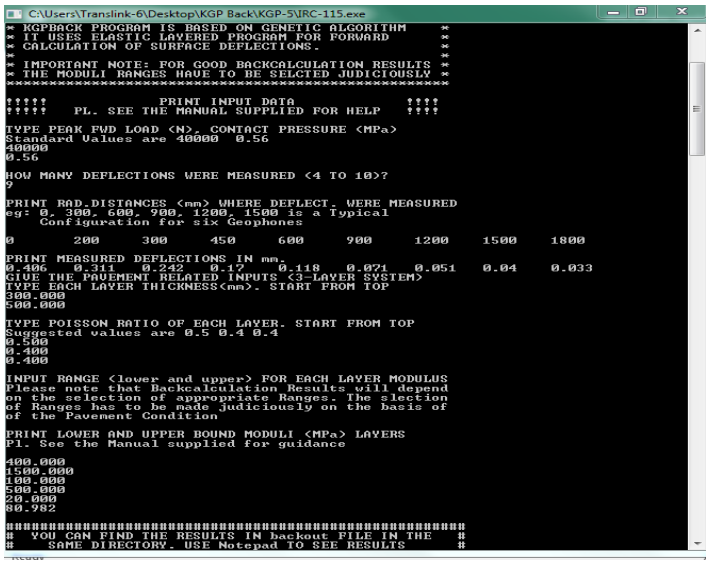


Figure: KGPBACK input Screen

- **Result of E Moduli for Pavement Layers**

The E moduli values were calculated at each test points of FWD using KGPBACK program considering the normalized deflection data. The back calculated moduli are used for the analysis of the in-service pavement and for assessment of the structural condition of the pavement. KGPBACK, which is a specific version of BACKGA program developed by the Transportation Engineering Section of IIT, Kharagpur. The E moduli values of each layer is the most important factor that affects the overall design of the pavement. E moduli values were corrected for temperature and seasonal variation which is further used for estimation of the design E moduli values.

- **Temperature Correction of Bitumen Layer**

Back calculated moduli values of the bituminous layers evaluated by FWD survey are influenced by the pavement temperature. Hence, the back calculated moduli obtained at temperatures other than the identified standard temperature would have to be corrected for a standard temperature of 35 degree Celsius. For areas in India having a tropical climate, the standard pavement temperature is recommended as 35°C. The bituminous layer modulli are corrected for a standard temperature of 35°C for each test points having temperature other than 35°C.

$$E_{T1} = \lambda E_{T2}$$

$$\lambda = \frac{1 - 0.238 \ln T_1}{1 - 0.238 \ln T_2}$$

Where, Lemda is a correction factor

Where, E_{T1} = Back calculated modulus (MPa) at Temperature T_1 (degree Celsius)

Where, E_{T2} = Back calculated modulus (MPa) at Temperature T_2 (degree Celsius)

- **Correction for Seasonal Variation - Non Bitumen Layer**

Moisture content affects the strength of subgrade and granular sub base/base layers. It is intended that the pavement layer moduli values should pertain to the period when the subgrade is at its weakest condition. In India, this period occurs during the recession of monsoon. It is, therefore, desirable to conduct deflection measurements during this period. Where the same is not feasible, a correction procedure should be adopted. Since the deflection data was collected during winter season, the winter correction factor has been applied for granular sub base/base and subgrade layer.

Seasonal correction factor for the Granular layer

$$E_{gran_Mon} = 10.5523 * (E_{gran_win})^{0.624} - 113.857$$

Where,
E gran_mon = Granular layer Modulus in Monsoon (MPa)
E gran_win = Granular layer Modulus in winter season (MPa)

Seasonal correction factor for the Subgrade layer

$$E_{sub_mon} = 3.351* (E_{sub_win})^{0.7688} - 28.9$$

Where,
E sub_mon = Subgrade Modulus in Monsoon (MPa)
E sub_win = Subgrade Modulus in winter season (MPa)

Annexures 3: Asset inventory and condition details

Annexure 3 (a) : Details of Sign Board

S.No	Chainage	Side	Signage
1	1.050	LHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
2	1.050	RHS	Object Hazard Marker
3	1.200	RHS	Object Hazard Marker
4	1.285	LHS	Speed Limit
5	1.330	LHS	School
6	1.350	LHS	Pedestrain Crossing
7	1.390	LHS	Rumble Strip
8	1.550	LHS	Cross Road
9	1.550	LHS	Speed Limit
10	1.630	RHS	Rumble Strip
11	1.650	RHS	Pedestrain Crossing
12	1.685	RHS	School
13	1.690	RHS	Stop Sign
14	1.690	RHS	Speed Breaker
15	1.690	RHS	Major Road Ahead
16	1.700	LHS	Stop Sign
17	1.700	LHS	Speed Breaker
18	1.700	LHS	Major Road Ahead
19	1.740	RHS	Speed Limit
20	1.855	RHS	Cross Road
21	1.990	LHS	Object Hazard Marker
22	2.285	RHS	Staggered Intersection
23	2.440	LHS	Stack Type Advance Direction Sign
24	2.460	LHS	Cross Road
25	2.560	LHS	Eating Place
26	2.595	RHS	Stop Sign
27	2.595	RHS	Speed Breaker
28	2.595	RHS	Major Road Ahead
29	2.635	LHS	Stop Sign
30	2.635	LHS	Speed Breaker
31	2.635	LHS	Major Road Ahead
32	2.775	RHS	Cross Road
33	2.800	LHS	Stack Type Advance Direction Sign
34	2.860	RHS	Eating Place
35	3.570	LHS	Direction Sign
36	3.630	LHS	Side Road Right
37	3.700	LHS	Accident Prone Area Sign Board
38	3.740	RHS	Stop Sign
39	3.740	RHS	Speed Breaker
40	3.740	RHS	Major Road Ahead
41	3.780	LHS	Object Hazard Marker
42	3.785	RHS	Object Hazard Marker
43	3.790	LHS	Object Hazard Marker
44	3.795	RHS	Object Hazard Marker
45	3.915	RHS	Side Road Left
46	3.930	RHS	Direction Sign
47	4.100	LHS	Stop Sign
48	4.300	LHS	Eating Place
49	4.620	LHS	Map Type Advance Direction Sing For Roundabout
50	4.620	LHS	Map Type Advance Direction Sing For Roundabout
51	4.625	LHS	Object Hazard Marker
52	4.630	RHS	Object Hazard Marker
53	4.650	LHS	NH Route Marker Sing
54	4.655	RHS	Eating Place
55	4.670	RHS	Reassurance Sign
56	4.710	RHS	NH Route Marker Sing

S.No	Chainage	Side	Signage
57	4.750	MEDIAN	Stack Type Advance Direction Sign
58	4.750	MEDIAN	TWO WAY Hazard Marker
59	4.800	MEDIAN	TWO WAY Hazard Marker
60	4.800	RHS	Stop Sign
61	4.800	LHS	Stop Sign
62	4.800	MEDIAN	TWO WAY Hazard Marker
63	4.800	MEDIAN	TWO WAY Hazard Marker
64	4.800	MEDIAN	Stack Type Advance Direction Sign
65	4.800	RHS	Stop Sign
66	4.800	RHS	Speed breaker
67	4.800	RHS	Give Way
68	4.800	LHS	Give Way
69	4.800	MEDIAN	Stack Type Advance Direction Sign
70	4.850		Stack Type Advance Direction Sign
71	4.895	LHS	NH Route Marker Sing
72	4.925	LHS	Reassurance Sign
73	4.950	RHS	NH Route Marker Sing
74	4.980	RHS	Map Type Advance Direction Sing For Roundabout
75	4.980	RHS	Map Type Advance Direction Sing For Roundabout
76	4.980	LHS	Eating Place
77	5.260	RHS	Eating Place
78	5.350	LHS	Accident Prone Area Sign Board
79	5.400	RHS	Helpline Number Sign Board
80	5.620	LHS	Speed Limit
81	5.640	LHS	School
82	5.680	LHS	Rumble Strip
83	5.720	LHS	Pedestrain Crossing
84	5.800		Speed Limit
85	5.840	RHS	Pedestrain Crossing
86	5.865	LHS	Right Hand Curve
87	5.870	RHS	Rumble Strip
88	5.900	RHS	Accident Prone Area Sign Board
89	5.905	LHS	Eating Place
90	5.910	RHS	School
91	5.935	RHS	Speed Limit
92	5.980	LHS	Chevron
93	5.980	RHS	Chevron
94	6.030	RHS	Chevron
95	6.030	LHS	Chevron
96	6.085	LHS	Chevron
97	6.088	RHS	Chevron
98	6.105	RHS	Chevron
99	6.110	LHS	Chevron
100	6.130	RHS	Chevron
101	6.140	LHS	Chevron
102	6.160	LHS	Chevron
103	6.165	RHS	Chevron
104	6.220	RHS	Eating Place
105	6.250	LHS	Chevron
106	6.250	RHS	Chevron
107	6.280	RHS	Left Hand Curve
108	6.385	LHS	Petrol Pump
109	6.640	LHS	Eating Place
110	6.655	LHS	Object Hazard Marker
111	6.660	RHS	Object Hazard Marker
112	6.704	LHS	Stack Type Advance Direction Sign
113	6.750	LHS	Cross Road

S.No	Chainage	Side	Signage
114	6.780	RHS	Petrol Pump
115	6.800	RHS	Accident Prone Area Sign Board
116	6.885	RHS	Stop Sign
117	6.885	RHS	Speed Breaker
118	6.885	RHS	Major Road Ahead
119	6.890	LHS	Stop Sign
120	6.890	LHS	Speed Breaker
121	6.890	LHS	Major Road Ahead
122	6.950	RHS	Eating Place
123	7.000	LHS	Place Identification Sign
124	7.000	RHS	Place Identification Sign
125	7.040	RHS	Cross Road
126	7.064	LHS	Stack Type Advance Direction Sign
127	7.330	LHS	Object Hazard Marker
128	7.335	RHS	Object Hazard Marker
129	8.700		Stop Sign
130	8.700		Major Road Ahead
131	8.750		Object Hazard Marker
132	8.800		Object Hazard Marker
133	9.000	LHS	Place Identification Sign
134	9.000	RHS	Place Identification Sign
135	9.135	LHS	Stack Type Advance Direction Sign
136	9.135	LHS	Direction Sign
137	9.140	LHS	Eating Place
138	9.160	LHS	Cross Road
139	9.295	RHS	Stop Sign
140	9.295	RHS	Speed Breaker
141	9.295	RHS	Major Road Ahead
142	9.305	LHS	Stop Sign
143	9.305	LHS	Speed Breaker
144	9.305	LHS	Major Road Ahead
145	9.405	RHS	Cross Road
146	9.435	RHS	Eating Place
147	9.495	LHS	Stack Type Advance Direction Sign
148	9.495	RHS	Direction Sign
149	9.900	RHS	Reassurance Sign
150	10.100	LHS	Reassurance Sign
151	10.379	LHS	Stack Type Advance Direction Sign
152	10.379	LHS	Direction Sign
153	10.405	LHS	Cross Road
154	10.550	RHS	Stop Sign
155	10.550	RHS	Speed Breaker
156	10.550	RHS	Major Road Ahead
157	10.560	LHS	Stop Sign
158	10.560	LHS	Speed Breaker
159	10.560	LHS	Major Road Ahead
160	10.705	RHS	Cross Road
161	10.739	RHS	Direction Sign
162	10.739	LHS	Stack Type Advance Direction Sign
163	10.843	LHS	Stack Type Advance Direction Sign
164	10.843	LHS	Direction Sign
165	10.885	LHS	Cross Road
166	11.005	RHS	Stop Sign
167	11.005	RHS	Speed Breaker
168	11.005	RHS	Major Road Ahead
169	11.015	LHS	Stop Sign
170	11.015	LHS	Speed Breaker

S.No	Chainage	Side	Signage
171	11.015	LHS	Major Road Ahead
172	11.185	RHS	Cross Road
173	11.203	LHS	Stack Type Advance Direction Sign
174	11.203	RHS	Direction Sign
175	11.500	LHS	Stack Type Advance Direction Sign
176	11.500	LHS	Direction Sign
177	11.530	LHS	Cross Road
178	11.600	RHS	Speed limit
179	11.620	LHS	Eating Place
180	11.655	RHS	Stop Sign
181	11.655	RHS	Speed Breaker
182	11.655	RHS	Major Road Ahead
183	11.695	LHS	Stop Sign
184	11.695	LHS	Speed Breaker
185	11.695	LHS	Major Road Ahead
186	11.830	RHS	Cross Road
187	11.860	LHS	Stack Type Advance Direction Sign
188	11.860	RHS	Direction Sign
189	11.915	RHS	Eating Place
190	13.485	LHS	Right Hand Curve
191	13.485	RHS	Chevron
192	13.600	RHS	Chevron
193	13.600	LHS	Chevron
194	13.650	RHS	Chevron
195	13.655	LHS	Chevron
196	13.710	LHS	Chevron
197	13.715	LHS	Chevron
198	13.830	LHS	Chevron
199	13.830	RHS	Left Hand Curve
200	14.250	LHS	Two Car Accident Front Side Sign Board
201	14.275	LHS	Stack Type Advance Direction Sign
202	14.300	RHS	Helpline Number Sign Board
203	14.340	LHS	NH Route Marker Sing
204	14.360	RHS	Reassurance Sign
205	14.398	RHS	NH Route Marker Sing
206	14.540	LHS	NH Route Marker Sing
207	14.570	LHS	Reassurance Sign
208	14.595	RHS	NH Route Marker Sing
209	14.635	RHS	Stack Type Advance Direction Sign
210	14.650	RHS	Two Car Accident Front Side Sign Board
211	15.135	RHS	Stack Type Advance Direction Sign
212	18.775	LHS	Stack Type Advance Direction Sign
213	19.200	LHS	Rumble Strip
214	19.225	LHS	Stack Type Advance Direction Sign
215	19.250	LHS	NH Route Marker Sing
216	19.260	RHS	NH Route Marker Sing
217	19.262	LHS	Speed Limit
218	19.305	LHS	Start Of Dual Carriageway
219	19.330	RHS	Reassurance Sign
220	19.350	RHS	Rumble Strip
221	19.600	LHS	Reassurance Sign
222	356.950	RHS	Stack Type Advance Direction Sign
223	357.000	LHS	Place Identification Sign
224	357.000	RHS	Place Identification Sign
225	357.000	RHS	End Of Dual Carriageway
226	357.040	LHS	NH Route Marker Sing
227	357.070	RHS	NH Route Marker Sing

S.No	Chainage	Side	Signage
228	357.100	LHS	Petrol Pump
229	357.100	RHS	Gantry Mounted Sing For In Advance For An Interchange
230	357.330	LHS	Side Road Left
231	357.400	RHS	Petrol Pump
232	357.480	LHS	Stop Sign
233	357.480	LHS	Speed Breaker
234	357.480	LHS	Major Road Ahead
235	357.625	RHS	Side Road Right
236	357.650	MEDIAN	Helpline Number Sign Board
237	357.710	LHS	Speed Limit
238	357.715	RHS	Restriction Ends
239	357.720	LHS	Direction Sign
240	357.750	LHS	Side Road Right
241	357.800	MEDIAN	Gap In Meadian
242	357.800	LHS	Rumble Strip
243	357.845	LHS	Pedestrain Crossing
244	357.885	MEDIAN	Object Hazard Marker
245	357.885	MEDIAN	Compulsory Keep Left
246	357.900	RHS	Stop Sign
247	357.900	RHS	Speed Breaker
248	357.900	RHS	Major Road Ahead
249	357.910	MEDIAN	Object Hazard Marker
250	357.910	MEDIAN	Compulsory Keep Left
251	357.950	RHS	Pedestrain Crossing
252	357.975	LHS	Direction Sign
253	358.000	LHS	Place Identification Sign
254	358.000	RHS	Place Identification Sign
255	358.000	MEDIAN	Gap In Meadian
256	358.000	LHS	Side Road Left
257	358.005	RHS	Rumble Strip
258	358.050	RHS	Side Road Left
259	358.075	LHS	Restriction Ends
260	358.080	RHS	Speed Limit
261	358.080	RHS	Direction Sign
262	358.160	LHS	Stop Sign
263	358.160	LHS	Speed Breaker
264	358.160	LHS	Major Road Ahead
265	358.300	RHS	Side Road Right
266	358.335	RHS	Direction Sign
267	359.000	RHS	Reassurance Sign
268	359.260	LHS	Right Hand Curve
269	359.300	LHS	Chevron
270	359.400	LHS	Chevron
271	359.400	MEDIAN	Chevron
272	359.495	MEDIAN	Chevron
273	359.545	MEDIAN	Left Hand Curve
274	359.945	LHS	Object Hazard Marker
275	359.950	RHS	Object Hazard Marker
276	360.060	LHS	Reverse Bend
277	360.100	LHS	Chevron
278	360.198	LHS	Chevron
279	360.198	MEDIAN	Chevron
280	360.285	MEDIAN	Chevron
281	360.340	MEDIAN	Chevron
282	360.340	RHS	Chevron
283	360.485	MEDIAN	Chevron
284	360.485	RHS	Chevron

S.No	Chainage	Side	Signage
285	360.585	LHS	Speed Limit
286	360.585	RHS	Restriction Ends
287	360.625	MEDIAN	Chevron
288	360.625	RHS	Chevron
289	360.628	LHS	Rumble Strip
290	360.665	RHS	Reverse Bend
291	360.670	LHS	Pedestrain Crossing
292	360.710	LHS	Place Identification Sign
293	360.770	LHS	Stack Type Advance Direction Sign
294	360.780	LHS	Side Road Left
295	360.790	RHS	Place Identification Sign
296	360.820	RHS	Pedestrain Crossing
297	360.830	LHS	Eating Place
298	360.850	RHS	Rumble Strip
299	360.860	MEDIAN	Gap In Meadian
300	360.885	LHS	Pedestrain Crossing
301	360.890	RHS	Speed Limit
302	360.900	RHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
303	360.925	LHS	Restriction Ends
304	360.945	MEDIAN	Object Hazard Marker
305	360.945	MEDIAN	Compulsory Keep Left
306	360.955	RHS	Stop Sign
307	360.955	RHS	Speed Breaker
308	360.955	RHS	Major Road Ahead
309	360.960	LHS	Stop Sign
310	360.960	LHS	Speed Breaker
311	360.960	LHS	Major Road Ahead
312	361.015	RHS	Pedestrain Crossing
313	361.045	MEDIAN	Gap In Meadian
314	361.085	LHS	Pedestrain Crossing
315	361.090	RHS	Side Road Right
316	361.120	LHS	Object Hazard Marker
317	361.125	RHS	Object Hazard Marker
318	361.130	LHS	Stack Type Advance Direction Sign
319	361.145	LHS	Bus Stop
320	361.150	RHS	Eating Place
321	361.235	LHS	Two Way Hazard Marker
322	361.235	LHS	Pass Either Side
323	361.415	RHS	Two Way Hazard Marker
324	361.415	RHS	Pass Either Side
325	361.450	LHS	Toll Road 01 KM A Head
326	361.499	RHS	Bus Stop
327	361.525	RHS	Pedestrain Crossing
328	361.790	MEDIAN	Left Hand Curve
329	361.850	MEDIAN	Chevron
330	361.950	LHS	Toll Road 500 Meter A Head
331	361.975	MEDIAN	Chevron
332	361.975	RHS	Chevron
333	362.50	MEDIAN	Helpline Number Sign Board
334	362.075	RHS	Chevron
335	362.115	RHS	Right Hand Curve
336	362.300	LHS	Toll Plaza Rate List Board
337	362.340	LHS	Toll Plaza Exemption Board
338	362.400	LHS	Toll Plaza Exemption Board
339	362.450	LHS	Stop Sign
340	362.450	LHS	Stop Sign
341	362.450	LHS	Stop Sign

S.No	Chainage	Side	Signage
342	362.450	LHS	Stop Sign
343	362.500	RHS	Stop Sign
344	362.501	RHS	Stop Sign
345	362.502	RHS	Stop Sign
346	362.503	RHS	Stop Sign
347	362.600	RHS	Toll Road 01 KM A Head
348	362.640	RHS	Toll Road 500 Meter A Head
349	362.680	RHS	Toll Plaza Rate List Board
350	362.950	RHS	Toll Plaza Exemption Board
351	363.000	MEDIAN	Accident Prone Area Sign Board
352	363.100	LHS	Right Hand Curve
353	363.125	LHS	Object Hazard Marker
354	363.130	RHS	Object Hazard Marker
355	363.175	LHS	Chevron
356	363.185	MEDIAN	Chevron
357	363.285	LHS	Chevron
358	363.285	MEDIAN	Chevron
359	363.425	LHS	Chevron
360	363.435	MEDIAN	Chevron
361	363.450	MEDIAN	Left Hand Curve
362	363.550	LHS	Right Hand Curve
363	363.595	LHS	Chevron
364	363.675	MEDIAN	Chevron
365	363.740	MEDIAN	Chevron
366	363.750	LHS	Chevron
367	363.820	MEDIAN	Chevron
368	363.825	LHS	Chevron
369	363.895	LHS	Chevron
370	363.940	LHS	Direction Sign
371	363.980	LHS	Side Road Right
372	363.985	RHS	Chevron
373	363.998	MEDIAN	Gap In Meadian
374	364.015	MEDIAN	Left Hand Curve
375	364.050	LHS	Pedestrain Crossing
376	364.105	MEDIAN	Object Hazard Marker
377	364.105	MEDIAN	Compulsory Keep Left
378	364.115	RHS	Stop Sign
379	364.115	RHS	Speed Breaker
380	364.115	RHS	Major Road Ahead
381	364.175	RHS	Pedestrain Crossing
382	364.230	MEDIAN	Gap In Meadian
383	364.250	LHS	Speed Limit
384	364.260	RHS	Side Road Left
385	364.300	LHS	Rumble Strip
386	364.300	RHS	Direction Sign
387	364.330	LHS	Pedestrain Crossing
388	364.360	LHS	Place Identification Sign
389	364.370	LHS	Chevron
390	364.440	RHS	Place Identification Sign
391	364.455	MEDIAN	Left Hand Curve
392	364.460	RHS	Pedestrain Crossing
393	364.495	LHS	Side Road Left
394	364.500	RHS	Rumble Strip
395	364.530	LHS	Chevron
396	364.530	RHS	Chevron
397	364.560	RHS	Speed Limit
398	364.630	LHS	Stop Sign

S.No	Chainage	Side	Signage
399	364.630	LHS	Speed Breaker
400	364.630	LHS	Major Road Ahead
401	364.665	RHS	Chevron
402	364.670	MEDIAN	Chevron
403	364.720	RHS	Chevron
404	364.745	MEDIAN	Chevron
405	364.760	RHS	Side Road Right
406	364.795	RHS	Chevron
407	364.795	MEDIAN	Chevron
408	364.845	RHS	Chevron
409	364.850	MEDIAN	Chevron
410	364.900	RHS	Chevron
411	364.900	RHS	Pedestrain Crossing
412	364.925	MEDIAN	Chevron
413	364.970	RHS	Chevron
414	364.985	MEDIAN	Chevron
415	365.115	MEDIAN	Chevron
416	365.195	RHS	Right Hand Curve
417	365.405	LHS	Right Hand Curve
418	365.450	LHS	Chevron
419	365.535	MEDIAN	Chevron
420	365.600	LHS	Chevron
421	365.690	MEDIAN	Chevron
422	365.735	MEDIAN	Left Hand Curve
423	365.900	RHS	Reassurance Sign
424	365.935	MEDIAN	Gap In Meadian
425	365.955	LHS	Pedestrain Crossing
426	366.015	MEDIAN	Object Hazard Marker
427	366.040	MEDIAN	Compulsory Keep Left
428	366.050	MEDIAN	Speed Limit
429	366.100	LHS	Reassurance Sign
430	366.120	RHS	Pedestrain Crossing
431	366.140	MEDIAN	Gap In Meadian
432	366.645	LHS	Object Hazard Marker
433	366.650	RHS	Object Hazard Marker
434	366.900	MEDIAN	Helpline Number Sign Board
435	367.030	LHS	Right Hand Curve
436	367.060	LHS	Chevron
437	367.150	MEDIAN	Chevron
438	367.225	LHS	Chevron
439	367.305	MEDIAN	Chevron
440	367.335	MEDIAN	Left Hand Curve
441	367.555	LHS	Object Hazard Marker
442	367.560	RHS	Object Hazard Marker
443	367.795	LHS	Object Hazard Marker
444	367.800	RHS	Object Hazard Marker
445	367.900	LHS	Stack Type Advance Direction Sign
446	367.985	RHS	Chevron
447	367.985	MEDIAN	Left Hand Curve
448	368.000	LHS	Accident Prone Area Sign Board
449	368.040	MEDIAN	Gap In Meadian
450	368.085	MEDIAN	Chevron
451	368.090	LHS	Pedestrain Crossing
452	368.090	RHS	Chevron
453	368.140	MEDIAN	Chevron
454	368.143	MEDIAN	Object Hazard Marker
455	368.150	LHS	Speed Limit

S.No	Chainage	Side	Signage
456	368.150	RHS	Chevron
457	368.160	MEDIAN	Compulsory Keep Left
458	368.180	RHS	Restriction Ends
459	368.205	MEDIAN	Chevron
460	368.205	RHS	Chevron
461	368.235	LHS	Rumble Strip
462	368.240	RHS	Pedestrain Crossing
463	368.260	LHS	Pedestrain Crossing
464	368.265	MEDIAN	Gap In Meadian
465	368.290	LHS	Place Identification Sign
466	368.325	MEDIAN	Chevron
467	368.325	RHS	Right Hand Curve
468	368.390	RHS	Place Identification Sign
469	368.410	LHS	Stack Type Advance Direction Sign
470	368.420	RHS	Pedestrain Crossing
471	368.435	LHS	Major Road Ahead
472	368.455	RHS	Rumble Strip
473	368.460	LHS	Restriction Ends
474	368.475	RHS	Speed Limit
475	368.500	MEDIAN	Helpline Number Sign Board
476	368.500	LHS	Speed Limit
477	368.530	LHS	School
478	368.565	LHS	Rumble Strip
479	368.585	RHS	Stop Sign
480	368.585	RHS	Speed Breaker
481	368.585	RHS	Major Road Ahead
482	368.600	LHS	Stop Sign
483	368.600	LHS	Speed Breaker
484	368.600	LHS	Major Road Ahead
485	368.630	LHS	Pedestrain Crossing
486	368.730	RHS	Pedestrain Crossing
487	368.760	RHS	Major Road Ahead
488	368.770	LHS	Stack Type Advance Direction Sign
489	368.810	RHS	Rumble Strip
490	368.830	RHS	School
491	368.865	RHS	Speed Limit
492	369.430	LHS	Speed Limit
493	369.460	LHS	School
494	369.500	MEDIAN	Gap In Meadian
495	369.510	LHS	Rumble Strip
496	369.545	LHS	Pedestrain Crossing
497	369.598	MEDIAN	Object Hazard Marker
498	369.598	MEDIAN	Compulsory Keep Left
499	369.660	LHS	Petrol Pump
500	369.675	RHS	Pedestrain Crossing
501	369.685	LHS	Eating Place
502	369.715	RHS	Rumble Strip
503	369.720	MEDIAN	Gap In Meadian
504	369.765	RHS	School
505	369.820	RHS	Speed Limit
506	369.950	RHS	Petrol Pump
507	369.985	RHS	Eating Place
508	370.300	LHS	Petrol Pump
509	370.600	RHS	Petrol Pump
510	370.998	LHS	Eating Place
511	371.145	LHS	Speed Limit
512	371.185	LHS	Rumble Strip

S.No	Chainage	Side	Signage
513	371.210	RHS	Place Identification Sign
514	371.225	LHS	Object Hazard Marker
515	371.230	RHS	Object Hazard Marker
516	371.260	LHS	Place Identification Sign
517	371.285	RHS	Eating Place
518	371.290	LHS	Petrol Pump
519	371.340	LHS	Pedestrain Crossing
520	371.360	RHS	Speed Limit
521	371.398	LHS	Petrol Pump
522	371.420	LHS	Bus Stop
523	371.485	LHS	Two Way Hazard Marker
524	371.485	LHS	Pass Either Side
525	371.540	RHS	Petrol Pump
526	371.550	RHS	Stop Sign
527	371.550	RHS	Speed Breaker
528	371.550	RHS	Major Road Ahead
529	371.560	LHS	Eating Place
530	371.680	RHS	Two Way Hazard Marker
531	371.680	RHS	Pass Either Side
532	371.745	RHS	Bus Stop
533	371.750	LHS	Side Road Right
534	371.760	RHS	Petrol Pump
535	371.800	RHS	Pedestrain Crossing
536	371.855	RHS	Eating Place
537	371.865	LHS	Side Road Right
538	371.905	MEDIAN	Gap In Meadian
539	371.905	RHS	Rumble Strip
540	371.940	RHS	Stop Sign
541	371.940	RHS	Speed Breaker
542	371.940	RHS	Major Road Ahead
543	371.955	LHS	Pedestrain Crossing
544	372.000	MEDIAN	Left Hand Curve
545	372.030	MEDIAN	Object Hazard Marker
546	372.030	RHS	Chevron
547	372.055	MEDIAN	Compulsory Keep Left
548	372.055	RHS	Stop Sign
549	372.055	RHS	Speed Breaker
550	372.055	RHS	Major Road Ahead
551	372.100	RHS	Side Road Left
552	372.130	MEDIAN	Chevron
553	372.140	RHS	Chevron
554	372.165	RHS	Side Road Left
555	372.195	MEDIAN	Chevron
556	372.200	RHS	Pedestrain Crossing
557	372.225	LHS	Rumble Strip
558	372.235	RHS	Chevron
559	372.250	LHS	School
560	372.255	MEDIAN	Gap In Meadian
561	372.270	LHS	Speed Limit
562	372.325	LHS	Pedestrain Crossing
563	372.335	RHS	Right Hand Curve
564	372.350	MEDIAN	Chevron
565	372.420	RHS	Pedestrain Crossing
566	372.465	RHS	Speed Limit
567	372.520	RHS	School
568	372.550	RHS	Rumble Strip
569	373.345	LHS	Object Hazard Marker

S.No	Chainage	Side	Signage
570	373.350	RHS	Object Hazard Marker
571	373.420	LHS	Direction Sign
572	373.505	MEDIAN	Gap In Meadian
573	373.550	LHS	Pedestrain Crossing
574	373.595	MEDIAN	Object Hazard Marker
575	373.600	LHS	Stop Sign
576	373.600	LHS	Speed Breaker
577	373.600	LHS	Major Road Ahead
578	373.600	LHS	Speed Breaker
579	373.600	MEDIAN	Object Hazard Marker
580	373.630	MEDIAN	Compulsory Keep Left
581	373.670	LHS	Direction Sign
582	373.695	RHS	Pedestrain Crossing
583	373.725	MEDIAN	Gap In Meadian
584	373.780	RHS	Direction Sign
585	373.885	LHS	Rumble Strip
586	373.950	LHS	Pedestrain Crossing
587	374.0	MEDIAN	Helpline Number Sign Board
588	374.030	RHS	Direction Sign
589	374.060	RHS	Pedestrain Crossing
590	374.125	RHS	Rumble Strip
591	374.310	RHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
592	374.365	LHS	Object Hazard Marker
593	374.370	RHS	Object Hazard Marker
594	374.460	LHS	Right Hand Curve
595	374.495	LHS	Chevron
596	374.500	MEDIAN	Accident Prone Area Sign Board
597	374.700	MEDIAN	Object Hazard Marker
598	374.700	LHS	Place Identification Sign
599	374.700	MEDIAN	Cluster of Red Peflector
600	374.530	LHS	Stack Type Advance Direction Sign
601	374.550	LHS	Place Identification Sign
602	374.570	LHS	Direction Sign
603	374.575	LHS	Speed Limit
604	374.600	LHS	Side Road Right
605	374.600	RHS	Chevron
606	374.630	LHS	Rumble Strip
607	374.635	RHS	Chevron
608	374.650	LHS	Chevron
609	374.650	RHS	Place Identification Sign
610	374.680	LHS	Start Of Dual Carriageway
611	374.690	RHS	Chevron
612	374.720	LHS	Chevron
613	374.730	LHS	Entry In Service Road
614	374.745	LHS	Stop Sign
615	374.745	LHS	Speed Breaker
616	374.745	LHS	Major Road Ahead
617	374.745	RHS	Stop Sign
618	374.745	RHS	Speed Breaker
619	374.745	RHS	Major Road Ahead
620	374.760	RHS	E0It Of Service Road
621	374.780	LHS	Two Way Hazard Marker
622	374.780	LHS	Pass Either Side
623	374.815	LHS	Chevron
624	374.820	RHS	Rumble Strip
625	374.830	RHS	Speed Limit
626	374.845	RHS	End Of Dual Carriageway

S.No	Chainage	Side	Signage
627	374.855	LHS	Chevron
628	374.860	RHS	Chevron
629	374.915	RHS	Side Road Left
630	374.930	RHS	Direction Sign
631	374.945	LHS	Chevron
632	374.955	RHS	Chevron
633	375.000	LHS	Stack Type Advance Direction Sign
634	375.035	RHS	Chevron
635	375.045	LHS	NH Route Marker Sing
636	375.075	RHS	Left Hand Curve
637	375.095	RHS	Reassurance Sign
638	375.120	RHS	NH Route Marker Sing
639	375.130	LHS	Petrol Pump
640	375.150	LHS	Object Hazard Marker
641	375.170	LHS	Stack Type Advance Direction Sign
642	375.185	RHS	Object Hazard Marker
643	375.240	LHS	NH Route Marker Sing
644	375.260	LHS	Reassurance Sign
645	375.285	RHS	NH Route Marker Sing
646	375.340	RHS	Stop Sign
647	375.340	RHS	Speed Breaker
648	375.340	RHS	Major Road Ahead
649	375.350	RHS	Stack Type Advance Direction Sign
650	375.420	RHS	Petrol Pump
651	375.445	LHS	E0It Of Service Road
652	375.480	RHS	Place Identification Sign
653	375.480	LHS	Place Identification Sign
654	375.545	LHS	Direction Sign
655	375.570	LHS	Side Road Left
656	375.570	RHS	Two Way Hazard Marker
657	375.570	RHS	Pass Either Side
658	375.570	LHS	Direction Sign
659	375.615	LHS	Side Road Right
660	375.625	RHS	Entry In Service Road
661	375.720	RHS	Stack Type Advance Direction Sign
662	375.740	LHS	Stop Sign
663	375.740	LHS	Speed Breaker
664	375.740	LHS	Major Road Ahead
665	375.740	RHS	Stop Sign
666	375.740	RHS	Speed Breaker
667	375.740	RHS	Major Road Ahead
668	375.820	LHS	Object Hazard Marker
669	375.825	RHS	Object Hazard Marker
670	375.875	RHS	Side Road Right
671	375.895	RHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
672	375.900	RHS	Side Road Left
673	375.900	RHS	Object Hazard Marker
674	375.905	RHS	Direction Sign
675	375.930	RHS	Direction Sign
676	375.950	LHS	Right Hand Curve
677	375.960	RHS	Chevron
678	376.060	LHS	Chevron
679	376.060	LHS	Chevron
680	376.135	LHS	Chevron
681	376.140	RHS	Chevron
682	376.200	LHS	Chevron
683	376.200	RHS	Chevron

S.No	Chainage	Side	Signage
684	376.300	LHS	Chevron
685	376.320	RHS	Left Hand Curve
686	376.545	LHS	Object Hazard Marker
687	376.550	RHS	Object Hazard Marker
688	376.560	LHS	Direction Sign
689	376.585	LHS	Side Road Left
690	376.750	LHS	Stop Sign
691	376.750	LHS	Speed Breaker
692	376.750	LHS	Major Road Ahead
693	376.800	LHS	Accident Prone Area Sign Board
694	376.880	RHS	Side Road Right
695	376.920	RHS	Direction Sign
696	377.280	RHS	Restriction Ends
697	377.280	LHS	Speed Limit
698	377.340	LHS	Pedestrain Crossing
699	377.360	LHS	Pedestrain Crossing
700	377.390	LHS	Place Identification Sign
701	377.500	RHS	Place Identification Sign
702	377.540	RHS	Pedestrain Crossing
703	377.565	RHS	Rumble Strip
704	377.600	LHS	Accident Prone Area Sign Board
705	377.620	LHS	Restriction Ends
706	377.620	RHS	Speed Limit
707	378.100	LHS	Helpline Number Sign Board
708	378.250	LHS	Left Hand Curve
709	378.260	RHS	Chevron
710	378.345	RHS	Chevron
711	378.355	RHS	Chevron
712	378.400	RHS	Chevron
713	378.400	RHS	Chevron
714	378.430	LHS	Side Road Right
715	378.460	LHS	Chevron
716	378.460	RHS	Chevron
717	378.500	LHS	Speed Limit
718	378.530	LHS	Chevron
719	378.545	RHS	Right Hand Curve
720	378.565	RHS	Stop Sign
721	378.565	RHS	Speed Breaker
722	378.565	RHS	Major Road Ahead
723	378.570	LHS	Eating Place
724	378.595	LHS	Object Hazard Marker
725	378.600	RHS	Object Hazard Marker
726	378.730	RHS	Side Road Left
727	378.750	LHS	Speed Limit
728	378.800	RHS	Stack Type Advance Direction Sign
729	378.870	RHS	Eating Place
730	379.170	LHS	Eating Place
731	379.225	LHS	Petrol Pump
732	379.350	LHS	Eating Place
733	379.460	RHS	Eating Place
734	379.510	RHS	Petrol Pump
735	379.620	LHS	Left Hand Curve
736	379.660	RHS	Eating Place
737	379.680	LHS	Chevron
738	379.800	LHS	Chevron
739	379.800	RHS	Chevron
740	379.810	RHS	Chevron

S.No	Chainage	Side	Signage
741	379.840	RHS	Chevron
742	379.865	RHS	Chevron
743	379.935	RHS	Right Hand Curve
744	380.000	RHS	Place Identification Sign
745	381.000	RHS	Accident Prone Area Sign Board
746	381.180	LHS	Direction Sign
747	381.200	LHS	Side Road Left
748	381.360	LHS	Stop Sign
749	381.360	LHS	Speed Breaker
750	381.360	LHS	Major Road Ahead
751	382.450	RHS	Helpline Number Sign Board
752	381.510	RHS	Side Road Right
753	381.540	RHS	Direction Sign
754	382.530	LHS	Direction Sign
755	382.550	LHS	Side Road Right
756	382.640	LHS	Direction Sign
757	382.705	RHS	Stop Sign
758	382.705	RHS	Speed Breaker
759	382.705	RHS	Major Road Ahead
760	382.805	LHS	Object Hazard Marker
761	382.810	RHS	Object Hazard Marker
762	382.860	RHS	Side Road Left
763	382.890	RHS	Direction Sign
764	383.000	RHS	Direction Sign
765	383.000	LHS	Speed Limit
766	383.600	LHS	Speed Limit
767	384.190	LHS	Direction Sign
768	384.395	LHS	Object Hazard Marker
769	384.400	RHS	Object Hazard Marker
770	384.550	RHS	Direction Sign
771	384.900	RHS	Object Hazard Marker
772	385.560	LHS	Side Road Left
773	385.600	LHS	Speed Limit
774	385.640	RHS	Speed Limit
775	385.800	LHS	Helpline Number Sign Board
776	385.900	RHS	Reassurance Sign
777	386.100	LHS	Reassurance Sign
778	386.400	LHS	Pedestrain Crossing
779	386.435	LHS	Bus Stop
780	386.485	LHS	Object Hazard Marker
781	386.490	RHS	Object Hazard Marker
782	386.530	LHS	Direction Sign
783	386.535	LHS	Two Way Hazard Marker
784	386.535	LHS	Pass Either Side
785	386.535	RHS	Two Way Hazard Marker
786	386.535	RHS	Pass Either Side
787	386.600	LHS	Right Hand Curve
788	386.600	RHS	Two Way Hazard Marker
789	386.670	LHS	Chevron
790	386.725	LHS	Stop Sign
791	386.725	LHS	Speed Breaker
792	386.725	LHS	Major Road Ahead
793	386.740	RHS	Chevron
794	386.745	LHS	Chevron
795	386.780	RHS	Bus Stop
796	386.800	RHS	Pedestrain Crossing
797	386.830	LHS	Chevron

S.No	Chainage	Side	Signage
798	386.835	LHS	Chevron
799	386.870	RHS	Side Road Right
800	386.890	RHS	Direction Sign
801	386.900	RHS	Chevron
802	386.900	LHS	Chevron
803	386.985	LHS	Chevron
804	386.990	LHS	Chevron
805	387.050	RHS	Chevron
806	387.050	LHS	Chevron
807	387.145	LHS	Truck Lay Bye
808	387.215	RHS	Chevron
809	387.275	RHS	Left Hand Curve
810	387.300	LHS	Two Way Hazard Marker
811	387.300	LHS	Pass Either Side
812	387.550	RHS	Truck Lay Bye
813	387.700	LHS	Petrol Pump
814	387.920	LHS	Left Hand Curve
815	387.980	LHS	Chevron
816	388.000	LHS	Place Identification Sign
817	388.000	RHS	Petrol Pump
818	388.035	RHS	Chevron
819	388.118	RHS	Chevron
820	388.123	LHS	Chevron
821	388.192	RHS	Chevron
822	388.196	LHS	Chevron
823	388.280	RHS	Chevron
824	388.330	RHS	Chevron
825	388.405	RHS	Right Hand Curve
826	388.550	LHS	Object Hazard Marker
827	388.560	RHS	Object Hazard Marker
828	388.690	LHS	Direction Sign
829	388.720	LHS	Side Road Left
830	388.875	LHS	Stop Sign
831	388.875	LHS	Speed Breaker
832	388.875	LHS	Major Road Ahead
833	388.900	LHS	Object Hazard Marker
834	389.025	RHS	Side Road Right
835	389.050	RHS	Direction Sign
836	390.495	LHS	Left Hand Curve
837	390.540	LHS	Chevron
838	390.600	LHS	Cattel Sign
839	390.630	RHS	Chevron
840	390.695	RHS	Chevron
841	390.785	RHS	Chevron
842	390.800	RHS	Helpline Number Sign Board
843	390.850	RHS	Right Hand Curve
844	391.300	RHS	Accident prone area
845	391.345	LHS	Right Hand Curve
846	391.365	RHS	Chevron
847	391.370	LHS	Chevron
848	391.400	LHS	Cauionary Sign Board
849	391.485	LHS	Chevron
850	391.505	LHS	Chevron
851	391.550	LHS	Chevron
852	391.570	LHS	Chevron
853	391.670	RHS	Chevron
854	391.670	LHS	Chevron

S.No	Chainage	Side	Signage
855	391.725	RHS	Left Hand Curve
856	391.800	LHS	Speed Limit
857	391.900	RHS	Cattel Sign
858	392.360	LHS	Left Hand Curve
859	392.360	RHS	Chevron
860	392.462	LHS	Direction Sign
861	392.470	RHS	Chevron
862	392.495	RHS	Chevron
863	392.545	LHS	Chevron
864	392.565	RHS	Chevron
865	392.640	RHS	Stop Sign
866	392.640	RHS	Speed Breaker
867	392.640	RHS	Major Road Ahead
868	392.660	LHS	Chevron
869	392.660	RHS	Right Hand Curve
870	392.800	RHS	Side Road Right
871	392.822	RHS	Direction Sign
872	393.400	RHS	Speed Limit
873	393.900	LHS	Helpline Number Sign Board
874	394.130	LHS	Left Hand Curve
875	394.150	LHS	Accident Prone Area Sign Board
876	394.160	RHS	Chevron
877	394.250	LHS	Chevron
878	394.260	RHS	Chevron
879	394.285	LHS	Start Of Dual Carriageway
880	394.300	RHS	Chevron
881	394.330	LHS	Chevron
882	394.340	RHS	Restriction Ends
883	394.350	LHS	Speed Limit
884	394.360	RHS	Chevron
885	394.398	RHS	Chevron
886	394.400	RHS	No Prohibited
887	394.430	RHS	Chevron
888	394.430	MEDIAN	Object Hazard Marker
889	394.430	MEDIAN	Compulsory Keep Left
890	394.450	LHS	Chevron
891	394.470	LHS	Place Identification Sign
892	394.470	RHS	Place Identification Sign
893	394.505	LHS	Chevron
894	394.520	LHS	Stack Type Advance Direction Sign
895	394.540	LHS	Side Road Right
896	394.560	MEDIAN	Gap In Meadian
897	394.580	RHS	End Of Dual Carriageway
898	394.585	LHS	Chevron
899	394.600	MEDIAN	Place Identification Sign
900	394.610	RHS	Right Hand Curve
901	394.650	LHS	Pedestrain Crossing
902	394.670	RHS	Stop Sign
903	394.680	MEDIAN	Object Hazard Marker
904	394.700	MEDIAN	Compulsory Keep Left
905	394.710	RHS	Stack Type Advance Direction Sign
906	394.750	RHS	Pedestrain Crossing
907	394.800	MEDIAN	Gap In Meadian
908	394.845	LHS	Object Hazard Marker
909	394.850	RHS	Object Hazard Marker
910	394.880	RHS	Stack Type Advance Direction Sign
911	394.930	RHS	Petrol Pump

S.No	Chainage	Side	Signage
912	395.425	LHS	Speed Limit
913	395.440	LHS	School
914	395.470	LHS	Rumble Strip
915	395.530	LHS	Pedestrain Crossing
916	395.640	RHS	Pedestrain Crossing
917	395.710	RHS	Rumble Strip
918	395.745	RHS	School
919	395.765	RHS	Speed Limit
920	395.915	LHS	Right Hand Curve
921	395.960	LHS	Chevron
922	396.080	LHS	Major Road Ahead
923	396.080	RHS	Chevron
924	396.125	LHS	Chevron
925	396.130	MEDIAN	Gap In Meadian
926	396.150	MEDIAN	Chevron
927	396.170	LHS	Pedestrain Crossing
928	396.185	LHS	Chevron
929	396.210	MEDIAN	Object Hazard Marker
930	396.240	RHS	Stop Sign
931	396.240	RHS	Speed Breaker
932	396.240	RHS	Major Road Ahead
933	396.240	LHS	Stop Sign
934	396.240	LHS	Speed Breaker
935	396.240	LHS	Major Road Ahead
936	396.250	MEDIAN	Compulsory Keep Left
937	396.290	RHS	Pedestrain Crossing
938	396.325	MEDIAN	Chevron
939	396.350	RHS	Left Hand Curve
940	396.370	RHS	Major Road Ahead
941	396.410	MEDIAN	Gap In Meadian
942	396.435	LHS	Rumble Strip
943	396.485	LHS	Pedestrain Crossing
944	396.600	RHS	Pedestrain Crossing
945	396.650	RHS	Rumble Strip
946	397.220	LHS	Direction Sign
947	397.220	LHS	Stack Type Advance Direction Sign
948	397.250	LHS	Cross Road
949	397.395	RHS	Stop Sign
950	397.395	RHS	Speed Breaker
951	397.395	RHS	Major Road Ahead
952	397.400	LHS	Stop Sign
953	397.400	LHS	Speed Breaker
954	397.400	LHS	Major Road Ahead
955	397.550	RHS	Cross Road
956	397.580	LHS	Stack Type Advance Direction Sign
957	397.580	RHS	Direction Sign
958	397.645	LHS	NH Route Marker Sing
959	397.660	LHS	Stack Type Advance Direction Sign
960	397.730	RHS	NH Route Marker Sing
961	397.745	MEDIAN	Gap In Meadian
962	397.750	MEDIAN	Place Identification Sign
963	397.755	RHS	Reassurance Sign
964	397.835	MEDIAN	Object Hazard Marker
965	397.840	RHS	Stack Type Advance Direction Sign
966	397.860	MEDIAN	Object Hazard Marker
967	397.930	LHS	Reassurance Sign
968	397.960	LHS	NH Route Marker Sing

S.No	Chainage	Side	Signage
969	397.960	RHS	NH Route Marker Sing
970	398.020	RHS	Stack Type Advance Direction Sign
971	398.030	MEDIAN	Gap In Meadian
972	398.360	LHS	End Of Dual Carriageway
973	398.460	RHS	Place Identification Sign
974	398.495	MEDIAN	Object Hazard Marker
975	398.530	MEDIAN	Compulsory Keep Left
976	398.545	RHS	Speed Limit
977	398.555	LHS	Restriction Ends
978	398.595	RHS	Start Of Dual Carriageway
979	398.600	LHS	Object Hazard Marker
980	398.600	RHS	Object Hazard Marker
981	398.980	LHS	Left Hand Curve
982	399.060	RHS	Chevron
983	399.090	RHS	Chevron
984	399.140	RHS	Chevron
985	399.160	RHS	Chevron
986	399.280	RHS	Right Hand Curve
987	399.400	RHS	Helpline Number Sign Board
988	399.795	LHS	Truck Lay Bye
989	399.870	LHS	Left Hand Curve
990	399.910	LHS	Chevron
991	399.970	RHS	Chevron
992	400.000	RHS	Two Way Hazard Marker
993	400.030	RHS	Chevron
994	400.035	LHS	Chevron
995	400.070	RHS	Pass Either Side
996	400.160	RHS	Right Hand Curve
997	400.195	RHS	Truck Lay Bye
998	400.910	LHS	Right Hand Curve
999	400.960	LHS	Chevron
1000	401.000	LHS	Place Identification Sign
1001	401.000	RHS	Place Identification Sign
1002	401.020	RHS	Chevron
1003	401.095	LHS	Chevron
1004	401.155	RHS	Chevron
1005	401.195	RHS	Left Hand Curve
1006	402.400	LHS	Pedestrain Crossing
1007	402.400	LHS	Side Road
1008	402.400	LHS	Place Identification Sign
1009	402.500	RHS	Stop Sign
1010	402.600	LHS	Speed Limit
1011	402.620	RHS	Pedestrain Crossing
1012	403.000	LHS	Place Identification Sign
1013	403.000	RHS	Place Identification Sign
1014	403.200	RHS	Accident prone area
1015	403.315	LHS	Left Hand Curve
1016	403.360	LHS	Chevron
1017	403.430	RHS	Chevron
1018	403.500	RHS	Chevron
1019	403.570	RHS	Chevron
1020	403.615	RHS	Right Hand Curve
1021	403.755	LHS	Left Hand Curve
1022	403.795	LHS	Chevron
1023	403.880	RHS	Chevron
1024	403.970	RHS	Chevron
1025	404.030	RHS	Chevron

S.No	Chainage	Side	Signage
1026	404.070	RHS	Right Hand Curve
1027	404.410	LHS	Right Hand Curve
1028	404.440	RHS	Chevron
1029	404.445	LHS	Chevron
1030	404.560	LHS	Chevron
1031	404.580	LHS	Chevron
1032	404.650	LHS	Chevron
1033	404.680	LHS	Chevron
1034	404.790	RHS	Chevron
1035	404.790	LHS	Chevron
1036	404.830	RHS	Left Hand Curve
1037	405.180	LHS	Helpline Number Sign Board
1038	405.200	RHS	Petrol Pump
1039	405.840	LHS	Resting Place
1040	405.870	LHS	Start Of Dual Carriageway
1041	405.915	LHS	Speed Limit
1042	405.915	RHS	Restriction Ends
1043	405.935	MEDIAN	Object Hazard Marker
1044	405.935	MEDIAN	Object Hazard Marker
1045	405.970	LHS	Place Identification Sign
1046	406.060	RHS	End Of Dual Carriageway
1047	406.445	RHS	Resting Place
1048	406.470	MEDIAN	Gap In Meadian
1049	406.500	LHS	Pedestrain Crossing
1050	406.520	LHS	Left Hand Curve
1051	406.575	LHS	Object Hazard Marker
1052	406.575	MEDIAN	Object Hazard Marker
1053	406.580	RHS	Object Hazard Marker
1054	406.600	MEDIAN	Object Hazard Marker
1055	406.650	MEDIAN	Chevron
1056	406.660	RHS	Chevron
1057	406.680	RHS	Pedestrain Crossing
1058	406.695	MEDIAN	Gap In Meadian
1059	406.800	MEDIAN	Accident Prone Area Sign Board
1060	406.810	MEDIAN	Chevron
1061	406.810	RHS	Chevron
1062	406.840	MEDIAN	Chevron
1063	406.845	RHS	Chevron
1064	406.930	LHS	Rumble Strip
1065	406.940	RHS	Reassurance Sign
1066	406.960	MEDIAN	Chevron
1067	406.980	RHS	Chevron
1068	407.000	LHS	Pedestrain Crossing
1069	407.020	RHS	Right Hand Curve
1070	407.040	LHS	Bus Stop
1071	407.050	RHS	Speed Limit
1072	407.060	LHS	Direction Sign
1073	407.080	LHS	Reassurance Sign
1074	407.095	RHS	Two Way Hazard Marker
1075	407.095	RHS	Pass Either Side
1076	407.120	MEDIAN	Gap In Meadian
1077	407.150	LHS	Cross Road
1078	407.170	LHS	Pedestrain Crossing
1079	407.210	MEDIAN	Object Hazard Marker
1080	407.230	LHS	Stop Sign
1081	407.230	LHS	Speed Breaker
1082	407.230	LHS	Major Road Ahead

S.No	Chainage	Side	Signage
1083	407.230	RHS	Stop Sign
1084	407.230	RHS	Speed Breaker
1085	407.230	RHS	Major Road Ahead
1086	407.240	MEDIAN	Object Hazard Marker
1087	407.280	RHS	Pedestrain Crossing
1088	407.310	RHS	Cross Road
1089	407.340	MEDIAN	Gap In Meadian
1090	407.350	LHS	Direction Sign
1091	407.350	LHS	Two Way Hazard Marker
1092	407.420	RHS	Bus Stop
1093	407.420	RHS	Direction Sign
1094	407.450	LHS	Side Road Left
1095	407.460	RHS	Pedestrain Crossing
1096	407.520	RHS	Rumble Strip
1097	407.540	LHS	Stop Sign
1098	407.540	LHS	Speed Breaker
1099	407.540	LHS	Major Road Ahead
1100	407.560	LHS	Object Hazard Marker
1101	407.565	RHS	Object Hazard Marker
1102	407.670	RHS	Side Road Right
1103	407.710	RHS	Direction Sign
1104	407.895	LHS	End Of Dual Carriageway
1105	407.980	RHS	Place Identification Sign
1106	407.990	LHS	Truck Lay Bye
1107	408.010	MEDIAN	Object Hazard Marker
1108	408.060	LHS	Start Of Dual Carriageway
1109	408.100	LHS	Speed Limit
1110	408.250	RHS	Pass Either Side
1111	408.250	RHS	Two Way Hazard Marker
1112	408.390	LHS	Truck Lay Bye
1113	409.020	LHS	Left Hand Curve
1114	409.070	LHS	Chevron
1115	409.200	RHS	Chevron
1116	409.200	RHS	Chevron
1117	409.320	RHS	Chevron
1118	409.370	RHS	Right Hand Curve
1119	409.540	LHS	Side Road Right
1120	409.680	RHS	Stop Sign
1121	409.680	RHS	Speed Breaker
1122	409.680	RHS	Major Road Ahead
1123	409.840	RHS	Side Road Left
1124	409.950	RHS	Helpline Number Sign Board
1125	411.000	LHS	Place Identification Sign
1126	411.000	RHS	Place Identification Sign
1127	411.040	LHS	Side Road Left
1128	411.045	LHS	Direction Sign
1129	411.090	LHS	Right Hand Curve
1130	411.130	LHS	Chevron
1131	411.190	LHS	Speed Limit
1132	411.230	LHS	Stop Sign
1133	411.230	LHS	Speed Breaker
1134	411.230	LHS	Major Road Ahead
1135	411.250	LHS	Chevron
1136	411.255	RHS	Chevron
1137	411.280	LHS	School
1138	411.320	RHS	Helpline Number Sign Board
1139	411.330	LHS	Rumble Strip

S.No	Chainage	Side	Signage
1140	411.340	RHS	Side Road Right
1141	411.370	RHS	Chevron
1142	411.375	LHS	Object Hazard Marker
1143	411.380	RHS	Object Hazard Marker
1144	411.400	LHS	Pedestrain Crossing
1145	411.405	RHS	Direction Sign
1146	411.420	RHS	Left Hand Curve
1147	411.480	RHS	Pedestrain Crossing
1148	411.540	RHS	Rumble Strip
1149	411.570	RHS	School
1150	411.620	RHS	Speed Limit
1151	411.750	LHS	Left Hand Curve
1152	411.780	RHS	Chevron
1153	411.905	LHS	Chevron
1154	411.905	RHS	Chevron
1155	412.020	RHS	Chevron
1156	412.060	RHS	Right Hand Curve
1157	413.120	LHS	Police Station
1158	413.420	RHS	Police Station
1159	413.800	LHS	Side Road Right
1160	413.900	LHS	Object Hazard Marker
1161	413.900	RHS	Object Hazard Marker
1162	413.950	LHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
1163	414.000	LHS	Place Identification Sign
1164	414.000	RHS	Place Identification Sign
1165	414.030	LHS	Right Hand Curve
1166	414.060	LHS	Chevron
1167	414.060	RHS	Chevron
1168	414.170	LHS	Chevron
1169	414.230	LHS	Chevron
1170	414.230	RHS	Chevron
1171	414.280	LHS	Chevron
1172	414.280	RHS	Chevron
1173	414.320	LHS	Direction Sign
1174	414.340	LHS	Chevron
1175	414.340	RHS	Chevron
1176	414.360	LHS	Cross Road
1177	414.380	LHS	Chevron
1178	414.480	RHS	Chevron
1179	414.480	LHS	Chevron
1180	414.510	LHS	Stop Sign
1181	414.510	LHS	Speed Breaker
1182	414.510	LHS	Major Road Ahead
1183	414.520	RHS	Stop Sign
1184	414.520	RHS	Speed Breaker
1185	414.520	RHS	Major Road Ahead
1186	414.530	RHS	Left Hand Curve
1187	414.550	LHS	Helpline Number Sign Board
1188	414.660	RHS	Cross Road
1189	414.680	RHS	Direction Sign
1190	415.713	LHS	Object Hazard Marker
1191	415.718	RHS	Object Hazard Marker
1192	416.100	LHS	Speed Limit
1193	416.900	RHS	Reassurance Sign
1194	417.100	LHS	Reassurance Sign
1195	417.595	LHS	Object Hazard Marker
1196	417.600	RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
1197	418.000	LHS	Object Hazard Marker
1198	418.230	LHS	Left Hand Curve
1199	418.260	LHS	Chevron
1200	418.370	RHS	Chevron
1201	418.425	LHS	Chevron
1202	418.480	RHS	Chevron
1203	418.500	LHS	Object Hazard Marker
1204	418.525	LHS	Chevron
1205	418.645	RHS	Right Hand Curve
1206	418.970	RHS	Chevron
1207	419.108	LHS	Direction Sign
1208	419.130	LHS	Side Road Right
1209	419.290	RHS	Stop Sign
1210	419.290	RHS	Speed Breaker
1211	419.290	RHS	Major Road Ahead
1212	419.445	RHS	Side Road Left
1213	419.468	RHS	Direction Sign
1214	419.720	LHS	Eating Place
1215	420.010	RHS	Eating Place
1216	420.070	LHS	Truck Lay Bye
1217	420.200	LHS	Eating Place
1218	420.360	RHS	Two Way Hazard Marker
1219	420.360	RHS	Pass Either Side
1220	420.400	LHS	Petrol Pump
1221	420.490	RHS	Truck Lay Bye
1222	422.465	LHS	Left Hand Curve
1223	422.520	LHS	Chevron
1224	422.610	LHS	Chevron
1225	422.610	RHS	Chevron
1226	422.705	RHS	Chevron
1227	422.760	RHS	Right Hand Curve
1228	422.800	LHS	Object Hazard Marker
1229	423.400	RHS	Eating Place
1230	423.630	LHS	Object Hazard Marker
1231	423.640	RHS	Object Hazard Marker
1232	424.138	LHS	Stack Type Advance Direction Sign
1233	424.138	LHS	Direction Sign
1234	424.230	LHS	Cross Road
1235	424.370	RHS	Stop Sign
1236	424.370	RHS	Speed Breaker
1237	424.370	RHS	Major Road Ahead
1238	424.385	LHS	Stop Sign
1239	424.385	LHS	Speed Breaker
1240	424.385	LHS	Major Road Ahead
1241	424.385	LHS	Pedestrain Crossing
1242	424.498	LHS	Stack Type Advance Direction Sign
1243	424.498	RHS	Direction Sign
1244	424.530	RHS	Cross Road
1245	424.900	LHS	Speed Limit
1246	425.200	RHS	Helpline Number Sign Board
1247	425.700	LHS	Rumble Strip
1248	426.400	LHS	Eating Place
1249	427.500	LHS	Petrol Pump
1250	428.250	LHS	Right Hand Curve
1251	428.290	LHS	Chevron
1252	428.300	LHS	Object Hazard Marker
1253	428.320	LHS	Object Hazard Marker

S.No	Chainage	Side	Signage
1254	428.330	RHS	Object Hazard Marker
1255	428.395	LHS	Chevron
1256	428.395	RHS	Chevron
1257	428.490	LHS	Chevron
1258	428.550	RHS	Left Hand Curve
1259	428.840	RHS	Stack Type Advance Direction Sign
1260	428.880	LHS	Side Road Left
1261	428.995	LHS	Side Road Right
1262	429.030	LHS	Stop Sign
1263	429.030	LHS	Speed Breaker
1264	429.030	LHS	Major Road Ahead
1265	429.040	LHS	Petrol Pump
1266	429.130	RHS	Stop Sign
1267	429.130	RHS	Speed Breaker
1268	429.130	RHS	Major Road Ahead
1269	429.180	RHS	Side Road Right
1270	429.200	RHS	Stack Type Advance Direction Sign
1271	429.280	RHS	Side Road Left
1272	429.330	RHS	Petrol Pump
1273	430.200	LHS	Object Hazard Marker
1274	430.230	LHS	Cross Road
1275	430.320	LHS	Object Hazard Marker
1276	430.330	RHS	Object Hazard Marker
1277	430.370	RHS	Stop Sign
1278	430.370	RHS	Speed Breaker
1279	430.370	RHS	Major Road Ahead
1280	430.380	LHS	Stop Sign
1281	430.380	RHS	Speed Breaker
1282	430.380	RHS	Major Road Ahead
1283	430.540	RHS	Cross Road
1284	431.290	LHS	Right Hand Curve
1285	431.330	LHS	Chevron
1286	431.360	LHS	Side Road Right
1287	431.440	RHS	Chevron
1288	431.480	RHS	Stop Sign
1289	431.480	RHS	Speed Breaker
1290	431.480	RHS	Major Road Ahead
1291	431.490	LHS	Chevron
1292	431.560	LHS	Speed Limit
1293	431.560	RHS	Restriction Ends
1294	431.590	RHS	Chevron
1295	431.600	LHS	Place Identification Sign
1296	431.640	RHS	Left Hand Curve
1297	431.660	RHS	Side Road Left
1298	432.020	LHS	Object Hazard Marker
1299	432.040	LHS	Eating Place
1300	432.100	LHS	Side Road Right
1301	432.130	LHS	Rumble Strip
1302	432.130	RHS	Object Hazard Marker
1303	432.150	LHS	Eating Place
1304	432.190	LHS	Pedestrain Crossing
1305	432.250	RHS	Stop Sign
1306	432.250	RHS	Speed Breaker
1307	432.250	RHS	Major Road Ahead
1308	432.310	RHS	Pedestrain Crossing
1309	432.350	LHS	Eating Place
1310	432.350	RHS	Eating Place

S.No	Chainage	Side	Signage
1311	432.370	RHS	Rumble Strip
1312	432.400	LHS	Left Hand Curve
1313	432.400	RHS	Side Road Left
1314	432.440	LHS	Start Of Dual Carriageway
1315	432.460	RHS	Eating Place
1316	432.495	LHS	Place Identification Sign
1317	432.510	RHS	Place Identification Sign
1318	432.530	LHS	Side Road Right
1319	432.560	MEDIAN	Compulsory Keep Left
1320	432.560	MEDIAN	Object Hazard Marker
1321	432.580	RHS	End Of Dual Carriageway
1322	432.585	MEDIAN	Chevron
1323	432.590	LHS	Object Hazard Marker
1324	432.600	RHS	Object Hazard Marker
1325	432.640	RHS	End Of Dual Carriageway
1326	432.660	RHS	Eating Place
1327	432.675	RHS	Chevron
1328	432.680	MEDIAN	Chevron
1329	432.690	RHS	Stop Sign
1330	432.690	RHS	Speed Breaker
1331	432.690	RHS	Major Road Ahead
1332	432.720	RHS	Chevron
1333	432.730	MEDIAN	Chevron
1334	432.733	LHS	Rumble Strip
1335	432.755	LHS	Petrol Pump
1336	432.775	RHS	Chevron
1337	432.785	MEDIAN	Chevron
1338	432.795	LHS	Pedestrain Crossing
1339	432.795	RHS	Side Road Left
1340	432.845	MEDIAN	Chevron
1341	432.845	RHS	Chevron
1342	432.870	RHS	Pedestrain Crossing
1343	432.900	RHS	Rumble Strip
1344	432.950	RHS	Right Hand Curve
1345	433.060	RHS	Petrol Pump
1346	433.100	LHS	Gantry Mounted Sing For In Advance For An Interchange
1347	433.170	LHS	Map Type Advance Direction Sing For Roundabout
1348	433.170	LHS	Map Type Advance Direction Sing For Roundabout
1349	433.170	RHS	Map Type Advance Direction Sing For Roundabout
1350	433.180	RHS	NH Route Marker Sing
1351	433.200	LHS	NH Route Marker Sing
1352	433.230	LHS	Direction Sign
1353	433.240	LHS	Side Road Left
1354	433.250	RHS	Give way Sign Board
1355	433.420	LHS	Stop Sign
1356	433.420	LHS	Speed Breaker
1357	433.420	LHS	Major Road Ahead
1358	433.425	LHS	Rumble Strip
1359	433.450	LHS	Pedestrain Crossing
1360	433.450	RHS	Gantry Mounted Sing For In Advance For An Interchange
1361	433.460	RHS	NH Route Marker Sing
1362	433.480	LHS	Bus Stop
1363	433.500	LHS	Reassurance Sign
1364	433.530	RHS	Map Type Advance Direction Sing For Roundabout
1365	433.540	LHS	NH Route Marker Sing
1366	433.555	LHS	Pass Either Side
1367	433.555	LHS	Two Way Hazard Marker

S.No	Chainage	Side	Signage
1368	433.580	RHS	Side Road Right
1369	433.590	RHS	Direction Sign
1370	433.680	RHS	Pass Either Side
1371	433.680	RHS	Two Way Hazard Marker
1372	433.775	RHS	Bus Stop
1373	433.795	RHS	Pedestrain Crossing
1374	433.850	RHS	Rumble Strip
1375	433.900	LHS	End Of Dual Carriageway
1376	434.000	MEDIAN	Object Hazard Marker
1377	434.000	MEDIAN	Compulsory Keep Left
1378	434.010	RHS	Place Identification Sign
1379	434.070	LHS	Restriction Ends
1380	434.070	RHS	Speed Limit
1381	434.110	RHS	Start Of Dual Carriageway
1382	434.180	LHS	Chevron
1383	434.200	LHS	Chevron
1384	434.250	LHS	Helpline Number Sign Board
1385	434.600	LHS	Object Hazard Marker
1386	434.720	LHS	Object Hazard Marker
1387	434.730	RHS	Object Hazard Marker
1388	436.990	LHS	Side Road Right
1389	437.000	LHS	Place Identification Sign
1390	437.000	RHS	Place Identification Sign
1391	437.120	RHS	Stop Sign
1392	437.120	RHS	Speed Breaker
1393	437.120	RHS	Major Road Ahead
1394	437.280	RHS	Side Road Left
1395	437.300	RHS	Helpline Number Sign Board
1396	437.330	LHS	Left Hand Curve
1397	437.330	RHS	Chevron
1398	437.440	RHS	Chevron
1399	437.450	RHS	Chevron
1400	437.490	RHS	Chevron
1401	437.500	RHS	Chevron
1402	437.620	LHS	Chevron
1403	437.620	RHS	Right Hand Curve
1404	437.800	RHS	Accident prone area
1405	438.830	LHS	Object Hazard Marker
1406	438.830	RHS	Object Hazard Marker
1407	439.800	LHS	Object Hazard Marker
1408	440.000	RHS	Object Hazard Marker
1409	440.020	RHS	Chevron
1410	440.030	LHS	Right Hand Curve
1411	440.070	RHS	Chevron
1412	440.130	RHS	Restriction Ends
1413	440.140	LHS	Speed Limit
1414	440.160	RHS	Chevron
1415	440.195	LHS	Place Identification Sign
1416	440.230	LHS	Chevron
1417	440.230	RHS	Chevron
1418	440.250	LHS	Hazard Marker
1419	440.280	LHS	Chevron
1420	440.290	RHS	Chevron
1421	440.340	LHS	Chevron
1422	440.350	RHS	Chevron
1423	440.380	LHS	Chevron
1424	440.400	RHS	Chevron

S.No	Chainage	Side	Signage
1425	440.420	LHS	Rumble Strip
1426	440.450	LHS	Chevron
1427	440.460	RHS	Chevron
1428	440.470	LHS	Pedestrain Crossing
1429	440.520	LHS	Chevron
1430	440.530	RHS	Chevron
1431	440.590	RHS	Pedestrain Crossing
1432	440.630	LHS	Chevron
1433	440.640	RHS	Left Hand Curve
1434	440.670	LHS	Object Hazard Marker
1435	440.670	RHS	Rumble Strip
1436	440.740	LHS	Side Road Right
1437	440.740	RHS	Object Hazard Marker
1438	440.760	LHS	Left Hand Curve
1439	440.760	RHS	Chevron
1440	440.820	LHS	Direction Sign
1441	440.840	RHS	Stop Sign
1442	440.840	RHS	Speed Breaker
1443	440.840	RHS	Major Road Ahead
1444	440.875	LHS	Chevron
1445	440.880	RHS	Chevron
1446	440.950	LHS	Chevron
1447	440.950	RHS	Chevron
1448	440.970	RHS	Side Road Left
1449	441.000	LHS	Chevron
1450	441.000	RHS	Chevron
1451	440.000	LHS	Object Hazard Marker
1452	441.060	LHS	Chevron
1453	441.060	RHS	Chevron
1454	441.130	LHS	Chevron
1455	441.130	RHS	Chevron
1456	441.130	RHS	Object Hazard Marker
1457	441.160	RHS	Place Identification Sign
1458	441.180	RHS	Direction Sign
1459	441.190	LHS	Chevron
1460	441.190	RHS	Chevron
1461	441.250	LHS	Chevron
1462	441.250	RHS	Speed Limit
1463	441.280	LHS	Restriction Ends
1464	441.280	RHS	Chevron
1465	441.370	LHS	Chevron
1466	441.380	RHS	Right Hand Curve
1467	441.800	LHS	Object Hazard Marker
1468	442.900	RHS	Reassurance Sign
1469	443.100	LHS	Reassurance Sign
1470	443.400	LHS	Speed Limit
1471	443.450	LHS	Object Hazard Marker
1472	443.480	LHS	Petrol Pump
1473	443.780	RHS	Petrol Pump
1474	443.900	RHS	Object Hazard Marker
1475	444.330	LHS	Object Hazard Marker
1476	444.340	RHS	Object Hazard Marker
1477	444.410	LHS	Direction Sign
1478	444.440	LHS	Side Road Right
1479	444.570	RHS	Stop Sign
1480	444.570	RHS	Speed Breaker
1481	444.570	RHS	Major Road Ahead

S.No	Chainage	Side	Signage
1482	444.730	RHS	Side Road Left
1483	444.750	LHS	Eating Place
1484	444.770	RHS	Direction Sign
1485	445.050	RHS	Eating Place
1486	445.660	LHS	Object Hazard Marker
1487	445.670	RHS	Object Hazard Marker
1488	445.945	LHS	Left Hand Curve
1489	446.010	LHS	Chevron
1490	446.010	LHS	Direction Sign
1491	446.030	RHS	Chevron
1492	446.035	LHS	Cross Road
1493	446.120	LHS	Chevron
1494	446.120	RHS	Chevron
1495	446.180	LHS	Pedestrain Crossing
1496	446.195	RHS	Stop Sign
1497	446.195	RHS	Speed Breaker
1498	446.195	RHS	Major Road Ahead
1499	446.200	LHS	Stop Sign
1500	446.200	LHS	Speed Breaker
1501	446.200	LHS	Major Road Ahead
1502	446.220	RHS	Right Hand Curve
1503	446.230	LHS	Bus Stop
1504	446.280	RHS	Cross Road
1505	446.365	LHS	Pass Either Side
1506	446.365	LHS	Two Way Hazard Marker
1507	446.370	RHS	Two Way Hazard Marker
1508	446.370	RHS	Pass Either Side
1509	446.370	RHS	Direction Sign
1510	446.520	RHS	Bus Stop
1511	446.550	RHS	Pedestrain Crossing
1512	446.570	LHS	Start Of Dual Carriageway
1513	446.650	LHS	Speed Limit
1514	446.650	RHS	Restriction Ends
1515	446.680	MEDIAN	Object Hazard Marker
1516	446.680	MEDIAN	Compulsory Keep Left
1517	446.690	LHS	Place Identification Sign
1518	446.730	LHS	Object Hazard Marker
1519	446.740	RHS	Object Hazard Marker
1520	446.770	RHS	End Of Dual Carriageway
1521	446.780	LHS	Police Station
1522	446.820	LHS	Direction Sign
1523	446.860	LHS	Direction Sign
1524	446.895	LHS	Side Road Left
1525	446.950	LHS	Cross Road
1526	447.020	LHS	Barrier Ahead
1527	447.035	LHS	Stop Sign
1528	447.035	LHS	Speed Breaker
1529	447.035	LHS	Major Road Ahead
1530	447.065	RHS	Stop Sign
1531	447.065	RHS	Speed Breaker
1532	447.065	RHS	Major Road Ahead
1533	447.075	LHS	Stop Sign
1534	447.075	LHS	Speed Breaker
1535	447.075	LHS	Major Road Ahead
1536	447.090	RHS	Police Station
1537	447.130	LHS	Pedestrain Crossing
1538	447.180	RHS	Side Road Right

S.No	Chainage	Side	Signage
1539	447.180	RHS	Direction Sign
1540	447.200	RHS	Cross Road
1541	447.220	RHS	Direction Sign
1542	447.240	LHS	Right Hand Curve
1543	447.240	RHS	Pedestrain Crossing
1544	447.280	RHS	Rumble Strip
1545	447.310	MEDIAN	Chevron
1546	447.350	MEDIAN	Chevron
1547	447.395	MEDIAN	Chevron
1548	447.440	MEDIAN	Chevron
1549	447.520	RHS	Left Hand Curve
1550	447.585	LHS	End Of Dual Carriageway
1551	447.680	RHS	Place Identification Sign
1552	447.685	MEDIAN	Object Hazard Marker
1553	447.685	MEDIAN	Compulsory Keep Left
1554	447.700	RHS	Object Hazard Marker
1555	447.765	LHS	Restriction Ends
1556	447.770	RHS	Speed Limit
1557	447.820	RHS	Start Of Dual Carriageway
1558	447.950	RHS	Stop Sign
1559	447.950	RHS	Speed Breaker
1560	448.050	LHS	Chevron
1561	448.080	LHS	Chevron
1562	448.100	LHS	Side Road
1563	448.900	LHS	Petrol Pump
1564	449.000	RHS	Petrol Pump
1565	450.150	LHS	Helpline Number Sign Board
1566	451.470	LHS	Rumble Strip
1567	452.000	LHS	Speed Limit
1568	452.900	RHS	Reassurance Sign
1569	453.100	LHS	Reassurance Sign
1570	454.700	RHS	Rumble Strip
1571	454.800	LHS	Left Hand Curve
1572	455.000	LHS	Object Hazard Marker
1573	455.000	RHS	Object Hazard Marker
1574	455.000	RHS	Chevron
1575	455.030	RHS	Chevron
1576	455.060	RHS	Chevron
1577	455.200	RHS	Right Hand Curve
1578	455.500	RHS	Object Hazard Marker
1579	456.000	LHS	Cattle sign
1580	456.400	RHS	Cattle sign
1581	456.080	LHS	Direction Sign
1582	456.120	LHS	Side Road Left
1583	456.280	LHS	Stop Sign
1584	456.280	LHS	Speed Breaker
1585	456.280	LHS	Major Road Ahead
1586	456.420	RHS	Side Road Right
1587	456.440	RHS	Direction Sign
1588	457.638	LHS	Direction Sign
1589	457.675	LHS	Side Road Right
1590	457.825	RHS	Stop Sign
1591	457.825	RHS	Speed Breaker
1592	457.825	RHS	Major Road Ahead
1593	457.980	RHS	Side Road Left
1594	457.985	LHS	Left Hand Curve
1595	457.998	RHS	Direction Sign

S.No	Chainage	Side	Signage
1596	458.080	LHS	Chevron
1597	458.080	RHS	Chevron
1598	458.145	RHS	Chevron
1599	458.150	RHS	Chevron
1600	458.210	RHS	Chevron
1601	458.240	LHS	Chevron
1602	458.285	LHS	Chevron
1603	458.285	RHS	Chevron
1604	458.390	RHS	Right Hand Curve
1605	459.800	RHS	Helpline Number Sign Board
1606	460.290	LHS	Object Hazard Marker
1607	460.300	RHS	Object Hazard Marker
1608	462.430	LHS	Object Hazard Marker
1609	462.440	RHS	Object Hazard Marker
1610	462.900	RHS	Reassurance Sign
1611	463.100	LHS	Reassurance Sign
1612	463.330	LHS	Object Hazard Marker
1613	463.340	RHS	Object Hazard Marker
1614	465.370	LHS	Object Hazard Marker
1615	465.380	RHS	Object Hazard Marker
1616	467.990	LHS	Object Hazard Marker
1617	468.000	RHS	Object Hazard Marker
1618	468.345	LHS	Eating Place
1619	468.545	RHS	Eating Place
1620	469.640	LHS	Object Hazard Marker
1621	469.650	RHS	Object Hazard Marker
1622	470.460	LHS	Left Hand Curve
1623	470.460	RHS	Chevron
1624	470.555	LHS	Chevron
1625	470.555	RHS	Chevron
1626	470.610	LHS	Chevron
1627	470.610	RHS	Chevron
1628	470.710	RHS	Chevron
1629	470.710	RHS	Right Hand Curve
1630	470.965	LHS	Pedestrain Crossing
1631	470.995	LHS	Bus Stop
1632	471.000	LHS	Direction Sign
1633	471.030	LHS	Side Road Left
1634	471.050	LHS	Start Of Dual Carriageway
1635	471.080	LHS	Pass Either Side
1636	471.080	LHS	Two Way Hazard Marker
1637	471.085	RHS	Two Way Hazard Marker
1638	471.085	RHS	Pass Either Side
1639	471.175	LHS	Speed Limit
1640	471.175	RHS	Restriction Ends
1641	471.195	LHS	Stop Sign
1642	471.195	LHS	Speed Breaker
1643	471.195	LHS	Major Road Ahead
1644	471.200	MEDIAN	Object Hazard Marker
1645	471.200	MEDIAN	Compulsory Keep Left
1646	471.210	LHS	School
1647	471.230	LHS	Place Identification Sign
1648	471.235	RHS	Bus Stop
1649	471.260	LHS	Rumble Strip
1650	471.265	RHS	Pedestrain Crossing
1651	471.280	LHS	Pedestrain Crossing
1652	471.285	RHS	End Of Dual Carriageway

S.No	Chainage	Side	Signage
1653	471.330	RHS	Side Road Right
1654	471.360	RHS	Stop Sign
1655	471.360	RHS	Speed Breaker
1656	471.360	RHS	Major Road Ahead
1657	471.360	RHS	Direction Sign
1658	471.380	RHS	Pedestrain Crossing
1659	471.410	RHS	Rumble Strip
1660	471.450	RHS	Side Road Left
1661	471.480	RHS	School
1662	471.530	RHS	Speed Limit
1663	471.580	LHS	Rumble Strip
1664	471.630	LHS	Pedestrain Crossing
1665	471.650	LHS	Object Hazard Marker
1666	471.660	RHS	Object Hazard Marker
1667	471.718	LHS	Direction Sign
1668	471.720	LHS	Side Road Right
1669	471.750	RHS	Pedestrain Crossing
1670	471.785	RHS	Rumble Strip
1671	471.860	RHS	Stop Sign
1672	471.860	RHS	Speed Breaker
1673	471.860	RHS	Major Road Ahead
1674	472.020	RHS	Side Road Left
1675	472.078	RHS	Direction Sign
1676	472.160	LHS	End Of Dual Carriageway
1677	472.240	RHS	Place Identification Sign
1678	472.275	MEDIAN	Object Hazard Marker
1679	472.275	MEDIAN	Compulsory Keep Left
1680	472.310	RHS	Speed Limit
1681	472.330	LHS	Restriction Ends
1682	472.360	RHS	Start Of Dual Carriageway
1683	472.600	LHS	Accident prone area
1684	472.660	LHS	Eating Place
1685	472.740	LHS	Petrol Pump
1686	472.770	RHS	Chevron
1687	472.780	LHS	Left Hand Curve
1688	472.780	LHS	Chevron
1689	472.830	RHS	Chevron
1690	472.900	RHS	Reassurance Sign
1691	472.930	RHS	Chevron
1692	472.970	LHS	Chevron
1693	472.970	RHS	Eating Place
1694	473.000	LHS	Reassurance Sign
1695	473.030	RHS	Chevron
1696	473.035	RHS	Petrol Pump
1697	473.040	RHS	Right Hand Curve
1698	473.895	LHS	Left Hand Curve
1699	473.990	RHS	Chevron
1700	474.060	LHS	Chevron
1701	474.060	RHS	Chevron
1702	474.140	LHS	Chevron
1703	474.140	RHS	Chevron
1704	474.200	RHS	Object Hazard Marker
1705	474.230	LHS	Chevron
1706	474.240	RHS	Right Hand Curve
1707	474.950	LHS	Right Hand Curve
1708	474.950	RHS	Chevron
1709	475.050	LHS	Chevron

S.No	Chainage	Side	Signage
1710	475.070	RHS	Chevron
1711	475.120	LHS	Chevron
1712	475.140	RHS	Chevron
1713	475.160	LHS	Chevron
1714	475.195	RHS	Chevron
1715	475.240	LHS	Chevron
1716	475.260	RHS	Chevron
1717	475.360	LHS	Chevron
1718	475.360	RHS	Left Hand Curve
1719	475.495	LHS	Side Road Left
1720	475.550	RHS	Accident prone area
1721	475.650	LHS	Stop Sign
1722	475.650	LHS	Speed Breaker
1723	475.650	LHS	Major Road Ahead
1724	475.800	RHS	Side Road Right
1725	476.250	LHS	Speed Limit
1726	476.610	LHS	Object Hazard Marker
1727	476.620	RHS	Object Hazard Marker
1728	477.510	LHS	Object Hazard Marker
1729	477.520	RHS	Object Hazard Marker
1730	479.630	LHS	Speed Limit
1731	479.670	LHS	School
1732	479.740	LHS	Rumble Strip
1733	479.770	LHS	Pedestrain Crossing
1734	479.780	LHS	Direction Sign
1735	479.860	LHS	Side Road Left
1736	479.880	RHS	Pedestrain Crossing
1737	479.940	RHS	Rumble Strip
1738	479.975	LHS	Stop Sign
1739	479.975	LHS	Speed Breaker
1740	479.975	LHS	Major Road Ahead
1741	479.980	RHS	School
1742	480.000	LHS	Place Identification Sign
1743	480.000	RHS	Place Identification Sign
1744	480.000	RHS	Speed Limit
1745	480.110	RHS	Side Road Right
1746	480.140	RHS	Direction Sign
1747	480.150	LHS	Direction Sign
1748	480.180	LHS	Side Road Right
1749	480.200	LHS	Petrol Pump
1750	480.330	RHS	Stop Sign
1751	480.330	RHS	Speed Breaker
1752	480.330	RHS	Major Road Ahead
1753	480.470	RHS	Side Road Left
1754	480.510	RHS	Direction Sign
1755	481.300	LHS	Accident prone area
1756	481.490	LHS	Object Hazard Marker
1757	481.500	RHS	Object Hazard Marker
1758	481.550	LHS	Chevron
1759	482.300	RHS	Speed Limit
1760	482.800	LHS	Stop Sign
1761	482.900	RHS	Reassurance Sign
1762	483.000	LHS	Place Identification Sign
1763	483.000	RHS	Place Identification Sign
1764	483.100	LHS	Reassurance Sign
1765	484.070	LHS	Left Hand Curve
1766	484.140	LHS	Chevron

S.No	Chainage	Side	Signage
1767	484.180	RHS	Chevron
1768	484.240	RHS	Chevron
1769	484.280	RHS	Chevron
1770	484.350	RHS	Right Hand Curve
1771	484.400	LHS	Object Hazard Marker
1772	484.400	LHS	Cantiliver Board
1773	484.730	LHS	Left Hand Curve
1774	484.820	LHS	Chevron
1775	484.850	RHS	Chevron
1776	484.910	LHS	Chevron
1777	484.930	RHS	Chevron
1778	485.040	LHS	Right Hand Curve
1779	486.350	LHS	Eating Place
1780	486.660	RHS	Eating Place
1781	486.800	RHS	Accident prone area
1782	487.330	LHS	Object Hazard Marker
1783	487.340	RHS	Object Hazard Marker
1784	487.400	RHS	Object Hazard Marker
1785	488.900	LHS	Eating Place
1786	489.190	RHS	Eating Place
1787	489.800	LHS	Helpline Number Sign Board
1788	489.830	LHS	Eating Place
1789	490.130	RHS	Eating Place
1790	490.600	LHS	Petrol Pump
1791	490.760	LHS	Start Of Dual Carriageway
1792	490.800	RHS	Petrol Pump
1793	490.810	LHS	Speed Limit
1794	490.810	RHS	Restriction Ends
1795	490.860	MEDIAN	Object Hazard Marker
1796	490.860	MEDIAN	Compulsory Keep Left
1797	490.900	LHS	Place Identification Sign
1798	491.0	LHS	Helpline Number Sign Board
1799	491.000	RHS	End Of Dual Carriageway
1800	491.210	LHS	Speed Limit
1801	491.250	LHS	School
1802	491.280	LHS	Rumble Strip
1803	491.310	LHS	Speed Limit
1804	491.360	LHS	Pedestrain Crossing
1805	491.390	LHS	School
1806	491.440	RHS	Pedestrain Crossing
1807	491.460	LHS	Pedestrain Crossing
1808	491.550	RHS	School
1809	491.580	RHS	Pedestrain Crossing
1810	491.610	RHS	Rumble Strip
1811	491.640	RHS	Speed Limit
1812	491.660	RHS	School
1813	491.710	RHS	Speed Limit
1814	491.710	LHS	Eating Place
1815	491.920	LHS	Left Hand Curve
1816	491.980	RHS	Chevron
1817	491.980	MEDIAN	Chevron
1818	492.010	RHS	Eating Place
1819	492.070	MEDIAN	Chevron
1820	492.070	LHS	Direction Sign
1821	492.080	RHS	Chevron
1822	492.100	LHS	Side Road Left
1823	492.130	MEDIAN	Chevron

S.No	Chainage	Side	Signage
1824	492.150	RHS	Chevron
1825	492.150	LHS	Gantry Mounted Sing For In Advance For An Interchange
1826	492.170	LHS	NH Route Marker Sing
1827	492.185	LHS	Side Road Right
1828	492.190	RHS	Right Hand Curve
1829	492.240	LHS	Stop Sign
1830	492.240	LHS	Speed Breaker
1831	492.240	LHS	Major Road Ahead
1832	492.245	RHS	NH Route Marker Sing
1833	492.260	LHS	Object Hazard Marker
1834	492.270	RHS	Object Hazard Marker
1835	492.280	MEDIAN	Gap In Meadian
1836	492.340	MEDIAN	Compulsory Keep Left
1837	492.340	MEDIAN	Object Hazard Marker
1838	492.340	LHS	Stop Sign
1839	492.340	LHS	Speed Breaker
1840	492.340	LHS	Major Road Ahead
1841	492.360	MEDIAN	Compulsory Keep Left
1842	492.360	MEDIAN	Object Hazard Marker
1843	492.430	RHS	Direction Sign
1844	492.445	RHS	Side Road Right
1845	492.450	LHS	NH Route Marker Sing
1846	492.470	MEDIAN	Gap In Meadian
1847	492.500	RHS	Gantry Mounted Sing For In Advance For An Interchange
1848	492.510	RHS	Side Road Left
1849	492.540	RHS	NH Route Marker Sing
1850	492.580	LHS	Speed Limit
1851	492.630	LHS	School
1852	492.660	LHS	Rumble Strip
1853	492.730	LHS	Pedestrain Crossing
1854	492.830	RHS	Pedestrain Crossing
1855	492.880	RHS	Rumble Strip
1856	492.930	RHS	School
1857	492.960	RHS	Speed Limit
1858	492.980	LHS	Speed Limit
1859	493.030	LHS	School
1860	493.080	LHS	Rumble Strip
1861	493.150	LHS	Pedestrain Crossing
1862	493.230	LHS	Right Hand Curve
1863	493.230	RHS	Pedestrain Crossing
1864	493.275	RHS	Rumble Strip
1865	493.290	LHS	Object Hazard Marker
1866	493.300	RHS	Object Hazard Marker
1867	493.340	RHS	School
1868	493.375	LHS	Chevron
1869	493.380	RHS	Speed Limit
1870	493.420	LHS	Eating Place
1871	493.435	MEDIAN	Chevron
1872	493.495	MEDIAN	Chevron
1873	493.530	RHS	Map Type Advance Direction Sing For Roundabout
1874	493.530	RHS	Map Type Advance Direction Sing For Roundabout
1875	493.535	LHS	Chevron
1876	493.540	RHS	Reassurance Sign
1877	493.545	LHS	Cross Road
1878	493.550	MEDIAN	Chevron
1879	493.580	LHS	Eating Place
1880	493.610	LHS	NH Route Marker Sing

S.No	Chainage	Side	Signage
1881	493.630	RHS	NH Route Marker Sing
1882	493.650	LHS	Chevron
1883	493.660	RHS	Left Hand Curve
1884	493.700	RHS	Stop Sign
1885	493.700	RHS	Speed Breaker
1886	493.700	RHS	Major Road Ahead
1887	493.730	LHS	Stop Sign
1888	493.730	LHS	Speed Breaker
1889	493.730	LHS	Major Road Ahead
1890	493.750	RHS	Eating Place
1891	493.770	LHS	NH Route Marker Sing
1892	493.810	LHS	Reassurance Sign
1893	493.840	LHS	Object Hazard Marker
1894	493.850	RHS	Object Hazard Marker
1895	493.890	RHS	Map Type Advance Direction Sing For Roundabout
1896	493.890	RHS	Map Type Advance Direction Sing For Roundabout
1897	493.910	RHS	Eating Place
1898	493.950	RHS	NH Route Marker Sing
1899	494.040	LHS	Right Hand Curve
1900	494.090	LHS	Chevron
1901	494.195	LHS	Chevron
1902	494.195	MEDIAN	Chevron
1903	494.260	LHS	Object Hazard Marker
1904	494.270	RHS	Object Hazard Marker
1905	494.300	MEDIAN	Chevron
1906	494.330	LHS	Eating Place
1907	494.370	LHS	Eating Place
1908	494.370	RHS	Left Hand Curve
1909	494.480	LHS	Petrol Pump
1910	494.620	RHS	Eating Place
1911	494.650	RHS	Eating Place
1912	494.750	LHS	End Of Dual Carriageway
1913	494.760	LHS	Direction Sign
1914	494.770	RHS	Petrol Pump
1915	494.790	LHS	Side Road Right
1916	494.840	LHS	Object Hazard Marker
1917	494.850	RHS	Object Hazard Marker
1918	494.900	RHS	Place Identification Sign
1919	494.910	RHS	Stop Sign
1920	494.910	RHS	Speed Breaker
1921	494.910	RHS	Major Road Ahead
1922	494.940	MEDIAN	Object Hazard Marker
1923	494.940	MEDIAN	Compulsory Keep Left
1924	494.980	RHS	Speed Limit
1925	494.985	LHS	Restriction Ends
1926	495.000	LHS	Speed Limit
1927	495.030	LHS	Speed Limit
1928	495.030	RHS	Start Of Dual Carriageway
1929	495.080	LHS	School
1930	495.080	RHS	Side Road Left
1931	495.120	RHS	Direction Sign
1932	495.130	LHS	Rumble Strip
1933	495.180	LHS	Pedestrain Crossing
1934	495.270	RHS	Pedestrain Crossing
1935	495.340	RHS	Rumble Strip
1936	495.370	RHS	School
1937	495.380	LHS	Pedestrain Crossing

S.No	Chainage	Side	Signage
1938	495.410	RHS	Speed Limit
1939	495.420	LHS	Bus Stop
1940	495.470	LHS	Petrol Pump
1941	495.515	LHS	Pass Either Side
1942	495.515	LHS	Two Way Hazard Marker
1943	495.520	RHS	Two Way Hazard Marker
1944	495.520	RHS	Pass Either Side
1945	495.610	RHS	Bus Stop
1946	495.630	RHS	Pedestrain Crossing
1947	495.800	RHS	Helpline Number Sign Board
1948	495.830	RHS	Petrol Pump
1949	496.230	LHS	Petrol Pump
1950	496.530	RHS	Petrol Pump
1951	496.960	LHS	Object Hazard Marker
1952	496.970	RHS	Object Hazard Marker
1953	498.210	LHS	Object Hazard Marker
1954	498.220	RHS	Object Hazard Marker
1955	498.300	LHS	Accident prone area
1956	498.430	LHS	Left Hand Curve
1957	498.530	LHS	Chevron
1958	498.590	RHS	Chevron
1959	498.610	RHS	Chevron
1960	498.660	RHS	Chevron
1961	498.660	RHS	Chevron
1962	498.730	RHS	Chevron
1963	498.790	RHS	Right Hand Curve
1964	498.885	LHS	Object Hazard Marker
1965	498.895	RHS	Object Hazard Marker
1966	499.630	LHS	Direction Sign
1967	499.770	LHS	Side Road Left
1968	499.930	LHS	Stop Sign
1969	499.930	LHS	Speed Breaker
1970	499.930	LHS	Major Road Ahead
1971	499.990	RHS	Direction Sign
1972	500.070	RHS	Side Road Right
1973	500.200	LHS	Helpline Number Sign Board
1974	500.900	LHS	Eating Place
1975	502.900	RHS	Reassurance Sign
1976	502.980	LHS	Right Hand Curve
1977	503.070	LHS	Chevron
1978	503.100	LHS	Reassurance Sign
1979	503.100	RHS	Chevron
1980	503.150	LHS	Chevron
1981	503.170	RHS	Chevron
1982	503.185	LHS	Direction Sign
1983	503.230	LHS	Eating Place
1984	503.250	LHS	Chevron
1985	503.260	LHS	Chevron
1986	503.270	LHS	Side Road Right
1987	503.310	LHS	Chevron
1988	503.340	RHS	Chevron
1989	503.370	LHS	Stop Sign
1990	503.370	LHS	Speed Breaker
1991	503.370	LHS	Major Road Ahead
1992	503.430	RHS	Left Hand Curve
1993	503.470	RHS	Side Road Left
1994	503.520	RHS	Eating Place

S.No	Chainage	Side	Signage
1995	503.545	RHS	Direction Sign
1996	504.990	LHS	Object Hazard Marker
1997	505.000	RHS	Object Hazard Marker
1998	505.280	LHS	Left Hand Curve
1999	505.290	RHS	Chevron
2000	505.400	LHS	Chevron
2001	505.445	RHS	Chevron
2002	505.460	LHS	Chevron
2003	505.495	RHS	Chevron
2004	505.500	LHS	Chevron
2005	505.530	RHS	Right Hand Curve
2006	505.800	LHS	Object Hazard Marker
2007	505.950	LHS	Right Hand Curve
2008	506.000	LHS	Chevron
2009	506.070	RHS	Chevron
2010	506.130	LHS	Chevron
2011	506.150	RHS	Chevron
2012	506.170	LHS	Chevron
2013	506.190	RHS	Chevron
2014	506.240	LHS	Chevron
2015	506.340	RHS	Chevron
2016	506.420	RHS	Left Hand Curve
2017	507.000	LHS	Place Identification Sign
2018	507.000	RHS	Place Identification Sign
2019	507.200	LHS	Accident prone area
2020	507.400	RHS	Object Hazard Marker
2021	507.420	LHS	Direction Sign
2022	507.430	LHS	Side Road Right
2023	507.595	RHS	Stop Sign
2024	507.595	RHS	Speed Breaker
2025	507.595	RHS	Major Road Ahead
2026	507.600	LHS	Pedestrain Crossing
2027	507.650	RHS	Pedestrain Crossing
2028	507.680	RHS	Side Road Left
2029	507.750	LHS	Left Hand Curve
2030	507.780	RHS	Chevron
2031	507.780	RHS	Direction Sign
2032	507.800	RHS	Pedestrain Crossing
2033	507.850	LHS	Direction Sign
2034	507.850	LHS	Chevron
2035	507.880	LHS	Side Road Left
2036	507.930	RHS	Chevron
2037	507.940	LHS	Chevron
2038	507.970	RHS	Object Hazard Marker
2039	507.980	RHS	Object Hazard Marker
2040	508.000	RHS	Chevron
2041	508.040	LHS	Stop Sign
2042	508.040	LHS	Speed Breaker
2043	508.040	LHS	Major Road Ahead
2044	508.060	RHS	Chevron
2045	508.120	RHS	Right Hand Curve
2046	508.150	RHS	Side Road Right
2047	508.210	RHS	Direction Sign
2048	508.560	LHS	Object Hazard Marker
2049	508.570	RHS	Object Hazard Marker
2050	508.600	LHS	Accident prone area
2051	508.650	LHS	Right Hand Curve

S.No	Chainage	Side	Signage
2052	508.710	LHS	Chevron
2053	508.830	LHS	Chevron
2054	508.830	RHS	Chevron
2055	508.870	LHS	Chevron
2056	508.870	RHS	Chevron
2057	509.000	RHS	Chevron
2058	509.050	RHS	Left Hand Curve
2059	509.260	LHS	Object Hazard Marker
2060	509.270	RHS	Object Hazard Marker
2061	509.740	LHS	Left Hand Curve
2062	509.800	LHS	Chevron
2063	509.900	RHS	Chevron
2064	509.930	RHS	Chevron
2065	509.970	LHS	Chevron
2066	509.980	RHS	Chevron
2067	510.100	RHS	Chevron
2068	510.140	RHS	Right Hand Curve
2069	511.850	LHS	Left Hand Curve
2070	511.930	LHS	Chevron
2071	512.030	RHS	Chevron
2072	512.030	RHS	Chevron
2073	512.080	LHS	Chevron
2074	512.080	RHS	Chevron
2075	512.190	RHS	Chevron
2076	512.250	RHS	Right Hand Curve
2077	512.270	LHS	Eating Place
2078	512.575	RHS	Eating Place
2079	512.700	LHS	Object Hazard Marker
2080	512.730	LHS	Object Hazard Marker
2081	512.740	RHS	Object Hazard Marker
2082	512.900	RHS	Reassurance Sign
2083	512.910	LHS	Place Identification Sign
2084	512.910	RHS	Place Identification Sign
2085	513.100	LHS	Reassurance Sign
2086	515.050	LHS	Eating Place
2087	515.600	RHS	Eating Place
2088	516.50	RHS	Helpline Number Sign Board
2089	516.800	LHS	Cattle sign
2090	517.000	LHS	Place Identification Sign
2091	517.000	RHS	Place Identification Sign
2092	517.000	LHS	Stop Sign
2093	517.800	RHS	Object Hazard Marker
2094	517.885	LHS	Right Hand Curve
2095	517.930	LHS	Chevron
2096	517.980	RHS	Chevron
2097	518.030	LHS	Chevron
2098	518.090	RHS	Chevron
2099	518.130	RHS	Left Hand Curve
2100	518.330	LHS	Object Hazard Marker
2101	518.340	RHS	Object Hazard Marker
2102	518.800	LHS	Object Hazard Marker
2103	518.900	LHS	Pedestrain Crossing
2104	519.420	LHS	Object Hazard Marker
2105	519.430	RHS	Object Hazard Marker
2106	519.500	LHS	Object Hazard Marker
2107	520.220	LHS	Object Hazard Marker
2108	520.230	RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
2109	520.585	LHS	Object Hazard Marker
2110	520.600	RHS	Object Hazard Marker
2111	520.800	RHS	Object Hazard Marker
2112	521.330	LHS	Right Hand Curve
2113	521.355	LHS	Petrol Pump
2114	521.425	LHS	Chevron
2115	521.460	RHS	Chevron
2116	521.530	LHS	Chevron
2117	521.585	RHS	Chevron
2118	521.660	RHS	Petrol Pump
2119	521.710	RHS	Left Hand Curve
2120	521.780	LHS	Start Of Dual Carriageway
2121	521.870	LHS	Speed Limit
2122	521.870	RHS	Restriction Ends
2123	521.920	MEDIAN	Object Hazard Marker
2124	521.920	MEDIAN	Compulsory Keep Left
2125	521.940	LHS	Direction Sign
2126	521.960	RHS	Stack Type Advance Direction Sign
2127	521.960	LHS	Side Road Left
2128	522.000	LHS	Side Road Right
2129	522.030	RHS	End Of Dual Carriageway
2130	522.045	LHS	Police Station
2131	522.100	LHS	Direction Sign
2132	522.120	LHS	Stop Sign
2133	522.120	LHS	Speed Breaker
2134	522.120	LHS	Major Road Ahead
2135	522.140	RHS	Stop Sign
2136	522.140	RHS	Speed Breaker
2137	522.140	RHS	Major Road Ahead
2138	522.180	LHS	Cross Road
2139	522.210	LHS	Object Hazard Marker
2140	522.220	RHS	Object Hazard Marker
2141	522.260	RHS	Side Road Right
2142	522.280	RHS	Stop Sign
2143	522.280	RHS	Speed Breaker
2144	522.280	RHS	Major Road Ahead
2145	522.285	LHS	Stop Sign
2146	522.285	LHS	Speed Breaker
2147	522.285	LHS	Major Road Ahead
2148	522.300	RHS	Direction Sign
2149	522.300	RHS	Side Road Left
2150	522.320	RHS	Stack Type Advance Direction Sign
2151	522.340	RHS	Police Station
2152	522.400	RHS	Cross Road
2153	522.410	LHS	Rumble Strip
2154	522.450	LHS	Pedestrain Crossing
2155	522.460	RHS	Direction Sign
2156	522.560	RHS	Pedestrain Crossing
2157	522.600	RHS	Rumble Strip
2158	522.610	LHS	Eating Place
2159	522.670	LHS	Petrol Pump
2160	522.835	LHS	End Of Dual Carriageway
2161	522.880	RHS	Reassurance Sign
2162	522.910	MEDIAN	Object Hazard Marker
2163	522.910	MEDIAN	Compulsory Keep Left
2164	522.910	RHS	Place Identification Sign
2165	522.910	LHS	Place Identification Sign

S.No	Chainage	Side	Signage
2166	522.950	RHS	Eating Place
2167	522.985	RHS	Petrol Pump
2168	523.010	LHS	Restriction Ends
2169	523.010	RHS	Speed Limit
2170	523.070	RHS	Start Of Dual Carriageway
2171	523.100	LHS	Reassurance Sign
2172	524.250	RHS	Helpline Number Sign Board
2173	525.070	LHS	Left Hand Curve
2174	525.120	LHS	Chevron
2175	525.160	RHS	Chevron
2176	525.240	RHS	Chevron
2177	525.340	RHS	Right Hand Curve
2178	525.590	RHS	Chevron
2179	525.880	LHS	Left Hand Curve
2180	525.940	LHS	Chevron
2181	525.980	RHS	Chevron
2182	526.070	LHS	Chevron
2183	526.130	RHS	Chevron
2184	526.170	RHS	Right Hand Curve
2185	528.370	LHS	Object Hazard Marker
2186	528.380	RHS	Object Hazard Marker
2187	528.740	LHS	Left Hand Curve
2188	528.770	LHS	Chevron
2189	528.830	RHS	Chevron
2190	528.930	LHS	Chevron
2191	528.970	RHS	Chevron
2192	529.020	RHS	Right Hand Curve
2193	529.400	RHS	Helpline Number Sign Board
2194	530.280	LHS	Right Hand Curve
2195	530.320	LHS	Chevron
2196	530.340	LHS	Direction Sign
2197	530.380	LHS	Side Road Left
2198	530.415	LHS	Chevron
2199	530.415	LHS	Chevron
2200	530.450	RHS	Chevron
2201	530.470	LHS	Chevron
2202	530.510	RHS	Chevron
2203	530.510	LHS	Chevron
2204	530.540	LHS	Stop Sign
2205	530.540	LHS	Speed Breaker
2206	530.540	LHS	Major Road Ahead
2207	530.610	LHS	Chevron
2208	530.630	RHS	Left Hand Curve
2209	530.670	RHS	Side Road Right
2210	530.700	RHS	Direction Sign
2211	530.740	LHS	Truck Lay Bye
2212	530.970	LHS	Right Hand Curve
2213	531.000	LHS	Chevron
2214	531.000	LHS	Place Identification Sign
2215	531.000	RHS	Place Identification Sign
2216	531.000	MEDIAN	Two Way Hazard Marker
2217	531.000	MEDIAN	Pass Either Side
2218	531.080	RHS	Chevron
2219	531.140	RHS	Truck Lay Bye
2220	531.140	LHS	Direction Sign
2221	531.150	LHS	Chevron
2222	531.170	LHS	Side Road Right

S.No	Chainage	Side	Signage
2223	531.230	RHS	Chevron
2224	531.260	RHS	Left Hand Curve
2225	531.330	RHS	Stop Sign
2226	531.330	RHS	Speed Breaker
2227	531.330	RHS	Major Road Ahead
2228	531.470	RHS	Side Road Left
2229	531.500	RHS	Direction Sign
2230	532.900	RHS	Reassurance Sign
2231	533.100	LHS	Reassurance Sign
2232	533.400	LHS	Accident A Head Sign Board
2233	533.830	LHS	Left Hand Curve
2234	533.870	LHS	Object Hazard Marker
2235	533.880	RHS	Object Hazard Marker
2236	533.930	LHS	Chevron
2237	534.010	RHS	Chevron
2238	534.100	RHS	Chevron
2239	534.190	RHS	Chevron
2240	534.240	RHS	Right Hand Curve
2241	535.420	LHS	Object Hazard Marker
2242	535.430	RHS	Object Hazard Marker
2243	536.390	LHS	Object Hazard Marker
2244	536.400	RHS	Object Hazard Marker
2245	536.980	LHS	Right Hand Curve
2246	537.010	LHS	Chevron
2247	537.120	LHS	Chevron
2248	537.120	RHS	Chevron
2249	537.175	RHS	Chevron
2250	537.175	LHS	Chevron
2251	537.280	LHS	Chevron
2252	537.340	RHS	Left Hand Curve
2253	537.500	LHS	Left Hand Curve
2254	537.560	LHS	Chevron
2255	537.670	LHS	Chevron
2256	537.670	RHS	Chevron
2257	537.720	LHS	Chevron
2258	537.720	RHS	Chevron
2259	537.820	RHS	Chevron
2260	537.860	RHS	Right Hand Curve
2261	539.100	LHS	Helpline Number Sign Board
2262	539.520	LHS	Left Hand Curve
2263	539.550	LHS	Petrol Pump
2264	539.590	LHS	Object Hazard Marker
2265	539.600	RHS	Object Hazard Marker
2266	539.630	LHS	Chevron
2267	539.660	RHS	Chevron
2268	539.760	RHS	Chevron
2269	539.800	RHS	Chevron
2270	539.870	RHS	Petrol Pump
2271	539.920	RHS	Right Hand Curve
2272	540.000	LHS	Place Identification Sign
2273	540.000	RHS	Place Identification Sign
2274	540.360	LHS	Direction Sign
2275	540.420	LHS	Side Road Right
2276	540.540	RHS	Stop Sign
2277	540.540	RHS	Speed Breaker
2278	540.540	RHS	Major Road Ahead
2279	540.705	RHS	Side Road Left

S.No	Chainage	Side	Signage
2280	540.720	RHS	Direction Sign
2281	542.460	LHS	Object Hazard Marker
2282	542.470	RHS	Object Hazard Marker
2283	542.700	LHS	Speed Limit
2284	542.900	RHS	Reassurance Sign
2285	543.100	LHS	Reassurance Sign
2286	544.180	LHS	Speed Limit
2287	544.200	LHS	Petrol Pump
2288	544.200	LHS	Accident A Head Sign Board
2289	544.240	LHS	Eating Place
2290	544.300	LHS	Gantry board
2291	544.510	RHS	Petrol Pump
2292	544.540	RHS	Eating Place
2293	544.800	RHS	Accident A Head Sign Board
2294	545.580	LHS	Eating Place
2295	545.770	LHS	Speed Limit
2296	545.830	LHS	School
2297	545.860	LHS	Rumble Strip
2298	545.870	RHS	Eating Place
2299	545.920	LHS	Pedestrain Crossing
2300	545.960	LHS	Speed Limit
2301	545.995	LHS	School
2302	546.020	RHS	Pedestrain Crossing
2303	546.060	RHS	Rumble Strip
2304	546.100	LHS	Pedestrain Crossing
2305	546.120	RHS	School
2306	546.180	RHS	Speed Limit
2307	546.210	RHS	Pedestrain Crossing
2308	546.250	RHS	Rumble Strip
2309	546.310	RHS	School
2310	546.360	RHS	Speed Limit
2311	547.000	LHS	Place Identification Sign
2312	547.000	RHS	Place Identification Sign
2313	547.550	RHS	Animal Sign Board
2314	547.750	LHS	Petrol Pump
2315	548.050	RHS	Petrol Pump
2316	550.100	RHS	Helpline Number Sign Board
2317	550.995	LHS	Object Hazard Marker
2318	551.005	RHS	Object Hazard Marker
2319	551.760	LHS	Object Hazard Marker
2320	551.770	RHS	Object Hazard Marker
2321	552.280	LHS	Object Hazard Marker
2322	552.280	RHS	Object Hazard Marker
2323	552.905	LHS	Object Hazard Marker
2324	552.915	RHS	Object Hazard Marker
2325	553.185	LHS	Map Type Advance Direction Sing For Roundabout
2326	553.700	LHS	Accident A Head Sign Board
2327	553.740	LHS	NH Route Marker Sing
2328	553.760	LHS	Map Type Advance Direction Sing For Roundabout
2329	553.760	RHS	Map Type Advance Direction Sing For Roundabout
2330	553.760	LHS	Map Type Advance Direction Sing For Roundabout
2331	553.800	RHS	Reassurance Sign
2332	553.840	RHS	NH Route Marker Sing
2333	553.850	Circle	Two Way Hazard Marker
2334	553.850	Circle	Object Hazard Marker
2335	553.850	Circle	Object Hazard Marker
2336	553.850	Circle	Object Hazard Marker

S.No	Chainage	Side	Signage
2337	553.850	Circle	Object Hazard Marker
2338	554.010	LHS	NH Route Marker Sing
2339	554.050	LHS	Eating Place
2340	554.090	LHS	Reassurance Sign
2341	554.100	RHS	Map Type Advance Direction Sing For Roundabout
2342	554.160	LHS	Object Hazard Marker
2343	554.170	RHS	Object Hazard Marker
2344	554.210	RHS	NH Route Marker Sing
2345	554.350	RHS	Eating Place
2346	554.460	LHS	Petrol Pump
2347	554.630	LHS	Eating Place
2348	554.685	RHS	Map Type Advance Direction Sing For Roundabout
2349	554.760	RHS	Petrol Pump
2350	554.930	RHS	Eating Place
2351	555.310	LHS	Right Hand Curve
2352	555.350	LHS	Chevron
2353	555.410	LHS	Chevron
2354	555.480	LHS	Chevron
2355	555.540	RHS	Chevron
2356	555.570	RHS	Left Hand Curve
2357	555.600	LHS	Petrol Pump
2358	555.710	LHS	Object Hazard Marker
2359	555.720	RHS	Object Hazard Marker
2360	555.930	RHS	Petrol Pump
2361	556.280	LHS	Left Hand Curve
2362	556.320	LHS	Object Hazard Marker
2363	556.330	RHS	Object Hazard Marker
2364	556.360	RHS	Chevron
2365	556.470	LHS	Chevron
2366	556.470	RHS	Chevron
2367	556.560	RHS	Chevron
2368	556.565	RHS	Chevron
2369	556.610	RHS	Chevron
2370	556.640	LHS	Object Hazard Marker
2371	556.650	RHS	Object Hazard Marker
2372	556.720	RHS	Right Hand Curve
2373	557.400	LHS	Side Road Left
2374	557.620	RHS	Stop Sign
2375	557.620	RHS	Speed Breaker
2376	557.620	RHS	Major Road Ahead
2377	557.695	RHS	Side Road Right
2378	557.900	LHS	Toll Road End Sign Board
2379	557.901	RHS	Toll Road Starrt Sign Board
2380	0.040	LHS	End Of Dual Carriageway
2381	0.055	RHS	Chevron
2382	0.100	LHS	Object Hazard Marker
2383	0.115	RHS	Object Hazard Marker
2384	0.145	LHS	Chevron
2385	0.145	RHS	Chevron
2386	0.230	LHS	Chevron
2387	0.280	LHS	Chevron
2388	0.280	RHS	Chevron
2389	0.375	LHS	Chevron
2390	0.375	RHS	Chevron
2391	0.410	RHS	Reverse Bend
2392	0.575	LHS	Object Hazard Marker
2393	0.585	RHS	Object Hazard Marker

S.No	Chainage	Side	Signage
2394	1.085	LHS	Object Hazard Marker
2395	1.095	RHS	Object Hazard Marker
2396	1.655	LHS	Object Hazard Marker
2397	1.665	RHS	Object Hazard Marker
2398	1.700	LHS	Object Hazard Marker
2399	1.835	LHS	Object Hazard Marker
2400	1.845	RHS	Object Hazard Marker
2401	1.980	LHS	Speed Limit
2402	1.990	LHS	Direction Sign
2403	2.030	LHS	School
2404	2.060	LHS	Rumble Strip
2405	2.120	LHS	Pedestrain Crossing
2406	2.230	RHS	Pedestrain Crossing
2407	2.260	RHS	Rumble Strip
2408	2.330	RHS	School
2409	2.350	RHS	Speed Limit
2410	2.350	RHS	Direction Sign
2411	2.810	LHS	Right Hand Curve
2412	2.810	RHS	Chevron
2413	2.850	LHS	Chevron
2414	2.900	LHS	Chevron
2415	2.945	LHS	Chevron
2416	2.955	RHS	Chevron
2417	2.995	LHS	Eating Place
2418	3.000	RHS	Chevron
2419	3.030	LHS	Chevron
2420	3.040	RHS	Chevron
2421	3.075	LHS	Chevron
2422	3.090	RHS	Chevron
2423	3.145	LHS	Chevron
2424	3.230	LHS	Chevron
2425	3.230	RHS	Left Hand Curve
2426	3.280	RHS	Eating Place
2427	3.400	LHS	Cross Road
2428	3.520	RHS	Stop Sign
2429	3.520	RHS	Speed Breaker
2430	3.520	RHS	Major Road Ahead
2431	3.525	LHS	Stop Sign
2432	3.525	LHS	Speed Breaker
2433	3.525	LHS	Major Road Ahead
2434	3.675	RHS	Cross Road
2435	4.060	LHS	Direction Sign
2436	4.230	LHS	Right Hand Curve
2437	4.240	RHS	Chevron
2438	4.250		Stack Type Advance Direction Sign
2439	4.360	LHS	Chevron
2440	4.360	RHS	Chevron
2441	4.400	LHS	Chevron
2442	4.400	RHS	Chevron
2443	4.420	RHS	Direction Sign
2444	4.520	LHS	Chevron
2445	4.520	RHS	Left Hand Curve
2446	5.890	LHS	Petrol Pump
2447	6.190	RHS	Petrol Pump
2448	6.840	LHS	Side Road Right
2449	6.950	RHS	Stop Sign
2450	6.950	RHS	Speed Breaker

S.No	Chainage	Side	Signage
2451	6.950	RHS	Major Road Ahead
2452	7.120	RHS	Side Road Left
2453	7.320	LHS	Side Road Left
2454	7.495	RHS	Stop Sign
2455	7.495	RHS	Speed Breaker
2456	7.495	RHS	Major Road Ahead
2457	7.630	RHS	Side Road Right
2458	7.700	LHS	Helpline Number Sign Board
2459	8.500	LHS	Direction Sign
2460	8.560	LHS	Cross Road
2461	8.660	RHS	Stop Sign
2462	8.660	RHS	Speed Breaker
2463	8.660	RHS	Major Road Ahead
2464	8.715	LHS	Stop Sign
2465	8.715	LHS	Speed Breaker
2466	8.715	LHS	Major Road Ahead
2467	8.735	LHS	Object Hazard Marker
2468	8.745	RHS	Object Hazard Marker
2469	8.800	LHS	No overtaking sign
2470	8.845	RHS	Cross Road
2471	8.860	RHS	Direction Sign
2472	9.235	LHS	Object Hazard Marker
2473	9.245	RHS	Object Hazard Marker
2474	9.390	LHS	Speed Limit
2475	9.390	RHS	Restriction Ends
2476	9.450	LHS	Place Identification Sign
2477	9.450	LHS	Object Hazard Marker
2478	9.600	LHS	Object Hazard Marker
2479	9.610	RHS	Object Hazard Marker
2480	9.635	LHS	Object Hazard Marker
2481	9.645	RHS	Object Hazard Marker
2482	9.895	LHS	Object Hazard Marker
2483	9.895	RHS	Reassurance Sign
2484	9.995	LHS	Right Hand Curve
2485	9.999	RHS	Object Hazard Marker
2486	10.015	LHS	Rumble Strip
2487	10.020	RHS	Chevron
2488	10.050	LHS	Pedestrain Crossing
2489	10.055	RHS	Chevron
2490	10.075	LHS	Object Hazard Marker
2491	10.085	RHS	Object Hazard Marker
2492	10.110	LHS	Chevron
2493	10.120	RHS	Chevron
2494	10.140	LHS	Chevron
2495	10.160	RHS	Chevron
2496	10.185	LHS	Chevron
2497	10.195	RHS	Pedestrain Crossing
2498	10.230	RHS	Rumble Strip
2499	10.260	LHS	Chevron
2500	10.265	RHS	Left Hand Curve
2501	10.300	LHS	Reassurance Sign
2502	10.360	RHS	E0It Of Service Road
2503	10.370	LHS	Entry In Service Road
2504	10.400	LHS	Place Identification Sign
2505	10.400	MEDIAN	Two Way Hazard Marker
2506	10.400	MEDIAN	Pass Either Side
2507	10.400	RHS	Place Identification Sign

S.No	Chainage	Side	Signage
2508	10.550	LHS	Cross Road
2509	10.605	LHS	Left Hand Curve
2510	10.655	RHS	Chevron
2511	10.660	LHS	Chevron
2512	10.700	LHS	E0It Of Service Road
2513	10.720	RHS	Chevron
2514	10.735	LHS	Object Hazard Marker
2515	10.750	RHS	Place Identification Sign
2516	10.750	LHS	Place Identification Sign
2517	10.755	LHS	Stop Sign
2518	10.755	LHS	Speed Breaker
2519	10.755	LHS	Major Road Ahead
2520	10.760	RHS	Stop Sign
2521	10.760	RHS	Speed Breaker
2522	10.760	RHS	Major Road Ahead
2523	10.770	RHS	Object Hazard Marker
2524	10.775	LHS	Chevron
2525	10.785	RHS	Chevron
2526	10.795	LHS	Chevron
2527	10.820	RHS	Chevron
2528	10.825	LHS	Chevron
2529	10.850	RHS	Chevron
2530	10.855	LHS	Chevron
2531	10.865	LHS	Object Hazard Marker
2532	10.875	RHS	Object Hazard Marker
2533	10.930	LHS	Chevron
2534	10.955	RHS	Chevron
2535	10.960	LHS	Object Hazard Marker
2536	10.995	LHS	Speed Limit
2537	11.030	LHS	School
2538	11.040	RHS	Object Hazard Marker
2539	11.050	LHS	Rumble Strip
2540	11.100	LHS	Pedestrain Crossing
2541	11.110	RHS	Right Hand Curve
2542	11.185	RHS	Pedestrain Crossing
2543	11.240	RHS	Rumble Strip
2544	11.275	RHS	School
2545	11.320	RHS	Speed Limit
2546	11.560	LHS	Restriction Ends
2547	11.560	RHS	Speed Limit
2548	11.800	RHS	Object Hazard Marker
2549	11.870	LHS	Direction Sign
2550	11.915	LHS	Side Road Right
2551	11.995	LHS	Eating Place
2552	12.030	LHS	Stop Sign
2553	12.030	LHS	Speed Breaker
2554	12.030	LHS	Major Road Ahead
2555	12.220	RHS	Side Road Left
2556	12.230	RHS	Direction Sign
2557	12.300	RHS	Eating Place
2558	13.100	LHS	Direction Sign
2559	13.200	LHS	Cross Road
2560	13.280	RHS	Stop Sign
2561	13.280	RHS	Speed Breaker
2562	13.280	RHS	Major Road Ahead
2563	13.285	LHS	Stop Sign
2564	13.285	LHS	Speed Breaker

S.No	Chainage	Side	Signage
2565	13.285	LHS	Major Road Ahead
2566	13.385	RHS	Cross Road
2567	13.460	RHS	Direction Sign
2568	13.800	RHS	Helpline Number Sign Board
2569	14.070	LHS	Object Hazard Marker
2570	14.075	RHS	Object Hazard Marker
2571	15.050	LHS	Object Hazard Marker
2572	15.070	RHS	Object Hazard Marker
2573	15.120	LHS	Accident Prone Area Sign Board
2574	15.275	LHS	Right Hand Curve
2575	15.330	LHS	Chevron
2576	15.440	LHS	Chevron
2577	15.440	RHS	Chevron
2578	15.470	RHS	Chevron
2579	15.475	LHS	Chevron
2580	15.510	LHS	Chevron
2581	15.510	LHS	Chevron
2582	15.640	RHS	Chevron
2583	15.640	LHS	Direction Sign
2584	15.675	RHS	Major Road Ahead
2585	15.680	RHS	Left Hand Curve
2586	15.820		Stack Type Advance Direction Sign
2587	15.830	RHS	Stop Sign
2588	15.830	RHS	Speed Breaker
2589	15.830	RHS	Major Road Ahead
2590	15.840	LHS	Stop Sign
2591	15.840	LHS	Speed Breaker
2592	15.840	LHS	Major Road Ahead
2593	15.970	RHS	Major Road Ahead
2594	16.000	RHS	Direction Sign
2595	16.090	LHS	Object Hazard Marker
2596	16.095	RHS	Object Hazard Marker
2597	16.200	LHS	Object Hazard Marker
2598	16.800	LHS	Object Hazard Marker
2599	16.850	RHS	Object Hazard Marker
2600	16.900	RHS	Gantry Mounted Advance Direction Sing Ahead Of A Grade Separated Junction
2601	16.900	RHS	Object Hazard Marker
2602	17.120	LHS	Stack Type Advance Direction Sign
2603	17.242	LHS	Stack Type Advance Direction Sign
2604	17.242	RHS	Stack Type Advance Direction Sign
Condition of majority of the signages ranges from good to fair			

Annexure 3 (b) : Pavement Marking Details

Chainage		Markings	
From	To	LHS	RHS
0.000	0.100	YES	YES
0.100	0.200	YES	YES
0.200	0.300	YES	YES
0.300	0.400	YES	YES
0.400	0.500	YES	YES
0.500	0.600	YES	YES
0.600	0.700	YES	YES
0.700	0.800	YES	YES
0.800	0.900	YES	YES
0.900	1.000	YES	YES
1.000	1.100	YES	YES
1.100	1.200	YES	YES
1.200	1.300	YES	YES
1.300	1.400	YES	YES
1.400	1.500	YES	YES
1.500	1.600	YES	YES
1.600	1.700	YES	YES
1.700	1.800	YES	YES
1.800	1.900	YES	YES
1.900	2.000	YES	YES
2.000	2.100	YES	YES
2.100	2.200	YES	YES
2.200	2.300	YES	YES
2.300	2.400	YES	YES
2.400	2.500	NO	NO
2.500	2.600	NO	NO
2.600	2.700	NO	NO
2.700	2.800	NO	NO
2.800	2.900	NO	NO
2.900	3.000	NO	NO
3.000	3.100	NO	NO
3.100	3.200	NO	NO
3.200	3.300	NO	NO
3.300	3.400	NO	NO
3.400	3.500	NO	NO
3.500	3.600	NO	NO
3.600	3.700	NO	NO
3.700	3.800	NO	NO
3.800	3.900	NO	NO
3.900	4.000	NO	NO
4.000	4.100	NO	NO
4.100	4.200	NO	NO
4.200	4.300	NO	NO
4.300	4.400	NO	NO
4.400	4.500	NO	NO

Chainage		Markings	
From	To	LHS	RHS
4.500	4.600	NO	NO
4.600	4.700	NO	NO
4.700	4.800	NO	NO
4.800	4.900	NO	NO
4.900	5.000	NO	NO
5.000	5.100	NO	NO
5.100	5.200	NO	NO
5.200	5.300	NO	NO
5.300	5.400	NO	NO
5.400	5.500	NO	NO
5.500	5.600	NO	NO
5.600	5.700	NO	NO
5.700	5.800	NO	NO
5.800	5.900	NO	NO
5.900	6.000	NO	NO
6.000	6.100	NO	NO
6.100	6.200	NO	NO
6.200	6.300	NO	NO
6.300	6.400	NO	NO
6.400	6.500	YES	YES
6.500	6.600	YES	YES
6.600	6.700	YES	YES
6.700	6.800	YES	YES
6.800	6.900	YES	YES
6.900	7.000	YES	YES
7.000	7.100	YES	YES
7.100	7.200	YES	YES
7.200	7.300	YES	YES
7.300	7.400	YES	YES
7.400	7.500	YES	YES
7.500	7.600	YES	YES
7.600	7.700	YES	YES
7.700	7.800	YES	YES
7.800	7.900	YES	YES
7.900	8.000	YES	YES
8.000	8.100	YES	YES
8.100	8.200	YES	YES
8.200	8.300	YES	YES
8.300	8.400	YES	YES
8.400	8.500	YES	YES
8.500	8.600	YES	YES
8.600	8.700	YES	YES
8.700	8.800	YES	YES
8.800	8.900	YES	YES
8.900	9.000	YES	YES
9.000	9.100	YES	YES

Chainage		Markings	
From	To	LHS	RHS
9.100	9.200	YES	YES
9.200	9.300	YES	YES
9.300	9.400	YES	YES
9.400	9.500	YES	YES
9.500	9.600	YES	YES
9.600	9.700	YES	YES
9.700	9.800	YES	YES
9.800	9.900	YES	YES
9.900	10.000	YES	YES
10.000	10.100	YES	YES
10.100	10.200	YES	YES
10.200	10.300	YES	YES
10.300	10.400	YES	YES
10.400	10.500	YES	YES
10.500	10.600	YES	YES
10.600	10.700	YES	YES
10.700	10.800	YES	YES
10.800	10.900	YES	YES
10.900	11.000	YES	YES
11.000	11.100	YES	YES
11.100	11.200	YES	YES
11.200	11.300	YES	YES
11.300	11.400	YES	YES
11.400	11.500	YES	YES
11.500	11.600	YES	YES
11.600	11.700	YES	YES
11.700	11.800	YES	YES
11.800	11.900	YES	YES
11.900	12.000	YES	YES
12.000	12.100	YES	YES
12.100	12.200	YES	YES
12.200	12.300	YES	YES
12.300	12.400	YES	YES
12.400	12.500	YES	YES
12.500	12.600	YES	YES
12.600	12.700	YES	YES
12.700	12.800	YES	YES
12.800	12.900	YES	YES
12.900	13.000	YES	YES
13.000	13.100	YES	YES
13.100	13.200	YES	YES
13.200	13.300	YES	YES
13.300	13.400	YES	YES
13.400	13.500	YES	YES
13.500	13.600	YES	YES
13.600	13.700	YES	YES

Chainage		Markings	
From	To	LHS	RHS
13.700	13.800	YES	YES
13.800	13.900	YES	YES
13.900	14.000	YES	YES
14.000	14.100	YES	YES
14.100	14.200	YES	YES
14.200	14.300	YES	YES
14.300	14.400	YES	YES
14.400	14.500	YES	YES
14.500	14.600	YES	YES
14.600	14.700	YES	YES
14.700	14.800	YES	YES
14.800	14.900	YES	YES
14.900	15.000	YES	YES
15.000	15.100	YES	YES
15.100	15.200	YES	YES
15.200	15.300	YES	YES
15.300	15.400	YES	YES
15.400	15.500	YES	YES
15.500	15.600	YES	YES
15.600	15.700	YES	YES
15.700	15.800	YES	YES
15.800	15.900	YES	YES
15.900	16.000	YES	YES
16.000	16.100	YES	YES
16.100	16.200	YES	YES
16.200	16.300	YES	YES
16.300	16.400	YES	YES
16.400	16.500	YES	YES
16.500	16.600	YES	YES
16.600	16.700	YES	YES
16.700	16.800	YES	YES
16.800	16.900	YES	YES
16.900	17.000	YES	YES
17.000	17.100	YES	YES
17.100	17.200	YES	YES
17.200	17.300	YES	YES
17.300	17.400	YES	YES
17.400	17.500	YES	YES
17.500	17.600	YES	YES
17.600	17.700	YES	YES
17.700	17.800	YES	YES
17.800	17.900	YES	YES
17.900	18.000	YES	YES
18.000	18.100	YES	YES
18.100	18.200	YES	YES
18.200	18.300	YES	YES

Chainage		Markings	
From	To	LHS	RHS
18.300	18.400	YES	YES
18.400	18.500	YES	YES
18.500	18.600	YES	YES
18.600	18.700	YES	YES
18.700	18.800	YES	YES
18.800	18.900	YES	YES
18.900	19.000	YES	YES
19.000	19.100	YES	YES
19.100	19.200	YES	YES
19.200	19.300	YES	YES
19.300	19.400	YES	YES
356.900	357.000	YES	NO
357.000	357.100	YES	NO
357.100	357.200	YES	NO
357.200	357.300	YES	NO
357.300	357.400	YES	NO
357.400	357.500	YES	NO
357.500	357.600	YES	NO
357.600	357.700	YES	NO
357.700	357.800	YES	NO
357.800	357.900	YES	YES
357.900	358.000	YES	YES
358.000	358.100	YES	YES
358.100	358.200	YES	YES
358.200	358.300	YES	YES
358.300	358.400	YES	YES
358.400	358.500	YES	YES
358.500	358.600	YES	YES
358.600	358.700	YES	YES
358.700	358.800	YES	YES
358.800	358.900	YES	YES
358.900	359.000	YES	YES
359.000	359.100	YES	YES
359.100	359.200	YES	YES
359.200	359.300	YES	YES
359.300	359.400	YES	YES
359.400	359.500	YES	YES
359.500	359.600	YES	YES
359.600	359.700	YES	YES
359.700	359.800	YES	YES
359.800	359.900	YES	YES
359.900	360.000	YES	YES
360.000	360.100	YES	YES
360.100	360.200	YES	YES
360.200	360.300	YES	YES
360.300	360.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
360.400	360.500	YES	YES
360.500	360.600	YES	YES
360.600	360.700	YES	YES
360.700	360.800	YES	YES
360.800	360.900	YES	YES
360.900	361.000	YES	YES
361.000	361.100	YES	YES
361.100	361.200	YES	YES
361.200	361.300	YES	YES
361.300	361.400	YES	YES
361.400	361.500	YES	YES
361.500	361.600	YES	YES
361.600	361.700	YES	YES
361.700	361.800	YES	YES
361.800	361.900	YES	YES
361.900	362.000	YES	YES
362.000	362.100	YES	YES
362.100	362.200	YES	YES
362.200	362.300	YES	YES
362.300	362.400	YES	YES
362.400	362.500	YES	YES
362.500	362.600	YES	YES
362.600	362.700	YES	YES
362.700	362.800	YES	YES
362.800	362.900	YES	YES
362.900	363.000	YES	YES
363.000	363.100	YES	YES
363.100	363.200	YES	YES
363.200	363.300	YES	YES
363.300	363.400	YES	YES
363.400	363.500	YES	YES
363.500	363.600	YES	YES
363.600	363.700	YES	YES
363.700	363.800	YES	YES
363.800	363.900	YES	YES
363.900	364.000	YES	YES
364.000	364.100	YES	YES
364.100	364.200	YES	YES
364.200	364.300	YES	YES
364.300	364.400	YES	YES
364.400	364.500	YES	YES
364.500	364.600	YES	YES
364.600	364.700	YES	YES
364.700	364.800	YES	YES
364.800	364.900	YES	YES
364.900	365.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
365.000	365.100	YES	YES
365.100	365.200	YES	YES
365.200	365.300	YES	YES
365.300	365.400	YES	YES
365.400	365.500	YES	YES
365.500	365.600	YES	YES
365.600	365.700	YES	YES
365.700	365.800	YES	YES
365.800	365.900	YES	YES
365.900	366.000	YES	YES
366.000	366.100	YES	YES
366.100	366.200	YES	YES
366.200	366.300	YES	YES
366.300	366.400	YES	YES
366.400	366.500	YES	YES
366.500	366.600	YES	YES
366.600	366.700	YES	YES
366.700	366.800	YES	YES
366.800	366.900	YES	YES
366.900	367.000	YES	YES
367.000	367.100	YES	YES
367.100	367.200	YES	YES
367.200	367.300	YES	YES
367.300	367.400	YES	YES
367.400	367.500	YES	YES
367.500	367.600	YES	YES
367.600	367.700	YES	YES
367.700	367.800	YES	YES
367.800	367.900	YES	YES
367.900	368.000	YES	YES
368.000	368.100	YES	YES
368.100	368.200	YES	YES
368.200	368.300	YES	YES
368.300	368.400	YES	YES
368.400	368.500	YES	YES
368.500	368.600	NO	YES
368.600	368.700	NO	YES
368.700	368.800	NO	YES
368.800	368.900	NO	YES
368.900	369.000	NO	YES
369.000	369.100	NO	YES
369.100	369.200	NO	YES
369.200	369.300	NO	YES
369.300	369.400	NO	YES
369.400	369.500	NO	YES
369.500	369.600	NO	YES

Chainage		Markings	
From	To	LHS	RHS
369.600	369.700	YES	YES
369.700	369.800	YES	YES
369.800	369.900	YES	YES
369.900	370.000	YES	YES
370.000	370.100	YES	YES
370.100	370.200	YES	YES
370.200	370.300	YES	YES
370.300	370.400	YES	YES
370.400	370.500	YES	YES
370.500	370.600	YES	YES
370.600	370.700	YES	YES
370.700	370.800	YES	YES
370.800	370.900	YES	YES
370.900	371.000	YES	YES
371.000	371.100	YES	YES
371.100	371.200	YES	YES
371.200	371.300	YES	YES
371.300	371.400	YES	YES
371.400	371.500	YES	YES
371.500	371.600	YES	YES
371.600	371.700	YES	YES
371.700	371.800	YES	YES
371.800	371.900	YES	YES
371.900	372.000	YES	YES
372.000	372.100	YES	YES
372.100	372.200	YES	YES
372.200	372.300	YES	YES
372.300	372.400	YES	YES
372.400	372.500	YES	YES
372.500	372.600	YES	YES
372.600	372.700	YES	YES
372.700	372.800	YES	YES
372.800	372.900	YES	YES
372.900	373.000	YES	YES
373.000	373.100	YES	YES
373.100	373.200	YES	YES
373.200	373.300	YES	YES
373.300	373.400	YES	YES
373.400	373.500	YES	YES
373.500	373.600	YES	YES
373.600	373.700	YES	YES
373.700	373.800	YES	YES
373.800	373.900	YES	YES
373.900	374.000	YES	YES
374.000	374.100	YES	YES
374.100	374.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
374.200	374.300	YES	YES
374.300	374.400	YES	YES
374.400	374.500	YES	YES
374.500	374.600	YES	YES
374.600	374.700	YES	YES
374.700	374.800	NO	NO
374.800	374.900	NO	NO
374.900	375.000	NO	NO
375.000	375.100	NO	NO
375.100	375.200	NO	NO
375.200	375.300	NO	NO
375.300	375.400	NO	NO
375.400	375.500	NO	NO
375.500	375.600	NO	NO
375.600	375.700	NO	NO
375.700	375.800	NO	NO
375.800	375.900	NO	NO
375.900	376.000	NO	NO
376.000	376.100	NO	NO
376.100	376.200	NO	NO
376.200	376.300	NO	NO
376.300	376.400	NO	NO
376.400	376.500	NO	NO
376.500	376.600	NO	NO
376.600	376.700	NO	NO
376.700	376.800	NO	NO
376.800	376.900	NO	NO
376.900	377.000	NO	NO
377.000	377.100	YES	YES
377.100	377.200	YES	YES
377.200	377.300	YES	YES
377.300	377.400	YES	YES
377.400	377.500	YES	YES
377.500	377.600	YES	YES
377.600	377.700	YES	YES
377.700	377.800	YES	YES
377.800	377.900	YES	YES
377.900	378.000	YES	YES
378.000	378.100	YES	YES
378.100	378.200	YES	YES
378.200	378.300	YES	YES
378.300	378.400	YES	YES
378.400	378.500	YES	YES
378.500	378.600	YES	YES
378.600	378.700	YES	YES
378.700	378.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
378.800	378.900	YES	YES
378.900	379.000	YES	YES
379.000	379.100	YES	YES
379.100	379.200	YES	YES
379.200	379.300	YES	YES
379.300	379.400	YES	YES
379.400	379.500	YES	YES
379.500	379.600	YES	YES
379.600	379.700	YES	YES
379.700	379.800	YES	YES
379.800	379.900	YES	YES
379.900	380.000	YES	YES
380.000	380.100	YES	YES
380.100	380.200	YES	YES
380.200	380.300	YES	YES
380.300	380.400	YES	YES
380.400	380.500	YES	YES
380.500	380.600	YES	YES
380.600	380.700	YES	YES
380.700	380.800	YES	YES
380.800	380.900	YES	YES
380.900	381.000	YES	YES
381.000	381.100	YES	YES
381.100	381.200	YES	YES
381.200	381.300	YES	YES
381.300	381.400	YES	YES
381.400	381.500	YES	YES
381.500	381.600	YES	YES
381.600	381.700	YES	YES
381.700	381.800	YES	YES
381.800	381.900	YES	YES
381.900	382.000	YES	YES
382.000	382.100	YES	YES
382.100	382.200	YES	YES
382.200	382.300	YES	YES
382.300	382.400	YES	YES
382.400	382.500	YES	YES
382.500	382.600	YES	YES
382.600	382.700	YES	YES
382.700	382.800	YES	YES
382.800	382.900	YES	YES
382.900	383.000	YES	YES
383.000	383.100	YES	YES
383.100	383.200	YES	YES
383.200	383.300	YES	YES
383.300	383.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
383.400	383.500	YES	YES
383.500	383.600	YES	YES
383.600	383.700	YES	YES
383.700	383.800	YES	YES
383.800	383.900	YES	YES
383.900	384.000	YES	YES
384.000	384.100	YES	YES
384.100	384.200	YES	YES
384.200	384.300	YES	YES
384.300	384.400	YES	YES
384.400	384.500	YES	YES
384.500	384.600	YES	YES
384.600	384.700	YES	YES
384.700	384.800	YES	YES
384.800	384.900	YES	YES
384.900	385.000	YES	YES
385.000	385.100	YES	YES
385.100	385.200	YES	YES
385.200	385.300	YES	YES
385.300	385.400	YES	YES
385.400	385.500	YES	YES
385.500	385.600	YES	YES
385.600	385.700	YES	YES
385.700	385.800	YES	YES
385.800	385.900	YES	YES
385.900	386.000	YES	YES
386.000	386.100	NO	NO
386.100	386.200	NO	NO
386.200	386.300	YES	YES
386.300	386.400	YES	YES
386.400	386.500	YES	YES
386.500	386.600	YES	YES
386.600	386.700	YES	YES
386.700	386.800	YES	YES
386.800	386.900	YES	YES
386.900	387.000	YES	YES
387.000	387.100	YES	YES
387.100	387.200	YES	YES
387.200	387.300	YES	YES
387.300	387.400	YES	YES
387.400	387.500	YES	YES
387.500	387.600	YES	YES
387.600	387.700	YES	YES
387.700	387.800	YES	YES
387.800	387.900	YES	YES
387.900	388.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
388.000	388.100	YES	YES
388.100	388.200	YES	YES
388.200	388.300	YES	YES
388.300	388.400	YES	YES
388.400	388.500	YES	YES
388.500	388.600	YES	YES
388.600	388.700	YES	YES
388.700	388.800	YES	YES
388.800	388.900	YES	YES
388.900	389.000	YES	YES
389.000	389.100	YES	YES
389.100	389.200	YES	YES
389.200	389.300	YES	YES
389.300	389.400	YES	YES
389.400	389.500	YES	YES
389.500	389.600	YES	YES
389.600	389.700	YES	YES
389.700	389.800	YES	YES
389.800	389.900	YES	YES
389.900	390.000	YES	YES
390.000	390.100	YES	YES
390.100	390.200	YES	YES
390.200	390.300	YES	YES
390.300	390.400	YES	YES
390.400	390.500	YES	YES
390.500	390.600	YES	YES
390.600	390.700	YES	YES
390.700	390.800	YES	YES
390.800	390.900	YES	YES
390.900	391.000	YES	YES
391.000	391.100	YES	YES
391.100	391.200	YES	YES
391.200	391.300	YES	YES
391.300	391.400	YES	YES
391.400	391.500	YES	YES
391.500	391.600	YES	YES
391.600	391.700	YES	YES
391.700	391.800	YES	YES
391.800	391.900	YES	YES
391.900	392.000	YES	YES
392.000	392.100	YES	YES
392.100	392.200	YES	YES
392.200	392.300	YES	YES
392.300	392.400	YES	YES
392.400	392.500	YES	YES
392.500	392.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
392.600	392.700	YES	YES
392.700	392.800	YES	YES
392.800	392.900	YES	YES
392.900	393.000	YES	YES
393.000	393.100	YES	YES
393.100	393.200	YES	YES
393.200	393.300	YES	YES
393.300	393.400	YES	YES
393.400	393.500	YES	YES
393.500	393.600	YES	YES
393.600	393.700	YES	YES
393.700	393.800	YES	YES
393.800	393.900	YES	YES
393.900	394.000	YES	YES
394.000	394.100	YES	YES
394.100	394.200	YES	YES
394.200	394.300	YES	YES
394.300	394.400	YES	YES
394.400	394.500	YES	YES
394.500	394.600	YES	YES
394.600	394.700	YES	YES
394.700	394.800	YES	YES
394.800	394.900	YES	YES
394.900	395.000	YES	YES
395.000	395.100	YES	YES
395.100	395.200	YES	YES
395.200	395.300	YES	YES
395.300	395.400	YES	YES
395.400	395.500	YES	YES
395.500	395.600	YES	YES
395.600	395.700	YES	YES
395.700	395.800	YES	YES
395.800	395.900	YES	YES
395.900	396.000	YES	YES
396.000	396.100	YES	YES
396.100	396.200	YES	YES
396.200	396.300	YES	YES
396.300	396.400	YES	YES
396.400	396.500	YES	YES
396.500	396.600	YES	YES
396.600	396.700	YES	YES
396.700	396.800	YES	YES
396.800	396.900	YES	YES
396.900	397.000	YES	YES
397.000	397.100	YES	YES
397.100	397.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
397.200	397.300	YES	YES
397.300	397.400	YES	YES
397.400	397.500	YES	YES
397.500	397.600	YES	YES
397.600	397.700	YES	YES
397.700	397.800	YES	YES
397.800	397.900	YES	YES
397.900	398.000	YES	YES
398.000	398.100	YES	YES
398.100	398.200	YES	YES
398.200	398.300	YES	YES
398.300	398.400	YES	YES
398.400	398.500	YES	YES
398.500	398.600	YES	YES
398.600	398.700	YES	YES
398.700	398.800	YES	YES
398.800	398.900	YES	YES
398.900	399.000	YES	YES
399.000	399.100	YES	YES
399.100	399.200	YES	YES
399.200	399.300	YES	YES
399.300	399.400	YES	YES
399.400	399.500	YES	YES
399.500	399.600	YES	YES
399.600	399.700	YES	YES
399.700	399.800	YES	YES
399.800	399.900	YES	YES
399.900	400.000	YES	YES
400.000	400.100	YES	YES
400.100	400.200	YES	YES
400.200	400.300	YES	YES
400.300	400.400	YES	YES
400.400	400.500	YES	YES
400.500	400.600	YES	YES
400.600	400.700	YES	YES
400.700	400.800	YES	YES
400.800	400.900	YES	YES
400.900	401.000	YES	YES
401.000	401.100	YES	YES
401.100	401.200	YES	YES
401.200	401.300	YES	YES
401.300	401.400	YES	YES
401.400	401.500	YES	YES
401.500	401.600	YES	YES
401.600	401.700	YES	YES
401.700	401.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
401.800	401.900	YES	YES
401.900	402.000	YES	YES
402.000	402.100	YES	YES
402.100	402.200	YES	YES
402.200	402.300	YES	YES
402.300	402.400	YES	YES
402.400	402.500	YES	YES
402.500	402.600	YES	YES
402.600	402.700	YES	YES
402.700	402.800	YES	YES
402.800	402.900	YES	YES
402.900	403.000	YES	YES
403.000	403.100	YES	YES
403.100	403.200	YES	YES
403.200	403.300	YES	YES
403.300	403.400	YES	YES
403.400	403.500	YES	YES
403.500	403.600	YES	YES
403.600	403.700	YES	YES
403.700	403.800	YES	YES
403.800	403.900	YES	YES
403.900	404.000	YES	YES
404.000	404.100	YES	YES
404.100	404.200	YES	YES
404.200	404.300	YES	YES
404.300	404.400	YES	YES
404.400	404.500	YES	YES
404.500	404.600	YES	YES
404.600	404.700	YES	YES
404.700	404.800	YES	YES
404.800	404.900	YES	YES
404.900	405.000	YES	YES
405.000	405.100	YES	YES
405.100	405.200	YES	YES
405.200	405.300	YES	YES
405.300	405.400	YES	YES
405.400	405.500	YES	YES
405.500	405.600	YES	YES
405.600	405.700	YES	YES
405.700	405.800	YES	YES
405.800	405.900	YES	YES
405.900	406.000	YES	YES
406.000	406.100	YES	YES
406.100	406.200	YES	YES
406.200	406.300	YES	YES
406.300	406.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
406.400	406.500	YES	YES
406.500	406.600	YES	YES
406.600	406.700	YES	YES
406.700	406.800	YES	YES
406.800	406.900	YES	YES
406.900	407.000	YES	YES
407.000	407.100	YES	YES
407.100	407.200	YES	YES
407.200	407.300	YES	YES
407.300	407.400	YES	YES
407.400	407.500	YES	YES
407.500	407.600	YES	YES
407.600	407.700	YES	YES
407.700	407.800	YES	YES
407.800	407.900	YES	YES
407.900	408.000	YES	YES
408.000	408.100	YES	YES
408.100	408.200	YES	YES
408.200	408.300	YES	YES
408.300	408.400	YES	YES
408.400	408.500	YES	YES
408.500	408.600	YES	YES
408.600	408.700	YES	YES
408.700	408.800	YES	YES
408.800	408.900	YES	YES
408.900	409.000	YES	YES
409.000	409.100	YES	YES
409.100	409.200	YES	YES
409.200	409.300	YES	YES
409.300	409.400	YES	YES
409.400	409.500	YES	YES
409.500	409.600	YES	YES
409.600	409.700	YES	YES
409.700	409.800	YES	YES
409.800	409.900	YES	YES
409.900	410.000	YES	YES
410.000	410.100	YES	YES
410.100	410.200	YES	YES
410.200	410.300	YES	YES
410.300	410.400	YES	YES
410.400	410.500	YES	YES
410.500	410.600	YES	YES
410.600	410.700	YES	YES
410.700	410.800	YES	YES
410.800	410.900	YES	YES
410.900	411.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
411.000	411.100	YES	YES
411.100	411.200	YES	YES
411.200	411.300	YES	YES
411.300	411.400	YES	YES
411.400	411.500	YES	YES
411.500	411.600	YES	YES
411.600	411.700	YES	YES
411.700	411.800	YES	YES
411.800	411.900	YES	YES
411.900	412.000	YES	YES
412.000	412.100	YES	YES
412.100	412.200	YES	YES
412.200	412.300	YES	YES
412.300	412.400	YES	YES
412.400	412.500	YES	YES
412.500	412.600	YES	YES
412.600	412.700	YES	YES
412.700	412.800	YES	YES
412.800	412.900	YES	YES
412.900	413.000	YES	YES
413.000	413.100	YES	YES
413.100	413.200	YES	YES
413.200	413.300	YES	YES
413.300	413.400	YES	YES
413.400	413.500	YES	YES
413.500	413.600	YES	YES
413.600	413.700	YES	YES
413.700	413.800	YES	YES
413.800	413.900	YES	YES
413.900	414.000	YES	YES
414.000	414.100	YES	YES
414.100	414.200	YES	YES
414.200	414.300	YES	YES
414.300	414.400	YES	YES
414.400	414.500	YES	YES
414.500	414.600	YES	YES
414.600	414.700	YES	YES
414.700	414.800	YES	YES
414.800	414.900	YES	YES
414.900	415.000	YES	YES
415.000	415.100	YES	YES
415.100	415.200	YES	YES
415.200	415.300	YES	YES
415.300	415.400	YES	YES
415.400	415.500	YES	YES
415.500	415.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
415.600	415.700	YES	YES
415.700	415.800	YES	YES
415.800	415.900	YES	YES
415.900	416.000	YES	YES
416.000	416.100	YES	YES
416.100	416.200	YES	YES
416.200	416.300	YES	YES
416.300	416.400	YES	YES
416.400	416.500	YES	YES
416.500	416.600	YES	YES
416.600	416.700	YES	YES
416.700	416.800	YES	YES
416.800	416.900	YES	YES
416.900	417.000	YES	YES
417.000	417.100	YES	YES
417.100	417.200	YES	YES
417.200	417.300	YES	YES
417.300	417.400	YES	YES
417.400	417.500	YES	YES
417.500	417.600	YES	YES
417.600	417.700	YES	YES
417.700	417.800	YES	YES
417.800	417.900	YES	YES
417.900	418.000	YES	YES
418.000	418.100	YES	YES
418.100	418.200	YES	YES
418.200	418.300	YES	YES
418.300	418.400	YES	YES
418.400	418.500	YES	YES
418.500	418.600	YES	YES
418.600	418.700	YES	YES
418.700	418.800	YES	YES
418.800	418.900	YES	YES
418.900	419.000	YES	YES
419.000	419.100	YES	YES
419.100	419.200	YES	YES
419.200	419.300	YES	YES
419.300	419.400	YES	YES
419.400	419.500	YES	YES
419.500	419.600	YES	YES
419.600	419.700	YES	YES
419.700	419.800	YES	YES
419.800	419.900	YES	YES
419.900	420.000	YES	YES
420.000	420.100	YES	YES
420.100	420.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
420.200	420.300	YES	YES
420.300	420.400	YES	YES
420.400	420.500	YES	YES
420.500	420.600	YES	YES
420.600	420.700	YES	YES
420.700	420.800	YES	YES
420.800	420.900	YES	YES
420.900	421.000	YES	YES
421.000	421.100	YES	YES
421.100	421.200	YES	YES
421.200	421.300	YES	YES
421.300	421.400	YES	YES
421.400	421.500	YES	YES
421.500	421.600	YES	YES
421.600	421.700	YES	YES
421.700	421.800	YES	YES
421.800	421.900	YES	YES
421.900	422.000	YES	YES
422.000	422.100	YES	YES
422.100	422.200	YES	YES
422.200	422.300	YES	YES
422.300	422.400	YES	YES
422.400	422.500	YES	YES
422.500	422.600	YES	YES
422.600	422.700	YES	YES
422.700	422.800	YES	YES
422.800	422.900	YES	YES
422.900	423.000	YES	YES
423.000	423.100	YES	YES
423.100	423.200	YES	YES
423.200	423.300	YES	YES
423.300	423.400	YES	YES
423.400	423.500	YES	YES
423.500	423.600	YES	YES
423.600	423.700	YES	YES
423.700	423.800	YES	YES
423.800	423.900	YES	YES
423.900	424.000	YES	YES
424.000	424.100	YES	YES
424.100	424.200	YES	YES
424.200	424.300	YES	YES
424.300	424.400	YES	YES
424.400	424.500	YES	YES
424.500	424.600	YES	YES
424.600	424.700	YES	YES
424.700	424.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
424.800	424.900	YES	YES
424.900	425.000	YES	YES
425.000	425.100	YES	YES
425.100	425.200	YES	YES
425.200	425.300	YES	YES
425.300	425.400	YES	YES
425.400	425.500	YES	YES
425.500	425.600	YES	YES
425.600	425.700	YES	YES
425.700	425.800	YES	YES
425.800	425.900	YES	YES
425.900	426.000	YES	YES
426.000	426.100	YES	YES
426.100	426.200	YES	YES
426.200	426.300	YES	YES
426.300	426.400	YES	YES
426.400	426.500	YES	YES
426.500	426.600	YES	YES
426.600	426.700	YES	YES
426.700	426.800	YES	YES
426.800	426.900	YES	YES
426.900	427.000	YES	YES
427.000	427.100	YES	YES
427.100	427.200	YES	YES
427.200	427.300	YES	YES
427.300	427.400	YES	YES
427.400	427.500	YES	YES
427.500	427.600	YES	YES
427.600	427.700	YES	YES
427.700	427.800	YES	YES
427.800	427.900	YES	YES
427.900	428.000	YES	YES
428.000	428.100	YES	YES
428.100	428.200	YES	YES
428.200	428.300	YES	YES
428.300	428.400	YES	YES
428.400	428.500	YES	YES
428.500	428.600	YES	YES
428.600	428.700	YES	YES
428.700	428.800	YES	YES
428.800	428.900	YES	YES
428.900	429.000	YES	YES
429.000	429.100	YES	YES
429.100	429.200	YES	YES
429.200	429.300	YES	YES
429.300	429.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
429.400	429.500	YES	YES
429.500	429.600	YES	YES
429.600	429.700	YES	YES
429.700	429.800	YES	YES
429.800	429.900	YES	YES
429.900	430.000	YES	YES
430.000	430.100	YES	YES
430.100	430.200	YES	YES
430.200	430.300	YES	YES
430.300	430.400	YES	YES
430.400	430.500	YES	YES
430.500	430.600	YES	YES
430.600	430.700	YES	YES
430.700	430.800	YES	YES
430.800	430.900	YES	YES
430.900	431.000	YES	YES
431.000	431.100	YES	YES
431.100	431.200	YES	YES
431.200	431.300	YES	YES
431.300	431.400	YES	YES
431.400	431.500	YES	YES
431.500	431.600	YES	YES
431.600	431.700	YES	YES
431.700	431.800	YES	YES
431.800	431.900	YES	YES
431.900	432.000	YES	YES
432.000	432.100	YES	YES
432.100	432.200	YES	YES
432.200	432.300	YES	YES
432.300	432.400	YES	YES
432.400	432.500	YES	YES
432.500	432.600	YES	YES
432.600	432.700	YES	YES
432.700	432.800	YES	YES
432.800	432.900	YES	YES
432.900	433.000	YES	YES
433.000	433.100	YES	YES
433.100	433.200	YES	YES
433.200	433.300	YES	YES
433.300	433.400	YES	YES
433.400	433.500	YES	YES
433.500	433.600	YES	YES
433.600	433.700	YES	YES
433.700	433.800	YES	YES
433.800	433.900	YES	YES
433.900	434.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
434.000	434.100	YES	YES
434.100	434.200	YES	YES
434.200	434.300	YES	YES
434.300	434.400	YES	YES
434.400	434.500	YES	YES
434.500	434.600	YES	YES
434.600	434.700	YES	YES
434.700	434.800	YES	YES
434.800	434.900	YES	YES
434.900	435.000	YES	YES
435.000	435.100	YES	YES
435.100	435.200	YES	YES
435.200	435.300	YES	YES
435.300	435.400	YES	YES
435.400	435.500	YES	YES
435.500	435.600	YES	YES
435.600	435.700	YES	YES
435.700	435.800	YES	YES
435.800	435.900	YES	YES
435.900	436.000	YES	YES
436.000	436.100	YES	YES
436.100	436.200	YES	YES
436.200	436.300	YES	YES
436.300	436.400	YES	YES
436.400	436.500	YES	YES
436.500	436.600	YES	YES
436.600	436.700	YES	YES
436.700	436.800	YES	YES
436.800	436.900	YES	YES
436.900	437.000	YES	YES
437.000	437.100	YES	YES
437.100	437.200	YES	YES
437.200	437.300	YES	YES
437.300	437.400	YES	YES
437.400	437.500	YES	YES
437.500	437.600	YES	YES
437.600	437.700	YES	YES
437.700	437.800	YES	YES
437.800	437.900	YES	YES
437.900	438.000	YES	YES
438.000	438.100	YES	YES
438.100	438.200	YES	YES
438.200	438.300	YES	YES
438.300	438.400	YES	YES
438.400	438.500	YES	YES
438.500	438.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
438.600	438.700	YES	YES
438.700	438.800	YES	YES
438.800	438.900	YES	YES
438.900	439.000	YES	YES
439.000	439.100	YES	YES
439.100	439.200	YES	YES
439.200	439.300	YES	YES
439.300	439.400	YES	YES
439.400	439.500	YES	YES
439.500	439.600	YES	YES
439.600	439.700	YES	YES
439.700	439.800	YES	YES
439.800	439.900	YES	YES
439.900	440.000	YES	YES
440.000	440.100	YES	YES
440.100	440.200	YES	YES
440.200	440.300	YES	YES
440.300	440.400	YES	YES
440.400	440.500	YES	YES
440.500	440.600	YES	YES
440.600	440.700	YES	YES
440.700	440.800	YES	YES
440.800	440.900	YES	YES
440.900	441.000	YES	YES
441.000	441.100	YES	YES
441.100	441.200	YES	YES
441.200	441.300	YES	YES
441.300	441.400	YES	YES
441.400	441.500	YES	YES
441.500	441.600	YES	YES
441.600	441.700	YES	YES
441.700	441.800	YES	YES
441.800	441.900	YES	YES
441.900	442.000	YES	YES
442.000	442.100	YES	YES
442.100	442.200	YES	YES
442.200	442.300	YES	YES
442.300	442.400	YES	YES
442.400	442.500	YES	YES
442.500	442.600	YES	YES
442.600	442.700	YES	YES
442.700	442.800	YES	YES
442.800	442.900	YES	YES
442.900	443.000	YES	YES
443.000	443.100	YES	YES
443.100	443.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
443.200	443.300	YES	YES
443.300	443.400	YES	YES
443.400	443.500	YES	YES
443.500	443.600	YES	YES
443.600	443.700	YES	YES
443.700	443.800	YES	YES
443.800	443.900	YES	YES
443.900	444.000	YES	YES
444.000	444.100	YES	YES
444.100	444.200	YES	YES
444.200	444.300	YES	YES
444.300	444.400	YES	YES
444.400	444.500	YES	YES
444.500	444.600	YES	YES
444.600	444.700	YES	YES
444.700	444.800	YES	YES
444.800	444.900	YES	YES
444.900	445.000	YES	YES
445.000	445.100	YES	YES
445.100	445.200	YES	YES
445.200	445.300	YES	YES
445.300	445.400	YES	YES
445.400	445.500	YES	YES
445.500	445.600	YES	YES
445.600	445.700	YES	YES
445.700	445.800	YES	YES
445.800	445.900	YES	YES
445.900	446.000	YES	YES
446.000	446.100	YES	YES
446.100	446.200	YES	YES
446.200	446.300	YES	YES
446.300	446.400	YES	YES
446.400	446.500	YES	YES
446.500	446.600	YES	YES
446.600	446.700	YES	YES
446.700	446.800	YES	YES
446.800	446.900	YES	YES
446.900	447.000	YES	YES
447.000	447.100	YES	YES
447.100	447.200	YES	YES
447.200	447.300	YES	YES
447.300	447.400	YES	YES
447.400	447.500	YES	YES
447.500	447.600	YES	YES
447.600	447.700	YES	YES
447.700	447.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
447.800	447.900	YES	YES
447.900	448.000	YES	YES
448.000	448.100	YES	YES
448.100	448.200	YES	YES
448.200	448.300	YES	YES
448.300	448.400	YES	YES
448.400	448.500	YES	YES
448.500	448.600	YES	YES
448.600	448.700	YES	YES
448.700	448.800	YES	YES
448.800	448.900	YES	YES
448.900	449.000	YES	YES
449.000	449.100	YES	YES
449.100	449.200	YES	YES
449.200	449.300	YES	YES
449.300	449.400	YES	YES
449.400	449.500	YES	YES
449.500	449.600	YES	YES
449.600	449.700	YES	YES
449.700	449.800	YES	YES
449.800	449.900	YES	YES
449.900	450.000	YES	YES
450.000	450.100	YES	YES
450.100	450.200	YES	YES
450.200	450.300	YES	YES
450.300	450.400	YES	YES
450.400	450.500	YES	YES
450.500	450.600	YES	YES
450.600	450.700	YES	YES
450.700	450.800	YES	YES
450.800	450.900	YES	YES
450.900	451.000	YES	YES
451.000	451.100	YES	YES
451.100	451.200	YES	YES
451.200	451.300	YES	YES
451.300	451.400	YES	YES
451.400	451.500	YES	YES
451.500	451.600	YES	YES
451.600	451.700	YES	YES
451.700	451.800	YES	YES
451.800	451.900	YES	YES
451.900	452.000	YES	YES
452.000	452.100	YES	YES
452.100	452.200	YES	YES
452.200	452.300	YES	YES
452.300	452.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
452.400	452.500	YES	YES
452.500	452.600	YES	YES
452.600	452.700	YES	YES
452.700	452.800	YES	YES
452.800	452.900	YES	YES
452.900	453.000	YES	YES
453.000	453.100	YES	YES
453.100	453.200	YES	YES
453.200	453.300	YES	YES
453.300	453.400	YES	YES
453.400	453.500	YES	YES
453.500	453.600	YES	YES
453.600	453.700	YES	YES
453.700	453.800	YES	YES
453.800	453.900	YES	YES
453.900	454.000	YES	YES
454.000	454.100	YES	YES
454.100	454.200	YES	YES
454.200	454.300	YES	YES
454.300	454.400	YES	YES
454.400	454.500	YES	YES
454.500	454.600	YES	YES
454.600	454.700	YES	YES
454.700	454.800	YES	YES
454.800	454.900	YES	YES
454.900	455.000	YES	YES
455.000	455.100	YES	YES
455.100	455.200	YES	YES
455.200	455.300	YES	YES
455.300	455.400	YES	YES
455.400	455.500	YES	YES
455.500	455.600	YES	YES
455.600	455.700	YES	YES
455.700	455.800	YES	YES
455.800	455.900	YES	YES
455.900	456.000	YES	YES
456.000	456.100	YES	YES
456.100	456.200	YES	YES
456.200	456.300	YES	YES
456.300	456.400	YES	YES
456.400	456.500	YES	YES
456.500	456.600	YES	YES
456.600	456.700	YES	YES
456.700	456.800	YES	YES
456.800	456.900	YES	YES
456.900	457.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
457.000	457.100	YES	YES
457.100	457.200	YES	YES
457.200	457.300	YES	YES
457.300	457.400	YES	YES
457.400	457.500	YES	YES
457.500	457.600	YES	YES
457.600	457.700	YES	YES
457.700	457.800	YES	YES
457.800	457.900	YES	YES
457.900	458.000	YES	YES
458.000	458.100	YES	YES
458.100	458.200	YES	YES
458.200	458.300	YES	YES
458.300	458.400	YES	YES
458.400	458.500	YES	YES
458.500	458.600	YES	YES
458.600	458.700	YES	YES
458.700	458.800	YES	YES
458.800	458.900	YES	YES
458.900	459.000	YES	YES
459.000	459.100	YES	YES
459.100	459.200	YES	YES
459.200	459.300	YES	YES
459.300	459.400	YES	YES
459.400	459.500	YES	YES
459.500	459.600	YES	YES
459.600	459.700	YES	YES
459.700	459.800	YES	YES
459.800	459.900	YES	YES
459.900	460.000	YES	YES
460.000	460.100	YES	YES
460.100	460.200	YES	YES
460.200	460.300	YES	YES
460.300	460.400	YES	YES
460.400	460.500	YES	YES
460.500	460.600	YES	YES
460.600	460.700	YES	YES
460.700	460.800	YES	YES
460.800	460.900	YES	YES
460.900	461.000	YES	YES
461.000	461.100	YES	YES
461.100	461.200	YES	YES
461.200	461.300	YES	YES
461.300	461.400	YES	YES
461.400	461.500	YES	YES
461.500	461.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
461.600	461.700	YES	YES
461.700	461.800	YES	YES
461.800	461.900	YES	YES
461.900	462.000	YES	YES
462.000	462.100	YES	YES
462.100	462.200	YES	YES
462.200	462.300	YES	YES
462.300	462.400	YES	YES
462.400	462.500	YES	YES
462.500	462.600	YES	YES
462.600	462.700	YES	YES
462.700	462.800	YES	YES
462.800	462.900	YES	YES
462.900	463.000	YES	YES
463.000	463.100	YES	YES
463.100	463.200	YES	YES
463.200	463.300	YES	YES
463.300	463.400	YES	YES
463.400	463.500	YES	YES
463.500	463.600	YES	YES
463.600	463.700	YES	YES
463.700	463.800	YES	YES
463.800	463.900	YES	YES
463.900	464.000	YES	YES
464.000	464.100	YES	YES
464.100	464.200	YES	YES
464.200	464.300	YES	YES
464.300	464.400	YES	YES
464.400	464.500	YES	YES
464.500	464.600	YES	YES
464.600	464.700	YES	YES
464.700	464.800	YES	YES
464.800	464.900	YES	YES
464.900	465.000	YES	YES
465.000	465.100	YES	YES
465.100	465.200	YES	YES
465.200	465.300	YES	YES
465.300	465.400	YES	YES
465.400	465.500	YES	YES
465.500	465.600	YES	YES
465.600	465.700	YES	YES
465.700	465.800	YES	YES
465.800	465.900	YES	YES
465.900	466.000	YES	YES
466.000	466.100	YES	YES
466.100	466.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
466.200	466.300	YES	YES
466.300	466.400	YES	YES
466.400	466.500	YES	YES
466.500	466.600	YES	YES
466.600	466.700	YES	YES
466.700	466.800	YES	YES
466.800	466.900	YES	YES
466.900	467.000	YES	YES
467.000	467.100	YES	YES
467.100	467.200	YES	YES
467.200	467.300	YES	YES
467.300	467.400	YES	YES
467.400	467.500	YES	YES
467.500	467.600	YES	YES
467.600	467.700	YES	YES
467.700	467.800	YES	YES
467.800	467.900	YES	YES
467.900	468.000	YES	YES
468.000	468.100	YES	YES
468.100	468.200	YES	YES
468.200	468.300	YES	YES
468.300	468.400	YES	YES
468.400	468.500	YES	YES
468.500	468.600	YES	YES
468.600	468.700	YES	YES
468.700	468.800	YES	YES
468.800	468.900	YES	YES
468.900	469.000	YES	YES
469.000	469.100	YES	YES
469.100	469.200	YES	YES
469.200	469.300	YES	YES
469.300	469.400	YES	YES
469.400	469.500	YES	YES
469.500	469.600	YES	YES
469.600	469.700	YES	YES
469.700	469.800	YES	YES
469.800	469.900	YES	YES
469.900	470.000	YES	YES
470.000	470.100	YES	YES
470.100	470.200	YES	YES
470.200	470.300	YES	YES
470.300	470.400	YES	YES
470.400	470.500	YES	YES
470.500	470.600	YES	YES
470.600	470.700	YES	YES
470.700	470.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
470.800	470.900	YES	YES
470.900	471.000	YES	YES
471.000	471.100	YES	YES
471.100	471.200	YES	YES
471.200	471.300	YES	YES
471.300	471.400	YES	YES
471.400	471.500	YES	YES
471.500	471.600	YES	YES
471.600	471.700	YES	YES
471.700	471.800	YES	YES
471.800	471.900	YES	YES
471.900	472.000	YES	YES
472.000	472.100	YES	YES
472.100	472.200	YES	YES
472.200	472.300	YES	YES
472.300	472.400	YES	YES
472.400	472.500	YES	YES
472.500	472.600	YES	YES
472.600	472.700	YES	YES
472.700	472.800	YES	YES
472.800	472.900	YES	YES
472.900	473.000	YES	YES
473.000	473.100	YES	YES
473.100	473.200	YES	YES
473.200	473.300	YES	YES
473.300	473.400	YES	YES
473.400	473.500	YES	YES
473.500	473.600	YES	YES
473.600	473.700	YES	YES
473.700	473.800	YES	YES
473.800	473.900	YES	YES
473.900	474.000	YES	YES
474.000	474.100	YES	YES
474.100	474.200	YES	YES
474.200	474.300	YES	YES
474.300	474.400	YES	YES
474.400	474.500	YES	YES
474.500	474.600	YES	YES
474.600	474.700	YES	YES
474.700	474.800	YES	YES
474.800	474.900	YES	YES
474.900	475.000	YES	YES
475.000	475.100	YES	YES
475.100	475.200	YES	YES
475.200	475.300	YES	YES
475.300	475.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
475.400	475.500	YES	YES
475.500	475.600	YES	YES
475.600	475.700	YES	YES
475.700	475.800	YES	YES
475.800	475.900	YES	YES
475.900	476.000	YES	YES
476.000	476.100	YES	YES
476.100	476.200	YES	YES
476.200	476.300	YES	YES
476.300	476.400	YES	YES
476.400	476.500	YES	YES
476.500	476.600	YES	YES
476.600	476.700	YES	YES
476.700	476.800	YES	YES
476.800	476.900	YES	YES
476.900	477.000	YES	YES
477.000	477.100	YES	YES
477.100	477.200	YES	YES
477.200	477.300	YES	YES
477.300	477.400	YES	YES
477.400	477.500	YES	YES
477.500	477.600	YES	YES
477.600	477.700	YES	YES
477.700	477.800	YES	YES
477.800	477.900	YES	YES
477.900	478.000	YES	YES
478.000	478.100	YES	YES
478.100	478.200	YES	YES
478.200	478.300	YES	YES
478.300	478.400	YES	YES
478.400	478.500	YES	YES
478.500	478.600	YES	YES
478.600	478.700	YES	YES
478.700	478.800	YES	YES
478.800	478.900	YES	YES
478.900	479.000	YES	YES
479.000	479.100	YES	YES
479.100	479.200	YES	YES
479.200	479.300	YES	YES
479.300	479.400	YES	YES
479.400	479.500	YES	YES
479.500	479.600	YES	YES
479.600	479.700	YES	YES
479.700	479.800	YES	YES
479.800	479.900	YES	YES
479.900	480.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
480.000	480.100	YES	YES
480.100	480.200	YES	YES
480.200	480.300	YES	YES
480.300	480.400	YES	YES
480.400	480.500	YES	YES
480.500	480.600	YES	YES
480.600	480.700	YES	YES
480.700	480.800	YES	YES
480.800	480.900	YES	YES
480.900	481.000	YES	YES
481.000	481.100	YES	YES
481.100	481.200	YES	YES
481.200	481.300	YES	YES
481.300	481.400	YES	YES
481.400	481.500	YES	YES
481.500	481.600	YES	YES
481.600	481.700	YES	YES
481.700	481.800	YES	YES
481.800	481.900	YES	YES
481.900	482.000	YES	YES
482.000	482.100	YES	YES
482.100	482.200	YES	YES
482.200	482.300	YES	YES
482.300	482.400	YES	YES
482.400	482.500	YES	YES
482.500	482.600	YES	YES
482.600	482.700	YES	YES
482.700	482.800	YES	YES
482.800	482.900	YES	YES
482.900	483.000	YES	YES
483.000	483.100	YES	YES
483.100	483.200	YES	YES
483.200	483.300	YES	YES
483.300	483.400	YES	YES
483.400	483.500	YES	YES
483.500	483.600	YES	YES
483.600	483.700	YES	YES
483.700	483.800	YES	YES
483.800	483.900	YES	YES
483.900	484.000	YES	YES
484.000	484.100	YES	YES
484.100	484.200	YES	YES
484.200	484.300	YES	YES
484.300	484.400	YES	YES
484.400	484.500	YES	YES
484.500	484.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
484.600	484.700	YES	YES
484.700	484.800	YES	YES
484.800	484.900	YES	YES
484.900	485.000	YES	YES
485.000	485.100	YES	YES
485.100	485.200	YES	YES
485.200	485.300	YES	YES
485.300	485.400	YES	YES
485.400	485.500	YES	YES
485.500	485.600	YES	YES
485.600	485.700	YES	YES
485.700	485.800	YES	YES
485.800	485.900	YES	YES
485.900	486.000	YES	YES
486.000	486.100	YES	YES
486.100	486.200	YES	YES
486.200	486.300	YES	YES
486.300	486.400	YES	YES
486.400	486.500	YES	YES
486.500	486.600	YES	YES
486.600	486.700	YES	YES
486.700	486.800	YES	YES
486.800	486.900	YES	YES
486.900	487.000	YES	YES
487.000	487.100	YES	YES
487.100	487.200	YES	YES
487.200	487.300	YES	YES
487.300	487.400	YES	YES
487.400	487.500	YES	YES
487.500	487.600	YES	YES
487.600	487.700	YES	YES
487.700	487.800	YES	YES
487.800	487.900	YES	YES
487.900	488.000	YES	YES
488.000	488.100	YES	YES
488.100	488.200	YES	YES
488.200	488.300	YES	YES
488.300	488.400	YES	YES
488.400	488.500	YES	YES
488.500	488.600	YES	YES
488.600	488.700	YES	YES
488.700	488.800	YES	YES
488.800	488.900	YES	YES
488.900	489.000	YES	YES
489.000	489.100	YES	YES
489.100	489.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
489.200	489.300	YES	YES
489.300	489.400	YES	YES
489.400	489.500	YES	YES
489.500	489.600	YES	YES
489.600	489.700	YES	YES
489.700	489.800	YES	YES
489.800	489.900	YES	YES
489.900	490.000	YES	YES
490.000	490.100	YES	YES
490.100	490.200	YES	YES
490.200	490.300	YES	YES
490.300	490.400	YES	YES
490.400	490.500	YES	YES
490.500	490.600	YES	YES
490.600	490.700	YES	YES
490.700	490.800	YES	YES
490.800	490.900	YES	YES
490.900	491.000	YES	YES
491.000	491.100	YES	YES
491.100	491.200	YES	YES
491.200	491.300	YES	YES
491.300	491.400	YES	YES
491.400	491.500	YES	YES
491.500	491.600	YES	YES
491.600	491.700	YES	YES
491.700	491.800	YES	YES
491.800	491.900	YES	YES
491.900	492.000	YES	YES
492.000	492.100	YES	YES
492.100	492.200	YES	YES
492.200	492.300	YES	YES
492.300	492.400	YES	YES
492.400	492.500	YES	YES
492.500	492.600	YES	YES
492.600	492.700	YES	YES
492.700	492.800	YES	YES
492.800	492.900	YES	YES
492.900	493.000	YES	YES
493.000	493.100	YES	YES
493.100	493.200	YES	YES
493.200	493.300	YES	YES
493.300	493.400	YES	YES
493.400	493.500	YES	YES
493.500	493.600	YES	YES
493.600	493.700	YES	YES
493.700	493.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
493.800	493.900	YES	YES
493.900	494.000	YES	YES
494.000	494.100	YES	YES
494.100	494.200	YES	YES
494.200	494.300	YES	YES
494.300	494.400	YES	YES
494.400	494.500	YES	YES
494.500	494.600	YES	YES
494.600	494.700	YES	YES
494.700	494.800	YES	YES
494.800	494.900	YES	YES
494.900	495.000	YES	YES
495.000	495.100	YES	YES
495.100	495.200	YES	YES
495.200	495.300	YES	YES
495.300	495.400	YES	YES
495.400	495.500	YES	YES
495.500	495.600	YES	YES
495.600	495.700	YES	YES
495.700	495.800	YES	YES
495.800	495.900	YES	YES
495.900	496.000	YES	YES
496.000	496.100	YES	YES
496.100	496.200	YES	YES
496.200	496.300	YES	YES
496.300	496.400	YES	YES
496.400	496.500	YES	YES
496.500	496.600	YES	YES
496.600	496.700	YES	YES
496.700	496.800	YES	YES
496.800	496.900	YES	YES
496.900	497.000	YES	YES
497.000	497.100	YES	YES
497.100	497.200	YES	YES
497.200	497.300	YES	YES
497.300	497.400	YES	YES
497.400	497.500	YES	YES
497.500	497.600	YES	YES
497.600	497.700	YES	YES
497.700	497.800	YES	YES
497.800	497.900	YES	YES
497.900	498.000	YES	YES
498.000	498.100	YES	YES
498.100	498.200	YES	YES
498.200	498.300	YES	YES
498.300	498.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
498.400	498.500	YES	YES
498.500	498.600	YES	YES
498.600	498.700	YES	YES
498.700	498.800	YES	YES
498.800	498.900	YES	YES
498.900	499.000	YES	YES
499.000	499.100	YES	YES
499.100	499.200	YES	YES
499.200	499.300	YES	YES
499.300	499.400	YES	YES
499.400	499.500	YES	YES
499.500	499.600	YES	YES
499.600	499.700	YES	YES
499.700	499.800	YES	YES
499.800	499.900	YES	YES
499.900	500.000	YES	YES
500.000	500.100	YES	YES
500.100	500.200	YES	YES
500.200	500.300	YES	YES
500.300	500.400	YES	YES
500.400	500.500	YES	YES
500.500	500.600	YES	YES
500.600	500.700	YES	YES
500.700	500.800	YES	YES
500.800	500.900	YES	YES
500.900	501.000	YES	YES
501.000	501.100	YES	YES
501.100	501.200	YES	YES
501.200	501.300	YES	YES
501.300	501.400	YES	YES
501.400	501.500	YES	YES
501.500	501.600	YES	YES
501.600	501.700	YES	YES
501.700	501.800	YES	YES
501.800	501.900	YES	YES
501.900	502.000	YES	YES
502.000	502.100	YES	YES
502.100	502.200	YES	YES
502.200	502.300	YES	YES
502.300	502.400	YES	YES
502.400	502.500	YES	YES
502.500	502.600	YES	YES
502.600	502.700	YES	YES
502.700	502.800	YES	YES
502.800	502.900	YES	YES
502.900	503.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
503.000	503.100	YES	YES
503.100	503.200	YES	YES
503.200	503.300	YES	YES
503.300	503.400	YES	YES
503.400	503.500	YES	YES
503.500	503.600	YES	YES
503.600	503.700	YES	YES
503.700	503.800	YES	YES
503.800	503.900	YES	YES
503.900	504.000	YES	YES
504.000	504.100	YES	YES
504.100	504.200	YES	YES
504.200	504.300	YES	YES
504.300	504.400	YES	YES
504.400	504.500	YES	YES
504.500	504.600	YES	YES
504.600	504.700	YES	YES
504.700	504.800	YES	YES
504.800	504.900	YES	YES
504.900	505.000	YES	YES
505.000	505.100	YES	YES
505.100	505.200	YES	YES
505.200	505.300	YES	YES
505.300	505.400	YES	YES
505.400	505.500	YES	YES
505.500	505.600	YES	YES
505.600	505.700	YES	YES
505.700	505.800	YES	YES
505.800	505.900	YES	YES
505.900	506.000	YES	YES
506.000	506.100	YES	YES
506.100	506.200	YES	YES
506.200	506.300	YES	YES
506.300	506.400	YES	YES
506.400	506.500	YES	YES
506.500	506.600	YES	YES
506.600	506.700	YES	YES
506.700	506.800	YES	YES
506.800	506.900	YES	YES
506.900	507.000	YES	YES
507.000	507.100	YES	YES
507.100	507.200	YES	YES
507.200	507.300	YES	YES
507.300	507.400	YES	YES
507.400	507.500	YES	YES
507.500	507.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
507.600	507.700	YES	YES
507.700	507.800	YES	YES
507.800	507.900	YES	YES
507.900	508.000	YES	YES
508.000	508.100	YES	YES
508.100	508.200	YES	YES
508.200	508.300	YES	YES
508.300	508.400	YES	YES
508.400	508.500	YES	YES
508.500	508.600	YES	YES
508.600	508.700	YES	YES
508.700	508.800	YES	YES
508.800	508.900	YES	YES
508.900	509.000	YES	YES
509.000	509.100	YES	YES
509.100	509.200	YES	YES
509.200	509.300	YES	YES
509.300	509.400	YES	YES
509.400	509.500	YES	YES
509.500	509.600	YES	YES
509.600	509.700	YES	YES
509.700	509.800	YES	YES
509.800	509.900	YES	YES
509.900	510.000	YES	YES
510.000	510.100	YES	YES
510.100	510.200	YES	YES
510.200	510.300	YES	YES
510.300	510.400	YES	YES
510.400	510.500	YES	YES
510.500	510.600	YES	YES
510.600	510.700	YES	YES
510.700	510.800	YES	YES
510.800	510.900	YES	YES
510.900	511.000	YES	YES
511.000	511.100	YES	YES
511.100	511.200	YES	YES
511.200	511.300	YES	YES
511.300	511.400	YES	YES
511.400	511.500	YES	YES
511.500	511.600	YES	YES
511.600	511.700	YES	YES
511.700	511.800	YES	YES
511.800	511.900	YES	YES
511.900	512.000	YES	YES
512.000	512.100	YES	YES
512.100	512.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
512.200	512.300	YES	YES
512.300	512.400	YES	YES
512.400	512.500	YES	YES
512.500	512.600	YES	YES
512.600	512.700	YES	YES
512.700	512.800	YES	YES
512.800	512.900	YES	YES
512.900	513.000	YES	YES
513.000	513.100	YES	YES
513.100	513.200	YES	YES
513.200	513.300	YES	YES
513.300	513.400	YES	YES
513.400	513.500	YES	YES
513.500	513.600	YES	YES
513.600	513.700	YES	YES
513.700	513.800	YES	YES
513.800	513.900	YES	YES
513.900	514.000	YES	YES
514.000	514.100	YES	YES
514.100	514.200	YES	YES
514.200	514.300	YES	YES
514.300	514.400	YES	YES
514.400	514.500	YES	YES
514.500	514.600	YES	YES
514.600	514.700	YES	YES
514.700	514.800	YES	YES
514.800	514.900	YES	YES
514.900	515.000	YES	YES
515.000	515.100	YES	YES
515.100	515.200	YES	YES
515.200	515.300	YES	YES
515.300	515.400	YES	YES
515.400	515.500	YES	YES
515.500	515.600	YES	YES
515.600	515.700	YES	YES
515.700	515.800	YES	YES
515.800	515.900	YES	YES
515.900	516.000	YES	YES
516.000	516.100	YES	YES
516.100	516.200	YES	YES
516.200	516.300	YES	YES
516.300	516.400	YES	YES
516.400	516.500	YES	YES
516.500	516.600	YES	YES
516.600	516.700	YES	YES
516.700	516.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
516.800	516.900	YES	YES
516.900	517.000	YES	YES
517.000	517.100	YES	YES
517.100	517.200	YES	YES
517.200	517.300	YES	YES
517.300	517.400	YES	YES
517.400	517.500	YES	YES
517.500	517.600	YES	YES
517.600	517.700	YES	YES
517.700	517.800	YES	YES
517.800	517.900	YES	YES
517.900	518.000	YES	YES
518.000	518.100	YES	YES
518.100	518.200	YES	YES
518.200	518.300	YES	YES
518.300	518.400	YES	YES
518.400	518.500	YES	YES
518.500	518.600	YES	YES
518.600	518.700	YES	YES
518.700	518.800	YES	YES
518.800	518.900	YES	YES
518.900	519.000	YES	YES
519.000	519.100	YES	YES
519.100	519.200	YES	YES
519.200	519.300	YES	YES
519.300	519.400	YES	YES
519.400	519.500	YES	YES
519.500	519.600	YES	YES
519.600	519.700	YES	YES
519.700	519.800	YES	YES
519.800	519.900	YES	YES
519.900	520.000	YES	YES
520.000	520.100	YES	YES
520.100	520.200	YES	YES
520.200	520.300	YES	YES
520.300	520.400	YES	YES
520.400	520.500	YES	YES
520.500	520.600	YES	YES
520.600	520.700	YES	YES
520.700	520.800	YES	YES
520.800	520.900	YES	YES
520.900	521.000	YES	YES
521.000	521.100	YES	YES
521.100	521.200	YES	YES
521.200	521.300	YES	YES
521.300	521.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
521.400	521.500	YES	YES
521.500	521.600	YES	YES
521.600	521.700	YES	YES
521.700	521.800	YES	YES
521.800	521.900	YES	YES
521.900	522.000	YES	YES
522.000	522.100	YES	YES
522.100	522.200	YES	YES
522.200	522.300	YES	YES
522.300	522.400	YES	YES
522.400	522.500	YES	YES
522.500	522.600	YES	YES
522.600	522.700	YES	YES
522.700	522.800	YES	YES
522.800	522.900	YES	YES
522.900	523.000	YES	YES
523.000	523.100	YES	YES
523.100	523.200	YES	YES
523.200	523.300	YES	YES
523.300	523.400	YES	YES
523.400	523.500	YES	YES
523.500	523.600	YES	YES
523.600	523.700	YES	YES
523.700	523.800	YES	YES
523.800	523.900	YES	YES
523.900	524.000	YES	YES
524.000	524.100	YES	YES
524.100	524.200	YES	YES
524.200	524.300	YES	YES
524.300	524.400	YES	YES
524.400	524.500	YES	YES
524.500	524.600	YES	YES
524.600	524.700	YES	YES
524.700	524.800	YES	YES
524.800	524.900	YES	YES
524.900	525.000	YES	YES
525.000	525.100	YES	YES
525.100	525.200	YES	YES
525.200	525.300	YES	YES
525.300	525.400	YES	YES
525.400	525.500	YES	YES
525.500	525.600	YES	YES
525.600	525.700	YES	YES
525.700	525.800	YES	YES
525.800	525.900	YES	YES
525.900	526.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
526.000	526.100	YES	YES
526.100	526.200	YES	YES
526.200	526.300	YES	YES
526.300	526.400	YES	YES
526.400	526.500	YES	YES
526.500	526.600	YES	YES
526.600	526.700	YES	YES
526.700	526.800	YES	YES
526.800	526.900	YES	YES
526.900	527.000	YES	YES
527.000	527.100	YES	YES
527.100	527.200	YES	YES
527.200	527.300	YES	YES
527.300	527.400	YES	YES
527.400	527.500	YES	YES
527.500	527.600	YES	YES
527.600	527.700	YES	YES
527.700	527.800	YES	YES
527.800	527.900	YES	YES
527.900	528.000	YES	YES
528.000	528.100	YES	YES
528.100	528.200	YES	YES
528.200	528.300	YES	YES
528.300	528.400	YES	YES
528.400	528.500	YES	YES
528.500	528.600	YES	YES
528.600	528.700	YES	YES
528.700	528.800	YES	YES
528.800	528.900	YES	YES
528.900	529.000	YES	YES
529.000	529.100	YES	YES
529.100	529.200	YES	YES
529.200	529.300	YES	YES
529.300	529.400	YES	YES
529.400	529.500	YES	YES
529.500	529.600	YES	YES
529.600	529.700	YES	YES
529.700	529.800	YES	YES
529.800	529.900	YES	YES
529.900	530.000	YES	YES
530.000	530.100	YES	YES
530.100	530.200	YES	YES
530.200	530.300	YES	YES
530.300	530.400	YES	YES
530.400	530.500	YES	YES
530.500	530.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
530.600	530.700	YES	YES
530.700	530.800	YES	YES
530.800	530.900	YES	YES
530.900	531.000	YES	YES
531.000	531.100	YES	YES
531.100	531.200	YES	YES
531.200	531.300	YES	YES
531.300	531.400	YES	YES
531.400	531.500	YES	YES
531.500	531.600	YES	YES
531.600	531.700	YES	YES
531.700	531.800	YES	YES
531.800	531.900	YES	YES
531.900	532.000	YES	YES
532.000	532.100	YES	YES
532.100	532.200	YES	YES
532.200	532.300	YES	YES
532.300	532.400	YES	YES
532.400	532.500	YES	YES
532.500	532.600	YES	YES
532.600	532.700	YES	YES
532.700	532.800	YES	YES
532.800	532.900	YES	YES
532.900	533.000	YES	YES
533.000	533.100	YES	YES
533.100	533.200	YES	YES
533.200	533.300	YES	YES
533.300	533.400	YES	YES
533.400	533.500	YES	YES
533.500	533.600	YES	YES
533.600	533.700	YES	YES
533.700	533.800	YES	YES
533.800	533.900	YES	YES
533.900	534.000	YES	YES
534.000	534.100	YES	YES
534.100	534.200	YES	YES
534.200	534.300	YES	YES
534.300	534.400	YES	YES
534.400	534.500	YES	YES
534.500	534.600	YES	YES
534.600	534.700	YES	YES
534.700	534.800	YES	YES
534.800	534.900	YES	YES
534.900	535.000	YES	YES
535.000	535.100	YES	YES
535.100	535.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
535.200	535.300	YES	YES
535.300	535.400	YES	YES
535.400	535.500	YES	YES
535.500	535.600	YES	YES
535.600	535.700	YES	YES
535.700	535.800	YES	YES
535.800	535.900	YES	YES
535.900	536.000	YES	YES
536.000	536.100	YES	YES
536.100	536.200	YES	YES
536.200	536.300	YES	YES
536.300	536.400	YES	YES
536.400	536.500	YES	YES
536.500	536.600	YES	YES
536.600	536.700	YES	YES
536.700	536.800	YES	YES
536.800	536.900	YES	YES
536.900	537.000	YES	YES
537.000	537.100	YES	YES
537.100	537.200	YES	YES
537.200	537.300	YES	YES
537.300	537.400	YES	YES
537.400	537.500	YES	YES
537.500	537.600	YES	YES
537.600	537.700	YES	YES
537.700	537.800	YES	YES
537.800	537.900	YES	YES
537.900	538.000	YES	YES
538.000	538.100	YES	YES
538.100	538.200	YES	YES
538.200	538.300	YES	YES
538.300	538.400	YES	YES
538.400	538.500	YES	YES
538.500	538.600	YES	YES
538.600	538.700	YES	YES
538.700	538.800	YES	YES
538.800	538.900	YES	YES
538.900	539.000	YES	YES
539.000	539.100	YES	YES
539.100	539.200	YES	YES
539.200	539.300	YES	YES
539.300	539.400	YES	YES
539.400	539.500	YES	YES
539.500	539.600	YES	YES
539.600	539.700	YES	YES
539.700	539.800	YES	YES

Chainage		Markings	
From	To	LHS	RHS
539.800	539.900	YES	YES
539.900	540.000	YES	YES
540.000	540.100	YES	YES
540.100	540.200	YES	YES
540.200	540.300	YES	YES
540.300	540.400	YES	YES
540.400	540.500	YES	YES
540.500	540.600	YES	YES
540.600	540.700	YES	YES
540.700	540.800	YES	YES
540.800	540.900	YES	YES
540.900	541.000	YES	YES
541.000	541.100	YES	YES
541.100	541.200	YES	YES
541.200	541.300	YES	YES
541.300	541.400	YES	YES
541.400	541.500	YES	YES
541.500	541.600	YES	YES
541.600	541.700	YES	YES
541.700	541.800	YES	YES
541.800	541.900	YES	YES
541.900	542.000	YES	YES
542.000	542.100	YES	YES
542.100	542.200	YES	YES
542.200	542.300	YES	YES
542.300	542.400	YES	YES
542.400	542.500	YES	YES
542.500	542.600	YES	YES
542.600	542.700	YES	YES
542.700	542.800	YES	YES
542.800	542.900	YES	YES
542.900	543.000	YES	YES
543.000	543.100	YES	YES
543.100	543.200	YES	YES
543.200	543.300	YES	YES
543.300	543.400	YES	YES
543.400	543.500	YES	YES
543.500	543.600	YES	YES
543.600	543.700	YES	YES
543.700	543.800	YES	YES
543.800	543.900	YES	YES
543.900	544.000	YES	YES
544.000	544.100	YES	YES
544.100	544.200	YES	YES
544.200	544.300	YES	YES
544.300	544.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
544.400	544.500	YES	YES
544.500	544.600	YES	YES
544.600	544.700	YES	YES
544.700	544.800	YES	YES
544.800	544.900	YES	YES
544.900	545.000	YES	YES
545.000	545.100	YES	YES
545.100	545.200	YES	YES
545.200	545.300	YES	YES
545.300	545.400	YES	YES
545.400	545.500	YES	YES
545.500	545.600	YES	YES
545.600	545.700	YES	YES
545.700	545.800	YES	YES
545.800	545.900	YES	YES
545.900	546.000	YES	YES
546.000	546.100	YES	YES
546.100	546.200	YES	YES
546.200	546.300	YES	YES
546.300	546.400	YES	YES
546.400	546.500	YES	YES
546.500	546.600	YES	YES
546.600	546.700	YES	YES
546.700	546.800	YES	YES
546.800	546.900	YES	YES
546.900	547.000	YES	YES
547.000	547.100	YES	YES
547.100	547.200	YES	YES
547.200	547.300	YES	YES
547.300	547.400	YES	YES
547.400	547.500	YES	YES
547.500	547.600	YES	YES
547.600	547.700	YES	YES
547.700	547.800	YES	YES
547.800	547.900	YES	YES
547.900	548.000	YES	YES
548.000	548.100	YES	YES
548.100	548.200	YES	YES
548.200	548.300	YES	YES
548.300	548.400	YES	YES
548.400	548.500	YES	YES
548.500	548.600	YES	YES
548.600	548.700	YES	YES
548.700	548.800	YES	YES
548.800	548.900	YES	YES
548.900	549.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
549.000	549.100	YES	YES
549.100	549.200	YES	YES
549.200	549.300	YES	YES
549.300	549.400	YES	YES
549.400	549.500	YES	YES
549.500	549.600	YES	YES
549.600	549.700	YES	YES
549.700	549.800	YES	YES
549.800	549.900	YES	YES
549.900	550.000	YES	YES
550.000	550.100	YES	YES
550.100	550.200	YES	YES
550.200	550.300	YES	YES
550.300	550.400	YES	YES
550.400	550.500	YES	YES
550.500	550.600	YES	YES
550.600	550.700	YES	YES
550.700	550.800	YES	YES
550.800	550.900	YES	YES
550.900	551.000	YES	YES
551.000	551.100	YES	YES
551.100	551.200	YES	YES
551.200	551.300	YES	YES
551.300	551.400	YES	YES
551.400	551.500	YES	YES
551.500	551.600	YES	YES
551.600	551.700	YES	YES
551.700	551.800	YES	YES
551.800	551.900	YES	YES
551.900	552.000	YES	YES
552.000	552.100	YES	YES
552.100	552.200	YES	YES
552.200	552.300	YES	YES
552.300	552.400	YES	YES
552.400	552.500	YES	YES
552.500	552.600	YES	YES
552.600	552.700	YES	YES
552.700	552.800	YES	YES
552.800	552.900	YES	YES
552.900	553.000	YES	YES
553.000	553.100	YES	YES
553.100	553.200	YES	YES
553.200	553.300	YES	YES
553.300	553.400	YES	YES
553.400	553.500	YES	YES
553.500	553.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
553.600	553.700	YES	YES
553.700	553.800	YES	YES
553.800	553.900	YES	YES
553.900	554.000	YES	YES
554.000	554.100	YES	YES
554.100	554.200	YES	YES
554.200	554.300	YES	YES
554.300	554.400	YES	YES
554.400	554.500	YES	YES
554.500	554.600	YES	YES
554.600	554.700	YES	YES
554.700	554.800	YES	YES
554.800	554.900	YES	YES
554.900	555.000	YES	YES
555.000	555.100	YES	YES
555.100	555.200	YES	YES
555.200	555.300	YES	YES
555.300	555.400	YES	YES
555.400	555.500	YES	YES
555.500	555.600	YES	YES
555.600	555.700	YES	YES
555.700	555.800	YES	YES
555.800	555.900	YES	YES
555.900	556.000	YES	YES
556.000	556.100	YES	YES
556.100	556.200	YES	YES
556.200	556.300	YES	YES
556.300	556.400	YES	YES
556.400	556.500	YES	YES
556.500	556.600	YES	YES
556.600	556.700	YES	YES
556.700	556.800	YES	YES
556.800	556.900	YES	YES
556.900	557.000	YES	YES
557.000	557.100	YES	YES
557.100	557.200	YES	YES
557.200	557.300	YES	YES
557.300	557.400	YES	YES
557.400	557.500	YES	YES
557.500	557.600	YES	YES
557.600	557.700	YES	YES
557.700	557.800	YES	YES
0.000	0.100	YES	YES
0.100	0.200	YES	YES
0.200	0.300	YES	YES
0.300	0.400	YES	YES

Chainage		Markings	
From	To	LHS	RHS
0.400	0.500	YES	YES
0.500	0.600	YES	YES
0.600	0.700	YES	YES
0.700	0.800	YES	YES
0.800	0.900	YES	YES
0.900	1.000	YES	YES
1.000	1.100	YES	YES
1.100	1.200	YES	YES
1.200	1.300	YES	YES
1.300	1.400	YES	YES
1.400	1.500	YES	YES
1.500	1.600	YES	YES
1.600	1.700	YES	YES
1.700	1.800	YES	YES
1.800	1.900	YES	YES
1.900	2.000	YES	YES
2.000	2.100	YES	YES
2.100	2.200	YES	YES
2.200	2.300	YES	YES
2.300	2.400	YES	YES
2.400	2.500	YES	YES
2.500	2.600	YES	YES
2.600	2.700	YES	YES
2.700	2.800	YES	YES
2.800	2.900	YES	YES
2.900	3.000	YES	YES
3.000	3.100	YES	YES
3.100	3.200	YES	YES
3.200	3.300	YES	YES
3.300	3.400	YES	YES
3.400	3.500	YES	YES
3.500	3.600	YES	YES
3.600	3.700	YES	YES
3.700	3.800	YES	YES
3.800	3.900	YES	YES
3.900	4.000	YES	YES
4.000	4.100	YES	YES
4.100	4.200	YES	YES
4.200	4.300	YES	YES
4.300	4.400	YES	YES
4.400	4.500	YES	YES
4.500	4.600	YES	YES
4.600	4.700	YES	YES
4.700	4.800	YES	YES
4.800	4.900	YES	YES
4.900	5.000	YES	YES

Chainage		Markings	
From	To	LHS	RHS
5.000	5.100	YES	YES
5.100	5.200	YES	YES
5.200	5.300	YES	YES
5.300	5.400	YES	YES
5.400	5.500	YES	YES
5.500	5.600	YES	YES
5.600	5.700	YES	YES
5.700	5.800	YES	YES
5.800	5.900	YES	YES
5.900	6.000	YES	YES
6.000	6.100	YES	YES
6.100	6.200	YES	YES
6.200	6.300	YES	YES
6.300	6.400	YES	YES
6.400	6.500	YES	YES
6.500	6.600	YES	YES
6.600	6.700	YES	YES
6.700	6.800	YES	YES
6.800	6.900	YES	YES
6.900	7.000	YES	YES
7.000	7.100	YES	YES
7.100	7.200	YES	YES
7.200	7.300	YES	YES
7.300	7.400	YES	YES
7.400	7.500	YES	YES
7.500	7.600	YES	YES
7.600	7.700	YES	YES
7.700	7.800	YES	YES
7.800	7.900	YES	YES
7.900	8.000	YES	YES
8.000	8.100	YES	YES
8.100	8.200	YES	YES
8.200	8.300	YES	YES
8.300	8.400	YES	YES
8.400	8.500	YES	YES
8.500	8.600	YES	YES
8.600	8.700	YES	YES
8.700	8.800	YES	YES
8.800	8.900	YES	YES
8.900	9.000	YES	YES
9.000	9.100	YES	YES
9.100	9.200	YES	YES
9.200	9.300	YES	YES
9.300	9.400	YES	YES
9.400	9.500	YES	YES
9.500	9.600	YES	YES

Chainage		Markings	
From	To	LHS	RHS
9.600	9.700	YES	YES
9.700	9.800	YES	YES
9.800	9.900	YES	YES
9.900	10.000	YES	YES
10.000	10.100	YES	YES
10.100	10.200	YES	YES
10.200	10.300	YES	YES
10.300	10.400	YES	YES
10.400	10.500	YES	YES
10.500	10.600	YES	YES
10.600	10.700	YES	YES
10.700	10.800	YES	YES
10.800	10.900	YES	YES
10.900	11.000	YES	YES
11.000	11.100	YES	YES
11.100	11.200	YES	YES
11.200	11.300	YES	YES
11.300	11.400	YES	YES
11.400	11.500	YES	YES
11.500	11.600	YES	YES
11.600	11.700	YES	YES
11.700	11.800	YES	YES
11.800	11.900	YES	YES
11.900	12.000	YES	YES
12.000	12.100	YES	YES
12.100	12.200	YES	YES
12.200	12.300	YES	YES
12.300	12.400	YES	YES
12.400	12.500	YES	YES
12.500	12.600	YES	YES
12.600	12.700	YES	YES
12.700	12.800	YES	YES
12.800	12.900	YES	YES
12.900	13.000	YES	YES
13.000	13.100	YES	YES
13.100	13.200	YES	YES
13.200	13.300	YES	YES
13.300	13.400	YES	YES
13.400	13.500	YES	YES
13.500	13.600	YES	YES
13.600	13.700	YES	YES
13.700	13.800	YES	YES
13.800	13.900	YES	YES
13.900	14.000	YES	YES
14.000	14.100	YES	YES
14.100	14.200	YES	YES

Chainage		Markings	
From	To	LHS	RHS
14.200	14.300	YES	YES
14.300	14.400	YES	YES
14.400	14.500	YES	YES
14.500	14.600	YES	YES
14.600	14.700	YES	YES
14.700	14.800	YES	YES
14.800	14.900	YES	YES
14.900	15.000	YES	YES
15.000	15.100	YES	YES
15.100	15.200	YES	YES
15.200	15.300	YES	YES
15.300	15.400	YES	YES
15.400	15.500	YES	YES
15.500	15.600	YES	YES
15.600	15.700	YES	YES
15.700	15.800	YES	YES
15.800	15.900	YES	YES
15.900	16.000	YES	YES
16.000	16.100	YES	YES
16.100	16.200	YES	YES
16.200	16.300	YES	YES
16.300	16.400	YES	YES
16.400	16.500	YES	YES
16.500	16.600	YES	YES
16.600	16.700	YES	YES
16.700	16.800	YES	YES
16.800	16.900	YES	YES
16.900	17.000	YES	YES
17.000	17.100	YES	YES
17.100	17.200	YES	YES
17.200	17.300	YES	YES

Annexure 3 (c) : Truck Lay-byes and Bus Bays

Sr No	Description of Project Facilities	Side
1	**Truck Lay-byes**	
	387.173	LHS
	399.600	RHS
	407.974	LHS
	420.074	RHS
	530.611	LHS
2	**Bus Bays & Bus Shelter**	
	361.170	BHS
	371.432	BHS
	386.623	BHS
	407.469	BHS
	433.523	BHS
	446.345	BHS
	471.080	BHS
	495.503	BHS

Annexure 3 (d) : Probable Black Spots

Sr No.	Chainage		Accident		
	From	To	Fatal	Major	Minor
1	12.300	12.300	1	0	0
2	16.800	16.800	1	0	2
3	360.000	360.000	0	2	0
4	362.050	362.600	0	0	3
5	365.100	365.400	0	1	0
6	371.200	371.200	0	2	0
7	376.200	376.200	0	6	14
8	391.600	391.600	1	0	0
9	413.300	413.600	0	0	1
10	430.300	430.950	0	0	1
11	459.000	459.000	1	0	0
12	470.800	470.800	2	3	0
13	497.000	497.400	0	0	1
14	503.300	503.600	0	1	1
15	507.400	507.800	0	0	2
16	535.600	536.300	0	0	5
17	543.300	543.300	1	0	0
18	552.150	552.150	3	1	0

Note: Provided Data is based Nov-22 to Feb-23 Accident data

Annexure 3 (e) : Service Road Details

Sr No.	From	To	Length (km)	Width (m)	Side
1	374.680	375.473	0.793	7.00	Both
2	10.400	10.740	0.340	7.00	Both

Annexure 3 (f) : Carriageway and Formation Width

Chainage		TCS	Carriageway Width (m)	Formation Width (m)	Remarks
From	To				
0.000	5.900	TCS-1	10.00	12.00	
5.900	6.300	TCS-5	10.00	12.00	
6.300	19.463	TCS-1	10.00	12.00	
356.900	359.300	TCS-8	17.00	26.00	
359.300	359.500	TCS-9	17.00	26.00	
359.500	360.250	TCS-8	17.00	26.00	
360.250	360.800	TCS-9	17.00	26.00	
360.800	361.900	TCS-8	17.00	26.00	
361.900	362.100	TCS-9	17.00	26.00	
362.100	363.200	TCS-8	17.00	26.00	
363.200	363.400	TCS-9	17.00	26.00	
363.400	365.500	TCS-8	17.00	26.00	
365.500	365.700	TCS-9	17.00	26.00	
365.700	367.100	TCS-8	17.00	26.00	
367.100	367.300	TCS-9	17.00	26.00	
367.300	368.000	TCS-8	17.00	26.00	
368.000	368.300	TCS-9	17.00	26.00	
368.300	371.249	TCS-8	17.00	26.00	
371.249	374.680	TCS-2	15.00	22.50	
374.680	375.473	TCS-3	11.00	29.00	Including Service road
375.473	391.400	TCS-1A	10.00	12.00	
391.400	391.650	TCS-5	10.00	12.00	
391.650	394.300	TCS-1A	10.00	12.00	
394.300	394.458	TCS-5	10.00	12.00	
394.458	398.464	TCS-2	15.00	22.50	
398.464	405.969	TCS-1A	10.00	12.00	
405.969	407.976	TCS-2	15.00	22.50	
407.976	431.600	TCS-1A	10.00	12.00	
431.600	432.511	TCS-4	10.50	14.80	
432.511	433.000	TCS-6	15.00	22.50	
433.000	434.000	TCS-2	15.00	22.50	
434.000	438.600	TCS-1A	10.00	12.00	
438.600	440.200	TCS-5	10.00	12.00	
440.200	441.160	TCS-4	10.50	14.80	
441.160	442.100	TCS-5	10.00	12.00	
442.100	446.685	TCS-1A	10.00	12.00	
446.685	447.688	TCS-2	15.00	22.50	
447.688	471.239	TCS-1A	10.00	12.00	
471.239	472.233	TCS-2	15.00	22.50	
472.233	490.900	TCS-1A	10.00	12.00	
490.900	491.945	TCS-2	15.00	22.50	
491.945	492.300	TCS-6	15.00	22.50	
492.300	494.900	TCS-2	15.00	22.50	
494.900	521.912	TCS-1A	10.00	12.00	
521.912	522.913	TCS-2	15.00	22.50	
522.913	557.775	TCS-1A	10.00	12.00	
0.000	2.850	TCS-1A	10.00	12.00	
2.850	3.143	TCS-5	10.00	12.00	
3.143	9.455	TCS-1A	10.00	12.00	
9.455	10.400	TCS-4	10.50	14.80	
10.400	10.740	TCS-7	10.50	31.80	Including Service road
10.740	11.483	TCS-4	10.50	14.80	
11.483	17.240	TCS-1A	10.00	12.00	

Annexure 3 (g) : Drain Details

Chainage		TCS	Type of Drain
From	To		
0.000	5.900	TCS-1	No Drain
5.900	6.300	TCS-5	No Drain
6.300	19.463	TCS-1	No Drain
356.900	359.300	TCS-8	Open Drain
359.300	359.500	TCS-9	Open Drain
359.500	360.250	TCS-8	Open Drain
360.250	360.800	TCS-9	Open Drain
360.800	361.900	TCS-8	Open Drain
361.900	362.100	TCS-9	Open Drain
362.100	363.200	TCS-8	Open Drain
363.200	363.400	TCS-9	Open Drain
363.400	365.500	TCS-8	Open Drain
365.500	365.700	TCS-9	Open Drain
365.700	367.100	TCS-8	Open Drain
367.100	367.300	TCS-9	Open Drain
367.300	368.000	TCS-8	Open Drain
368.000	368.300	TCS-9	Open Drain
368.300	371.249	TCS-8	Open Drain
371.249	374.680	TCS-2	Covered Drain
374.680	375.473	TCS-3	Covered Drain
375.473	391.400	TCS-1A	No Drain
391.400	391.650	TCS-5	No Drain
391.650	394.300	TCS-1A	No Drain
394.300	394.458	TCS-5	No Drain
394.458	398.464	TCS-2	Covered Drain
398.464	405.969	TCS-1A	No Drain
405.969	407.976	TCS-2	Covered Drain
407.976	431.600	TCS-1A	No Drain
431.600	432.511	TCS-4	Open Drain
432.511	433.000	TCS-6	Covered Drain
433.000	434.000	TCS-2	Covered Drain
434.000	438.600	TCS-1A	No Drain
438.600	440.200	TCS-5	No Drain
440.200	441.160	TCS-4	Open Drain
441.160	442.100	TCS-5	No Drain
442.100	446.685	TCS-1A	No Drain
446.685	447.688	TCS-2	Covered Drain
447.688	471.239	TCS-1A	No Drain
471.239	472.233	TCS-2	Covered Drain
472.233	490.900	TCS-1A	No Drain
490.900	491.945	TCS-2	Covered Drain
491.945	492.300	TCS-6	Covered Drain
492.300	494.900	TCS-2	Covered Drain
494.900	521.912	TCS-1A	No Drain
521.912	522.913	TCS-2	Covered Drain
522.913	557.775	TCS-1A	No Drain
0.000	2.850	TCS-1A	No Drain
2.850	3.143	TCS-5	No Drain

Chainage		TCS	Type of Drain
From	To		
3.143	9.455	TCS-1A	No Drain
9.455	10.400	TCS-4	Open Drain
10.400	10.740	TCS-7	Covered Drain
10.740	11.483	TCS-4	Open Drain
11.483	17.240	TCS-1A	No Drain

Annexures 4: O&M cost estimate

Routine Maintenance

Item No	Item Head	Description	Frequency	Unit (per annum)	Qty	Rate	Amount per year, INR	Remarks
1	**ROADS**	**28.8%**						
1.1		Roughness Value (BI Test)	2 X Annually	Lane Km	541.2	2,000	10,82,400	BI test twice a year | Rs 1000/- per lane km
1.2		Pothole / Patchwork						
		Main Carriage way	Upon Occurrence	Sqm	13202	332	43,83,064	0.5% Per Km Per Year | 1 Km Area = 10000 M² for 2 lane & 17500 M² for 4 lane| Rs 332/- Per Sqm
		Service Road	Upon Occurrence	Sqm	79	332	26,331	0.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 332/- Per Sqm
1.3		Cracks Sealing						
		Main Carriage way	Upon Occurrence	Sqm	26404	47	12,40,988	1% Per Km Per Year | 1 Km Area = 10000 M² for 2 lane & 17500 M² for 4 lane| Rs 47/- Per Sqm
		Service Road	Upon Occurrence	Sqm	159	47	7,455	1% Per Km Per Year | 1 Km Area = 7000 M² | Rs 47/- Per Sqm
1.4		Other Defects (Rutting, Bleeding / Skidding, Ravelling / Stripping, Pavement Edge Repairs)						
		Main Carriage way	Upon Occurrence	Sqm	13202	85	11,22,170	0.5% Per Km Per Year | 1 Km Area = 10000 M² for 2 lane & 17500 M² for 4 lane| Rs 85/- Per Sqm
		Service Road	Upon Occurrence	Sqm	79	85	6,741	0.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 85/- Per Sqm
1.5		Road Sweeping /Cleaning (MCW /SR)						
		Urban	Daily	Km-month	215	3,349	7,20,978	Total 17.941 Km of urban section. Rental and operating cost of 1 broomer is considered. Broomer works with efficiency of 10 km/hr for 6 hr.
		Rural	Daily	Km-month	2245	529	11,87,845	Total 6 labours for cleaning work of MCW of rural section | Labour wages - Rs 550/-
						Total Cost for Roads	**97,77,973**	
2	**ROADSIDE**	**9.3%**						
2.1		Blading/grading the unpaved shoulder and slopes using motor grader at the required camber /Repairing Hard/Earthen Shoulders/Side Slopes (Edge Drops)	2-3X Annually	Sqm	13192	120	15,82,985	1.5% Per Km Per Year | 1 Km Area = 2000 M² | Rs 120/- Per Sqm
2.2		Rain Cuts / Gullies in Slopes	2-3X Annually	RM	10000	152	15,24,390	10 Km of Rain cuts maintenance work considered annually
2.3		Foothpath / Sidewalk repairs	Upon Occurrence	Sqm	269	240	64,588	0.5% Per Km Per Year | 1 Km Area = 7000 M² | Rs 240/- Per Sqm
						Total Cost for Roadside	**31,71,962**	
3	**TRAFFIC SERVICES (Road Signs & Pavement Marking)**	**35.4%**						
3.1		Traffic Signs -(Informatory / Direction/Hazard Marker/ Gantries)						
		Routine Maintenance	Monthly	No-month	6000	165	9,90,000	Total 5 labours for cleaning work of sign boards | Labour wages - Rs 550/-
		Replacement	Upon Occurrence	No.	400	4,900	19,60,000	Replacement of total 400 TS per year |Rs. 4900/- per nos.
3.2		Pedestrain Guardrail Repair						
		Cleaning, clearing of dirt, routine maintenance	Monthly	RM-month	474	2,089	9,89,499	Total 5 labours for cleaning work of PGR| Labour wages - Rs 550/-
		Replacement	Upon Occurrence	RM	200	1,800	3,60,000	Replacement 200m pedestrian guard rail annually | Rs 1800/- per RM
3.3		MBCB Inspection and Service						
		Cleaning, clearing of dirt, routine maintenance	Daily	No-month	420	2,357	9,90,000	Total 5 labours for cleaning work of MBCB | Labour wages - Rs 550/-
		Replacement	Upon Occurrence	RM	280	2,500	7,00,000	Replacement of 200 m of MBCB | Rs 2500/- Per RM
3.4		Pavement Marking - Reflectivity / Fading	1X Year	Sqm	10373	410	42,52,930	New pavement marking for entire section for (2 times in addition to 3 cycles of MMR)
3.5		Kerb Painting	1X Year	Sqm	7467	115	8,58,667	Kerb painting for applicable sections (3 times in addition to 3 cycles of MMR)
3.6		Road Studs Replacement	1X Year	No.	3333	280	9,33,333	Capex cost of stud installation after MMR this year, 2nd and 3rd cycle is considered. Replacement of 20000 nos. of Road studs twice | RS 280/- per nos.
3.7		Delineators - Maintenance		No.	0	1,200	-	Maintenance/Replacement of 20 delineators per year
3.8		Solar Blinkers		No.	0	1,700	-	Maintenance of 3 solar blinkers per year

Item No	Item Head	Description	Frequency	Unit (per annum)	Qty	Rate	Amount per year, INR	Remarks
					Total Cost for Traffic Services		**1,20,34,429**	
4	**DRAINAGE**	**3.77%**						
4.1		Clean Drainage Structures	2 x Annually	Km	19.075	12,262	2,33,906	2 teams of 5 person cleaning 17 km drain twice in a year pre/post monsoon with 550 of daily wages
4.2		Weep Hole Cleaning	2 x Annually	No.	6	7,333	44,000	2 teams of 2 person cleaning weep holes at every structure locations twice in a year pre/post monsoon with 550 of daily wages
4.3		Replacement of drain cover	2 x Annually	RM	476.875	2,100	10,01,438	Replacement of drain cover for 15% of total drain length of 19.075 Km on both side | Annually
					Total Cost for Traffic Services		**12,79,343**	
5	**VEGETATION AND AESTHETICS (Median & Avenue Plantation)**	**8%**						
5.1		Replacement of dead plants	Annually	No.	2000	140	2,80,000	Replacement of 200 plants per year
5.2		Maintenance of existing plant		Km-month	394	3,341	13,15,200	
		Watering of plant						Total 3 labours for watering of plant | Labour wages - Rs 550/-
		Application of Fungiside/pestiside/Fertilizer						
		Training and pruning of plants						
5.3		Unwanted grass removal (median & road side)		Km-month	178	5,552	9,90,000	Total 5 labours for removal of unwanted grass | Labour wages - Rs 550/-
					Total Cost for Vegetation and Asthetics		**25,85,200**	
6	**BRIDGE/STRUCTURES**	**6%**						
6.1		Routine maintenance of structures						
		Cleaning, clearing slab/ box type culverts and pipe culverts including clearing, cleaning and reshapping of upstream and down stream faces of these culverts with in rights of way. The job includes disposal of excess material recovered from site.		Nos	79	550	86,900	
		Cleaning, clearing of bridges reshapping of upstream and down stream faces , Cleaning debris vegitation ,clogging drainange spout etc /Including cleaning of expansion joint and Bearing when applicable The job includes disposal of excess material recovered from site.		Nos	8	2,200	35,200	
		Providing & laying 300 mm thick stone pitching covering the slopes of guide bunds or other location to MOST Specification Clause No. 2504 complete in all respect as directed by the Engineer.		Cum	283	1,255	3,55,066	
		Drainange spout Replacement		Cum	2	1,736	3,472	
		Crash Barrier M40 with reinforcement		nos	50	17,000	8,50,000	
		Patch work for Structure		Rm	100	200	20,000	
		Cement Grouting for crack sealing and spalling of concrete.		sqm	50	450	22,500	
		Reconstruction of damaged head wall PCC M 15		Kg	125	3,984	4,98,000	
					Total cost for Bridges/Structures		**18,71,138**	
7	**REST AREA / Toll Plaza/Ancillary F**	**8%**						
7.1		Toilet Inspections and repairs	Monthly	No	8	6,000	48,000	6% of the capital cost
7.2		Defects of Sanitary /Electrical /Water installations	Monthly	Lumsum	4	2,02,500	8,10,000	6% of the capital cost
7.3		Toll Collection System / Lighting	Monthly					
7.4		Toll Plaza & Admin Building Painting	Monthly					
7.5		Damage to Toll Plaza, Canopy	Monthly					
7.6		Toll Plaza Maintenace i.e. WIM, SWB, Canopy	Monthly	Lane-month	672	2,000	13,44,000	Only Toll Building Canopy Maintenance (No WIM and SWB)
7.7		Damage/Deterioration of Busbays/Truck Layby/Traffic Aid Posts/Medical Aid Posts etc	Monthly	Lumsum	-	2,46,000	2,46,000	6% of the capital cost
7.8		Control Centre Maintenenace	Monthly	No-month	48	5,000	2,40,000	
					Total Cost for RA/TP/Ancillary		**26,88,000**	
8	**MISCELLANEOUS**	**0.56%**						
8.1		Structure Inspections	Pre / Post Monsoon	Km	238	303	72,000	Structure inspection for 2 times a year

Item No	Item Head	Description	Frequency	Unit (per annum)	Qty	Rate	Amount per year, INR	Remarks
8.2		Structure Stability Test (Including RE/RET Wall)	Every 2 Years					Considered 10% of structure needs non-destructive testing every year |Rs 10000/- Per structure
8.3		Sign Inspections (Reflectivity Test)	Every 2 Years	Km	237.8	500	1,18,900	
					Total Cost Miscellanious		**1,90,900**	
9	**ELECTRIFICATION**	**1.1%**						
9.1		Maintenance of street lighting	Monthly	No-month	1212	108	1,30,896	Considered replacement of 5% sodium lamp, 5% Ignitor and 2% choke
9.2		Maintenance of High Mast Lamp	Monthly	No-month	144	1,650	2,37,600	Considered replacement of 5% sodium lamp, 5% Ignitor and 2% choke
					Total Cost for Electrification		**3,68,496**	
				Routine Maintenance Cost per Month			**2830620**	
				Routine Maintenance Cost per Year			**33967441**	

SBHL- Tolling Operation Expenses (For 4 toll plazas)

Item No	Description	Unit (per month)	Quantity	Rate	Amount, INR
1	**Toll Plaza Staff**				
1.01	Project Head - Senior Manager	Nos	1	1,50,000	1,50,000
1.02	Toll Plaza Manager	Nos	1	1,00,000	1,00,000
1.03	Toll Plaza Deputy/Assist Manager	Nos	3	60,000	1,80,000
1.04	Shift In charge	Nos	16	35,000	5,60,000
1.05	Cashier	Nos	6	27,100	1,62,600
1.06	MIS/Documentation	Nos	3	27,100	81,300
1.07	Toll Collector including reliever	Nos	80	23,400	18,72,000
1.08	Lane Assistant	Nos	28	23,400	6,55,200
1.09	Traffic Marshal	Nos	0	-	-
1.10	IT - Manager	Nos	1	60,000	60,000
1.11	IT - System Technician	Nos	10	40,000	4,00,000
1.12	Validator	Nos	6	27,100	1,62,600
1.13	HR & Admin Officer (General Shift)	Nos	1	45,000	45,000
1.14	Electrician (1 per shift + 1 spare)	Nos	9	32,000	2,88,000
1.15	Clerk for POS (General Shift)	Nos	0	-	-
1.16	F&A	Nos	1	45,000	45,000
1.17	Document Controller	Nos	1	28,076	28,076
1.18	Housekeeping	Nos	8	21,000	1,68,000
1.19	Peon/ Office Boy	Nos	4	21,000	84,000
1.20	Cooks	Nos	10	27,100	2,71,000
				Total Toll Plaza Staff Cost	**53,12,776**
2	**Security Staff**				
2.01	Security Guards	Nos	18	24,242	4,36,363
2.02	Armed Guards (Security Gunman)	Nos	1	28,076	28,076
				Total Security Cost	**4,64,439**
3	**Maintenance of Toll collection equipment**				
	6% of the cost of TCE per year including the AMC	Nos	1	25,20,000	**2,10,000**
	cost of TCE= 28* 15 lacs = 420 lacs				
	Note: System is provided by third party. AMC is in VAAN infra scope. However, we have included some maintenance				
4	**Cash Handling Charges**	Nos	4	10,000	**40,000**
	Lumpsum				
6	**Expendables and other misc. stores**	Nos	4	2,05,696	**8,22,786**
	Tickets, printer ribbons, stationery etc				
	Lumpsum				
7	**Plaza Adm Vehicles**				
	1 Vehicles per Plaza Manager with driver	Nos	5	50,000	**2,50,000**
				Cost for 4 Toll Plaza per month, INR	**71,00,000**
				Cost for 4 Toll Plaza per Year, INR	**8,52,00,000**

Corridor Petrol & Incident Management Cost

Item No	Description	Unit (per month)	Quantity	Rate	Amount INR	Remarks
1	**Patrolling Cost**					
1.01	Maintenance manager	Nos	0	1,00,000	-	
1.02	Corridor Manager/Safety officer	Nos	1	50,000	50,000	
1.03	Safety officer	Nos	0	-	-	
1.04	Site Engineer	Nos	0	50,000	-	
1.05	Site Supervisor	Nos	0	30,000	-	
1.06	Route Patrol officer	Nos	12	25,000	3,00,000	
				Total Patrolling Cost	**3,50,000**	
2	**Vehicle Cost**					
2.01	Route Patrol Vehicle (01 nos of each Toll Plaza)	Nos	4	75,000	3,00,000	35000 rent including driver and 40000 diesel
2.02	Drivers for Route Patrol Vehicle	Nos	3	20,000	60,000	
2.03	Motorcycle for Site Supervisor	Nos	0	15,000	-	
2.04	Highway Maintenance Vehicle	Nos	0	40,000	-	
2.05	Driver for Highway Maintenance Vehicle	Nos	0	20,000	-	
2.06	Mobile Telephone for Control Centre, Vehicle Patrolling, Cranes and Ambulances etc.)	Nos	4	4,000	16,000	
				Total Vehicle Cost	**3,76,000**	
	Emergency Services					
3	**ATMS / Control Centre**					
3.01	Pay and allowances for Control Centre Officer	Nos	1	50,000	50,000	
3.02	Pay and allowances for Asstt. Control Centre Officer (1 for each TP)	Nos	4	20,000	80,000	
4	**Ambulance**					
4.01	Operation cost of Ambulance (01 each TP)	Nos	4	55,000	2,20,000	Hiring cost including driver, fuel and Tools
4.02	Ambulance driver	Nos	0	25,000	-	
4.03	Ambulance Paramedics (Total 10 for 4 TP)	Nos	10	30,000	3,00,000	
5	**Crane & Hydra**					
5.01	Operation cost of Crane including crane operator (01 each TP)	Nos	4	75,000	3,00,000	Hiring cost including fuel + Operator with Helpers
5.02	Cranes operator	Nos	6	27,071	1,62,426	
5.03	RPV & Crane Helper	Nos	10	15,000	1,50,000	
				Emergency Services Cost	**12,62,426**	
6	**Incident Management Centre**					
6.01	CCO (1 each TP)	LS	4	20,000	80,000	
				Incident Management Cost	**80,000**	
7						
7.01	Supply of colour photographs in three copies and two CDs		237.578	40	9,503	
7.02	Supply of Vedio Cassette (CD) in three copies including videography of complete stretch at three stages in O&M period complete		4	5,000	20,000	
				CDs, Photographs, etc. Cost	**29,503**	
8	**Tests/ Survey**					
8.01	Traffic Sampling	Nos	0	1,10,250	-	
8.02	Road Inventory & Pavement Condition (NSV)	lane km	0	1,038	-	
				Test/Survey Cost	-	
				Total Monthly Corridor Petrol & Incident Management Cost	**20,97,929**	
				Total Annual Corridor Petrol & Incident Management Cost	**2,51,75,149**	

Insurance Premium

Item No	Description	Unit	Quantity	Rate	Amount INR
1	IAR Policy	Annual	1	73,80,606	73,80,606
2	Road and Toll plaza Building including terrorism cover	Annual	1	96,195	96,195
3	Road Furniture including terrorism cover and Burglary Cover	Annual	1	37,595	37,595
4	EEI Policy	Annual	1	49	49
5	Money Policy	Annual	1	10	10
6	Special Contingency Policy	Annual	1	58,824	58,824
7	Terrorism Cover SPV Office	Annual	1	27,778	27,778
8	Comprehensive General Liability	Annual	1	16,667	16,667
				Total Monthly Insurance Cost	**6,34,810**
				Total Annual Insurance Cost	**76,17,724**

Note: Rates excluding GST

IE Fees

Item No	Description	Unit/ Month	Quantity	Rate	Amount INR
1	Independent Engineers Fees	Monthly	1	7,40,000	7,40,000
2	Audit Charges	Monthly	0	74,419	0
3	Legal & Professional Fee	Monthly	0	99,225	0
			Total monthly IE, Audit Charges & Legal & Professional Fees		**7,40,000**
			Total Annual IE, Audit Charges & Legal & Professional Fees		**88,80,000**

Electric Cost

Item No	Description	Unit/ Month	Quantity	Rate	Amount INR
1	Electricity Charges Tariff for Office, operation & Maintenance cost of stand by Genset (Lump sum cost)	per toll lane per month	28	14,780	**4,13,840**
2	Electricity Charges Tariff for Corridor Highway Lighting (Lump sum cost)	per Lane km per month	541.2	250	**1,35,300**
				Total AMC, Cash, Expandables, Electricity Cost	**5,49,140**

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